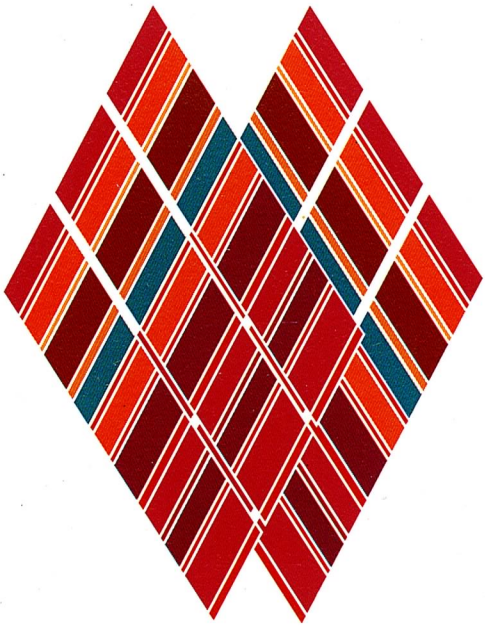
COMITATO INTERNAZIONALE PER LO SVILUPPO DEI POPOLI

Resettlement and Rural Development in Ethiopia

Social and economic research, training and technical assistance in the Beles Valley

edited by Paolo Dieci and Claudio Viezzoli



Franco Angeli

With a grant from the Directorate-General for Development Cooperation, Italian Ministry of Foreign Affairs

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FOREWORD: ETHIOPIAN STUDIES: BACKGROUND, DEVELOPMENTS AND TRENDS

Taddese Beyene

Background

Ethiopia, one of the oldest nations of the world, can trace its history back for thousands of years before Christ. References about the country and its people could be found in the epics of Homer as well as in the works of Herodotus. One can also find numerous Biblical references interspersed here and there throughout the Bible attesting to the fact that Ethiopia was well known in biblical times as well.

Ethiopia adopted Christianity as the official religion in about 330 A.D. Ancient pre-Christian and Christian relics can be seen to this day in the stellae of Aksum erected before the introduction of Christianity, in the well-preserved eleventh and twelfth-century churches hewn from solid rock at Lalibela, in the great stone castles in Gondar built in the 17th century, and in the ruins of a monolithic church on the out skirts of the capital city, Addis Ababa, to mention just a few among the vast number of architectural and historical treasures which are very little known to the outside world.

For thousand of years, Ethiopia has fascinated and captured the imaginations of the people, as it still does to this day. The ancient Egyptians, for whom the source of the Nile, their life-giving water, rises from the highlands in Ethiopia, and whose navigators called upon the coastal towns and the port of Adulis for refreshment and in search of such exotic commodities as frankincense, myrrh, ivory, etc., had a good knowledge of the country, if somewhat vaguely defined. Ancient Greek navigators had also an intimate knowledge of the Red Sea coast of Ethiopia as can be attested from the logbook of a certain Greek navigator, the author of the *Periplus of the Erythraean Sea*.

After the introduction of Christianity in 330 A.D., and its further propagation throughout the subsequent years, a number of churches

and monasteries were built throughout the country which served not only as centres of worship and religious activities, but also as centres of scholarly activities for the conduct of literacy, and the teachings of theology. Translations of theological manuscripts from such diverse sources as Hebrew, Greek and Arabic, and copying them many times over by hand were carried out by monks, and priests attached to the various churches and monasteries scattered throughout the northern parts of the country. In addition to Christianity, Ethiopia is also the crossroad of two of the world's great religions, Islam and Judaism, which have coexisted together for hundreds of years and have significantly shaped the religious beliefs and outlooks of the people toward life.

Developments

With the above brief background in mind, one can, therefore, assert that Ethiopia has not only provided important sources for Ethiopian Studies but has also been a centre of Ethiopian Studies itself for hundreds of years. Religious leaders, priests, and monks in the various churches, monasteries, and mosques were engaged in teaching as well as in translating and interpreting religious works which very often generated lively debates among the scholars. Admittedly, the debates largely centred on religious issues and controversies.

Towards the end of the fifteenth and the beginning of the sixteenth centuries Europeans became interested in Ethiopia for one reason or another, such as economic and religious expansion, etc., and journeyed the country in increasing numbers as commercial and military agents and missionaries. The travellers returned to their countries of origin with detailed accounts of the country including its resources, the history, languages, and cultures of the people. Invariably, these travellers also took with them a wealth of ancient manuscripts and cultural material objects with them which further enriched their accounts of the country and people.

Ethiopian travellers also visited Europe for a number of reasons, some as official delegations to the various European courts, and other on pilgrimage to the Holy lands in Jerusalem and Rome, and their new contacts rekindled European interest in Ethiopia, once again. The genesis of the tradition of Ethiopian Studies among European scholars and the establishment of various centres of Ethiopian Studies in Europe can be traced back to these early contacts. Many of the Ethio-

pian pilgrims, such as Abba Gorgoreyos, the teacher and mentor of the renowned Ethiopicist, Hiob Ludolf, who is credited for being the father of Ethiopian Studies in Europe, as well as an unknown number of Ethiopian scholars, were highly esteemed intellectuals, who taught Geez and Amharic, the history of the country, the cultures of the people of Ethiopia to European scholars.

The introduction of modern education in the early part of the twentieth century has also provided an opportunity for contacts between expatriate teachers from various countries with Ethiopia and her people. Ethiopian students were at the same time exposed to modern education which gradually took roots and resulted in the expansion of the western type of educational system, without completely supplanting the traditional system of education which still exists. As a consequence of the gradual development of modern education in the country, three universities and a number of colleges are now in full operation.

The establishment of post-graduate programmes within Addis Ababa and Alemaya Universities during the past ten years, has also contributed immensely toward building and strengthening of the research capacity of the faculties concerned, in addition to providing qualified manpower to other public sector.

Trends

A number of research institutes have also been established, both within and outside the institutions of higher learning, with the aim of encouraging and developing research into many aspects of Ethiopian Studies. Among the many research centres that exist in the country, the Institute of Ethiopian Studies, entrusted with the task of fostering and encouraging Ethiopian Studies, was the earliest to be established.

The book edited by Claudio Viezzoli and Paolo Dieci, based on the results of implementation and research activities carried out in the Beles Valley, can be included in the framework of recent trends of Ethiopian studies.

The Institute of Ethiopian Studies

History and aims

Founded 27 years ago in 1963, the Institute of Ethiopian Studies has

been operating with the general objectives of "conducting, promoting, and coordinating research and publication on Ethiopia with special emphasis on the humanities and cultural studies; as well as helping in the preservation of the Ethiopian cultural heritage by collecting and displaying in its museum Ethiopian artifacts and other items of historical value."

Location and facilities

The Library has very rich collections of books, pamphlets, periodicals, and a growing archival material on Ethiopia both in Ethiopian and other languages. Its holdings include books and periodicals published in Ethiopia since the inception of printing in the Country, thus making it probably the only comprehensive public collection of such materials in the world. The manuscript and documentation centre is growing and already has over eight hundred items in Ge'ez, Amharic, Arabic, Harari, Oromigna and some foreign languages and a collection of photographic and other archival materials. As a centre for research, this is only a reference and not a lending library.

The museum has a collection of over ten-thousand items. A large part of these are ethnological objects and the collection of traditional paintings and crosses is very rich and unique. The museum also collects and displays traditional musical instruments of the various nationalities of Ethiopia. The growing photographic archives, a collection of photographs of historical interest is also housed there.

The publications of the Institute include the following regular publications: *Journal of Ethiopian Studies* (semi-annual); *Register of Current Research on Ethiopia and the Horn of Africa* (annual); *Ethiopian Publications* (annual) and *List of Current Periodical Publications in Ethiopia* (annual); *Dictionary of Ethiopian Biography*; and occasional publications, such as the *Pottery Collection*, *Processional Crosses*, and *Proceedings* including *Proceedings of the Third International Conference of Ethiopian Studies*, *Proceedings of the 8th International Conference of Ethiopian Studies*, *Proceedings of the Symposium on the Centenary of Addis Ababa*, etc..

The International Conference of Ethiopian Studies

The First International Conference of Ethiopian Studies, organized

by the illustrious Italian scholar, Professor Enrico Cerulli, under the sponsorship of the Accademia dei Lincei, was held in Rome in April, 1959. The conference brought together, for the first time, Ethiopianists who had devoted their life and energy to Ethiopian Studies, and at the same time succeeded in firmly establishing the tradition of convening a conference on Ethiopian Studies, at irregular intervals initially, at different centres of Ethiopian Studies in Europe. Since 1959, ten international conferences have successfully been convened in various cities of the world. The following table shows the number and chronological order of international conferences convened so far.

Number and chronological order of international conferences of Ethiopian Studies

Chronological order	*City*	*Date*
First	Rome	1959
Second	Manchester	1963
Third	Addis Ababa	1966
Fourth	Rome	1972
Fifth A.	Nice	1977
B.	Chicago	1977
Sixth	Tel-Aviv	1980
Seventh	Lund	1982
Eighth	Addis Ababa	1984
Ninth	Moscow	1986
Tenth	Paris	1988

Permanent Secretariat

At the Tenth International Conference of Ethiopian Studies held in Paris in 1988, the Conference unanimously decided to establish a Permanent Secretariat for the International Conference of Ethiopian Studies in order to coordinate the activities of the successive international conferences and to ensure their continuity. The conferences also decided that the Permanent Secretariat be established within the Institute of Ethiopian Studies of Addis Ababa University, that it be held

every three years instead of at irregular intervals, as was the case initially, and that every third conference be convened in Addis Ababa under the auspices of the Institute of Ethiopian Studies.

In accordance with the decisions of the Tenth International Conference of Ethiopian Studies, the Permanent Secretariat has now been established within the Institute of Ethiopian Studies which will also organize the Eleventh International Conference in 1991.

The number of international scholars pursuing Ethiopian Studies as well as the number of institutions offering courses in Ethiopian Studies has been growing all the time. A growing interest in the non-traditional areas of studies, in contrast with such traditional studies as archaeology, history, studies of manuscripts, Semitic languages, etc., which have characterized the international conference during its early years, can be discerned from the large number of diverse research undertakings at the universities and research institutes. These new areas of research include: agriculture, development economics, and the natural sciences. A number of specialized journals are also being published every year of the country. Many conferences, symposia, and seminars are also organized by each research institute as part of its overall research activities and responsibilities. In addition to the International Conference of Ethiopian Studies, the Institute of Ethiopian Studies has now instituted a new tradition - the National Conference of Ethiopian Studies - which will be held every two years. The First National Conference of Ethiopian Studies was held in April 11-12, 1990, thus establishing a new and additional forum which had provided an opportunity for Ethiopian scholars to present their research findings to colleagues in similar areas of research and to exchange relevant academic information with one another.

Visiting scholars

A large number of visiting and/or research scholars also come to Ethiopia every year, and these scholars are directly associated with one of the colleges or research institutes. Such associations have been instrumental in bringing together Ethiopian and expatriate scholars to undertake joint research projects. Such collaborative joint research projects have contributed greatly toward up-grading the qualifications and research capacities of the staff of the faculties involved.

Conclusion

Ethiopia, a country with a long and uninterrupted history, comprising diverse ethnic groups, languages, cultures, flora and fauna, etc., will continue to attract the attention of scholars in both the social sciences and the natural sciences. Archaeologically, the recent findings of a humanoid fossil estimated to be three and half million years old has demonstrated that the country has a lot to offer toward our understanding of human evolution and early forms of social system and social organizations. Linguistically and ethnically too, the country is "a museum of peoples and cultures" which, when adequately investigated, will contribute greatly toward out knowledge of the languages and peoples of the Horn of Africa. The large and diverse species of plants and animals known to be endemic to Ethiopia, and the early domestication of some food grains will add to our knowledge of the earliest forms of agriculture.

Universities and the research institutes actively encourage their staff to engage in research by allotting a modest sum of money for the support of individual or group projects. A large number of researches supported by the universities have been completed and deposited in the libraries of the research institutes, however, due mainly to shortage of funds, these research documents could not be published and disseminated as widely as possible to scholars within and outside the country for whom the research findings would prove important. There are two main tasks awaiting us during the coming few years: broadening of research activities, and publications of research findings.

With respect to broadening of research activities, universities and research institutes have already embarked upon a new programme, that of conducting multi-disciplinary research projects with scholars or group of scholars from foreign institutions. Such arrangements have already started to bear fruit in terms of research outputs as well as in providing training for Ethiopian researchers both in the field and in a number of foreign universities. With regard to publications, effort have been made by Addis Ababa University to set up a printing press to alleviate problems associated with printing. The University Printing Press now prints almost all the established journals of the University. However, a lot remains to be done in this area if most of the large number of research outputs are to be published and disseminated efficiently.

In spite of the financial constraints encountered by universities and research institutes, there is a growing optimism that research in Ethio-

pian studies will continue to develop further and shall expand to include a number of diverse areas of research, which have received neither the attention nor the emphasis they deserve, in the social sciences, humanities and the natural sciences.

There is also complete unanimity among people in various walks of life in general, and researchers in particular, that the problems of peace, security and development of the Horn of Africa, which have posed, and continue to pose serious problems as well as the causes of ethnic conflicts and the ensuing environmental degradation, both generally prevalent in the area, must be thoroughly examined and investigated. And in order to do so, it is vitally important to understand and appreciate fully the complex and interrelated geopolitical problems of the area generally, and the individual states that comprise it, particularly. The inescapable conclusion is, therefore, that intensive multidisciplinary researches must be launched urgently. Obviously, the urgency of the task would require mobilizing our limited human and financial resources. Since the problems of the area have wider implications for world peace and global security, we hope and firmly believe that international organizations and the world community of nations will lend their support toward such an important and urgent research task.

The Institute of Ethiopian Studies will have specific responsibilities in this regard, particularly in assembling together competent and committed researchers representing the relevant disciplines, and in formulating multi-disciplinary research strategies, and finally in undertaking the responsibility to coordinate and facilitate the work of the researchers. We are, therefore, convinced that the 1990s will be marked by great strides and important contributions in this and other important areas of research in Ethiopian Studies.

EDITORS' PREFACE

In May 1986, with the assistance of CISP, the Italian Ministry of Foreign Affairs conducted a feasibility mission for the start-up of a development project to support the resettled populations in the Beles Valley. The project was planned to be implemented under part of the National Agrarian and Resettlement Plans drawn up by the Ethiopian Government and supported in various ways by Italian Development Cooperation agencies within the terms of the Agreed Minutes of 11th March, 1986.

In September 1986, CISP set the project in motion under the name "Multi-Sectoral Programme to Support the Resettled Populations in the Beles Valley". The first phase of the programme lasted until December 1990 with the possibility of a second phase taking it up to 1993.

In 1986 in the same area a vast Italian-financed cooperation programme, the "Tana Beles Project", was initiated, focusing on the creation of general infrastructures and bringing thousands of hectares of land under cultivation.

The idea for this book came about after the first phase of the CISP project had been completed, and particularly as a result of the technical activities and the socio-economic and socio-cultural surveys, whose main results are set out in the pages that follow.

Rural Development Problems and Project Policies

Anyone working in the field of international development cooperation, whether implementing projects or conducting research, knows how difficult it is to activate or strengthen policies which are able to take account at one and the same time of a variety of different and often conflicting interests: the interests of the beneficiary populations,

the executing companies and agencies, the financiers, the national governments, the local political or ethnic institutions, the field staff and all the institutions that operate directly or indirectly in contact with the project. Generally speaking, the objectives being pursued by the various institutions and agencies only partially coincide, giving rise to friction and misunderstandings, and further complicating the implementation of development activities.

A project is, in most instances, a matter of putting together widely differing points of view and cultural attitudes, and the Beles case is certainly no exception in this regard. Moreover, being a resettlement project it had to deal with the problems of the stability of the resettlement area, and the possibility that the settlers might eventually decide to return to their place of origin.

The tendency on the part of the settlers to view the place to which they are transferred as a purely temporary measure while waiting to return to their own regions of origin is not a question that can be solved in the long term by coercing them to settle permanently, or by using any other forms of constriction. There are a variety of well-known cases in which this has created serious social problems in other African countries culminating in the failure of the resettlement plan, with the consequent wastage of the country's financial resources. What proves useful in these cases, however, is implementing sound economic and social policies and introducing the right kind of incentives to facilitate the settling-in process on the part of the transferred populations.

In the case of the Beles Valley the need to adjust the management policies to the local situation was mainly motivated by the fact that there was a skewed relationship between small-scale family agriculture and collective farming, the lack of any income-generating off-farm activities to boost the area's production structure, and the inadequacy of the training and retraining programmes laid on for the settlers.

The project was therefore split into three areas of intervention, in each one of which a positive attempt was made to integrate technical activities and social research over a period of approximately four years: agriculture and reforestation, handicrafts, pre-school education training and child care.

The agriculture sector focused on the need to develop the areas earmarked for individual families, and if possible to extend them to areas which could be placed under irrigation; to create, in every village, teams of agricultural extension workers who would be able to extend the main contents of the agricultural programme, and liaise in order to disseminate among the households innovative elements in cultivating

their home gardens; and to strengthen the marketing procedures for their agricultural products by opening shops and retail centres.

As far as the handicraft sector is concerned, the project tried to organise the production facilities in the Beles area by training new craftsmen and retraining those already skilled in working metal, pottery, wood and bamboo. The handicraft training courses made it possible not only to upgrade the technical skills of individual workers but also to establish handicraft activities throughout the whole area. After a training phase, a number of decentralised workshops began production and marketing both inside and outside the resettlement area proper. With the opening of private cooperative and pre-cooperative enterprises, with partial autonomy in terms of procurement and profits, economically productive and institutionally innovative units were introduced into the area.

In the field of pre-school education training and child care, several kindergartens were built and equipped, one made of concrete, and the others of local materials. Several courses were run for primary school teachers, and child-care activities were organised. Through the educational structure that was established with the kindergartens information was disseminated on traditional syllabus subjects as well as basic hygiene, and experiments were conducted into forms of inter-ethnic integration which were also important because they could be extended to cater for the indigenous populations of the Beles Valley.

Even though it is not necessarily complete or exhaustive, this book deals systematically with the technical and research activities conducted by CISP in the Beles area. Part 1 is divided into three sections (agriculture, small-scale manufacturing and handicraft activities, and education and child-care activities), one for each of the three sectors mentioned above.

Issues Dealt with in the Book

Comparison between resettlement projects, and the Beles Valley case

The experience of many LDCs has demonstrated the extreme vulnerability of projects which have tried, in one way or another, to generate large scale piloted population shifts. The problems that have emerged in implementing them have made international agencies and national governments more cautious, and less willing to embark on resettlement operations. In the case of Ethiopia, the national resettlement pro-

gramme which was supposed to involve at least one million people was designed because of the need to ease the demographic pressure on highly populated areas, and to relocate several hundred thousand victims of the 1984-85 drought. Quite apart from all the criticisms that were levelled from various quarters at the population transfer methods, once the programme was under way, there is no doubt that it was motivated by financial and economic reasons which were recognised by many international organisations working in the country.

Chapters 1 and 2 of this book provide information relating, respectively, to the comparative analysis of resettlement experiments in different LDCs, and the specific approach used by CISP in 1986 for the planning of the Beles Valley Project. Chapter 1 is indispensable to provide an understanding of some of the choices made by CISP to prevent or reduce the sequence of errors in the design or implementation phase which are normally associated with resettlement plans. Chapter 2, on the other hand, provides the guidelines for the CISP project. These guidelines reveal CISP's decision to work at a highly decentralised and capillary level in the Beles Valley, in every village or with individual groups of settlers, and to try fill the voids which the "Tana Beles Project" had left open in the implementation phase: developing off-farm jobs, providing vocational training, exploiting the settlers' prior experiences by strengthening private and family farming, and carrying out activities designed to reinforce inter-ethnic integration processes.

Collective agriculture and family farming

Like other countries which have adopted an agrarian socialism approach to rural development in the past, Ethiopia also experienced the typical forms of conflict between development strategies which set small-scale household farming against more or less highly organised forms of collective ownership of the means of production, the constitution of state farms and state control over the rural market.

It was inevitable that this kind of conflict should re-emerge while implementing a resettlement programme on almost virgin lands, characterised by the massive introduction of advanced agricultural technology, thanks to Italian cooperation, even though the conflict often took forms that were very specific.

It was probably because the whole of the first phase of the Tana Beles Project used a production structure in the agricultural sector that

was designed to use heavy machinery and obtain high output levels by keeping the pace of work high to use the production to sustain the resettled people that the labour force was used in an atypical manner, mainly viewed as instruments to support collective farming.

It is in this regard that one must interpret the efforts made by the CISP programme to develop family agriculture, provide technical assistance for the home gardens and for the training of agricultural extension workers, improve farming techniques and introduce and disseminate new crops. It was in this context, too, that the programme experimented with reclaiming farmland not originally included in the collective farming programme, in addition to the 1,000 m^2 distributed to each household by the government, and adopted irrigated family or village farming in order to maximize the use of the land near the water courses, thus doubling the crop seasons.

The original idea had been to do everything possible to extend farm management opportunities to the resettled families under the country's agrarian reform legislation by increasing the acreages that could be used for private farming, and improving cropping techniques. This was all based on the conviction that it was only by exploiting the settlers' previous agricultural experience and improving their real living standards, that it would be possible to guarantee balanced and fair development conditions in the area.

The chapters set out in Part 1, Section A of this book deal with all of these points. They provide the results of surveys into issues relating to the specific features of traditional agriculture as practised by the various nationalities resettled in the Beles Valley and their ability to adapt to the new conditions in the area (Chapter 6); the features of the home gardens (Chapter 5 and 7); the production strategies used by the project and the assessment of the agricultural extension programmes and the programmes for disseminating new production techniques among the families in the area (Chapter 8); the comparative competitiveness of the various agricultural technologies used in the area, and the comparison between the collective and the private management of farms in terms of profitability and economic efficiency (Chapter 4). Lastly, Chapter 3 deals with a number of aspects of agricultural development in Ethiopia, specifically regarding the adoption of agrarian policies borrowed from other cultural contexts.

Off-farm income-generating activities, and vocational training programmes for the settlers

The lack of off-farm activities is one of the problems normally associated with the poor performance or failure of resettlement programmes in rural areas. In the case of CISP's multi-sectoral programme, the decision to exploit the settlers' handicraft skills was taken partly to meet the large real and potential demand for iron, pottery and bamboo products.

At the same time, it became indispensable to open and manage handicraft centres, some decentralised in a few of the villages, in order to provide work opportunities for the settlers who had already been trained in handicraft skills and who would have otherwise been used solely as farm labourers.

Chapters 10 and 11 in Part I, Section B, provide the results of two surveys of the handicraft sector. One deals with the socio-cultural impact of resettlement on the women potters, while the other examines the role of handicraft activities within the process of the socio-economic consolidation of the Beles Valley. Chapter 12 offers a number of technical conclusions regarding all the innovative processes introduced by the project in the field of pottery work. All these chapters must also be read in the light of essential comments given in Chapter 16, Part II, regarding the organic development of private or cooperative type economic activities. Chapter 9 contains a wide-ranging and systematic description of the role ascribed to developing craft activities in Ethiopia in its recent and past history.

The possibility of setting up cooperative structures or private companies that can be self-sustaining and subsequently develop, with an autonomous capacity to train new skilled personnel, must be considered as vital when envisaging any future hand-over of the various project activities. It is in this connection that the results of the surveys set out in Chapters 13, 14 and 15 of Part I, Section C, have to be viewed, dealing with a number of specific problems connected with the structure of the educational services in Ethiopia and in the Beles area, the training of Ethiopian kindergarten teachers, and health-care education.

Changes introduced in 1989 and 1990

Of all the developing countries, Ethiopia is one in which a socialist

economic policy was the most thoroughly applied in an orthodox manner during the past decade. The development policies adopted there reveal important similarities with the Leninist NEP, while national planning practices were very similar indeed to those that were being implemented, until only a few months ago, in Eastern Europe. The production and service cooperatives, collective farms, piloted population shifts, centrally planned solutions for problems which are of total local relevance, agricultural training campaigns for undergraduates, agro-industrial policies, and the national villagization plan, are all products of this State management strategy. All of this was worked out in implementation of the thinking of Marxist scholars, often without any concern for consistency with the reality of a poor country like Ethiopia.

It was therefore hardly surprising that far-reaching upheavals were shaking Ethiopia's civil and political life until the DERG-supported Government finally collapsed and power was taken over by the opposition, particularly those relating to private ownership and political freedoms.

The first, over-cautious openings granted by the deposed government in the first half of 1990 created a more flexible attitude and a greater willingness on the part of international financial institutions, and also led to the enactment of a number of legislative measures which began to introduce essential changes in agriculture, industry, banking and the monetary system, foreign trade, investment and the participation of foreign investors in national economic activities.

The hand-over of power to the armed movements which control Ethiopia today has certainly changed the underlying scenario in which these measures were originally taken. However, we believe that the basic problems of Ethiopia's economic development are too complex and too intricate to be considered solely in terms of the governments in power or their ideology. Some of the problems which the former government began tackling are far from solved even since the transfer of power. We shall have to wait and see whether the economic liberalisation that has been advocated from so many quarters in the past few weeks can be combined not only with a peace-making process at the national level, but also with coherent development strategies that are able to cope with the national economy's restructuring requirements, particularly in the agriculture sector, and the need to reduce poverty levels and make political life more democratic.

The Articles

The articles published in this book have been drafted on the basis on the results of research and technical activities conducted by CISP in the Beles Valley over about four years. The nature and the breadth of certain changes that have occurred in the area throughout this period can be appreciated from reading the book as a whole.

Earlier versions of certain chapters have already been presented at a number of international conferences. Chapters 4, 6, 11 and 13 were presented to the Tenth International Conference of Ethiopian Studies, held in Paris in August 1988; further versions of Chapter 4 and 11 were presented, respectively, at the Twentieth International Congress of Agricultural Economists in Buenos Aires in August-September 1988 and the International Conference on the Post-Revolutionary Ethiopian Society held in Oxford in September 1988; lastly, Chapter 15 was presented at the seminar on "Migration Medicine" organised by the International Organisation for Migration and co-sponsored by the World Health Organisation, Geneva, in February 1990.

Acknowledgements

The papers in this book were written not only by the people who directly or indirectly took part in managing the project, but also by people belonging to different institutions whose contribution has been requested in view of their specific skills and competence in relation to development problems, and to Ethiopia in particular. This is the case of Mulugetta Bezzabeh, from FAO, based at the ECA/FAO Joint Agriculture Division, Addis Ababa; A.S. Oberai, at the Employment Planning and Population Branch, Employment and Development Department of the ILO, Geneva; and Richard Pankhurst, Professor of Ethiopian Studies, Institute of Ethiopian Studies of Addis Ababa University.

In addition to the papers by the contributors, the book also includes a series of other occasional or regular contributions from institutions and individuals who have collaborated in implementing and supervising the activities of the project and the surveys.

A particular word of thanks is due to the authorities and institutions at both national and local level, and to the local offices of international agencies, all of whom have enabled CISP's relations at all times to be characterised by a spirit of close cooperation: the Ethiopian Nutrition

Institute, the FAO, the Handicraft and Small Scale Industry Development Agency (HASIDA), the ILCA, the Institute of Development Research and the Institute of Ethiopian Studies of the University of Addis Ababa, the Institute for Agricultural Research of Pawi, the technical staff of the Ministries of Agriculture, of Education, of Construction, of Labour and Social Affairs, of Mines and Energy, the National Children Commission, the Unicef, and the Yekatit 12 Pre-School Teachers Training Institute.

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We would also like to thank the International Labour Office for having given its permission to print the paper by Dr. A. S. Oberai, "An Overview of Settlement Policies and Programmes".*

A great debt of gratitude is also due to Vittorio Baldioli who was then a collaborator with Ifagraria. He took part in the feasibility mission, and jointly with CISP drafted the project and monitored the activities for the agricultural sector. But mainly he provided substantial input to the idea of trying out forms of farm management in which the role of the family, and family farming took a priority and central position in the development process of the whole of the Beles area. When

* Published in: A. S. Oberai (ed.), *Land settlement policies and population redistribution in developing countries. Achievements, problems and prospects*, 1989; page number 395; Copyright 1988, International Labour Office, Geneva; published on behalf of the ILO by Praeger Publishers, New York.

defining the contents of the project's agricultural sector, the studies conducted by Professor Bigi on the development potential in the area of family farming were also drawn on at length.

And, lastly, a particular word of thanks is extended to the experts and officials of the Italian General Directorate for Development Cooperation, Ministry of Foreign Affairs, who have cooperated throughout all the drafting phases of the programme.

Rome, 10th June 1991

INTRODUCTION: ANALYSIS OF ETHIOPIA'S ECONOMIC PERFORMANCE IN THE PERIOD 1960-90

Claudio Viezzoli

1. Foreword

A country's economic performance depends to a great extent on the soundness of the macro- and microeconomic policies which the governments are in a position to implement and manage, and on a number of random factors such as the irrational variations in international prices or unpredictable natural events. The process of integrating the world's economy which occurred between the late Seventies and early Eighties also heightened the effect of international exogenous factors on national macroeconomic policies. The economic weakness of certain countries, which undoubtedly includes Ethiopia, and the degree to which they were open to the international markets meant that many international price variations created small and large upheavals that were able to shake whole economies to their foundations. This was what happened in the case of the oil shocks at the beginning and the end of the Seventies, and the "counter-shock" in the mid-Eighties, the shock caused by the Gulf crisis, the sharp increase in exported agricultural commodity prices, as well in the case of the loss of most of Brazil's coffee output in 1977. However, even in these cases their recovery capacity depends essentially on the governmental policies that are adopted to contain the damage or to spread the benefits accruing to exogenous shocks or to seek to use economically favourable periods in order to transform or consolidate the structure of a national economy.

This introduction analyzes the trends of the time series of the main macroeconomic aggregates of Ethiopia with specific reference to the balance of payments and exchange rate policy issues. It also deals with the problem of implementing a sound macroeconomic adjustment policy after the socialist government surrendered power in the first half of 1991.

2. The country's macroeconomic scenario

2.1 GDP growth

Ethiopia's economic growth has followed a non-linear trend, subject to sharp fluctuations caused by changes in international commodity prices or dependent upon ecological and environmental disasters which have affected the country over the past 30/40 years. Figures 1 and 2 show the logarithm of the real GDP and the logarithm of the same series taken as the deviation from a first-order trend polynomial, respectively. The latter is useful in order to highlight the cyclical components of the series. Figure 1 shows the long-term shocks underlying GDP growth, while Figure 2 shows the short-term shocks.

As these clearly show, the early years following the revolution were characterized by a sharp economic slump which continued until 1978. This slump -- which was the result of a series of concomitant causes including the 1973/74 drought, the revolution itself and the oil shock -- is even more obvious when one considers the trend for the per capita GNP, consumer prices, real GDP growth and the population growth rates, and per capita food production (Table 1). The real GDP declined sharply between 1974 and 1975 as did the per capital real GNP and per capita food production, whereas there was a negative growth rate in 1978. On the other hand, over the same period the increase in consumer prices accelerated.

After the end of 1978, which was the year of the lowest ever marketed agricultural surplus, economic growth began at quite high rates again, reaching 5.2% in 1979, 5.4% in 1980 and 5.9% in 1981. This increase was due to the favourable climatic conditions as well as the recovery of the manufacturing sector's production capacity. In the following two years, growth rates settled around an average of 3%.

In 1984 and 1985, following the drought, the GDP growth rate declined steeply, in 1986 the real GDP was even lower than 1983's, and it was only in 1987 that growth managed to recover what had been lost in the previous years. In 1988/89 growth remained around the average levels of the other low-income African countries, but it was still insufficient to keep pace with population growth.

The sectoral distribution of the real GDP at factor cost (Figure 3) shows the variations in the percentage shares of the GDP for each individual sector of the economy. The comparative weight of the industrial sector, including manufacturing and services, grew by an average of 3.5% and 5.3%, respectively, in the period 1964-73, by 0.9% and

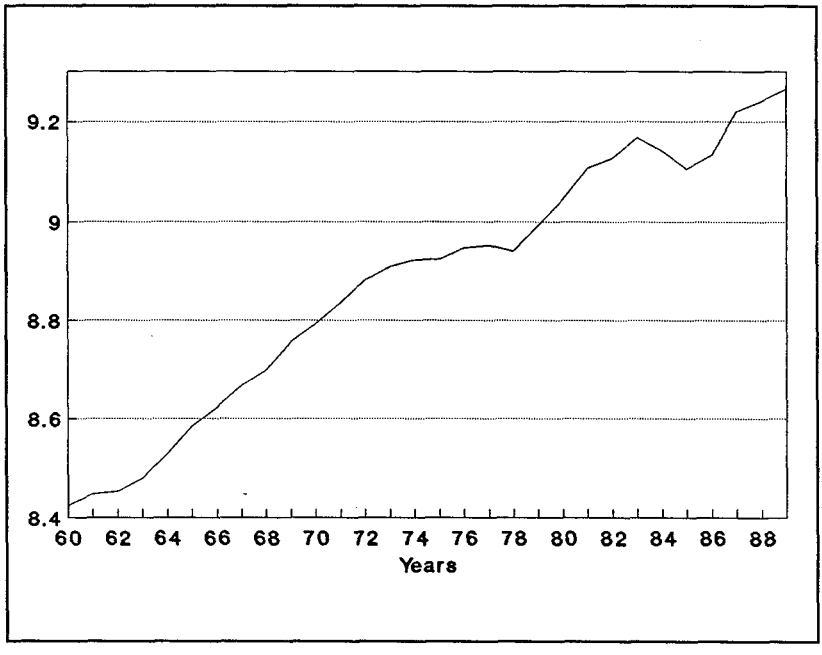


Figure 1 - Logarithm of real GDP (millions of birr, 1980 prices)
Source: IMF, IFSs, various issues

4.9%, respectively, in the period 1974-1983, and by 4.3% and 2.4% in the period 1984-88. In the same periods, agriculture's share fell by 8.9%, 5.6% and 6.9%, respectively. Whereas in 1960 agriculture accounted for 66.4% of GDP, the industrial sector 10.3% and services 23.3%, by 1988 these comparative percentages had become 43.4%, 17.6% and 39.0%.

The structural change in the Ethiopian economy over the past 25 years or so has been significant, but not sufficient to reduce the country's dependency on foreign industrial production or the international agricultural commodity marketing circuit. Moreover, during the decade 1974-1983 much smaller changes occurred in the structure of the Ethiopian economy compared with previous and subsequent periods.

The sectoral analysis also reveals substantial falls in the levels of productivity in the agricultural sector, compared with the industrial and services sector. While the productivity index of the non-farm sec-

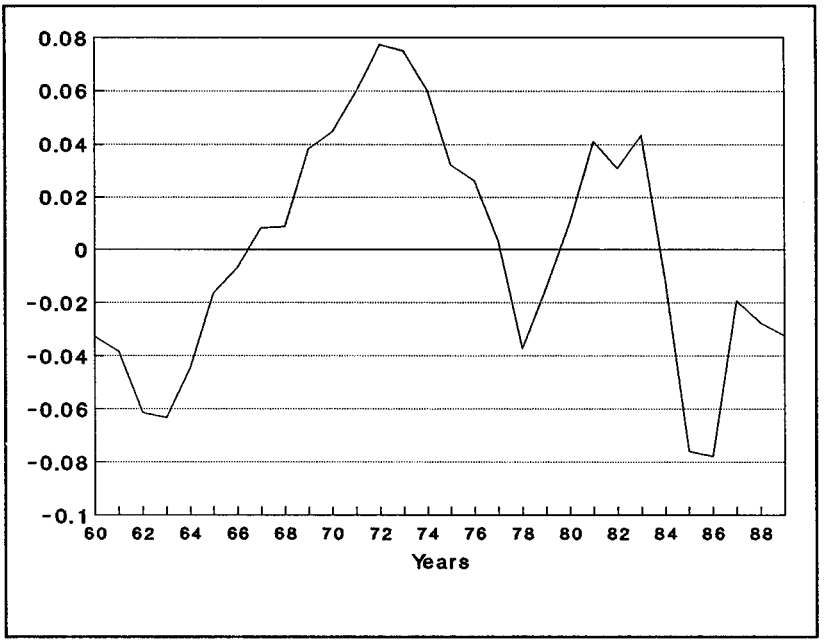


Figure 2 - Logarithm of real GDP (millions of birr, 1980 prices): Deviations from a first order trend polynomial

tors rose during 1960-89 by 24%, agriculture fell by 19% over the same period. This process quickened throughout the Eighties leading to apparent disinvestment in the agricultural sector: the growth rate in tractor use fell from 37.5% in 1961-70 to 2.4% in 1971-80, and to -0.1% in 1981-88; the growth rate in fertilizer consumption fell from 21.3% to 20.6% to 7.1% in each of these periods (World Bank, 1990).

2.1.2 The Ten Year Perspective Plan

An analysis of the long-term GDP trends and the sectoral breakdown makes it possible to appraise the contents of the Ten Year Perspective Plan (1984/85-1993/94). It forecasted an annual economic growth rate of 6.5% (4.3% in agriculture, 10.8% in industry and 6.9% in services), an investment rate of 16.8%, a 200% increase in official grants, 100% in

Table 1 - Real GDP growth and population growth rates, per capita real GNP, consumer prices, and per capita food production

Years	*Growth rates*		*Per capita real GNP in US$*	*Consumer prices 1980=100*	*Per capita food production '79-81=100*
	Real GDP	*Population*			
1961	2.34	1.30	43.24		117.0
1962	0.57	0.99	44.73		116.0
1963	2.71	0.98	46.38		115.0
1964	4.77	1.04	50.55		114.0
1965	5.72	1.03	55.83	36.3	113.0
1966	3.84	1.13	52.26	35.9	111.3
1967	4.41	1.32	60.14	36.1	110.4
1968	2.94	1.95	62.73	36.2	108.8
1969	5.86	1.95	65.08	36.7	108.1
1970	3.54	2.01	70.18	40.4	108.9
1971	4.39	2.00	72.65	40.7	103.4
1972	4.65	1.87	71.67	38.2	102.4
1973	2.65	1.74	74.06	41.6	101.1
1974	1.43	2.56	80.29	45.2	94.1
1975	0.10	2.58	77.29	48.1	96.7
1976	2.22	2.65	82.92	61.9	94.4
1977	0.59	2.70	91.72	72.2	93.5
1978	-1.11	2.31	95.35	82.5	92.8
1979	5.18	2.33	102.48	95.7	102.2
1980	5.39	2.33	106.77	100.0	98.9
1981	5.97	2.36	108.87	106.1	95.5
1982	1.86	2.40	109.55	112.4	101.9
1983	4.16	2.42	116.75	111.6	92.9
1984	-2.66	2.50	113.38	121.0	82.8
1985	-3.48	2.12	109.34	144.1	87.5
1986	2.70	3.57	115.72	129.9	93.4
1987	8.77	2.74	116.32	126.8	87.4
1988	2.06	3.61	115.03	135.7	86.0
1989	2.43	3.34	119.02	146.2	86.0

Sources: International Monetary Fund, *IFSs*, various issues; World Bank, *World tables*, various issues

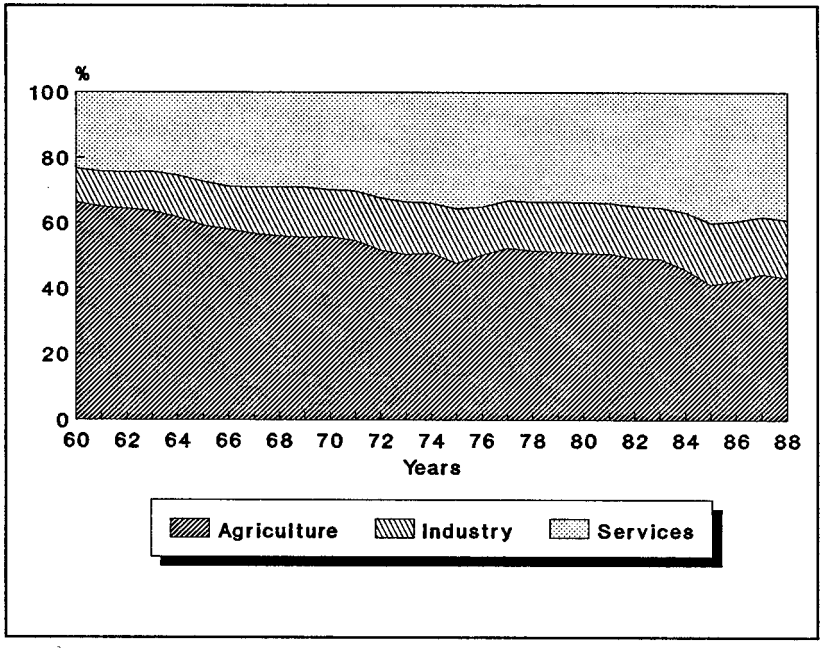


Figure 3 - Shares of real GDP at factor cost for economic sectors
Source: IMF, IFSs, various issues

net borrowing, and 400% in net revenues of capital investment. Apart from the effects of the 1984 drought, which considerably weakened the Ethiopian economy's recovery capacity, the plan laid down wholly unrealistic growth targets for the country's real production potential, resources and possibilities for mobilizing savings for investment. Even in 1982, UNECA said that it was only with an annual 26% investment rate that GDP might feasibly increase annually by 6.5%.

The trend of the time series shows that the country had no chance of reaching the targets. During the five-year period preceding 1984, in which three had exceptionally high GDP growth rates, net borrowing and official grants, the annual average growth rate never exceeded 2.6%, savings as a share of the total GDP was about 4%, with clear signs of a strong probability of a further expansion in the share of private consumption, investment stood at 10.4% of the total GDP, while agriculture, industry, and services accounted for 50.1%, 15.6%

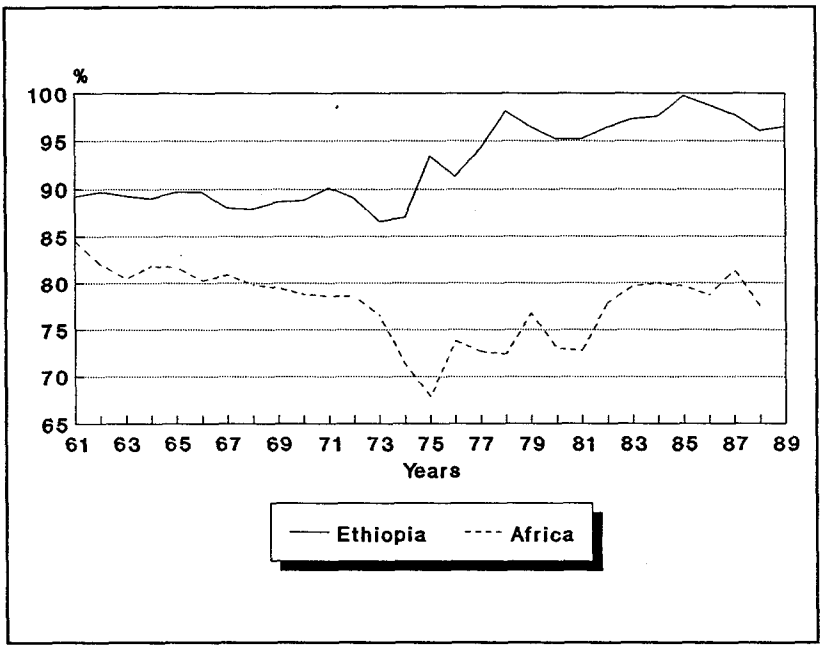


Figure 4 - Private consumption as percentage of GDP
Source: IMF, IFSs, various issues

and 34.2% of GDP, respectively; net borrowing (domestic and foreign) and grants received totalled an annual 563 million and 216 million birr, respectively. Of all the forecasts, perhaps the one which was furthest away from the country's real production capacity was the estimate for the restructuring of the economy, which provided for a decline in agriculture's share of GDP to about 39% and an increase in the industrial and services sector to about 24% and 37%. Within ten years the industrial sector was expected to be strengthened more than had been possible over the previous 15 and more years. In 1988 the industrial sector still only accounted for 17.6% of GDP.

The first two years of the plan experienced an unexpected deterioration in the economy due to the drought. Between 1986 and 1989, when the recovery began and part of the imbalances created in the previous two-year period were absorbed, GDP rose at an average rate of 3.9% while the real per capital GNP remained roughly the same, private

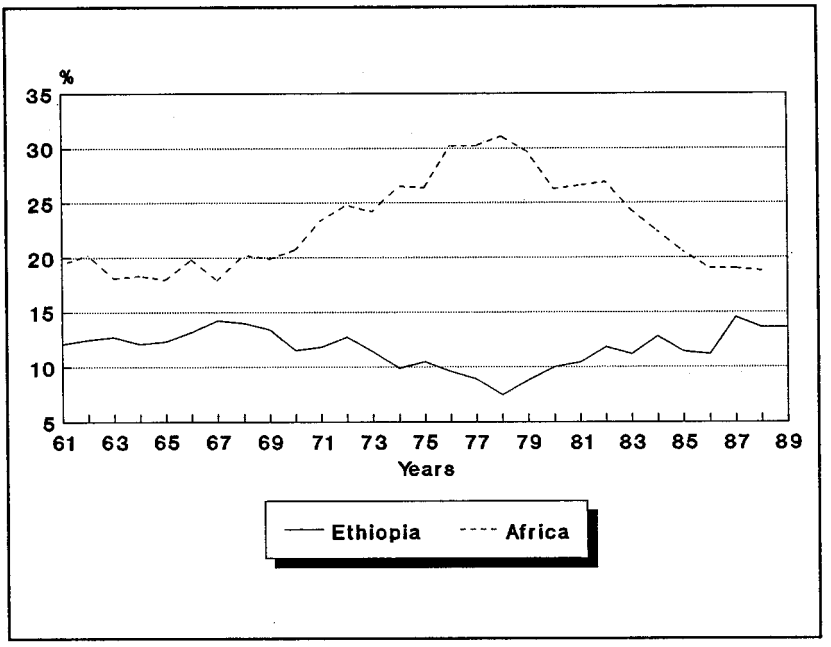


Figure 5 - Investment as percentage of GDP
Source: IMF, IFSs, various issues

consumption as a share of GDP remained very high, above 96%, and investment around 13%.

2.2 Consumption and Investment

The trends shown in Figure 3 indicate the tendency of the Ethiopian economy to hold high domestic consumption levels and low investment levels. Figures 4 and 5 show the trend of private consumption and investment as percentages of GDP. In the late Seventies, the percentage share of private consumption steeply increased. It soared to a peak of 99.7% in 1985. Throughout the whole period 1980-89 savings hovered between 10 and 14%, falling at times sharply below the average of the African countries.

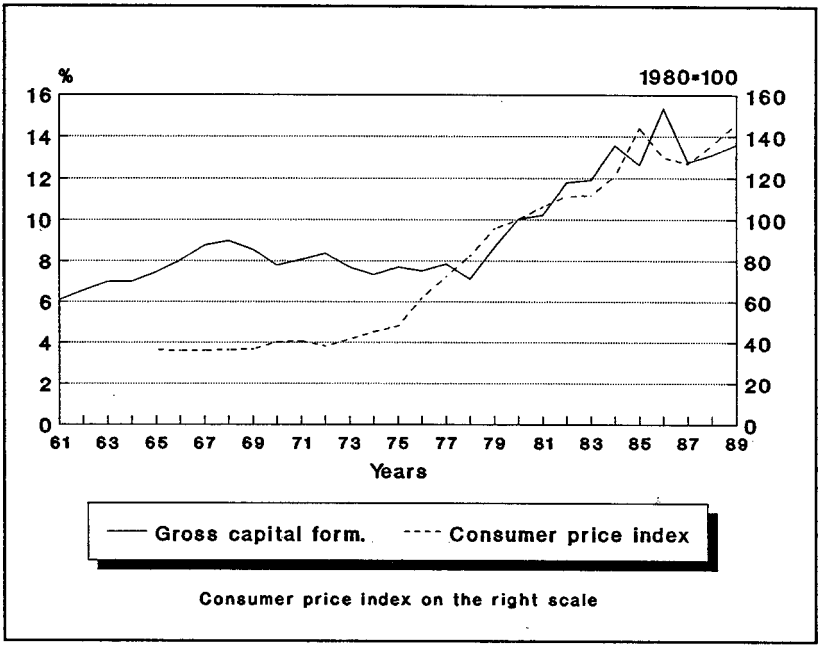


Figure 6 - Consumer price index and gross capital formation as a share of gross domestic product
Source: IMF, IFSs, various issues

2.3 Consumer Prices

As an indicator of the degree of economic adjustment, the inflation rate (measured in Figure 6 by the increase in consumer prices) rose rapidly from 1975 to 1985. The temporary fall in prices recorded in the following two years is significant because it reflects foreign food aid inflows following the international relief campaign for drought-stricken Ethiopia. The trend of gross capital formation as a share of gross domestic product, as Figure 6 shows, indicates that inflation did not have any significant influence on the share of GDP taken up by capital formation. On the contrary, excluding the period 1985-86, both series followed very similar trends.

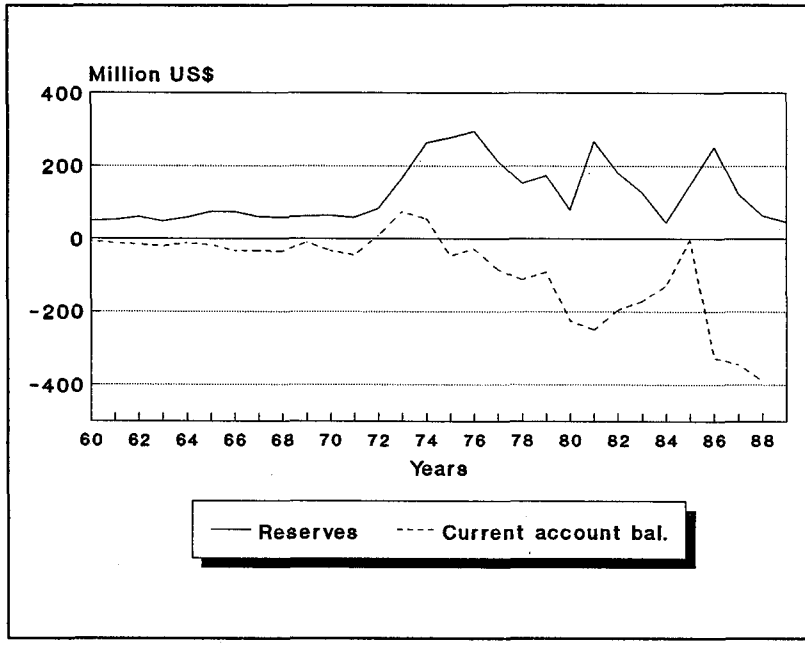


Figure 7 - Reserves less gold and current account balance
Source: IMF, IFSs, various issues

2.4 Reserve Flows

After the period 1957-71, in which the dollar value of all reserves other than gold remained roughly constant, the early Seventies was marked by a sharp increase in reserves, reaching 60% in some years (Figure 7). Reserves fluctuated sharply and drastically in the following years. These variations only partially reflected changes in the current account deficits. In reality they were closely linked to changes in world liquidity. The money shock in 1981-83 might, for example, have made it necessary for a drawdown in foreign exchange. The rapid depletion of international reserves which began at the beginning of 1986 was particularly worrying because, in the absence of any significant changes in the government's economic policy to encourage substantial increases in financial support by the governments of the industrial countries and

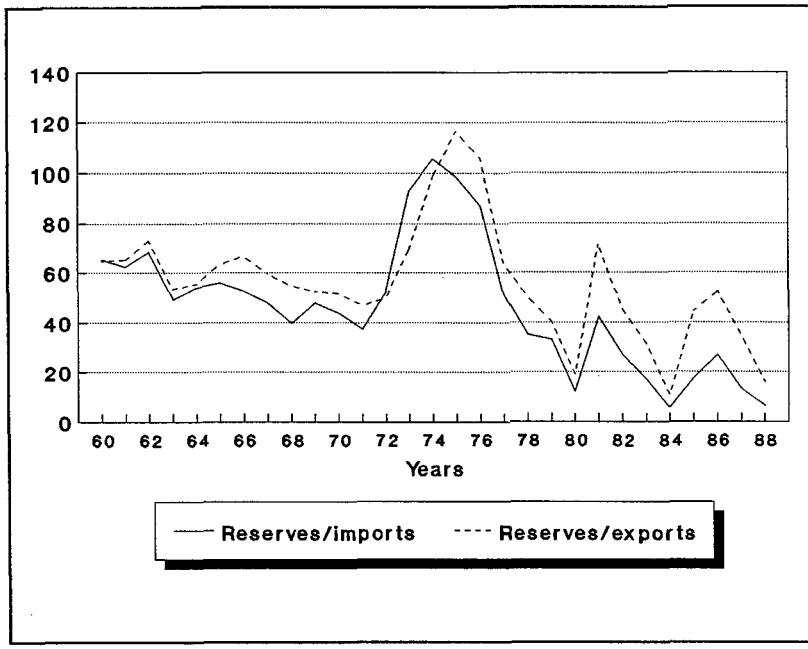


Figure 8 - Reserve/import and reserve/export ratios
Source: IMF, IFSs, various issues

the International Financial Institutions, the country might have encountered serious difficulties in servicing its foreign debt.

The reserve/import and reserve/export ratios also swung widely, mainly due to the variation in the levels of reserves, rather than of imports or exports. In 1975-76 both rates exceeded 100%. The two peaks in 1981 and 1986 were sharply below the levels of the mid-Seventies (on average, 30%) despite the fact that the actual increases in the reserves in absolute terms were fairly similar (Figure 8).

2.5 Foreign Trade

Ethiopia's foreign trade situation gradually deteriorated from the mid-Seventies onwards. Foreign trade has suffered from a combination of negative factors. On the export side, the country was exposed to

changes in international coffee prices and was also structurally affected by the weakness of such sectors as mining (1% approximately of GDP).[1] On the import side, Ethiopia revealed its strong dependence on petroleum imports.

Figure 9 shows the trend of coffee exports as a percentage of total exports, and the trend of imported petroleum and oil-derived products as a percentage of total imports. As the Figure shows, after the sharp rise in 1975-76 coffee exports always remained above 60% of total exports. According to a World Bank survey (1988) Ethiopia not only found it difficult throughout the Eighties to increase the volume of coffee exports, but its internal production capacity was seriously weakened because of inadequate effort at technological development, heavy taxation, inadequate price policies and, as a result of this, a reduction in acreages under cultivation. Moreover it is expected that over the coming years the productivity differences between producer countries are going to increase. The international coffee market will probably become more competitive as time passes for most of the countries which have performed poorly in the recent past, partly because of the build-up of huge stocks in order to keep down medium-long term international prices (see Figure 10). Countries like Ethiopia, with high average production costs, will probably be required to implement macroeconomic adjustment policies, including real exchange rates, to cope with low world coffee prices that are expected over the next few years.

As far as directions of trade flows are concerned, it is interesting to note that even after the 1974 revolution, and hence with the strengthening of political ties with the socialist and CMEA countries, no substantial changes occurred in the trade flows with industrial countries: in 1971, exports to the industrial countries accounted for 69.1% of the total, with imports 75.2%, whereas in 1987 these figures had only fallen to 65.5% and 67.7%, respectively; exports and imports to and from other developing countries were 28.4% and 20.5% in 1971,

1. The study by Etherington and Yainshet (1988) shows that price instability on the international markets is one of the main causes of reduced export earnings. Price fluctuations percolate through the whole economy through variations in the imports of capital goods and the domestic capital formation. Since prices are determined internationally, it is difficult to implement measures to offset the effects of these fluctuations. The country could stabilize coffee prices on the rural markets by laying down a minimum farm-gate price, thereby protecting the farmers against internationally generated fluctuations. At the present time the farmers are partly protected because at least 50% of their production is for domestic consumption.

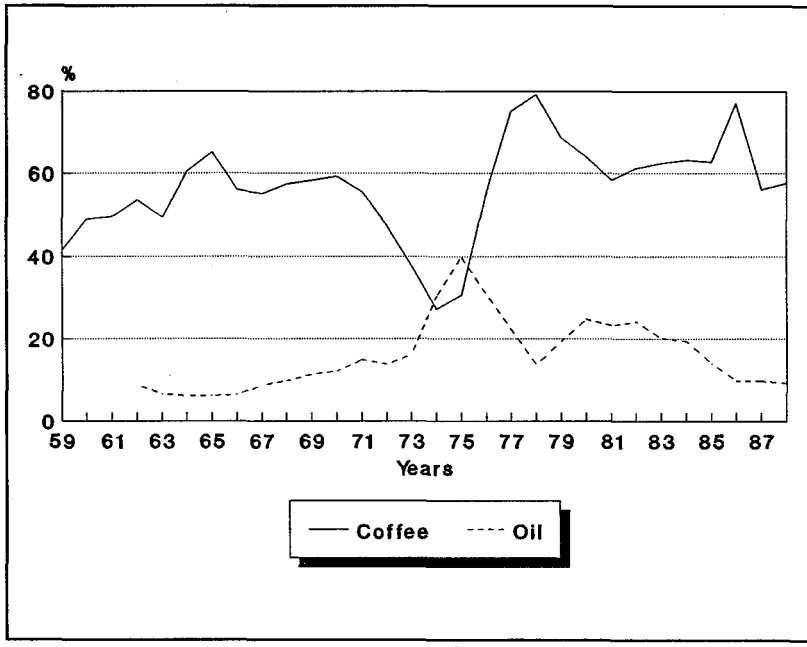


Figure 9 - Percentage of Coffee exports and oil imports in total exports and total imports, respectively
Source: Constructed from data on export and import values in million Birr from IMF, IFSs, various issues

respectively, and 25.4% and 10.4% in 1987; exports and imports to and from other countries, including CMEA, were 2.6% and 4.3%, respectively, in 1971, and 9.1% and 21.9% in 1987.

Conversely, significant changes emerged from an analysis of the trade by commodity sections. The share of the imports of "food, beverages and tobacco" and "fuels" rose considerably, while "manufactured goods" fell: 7.9, 9.4 and 78.8% in 1971, respectively, and 29.8, 14.8, and 52% in 1985. In the same period, exports of "food, beverages and tobacco" fell from 85% to 71.2%.

2.5.1 The trade balance

The foreign trade series clearly reveals the imbalances that exist.

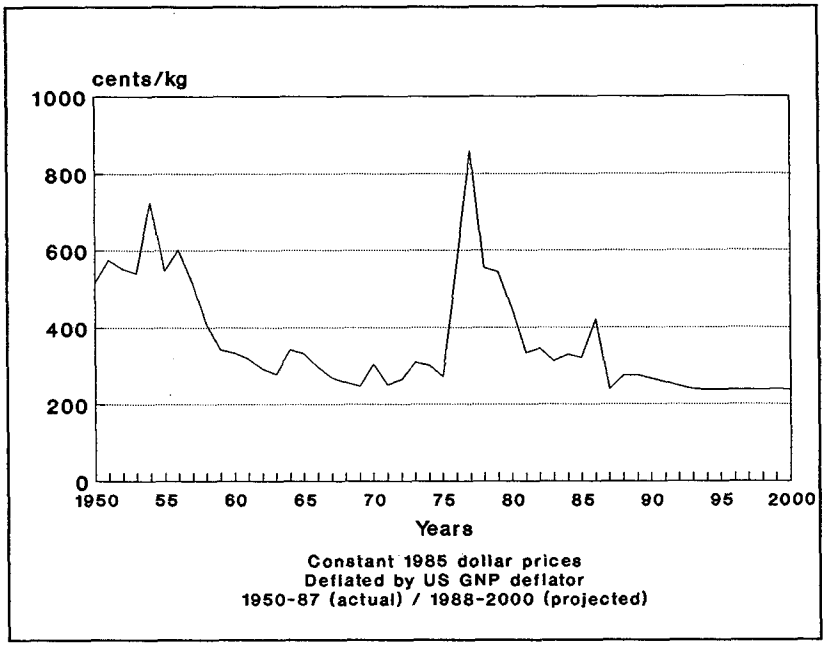


Figure 10 - Coffee prices 1950-2000, Other Mild Arabica
Source: World Bank, 1988

Between 1960 and 1987, the ratio of exports to GDP remained roughly constant, rising from 7.9 to 8.7%, while the ratio of imports to GDP rose from 9.0% to 21.4%; the ratio of trade balance to GDP moved from -1.1% to -13.0%; the ratio of exports to imports fell from 0.88 to 0.44%. In 1975 the trade deficit stood at 44 million dollars, in 1980 230 million dollars, and in 1985 507 million dollars.

The gradual weakening of the domestic production structure, mainly due to disinvestment in the agriculture sector and the reduction in acreages devoted to growing coffee, created supply problems for exporters with the result that there was a stagnation and in some cases a substantial deterioration in the volume of exports (Figure 11). The reduction in the volume of exports also aggravated the internal infrastructure situation, creating disincentives for producing in the agriculture sector and marketing the products. It is also significant to note the trend of export unit values. Despite the commodity price boom, partic-

ularly the price of coffee, in the second half of the Seventies, Ethiopia was not able to exploit the increases in international prices. In the years of greatest growth, exports fell by about 30%.

Figure 11 also shows the developments of Ethiopia's terms of trade. In the period 1976-79 the value of merchandise exports rose more than the increased value of merchandise imports. The same occurred in 1986 after a decline in oil prices and increased revenues from the coffee sales. However, generally speaking, the terms of trade declined by about 5% in the period 1970-1986, while projections for the early Nineties put the prices of Ethiopian exports at below those recorded for the first half of the Eighties.

2.5.2 External balances and debt problems

The deterioration in the terms of trade created a chronic balance of payments deficit, making it necessary to contract additional loans. Foreign debt rose from 804 million dollars in 1980 to 3,013 million in 1989. In 1989 the total debt stock accounted for 50.6% of GNP, and 416.8% of exports of goods and services. Total debt service charges accounted for 38.7% of exports of goods and services, while foreign exchange reserves stood at 4.1% of the total debt stock. Ninety-five percent of the total debt stock was long-term debt, wholly public and publicly guaranteed. Figure 12 shows the debt-export and debt service ratio trends (debt service 1 = total debt service/exports of goods and services; Debt service ratio 2 = interest payments/exports of goods and services).

2.5.3 Consequences of trade imbalances

Ethiopia's foreign trade series indicate a number of processes that have influenced the country's economic development over the past few decades. Basically, the development of external trade relations seems to have been characterized by four main factors. The first was that the deterioration in the terms of trade which led to a chronic trade and balance of payments deficit, requiring external borrowing. The second was the fall in the volume of imports, particularly of machinery and spares, which led to a deterioration in the country's infrastructures and indirectly increased disincentives to production. The third was the decline of Ethiopia's production capacity and its increased food de-

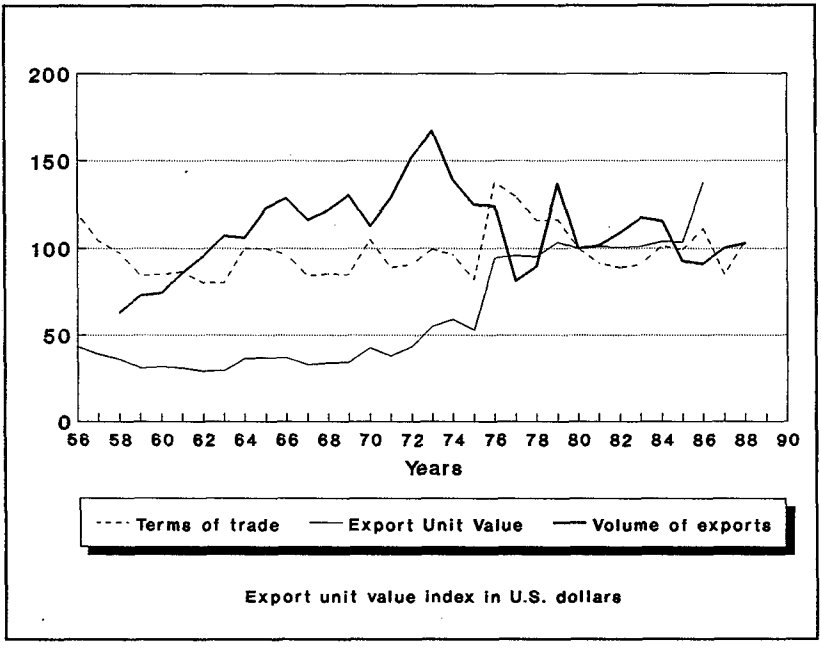


Figure 11 - Total trade in goods: export volume and value indexes; terms of trade; 1980=100
Source: IMF, IFSs, Supplement on trade statistics, 1988

pendence which was also represented by the increase in the volume of food imports. The figures set out in Table 1 on per capita food production clearly show that throughout the decade 1980-89, per capita food production fell sharply below the levels of the Sixties. The fourth was the reduction in foreign exchange earnings as a result of the decline in exports.

According to a normal adjustment process in which current account deficits are no longer sustainable, Ethiopia ought to have implemented import containment policies followed by policies to increase exports. However, exports did not increase to the required levels. The expansion of exports does not seem to be a realistic prospect for the foreseeable future in view of the constraints on the international markets, and the increase in the cost competitiveness levels does not seem feasible, in view of the forecast international price levels for the coming years. Furthermore, an export promotion policy could only further worsen

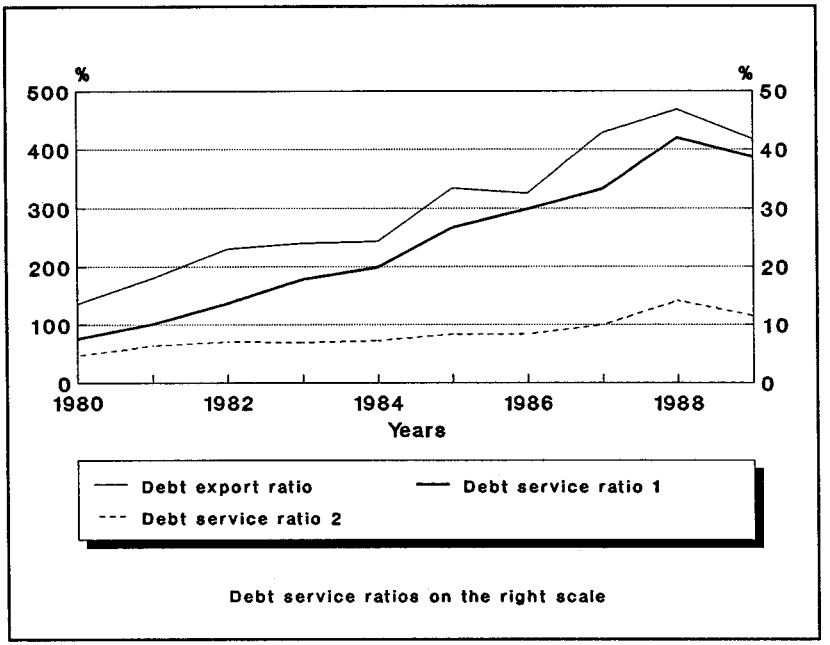


Figure 12 - Debt/export and debt/service ratios
Source: World Bank, World Debt Tables, 1990

the already inadequate level of food security. The resumption of growth involves investment in new sectors or in the existing export industries. However, the increase in international loans has been accompanied by a reduction in the level of gross domestic investment, perhaps because of the extremely high military expenditures until the beginning of 1991. The path which is valid for the other LDCs, leading the country towards a low-level growth equilibrium and thereafter to a rapid reduction of debt ratios leading to new credit availability and growth, does not seem to be a remotely viable proposition for Ethiopia.

In view of this, and also considering the far-reaching on-going political changes taking place in the country, there seems to be no alternative to the inflow of foreign capital, a revival of the economic sectors partly as a result of the willingness to privatize and liberalize internal prices, massive increases in the levels of loans granted by the International Financial Institutions and a resumption of development aid.

2.6 Exchange rate policies

An analysis of the exchange rate policies adopted by the LDCs is extremely important in order to correctly appraise the causes leading to a country's comparative international trading position. Monetary policies designed to over-value or under-value exchange rates are the means used to protect or to expose to varying degrees the internal products or the economies as a whole.[2] When the policies analyzed are those of a country whose domestic production structure is dominated by agriculture, as is the case with Ethiopia, the analysis of the international competitiveness levels is necessarily reflected in the growth and recovery potential of the agricultural sector.

The experience built up throughout the Seventies and Eighties does not seem to indicate that the flexible exchange rate system is capable by itself of solving the problems connected with restoring the balance of payments. However the sharp variations in exchange rates have sometimes been surprising, particularly with regard to their magnitude. As Dornbusch says (1987):

"In the past fifteen years key exchange rates have moved in larger and more persistent ways than advocates of flexible rates in the late 1960s would have left anyone free to imagine. Certainly there was no expectation of constancy for nominal exchange rates. But real exchange rate movements of 30 or 40 percent were certainly not suggested as a realistic possibility. Moreover, where these large movements did occur, they did not obviously appear to be connected with fundamentals, and hence seemed difficult to explain in terms of the exchange rate theories at hand".

2. According to Edwards (1988b), the mismanagement of exchange rates is one of the direct or indirect causes of the economic crises in the LDCs in the Eighties, including the debt crisis, (see also Cline, 1983), the poor performance of the agricultural sector in many African countries (see World Bank, 1984) and the poor results of free market experiments carried out in a number of countries in the Southern Cone of Latin America (see Corbo, 1986). The over-evaluation of exchange rates in particular has become popular because in the short-term it makes it possible to reduce inflation levels and increase national income, and hence increase the popularity of the governments. Over-valuation policies have been tried out not only in a number of LDCs, like Chile under Pinochet or Argentina under Martinez de Hoz, but also in a number of industrialized countries, particularly the United Kingdom under Mrs Thatcher and the United States under President Reagan (as Dornbusch said, 1987, "the best trick in the bag"). The costs of over-evaluation measures only become evident in time, once the substitution effect becomes predominant and the reduction in the quantities produced because of the loss of international competitiveness takes on greater importance.

A number of new issues have therefore arisen in an attempt to explain the massive and often unpredictable changes in real exchange rates, the relationships between changes in exchange rates and in relative prices, the linkage between variations in exchange rates and speculative attitudes or variations of an irrational nature, or the fact that persistent mis-alignments in exchange rates might have led to permanent over-shooting designed to remedy the consequences of over-valuation or under-valuation. It has also become essential to draw a distinction between volatility and mis-alignments (Williamson, 1985).

However, many LDCs have maintained pre-established nominal exchange rates or rates pegged to specific currencies even after the final collapse of the Bretton Woods system.[3] It is also a typical feature of many LDCs to have parallel exchange markets, non-convertible currencies, poor control over exchange, inadequate capital mobility, multiple official exchange rate valuations, and no real domestic financial markets. These reasons contribute towards making the exchange rate system of an LDC a unique case, which can only partially exploit theoretical advances in the exchange rate analysis as applied in advanced industrial countries.

2.6.1 Real exchange rates

Policies for the macroeconomic management of real exchange rates play an essential role in determining the profitability of export-oriented or import-competing agricultural commodities. The real exchange rate measures the terms of trade between traded and non-traded goods. If one thinks of the real exchange rate as the ratio of the prices of tradeable goods to the prices of non-tradeables, a fall in the real exchange rate means that the price of tradeable goods falls relative to the price of the non-tradeable goods.[4]

3. According to the IMF (1988) the LDCs exchange rate systems can be classified as follows: limited flexible exchange rates (4 countries), piloted flexibility exchange rates (21 countries), parities defined on the basis of macroeconomic indicators (4 countries), exchange rates pegged to particular currencies (88 countries), and wholly flexible exchange rates (10 countries).

4. There are various reasons which suggest that the real exchange rate is operationally more useful than, for example, the nominal exchange rate. Helmers (1988) suggests two: the first is the need to work in real terms in order to be able to analyze commercial transactions and current account movements using the same bases as for analyzing the real supply, the real demand and the real price of an individual commodity; the second is the need to introduce a number of "disciplinary" elements into the current account analysis in a situation characterized by the presence of a variety of exchange rate systems.

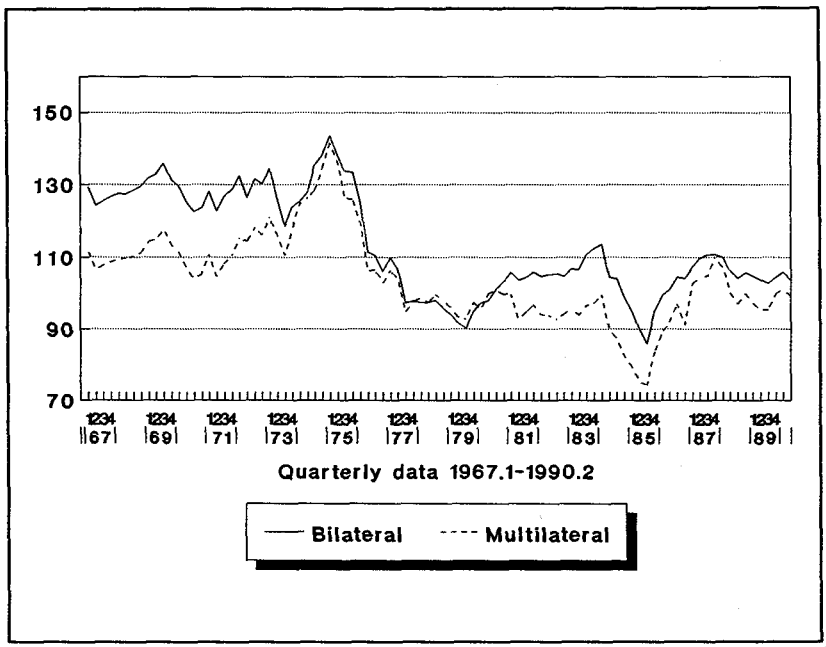


Figure 13 - Ethiopia: Bilateral (be1) and multilateral (me1j) real exchange rates
Source: Constructed from raw data obtained from IMF, the IFIs and the Directory of Trade Statistics

Figure 13 shows the trend of the bilateral RER (be_1) and the multilateral RER (me_{1j}) calculated using the procedure described in Appendix 1. As this shows, both RERs are characterized by a variability which denotes the absence of any particular long term trends. The behaviour of both indices tends to change, after the collapse of the Bretton Woods system, at the beginning of the 80s. This reflects the fact that the nominal exchange rates have always been officially pegged to the dollar in Ethiopia; between 1980 and 1985, however, when the dollar began to appreciate very rapidly against the other main currencies, the multilateral RER index was markedly below that of the bilateral RER. The trend of the indices is also characterized by a real multilateral depreciation which was observed up until mid-70s, followed by a rapid real appreciation. An analysis of the statistical properties of both indices also shows that the degree of availability of both RERs has in-

creased with time, becoming more marked since 1971.[5]

Elsewhere we have tried to demonstrate that the per capita GDP growth in Ethiopia is negatively correlated to some measure of RER instability, and that the policies for stabilizing the RER around more realistic values boosts the country's economic growth or that stabilization policies correspond to more stable RERs which better meet the equilibrium values. The results of our research have shown that the presence of misalignments in the RER stems from the financing of the fiscal deficit by increasing domestic credit, against a background of fixed nominal exchange rates. Moreover, Ethiopia showed a high degree of insensitivity to change in its terms of trade, thereby indicating the need for a higher degree of trade liberalization and a marked devaluation. Testing a simulation model with a substantial devaluation accompanied by stricter fiscal and monetary constraints, produced a partial elimination of the misalignments caused by macro-economic imbalances. Since the RER is a mechanism which hands on these imbalances, and constitutes a linkage between policy and performance, by readjusting it towards long-term equilibrium levels stabilization policies can be strengthened.[6]

2.6.2 Black market US dollar rates

In Ethiopia, as in many developing countries, the existence of a rigid exchange rate control system does not prevent the emergence of a large foreign exchange black market, and for certain types of transactions a process of "dollarization" of the economy.

From an analytical point of view, the existence of a non-official market in which, for the sake of argument, the dollar is quoted differently from the official market rate, has analogies with the case of the model which provides for a non-standardized nominal exchange rate, one of whose first proponents were Calvo and Rodriguez (1977).

The characteristic of illegality of the dollar black market nevertheless introduces substantial differences from the case of a normal non-standardized market (see also Flood, 1976).

5. The use of a triangular arbitrage condition for the nominal exchange rates has been suggested by Edwards (1989a) to prove that even with a fixed exchange rate against the dollar, fluctuations in the dollar against the other main currencies can still affect the multilateral exchange rate.

6. Viezzoli (1990). On the same subject see also Cottani, Cavallo and Khan (1990); Faini and de Melo (1990).

First of all, the situation of illegality means that the expectations of the operators and the risks connected with the possession of foreign exchange acquired on the black market, play a fundamental part in determining the premiums and the differentials between the nominal and the parallel exchange rates. Secondly, expectations relating to future political events play an essential part, particularly where changes take place as a result of those events in the intensity of exchange rate controls. Lastly, exporters of commodities earn foreign exchange, and can decided case by case how much foreign exchange to introduce into the country.

If one assumes that the behaviour of the economic operators is described by a model which stresses relations between portfolio decisions depending on the comparative advantages of possessing foreign exchange acquired on the black market and activities transacted in the national currency, and the black market for dollars (Dornbusch, 1976, 1980, 1983; Dornbusch and Fischer, 1980; Kouri, 1976; Rodriguez, 1980), the supply of black market dollars can be viewed as a function of the comparative level of wealth and the comparative weight of the dollar demand. The equilibrium on the market of dollar stocks demands that an increase in the supply of black market dollars should be accompanied by an increase in their comparative weight. This model is useful to explain how the expectations of future official devaluations are able to determine an immediate devaluation on the black market and lead to a decline in the premiums whenever that devaluation actually takes place. The opposite happens when the expectations are of a revaluation or a future shortage of dollars. This model also makes it possible to examine possible seasonal or cyclical features of the black market, as well as the speed with which it will react to shocks, including temporary economic or political shocks.

Figure 14 is interesting in this connection, showing the trend of premiums obtained on the Ethiopian dollar black market in the period 1970:2 - 1987:1. The premiums exhibit a variable behaviour characterized by the lack of any particular trends and the presence of peaks. Moreover, the periods in which the differential between the nominal exchange rate and the black market dollar quotation is greatest are the periods of great political instability or deep economic crisis in the country, namely: the 1973/74 drought and the 1974 revolution, the replacement by the Ethiopian dollar with the birr in September 1976, the takeover of the leadership of the Derg by Mengistu Haile-Mariam in February 1977, the worsening situation of the Ogaden war with Somalia in 1978/79, and the 1984 drought. Throughout 1986, following

the devaluation of the dollar, the birr increased in value whereas at the beginning of 1987 the country's persistent economic problems pushed up the parallel market quotations. The soaring premiums obtained on the black market matched periods of rationing or scarcity of foreign exchange on the official markets, and in which the foreign exchange control measures were intensified or the amounts of transactions permitted on the official markets were reduced.

The behaviour of the black market dollar quotations does not supply any information regarding the extent of the phenomena, which was probably concentrated in the main cities and the commercial urban centres. However, the level of premiums seems to be such that it is easy to disagree with the opinion expressed by Befekadu Degefe (1984) to the effect that:

"As the preceding discussion makes obvious, exchange control is very tight. Foreign exchange is distributed not through the market but administratively at a lower price than what the market is willing to pay for. These may create a necessary condition for the development of parallel markets. However the condition that makes it sufficient do not obtain and therefore the parallel market could be considered very marginal. Although difficult to estimate with any degree of confidence, parallel foreign exchange market would account for no more than 5%."

2.6.3. A few conclusions regarding exchange rates

Two main conclusions can be drawn from the analysis of the exchange rate policies adopted in Ethiopia. The first relates to the changes that have to be made to these policies, assuming in particular a devaluation of the currency. Devaluing the birr not only seems to meet the need to boost foreign trade but also to strengthen growth policies. It should nevertheless be borne in mind that the experience of other low-income, primary-exporting countries has shown that devaluation in real terms carried out simultaneously with a structural adjustment plan may not prove effective. First of all, because of inadequate supply responses and, secondly, because of the negative effects which the uncertainty about the results of the stabilization programme produce on the microeconomic reforms.

The second conclusion relates to the expansion of the US dollar black market. The estimate for dollar exchange rates on the informal market has made it possible to calculate an alternative RER to the official one. The analysis of the correlation coefficients between both

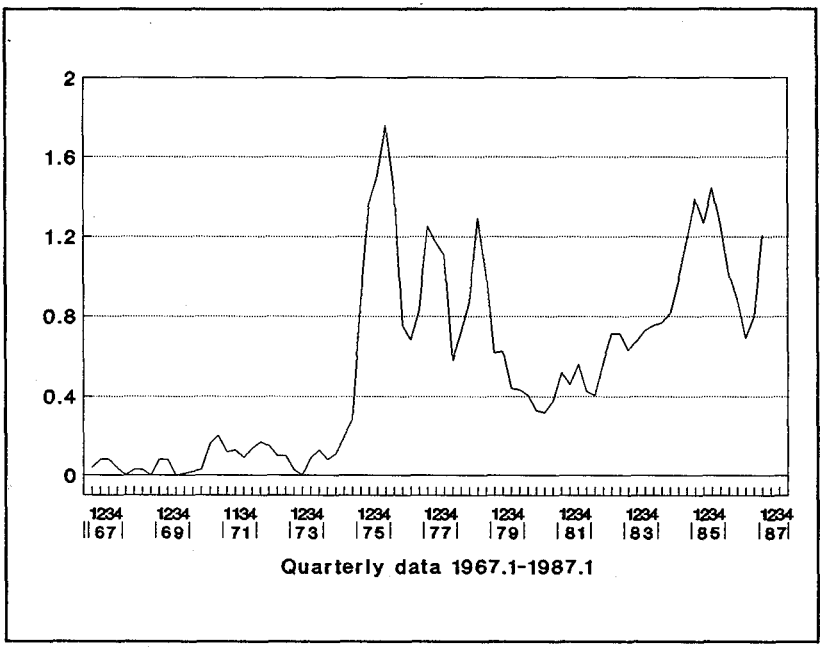


Figure 14 - Black market premiums
Source: Constructed from raw data obtained from Pick's Currency Yearbook and World Currency Yearbook

indices shows that they moved in quite different ways and often in opposite directions. This should lead, on the one hand, to greater caution when using the RER to design appropriate economic policies, and on the other hand, to take a more realistic approach to the exchange rate situation than has been the case in Ethiopia, at least until mid-1991 (Viezzoli, 1990).

3. Conclusions

An analysis of the time series shows that the basic problems facing the country hinge around the gap which exists between GDP growth and population growth, disinvestment in the agriculture sector, the decline in the level of food security and a foreign trade situation which

neither facilitates access to international loans nor increases the foreign exchange reserves. The country's extremely slow rate of development is due to a number of different causes. These include a deterioration in the terms of trade, mismanagement of domestic resources and development aid, a production policy based on the distortion of the signals being sent out by the price system and the interest rates and an overvalued exchange rate. All of this confirms the need to set a wide-ranging transformation process in motion in Ethiopia, setting aside the production system that has been practised since 1974, and attempting to solve some of the structural problems that it shares with all the less developed African economies.

The reform process should begin with a stabilization programme and the devaluation of the birr, in order to reduce the balance of payments deficit, the partial liberalization of prices and strengthening and liberalizing domestic commercial circuits. As the experience of such countries as Togo or Malawi shows, if the reforms are to be successful they must be rapid and intense. The governability of the process also demands the readiness of the IFIs and the governments which provide development aid, and private sources to finance the economic transformation of the country. In order to bridge the gap between domestic savings and investments and to make up the trade balance deficit, a combined policy is needed, combining increased development aid, foreign commercial loans, foreign private investment and debt relief.

With few exceptions, the vast majority of the low-income African countries receive development aid above 15% of their GNPs. Ethiopia, with only 12.2% (UNDP, 1991: 1989 data), belongs to the group of countries whose dependency on foreign aid is comparatively low. More than 18% of the aid is directed towards social investment compared with an average of 12.8% in the countries of sub-Saharan Africa, where a higher percentage of aid is used to finance imports and investments. There would therefore seem to be plenty of room in theory to considerably increase external aid. The industrial countries and the IFIs could find sufficient reasons in the political changes that have taken place in the government to increase their levels of aid. But despite this, the prospects for the coming years are not particularly bright. According to the World Bank (1989), development aid to the African countries is only likely to grow by an annual average of 4% throughout the 90s. However, among the countries which are most active in this area, Italy has reduced its real bilateral aid (Lancaster 1991), Japan does not seem inclined to increase its aid above the levels attained at the end of the 80s, and the United States seem to be concentrating more on liberaliza-

tion experiments in Latin America and in assisting the poor countries of Asia than resuming cooperation with Africa. Other countries, such as the United Kingdom and Germany, are struggling with their own budgetary problems and the difficulties of financing the economic recovery of the East German Länder.

In the medium term substantial increases in foreign commercial borrowing seem unlikely, while the level of foreign direct investments, which has always been low in the African countries, could fall even lower as a result of the redirecting of investments towards the countries of Eastern Europe.[7] The political changes that have occurred in recent months in Ethiopia should form a sound basis for ensuring that the process of greater political openness is irreversible, and thereby reassure private investors. However, the present thinking in government circles does not authorize us to state with any certainty whether misgivings and suspicion of the private sector of the economy have been overcome or not; or whether the administrative system is now able to streamline procedures for issuing permits and for privatization; or whether the highly centralized character of government in Ethiopia might indicate that there are no legal rules and that the laws are being applied in an arbitrary fashion.

Debt relief does not seem to be a sufficiently realistic hypothesis either. Ethiopia is not one of the 24 highly indebted countries which might be helped by the debt relief measures suggested by the Club of Paris.

Apart from any agreements that might be concluded with the IMF and the World Bank, there seems to be no alternative for freeing resources than converting part of the huge military expenses incurred by the country in recent years, and rationalizing the use of those which already exist.

7. For a more detailed analysis of the impact on international financial flows of economic liberalization in the Eastern countries, see also: Bogdanowicz-Binder and Phillips (1991), Young (1991), Adda and Colin (1990), Poznanski (1991), Institute for Economic Forecasting - Academy of Sciences of the USSR (1991), and Collins and Rodrik (1991). Collins and Rodrik in particular, analyzing the consequences on capital flows of the liberalization of Eastern Europe conclude that: a) real interest rates may increase in future between 1% and 3%, but only if there is no offsetting reduction in transfers to developing countries; b) alternatively, if the interest rates remain the same, there will be reductions in developing country investment amounting to 0.8% to 2.3% of their GDPs; c) on the basis of the more realistic assumption of a 1% increase in interest rates, the reduction in transfers towards the developing countries would be about 25 billion dollars, which would be equivalent to a reduction of about 0.6% of their GDP in their investments.

In 1987 Ethiopia imported weapons totalling 1 billion dollars; apart from Angola, this is the highest figure for all the countries of sub-Saharan Africa. That same year, the country ran up a military expenditure bill of about 500 million dollars. The magnitude of the phenomenon can be gauged from the fact that, in 1987, the aid used by Ethiopia for social investment was worth about one-seventh of the total spent on importing arms; military expenditure was equal to two-thirds of all the development aid received; and was almost twice the amount spent on education and health care services. Ethiopia was also, after Somalia and before Iraq, the country with the highest number of military in proportion to the number of teachers (UNDP, 1991).

Let us therefore suppose that an appropriate expenditure policy can be implemented in the near future, and that compared with 1987 expenditure on weapons and for military purposes are reduced to one-third. What could be financed with 1 billion dollars -- the equivalent of about one-fifth of the gross national product? First of all, it would be possible to more than offset any possible reductions in capital flows from abroad, and the medium terms effects of the Gulf crisis. It would also be possible to more than triple the amount of investments, wipe out the budget deficit, and service the foreign debt.

The problem of rationalizing existing resources still remains to be solved. There are two different aspects to this problem. The first is more directly related to the attempt to avoid wasting resources, or utilizing them inconsistently. There are many cases that could be mentioned here, but, for the sake of brevity, we will refer the reader directly to the "Tana Beles Project".

Chapters 2 and 4 of this book provide a more detailed account of this project, and so we will merely point out that the essential components of the project, until work stopped because of the civil war, were the following: mechanized farming of vast areas of land, using settlers as unpaid forced labour and subjected to food rationing, experimenting with irrigated cropping and allocating arable land to households only on the marginal and least productive lands. This led to partial food-dependency on the part of the settlers, limited monetary circulation, and created the technological dependency of the area on foreign technicians and the need to import spare parts, as well as atypical urbanization processes around Almu Town.

There were various reasons, some of them understandable, which led the planners to design this project around principles that were more consistent with agro-industry than with the need to develop a rural area by adopting mixed cropping techniques, and granting more opportuni-

ties for production to the resettled families. However, faced with the prospect of the imminent resumption of activities, a systematic and detailed examination must be made of the whole adjustment process to which the project must be submitted. The restructuring plan, which was necessary even before the events of the recent months occurred, can be put off no longer. It should make it easier to redirect activities, modify objectives, change the role of the Italian companies involved in the area, improve performance and make better use of available resources.

The main resources that have been under-used so far are the experience, the specific technological know-how, the productive strength, economic rationality and the capacity to optimize the use of the inputs at the disposal of the resettled peasants. In order to make full use of them, the right conditions will have to be established to ensure that every individual family is able to find work in the fields, market their products, make productive use of their services and create wealth. It will be necessary to underpin a system based upon the central role of peasant agriculture and on the attainment of food and economic self-sufficiency in the area.

A number of measures will have to be adopted, but only after the implementation of in-depth field research. Among these, the following seem to be the most important: distributing (or selling at a nominal price) land to the households; supporting family farming by granting them cheap inputs, training or retraining agricultural extension workers and facilitating commercial circuits; opening vocational training schools for the management and repair of the machine stock present in the area; using paid labourers to develop the areas needing to be farmed mechanically; supporting the establishment of service cooperatives to distribute foodstuffs, to market products outside the area and to procure inputs; setting up a rural credit bank; planning a hand-over process which should begin when the project resumes, and end after the third year of the commencement of the new phase.

The second aspect of the problem relates to activating economic policies nationwide, which are able to make the most of the peculiarities of peasant agriculture, *inter alia* to strengthen the export sector. This will depend on the thinking underlying the new agrarian policy, but it is to be hoped that after the failure of the collectivization experiments, adequate instruments will become operational in order to capitalize on the function of family agriculture. Development programmes should be agreed upon with the World Bank in this connection, together with a restructuring plan provided under agreements with the IMF.

Appendix 1: Bilateral and multilateral real exchange rates

The real exchange rate can be defined, according to the definition based on the PPP, as the product of the nominal official exchange rate (E) and the ratio between the level of foreign prices (P*) and the domestic price level (P):

$$[1] \qquad e_{PPP} = EP^*/P$$

However, the problem is that the measurement of the real exchange rate will vary according to the price indices used.[1] A number of studies use the GNP deflator as the main measure of inflation levels because this covers a wide range of commodities and services and is comparatively uninfluenced by distortions deriving from subsidies or price controls. In some LDCs the GNP deflator may be biassed by unrealistic evaluations of agricultural productivity and the level of government services, or by the weakness of the national accounts system. In the case of Ethiopia, it has been demonstrated that the GNP deflator is insensible to over 40% of the price increases recorded by the Consumer Price Index (CPI) (Wood, 1988).

Among the models set up for dependent economies one can also find real exchange rate definitions based on the ratio between internationally traded prices and non-traded prices (Dornbusch, 1974, 1980). Approximate measurements of internationally traded commodity prices are identified by the CPI (for example, de Vries, 1968) assuming that the data on the CPIs are more available and take overall account of changes in the comparative competitiveness levels, or in the Wholesale Price Index (WPI) (Diaz-Alejandro, 1986); and those of the non-traded commodity prices in the CPI (Edwards, 1988a, 1989a).

Measurements of the real exchange rate based upon the price indices ratio can therefore take the form of bilateral indices for which the internationally traded commodity prices are approximated either by the Consumer Price Index or the Wholesale Price Index of a trading partner country, whereas the prices of internationally non-traded commodities can be approximated by the Consumer Price Index of the selected country. This will give two bilateral real exchange rates:

$$[2] \qquad be_1 = ECPI^{US}/CPI$$

$$[3] \qquad be_2 = EWPI^{US}/CPI$$

where E represents the nominal official exchange rate.

One can also consider the trade-weighted multilateral real exchange rates, which are considered as overall measurements of a country's international competitiveness. In a system of flexible exchange rates in which the benchmark country has kept the nominal exchange rate pegged to the dollar, as Ethiopia has

1. With regard to the problems connected with measuring the real exchange rate see also Edwards, 1985a; Dornbusch and Helmers, 1988.

done, the multilateral rate provides a less-distorted measurement of competitiveness. Even the case of a currency pegged to the dollar, multilateral arbitrage conditions make it possible for variations in the dollar compared with third currencies to vary competitiveness levels (Edwards, 1989a). This gives the following two indices:

$$[4] \qquad me_{1j} = \sum_{i=0}^{K} \alpha_i E_i CPI_i / CPI_j$$

$$[5] \qquad me_{2j} = \sum_{i=0}^{K} \alpha_i E_i WPI_i / CPI_j$$

where the multilateral real exchange of a country j is the ratio between the sum of the products of the relative weight of the i-th commercial partner, α, the nominal official exchange rate, E, between the currency of the i-th country and that of the j country and the CPI (or WPI) of the i-th country, and the CPI of country j.

Lastly, there is a bilateral real exchange rate built up on the basis of the dollar quotations on the black market. The spread of the parallel dollar markets, their function within the economic system and the degree of "illegality" vary from one LDC to another. There are parallel systems which manage financial resources that exceed the amounts officially invested, and cases in which the parallel exchange rate is used to channel resources unofficially from international tourism. The nature of these markets is such that it is impossible to make any accurate estimate of the volume of the transactions made in this way. However, with an acceptable degree of approximation, it is possible to reconstruct the quotations of the dollar, and in some cases the quotation of other currencies.[2] The index takes the following form, where (PM) represents the quotation of the dollar on the black market:

$$[6] \qquad pme = (PM)WPI^{US}/CPI$$

2. For the analysis of the monthly dollar quotations on the black market in Ethiopia we have cited the data published by Pick's Currency Yearbook and the World Currency Yearbook.

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I. PROBLEMS OF RESETTLEMENT PROGRAMMES. THE CASE OF BELES VALLEY: AGRICULTURE, OFF-FARM ACTIVITIES, AND EDUCATION

1. AN OVERVIEW OF SETTLEMENT POLICIES AND PROGRAMS

A. S. Oberai

The purpose of this chapter is to provide an overview of the performance of national resettlement programs. The major focus of the discussion here is on the similarities and differences in the policies and implementation of different resettlement projects. An attempt is also made to identify the problems facing settlement programs and to indicate what *should* or *could* be done to improve settlement performance.

There are five sections in this chapter. The first provides a discussion of the performance of settlement projects, concentrating on the extent to which they have achieved their objectives. The second section discusses major economic and social problems confronting settlement programs. The third section analyzes the factors affecting success or failure of settlement projects. The fourth section considers whether resettlement is an appropriate policy response to the problems of population redistribution, unemployment, and poverty. Finally, the last section brings together the overall findings and highlights their major policy implications.

1. Achievement of settlement objectives

1.1 Population redistribution

Population redistribution - the movement of excess population from one part of the country to other, more sparsely populated parts - is often one of the principal objectives of land settlement policy.

In Sri Lanka the policy of colonization and irrigation is considered to have had a major impact on population distribution. The concept of large-scale colonization had been conceived by the policymakers in the pre-independence era. Because land suitable for cultivation in the wet

zone was scarce and what remained was comparatively inaccessible, the existing demand for land could not be fully met without using the resources of the dry zone. Several colonization schemes were therefore initiated. With independence the process of colonization was accelerated.

Several studies point to the success of land settlement and irrigation schemes, which have resulted in increased food production and considerable relief of population pressures in the wet zone (Indraratna et al., 1983). About 75,000 families were resettled between 1946 and 1971. Taking into account the estimated average size of the resettled households, this means that nearly 4 percent of the island's population was resettled within a period of 25 years (Indraratna et al., 1983).

In Indonesia, too, the idea of population transfer is far from new. The Dutch tried it in 1905, but for economic reasons rather than to relieve population pressures, when they moved Javanese to southern Sumatra, where additional labor was needed. Between 1905 and 1950 the government moved about 220,000 people to the outer islands.

Since independence, however, the pace has increased dramatically. Between 1950 and 1977, the program resettled about 771,100 people, while at least as many moved independently without being officially recorded (Arndt, 1988). Throughout most of the period, however, there have been wide gaps between the targets set for the program and the actual numbers moved, due both to the overenthusiasm in setting the targets and to political and administrative problems (Oey and Astika, 1978). Recently, the program has been much more successful in meeting its targets. The target for the Five-Year Plan (1979-84) was to move about 2 million people. It was a daunting goal, but the government appears to have achieved it. Encouraged by this success, the authorities want to move twice as many in the next five years.

In the case of the most often quoted objective, however - relieving population pressure - the program has had only a minimal impact in Java. While the official transmigration program moved at most 991,100 people in the 1905-77 period, the population of Java increased by more than 35 million during the same period.

With Java's population increasing by about 2 million a year, government officials no longer claim that the transmigration program could correct the population imbalance between Java and the outer islands. Arndt's analysis (1988) shows that even if it were possible to sustain transmigration at the Third Five-Year Plan (1978-79 to 1983-84) target rate, this would remove from Java only one-fifth of the annual increase in Java's population. A recent study has also noted that the number of

people who move from the outer provinces to Java is about two and a half times greater than that of people migrating from Java to the outer islands (Bahrin, 1979:300).

This is not to say that, in terms of numbers, the effort has been pointless. The removal of between 300,000 and 400,000 people a year during the period 1979-84 must have done something to relieve the population pressure and consequent social problems in some of the poorest areas of Java. Moreover, as Arndt argues, if the outflow of spontaneous migrants was to some extent induced by the transmigration program, the program can be credited with a greater total effect on the population balance than the official transmigration statistics would suggest. The influx of transmigrants also represents a significant addition to the human resource base of the outer islands, where low population density and a shortage of labor undoubtedly constitute obstacles to economic development. But it would clearly be difficult to justify the program simply in terms of its effects on the population imbalance.

In Malaysia, while population redistribution as such was never an objective of land development programs, FELDA was seen as having a role in regulating and stabilizing population movement within the rural areas. Except in Pahang, which depends on migrants from other states, the FELDA settlers are predominantly from their own states. This is largely because most states have a quota requiring a minimum of 50 percent of the settlers to be from their own states (Chan, 1983).

In this way the FELDA schemes succeed in retaining migrants from rural villages within the rural areas. Rural-rural migration is therefore encouraged, and this minimizes rural-urban movement. It will be noticed that, except where states have a land availability problem, most of the FELDA schemes are located in states that suffer from outmigration. This deliberate location of land development projects in such states provides FELDA with a stabilizing role, and partly explains Malaysia's relatively slow rate of urbanization, compared with other developing countries. Ying has shown that between 1957 and 1970 the urban population grew at the same rate as the rural population (2.6 percent a year). Since the natural population growth was somewhat lower in urban areas, some rural-urban migration obviously took place over the period, but the rate appears to have been low (Ying, 1977:87).

1.2 Colonization and development of new areas

There are many reasons why a government might wish to colonize

and develop a sparsely populated, underdeveloped area: increased agricultural output, considerations of national security, the provision of land for landless or displaced people, the relief of population pressures in overcrowded areas. The colonization of new areas is not, then, so much an end in itself as a means of achieving certain other goals.

In the Philippines the earliest settlement projects had the colonization of the frontier as their major objective. It was considered that the unexplored areas of Mindanao, Palawan, and Cagayan Valley had resources that were being underutilized. It was also thought that an influx of Christian settlers into these regions would lead to the assimilation of cultural minorities, or at least reduce the threat of raids or warfare against other regions. This was an important aim in the early settlement of the Mindanao regions. The initial projects therefore sought to achieve a major shift of population, with the aim of changing the economic and political character of the frontier area. From this point of view, the settlement program was very successful. From almost one-seventh of the average population density of the country's traditional agricultural areas at the beginning of the century, Mindanao's density had risen to almost one-half by 1975.

The pacification of cultural minorities appeared at first to have been achieved, but now looks to be one of the more palpable failures of the program. As the frontier areas rapidly filled up, conflicts began to arise between the original tribal inhabitants and the settlers. Early frictions returned, due both to cultural differences and to conflicts over land. Land disputes contributed to the problems, which culminated in the violent uprising led by Muslim separatists in the early 1970s.

Paderanga's study (1988) does suggest, however, that an increase in agricultural output has been a major benefit of frontier migration. Quoting the ILO mission report, he points to the expansion of the cultivated areas as a major factor in the growth of national agricultural output (ILO, 1974). The same report also suggested that land colonization could play an even greater role in increasing agricultural output, since a substantial amount of unutilized land still remained to be exploited.

Paderanga argues, however, that land settlement cannot be seen as the only option here. Other instruments for increasing agricultural output such as intensified cultivation, which would entail investment in rural infrastructure (irrigation, rural roads, etc.), must be considered. His analysis suggests that benefit-cost ratios for irrigation of rice land are higher than those for land resettlement.

The cultivation of hitherto unutilized land is also a major issue in

parts of Africa; in Somalia, for example, where nearly 70 percent of the 5.7 million population consists of nomads, only 1.5 million of the 8 million hectares of land potentially available for cultivation is actually cultivated.

Three agricultural and three fisheries settlements were established to settle war refugees and the 1974 drought-stricken population, but the achievements of these settlements have been much below target. The original target laid down by the Settlement Development Agency (SDA) for developing irrigated and nonirrigated agricultural land during the Five-Year Development Plan (FYDP) of 1974-1978 was 56,000 hectares for its three settlements. This target was subsequently scaled down to 30,000 hectares. By the end of 1978, only 2,438 hectares of rain-fed land had been reclaimed and improved (Ragsdale and Ali, 1988).

During the next development plan (the Three-Year Development Plan of 1979-81), the SDA's objective was to develop 22,000 hectares of land, half of it irrigated. However, since 10,000 hectares of this was to be at Dujuma, the overall target was reduced to 12,000 hectares when Dujuma was abandoned at the end of 1980, because the land was found to be unsuitable for irrigated agriculture and only marginally suitable for rain-fed agriculture. Soon after, even this modest goal was further scaled down to a mere 3,050 hectares.

The analysis by Ragsdale and Abdullahi (1988) suggests that Somalia's fisheries settlements are doing slightly better than the agricultural settlements, although neither appears to have been sufficiently successful in economic terms to make it worth emulating in future resettlement programs.

In Ethiopia, a recent land use survey has shown that only 15 percent of arable land is now under cultivation. There is, therefore, a great potential for developing land and moving people from high-density to low-density areas.

The settlement program in Ethiopia started after the 1974 drought. The target was to settle a population of 520,000 over a period of ten years. By the end of 1983, however, only 103,500 persons (31,506 households) had been settled in 83 settlements (Chole and Mulat, 1988).

In Peru it was hoped that the colonization of the Amazon, and in particular the forest highlands, would absorb a significant proportion of the country's population increment. Until the 1940s, the principal means used by the state to colonize the region was to establish and promote large estates. However, ecological problems, the decline in

international prices for cash crops, and the relative shortage of manpower proved detrimental to the consolidation of these estates. From 1940s on-wards, the emphasis was on the development of small family farms. In addition, the government encouraged the cultivation of crops that were required to satisfy urban consumption needs.

Carpio's study suggests that although the population of the forest highlands has increased in recent decades, the region has absorbed less than 10 percent of the population growth of the country as a whole (Carpio, 1988). Similarly, less than 20 percent of the Andean migrants have chosen the valleys of this region as their destination in the last 40 years. It thus appears that the forest highlands have not constituted a major alternative for human settlements.

1.3 Provision of land for the landless

In certain cases (although resettlement programs must necessarily involve the settlement and cultivation of hitherto little populated areas) the main emphasis of the program has been on the provision of land for landless people.

When FELDA was established in Malaysia in 1956, its principal objective was to develop land for the landless and unemployed. In 1966 the government created an additional organization, the Federal Land Consolidation and Rehabilitation Authority (FELCRA), in order to assist other poor rural groups such as those with small and fragmented holdings.

By the end of 1982, FELDA had developed 331 schemes with a total of 559,906 hectares of agricultural land, involving about 76,786 families (Bahrin, 1988). Assuming that the household size is six (five dependents and the settler), FELDA would appear to have moved more than 460,716 people. This does not include additional labor needed during the initial period of establishing the land schemes (viz. the use of migrant casual labor in land clearing, road construction, etc.). Although during the fourth plan period (1981-85), FELDA hoped to settle 6,000 families annually, it had been able to exceed this figure by 500 and 219 for 1981 and 1982, respectively.

In India, on the other hand, rural settlement projects have mainly been much less successful. In an evaluation of the Dandakaranya project, for example, Bose observes that the project has totally failed to achieve its objectives (Bose, 1983). When it was set up in 1958, its aim was to resettle 20,000 displaced families by 1959. It was thought that it

could eventually absorb as many as 2 million displaced persons. Bose's study indicates that by August 1979 only 31,007 families had been settled, and of these 11,364 (36.6 percent) had already deserted. The number of deserters has been increasing in recent years; during 1978-79, 844 new families were settled, while 2,504 deserted.

In an assessment of the Rondonia project in Brazil, Wood and Schmink suggest that the colonization program's most pertinent failure relates to the very size of the population, which has effectively benefited from the program. The goals have turned out to be far higher than the actual achievements. By mid-1974 only around 7,000 families had been settled in three major pilot projects, instead of the 100,000 families estimated initially (Wood and Schmink, 1979).

The failure to meet targets has led to large numbers of people arriving in the settlement areas and failing to find land within the settlement projects. By mid-1977, the number of agricultural families who had not managed to obtain a plot by legal or illegal means, and had thus joined the marginal population of newly created urban areas, was estimated at 30,000 (O Globo, 1977).

Recognizing the impossibility of absorbing the rural population that was migrating to Rondonia in growing numbers, the government was forced to adopt measures aimed at discouraging these flows at their origin. At the end of 1977, disincentive pamphlets were distributed in several municipalities in the states from which the majority of migrants to Rondonia had come.

Since then, however, the migration flows have continued. Henriques' analysis (1988) shows that northeasterners and other spontaneous migrants have been attracted in much greater numbers than could effectively be absorbed by official programs. For each family settled by the official programs, four others have established themselves spontaneously on vacant land. The authorities now say that they can no longer cope with the torrents of migrants that are being attracted by the 1 million free land titles being distributed by the government. New arrivals now have to wait up to four years for a title to 100 hectares of virgin forest (South, 1985).

The authorities of Rondonia are now faced with growing problems. There are violent conflicts over land, and uncontrolled urban growth and its attendant problems. Some of the settlers have become disillusioned by the lack of the easy wealth. They are ready to sell their holdings and move back to their places of origin or to even remoter jungle areas. Nevertheless, Rondonia's population continues to swell by 13 percent a year (six times the national average), and crime, disease, and

competition for available land are mounting (South, 1985).

The same sort of thing has tended to happen in Nepal. Planned resettlement started with the establishment of the Nepal Settlement Company in 1964, with the dual objectives of coping with the pressure of population in the hills and settling landless peasants, as well as peasants with inadequate lands in the Terai and Inner Terai areas. The provision of land at a nominal price, and the availability of social and economic infrastructure (such as schools, drinking water, roads, agricultural extension services and credit facilities within the project area), were important attractions for the hill people. They began to migrate to the resettlement project in large numbers, and the project could not keep pace with the demand for land through forest clearing. Those who had come in the hope of acquiring land encroached on forests in and around the project area, and the project had in turn to involve itself in resettling these encroachers.

At the beginning of 1969, the government established the Resettlement Department, with the objective of organizing land settlement on a massive scale. The program implemented by the Department has been largely ineffective, however, in meeting the objectives of resettling landless peasants and controlling forest encroachment (Kansakar, 1983).

1.4 Promotion of regional development

Land development programs have sometimes been seen, at least partly, as a means of promoting regional development. In Indonesia, for example, this was certainly one objective of the transmigration program.

If by regional development is meant the promotion of industry and trade, the exploitation and processing of minerals, forestry and other natural resources, and the improvement of transport and communications necessary to integrate the region more effectively into the national economy, then the contribution of the transmigration program has so far been quite marginal.

Arndt argues that the whole notion of promoting regional development by means of land settlement is unrealistic (Arndt, 1988). Land settlement is perhaps useful for the people who are given the opportunity of growing some crops in somewhat better conditions than at home in Java. It is a form of social relief for poor people, but it cannot contribute significantly to the industrial and commercial development of

the outer islands. For this it would be necessary to provide wage employment opportunities, which in turn would attract a large flow of spontaneous migrants from Java. But where would the jobs come from? Arndt and Sundrum have suggested that in the first instance they have to come from public employment, on public works, to create the infrastructure, in transport and other areas, without which regional development of the outer islands is in any case impossible (Arndt and Sundrum, 1977).

Some observers argue, however, that the approach suggested by Arndt and Sudrum would require diversion of a huge percentage of the national budget to the construction of infrastructure in the islands outside Java. While it is undeniable that infrastructure of all kinds needs to be expanded, there is obviously a point beyond which no central government can go when it comes to allocating funds to the development of relatively unpopulated areas (Perez-Sàinz, 1983).

While it is almost certainly totally unrealistic to regard a land development program in itself as a viable means of promoting regional development, such a program could well be a valuable part of a broader regional development strategy.

In Malaysia, land development and settlement constitutes one of the most important instruments of the regional development program. The available evidence suggests that land settlement schemes in Malaysia, combined with broader rural development programs, have been rather successful in increasing rural production, raising rural incomes and reducing rural-urban migration. The reduction in rural-urban differentials in income and employment opportunities, and the provision of social and economic infrastructure in rural areas, have discouraged potential migrants from leaving the rural areas.

In fact, it was also thought that the FELDA model of land development would include urbanization (or at least semi-urbanization) in the rural areas, something that is vitally necessary if the second and subsequent generations are to be retained in the rural areas. This would have tailored neatly with the goals of the New Economic Policy: to urbanize and modernize the Malays. Somehow this has not occurred. A physical aggregation of settlers engaged in agricultural activities does not constitute an urban center. While it is true that the Malays have migrated from the rural villages, they have in fact transplanted themselves to another rural and agricultural environment that is only physically more "modernized". If the FELDA type of land development is to function effectively as an urbanizing agent, it must offer a socioeconomic environment that is different from that of the *kampong* (village). The

social, economic, and commercial structure must be different, and it must offer opportunities for the sort of competitive endeavours that are usually found in urban centers. Thus, while FELDA has physically influenced the demographic landscape, it has not really succeeded in establishing urban growth centers.

Partly in response to this problem, FELDA has initiated a larger-scale integrated regional development. A number of projects have been designed and some of them have been implemented. Prominent among these are the Jengha Triangle and the Pahang Tengyara Region in Pahang and the Johore Tengyara Region in Johore. Unfortunately, whereas the land development and settlement part of some of these projects has developed according to schedule, thus bringing in the settlers, the growth of urban centers and the spontaneous movement of business and services are still lagging behind.

1.5 Agricultural Development

Agricultural development is often included among the objectives of settlement programs. Here again, performance has more often than not been disappointing.

In Nepal, for example, productivity has been lower in new settlements than in surrounding cultivated areas. This is due to several reasons. First, as most of the settlement projects are located on ground higher than the surrounding older cultivation areas, irrigation through canals from the rivers is not feasible. The intensity of cultivation in the resettlement projects is therefore very low compared with the surrounding areas. Second, the quality of land in the resettlement projects is not good compared with the surrounding lowlands. Third, the settlers do not get adequate loans and credit in time. In such a situation, they have to take the recourse of borrowing from moneylenders at exorbitantly high rates of interest. And, finally, the inaccessibility of projects, coupled with the absence of marketing facilities, has acted as a major constraint on the settlers' securing reasonable prices for their farm produce. Usually they have to sell their produce at low prices to moneylenders or local grain traders. Low farm incomes adversely affect their ability to improve the land and consequently result in low productivity.

In Indonesia, too, several studies indicate that in the northern Sumatran provinces, which have received relatively fewer transmigrants, the rate of growth of productivity has been higher than that in

southern Sumatra. Overall, the evidence suggests that productivity is abysmally low, except in the 10 percent of settlements that have tree crops or irrigated rice fields. None of the other settlements have returns anything like what the World Bank regards as the minimum feasible if the program is to be economically justifiable. There has been a small net increase in food production, but it can hardly justify the huge investment (Carelfield, 1984).

Settlement programs have not always been so unsuccessful in achieving their agricultural objectives, however. As we have already seen, frontier migration in the Philippines has been a major factor in increasing national agricultural output.

Bahrin's analysis (1988) suggests that in Malaysia, too, FELDA's land settlement schemes have made a significant contribution to the development and diversification of agriculture. The area developed and maintained by FELDA constitutes approximately 12 percent of peninsular Malaysia's cultivated land. Although it has helped to create a community of modern and relatively prosperous rubber smallholders, it is actually with respect to the expansion in the cultivation of oil palm that its contribution has been the greatest. By 1982, FELDA schemes were responsible for producing 4,734,605 tons of palm oil, representing nearly 30 percent of Malaysia's total production. The newly established smallholders thus appear to be playing a significant role in making Malaysia the biggest producer of palm oil in the world.

In some cases specific increases in output have occurred despite generally low levels of productivity. In Sri Lanka, for example, average yields have normally (though not always) proved to be considerably lower than the national average, and projects have suffered from serious problems of social cohesion and even, on certain occasions, of social distress. On the other hand, one major benefit of the land settlement program has been the increase in food production. It is estimated that more than one-third of Sri Lanka's paddy output is produced on major irrigation schemes in the colonization areas (Indraratna et al., 1983).

In Somalia, too, the total output from settlements has generally been quite modest, while the costs of developing and running the schemes have been high. From the standpoint of the SDA settlements' contribution to the import substitution, however, it is noteworthy that, among food commodities alone, sugar imports actually decreased from 90,818 tons in 1978 to none by 1981 (Ragsdale and Ali, 1988). Dujuma's newly transferred former nomads, contributing their labor to the new Juba Sugar Estate, were in large part responsible for this success.

1.6 Improved welfare of migrants

Reducing poverty and providing improved standards of living for the poorest in society (the landless, those with inadequate holdings of land, refugees, drought victims, and so on) is advanced as one of the objectives of most land settlement programs. It is thought both that the settlements will provide migrants with better incomes and that the concentration of people into settlements will make it easier to provide social services such as housing, health and education.

1.6.1 Settlers' incomes

As far as settlers' incomes are concerned, settlement performance has been mixed. In Peru, for example, the evidence suggests that the farmers of the forest highlands enjoy a higher standard of living than in their regions of origin. In a survey carried out in Alto Huallaga in 1973, for example, two-thirds of the respondents indicated that their situation had improved since moving or simply that they were satisfied. Even in the case of Tambopata, which has been described as one of the most depressed settlement areas in terms of development and availability of basic services, only 47 percent of migrant families had real incomes below the legally established minimum rural wage, as compared with 56.3 percent in the areas of origin (Carpio, 1988).

In Malaysia, it seems that poor rural farmer of any age who decided to join a FELDA scheme enjoyed, after a few years of settlement, a steady increase in the level of real income between 50 and 74 percent, compared with farmers of the same age who did not join the FELDA schemes, but who might have been benefiting from other rural development programs during the same period (Bahrin, 1988). While the average income of rural workers in Malaysia increased from M$200 per month in 1970 to M$355 in 1980, the corresponding figures for the average income of urban workers were M$428 and M$675. Although the average income of the FELDA settlers in rubber schemes is still well below urban levels, the income of the oil palm settlers is definitely comparable.

In Indonesia, too, migrants do seem to experience some improvements in their incomes, although the available evidence suggests that benefits are still extremely variable and on average relatively small. The average income of transmigrants is only a little above that rural in Java.

Even in settlements assisted by the World Bank, farmers with an average of just over 1 hectare under cultivation are found after three to four years on the site to reach an annual family income of only about U.S. $600 (at the 1982 prices). This may be compared with an estimated average per capita consumption expenditure of about U.S. $120 in rural Java (Arndt, 1988). It must be remembered, however, that most of the transmigrants are not average Javanese. The majority are recruited from among the landless and poorest. To them, even an average migrant standard of living, including a piece of land of their own, represents a big improvement.

Unfortunately, in many countries land settlement programs have not had even this limited degree of success. Evaluations of colonists' returns in coastal northeastern Brazil and Costa Rica show that most colonists earn less than the minimum wage. In the Satipo region of Peru and the Eje Norte of Paraguay, the average colonist spends more than he earns.

In Somalia, the SDA had estimated that the gross family income for 1976 would be around 12,921 shillings, of which about 47 percent was to be returned in kind or cash to the SDA for operational costs, leaving each family with about 6,848 shillings net average income. This was to be compared with an estimated national family income of only 3,504 shillings in 1976.

Obviously the settlers had high expectations that their income would rise substantially once the program was implemented. Despite enthusiasm and hard work on the part of the settlers, however, most settler households received less than 2,400 shillings, an income considerably below the projected net income of 6,848 shillings (Ragsdale and Ali, 1988).

Low farm incomes force many colonists to seek off-farm work to supplement their farm earnings. Here again, a lack of off-farm employment opportunities is a problem in almost all settlements, so settlers often cannot solve their problems by seeking work away from their farms. Low incomes often cause settlers to abandon the settlements.

In Latin America, for example, while earnings from off-farm work may enable the family to meet subsistence needs, most frontier jobs pay poorly, and only rarely do they provide enough to invest in commercialization. For many settlers, off-farm earnings simply cannot fill the gap between net farm income and consumption expenses, with the result that they have to obtain credit from local merchants to tide their families over until the next harvest. When they cannot clear their debt, they have to sell their land. The debtors either start anew, become tenants

or sharecroppers on a large landowner's farm, or become casual workers in the frontier zone. The net result is that, despite the fact that colonists start off with similar holdings, land is increasingly held by a smaller and more select group of rich individuals, while the poorer colonists find themselves on successively smaller plots after each forced sale.

1.6.2 Provision of social services

Here once again, settlement performance is very mixed. In the United Republic of Tanzania, the provision of social services such as improved access to clean water, primary education, and health services to a vast majority of the rural population has been among the most notable achievements of the "villagization" strategy. The availability of these services had led to a reduction in mortality and an increase in life expectancy, a reduction in the incidence of some diseases, and an ability on the part of a more liberate society to comprehend and implement technical and scientific innovations. As social and economic development indicators show, since independence, and particularly in the post-1967 period, the enrolment rate in primary schools has almost tripled, with over 70 percent of school-age children (7-13 years) attending school; health services are within easy access at 5 kilometers for over 50 percent of the population; around 40 percent of the population now has access to safe water, as compared with only 13 percent in 1970; and the average life expectancy has increased from 37 years in 1967 to 50 years in 1981 (Findley, 1988).

One important social consequence of villagization has been the improved position of women in society. Women are now entitled to village membership in their own right and play an active role in communal agriculture. In most villages women are represented on the village councils. The provision of clean water in many villages has relieved women of the arduous task of fetching water from great distances from the village (Shayo, 1984).

In Somalia, though income and production targets have not been met, the settlements have been quite successful in creating a social infrastructure that has improved hygiene, nutrition, and educational opportunities for some 15,000 families.

The provision of education and health care at the settlements appears to be well above the national norm. In 1981, the elementary school program at the settlements ranked behind only 5 of the 16

administrative regions in terms of the rate of enrollment. At the intermediate (grades 5-8) and secondary levels, the settlement enrolment was less than only two and three regions, respectively (Ragsdale and Ali, 1988).

Health facilities at the settlements also appear to be above average. Each of the settlements at Kurtunwary and Sablaale has a central hospital with about 130 and 140 beds, respectively. Each settlement has a lower ratio of persons per dispensary than the national average (and much lower than the home regions of the settlers).

While health facilities are generally at higher level than the national norm, however, the former nomads face unprecedented health hazards in bilharzia and in the year-round incidence of malaria.

Housing has also presented problems, and the housing pilot projects at the agricultural settlements remain a point of controversy. By 1981, the targeted 400 houses at Sablaale and Kurtunwary were still far from completion. At Sablaale, only 58 houses had been completed. The situation at Kurtunwary was not much better. The housing was expected to be low cost, but turned out to be expensive, with a large component of imported materials.

In many other countries, however, the provision of social infrastructure, has been totally inadequate and has often constituted a major reason for settlement abandonment. A 1979 report on Dandakaranya project in India found, for example, that only eight of the 381 villages had been electrified; that the supply of drinking water was far from adequate; that of 296 primary schools, as many as 169 were housed in temporary structures; that there was a shortage of medicines in the hospitals and dispensaries; and that several vacancies for technical staff had not been filled.

Nor does the implementation of a colonization policy in Brazil's Rondonia appear to have significantly enhanced people's well-being. The analysis of data from a recent survey shows that in 1980, 93 percent of settlers' houses were made of unfinished wood (Henriques, 1988). A similar percentage of houses had no source of water other than a nearby river or an untreated well. Sewage facilities were also lacking; 73 per-cent of the settlers had none at all and 22 percent only a rudimentary cesspool.

Health standards were also found to be low among both settlers and *agregados* (agricultural laborers). Disease was part of their lives. Sixty percent of the settlers reported that they had felt sick during the month prior to the survey, and most of them had had to interrupt their normal activities as a result.

The available evidence on the Bura project in Kenya suggests that here, too, the settlers run serious health risks. Malaria and malnutrition are widespread, and infant mortality is high compared with other rural areas of Kenya. The provision of social infrastructure has also not kept pace with that of the settlement. This is largely because of the National Irrigation Board's (NIB) comparatively weak resources for coordination and planning in sectors where they rely on action by other ministries.

1.7 Broader social objectives

Land settlement programs have sometimes had extremely far-reaching social objectives. In the United Republic of Tanzania, the objective could be described as a complete transformation of rural society. The villagization program was an attempt by the nation's leadership to evolve a coherent rural development strategy with the aim of fostering communal production on the *ujamaa* (socialist) model, thus achieving growth with equity. After the Arusha Declaration (1967), which ushered in the philosophy of socialism and self-reliance, the United Republic of Tanzania embarked on the collectivization of the entire rural population into nucleated settlements (ujamaa villages) as a precondition for rural development. Although ujamaa villages were conceived as a voluntary association of people living and working together, some force had to be used to move people into them.

Maro's study (1988) indicates that today, practically the whole of the rural population of the United Republic of Tanzania is living in more than 8000 villages. The total cost of moving around 5 million people has been estimated at 800 million Tanzanian shillings, which is a very large sum of money, since it was not initially planned or budgeted for. The opportunity cost of spending this sum of money on moving people to villages must have been great, but has never been assessed.

The objectives of the nucleated settlements were to mobilize land and labor for communal production and to achieve equitable income distribution. Although the growth of rural incomes had been slow compared with that of urban incomes, there has been a lessening of inequality in the rural areas, as shown by the decline in the Gini coefficient from 0.57 in 1969 to 0.49 in 1976-77 (Maro, 1988). One of the factors that accounts for this trend is the redistribution of land and introduction of income-generating communal activities through the villagization program.

In spite of villagization program, however, levels of agricultural production and productivity have continued to be low, and as a result rural incomes have remained far from adequate. In fact, there are some indications that agricultural productivity and output have actually declined. There are several reasons for this. First, the communal farms have not been successful. At the same time, private farms have not been allowed to borrow money. Only the communal farms have had privileged access to credit and technical assistance. Second, there has been greater emphasis on the transformation of the institutional structure for rural development than on measures such as the adoption of new technology and the increased use of fertilizers, which would improve agricultural productivity directly. Third, young adults have been moving to urban centers, leaving behind the children and older people. This has adversely affected land and labor productivity in the rural areas.

2. Problems confronting settlement programs

2.1 Settlers' abandonment of settlement schemes

The problem of settler retention is one that confronts most settlement schemes to some degree. Where settlement performance and achievement of objectives are poor, and the settlers are disappointed in their often unrealistically high expectations, the natural tendency is for settlers to abandon the settlement and seek better opportunities elsewhere.

In one completed project in Nawalpur, in Nepal, where the land titles have been conferred, nearly 50 percent of the original settlers have already disposed of their plots and left. Of the remaining 50 percent, very few families have holdings of 4 bighas (1 bigha = 0.7 hectares), most of them already having sold a portion of their land (Kansakar, 1983: 243).

Here, low productivity seems to be at the root of the problem. Despite facilities such as agricultural extension services, agricultural development in settlement projects, as discussed earlier, has not been remarkable compared with the surrounding older areas of cultivation. In a recent review of planned resettlement in Nepal, Kansakar (1983:244) concludes:

"... the programme has not been able either to emerge as an example of agricul-

tural development or to raise the standard of living of the resettlers. The apathy on the part of the resettlers in agricultural development and the discouraging environmental conditions of the settlement projects indicate that the resettlers are just waiting to acquire land ownership certificates in order to sell the allotted land and go elsewhere".

Settler retention is also a major problem for most settlements in Ethiopia. Several factors account for the high but variable rate of settler abandonment of the settlements. Initially settlers were not allowed to bring in their families. This resulted in a shortage of labor and low productivity. As a consequence, many of the settlers left the settlements. The multivariate analysis by Chole and Mulat (1988) suggest that the more distant a settlement is from the origin of the settlers, the smaller is the degree of settlement abandonment.

In Somalia, because achievement of production targets has been unsatisfactory, income in settlement areas is considerably below the target levels and is not adequate. As a result, many of the settlers, particularly the adult males, have been abandoning the settlements in search of work elsewhere, leaving behind the children and the older members. By 1981, only 75,000 of the original 120,000 former nomads remained in the settlement schemes (Ragsdale and Ali, 1988). This has adversely affected agricultural productivity and incomes in settlement areas. The family members are left behind so that they can take advantage of the free education and the health and housing facilities available in the settlements.

In Indonesia, lack of infrastructural facilities, such as housing, drinking water, roads (essential for marketing), and irrigation; lack of farming experience; and scarcity of nonagricultural employment are among the important factors that have induced people to abandon the land settlement projects. The available evidence suggests that in most settlement projects between 6 and 10 percent of settled families have already abandoned the settlement sites.

2.2 Lack of non-farm employment opportunities - second generation problems

The provision of non-farm employment is an area most settlement schemes seem to have failed totally.

Even in Malaysia, where the land settlement program is conceived as part of an integrated regional development program, the problem has

not been solved. Initially one plot of land (4-5) hectares is perhaps adequate to provide a minimum income for the family, utilize the family labor, and satisfy the emotive need for land ownership. This is workable during the early years while the settler's family is small. As it grows, however, the triple function of land fail. One of the rigid principles of FELDA is that the settler's land cannot be subdivided, for fragmentation creates uneconomic holdings. This means that the settler's dependents will have to leave the land settlement scheme to seek employment opportunities elsewhere. A new cycle of out-migration is thus generated. Already, though the problem is not acute yet, this new wave of out-migration is occurring, particulrly among those who have received a higher level of education and who have developed some inclination toward urban living (Chan, 1983).

Under such circumstances, what is needed is the establishment of urban-based industries and activities in the schemes. As we havw seen, this has so far not been achieved. Thus, although land settlement programs have given potential rural-urban migrants the alternative of remaining in the rural areas, they can play only a temporary role in combating rural-urban migration.

Nepal provides another typical case. As agriculture is characterized by slack seasons, the resettlement program should provide alternative employment opportunities outside agriculture during the slack seasons to generate additional income for the settlers. As it has not been able to do this, the settlers are unemployed or underemployed for a large part of the year. Moreover, with the gradual increase in the size of settlers' families, the allotted holdings in the resettlement projects have not been large enough for families to maintain a livelihood. Fragmentation of land in the re- settlement projects has therefore led to the emergence of landless families or families with inadequate land within the settlememt areas. The program thus completely lacks a plan of action to deal with second-generatin problems.

In the Dandakaranya project in India, the failure to provide non-farm employment seems to have had particularly distressing consequences. The available evidence suggests that due to lack of employment opportunities in the schemes, there are large numbers of young men and women who have grown up in the Dandakaranya area who are totally frustrated. Some of the young men have turned to crime, and there are reports of young women taking to prostitution, especially in the nearby Bhilai industrial region (Bose, 1983). The human suffering generated by the failure of the Dandakaranya project has yet to be assessed.

A serious problem for land resettlement programs in Latin America is that of land concentration, which defeats many of the aims of the programs, such as providing land for the landless and promoting greater equality in land and income distribution.

The process of land concentration is well documented by Martine (1982) in his study of the colonization on Brazil's Rondonia. Concentration often results from the sale of land by failed colonists. By 1976, the small farmer colonists (those with less than 50 hectares) made up 31 percent of the farms but owned only 1 percent of the land. Almost 60 percent of the land was controlled by a minority of 1.2 per- cent of the landowners, each with 5,000 hectares or more (Findley, 1988).

The analysis by Henriques (1988) also suggests that significant changes are taking place in Rondonia's land tenure system. The mean size of larger holdings has almost doubled during the last five years, a clear sign of a land concentration process. Several other reports also indicate that up to one-third of colonists sell shortly after receiving their land titles. Eighty percent sell their land within five years (South, 1985). By the time the roads and infrastructure arrive in the settlement areas, the original colonists are often exhausted. Since prices have usually doubled in the meantime, they accept any cash offer and move on. The pioneer region thus becomes like a stock exchange; many people think that they can make more money by selling land than by planting it. Many of those who sell their land end up as a day laborers.

Some who sell their land, however, are not compelled to do so by debts or lack of capital. With the rise in land values, colonists sometimes find it more profitable to sell their land after only two or three years of occupation. They obtain a plot of land, clear it, work it for a few years and then sell the improvements. In Colombia's Llanos Abrierto and Departmento de Meta, for example, professional colonists can earn up to U.S. $30,000 per hectare of improved land sold (Findley, 1988). Some of them hope to amass enough capital eventually to establish their own cattle ranches, but for many clearing and selling becomes a way of life.

The result of this process is the emergence of the *minifundia-latifundia* pattern so evident throughout settled, traditional areas of Latin America. In Bolivia's Santa Cruz zone, for example, the majority of the settlers no longer possess their original 20 hectares. Despite relatively equal plot sizes at the start of the colonization, after 10-15 year over

one-third of the land is possessed by one-sixth of the colonists (Maxwell, 1980). This process of concentration has been observed in virtually all Latin America's frontier zones.

Shifts in crop patterns and labor force demand accompany the land concentration process. Like large land-holders in traditional settled zones, the large landholders in frontier zones concentrate on raising livestock or commercial crops that do not require large or year-round labor inputs. This can only have an adverse impact on the population retention potential of the colonization zones, where many colonists depend on off-farm agricultural wage labor.

2.4 Social tension between settlers and indigenous population

Tension are likely to arise between settlers and indigenous population if the settlers are perceived to have larger landholdings and better provision of social services or to be encroaching on land traditionally farmed by the local community.

As the Andean settlements in Peru's forest highlands have grown, land areas that had always previously been held by indigenous forest communities have been taken over. The competition for both land and labor led to serious ethnic conflicts (Carpio, 1988).

The lack of adequate communication with the indigenous tribal population regarding the resettlement scheme was an important factor contributing to the failure of the Dandakaranya project in India. This led to misgivings on the part of the tribal communities and tension between them and the migrants. As we have seen, there have also been serious conflicts between separatists and Christian settlers in the Philippines.

It is a crucial part of the resettlement agency's job to ensure that there is adequate communication between settlers and the indigenous population. It should also anticipate that feelings of jealousy are likely to arise among the native population if superior services and housing are provided to the settlers. If possible, education, water, health, and other services should be made available to both groups, and a suitable social climate generated for their integration.

In fact, spontaneous migration is less likely to create the social problems that occur in many governmental resettlement schemes between migrants and local residents. This is because spontaneous migrants are more likely to have some contact with the local residents

before migrating, or once they have arrived might work out acceptable relationships with the local population in order to succeed in the new areas.

2.5 Ecological problems

In many Latin American countries, the practice of shifting cultivation by settlers has resulted in the excessive deforestation and serious ecological deterioration that is at present occurring in the different basins of the forest highlands. In Peru, for example, during the period 1925-84, approximately 7 million hectares of forest are estimated to have been destroyed (Carpio, 1988). The cultivation of crops unsuitable for the forest highlands has also contributed to the environmental problems (Hyman, 1984).

Because of this practice of shifting cultivation, a significant proportion of the agricultural land is now uncultivated. Although this has been done largely to maintain soil fertility, measures should be taken to use land more intensively and to adopt more appropriate technologies.

2.6 High settlement costs

The prohibitively high costs of planned settlements constitute one of the major reasons advanced in favor of spontaneous settlement, particularly where large numbers of people need to be resettled.

Arndt's analysis (1988) shows how the proportion of the development budget allocated to Indonesia's transmigration program has risen from 0.7 percent in 1969-70 to 6.1 percent in 1982-83, though it was slightly less (5.8 percent) in 1983-84. Expenditure per family settled reached nearly U.S. $12,000 in 1982-83. Taking the target size of 800,000 families most commonly mentioned for the Five-Year Plan 1985-89, the direct cost to the government would add up to U.S. $10 billion, or U.S $2 billion a year.

In the Bura irrigation and settlement scheme in eastern Kenya, the estimated cost of settling one landless family on a small (1.25 hectare) plot is now U.S. $40,000 (Gunnel, 1983). The rapidly escalating costs of this project have proved a serious drain on government resources at a time when it can little afford it. The World Bank, backing the Bura scheme with a loan of U.S. $34 million, estimated total project costs at U.S. $91.7 million in 1977, of which 52 percent was to be financed by

external loans and grants. The latest estimate in now about U.S. $200 million, and the Kenyan government has to pay the increase, as well as repayment of capital and interest on loans.

On the economic viability of the scheme, Gunnel (1983) writes:

"The World Bank had predicted a 13 percent rate of return on the project based on assumptions that now seem ridiculously optimistic: high cotton yields (they are poor to average); stable export price of cotton; and strict adherence to the construction schedule. The Bank's predicted rate of return would drop 1.5 percent points for every 10 percent increase in costs or one year delay in construction schedule. On these estimates the project has already hit zero".

Looked at in purely economic terms, few land settlement schemes are likely to be "viable", although this is not necessarily a useful way of looking at them. Certainly most schemes have not been profitable in terms of the returns on capital invested. The benefit-cost ratio of the Nagadeepa project in Sri Lanka, for example, is estimated to range from 0.42 to 0.82, according to the discount rates adopted, which vary between 6 and 15 percent (Kunasingham, 1972). Similarly, commenting on the economics of the Gal Oya project, which had produced a benefit-cost ratio of only one-half, the Farmer Committee concluded in 1970 that "this finding makes it necessary that policymakers take a long, hard look at the advisability of diverting resources to what is essentially a social welfare function in an economy where the greatest need is to maximize production" (Dunham, 1982).

This conclusion was reiterated by the ILO mission to Sri Lanka the following year. The economic viability of major colonization programs was questioned, and serious doubts were expressed about the wisdom of continuing to pursue a policy of large-scale capital-intensive land development. Before the report of the ILO mission was formally published, however, the bill creating the Mahaweli Development Board had passed through parliament, and a project committing the country to massive investment for a full 30-year period had been endorsed by the government (Dunham, 1982).

The picture is not universally gloomy, however. The data presented in Bahrin (1988) show that FELDA spent approximately M$26,600 in 1976 to resettle one family. This seems a large sum compared with the cost of settling an Indonesian farmer in a transmigration project. But Bahrin's analysis suggests that economic returns more than compensate for the investment. Moreover, the settlers are obliged to repay the costs of clearing the jungle, preparing the land, planting the main crop,

developing house sites, and constructing houses, and the cost of maintenance, including materials and subsistence allowance, before crop production.

Despite declining commodity prices, the collection of loan repayments can be considered satisfactory. The first batch of settlers had fully repaid their loans and were awarded their land titles in 1977, exactly 21 years after the establishment of FELDA. By the end of the 1982, a total of 2724 settlers, comprising 1822 rubber settlers and 902 oil palm settlers, had fully repaid their loans. By 1982, the collection rate was 91.2 percent from palm oil settlers and 67.6 percent from rubber settlers (Bahrin, 1988).

3. Factors affecting success or failure of land settlement programs

3.1 Planning

A lack of detailed and comprehensive planning has been a major factor behind the poor performance (and even total failure) of settlement projects.

Reporting to the Indian parliament in April 1979 on the many failures of the Dandakaranya project, the Estimates Committee mentioned the fact that no master plan for the region had yet been prepared, in spite of repeated recommendations to prepare such a plan by successive Estimates Committees, and that no serious attention had been paid to the essential input and infrastructure for the development of small-scale industries, with the result that attempts to develop these industries had ended in failure.

The achievements of the land settlement program in Peru seem to have fallen short of expectations, largely because land development in the forest highlands had been characterized by a piecemeal approach. In no case were the settlement projects preceded by serious, comprehensive, in-depth economic and social feasibility studies. Even the objectives to be pursued were often stated after the technical and credit assistance programs were already under way. In most cases, no detailed soil studies were undertaken, which could have served as a guide in recommending the most suitable crops. As a result, there has been low productivity per hectare. No serious consideration has been given to improving agricultural technology or solving the problems of large-scale deforestation. Moreover, there has been a neglect of complementary investment in forestry, industries, and services in colonization

areas, which would have generated alternative employment and improved the living standards of the settlers.

Settlements in both Ethiopia and Somalia have also suffered from a lack of planning. Because they were mostly conceived during a period of national emergency, settlements tended to be created long before any social or economic planning could be carried out. Things were done quickly, and ambitious and unrealistic goals were set to be achieved in far too short a time. The settlement scheme at Dujuma in Somalia had to be abandoned five years after it was established because of the salinity of the soil. Obviously no soil studies had been carried out.

In the United Republic of Tanzania, too, people were moved in a hurry without any proper planning, with the result that some of the villages are now overcrowded, some with a population of more than 10,000. This has implications for the availability of sufficient land for communal and individual plots within a reasonable walking distance. In order to reduce the pressures on land, the government is already thinking of moving people again, by creating satellite settlements (a revillagization program). These settlements are likely to increase both effective working time, by reducing travel time to the fields, and the average size of farm holdings.

3.2 Selection of site

One of the most crucial aspects of planning is the selection of suitable sites. We have already seen how the Dujuma project in Somalia had to be abandoned after five years because the salinity of the soil made it unsuitable for cultivation, and how in Nepal the fact that the settlers were on higher ground than existing cultivated areas made it impossible to provide irrigation through canals from the rivers, and so led to low productivity.

As far as the selection of a site is concerned, the physical aspects must be appropriate; the soil must be fertile, the rainfall adequate, the draining and environmental conditions acceptable, The settlement must be conveniently located to afford its accessibility to essential infrastructural services as well as to markets for the settlers' produce at a later stage. Settlement schemes in many countries have failed where these considerations have not been properly understood.

In Indonesia, for example, a major shortcoming of the transmigration program has been the choice of sites that are unsuitable with

respect to location, accessibility, and soil conditions; this has led to slow development of the projects, and sometimes to their abandonment and perhaps costly resurrection at a later stage.

Poor choice of sites has also been a problem in Ethiopia. In some cases settlement sites were selected without prior studies of the suitability of land moisture conditions for permanent crops. Other settlements are located far out of easy reach, near the border regions or disturbed areas, and face serious security problems.

3.2 Size of plot

The size of the holding allocated to settlers is an important factor in attracting them. Two principles frequently used in determining farm size are (a) farms must be large enough to provide settlers with a standard of living higher than what they had in their areas of origin (if colonists are to be attracted to confront pioneer conditions) but not very much higher (less tensions develop between existing farmers and favoured settlers), and (b) farms must not be larger than the settler can cultivate (Farmer, 1974; Amerasinghe, 1974). Farm size must vary, however, with the type of crop, market conditions, soil characteristics, management capacities, and technological changes.

It is futile to settle people on holdings that do not provide them with enough elasticity to allow for changes in the number of dependents or variations in the pattern of rainfall, and which do not fulfil food crop requirements. The size of holdings should therefore be worked out in order to anticipate full use of family labor. Very small holdings will not provide the necessary income, while holdings that are too large will favor the employment and most probably the exploitation of permanent non-family labor.

The Gezire Scheme in Sudan is an example of a project where many of the beneficiaries have become absentee landlords, because the land initially allocated to them exceeded the labor requirements of their families (Sabry, 1970).

If productive and economic efficiency are to be achieved, it is also important that new land development should not be viewed within a static framework. As a region evolves, the system must be flexible enough for those with ability and savings to put these assets to productive use in the form of expanded agricultural operations. During the past two decades, for example, FELDA in Malaysia has modified several times the size of agricultural holdings allotted to its settlers. A 2.5

hectare holding planted with rubber was considered adequate initially; but over the years, due to changes in prices and other factors, increases in the size of holdings to 5 hectares for rubber and 6 hectares for oil palm were deemed necessary in order to meet the objective of providing a "fair income" to the resettled families (Bahrin and Perera, 1977).

Although such changes were sensible, the size of holdings cannot be increased indefinitely, however. There are two main reasons for this. First, the changes in holding size have already created land inequalities among FELDA's own settlers. Second, with an increasing demand for land, an "optimum" size has to be worked out whereby the limited resources can be made to benefit the maximum number of people without depressing family incomes to the "poverty" level (Chan, 1983).

When land is scarce, and the number of potential settlers large, some underemployment may be inevitable. In these circumstances, the welfare of society is likely to be better served by accommodating larger number of landless people on smaller holdings than by giving fewer settlers holdings large enough to make full use of family labor, while unsuccessful candidates go without meaningful employment altogether.

Unfortunately, most settlement programs do not make explicit the degree of income improvement sought, nor do they indicate priorities in case of conflict between income distribution and productivity objectives.

3.4 Selection of settlers

Issues of settler selection are quite complex. The selection criteria largely depend on the national objectives and the target group to which the program is directed. It is therefore difficult to provide a general mode of selection.

One thing that is certainly important is that a clear explanation be given to applicants at the time of selection of what will be expected of them and what they can expect in return, so that people do not come in with a misunderstanding of what the project is all about. An opportunity to participate in a settlement scheme often unrealistically raises people's expectations, even in successful settlements. This may contribute to settlement failure. Settlement usually requires a major commitment from the settlers, but few families are prepared to wait ten or more years for results that they feel should come immediately.

Gunnel's report on the unsuccessful Bura project in Kenya points out that the newly arrived settlers at Bura who were interviewed in

1982 had a number of misconceptions about the scheme. Many thought that they would be able to build houses on their own land. Some thought they would become rich. None had any clear idea about the repayments for housing and services that they would be required to make. Tenurial rights to land and houses were not clearly understood. As far as some of these aspects of the scheme are concerned, the authorities themselves have yet to decide on the financial and legal position of the settlers.

In most countries, the selection criteria are biased in favor of young persons. This means that villages in rural areas are losing energetic and young labor. This dimension of the migration effects of land development schemes on the sending areas has yet to be studied.

The priority given to agriculturists with experience obviously has merit. The principle need not be rigidly applied in all schemes, however. Where resettlement need not emphasize agricultural development (for example, where the chief objective of a scheme is to resettle refugees or enhance national security), insistence on agricultural experience would be misplaced.

The selection procedure is open to abuse, however. In Indonesia, a reduced emphasis on farming experience has tended to serve as an excuse for including in transmigrant groups all sorts of unskilled and unwanted people. With the expansion of the transmigrant program in the 1970s, official policy statements began to stress the need to include among transmigrants an admixture of people with other skills apart from agriculture, for building and construction and for services of many kinds. Social welfare departments and village officials were then tempted to solve their own problems by sending out of Java the landless, homeless, and jobless, who did not necessarily have the skills and pioneering spirit needed. A recent report based on the field visits to several settlement sites in Sumatra indicates that a significant number of transmigrants (50 percent) had never owned or managed farmland before, and many (approximately 25 percent) had not engaged in farming at all. The report also concludes that lack of knowledge of appropriate clearing and cultivation techniques has been a major cause of failure for many transmigrants (World Food Program, 1985).

There is also some merit in resettling people who speak the same language, belong to the same tribe, or come from the same group of villages, in order to minimize social tension. Experience has shown that settlement projects with diverse "social groupings" can create intergroup conflicts, as in the Philippines, India, and Peru. In Latin America generally, it has been found that settlements tend to be more successful

where settlers are a fairly homogeneous group, drawn predominantly from nearby areas (Findley, 1988). This seems to result in less dislocation and more continuity and cooperation between settlers.

It may not always be possible to resettle distinct social groups, however. If settlers are selected on the basis of their individual qualifications, as in FELDA projects in Malaysia, or if selection is done on a first-come, first-settled basis, then resettlement of social groups can be difficult. In some cases, it may not even be desirable, particularly in a multiracial society where national integration is a major aim of the government resettlement program.

The preference for settlers with capital should also be assessed within the context of the overall objectives of resettlement. If, as in the majority of cases, land settlement projects are designed specifically for the most disadvantaged segment of the population (i.e., the landless and the poor), then giving priority to those with capital conflicts with the overall intention.

As far as the success or failure of individual colonists is concerned, of course, those with capital must have a greater chance of success than those without. Findley argues, however, that initial capital is not the only pre-requisite for a settler's success. In his study of Brazilian colonists, for example, Galjart distinguishes innovators, or commercialized farmers, from noninnovators, concluding that a major distinction is that the innovators are committed to staying in the colony and making the frontier their life (Galjart 1968). They therefore treat their farm as a commercial venture, invest their savings in it, and develop a wide network of political and social contacts that may be tapped for help or advice as needed.

Findley's review does suggest, however, that even with such a commitment to the frontier zone, not all who attempt commercialization succeed. Not infrequently, hard work and commitment fail to overcome the initial handicaps, such as too little capital and poor location.

3.5 Land tenure and farming systems

The land tenure system defines rights and obligations with respect to acquisition and use of land in agricultural settlements, and is a critical determinant of the size and distribution of agricultural incomes. The ideal land tenure system is one that provides adequate incentives to produce, to adopt improved technologies, and to invest. It should afford reasonable security to those who till the land. A good tenure

system can also be the means for generating adequate employment opportunities and promoting a more equal distribution of income.

Technical efficiency and economic viability are best achieved by a project design that promotes individual landholdings through the issuance of freehold or leasehold titles. Exceptions do exist, however. Existing land settlement projects incorporate a wide array of tenure systems, reflecting both local customs and unique project objectives.

In practice, the degree of freedom with which planners in different countries can create alternative tenure systems is greatly constrained by sociopolitical factors. Within these constraints, however, several general considerations apply. Equity and security are essential under any tenure system. Subdivision into uneconomic units must be strongly discouraged. Settlers must be aware of their rights and obligations, and the settlement authority must have the necessary enforcement authority.

In general, settler's rights over the land should bear a direct relationship to their contribution to its development. When a government's contribution is large relative to that of the settlers, as in costly irrigation projects, the settlement authority should retain a large element of control over use of the land. In lower-cost settlements, where the settlers' contribution is correspondingly larger, it is both appropriate and necessary for incentive purposes to grant more extensive land rights to settlers.

It is common, however, for governments to impose some restrictions or conditions on the land titles. The usual argument is that without such conditions the settlers would either sell the land and thus become landless or subdivide the land among their heirs and make the holdings uneconomic. Both these situations are considered undesirable, as they contradict the basic objectives of the settlement programs. In some countries, the issuing of titles is tied to the repayment of loans by the settlers (Kansakar, 1983). But, whatever the restrictions imposed, it is important that the settlers are guaranteed titles to their land.

The failure to do this has caused serious problems in the Dandakaranya project in India. Even though allotment of land had been completed in many areas as far as 1963, *patta* (land ownership) rights have not been conferred so far. This has led to unrest, and was one of the major factors behind the mass exodus of displaced persons in 1978 (Bose, 1983).

In most circumstances, individually owned and operated farms are likely to be the most conducive to productive efficiency and the development of settlers' initiative and entrepreneurial capabilities (Amera-

singhe, 1978). The advantages of freehold tenure may decline, however, as distributional and egalitarian objectives are accorded greater priority.

The choice between cooperative and individual family farms appears to have stood out as the most controversial issue in land development and settlement policy in many countries, particularly in Africa. Cooperative farming has often been regarded as a means of combining land development with equity, introducing scientific management, and achieving economies of scale. Cooperative farm ventures do, however, depend heavily for success on the motivation of the members. Lack of incentives and "cooperative" spirit is sufficient to mask whatever economies of scale may be obtainable. Cooperative enterprises also demand a high order of leadership and management. Where these are lacking, whatever advantages cooperative farming may have are lost. Although there are a few exceptions (e.g., Honduras, Israel), cooperative farming in many countries such as India, Sri Lanka, Somalia, and Ethiopia has not been very successful. The yields in cooperative settlements have been lower than those in private settlements (Chole and Mulat, 1988).

In order to promote communal farming it would be necessary, therefore, to increase its economic advantages as a system of production and to devise appropriate incentives to bring about a shift in labor allocation and other resources in its favor. This means, above all, giving careful attention to methods of work organization, payment systems, and the allocation of proceeds from communal production between distribution and accumulation. So far, the major emphasis has been placed on exhorting people to devote more labor time to communal work. What is really needed, however, is to devise strategies that would generate group feelings and solidarity among the settlers to a greater degree than at present.

Even in the United Republic of Tanzania, there is a low level of commitment to collective undertakings in many villages. Inducing faster growth in communal production, which at present accounts for only a small fraction of total agricultural output, remains a serious problem. This may be due to several reasons: the predominance within the village economy of individual farming, which is still the main source of livelihood; the relatively poor performance of some collective undertakings, due to poor organization of production, lack of work discipline, and lack of financial control; poor management; and lack of incentives for individual participation in communal production. The answer may be some form of inducement to make villages expand the

communal farms to a size that would allow the introduction of appropriate technology and large-scale use of modern inputs. The average of 40 hectares suggested in 1980 is too small on a per capita basis, and most villages do not have communal farms even as large as this.

3.6 Management and administration

Good management and administration are important in determining a program's degree of success. Since land development lends itself to an integrated type of development process, it is essential that the agency entrusted with implementation be able to harness the help and assistance of other government departments, especially if the settlement agency itself has not been given the funds and the necessary supporting personnel. The success of FELDA in Malaysia can be attributed in part to its ability to obtain the assistance of other departments. Conversely, projects in Indonesia and elsewhere have been less successful partly because such assistance has not been forthcoming.

To be successful, resettlement operations require a gradual transfer of responsibility from resettlement agencies to the settlers themselves. Otherwise, a dangerous relationship of dependency may arise and agency resources may become tied up in a limited number of permanently supervised schemes. Action should be taken from the outset to prepare for the transfer of management responsibilities to the settlers. If settlement agencies overcome the tendency to retain decision-making and managerial functions and encourage the emergence of recognised community leaders, this will stimulate local initiative and greatly facilitate the transfer of responsibilities.

3.7 Settler dependency

It should be remembered that settlers are prone to dependency if paternalistic help policies are applied, as many land settlement schemes in Asia and Africa. Not only does this have the result of escalating the costs of settlement, but it also discourages self-mobilization and undermines the settlers' commitment to self-reliance and development. Government assistance should therefore be an interim measure. Care must be taken to avoid implanting in the minds of the settlers the idea that they have become permanent wards of the state.

In Somalia it seems that work incentives and family incomes have

not been given adequate weight because the settlement agencies have often provided the settlers with all their basic needs. The maintenance of the settlements as "relief camps" has produced a large measure of apathy and dependency among the settlers, and has adversely affected the settlements' economic performance. A shortage of labor for agricultural production continues to be a problem, as a large number of working-age men have left the settlements for presumably more profitable endeavors elsewhere.

Similar problems have occurred in Ethiopia. When the settlement program was initiated, it was thought that settlers would become self-sufficient in two years. But experience shows that this has not been the case. In fact, they become increasingly dependent on the government, which provides free food, transportation, inputs and equipment, training, and technical services. This system is in part responsible for the high settlement costs.

The extent of site preparation to be carried out should be considered in relation to the more general issue of settler dependency. The decision concerning the degree of settlers' participation in site development is a critical one. It is obviously possible to admit settlers to a new area without prior preparation of the site, allowing them to succeed or fail by their own efforts. On the other hand, land preparation can be so comprehensive that the settlers have little to do on arrival. Between these two extremes are many possible degrees of site development, and the amount of preliminary work to be done in each case must be a matter for close deliberation and careful decision, giving due consideration to resources available.

The extent of site preparation should also be considered in relation to the objectives of the program and the number of people to be resettled. If the settlement is intended to be a development project to improve the living standards of the people and to contain urban drift, then site preparation should be extensive. Settlers' failure to start their agricultural work immediately because of the time required for clearing has forced many settlement agencies in the Philippines, Indonesia, and Ethiopia to extend their subsidy period and thus delay the settlement process.

3.8 Planned or spontaneous settlements?

The issue of settler dependency is closely related to the question of whether settlements should be planned or spontaneous.

Planned movement often entails a high degree of government involvement, including a selection of colonists, provision of services, and financial aid. In planned settlement, the issue is how much should be left to individual settlers and how much should be organized or guided. There is no one answer. The ideal, of course, is to have a combination of both, but a great deal depends on the structure of the project and the types of crops to be cultivated.

If the people are settled on individual family units with subsistence as the objective, then the need for guidance group work is reduced. In this case, settlement becomes an end in itself and not a means to overall economic development. If, on the other hand, the crops are grown for sale, and if the family-size farm is to be economically viable, some central agency must organize all matters that are best done on a large scale (e.g., mechanical operations, irrigation, research and technical advice, processing and marketing of the crops, provision of credit, and purchase of supplies).

Government-sponsored settlements, as currently structured, appear to have the major disadvantages, however. The relatively high costs limit the number of participants to such an extent that little may be achieved in terms of relieving population pressure in densely populated areas. Moreover, the excessive rate of defaults on assistance loans often places the settlement agency in an untenable financial position. In his study of colonization in Latin American countries, Nelson found that most government recoup on average only 10-20 percent of their expenditures on these projects, which thus create subsidized rural elites (Nelson 1973). The agencies themselves have sometimes mismanaged funds, and overall settlement programs have proved to be excessively costly in terms of the limited number of beneficiaries. As we have already discussed, erroneous and incomplete preliminary natural resource surveys have been almost universal shortcomings of the directed projects.

Since the record of planned colonization has generally been mixed, planners have sometimes been of the opinion that the process of opening up the frontier areas through migration should be left to the voluntary and spontaneous choice of individuals. Where the number needing to be resettled is large, the eventual savings to the government would be substantial.

A recent study indicates that nearly 75 percent of the current rate of new rural land settlement is due to spontaneous settlement (World Bank, 1978). Although spontaneous migration without government assistance is widespread, it does present problems of its own. Since

spontaneous settlements are established by individuals, community services and facilities are usually poor and take a long time to become available. Unsupervised farming system and disregard for proper land management have produced erosion and other environmental problems.

However, in spite of the bad reputation of spontaneous settlement has acquired because of natural resource destruction and shifting subsistence agriculture, it does offer the best chance of success in developing new lands where capital and administrative resources are scarce. Findley's analysis (1988) suggests that the more complex and costly government-assisted settlement projects are in fact no more likely to succeed than largely spontaneous settlements. A similar conclusion was reported by Nelson in his study of 24 settlement projects ranging from spontaneous to highly planned and directed ones. The study examined the effect of settlement projects on employment and the economic viability.

Eight projects were classified as "dinamic", seven as "acceptable", and the remaining nine as "poor". Significantly, no projects with extensive government assistance appear among the "dynamic" group. Inadequate technical and administrative capacity in the implementing agencies was identified as the major factor behind this disappointing performance. Six of the nine project rated "poor" received extensive government support. On the other hand, three of the eight "dynamic" projects were largely spontaneous settlements, while the other five were either private (domestic or foreign) ventures or received limited government assistance (Nelson, 1973).

The various studies also indicate that spontaneous migration is not random and unplanned, but rather that it involves systematic cooperation between early migrants and those who follow. It is for this reason that spontaneous migration usually takes place in areas where development has been initiated by others.

4. Land settlement programs and other policy options

If land settlement programs have not been notably succesful in achieving their stated objectives, why is it that they continue to be adopted by so many governments? Some observers have argued that the real goal of colonization programs, particularly in Latin American countries, is to open frontier areas for capital accumulation by creating a labor reserve to be used by capitalist enterprises (Moran, 1981:69-84;

Wood and Schmink, 1979). The redirection of surplus rural population to frontier areas by means of the settlement schemes provides low-cost labor as the workers get their subsistence out of their own plots. As Pacheco (1977:106-7) points out: "In the directed colonization projects, based on family units, a trend was observed that within two or three generations the process of small farming starts enabling the formation of a rural reserve army.... The plot provides for the workers' subsistence through the periods of seasonal unemployment and at the peak of labor demand they are hired as paid workers by the enterprises".

Perhaps the most important reason for pursuing colonization rather than integrated rural development programs is that the latter usually include land reforms, which for political reasons most governments are usually reluctant to implement. Yet a strong demand for the land may exist among the landless and *minifundistas* in the more densely populated areas. In such a situation colonization is offered as a substitute for land reform. Colonization programs are also favored by urban-industrial interests, particularly if such schemes hold out the promise of cheaper food for urban industrial workers, thereby enabling employers to keep down wage rates (Standing, 1984).

The evidence suggests, however, that the existing agrarian structure are being reproduced in most new settlement areas, thus giving little scope for solving the problems of unemployment and poverty. Despite initial efforts directed to the rural poor and to small farmers, the eventual outcome is generally the reappearance of the modes of production that prevail in the traditional agricultural areas. In Brazil, for example, government efforts to effect a distribution and use of land consistent with its land settlement policy lasted only for the first five years following the implementation of settlement projects. After that, the process took its own course and land distribution became more skewed, with increases both in very large farms and in squatting (Henriques, 1988). The Philippine study also shows that the land settlement program had no perceptible effect in terms of alleviating agrarian problems in over-crowded or high-tenancy areas. In fact, the situation had deteriorated over the years. Even more discouraging was the perceived reversion of the pattern of land ownership in the frontier areas to that prevailing in the regions of origin (Paderanga, 1988).

How is it that government programs that are intended to assist all colonists end up benefiting only a few? Findley's analysis suggests that most government credit and assistance programs are based on the premise that the colonist has title to a piece of land. But the evidence contradicts this premise. In many developing countries such as Indone-

sia, India, and Nepal, settlers sometimes have to wait between five and ten years before they get a title to their land. In most Latin American countries, at least half of all colonists are spontaneous settlers, of whom only a minority obtain title on arrival. A majority of colonists are thus barred from seeking institutional credit. Those who have access to institutional credit, on the other hand, can meet their requirements for capital relatively easily, which encourages investment in commercial agriculture and capital-intensive technologies. With greater access to new technology, some colonists become richer, while others who find the new technology too expensive and risky are left behind. Because the subsequent increase in productivity and output brings down prices, colonists using traditional forms of production and receiving lower prices experience declining incomes. Many colonists are forced to sell their land to richer colonists and seek wage labor in the area, to work as temporary or seasonal workers in other areas to supplement their farm income, or to permanently migrate away from the area. As we have seen, however, some who sell their land are not in fact compelled to do so by debts or lack of capital; many colonists sell their land with improvements in order to make a profit. The net result is that land is increasingly held by a smaller and more select group of rich individuals (Findley, 1988).

The ambiguous and limited support received by smallholder colonists in frontier areas has therefore led to the reproduction of the productive relations found in the areas from wich the peasants have migrated. The upshot has been a growing rural reserve army; this greatly limits the barbaining power of tenents and farm workers vis-à-vis landlords. Unless these and other more basic conditions are altered, it is doubtful whether land settlement programs will have a lasting impact on agrarian problems. What land colonization programs can do, however, is to give tenants and landless rural workers temporary help until the effects of more basic changes begin to be felt.

What, then, is the alternative? The ideal solution for the absorption of rural surplus population would involve the adoption of a range of strategies to create employment and reduce inequalities in the distribution of land and income. Of particular relevance here would be the implementation of comprehensive land reform. In many countries, bold redistributive programs could release large areas of land, already equipped with basic infrastructure, for settlement at costs lower than those entailed in opening up new land (World Bank, 1978). Such programs should involve the transfer of land from noncultivating owners (landlords) to the actual tillers of the soil (and this usually implies an

abolition of both wage labor and tenancy). Governments should also regulate the activities of intermediaries such as traders and money lenders and, to the extent possible, they should provide credit and marketing facilities through cooperative and state-controlled institutions.

An immediate consequence of such measures, however, may be a decline in the volume of the agricultural surplus available to the urban industrial sectors, particularly in view of the prevailing poverty of the direct producers. Such a decline may involve either a shift in crop patterns (from cash crops to food crops) or a decline in the proportion of food output marketed, or both. To overcome these short-term problems, state policies would therefore be needed to promote modern technologies to raise productivity and increase the agricultural surplus. On the demand side, some adjustment may also be necessary in the urban industrial structure and other sectors of the economy, particularly if they depend on the agricultural sector for raw materials or export crops (Ghose, 1983).

Nor should new land development be seen as the only option for increasing agricultural production. Other instruments for increasing agricultural output, such as intensification of agriculture, must be considered. Additional resources for an already settled agricultural area, where the basic physical infrastructure is in place, can be expected to generate greater economic returns than resources invested in new areas where a good portion is needed for essential infrastructure. The Philippine study clearly demostrates the greater cost-effectiveness of investing in irrigation rather than attempting to achieve an increase in output through an organized settlement program (Paderanga, 1988). Some studies suggest, however, that production intensification in already settled areas will leave unchanged both the pattern of land ownership and the distribution of rural incomes (Bal, 1981). The experience of several countries in Asia shows that the "green revolution" has benefited the rich rather than the poor and has led to an absolute as well as a relative deterioration in the conditions of the already underprivileged tenant farmers and agricultural laborers. On the other hand, several observers have argued that by providing access to land, new land development can have a greater egalitarian impact on income distribution. However, the evidence suggests that although there are a few exceptions (Malaysia and the United Republic of Tanzania, for example), land settlement programs in many countries (Bolivia, Peru, Brazil, Chile) have worsened income distribution, particularly where the beneficiaries have not been among the poorest groups in rural

society.

In practice, the method of benefit-cost analysis can be used to compare the relative performance of the two methods of increasing agricultural production. However, benefit-cost analysis as a guide to choice between colonization and production intensification needs to be disaggregated if it is to be meaningful. It is not reasonable to assume that for a whole country the choice should be either colonization or production intensification. The analysis must relate to specific projects and areas.

5. Conclusions

The above review of land settlement programs suggests that they have so far made no more than a modest contribution to the solution of the problems of population distribution, unemployment, and poverty. Very few programs have achieved their stated objectives. Although an increase in agricultural production and an improvement in settlers' living standards can be observed in some countries, the overall impact on employment and production remains limited, while the cost per settler of successful settlements has been high. Despite government efforts, settlement or resettlement of the rural population has been on a small scale, compared with the potential numbers of people that need some assistance.

Notwithstanding their limited success, land settlement programs are popular in most developing countries, mainly because they are politically more desirable, more expedient, and relatively easier to execute than other agrarian reform measures. However, the evidence suggest that land settlement programs alone cannot be expected to solve agrarian problems. At best, they are palliatives that buy time so that other policies can operate fully.

This review of various colonization programs also shows that both a process of land concentration and an increasing fragmentation of holdings are taking place in most settlement projects as a result of insufficient support to smallholder farmers. In fact, the distribution of land in many colonization projects is as skewed as in other traditional agricultural areas. This has adverse consequences for the absorption of manpower and the capacity of settlement projects to retain settlers.

The emergent differentiation was certainly not intended. Nonetheless, the evidence suggests that in many instances the chances of success have been biased in favor of colonists with more land or capital. As in

traditional settled areas, those who are able to take best advantage of government assistance and agricultural credit are the capitalist farmers, not the subsistence farmers for whom the programs were seemingly designated.

As colonization is likely to move in the future to more and more marginal land, at ever increasing real costs, there is an urgent need to review colonization policy in light of the benefits and costs of alternative means of increasing agricultural output and achieving a more equitable distribution of land and incomes - for example, by intensification of the cultivation, coupled with comprehensive land reforms. Whatever the outcome of such a review, some colonization may well continue for other reasons, such as to correct spatial imbalances in the distribution of population, to settle war refugees, or to exploit frontier lands for the purposes of national security. But, since government-sponsored projects have been very expensive, semi-directed or spontaneous colonization may be promoted as the best means of maximizing settlement per unit of state investment. In fact, the success of government land resettlement programs can to some extent be measured by the degree to wich they stimulate spontaneous movement.

Efforts should be made to improve settlement performance. One major problem is that many governments do not have a consistent, wellthought out, long-term settlement policy that looks ahead to problems of adjustment, of second-generation settlers, and of integrating these settlements into regional plans. In many countries there is a tendency to put a major effort into the initial settlement and to fail to plan for settlers' long-term requirements. These include not only the consolidation and perhaps expansion of the original settlement, but the means of ensuring that potential earnings remain realistic, that tenancy systems do not revert to unjust forms, and that there are alternative employment outlets available as the settlement area grows. Land settlement should not be considered either as an end in itself or as a convenient means of redistributing the population. It should be conceived as a proper strategy for creating new and viable communities.

To be successful, the planning and implementation of settlement projects require a close scrutiny of the essential needs of the settlers. High priority should be attached to providing community infrastructure and social services such as housing, schools, health care, and water supplies. Government support for housing should be limited to helping with site selection and planning, provision of building materials on credit, and technical assistance. This should help make settlers self-reliant and reduce the risk of creating a class of dependent farmers.

As low productivity in settlements results in low incomes for the settler (wich in turn leads to high rates of settlement abandonment), it is vital for the future of land development that the problem should be overcome. The introduction of incentives, the provision of inputs and training, and the guarantee of favorable prices for settlement-produced goods and services would all contribute to improved productivity.

In many Latin Amarican countries, the practice of shifting cultivation by settlers and the resultant excessive deforestation are the major reasons for the serious ecological deterioration that is taking place. The cultivation of crops that are unsuitable for the forest highlands has also contributed to environmental problems. There is thus an urgent need to improve agricultural technology and to provide educational programs for the settlers covering the various aspects of environmental protection.

All government plans to settle nomads must recognize the nomadic existence as a cultural system that has evolved over several centuries. From their mobility they derive not only subsistence but the values and satisfactions of social life. The idea of forcing them to settle in faraway agricultural areas at a tremendous cost therefore needs to be reconsidered, particularly in light of the finding that more than one-third of nomad settlers have already abandoned settlement schemes in Somalia. Help for nomads must first take the form of helping them to make better use of the resources they have, rether than attempting to settle them. This should perhaps be done by creating growth centers or poles of attraction where they are provided with water, training, and health and other social services. This would reduce the radius of their movement, and as these poles of attraction grew in size they would automatically develop into settlements. This type of strategy is likely to be more successful and cost-effective than a settlement program.

Alternatively, a policy of encouraging voluntary spontaneous settlement of nomads in regions where agricultural potential is greatest may be a more efficient alternative to planned settlement programs.

It is not sufficient, however, to look at settlements simply in terms of their agricultural potential, for the concept of a purely agricultural settlement is inadequate for present-day needs. Most settlement planners fail to give explicit consideration in project design to generating nonfarm employment, particularly for settlers' children as they mature and enter the labor force. It is frequently assumed that settlers' children will carry on with agricultural work, although the evidence strongly suggests that not all intend to remain in agriculture, in part because of the limited possibilities they perceive to exist there, and in part because

of the wider range of employment opportunities ansd social services believed to await them in urban areas. Land settlement should therefore be planned within an integrated regional framework that includes development of related agro-indust- rial and services sectors.

Although some countries have already taken measures to provide nonagricultural employment in settlement areas, there seems to be few instances of this being carried out successfully. One of the reasons for this is that the ministries responsible for rural industrial development are rarely closely corcerned with settlement planning. One country that has attempted to provide nonagricultural employment is the United Republic of Tanzania (where a National Small-Scale Industries Corporation has recently been established to promote industries in rural areas), but so far the results have not been spctacular.

Malaysia has also adopted the concept of integrating land settlement with regional development. But, as we have already seen, whereas the land development and settlement part of the integrated projects have developed according to schedule, the growth of urban centers and the spontaneous movement of business and services have lagged behind. It is probably too early to expect the growth of urban centers. One weakness of the whole approach may be that in the early stages of settlement, the immediate needs of the settlers are those basic to their rural way of life and agricultural economy. The urban centers that could cater to that stage of development would be agriculturally based market towns. Only when the schemes were in advanced state of development, with commercial and industrial and other sectors pressing for a higher order of demand, would a fully fledget urban center be able to take off on its own. "Phases" or "stages" of urban development strategy may therefore be an answer to this problem.

Overall, this review of settlement schemes suggests that resettlement should not simply be a matter of logistics - moving people physically from one region to another - but rather should embrace more concerted and imaginative planning in the areas of destination, emphasizing the human element. The settlers must be provided with basic infrastructural facilities, and a noticeable improvement in income, if they are to remain within the scheme. To reverse the trend toward increased concentration of land in settlement projects requires significant changes. Instead of explicitly or implicitly aiding concentration and large-scale commercialization of agriculture, programs need to be redirected toward commercialization among the colonists with the smaller landholdings. Unless this is done, there will be an increased movement back to the areas of origin.

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2. THE NEED FOR A GRASS-ROOTS APPROACH: THE CISP DEVELOPMENT PROJECT IN THE BELES AREA

Paolo Dieci and Vittorio Roscio

1. The situation in the Beles area at the time the CISP multisectoral programme was designed

The objective of this report is to describe the general conditions in the Beles area at the time (May and June 1986) of CISP's on-site design of its multisectoral programme in support of the resettled populations and to illustrate the goals and the methodologies chosen, as well as their rationale.

This report does not set out to evaluate the results of the programme in the light of the theoretical and methodological structure it adopted, nor therefore will it draw any conclusions about the first years of work by CISP in the Beles area.

Moreover, it should be noted that at the time this report is being submitted (May 1990) the programme is still in progress and that the most significant results obtained to date are presented elsewhere in this book.

In the first half of 1986 the over-riding concern in the Beles area was the weakened state of the resettled populations due to the extreme hardship they suffered during resettlement and the difficulties they encountered in adapting to the new environment, which were obviously greatest during the initial period of residence.[1]

To put into proper perspective the situation in the Beles area in the

1. The issue of the conditions under which part of the Ethiopian population was transferred from drought-stricken areas to new settlement areas has aroused a wide-ranging and heated international debate. Certainly, the acute shortage of vehicles caused great hardship and suffering to the populations transferred, adding to the misery they had suffered in their former lands because of the drought.

period when the multisectoral programme of CISP was devised we should also be mindful of the discrepancy existing between the actual initial living conditions of the resettled populations and their expectations in this regard.[2]

The "Tana Beles Project", implemented by the Salini Costruttori firm under the direction of the Studio Pietrangeli, began operating in March 1986, executing an emergency work plan, especially in the agricultural and general infrastructure sectors (in particular the construction of a first road network to link the villages).

The emergency criterion also dictated initial actions by Ethiopian institutions, in particular the authority implementing assistance programmes for the resettled populations, the "Relief and Rehabilitation Commission" (RRC).

1.1 The resettled population

On 15 May, 1986, when the feasibility mission of the CISP multisectoral programme in the area began, 22,924 family units had already been transferred to it, for a total of 75,344 persons. The average size of the families was hence approximately 3.3 individuals.

The composition of the resettled populations in that period by age and sex is given in Table 1.

The average population of the villages in the same period was 1,570 individuals, ranging from a minimum of 481 to a maximum of 2,617.

48 villages already existed in the area, mostly located near the banks of the Beles River and its tributaries.

1.2 The indigenous populations in the resettlement area

In the first half of 1986, the Beles Valley area was administratively part of the Gojjam region and of the province (*Awraja*) of Metekel.[3]

2. In conversations held with several settlers in the planning phase of the Programme, it emerged that many of them thought that the Beles villages were already furnished with services such as water supply and roads, and that they would have access to fields already prepared for sowing. But all of these were however to be implemented after resettlement by the settlers themselves.

3. As explained further on in the text, this administrative subdivision was modified in course of 1989 when Metekel was upgraded to the status of a region.

Table 1 - Composition of the resettled population

Age Group	*Males*	*Females*	*Total*	*% of total*
0 - 5	6,484	6,390	12,874	17.1
6 - 14	8,502	8,190	16,692	22.2
15 - 30	11,409	13,537	24,946	33.1
31 - 55	11,267	7,497	18,764	24.9
Over 55	1,412	656	2,068	2.7
Total	39,074	36,270	75,344	100.0

Source: CISP Calculation on 1986 RRC data

The *Awraja* of Metekel was in turn divided into six districts (*woredas*), two of which -- Gubba and Dangur -- bordered on Sudan.

The administrative and economic centre of the Metekel province was the town of Chagni, located approximately 50 kilometres from the resettlement area.

During the first phases of the Italo-Ethiopian cooperation programme, in addition to the transferred populations, people from other areas of Metekel, and, subsequently, from other Ethiopian regions had begun to converge on the Beles area, attracted by new employment opportunities generated by the cooperation programme.[4]

Before resettlement, the Beles Valley was -- and still is to some extent -- inhabited by populations belonging to the *Gumuz* ethnic group, which have very different cultural models and customs from the rest of the Ethiopian population, as well as Negroid-type somatic features which clearly set them apart from the other inhabitants.

Precise data is lacking on the size and composition of this population in the area before and after resettlement.

For the Gumuz, the arrival of the resettled populations in the area, which was then mostly covered by dense bamboo vegetation and

4. In the period immediately following the transfers, voluntary movements of persons in search of work with the Italian cooperation programmes led to the establishment of an unplanned micro-settlement near the organizational headquarters of the "Tana Beles Project".

was almost entirely unexplored by anyone outside their ethnic group, practically coincided with their first contact with the administrative system of the Ethiopian state.[5]

Previously, the Gumuz of Metekel, who were also known in Ethiopia by the name of *Shanquella*, had depended exclusively on a traditional system of government which conferred authority on the elders of the clan, called *Ganzas*, who jointly constituted the executive body for the whole community.

The economy of the Gumuz population of Metekel was based almost exclusively on agriculture; hunting and fishing were a secondary pursuit.

The land was collectively owned, and every member had a right to use the land as needed. Cultivation and harvesting were performed by community cooperation organized by elected members.

The tasks of these leaders were in particular the organization of days of work for each person and the supervision of agricultural work. Hunting and the construction of dwellings were also managed in accordance with these methods.

With the arrival of approximately 75,000 settlers, a large part of the Gumuz left the resettlement area. Their exodus was prompted by radical changes in the environment, especially with regard to space, in which this group had constructed its socio-cultural organizational system.[6]

After 1985 the Gumuz who remained in the area began to live together with the resettled populations: the Kembata, Hadiya, Amhara, Wolajta, Oromo and Agew, from the regions of Sidamo, Wallo and Shoa, and, subsequently, groups formerly resident in Tigray.[7]

5. During the feasibility mission conducted in May and June 1986, this was confirmed by the local administrative authorities themselves in informal conversations in the course of planning the activities. The feasibility mission was led by Vittorio Baldioli (Ifagraria), Paolo Dieci (CISP), Gennaro Papa (Ifagraria) and Vittorio Roscio (CISP). Ifagraria provided consultancy services for planning the agricultural sector of the CISP programme.

6. While exact data on the presence of the Gumuz before and after the resettlement does not exist, several Gumuz villages were seen to disappear from several localities in the Beles area between June 1986 and October of that same year. In any event, for further information on the cultural and social organization of the Gumuz, see especially: Lipsky, George et al., 1967; Crawford, 1951; Pankhurst, 1968.

7. Unlike other settlers, those from Tigray were not present in the area at the beginning of the Italian cooperation programme; they were transferred subsequently, in the course of 1987, and created new villages.

1.3 Actions and national policies of Ethiopian governmental bodies

The activity of Ethiopian institutions in the first phase following resettlement concentrated on distributing basic commodities through the RRC and on restructuring the administrative system in the resettlement area.

Table 2 shows data on agricultural instruments and domestic goods distributed by RRC in the area up to 15 May 1986.

Table 2 - Agricultural instruments and domestic goods distributed by RRC

Item	*Number of pieces distributed*
Ploughs	10,162
Hoes	27,827
Axes	25,945
Shovels	28,923
Sickles	49,722
Other farm implements	9,857
Clothes for adults	174,858
Clothes for children	102,105
Blankets	38,934
Dishes	79,148
Frying pans	70,021
Water pails	35,847
Plastic bowls	72,043
Knives	102
Ladles	9,507
Forks and spoons	5,727

Source: CISP Calculation on 1986 RRC data

Data on the distribution of foodstuffs by RRC (as before, up to the middle of May 1986) are rather fragmentary. The first distributions were made with extreme urgency, as soon as the populations were resettled in the villages. In fact, the supply and distribution system for the products delivered to the settlers took shape as the first products were distributed in each village.

The list of the first foodstuffs distributed includes cereals, salt,

pepper, butter, oil, legumes, rice, biscuits, food supplements, soup mixes, powdered milk, sugar and canned fruit.

The programme of the Ethiopian institutions provided for the distribution of food to the population, with priority given to children, pregnant women and the sick, while awaiting the first harvests.

Moreover, the efforts of the Ethiopian institutions in the period we are considering were focused on organizing administrative, educational and sanitary services. Particular attention was given to cooperation with the three Italian programmes, namely, the Tana Beles Project, the health programme centred on the operation of a hospital (built by the Ethiopian government using construction materials available locally, especially bamboo), and the CISP multisectoral programme.

The Ethiopian administration followed five principal benchmark strategies for the development of the Beles area. These guidelines were based on five legislative provisions which constituted the context of the resettlement plans in the country beginning in 1975.

The first of these consisted of Proclamation No. 31 of 1975 which established the Public Ownership of Rural Lands. Under this proclamation the earlier system of land ownership based on a feudal order was abolished, and Peasants' Associations were introduced as the bodies responsible for the redistribution of land and for improving and managing services in rural communities.

Proclamation No. 71 of 1975 was the Peasants' Association Organization and Consolidation Decree, which established that all Ethiopian peasants must belong to these organizations. In practice, the Peasants' Associations are for all intents and purposes the basic organizational units of the Ethiopian government in the rural areas.

The structure of these associations provides for five levels of organization: local, *woreda* (district), *awraja* (sub-provincial), *kifle hagar* (provincial) and national. The villages first established in the Beles area were divided into six districts, each of them under the jurisdiction of a Peasants' Association. Administrative functionaries from Addis Ababa assumed the function of village leader.

Peasants' Association in Ethiopia are composed on average of approximately 25 members and have jurisdiction over an area of 800 hectares. Their principal functions are as follows:

- to redistribute land in accordance with government directives;
- to govern the use of land in accordance with national development plans. This function includes, for example, the management of reafforestation plans;

- to administer and conserve all public property included in the area of their responsibility, with particular reference to soil, forestry resources and water;
- to establish juridical committees and local tribunals;
- to establish cooperative organizations, women's associations, and public safety committees;
- to build schools, clinics and other amenities and services in collaboration with the government;
- to assist persons who for reasons of age or health cannot cultivate the land assigned to them;
- to promote villagization programmes.[8]

The third legislative provision governing Ethiopian resettlement plans assigned to the Peasants' Associations the task of organizing and managing the tax system, and collecting taxes from the peasants based on their agricultural income (Proclamation No. 77 of 1976, entitled the Rural Land Use Fee and Agricultural Activities Income Tax).

The fourth provision was Proclamation No. 78 of 1976, which set up the Settlement Authority Establishment.

The task of this Authority is the planning and implementation of the resettlement plans, in collaboration with other Ethiopian institutions, particularly the RRC.

The Ten Years Perspective Plan (1984-1994), lastly, incorporated the resettlement plan into the framework of development of the country as a whole. Among other things, it establishes these priorities:

- to extend the cultivated acreages and rehabilitate the areas affected by drought;
- to expand the rural cooperative system;
- to expand the irrigation and technological modernization of agriculture in rural areas;
- to develop forestation and soil conservation;
- to develop healthcare and educational services.[9]

8. See in this regard: "Assistance to Settlement - Rural Settlement Schemes - Ethiopia", FAO, 1980.

9. See in this regard: "Ten Year Perspective Plan", Office of the National Committee for Central Planning, Addis Ababa, August 1984.

2. Goals of the CISP Multisectoral Programme

CISP's chief concern in the planning stage of the programme was to involve local communities in the planning and management of activities in support of the consolidation of the rural associations.

In practice, one of the principal goals established was to accelerate the development of the village as a productive entity endowed with its own social identity.

This goal was given priority because of the danger posed by the great demand for agricultural labour. It was feared that the villages might turn into mere residential centres with authorities in charge of mobilizing the peasants for work in the fields.

In other words, the main concern was that the emergency situation in the area regarding food, healthcare (and in this regard we should bear in mind the effects of malaria on the resettled population -- a disease that had previously been unknown most of them),[10] and their social conditions might give rise to an organizational system exclusively concerned with mobilizing the peasants to implementation programmes of which they had no knowledge.

The general assumption on which the CISP multisectoral programme was based in the first half of 1986 may therefore be summarized as a search for stable development conditions in the area by strengthening the socio-economic identity of the villages, taking into consideration the emergency situation and hence the need to obtain practical results in a short period of time.

One of the main features of the programme, which reflects its basic rationale, is the concentration of efforts within the village to consolidate its social identity and develop its economic and productive aspects.

The aim then was to reduce the temporary character of life in the villages, which stemmed from the dynamics of resettlement and the uprooting of the resettled populations from their regions of origin, by exploiting certain skills and abilities of the resettled populations and by promoting village leadership formation and its active introduction into the process of the overall structuring of the area.

Specifically, the programme sought to promote specific activities at the family and village levels through training and technical assistance in three sectors: agriculture and forestation, handicrafts, and child care and pre-school education.

10. See in this regard: Awash, 1988.

To develop these activities, initiatives were devised to reach the entire population directly and demonstration projects have been implemented which would suggest development ideas for the resettlement area.

2.1 The agro-forestry programme

With regard to the agro-forestry sector, the objectives established for the first two years were to improve the family plots in every village, to develop small- and medium-scale irrigation by exploiting riverside sites, increasing the production and consumption of vegetables, and developing village reafforestation plans.

During the first period following the transfer of approximately seventy-five thousand persons, a predominantly collective system of organization of agricultural work and of production ownership was in effect in the Beles area.

Collective land dedicated to the growing of cereal crops, partly by manual labour and partly by mechanized farming, was assigned to every village.

Farming these collective parcels was the chief objective in the first phase of the emergency plan. The area had not previously been exploited for agriculture (except marginally, from the quantitative point of view, by the Gumuz population)[11] and therefore reclamation and preparation of the land was required. The operations needed to put the collective parcels under cultivation were managed by the "Tana Beles Project" in collaboration with Ethiopian administrative authorities resident in the villages and with the central government system.

After harvesting, the products were stored in the villages (the "Tana Beles Project" was beginning to construct storage facilities in every village) and were then distributed to the peasants under a points system which took into account the number of days actually worked in the fields. This system is still in use, but village cooperative organizations are being planned which will be able to direct agricultural development by extending the participation of the peasants to every phase of the production process and the use of the products.

11. During the first period following the transfer of the population it was ascertained that the Beles area was mainly characterized by dense bamboo forests. We should note that the Gumuz consider agriculture as only one of the means of subsistence, along with hunting and fishing.

In addition, each family had (and still possesses) 0.1 hectare of land adjacent to its dwelling for family farming.

The CISP feasibility study identified some areas along river banks as particularly suitable for the development of small- and medium-sized irrigation projects. The forms of their utilization were not included by local planners.

The decision to concentrate technical assistance activities and training on developing family plots and plots along rivers was taken on the basis of a number of assumptions, after meetings with the newly-formed Peasants' Associations and, obviously, with the responsible Ethiopian authorities.

The first assumption was that the village communities and family units would immediately manage these plots effectively. This would have a positive impact on the level of adaptation of the settlers to their new environment, especially in view of the fact that some of them had abandoned property in their places of origin and had formerly possessed home gardens.[12]

The second assumption was that it would be possible to use labour not directly employed in reclamation work to cultivate cereal products and exploit the home gardens.

The third assumption was that it was necessary to provide a diet including vitamin-rich foods, especially fruit and vegetables.[13]

The fourth and last assumption was to assign a role in the consolidation of the rural associations to developing small- and medium-scale irrigation projects (that is, plots of land varying in size between two and ten hectares). With the irrigation projects, the Peasants' Associations, the Women's Associations and the Youth Associations could develop their own production and distribution activities, with the possibility of subsequently creating fully-fledged cooperative-type organizations.

For the exploitation of family plots the programme therefore began by contacting all the village Peasants' Associations, and jointly with them selected groups of seven Agricultural Extension Workers to be assigned to specific on-the-job training projects centred around family vegetable farming. In addition to distributing production inputs

12. This fact was directly verified by a mission organized by the Programme in December 1988 in the Sidamo region, in localities populated by Kembata and Hadiya groups. We should note that the reasons which the Ethiopian government advanced for the transfer of the populations belonging to these groups had nothing to do with drought but to over-population in the zones of origin.

13. In this regard see the work of P. Dieci published in this volume on the planning of home gardening activities in the CISP programme in the Beles area.

to families and supervising home gardening activities in the villages, one task of these groups, from the beginning, was to set up a demonstration home garden in every village from which the family units might gather ideas for farming in plots near their dwellings.

The village reafforestation plans were designed to be part of a much wider forestry programme promoted under the "Tana Beles Project". Its goal, besides that of providing villages and family units with trees for embellishment and shade, was to sensitize the people, once again with the help of the agricultural extension workers, to the need to protect and make the best use of the forestry resources in the area.

For the development of irrigated areas, the method followed by the programmes focused on analyzing existing water resources and, in cooperation with the villages and representatives of the Ministry of Agriculture, identifying which forms of management the irrigation schemes might adopt.

Once it had been decided that these rural associations would be the appropriate bodies to manage and develop irrigation, their representatives were involved in intensive training programmes. These were accompanied by the first on-site operations, including the installation of motor pumps, digging channels and ditches and implementation the cropping plans.[14]

To complete this account of the objectives and methodologies followed in the agro-forestry sector of the programme, mention must be made of the criteria used in formulating the cropping plans. Three main factors were considered.

The first concerned the nutritional value of the crops, the second the populations' preferences and demands, and the third was based on fact-finding microstudies conducted by the programme in several of the settlers' areas of origin. Cassava was disseminated, for example, because this product is widely consumed by the Kembata population.

14. For the development of irrigated areas the Programme promoted forms of management centred on the following criterion. A group of peasants belonging to a Peasants' Association undertakes to exploit the irrigated area and to promote the marketing of the products. Subsequently this group keeps half of the proceeds, the other half going to the Peasants' Association with jurisdiction over the land being worked. This scheme is also being used in other zones of the country. In particular, a cooperative of this kind has been seen about 150 kilometres from the Beles area at Bure', on the road linking the area to Addis Ababa.

2.2 *The programme of development of artisan industry*

Without doubt, the main object of the strategies implemented in the Beles Valley was, for local planners, the development of agriculture, assisted among other things by a significant degree of mechanization.[15]

At the same time, one of the assumptions underlying the programme was that it would be difficult to accomplish enduring integrated rural development without off-farm social and productive activities to complement the process of exploiting and improving the land.

This assumption was based on three considerations. The first was that a lack of non-farm commodities might limit the vitality and dynamism of the local market. The second concerned the need for certain manufactured articles, domestic goods, and agricultural implements which, in the absence of local production, would increase dependence on outside help over time. The third resulted from the existence of specific off-farm skills within the village.[16]

These considerations constituted the frame of reference for formulating development plans in the craft and child care sectors.

With regard to the craft sector, the first step was to carry out of a survey of the villages to assess existing skills and identify the most urgent needs. The programme then developed training and technical assistance programmes in the sub-sectors of work on bamboo, iron and pottery, mainly targeting this last line of activity on the women.

At the level of activities planning, it was believed that the possibility of setting up a productive network generating income which could be included in the future in cooperative organizations was linked to the development of a local craft industry.

The programme therefore proposed to emphasize training activities and technical assistance, as well as supplying materials and working tools in the three previously mentioned sub-sectors, bearing in mind general goals such as:

- permitting improvement and growth of local technical resources;
- creating income-generating activities for the benefit of family units;

15. See in this regard: "Tana Beles Project", Ethiopia 1989, Salini Costruttori, and particularly the section on agriculture.

16. Beginning in 1986 the Programme began conducting regular surveys in the villages to obtain information on the activities carried out by the settlers in their areas of origin.

- reducing dependency on outside supplies of goods for domestic use and agricultural tools;
- encouraging women to participate in developing the area through activities directly fostered by them;
- supporting, over the medium term, the development of cooperative organizations, managed by the artisans, with a wide range of specialized crafts.

On the basis of these initial criteria, the programme then set up three training and production centres, while simultaneously instituting the first marketing activities in the area and fostering, through technical assistance and training, craft centres in the villages.

2.3 The pre-school education and child care programme

The third sector of activity identified by the programme's feasibility mission was child care and pre-school education. There were two principal reasons for this policy choice.

The first was the need to support the schooling process by engaging children from four to six years of age in activities that would help them acquire the skills needed in primary school (for example, mastery of Amharic, which was unfamiliar to most of the children transferred to Beles but not belonging to the Amhara ethnic group).

A second reason concerned the advisability of setting up a network of child care services to improve child health through hygiene, healthcare and nutritional activities provided by the kindergartens.

Here again, the programme took an initial popularization and demonstration approach, taking as its first objective the creation of a demonstration kindergarten which would also function as a training centre for nursery school teachers, all of whom would be chosen from among the resettled population.

This approach was based on the conviction that a successful demonstration project would encourage demand for grassroots educational activities for children in the villages. The programme was to respond to this demand by offering technical assistance to build kindergartens, train elementary school teachers, and organize educational and healthcare activities at the village level.

2.4 The institutional framework within which the programme was developed

For the design of the CISP multisectoral programme, and the implementation of its work during the first few years, it proved to be of fundamental importance to hold work and planning sessions involving both the rural associations in the village that had only just been resettled, and representatives of Ethiopian institutions directly and indirectly concerned with the development of this resettlement area.

The Ministry of Agriculture, the Ethiopian Nutrition Institute, the Ministry of Labour and Social Affairs, the Ministry of Education, the HASIDA (Handicraft and Small Scale Industry Development Agency), the National Children Commission, the RRC, and the WPE, as well as the Institute of Development Research of the University of Addis Ababa, together with their respective local, regional, and national representatives, put at the programme's disposition during its development and goals identification phase, materials and suggestions that profoundly influenced methodologies and operational content.

3. Factors in the identification of development ideas in the Beles Valley

Beginning in the second half of 1989 the political and institutional status of the Beles area changed, partly as a result of the administrative Reforms carried out in the country.

By decision of the National Shengo, the Gojjam region was split into three distinct regions: West Gojjam, East Gojjam, and Metekel.

The administrative capital of the new region of Metekel, where the Beles area is located, was established in Almu Town.[17]

The administrative Reform included the Beles area, which is now divided into three districts under the regional development plan, which was itself articulated into priority sectors such as agriculture and animal husbandry, inland trade, industry, education, and health.

At the same time, Almu Town, the organizational centre of the Italian cooperation programme, took on the characteristics of an urban centre with commercial activities promoted from both within and without the area.

17. Almu Town, which arose initially as a logistical support base for the "Tana Beles Project", became progressively organized as an urban centre until it became capital of the new Metekel region.

In the villages local leadership began to emerge in the administrative field, trade and production.

Two years after resettlement, the villages came under the administration of the Peasants' Associations and their leaders, since the administrative authority of the officials previously sent by the government had lapsed.

For the purposes of overall stability in developing the area, in addition to a more decisive organization and diversification of economic and productive activities, it is necessary to define the resettled population's real self-reliance as an ongoing process and not just as a question of administration.

Self-reliance in this context obviously does not mean being an autarkic self-sufficient exception to the development rationale of the Beles area.

In other words, the fundamental problem on which future programme activities must be based is not to support local development independently of the national socio-economic system, nor would a goal of that kind be at all realistic.

One cannot ignore the fact that the development of the Beles area, like that of other Ethiopian regions, is dramatically linked to the possibility of finding effective solutions to the conflicts that have plagued the nation and caused so much bloodshed for years.

The central problem for future development of the area is how to effectively involve the settlers in the socio-economic dynamics of the valley bordering on the Beles River, and hence the nature and the intensity of this whole process.

In this context the expectations regarding the CISP multisectoral programme on the part of the population and of the local administrative officials have grown to such an extent as to make it a possible laboratory for working out solutions and feasible strategies for the entire resettlement area.

The growth of a local leadership permanently established in the villages, the development of cooperative organizations capable of the overall direction of productive activities and trade in competition with services and commercial centres brought in from other Ethiopian regions, and the establishment of the economic and social conditions that will allow the villages to support educational services, particularly for infants, have now become not just goals for the medium term of the multisectoral programme, but inescapable problem areas for the future development of the Beles area.

In this perspective two areas of the programme take on a new and

greater importance. One is training: this must be directed ever more incisively toward enhancing management and administration capabilities, and particular technical skills.

Secondly, it seems absolutely necessary to formulate a proper research strategy for interpreting and directing the social and economic dynamics of the area towards the general objectives mentioned earlier.

One other problems area, identified by the programme as one of its general objectives, is incorporating the Gumuz population into the development process.[18]

The Gumuz have a centuries' old familiarity with the area. This is a valuable development resource which should be more extensively exploited in the future.

Just to cite one small example, but one not with important practical implications, the Gumuz possess particularly useful information on the varieties of seeds that are most suitable for the valley's environmental and climatic conditions and on the system for reproducing the seeds. This information has already been profitably taken into consideration in the course of the first years of the programme.[19]

At the same time, the experience acquired regarding nursery school education and handicrafts indicates that specific training requirements are beginning to emerge among the Gumuz, largely as a result of their need to adapt to a socio-economic reality which is very different from the one they knew until four years ago. These can constitute a basis for making use of the specific contribution that the Gumuz can make to the future development of the Beles Valley.[20]

18. Although, as has been explained, part of the Gumuz population left the Beles area, in some villages the Gumuz live together with the settlers.

19. This relates particularly to varieties of legumes.

20. Reference is made in this case to the fact that training courses for artisans and running kindergartens are attended by a few representatives of the Gumuz people. As far as the kindergartens are concerned, it is also noted that periodic meetings between representatives of the Gumuz communities and programme staff are arranged to jointly evaluate the impact of these activities on the education and health of the children.

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A. AGRICULTURE

BOX I

Main agro-forestry activities in the Programme October 1986 - May 1990

1986-87

- conducting a preliminary survey of the situation of home garden farming on a sample of randomly selected villages;
- selection and start-up of the training programme for 210 agricultural extension workers distributed throughout 30 villages with the task of promoting and supervising the development of vegetable farming at household level and village level, both rainfed, and under irrigation in the case of villages near waterways;
- setting up 30 demonstration areas, one per village and each 0.1 ha in size to disseminate household vegetable farming;
- conducting an initial survey on home garden farming management on 10 randomly-selected households in each of the 30 villages;
- nursery production and planting out of 300,000 saplings in 30 villages, mainly for shade and decoration;
- distributing seed for family farming and setting up village seed nurseries.

1988-89

- extending the home garden plan to 44 villages with the selection of another 70 agricultural extension workers and the establishment of 14 new demonstration areas;
- using 0.1 ha home parcels for a total of 23,000 households;
- setting up irrigation schemes for fruit and vegetable production and seedlings production in 10 villages covering a total of 70 has.;

- promoting the marketing of fruit and vegetables in 16 villages by setting up a store directly managed by the Peasants' Associations of the villages concerned;
- follow-up and retraining the 280 agricultural extension workers;
- conducting extension activities for natural fertilization and compost production;
- conducting a second survey into methods of farming home gardens with 10 households randomly selected in each of the 44 villages;
- conducting an initial survey on the use of the fruit and vegetables grown on the home gardens;
- training the sekected agricultural extension workers in cooperation with the Ministry of Agriculture in Bahr Dar.

1990

- extending the irrigation schemes to 16 villages to total 105 has.;
- monitoring the status of home garden farming through interviews with the agronomists in all the villages in the area;
- managing and improving the irrigated schemes;
- carrying out agricultural extension work on demonstration home gardens;
- strengthening marketing mechanisms for agricultural products also by opening a shop and carrying out a survey of the prices system in the markets in the area;
- improving home gardens for 23,000 households.

3. TRANSFORMATION OF ETHIOPIA'S AGRICULTURE - A POLICY IN CRISIS OR THE CRISIS OF POLICY?

Mulugetta Bezzabeh

1. Introduction

The most tragic event of the world seen during the 1980s has undoubtedly been the mass hunger in Ethiopia, publicly viewed and witnessed by millions of people the world over. Despite the litany of explanations and protestations, the debate on why this hunger happened in a country often described as a "water tower of Africa" has not subsided. There are those who argue that Ethiopia is caught in a serious Malthusian trap from which it can not extricate itself ever. There are others who hide behind the pride of nationalism and downgrade the tragedy as a passing momentary pain in Ethiopia's history which will be forgotten and overcome over time, once the war is over. There are still others who see the crisis purely in terms of malfunctioning policies, strategies, structures and institutions. They allege that Ethiopia has lost touch with the original objectives of the revolution, namely the implementation of the democratic phase of the socialist revolution resulting in a serious conflict in "means" and "ends". Finally, a large body of critics whose vision of society is rooted in classical liberal capitalism find no merit in anything associated with the present policies and therefore attribute the present economic crisis to a crisis of the policy itself. Who is right and who is wrong?

In this paper it is argued that the challenges facing Ethiopian agriculture are rooted in the politics of development, and by parallel discourse in the politics of the nation state. Studying Ethiopian agriculture is like reviewing a chapter on Ethiopian politics. War, drought, economic management or mismanagement, bureaucratization and politics, declining terms of trade of agriculture, etc., are part of the same logic of development.

From the start, it must be cautioned that a completely open and comprehensive analysis of the situation cannot be undertaken, given the state of conditions in Ethiopian polity. At the same time there are issues which cannot be disregarded in our analysis: a serious analysis of Ethiopia's food system paradigms can only be undertaken through a wider interdisciplinary analysis involving the inter-action of culture, ecology, the heritage of Ethiopian nationalism and independence, the political/ideological position of the regime in power vis-à-vis the transition to a socialist economy, bureaucratization and politics. These essential parts of the analysis could not be undertaken in detail in a short chapter of this kind. Neither could we avoid them altogether. Thus by implication our analysis essentially remains limited and rooted in an observation of the political economy at the level of the nation state and the factors that develop and interact within it. The international dimensions of Ethiopia's underdevelopment have not received the attention they deserve.

2. Theoretical considerations - Agrarian transformation in a backward economy

A review of Ethiopia's small holder agriculture which is essentially a review of the agrarian question in Ethiopia should be seen against the background of current agrarian policy. The agrarian policy articulated by the Derg (a name for the Military Committee which overthrew the regime of Imperial Ethiopia and declared the country a Marxist Leninist State) had, and still has, as its central objective, the transformation of Ethiopia from a country with essentially feudal forms of production relations to one containing the basic features of a transition to a socialist mode of production.[1] The effort, massive by any standard attempted in any African country treading on the same Marxist Leninist road, involved the dismantling of the old order of production relations in the rural areas and implanting new institutional arrangements. These changes included the creation of rural mass organizations, new production structures, the mass introduction of political and cultural programmes, especially literacy, and the introduction of changes in pro-

1. Despite the recent policy declaration in favour of a "mixed" economy, there has not been any explicit renunciation of the policy objectives of creating a socialist society as contained in several official documents of the state, including the constitution.

duction relations. This involved the physical transfer of the means of production which, because of the backward nature of the economy, has been largely confined to land assets.

By any criteria of evaluation, Ethiopia's agrarian transformation effort is massive. The central question, however, is whether (as it has happened in countries that embarked on a similar course of action such as China, Cuba, Vietnam, Nicaragua, etc.) there has been a serious debate on the nature of the transition, including the means and ends, which the transition entailed. Admittedly in the early period of the Ethiopian Revolution, a national debate took place largely through the national media, on the question of the transition to socialism. However, these debates which were monopolized by Marxist movements and parties were largely confined to general issues of state power, democracy and class struggle. These debates hardly touched the agrarian question, much less the specificity of Ethiopia's agrarian systems. Even the passing references which surfaced occasionally on the agrarian question had little or no relations to the objective conditions in Ethiopia. What followed, therefore, were a series of national policy declaration and instruments, largely derived from the general theories of the political economy of Marxism-Leninism, applied uncritically to the conditions in Ethiopia.

The difficulties which have now emerged and the consequent reversals of political/ideological positions in recent times can partly be attributed to the absence, during the formative years, of critical analysis on the relevance of Marxist political thoughts to the agrarian conditions of Ethiopia.

In part it is understandable why there have not been sufficient critical thinking on the peasant/agrarian question in Ethiopia. There were no ideologues with an empiric orientation to undertake the historic task of constructing a body of knowledge and a policy applicable for transforming Ethiopia from a backward feudal type economy to the society envisaged in a Marxist-Leninist model: egalitarian but at the same time containing the structures, institutions and know-how for continuous accumulation. Indeed this has been and continues to be part of the problem.

A more fundamental problem, however is rooted in Marxist theory of transformation. Marxism has not produced a political/economic theory for pre-capitalist societies like the one provided for capitalist economies. Neither have those states that brought Marxism to power in backward pre-capitalist societies been able to evolve a systematic body of theory and practice relevant and applicable to the day-to-day organi-

zations and management of an economy in transition to socialism. This was the dilemma Ethiopian policy makers must have faced from time to times, and as one senior minister candidly remarked, "there is hardly the time for well thought actions; we operate in an environment of a continuous crisis management hoping that some of our decisions will be fruitful. The poverty of knowledge in our day to day decisions and actions is alarming".[2]

Crisis mentality or not, agrarian policy in Ethiopia went through a series of acrobatic somersaults of various types, culminating in agrarian policies and programmes, sometimes in contradiction with each other (e.g. investment priorities between state and peasant farms; villagization vs investments for the development of the forces of production, etc.), and, at other times, embarking on measures with an inherent tendency for being counterproductive (e.g. the adoption of pricing and marketing policy ostensibly as a weapon for breaking the "exploitative exchange relations in production", and terminating such policy ten or more years later for being unworkable).

This somersault in agrarian policy has yet to settle on a stable and firm ground. It will do so only when the existing model of development (which this author thinks is still essentially the Marxist-Leninist model) will reflect the objective conditions of the agrarian questions and interpret and develop policy actions accordingly. It is precisely for these reasons that it becomes essential to undertake a brief review of the extent to which Marxist and neo-Marxist thoughts on the transition to socialism have been relevant to the contemporary reality of agrarian Ethiopia. Such a brief review will help us focus on and determine whether policies were developed on the basis of a realistic and critical assessment of the agrarian question in Ethiopia, and the extent to which Marxist/neo-Marxist theories have been critically analyzed.

The problems involved in applying Marxist thought for transforming societies in revolution has been addressed at length by the French Marxist scholar, Charles Bettelheim in his book *The transition to socialist economy* (1978). Bettelheim argues that Marxism involves considering "every reality as a structured whole which has to be analyzed as such" (1978:148). Other neo-Marxist scholars have argued along similar lines, contending that each transition is materially different, therefore conceptually different. Furthermore, the transition to socialism requires

2. Personal conversation with --- in 1983. Ethiopian policy makers often do engage in critical discussions to a point of accusing their government for adopting wrong policies but rarely do so in open or during sessions of policy discussions.

"the passing of state power to the working class, or a coalition of formerly exploited classes within which the working class plays a dominant role" (1978:21).

At this point we can raise a number of fundamental questions. That a revolution took place in Ethiopia is not a question at issue. The Ethiopian revolution was a popular mass insurrection led by students, workers, peasants, and all other democratic forces. These insurrections culminated in the major towns after many years of overt and covert agitations. The military joined the insurrection at a much later date. Despite this, the military played a crucial role in tipping the balance of the insurrection and the subsequent shift to policies of "socialist" orientation. Prior to and following the overthrow of the ancient regime, there was a popular appeal for change especially for land reform. The impulse which was generated after the revolution was directed mainly to a general democratization of life, as evidenced by numerous mass demonstrations for civil liberties. On the other hand, it is plausible to assume that the socialist project, in the manner in which it unfolded subsequently, was only supported and spearheaded by a tiny minority of students and intellectuals. There was no working class movement advocating socialism, a political party pressing for such a direction, or a popular debate or insurrection in support of a socialist transformation process. The political decision for a socialist programme was made in the absence of a free discourse on alternative directions of one form or another. State power, unlike Bettelheim's prescriptions, passed to the military under the guise that the "military is part and parcel of the exploited classes of the peasantry",[3] a reasoning similar to that of "state power by substitution" advanced by early Bolshevik leaders as a justification for them, playing a dominant role in the maintenance of state power instead of the working class, unorganized and decimated by the Civil War. even if the military had not been in the picture, it is difficult to imagine how Ethiopia's working class, essentially of peasant stock and with no or little history of struggle for a working class movement could have maintained state power, either by itself or in collusion with other marginalized classes.

3. This is the political line repeatedly argued in the media to justify the military leadership of the Ethiopian Revolution. Using a purely class approach to the question of leadership, the military, as a group, has more legitimacy as a member of the oppressed classed than the intellectual elites who come from a well to do urban class. In the old days joining the military, except for those that were forced to join the Military Academy at Harrar, was an occupation for the poor who had no other alternative except being a soldier.

The most fundamental political premise which has characterized Ethiopia's national and rural development effort during the past decade and a half has been largely derived from the Leninist thought that in order to develop the production base it is important to depend initially upon a combination of capitalist relations in production and strong centralized state control of the economy to achieve "a complete material preparation of socialism" (Lenin 1976:445). These Leninist assumptions directly implied the need for dictatorship and coercion during the transition period, thus precluding the "peaceful" transition road advocated by social democratic parties throughout Western Europe. Undoubtedly this Leninist thought not only influenced policy directions in Ethiopia but became the cornerstone for the organization and management of national development and politics. The direct implication of this policy direction was the establishment of mass organizations in the rural and urban areas, linked vertically to central power and planning structures of the state. Such a system helped facilitate and implement the decisions to accumulation, at least in the short run. But the political situation in the country, especially in the Northern part was neither amenable to central control nor positively inclined to it. Subsequent policies of the state failed to find remedies to this crucial issue, as a result of which, more than 65 percent of the national budget is now devoted to military expenditures, depriving the rural areas of essential investment resources without which it is not possible to talk about a sustained growth of the agricultural sector, Here lies Ethiopia's dilemma.

3. Resources for development

3.1 Human resources

Ethiopia is the third most populous country in Africa. By year 2010 the population is estimated to reach 100 million. It is also estimated that more than 60% of the population live in the northern highlands. By present standards of technology and institutional arrangements, food security will be a preoccupying factor in national policies for many decades to come, at least until such times when the country will be in the conditions to control population growth and its effects on fixed resources, food availability, social and infrastructural services.

As part of the reform measures, Ethiopia embarked on a comprehensive programme of literacy. It is estimated that close to 70 per cent

of the rural population has been provided with the basic skills of reading and writing. The actual percentage of literacy in the rural areas cannot, however, be identified with certainty, although the figure is very high by comparison to imperial Ethiopia and by the present standards of many African countries. Neither is it possible to verify, for lack of data, the extent to which literacy has had an impact on increased output and productivity, particularly in agriculture.

Ethiopian farmers practised agriculture since primordial times with a technology sufficient to sustain food supplies for low population levels. Nowadays, the technology-human resource balance has been outlived by time; still it is wrong to describe Ethiopian agriculture as backward and primitive as many uniformed students of Ethiopian agriculture do. Operating with predominantly rainfed agriculture, many types of intensive land use systems have been practised in the country by tradition, quite apart from the fact that Ethiopia is the genetic home for many cultivated food crops such as teff (*Erograstis*), barley (*Hordium vulgave*), wheat (*Triticum spp.*), Ethiopian mustard (*Brassica cavinata*), linseed (*Linum sitatissimum*), lentil (*Lens culinaris*), faba bean (*Vicia faba*) and many others.

The conjunction of high population growth and limited technology have resulted in creating a serious dichotomy of enormous policy implication. On the one hand there are the northern highlands hugely degraded as a result of inappropriate land use practices over centuries and with 50% of the area unsuitable for agricultural production, by present level of technology and know-how. On the other hand, there are the southern areas, where man-land ratios are low and the possibilities for evolving a sustainable system of agricultural production are generally positive. This emerging dichotomy of North and South, containing within it acute social, ethnic, linguistic and cultural differences increasingly acts as a deterrent force against the evolution of a stable national development policy or a stable production and distribution system.

3.2 Degradation and stagnation

The mountainous topography of the country in which traditional agriculture has been practised for centuries, the ox-plow technology of Ethiopian agriculture as well as the population pressure have turned the highlands, especially the northern highlands, into areas with the worst features of soil degradation. The degradation extends also to the

other highlands of the country.[4]

The highlands as a whole constitute 53.6 million hectares or roughly 44 per cent of the total area of the country. Of the 53.6 million hectares of land six million are highly degraded, 8.5 million are degraded and 13.0 million are moderately degraded. This means that more than 50% of the highland area is unsuitable for agricultural production. Soil fertility has been greatly diminished in many of the highland areas, especially in the northern highlands through deforestation, overgrazing, overcropping and resultant erosion.

The gravity of the problem of degradation can be understood in a case study of Wollo (Mulugetta, 1980) by using sample transects of Wollo by slope categories and altitudes. As indicated in Table 1, in zone VII, with 40% slope, we have 578,000 hectares or 13% of the total area of the region unsuitable for cultivation. Assuming that 50 per cent of the 578,000 hectares is under cultivation (a very conservative figure) with a land holding of 1.5 hectares per family (in a family of 4) we can conclude that about 190,000 families are living in agriculturally unsuitable area.

Using the same table, and the same assumption described above, in Zone VI, we have 543,000 hectares of land unfit for human settlement with about 185,000 people living in such an environment. Disregarding the other implications of Table 1, we can see that from Zone VI and VII there are 375,000 families or 1.5 million people that are living in a hostile environment for agriculture and who need to move out of these areas. The situation, in terms of degradation, in Tigray, Northern Shoa, Eastern Harrarge, Eastern Gondar and a large part of highland Eritrea is believed to be worse than Wollo. Especially in the northern highlands millions of people have lost their capacity for subsistence and survival and the available policy options are extremely limited. Only an orderly resettlement programme can avert future disasters and save the lives of millions of people as well as protect the environment.

A problem closely related to degradation is extreme fragmentation of cultivable land. Fragmentation of holdings has its historic basis in the evolution of land tenure and production systems of the country and it is not our intention to dwell on the background of this problem. The fact is that fragmentation of cultivable land has increased tremendously since land reform, following land redistribution and land allocation to

4. For detailed reference on the extent of degradation see: FAO, 1986; IFAD, 1989.

new adult members of the rural holdings. In only a matter of a decade, fragmentation of cultivable land has grown by at least 25 per cent, resulting in a situation where by 1989 51.3 per cent of the farming population had less than one hectare. At present the national average land holding per farming household is 1.2 hectare, down from 1.5 only a decade ago. With increased fragmentation, given the present level of technology, there is little doubt that output and productivity have been declining.

Table 1 - Altitude/Slope Zones in Wollo (000 has.)

Altitude zones (M)	*Slope categories (%)*							*Total*
	I	*II*	*III*	*IV*	*V*	*VI*	*VII*	
	Under 1.25	*1.5-2.5*	*2.5-5*	*5-10*	*10-20*	*20-40*	*Over 40*	
Under 800m A	1159a	663a	709a	549a	308a	147a	12a	3548
800-1400m B	253a	135a	284a	231a	149a	36a	10a	1099
1400-1800m C	3b	62b	143b	126b	120b	263b	90d	806
1800-2100m D	0b	0b	18b	196b	94b	242c	68d	619
2100-2300m E	0b	0b	1b	119b	106b	133c	51d	409
2300-2500m F	0b	8b	3b	85b	82b	66b	57d	301
2500-2700m G	0b	9b	55b	31b	76b	46c	109d	326
2700-3000m H	0b	36b	80b	63b	90b	61c	111d	442
3000-3300m I	0b	0b	86b	0b	76b	41c	42d	246
3300-3700m J	0b	10b	33b	0b	33b	34c	25d	135
Over 3700m K	0b	0b	0b	0b	2b	16c	3d	20
Total	1415	922	1414	1399	1135	1087	578	7950

a Σ 4647 hectares marginal or inadequate rainfall.

b Σ 1716 hectares area with less than 20% slope. From this area available for arable agriculture is 1116 hectares (after subtracting 600 hectares of roads, swamps, torrent beds, and others).

c Σ 904 hectares suitabl only for careful cropping om bench terraces slop category (20-40%).

d Σ 556 hectares area with over 40% slope.

Σ of areas above 1400m altitude and with all 7 slopes zones that have adequate rainfall constitute 3303 and the areas with adequate rainfall suited to some form of agriculture constitute 2720.5 hectares.

It is important to understand the dynamic causes behind the issues of degradation, fragmentation and the general deterioration of the environment. Failure to see the cause and effect relationships will lead to neglect; neglecting to see the already serious situation will lead to more disasters, causing the death of millions of people.

Historically feudalism started in the northern part of the country. The north was a region where many internal wars were fought and where foreign expansionist wars met resistance in defence of Ethiopia' independence. These wars had their devastating effects on the environment. Forests had to be cut to maintain the energy needs of contending armies. The land had to be cultivated intensely to maintain the food requirements of a growing population, including the growing appetite of landowners. Every actor living in the north - the nobilities, the armies, the peasantry - contributed to the present crisis. The nobilities with their extravagant pattern of consumption, including the maintenance of their armies, wasted considerable resources; the poor destroyed the land and other resources to which they had access and which they desperately needed for survival. Thus inequality, dependence and environmental degradation are closely interlocked aspects of a development crisis syndrome. The solution to the problem lies in mobilizing the same actors who contributed to degradation to ensure that they contribute to regeneration using, at the local level, a development strategy based on the concept of self-reliance. What makes the issue alarming is the urgency for such a strategy.

3.3 Resources for stable policy

The statistical indicators reviewed above may give the impression that the country has no hope for recovery and adjustment. This is not actually the case. Ethiopia has enormous natural resources for agriculture, mainly located in the south.

At present only 9.5 million hectares of land are under crop production which is roughly about 8% of the land area. By conservative estimates this land area under cultivation can easily be doubled since reliable estimates indicate that an estimated 19 million hectares can be classified as suitable for crop production. This potential offers scope for revitalizing the agricultural system.

Ethiopia has 77 million heads of livestock with a large grazing area (64 million hectares or 51% of the total area) to sustain it. This sector remains largely undeveloped. here again, a national development policy

can take advantage of this rich potential.

Recent events gave the country the bad image of being dry and barren. However, hydrologists have named it "the Water Tower of Africa", because of its potential of about 60 billion kilowatt-hours of electrical energy to be generated from the major rivers and tributaries. The total electrical energy produced at present is estimated at only 1.2 billion Kwh. With such water-flows the potential for irrigation especially in the lowlands is also considered to be very high.

3.4 The present scenario

With a GNP per capita of US$ 130 in 1987 and a growth rate of 0.1% from 1965-87, Ethiopia is one of the poorest countries in the world as compared to an average of US$ 290 and growth rate of 3.1% for low income countries. Using similar indicators, we find that the GDP grew by 2.7% from 1965-80 and only by 0.9% from 1980-87 as compared to 5.4 and 6.18% for the low income countries. The sectoral indicators are even more alarming. Agriculture grew by 1.2% between 1965-80, while it declined by 2.1% per annum between 1980-87. These negative growth rates were taking place side by side with a high population growth rate of over 2.5% between 1965-80 and by over 3.5% thereafter until the present time. It can therefore be said that for the past many years stagnation and deterioration prevailed in Ethiopia over the national development effort. This deterioration has been aggravated further in recent times as the country progressively entangled itself in an economy of war and scarcity.

In terms of direct revenue through taxation, agriculture's contribution is insignificant, contributing to less than one-fifth of the total annual government revenue. Because standards of living are low and marginal output above subsistence insignificant, it is difficult to increase savings by compressing the level of consumption. To increase the level of savings will require fundamental rethinking on development policies and strategies, including the opening up of high potential areas as well as the distribution of public agricultural areas controlled and managed by state farms to cooperative and private investments. It will also require introducing a series of fiscal and monetary measures to accelerate the monetization of the economy as well as other measures which will increase local initiatives in planning and implementing development programmes at the grassroots level.

4. Transforming agriculture: The process

4.1 Basic premises

Transformation measures which took place in Ethiopia have their basis in the writings of Marx and Engels and to understand what happened during the past decade and half, it is important to undertake a limited review of some of their writings. In the "Manifesto of the Communist Party" (1972) and in Engels' famous essay, "The peasant question in France and Germany" (1974:12-17), among the agrarian measures that they propose after seizure of state power were the "abolishing property in land", integrating agriculture with industry, the gradual abolishing of the distinctions between town and country through a "more equitable" distribution of the population, (emphasis mine) expropriation of land of the large landowners and the persuasion of peasants with small holdings to join cooperatives and enjoy the advantage of large scale farming. The views of Marx and Engels on the issue of cooperatives gave great relevance to what has happened in Ethiopia:

"When we are in possession of state power we shall not even think of forcibly expropriating the small peasants (...). Our task relative to the small peasant consists (...) in effecting a transition of his private enterprise and private possessions to cooperative ones, not forcibly by dint of example and the proffer of social assistance for the purpose" (Marx and Engels, 1972:644-645).

More than Marx and Engels, it was Lenin who emphasized on the importance of gradual cooperativization of the peasantry. This is revealed in his essay, "On cooperation" written a few moths before his death. In this important essay, Lenin indicated that the transformation of the peasantry would take many years, at least two decades, given the implementation of a comprehensive programme of literacy. After Lenin's death voluntary cooperativization was abandoned and replaced by collectivization and state controlled cooperatives.

The decisive issue in the transformation process which preoccupies policy makers in developing countries attempting a transition to socialism, is the need for an all rounded increase in the level of production. Unless this is done, countries embarking on socialist transformation can only aspire, as Mandel says, to a "socialism of poverty" (Mandel, 1968:610). To achieve socialist accumulation involves deploying a large part of the national income as investment in productive development

activities. This objective has been achieved in the two major socialist countries, China and the Soviet Union, using different approaches - the "squeezing of agricultural surplus" model of the Soviet Union as opposed to the Chinese model of providing incentives to agriculture so that it could be the basis for industrialization. Within these two broad strategies, a number of economic and financial issues assume importance during the transition. It is now recognized that the Soviet model of concentrating on the capital goods at the expense of the consumer goods undermines the two sectors, since workers would not have the incentive to work hard in the capital goods sector, thus making accumulation difficult.

The experience of all socialist countries indicates that the most sensitive and politically volatile economic issue in the transition has been the pricing and marketing policy. The Soviet model involved the mobilization and exaction effort, to siphon surplus from agriculture for investment in industry. This meant very low prices for agricultural produce, hence very low standards of living for those in agricultural occupations. In contrast, the Chinese model has been more innovative. Mao-Tse Tung in his brilliant short essay "The Ten Relationships" (1956) uses the analogy of a cow to describe the fate of agriculture. Mao states that it is not possible to expect milk from a cow if it is not fed properly. Agriculture must be provided with continuous price incentives to produce for itself, for the urban areas and for industry. This policy, together with institutional arrangements at the grassroots level, explains for the relatively good performance of Chines agriculture.

Agrarian transformation in Ethiopia was inclined towards the Soviet approach, with some variations and exceptions. However, unlike what happened in the Soviet Union there was no forced collectivization. The material conditions in the country did not permit venturing on such a course. Cooperativization was and is still based on voluntary membership. However, neither the cooperative sector nor the peasant non-cooperativized sector have made any serious contribution to accumulation. The pricing and marketing policy which has been in force for the past decade and which depended largely on lower producer prices and the use of a quota system for the collection of farm produce has not contributed either to higher production, to extraction of surplus or to accumulation. This policy has now been revised and Ethiopia seems to be heading towards a market dependent pricing policy.

4.2 Basic structural changes

4.2.1 The peasant mode of production

The Ethiopian revolution, unique in its own ways, introduced the most radical change ever to take place in a developing country in recent times. The revolution introduced far-reaching structural changes, including the abolishing of ownership of land in both the rural and urban areas. It is a revolution unique in its own ways because most of the reform efforts were undertaken swiftly, without a prior decision by a political party or parties, and by consequence, without a truly national debate and consensus on the means and ends. Through a series of military style mobilizations, a highly entrenched feudal type of agrarian production system had to be dismantled, following some of the best Leninist traditions of centralism. These measures had helped shape the course of Ethiopian life and politics, and Ethiopia was destined not to be the same again. Massive rural and urban institutional structures evolved in no time, embracing millions of people. Initially no less than twenty five thousand Peasants' Associations were formed, having more than six million rural households or roughly (1980) 80% of the population. Later, with consolidation of some of the smaller Peasants' Associations into larger ones and after gradual erosion of the system in Northern Ethiopia, the country came to have sixteen thousand Peasants' Associations, embracing well over four million households or roughly 60% of the population.

Unlike those critics who see these associations as Stalinist prototypes organized by a few elites for controlling the lives of the Ethiopian people (as if elites ever ceased control societies in history), we see in these associations, with all their institutional weaknesses, the human will, capacity and perseverance of the underprivileged to take control of their own destinies, struggling against bureaucratization and politics. Peasants' Associations remain genuine mass organizations having the freedom and flexibility to perform important tasks such as land redistribution. Although data on income redistribution are not available, nevertheless the improvement in the standard of living of the mass of the rural people, especially in the southern areas, is rather considerable in view of the fact that former tenants and landless labourers benefited from the land redistribution programme, getting access to the income of the former landlords which accounted for about 30 per cent of the rural sector's net output. It is possible to speculate, however, that real incomes per capita may not have increased in the northern areas,

considering that there was very little or no change in the net transfer of land resources from land owners to tenants or the landless. As a matter of fact, incomes in these areas may actually have stagnated, not because of land reform, but because of the recurring droughts, the effects of which were exacerbated by the war.

The delivery network in the rural areas in support of the local Peasants' Associations merits some attention. Ethiopia has. 3,518 Service Cooperatives (1989-90) whose essential task has been the delivery of consumer goods, input supplies, marketing of produce and, in a limited way, the delivery of credit and associated services to more than 15,000 Peasants' Associations serving four million farmer households or roughly 83% of the total membership of Peasants' Associations. Still, Ethiopian agriculture operates with very low levels of inputs per capita. For instance, fertilizers consumption stands at 9.2 kgs./ha of harvested area (1990) as compared to 19 kg/ha for Kenya; less than 2% of Ethiopia's farmers use some kind of improved seeds; the volume of institutional credit remains at US$12 per household; surprisingly, the pattern of credit delivered is highly skewed such that three out of the 15 administrative regions (1988) absorbed more than 85% of the total credit to small farmers. In effect Ethiopia's poor smallholder farmers operate with virtually no modern inputs and technology. Neither has the nation been able to develop the capacity for alternative inputs such as the use of organic fertilizers which could have foreign exchange saving impacts.[5]

In historical terms, Ethiopia's present position has corresponding parallells to those of famine ridden India of the years 1955-65 when million of people were dying of hunger and malnutrition. One of the most critical factors which contributed to India's fast recovery has been the formulation and adoption in 1959 of a comprehensive set of policy measures relating to farm technology (especially mechanization) and the supply of farm inputs (Misra, 1990). These policy measures were consistently followed and applied, as result of which India now claims to have a national food reserve exceeding 30 million tons. Like those of India, Ethiopia's problems are surmountable, given the proper policy instruments. Such policies have to be recast in a time frame and applied consistently and methodically.

Next to smallholder peasant agriculture, the small sector of Producer

5. It is worth noting that 38 per cent of the rural households have no oxen at all; 32 per cent have one ox; 24.5 per cent have two oxen; 3.7 per cent have three oxen; and only 2.1 per cent have four oxen or more.

Cooperatives is the second important mode of production in the rural areas. In theory producer cooperatives are supposed to be implemented in two stages. The first stage involves the cultivation of land collectively with implements and drought animals hired by the cooperative from members. The members retain some of their land for individual cultivation and share the cooperatively generated income on the basis of labour contributions. Payments are also made to those who have provided oxen and implements. The second stage involves the pooling of greater portions of the land; implements are pooled for collective use. The income is distributed according to a work point system.

Up until March 1990 there were 250,000 households who were members of Producer Cooperatives or roughly 5.5% of the total number of households in Peasants' Association. The new policy declaration of March 7, 1990, which called for Ethiopia to follow a path of "mixed economy" introduced tremors into the already shaky situation of Producer Cooperatives. Peasants voluntarily disbanded their cooperatives and between March and September 1990 the number of Producer Cooperatives was significantly reduced from 3,500 to only 170. Thus Producer Cooperatives have almost ceased to exist as a distinct mode of production.

The fact that the peasants rejected Producer Cooperatives does not, however, invalidate their usefulness. It only shows that the peasantry did not have a voice on how these cooperatives should be organized and managed. In the past, members of Producer Cooperatives were drawn from the poorest strata of the peasantry and in a country where a significant number of households have no implements and no draughts animal and where average cultivable land is diminishing every year, it is difficult to minimize the importance of Producer Cooperatives.

It needs to be recognized that the present set up of Producer Cooperatives has led to several abuses both from inside the cooperatives and from outside. But the nature of these problems is insignificant relative to the importance of these cooperatives, their greater benefits could be obtained by using a system of participatory methodology, where the cooperatives would be geared primarily not to collective cultivation but to collective cooperation for accumulation. Producer and Service Cooperatives should be regarded more as instruments for promoting investments by organizing labour for capital construction and by amassing special funds for accumulation, involving local grassroots activities.

The other transient mode of production which recently gained international attention is the settlement farm. Although the tradition for spontaneous resettlement has a long history in Ethiopia, involving

people moving out voluntarily from the drought prone areas of the northern highlands and resettling in the southern areas, spontaneous resettlement almost ceased to exist as a phenomenon, having lost its importance for several reasons: hiring wage labour was prohibited by the land reform proclamation, discouraging potential migrant settlers; security reasons were also a deterrent factor; the periodic land redistribution system became a disincentive for migration, as potential migrants were afraid of loosing the piece of land they "owned" in their Peasants' Associations; the social and economic environment which made migration and resettlement easier were breaking down and the potential benefits from migration were no longer attractive. With a decline in spontaneous resettlement came the officially sanctioned and organized massive resettlement programme whose magnitude reached unheard proportions following the 1984 drought in Northern Ethiopia. Since 1984 about 200,000 families or 600,000 people were moved from the north, especially from Northern Shoa, Wollo and Tigrai, and resettled in the southern and south-western areas. The international controversy which arose as a result of this programme, and its exorbitant costs, led to its de-escalation. According to reliable estimates, the official resettlement programme cost US$ 5,000 per family, absorbing more than 50% of the total capital budget for the year 1985/86. The programme was not only controversial because of its military approach and non-voluntary enlisting of potential settlers, but it was also not sustainable it entailed also substantial health hazards and therefore had to be discontinued.

It is important to consider Ethiopia's long term recovery and rehabilitation of the northern highlands in terms of relieving the population pressure in these areas together with land use conservation measures. Present resettlement costs are indeed exorbitant. However these costs were incurred in a period where the planning and management systems were in a panic situation. A more orderly programme could be developed at significantly reduced costs.

A programme similar in its planning approach, the villagization programme, met the same fate. In one of the most remarkable mobilization efforts ever undertaken by a developing country, more than 21,000 villages were created in a span of less than five years, involving the movement of more than 12 million people (1988) or roughly 38 per cent of the rural population into the new villages. This programme also had to halt, mainly for reasons of viability and sustainability.

The state farm mode of production involving the cultivation of about 240,000 hectares of land is undoubtedly the sector that most destabi-

lizes Ethiopia's agrarian policy. This sector absorbs the largest share of official credit (40%) with most of these funds remaining in arrears. To date state farms have more than Birr 1.5 million of credit in arrears. The state farms have been the government's insurance against food shortages, with almost all of the produce channelled to the urban areas through the Agricultural Marketing Corporation. This insurance is no longer viable. The high operation cost of the state farms is likely to lead to a sharp de-escalation of the importance in the next few years to come.

5. Policy in crisis or the crisis of policy? Some conclusions

5.1 Recapitulation

From the analysis undertaken so far, it is obvious that we could not answer definitively the question which we started with. "Policy in crisis of the crisis of policy?" directly implies that there is, first and foremost, a crisis of agriculture in Ethiopia. How else, except in terms of "crisis" can one explain the sense of fear and hopelessness which has prevailed upon people who, with real justification, once believed that Ethiopia was God's choice to be "green" and to feed the inhabitants of the desert kingdoms surrounding it. Yet the grim reality has been that this once confident people witnessed, within a matter of two decades, their country starving, turning from a net exporter of food to a basket case of food aid; developing dependency syndrome painful to admit, yet true, a dependency which could overcome but only in the future.

The effects of agricultural policy usually take a decade to show "signs" of regeneration or degeneration; perhaps two or more decades to be stable, productive and sustaining. This is assuming these policies take a dispassionate stock of the past, because the past has an influence on the present and future; an open and critical assessment of the present for a better tomorrow. In this sense, Ethiopia's present generation is a victim of its history, unable to untangle itself from the pains of its past, not for lack of courage to do so, but for the simple fact that reconstructing over the errors of the past is awesomely difficult. Varying and conflicting attitudes, motivations, interests, values, institutions and structures are all factors that make reconstruction difficult; yet, one way or another, reconstruction is inevitable. How true that the famous Marx's dictum has relevance for Ethiopia and Ethiopians: "... men do not make history just as they please (...). They make it out of

circumstances of the past (...)". In short this in the political reality, the essence of what it will take to get Ethiopian agriculture moving again.

Ethiopia has gone a long way. Yet, the statistics do not prove it; statistics measure the tangible and the numerically measurable objective elements. Still, the intangibles and imponderable are *par excellence* issues of values and meta values that economists cannot ignore.

Ethiopia's agrarian policy developed in sequences at an amazing breath-taking pace. That the peasantry became usufructuary owner of the land it cultivates only affirmed its legitimate rights; that is has been freed, through hard struggles, from the bondage of feudalism only confirmed the long-view of history; that the peasantry had, for the first time, its own voice articulated through its own associations and production structures added new dimensions to power relations at the local level, through which new rights and privileges could be translated into higher incomes and defended on a sustained basis; that the country embarked on long overdue resettlement schemes and executed the programme in a work style not worthy of a good planning process only proved human fallibility. Yet, the process brought forward the issue of resettlement into the forefront of the national agenda.

The massive movement of millions of peasants living in scattered households into organized villages in only a matter of few years may raise serious conceptual problems of prioritization in a planning process. Yet, the programme proved that the impossible could be done through the "boundless creative power of the people" (Mao-Tse Tung); that millions of people, whatever the exact figure, can now read and write in so short a period, abandoning the old practices of being read to and signing only with their finger prints, like criminals, is a miracle that could only be possible because of the high level commitment and motivation by so many people. Many more examples could be cited which have positively affected the rural areas. Indeed serious problems exist awaiting resolution, but is not development work itself solving one problem only to discover a new one?

Emerging problems need to be recognized with honesty and accountability. It is precisely the failure to admit the existence of serious policy flaws that led to fluctuations and contradictions in policy prescriptions over the past decade, and furthermore resulted in lost opportunities for accumulation in the future.

High on the agenda of missed opportunities is the fact that in the formative years of agrarian policy, no critical assessment was done on what is required and what can be done. Otherwise Ethiopia would not have embarked on a policy of diverting a huge amount of its scarce

resources to support a programme of state farming, leaving millions of its rural farmers desperately in need of inputs and services. This is only one example. Perhaps this is intellectually pardonable. After all part of the 1.5 billion Birr credit in arrears attributable to state farms has gone into infrastructural investments.

Let us look at the "unpardonable", citing one example: the price and marketing policy which Ethiopia adopted for over a decade. This policy was adopted, undoubtedly, out of concern to curtail the "exploitation in production relations" and to achieve the objectives of equity and accumulation, conflicting as they are. That such a policy should not have been adopted during the "democratic phase" of the transition to socialist accumulation is not even a point for debate. But let us see the economic side of the issue. Simple microeconomics indicates that in a situation of inelastic supply, control measures (state interventions) only result in creating internal parallel markets, external illicit trade, higher price margins for consumers and loss of revenue for the state. In these state of events, agricultural producers are at a disadvantage since the investment capacity of the state is hampered, No one benefits from the programme; the damage to the economy is incalculable, to say the least. This, indeed, is a clear case of a crisis in policy itself.

There still are a number of outstanding constraints to consider. The newly established agrarian structures are facing serious organizational constraints. These "top-down" structures were so far tolerated by the peasantry only on account of the politics in command. New grassroots structures have to replace them. The bottom line is that Ethiopia has only experimented with institution-building processes of a model such as the Soviet one which is still struggling to find a viable and sustainable way of achieving the objective of growth with equity. In addition serious gender issues affecting seriously the health of rural women have yet to find remedy. Finally the regeneration of Ethiopia's high export potential, which has been negatively and drastically affected during the past decade is one outstanding constraint that awaits a workable and effective policy framework.

A brief comment on the current main agricultural policy of the country - concentration of effort and resources on high potential areas. This policy which was officially discarded in 1971 (but discretely applied even after) is yet another of the many agrarian policy issues that require critical scrutiny. The policy is cushioned in the growth model and it is not our intention to repeat the arguments here, except for those that relate to the agrarian condition in Ethiopia. Econometric work conducted by the Office of the National Committee for Central

Planning (ONCCP) revealed that 83 per cent of the difference in agricultural production is explained by variation in rainfall (1988). Indeed water is a critical element and concentration should have been on a selective organization of irrigation works. The so-called high potential areas, given a conducive climate in price policy, for instance, could achieve the objectives of growth even without a concentrated deployment of scarce resources. The policy of concentrating on high potential areas would definitely aggravate personal and regional incomes, a situation which cannot be corrected through the "trickling" down effects of the growth model. In the long-run the stability of the nation falls into question.

5.2 What is to be done

In our analysis we have purposely avoided coverage of two fundamental issues drastically affecting agrarian transformation in Ethiopia - the war and the bureaucracy. These two issues are awaiting the interest of researchers.

Matters related to policy formulation have been dealt with, to some extent, in this review. However, this issue requires a much broader public debate and consensus. Whatever the nature of this discourse all indicators point to one central issue. Ethiopia needs to find remedies to the critical resource constraints outlined in this review. These constraints can however be overcome only if the people concerned - the peasantry - are motivated to organize and manage institutions of their own. The policy option open for Ethiopian agriculture is to adopt a participatory methodology for planning and implementing development programmes at the grassroots level. This empowerment process requires a priori a radical commitment in development policy in favour of the rural poor.

The Ethiopian path to development, with contradictions and shortcomings, was meant to lead to the improvement and economic advancement of the rural poor. Institutions for group activities have been laid out. The task ahead is to make these institutions truly participative. Therefore, it would be most counterproductive for the cause of the rural poor if international economic trends towards privatization were to sweep away the achievements in equity and the potential for group action and development. This would leave the rural poor to fight on their own of their small pieces of land, vulnerable to the vagaries of the market and the exploitation of economic entrepreneurs.

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4. SCENARIOS OF ECONOMIC DEVELOPMENT IN THE BELES VALLEY

Claudio Viezzoli

1. Introduction

Scarcity of arable land, population pressure and the need to provide land for those who have none within the framework of agrarian reform policy are some of the factors which have induced and continue to spur the governments of several developing countries to implement large-scale population resettlement programmes. Their objectives in implementing this economic policy programme are to redistribute the population throughout the country, settle and develop virgin or frontier areas, promote regional development, foster agricultural development, improve the migrants' quality of life and take the first step towards implementation of broader economic and social restructuring projects, such as *villagization* projects.

Against the background of an overall picture of the results achieved from implementation of the various resettlement programmes,[1] we set out to analyze an ongoing rural development project initiated in 1985 by the Ethiopian government, as a population redistribution programme, and supported by Italy since 1986.

The "Tana Beles Resettlement Project", which was re-named the "Tana Beles Project" after Italy's cooperation began, is a large-scale rural development programme forming part of a resettlement plan involving the transfer of approximately 200,000 persons from the northwestern regions of Ethiopia, which were stricken by the 1984 drought, to the country's fertile Gojjam region.

1. See: Oberai A.S. (1983, 1986, 1988); Kansakar V.B.S. (1983); Ragsdale T.A. (1988); Bose A. (1983); Chan P. (1983); Findley S.E. (1988); Carpio G. (1988); Dunham D. (1982); Gunnel B. (1983); Kunasingham A.S. (1972); Government of India, Estimates Committee (1979); Arndt H.W. (1977).

The aim of this paper is to examine the project's implementation methodologies, offer a preliminary assessment of the agricultural system now being established and to point out some of the institutional and production problems associated with the introduction of mechanized farming and the process of technology transfer.

This paper is based on surveys and observations made in the Beles area between September 1986 and March 1988.

2. Ethiopia's agrarian policy

About 85% of Ethiopia's workforce still depends wholly on agriculture today. Before the revolution, most of the peasants were tenant farmers who rented their lands from landlords, as in all feudal regimes. Moreover, the farms were extremely small, and traditional agricultural implements were used.[2]

2.1 Before 1974

The main feature of the pre-revolutionary land tenure system was the almost total lack of any legal protection to guarantee the work performed by each individual farmer. Indeed, the farmers often had to pay up to 75% of the value of their harvests in rent to their landlords. Under these conditions, the farmers had no incentive to raise their output or to invest in their lands, let alone to introduce soil and water resource conservation practices.[3]

The *Third Five-Year Plan (1968-1973)* laid down by the imperial government demonstrated little interest in improving the working conditions of the majority of the peasant farmers. Only 1% of the resources were earmarked for the development of peasant farming[4] and the development of intermediate technology.[5]

The only far-reaching solution officially adopted for Ethiopia was the wholesale adoption of Western technology,[6] and the Third Plan stressed the need to develop large farms for the production of cash-

2. Cf. Disney R. (1976).
3. Cf.Cohen J.M. and Weintraub D. (1975); Stahl M. (1974).
4. Cf. Cohen J.M. and Weintraub D. (1975).
5. Cf. Ellis G. (1978).
6. Cf. Gill G.J. (1975).

crops. To encourage the creation of capital-intensive farms, the government imported fertilisers, pesticides and tractors.[7] Many of the main farms set up by the government of Haile Salassie produced products and commodities solely for export.[8]

The general consequences of this agrarian policy were as follows: sophisticated agricultural machinery was rapidly adopted by the large farms; there was a downturn in the production of food for domestic consumption and an increase in cash-crop exports; the tenant farmers were more insecure and exploited than before; the peasants and farm labourers became more vulnerable and more deprived, while the soils suddenly underwent large-scale de-forestation and erosion.[9]

As a result of this general state of affairs, there was also an increase in the rural exodus to the towns and an increase in shifting cultivation systems.[10]

The medium-term consequence was the establishment of agricultural production poles which were highly privileged (such as the five regions of Arssi, Gojjam, Gondar, Shoa and Wollo) because of an almost total lack of any nation-wide master planning.

2.2 After the revolution

As a result of the 1974 revolution by the Dergue a number of radical policy measures were adopted, designed primarily to change the agricultural production system and transform the traditional power structure of rural society.

The main act of the new sovereign government was to nationalize all the lands without compensation, to abolish all the legal obligations stemming from the feudal regime and to extend legal guarantees to the livestock farmers. Even the large farms controlled by foreign capital were nationalized.

The formal act which set in motion the new government policy was the 1975 Land Reform Proclamation, which guaranteed peasants the right to continue farming the land which they had previously worked,

7. Cf. Cohen J.M. (1975); Bisrat Aklilu (1980); Blaug M. (1974).
8. Cf. Bondestam L. (1974, 1975); Lofchie M.F. (1975); Koehn P. (1979); Stahl M. (1974); Markakis J. e Nega A. (1978); Assefa K. (1978); Reimer R. (1975).
9. Cf. Koehn P. (1986).
10. Cf. Assefa K. (1978).

rent-free, up to a maximum of 10 hectares per family. The Proclamation cancelled any right to rent, sell, exchange, or impose liens on state lands.[11]

The Proclamation also created a system of Peasants' Associations with jurisdiction over a maximum of 800 hectares each. By being released of the obligation to pay rent for the lands, farm production increased and the malnutrition levels of the rural population improved,[12] at least during the first few years.

Another no less important aspect of the Dergue's agrarian policy was the strategy for the creation of State Farms. Some of these were set up on the basis of the pre-existing large farms.[13] One of the most positive aspects of this policy was the conversion of huge plantations of products for export into farmland for the production of cereals for domestic consumption.[14]

During the same period, the Dergue emphasized agricultural resettlement policies, seed production and, in some areas, mechanized farming.[15]

2.3 The scenario for Ethiopian agricultural development in the Eighties

During the period 1974/75 to 1979/80, agricultural production expanded at an average annual rate of about 1.3%, while the population grew at an estimated annual rate of 2.6% to 2.8%.[16] Except for teff (+4.2% per annum), production of all the other crops remained stable or declined.

One of the results of the uneven development of agriculture during the imperial period, was the concentration of rural production in a few

11. We deal only marginally with a broad subject which is much discussed both in Ethiopia and the assemblies of international organizations. We will therefore forgo further analysis of the subject and provide the brief bibliography which we used in our work: Dessalegn Rahmato (1984, 1985); Ethiopia, *Negarit Gazeta*, Proclamation no.31 (1975), no.71 (Dec. 1975), no. 77 (1976) subsequently amended as no. 152 (1978), no. 130, (September 1977), and no. 223 of (May 1982); E.Westphal (1975); FAO (1961); J.M.Cohen and D.Weintraub (1975); A.Hoben (1973); P.Gilkes (1975); Alula Abate and Tesfaye Teklu (1978).

12. Cf. Gilkes P. (1976); Holmberg J. (1976); Tesfai Tecle (1975);

13. Cf. Cohen J.M. (1983).

14. Cf. Holmberg J. (1976).

15. Cf. Harbeson J.W. (1980); Stevens C. (1980); Ottaway D.B. (1980); *Horn of Africa* (1981).

16. Cf. Griffin H. and Hay R. (1985).

areas with better amenities and which were better developed.

Data from agricultural sample surveys show substantial differences in the average size of family farms, in the quality of the land, in the possibility of land access, in the per capita food crop production and in cereals production between regions. With very few exceptions, five regions seemed to be particularly privileged; Arssi, Gojjam, Gondar, Shoa, and Wollo.[17]

In connection with these points, there are a number of facts which must be borne in mind. First of all, Ethiopian agriculture in the Eighties is still strongly dominated by family-run farms. According to a survey of the production system in the agricultural sector conducted in 1983, 98.7% of the households practised smallholder agriculture, 1.1% worked in producer co-operatives, and only 0.2% worked on state farms; 94.7% of the overall farmland is farmed by individual families, 1.8% by producer co-operatives, and 3.5% by the state farms; 95% of the acreage used for growing food grains is farmed by individual families, 1.9% by producer co-operatives and 3% by the state farms; and lastly, 94.4% of the total output from agriculture, excluding coffee, comes from the smallholders, 2% comes from the producer co-operatives and 3.6% from the state farms (Ghose, 1985).

3. Resettlement programmes in Ethiopia

Resettlement programmes contribute to the implementation of the Ethiopian's government economic policy as vehicles of agrarian reform and as a means of restoring production equilibrium in the various administrative regions.

The Ethiopian government resettlement policy was aimed primarily at three distinct target groups: the urban unemployed, the populations affected by natural disasters, and nomadic populations. The policy's objectives were to create income-producing activities and commercial networks that would mainly benefit the target groups mentioned within the framework of regional development policies aimed at the conversion of virgin lands to agriculture.

The 85 resettlement programmes implemented until 1983 in Ethiopia can be differentiated into distinct types producing different results

17. See: Central Statistical Office (1980, 1981); Agricultural Marketing Corporation (1982).

as regards productivity and consolidation of productivity.

A study by Chole and Mulat (1988) reports that in 1983, of the 85 Ethiopian resettlement programmes, 65 were classified as "special settlements" and 20 as "low-cost settlements"; 57 were classified as "under-budget" and 27 were provided only with technical assistance; irrigation farming was practised in 19 programmes, rainfed farming in 61 and both in 5.

The study also reported that in 62 settlements studied 36% of the population on average was under 15 years of age (as compared with a national average of 46%) and 64% of the population was over the age of 15.

As regards agricultural production, the study reported data revealing a significant difference in productivity between low-cost and high-cost settlements: this is the basis of the authors' recommendation that future RRC projects should be of the low-cost type.

According to Chole and Mulat, a set of main factors are responsible for variations in land productivity within resettlement programmes: the length of residency of settlers in the new area; the demand for agricultural products stimulated by the existence of new cultivated areas; the settlers' possibility of returning to their place of origin; the type of settlement; the type of settlers; and the degree of government participation.

4. The "Tana Beles Resettlement Project" and the "Tana Beles Project"

The "Tana Beles Resettlement Project", referred to as the "Tana Beles Project" by the Italian government starting in early 1986, was initiated in 1985 by the Ethiopian government as one of the most important programmes of Ethiopian economic policy both in terms of resources employed and, it should be mentioned, in terms of Ethiopia's international image.

The main objective of the project was the settlement of the Beles River valley, which was defined in the 1981 Beles Settlement Project as "unoccupied land with agriculture potential" (RRC, 1981).

The Tana Beles Resettlement Project can be defined as a "special, under-budget, high-input, production-oriented mechanized farming settlement" for which rainfed and irrigated tracts of land were set aside. The project's target populations mainly comprised people relocated from areas affected by the 1984 drought and individuals from areas with particularly high population density.

The formal procedures for implementing the Tana Beles Project were embodied in the preliminary agreement signed on 9 November 1985 in Addis Ababa by delegations from the governments of Ethiopia and Italy.

The official document embodying the agreement on the Tana Beles Project is the Memorandum of Understanding signed in Rome on 21 January 1986 by the Minister of Public Works and Adjunct Member of the Politburo of the Central Committee of the WPE, Mr. Kassa Gebre, and by the Under-Secretary for Third World Emergency Aid, Mr. Francesco Forte.

The agreement provides for the allocation by the Italian government of 270 billion lire (US$ 150 million) to finance the first of a two-phase, multi-sectoral project in the Beles River valley, an area chosen for the resettlement of approximately 200,000 persons. The project was named the "Tana Beles Project".

The project area is situated in the Administrative Region of Metekel, approximately 450 km north of Addis Ababa (approximately between 36°20'-36°32' long. and 11°12'-11°21'N lat.). It covers an area of approximately 220,000 has.; the altitude varies from 1,000 to 1,200 m above sea level.

The climate of the area is semiarid;[20] the average temperature is approximately 25° C; variations in temperature range between approximately 8° and 40° C. Average annual rainfall is approximately 1,100 mm, 85% of which falls during the rainy season from mid-May to mid-September.[21]

Normal cultivation cycles are carried out exclusively during the rainy season. During this period there is no lack of water; during the dry season, however, the volume of water from the Beles River tributaries is drastically reduced.

The waterway network of the Beles River valley consists in the river itself and a few major tributaries: the Ali', Buhl, Chankur, Medema, Gilgelbeles, Wahi, Ampuchai, Aybanga, Ayapapawa and Gichig.[22]

The land has been classified into three major types: vertisols or black clay soils accounting for 40-45% of the area; latosols or red or reddish-brown laterite soils accounting for 25-30%; and intermediate

20. According to the definitions by Ruthenberg H. (1983).

21. Data gathered by the meteorological station of Almu Town in the Beles valley: monthly summary chart -- June 1986.

22. See: Saccuman G. (1986).

soils of a blackish-brown colour accounting for 25-30%.[23]

The original plant cover of the valley is constituted, according to area, by dense hyparrenia, by dense bamboo thickets and scattered trees, by arboreal and thick shrubby formations along the waterways and by dense arboreal formations covering areas of various sizes.[24]

4.1 The planning of the "Tana Beles Project" agricultural sector and its implementation to date, March 1988

In January of 1987 the total number of settlers in the Tana Beles area could be estimated on the basis of data from the census conducted by the RRC and members of the WPE in November 1986.

These data reveal that there were 21,112 families in the Tana Beles areas; based on an average of 3.3 persons per family, the total number of settlers was 70,119, of which 36,366 were males and 33,753 females. The settlers were distributed in 48 villages each of which had an average area of 1,082 has.

The population over 15 years of age numbered 44,122 (62.9%); 18,281 (26.1%) were between five and 14 years of age; and 7,716 (11.0%) were under the age of five.

After January 1987 several changes in population composition and distribution (as a result of new migratory waves) and in the total number of villages were observed. As of March 1988, however, the total population only slightly exceeded the figure given above and the number and location of villages had changed only slightly.

The document which sets out the overall plan for the works to be

23. See: Bigi (1985); Saccuman G. (1986). The 1986 Saccuman report stated that: "the main characteristics [of the soils] can be summarized as follows: *Latosols*: moderate permeability, limited capacity to retain usable water, meagre and weak structure with average to high susceptibility to erosion; variable and generally more than sufficient depth; meagre to average content of organic matter and nutrients; generally limited hydrolysis thanks to the presence of dense and important vegetation (arboreal plants and bamboo) particularly florid during the wet season; pH generally variable between 5 and 5.5. *Vertisols*: extremely low permeability to water (due mainly to the compact lamellar structure) which favours either stagnation (asphyxiation conditions) or surface run-off and therefore erosion; moderate amount of organic matter (mostly not decomposed due to the very low biological activity caused by asphyxiation) and nutrients which for the foregoing reasons are scarcely available; difficult to work (almost impracticable during the wet season and very compact and hard during the dry season); pH generally variable between 5 and 5.5."

24. See: Saccuman G. (1986).

realized in the Beles valley is the Master Plan. In the chapter concerning rainfed agriculture, it sets out the following rural development scheme: small family plots of no more than 1,000 m² for horticulture for home consumption or sale at market; small parcels (usually not larger than 3/5 hectares) for cultivation of fruits and vegetables for the village; and, finally, large tracts (hundreds of hectares in some instances) to be farmed either mechanically or manually.

The development of rainfed agriculture is one of the most important undertakings in the project: it includes furnishing machinery and equipment, agricultural inputs and technical assistance to the settlers. It is also the sector in which government participation is most important to direct the development of the area in a manner which is consistent with the agrarian policy set out in the reform legislation.

Three goals were set for intervention in this sector: to achieve basic food self-sufficiency; to achieve food self-sufficiency in each agricultural season; and to achieve the economic self-sufficiency of the area.

The first stage of agricultural development in the Beles area covers a period of five years during which two different objectives must be achieved: to meet the most basic food requirements and to embark on agricultural development which will aid in the economic growth and consolidation of the area. It is based mainly on rainfed agriculture and provides for cultivation to be carried out 2/3 manually and 1/3 mechanically.

The area to be cultivated by each village over the course of the five years is targeted at 800 has.; the clearing and cultivation of lands destined for family use is to be carried out manually; the clearing and cultivation of communal lands is to be carried out with the aid of mechanized equipment.

By March 1988 most of the infrastructure was in place, including an aqueduct to supply water to the villages; more than 20,000 has. of land plus an additional 1,000 m² of land assigned to individual families were cleared and cultivated.

5. Rural development in the Beles Valley: some inconsistencies

According to studies conducted by the consulting agencies for the project, it was found that the economic stability of the area could be achieved in approximately five or six years and that 1991 or 1992 could be expected to be the year of definite stabilization.

This projection was made on the basis of a set of assumptions con-

cerning both political and productive factors. Firstly, a projection was made that the flow of immigration from settlement would cease towards the end of 1991; secondly, several alternative economic development scenarios were presented which would ensure increased production, the implementation of commercial networks and the definite integration of the Tana Beles Project into the national economy. Each scenario projected completion of the clearing and preparation of virgin land for cultivation within a five-year period.[25]

Each scenario also assumed that the overall economic structure of the Beles area could rely upon institutional and organizational structures specific to a rural socialist system, i.e., farmers' cooperatives, farmers' associations and state farms.

The choice of one or more of the scenarios has not yet been made. It involves a very complex evaluation in which many strongly interrelated variables must be considered. An examination of the proposed scenarios reveals that a choice must be made from among agricultural systems which are essentially antithetical and not easily integrated into a single development strategy.

For example, the decision to adopt a heavily mechanized farming system, given the country's almost total dependence on foreign supplies, requires an evaluation of the potential for industrial development and an increase in commerce with the countries producing the farming machinery.

The six scenarios which realistically project adequate resources and economic development are as follows: totally mechanized agriculture with the use of fertilizers (A); exclusively manual agriculture with the use of fertilizers (B); exclusively manual agriculture with some use of fertilizers (C); exclusively manual agriculture with no use of fertilizers (D); partly manual and partly mechanized agriculture with the use of fertilizers (E); and manual agriculture with the use of animal-powered technology (F).

In examining the six scenarios it is particularly interesting to note the effects of the productive structure generated by each of them on certain qualitative variables. The variables referred to concern the set of factors which affect the settlers' quality of life, among which we should mention the following: the possibility of engaging in extra-agricultural activities, the possibility of selling produce from family farming on the

25. Studio Pietrangeli (1987, 1988); Viezzoli C.-CISP Ricerche (1988).

open market, the existence of educational activities for the young, health assistance and diversification of diet, and the possibility of travelling throughout the country to re-establish ethnic or family ties.

5.1 Survey Methodology

As regards methodology, we decided to examine the economic structure generated by each scenario by studying the conditions which would effect the optimal use of available resources, projected for each year and each scenario, using linear programming analysis.

The analysis we conducted revealed the probable results for each scenario; thus, given the overall set of economic development options for the area, we were able to compare the different scenarios.

The analysis focused on the periods 1986-87 and 1991-92. The agricultural plans set out by the consultancy studies for the Tana Beles Project were considered for each year, and checked according to the on-field situation.

Certain assumptions and presumptions applicable to all the scenarios were considered constraints in the analysis. They are the following:

1. Fixed coefficient production function.
2. Constant prices and costs.
3. Constant yields per hectare and per product.
4. Averaging of vertisol and latosol yields.
5. Establishment of work coefficients according to sex and age.
6. Establishment of available work resources on the basis of projected immigration flows for the five-year period.
7. Establishment of the pool of machinery available on the basis of projected acquisitions per year and per scenario.
8. Limited availability of seed, fertilizer and pesticides.
9. Exclusion of fixed costs.
10. Minimum production constraint geared to estimated calorie requirement.
11. Averaging of work and machinery productivity without distinction by type of soil, but differentiated according to type of crop.
12. Product market prices based on prices recorded in August 1986 by the Ministry of Agriculture, Bureau of Chagni.

5.2 The basic matrix

The basic technical matrix calculated for the agricultural season 1986/87 is considered to be the common component for the diversified development of the six scenarios.

The objective function of the matrix generates 1,259,817 birr in profits from the maximization plan. The activities involved are all binding at the given levels.

46 basic activities have been identified. The first 22 relate to the production of individual crops, divided into type of cropping technique, manual versus mechanical. For each of these 22 activities, the gross margins have been defined, technical coefficients for each input used, and a few additional constraints relating to the minimum or maximum extension of the cultivable land for each product.

The next four activities relate to mechanical and manually farmed sorghum and maize, designed to reach the required level of production to meet the basic food intake requirements. These have been computed on the basis of a daily average 2,000 kCal/days per person, and obtaining the necessary acreage on the basis of the yields per hectare, per crop and per technology used.

The gross margins of the food support activities are nil, because these are fictitious activities that have only been introduced to establish a minimum level of production that is not saleable, at any event.

The next three activities are, respectively, bushclearing, land reclamation and the transfer of capital resources from farming to land reclamation activities. Bushclearing is carried out entirely by hand, except that a maximum of 5% of the land may be cleared mechanically, which has been ignored for the sake of simplicity.

Bushclearing and land reclamation are not practised on the land available for farming but on the incremental 12,000 has. of land to be reclaimed and incorporated as farmland in the following crop year.

The remaining activities relate to the acreage to be set aside each year for the production of seed to be used to produce the following year's crop. Internal production from Tana Beles must be able to cover 80% of the scheduled seed requirement each year.

The matrix constraints up to no.14 indicate the maximum availability for each of the resources employed. For labour and capital, two periods have been considered: October-April, and May-September, because the man/day and machine/hour availability differs as between these two. Constraints nos.15-35 indicate the minimum or maximum constraints on the land per crop, while constraints nos.35, 36 and 37 impose a

minimum extension on the land to be cleared and reclaimed. Different machines are used for reclamation and for farming, and their maximum availability is indicated in the last two constraints. Should the machines available for reclamation not be sufficient to work the scheduled acreages, an activity automatically provides the number of machines/hours, if available, that are needed to reach the established ceiling.

Constraints nos.40-48 lay down the minimum acreage set aside for seed production.

5.3 Comparison of results of the six scenarios

For the sake of brevity we will not present a detailed analysis of the results obtained by the application of linear programming to each scenario. Rather, considering certain aggregated values, we believe it is more useful to compare the results of the overall analysis of the six scenarios.

To have an approximate, summary idea of the type of agricultural development planned for the Tana Beles area we selected a set of seven indicators. Four of these are standard indicators used by FAO (1984); the national value for these is shown in Table 1.

The four FAO indicators pertain to consumption of fertilizer per hectare of arable or permanently cultivated land (in Kg), the number of tractors per 1,000 has. of arable or permanently cultivated land (or percentage of mechanization), head of cattle per units of 1,000 persons, and the percentage of food self-sufficiency (calories produced by domestic cultivation as a percentage of total calories produced).

The remaining three indicators were calculated because they were useful in determining overall productive efficiency (value of saleable production per capita: value of the target function in relation to projected population), the rhythm of variation of saleable production (percentage increase of saleable production based on an average of the five years under consideration) and the speed of absorption of structural costs and the slope of the cost curve (average percentage variation of total costs over five years).

Comparison of the indicators with national data is essential to understanding some atypical results for the "Tana Beles Project" compared with the national average. On close examination the cooperation of Italy engendered greater use of fertilizers and agricultural machinery. The national average consumption of fertilizer is 4 Kg per hectare. Excluding the scenario calling for exclusively manual cultiva-

tion without use of fertilizers, the scenario which projects the use of animal-powered technology comes closest to the national average with 22.21 Kg per hectare. Therefore, even in the scenario which projects the lowest level of fertilizer use per hectare there is an enormous difference in the quantity of fertilizer used with respect to the national average.

The percentage of mechanization is another indicator which shows a very marked difference with respect to the national average. The latter is 0.28 tractors per 1,000 has.; in the two cases in which the continued use of tractors until 1991-92 are projected, scenarios A and E, this value rises, respectively, to 5.37 and 1.78.

Consumption of fertilizer per hectare and percentage of mechanization are two key indicators for understanding the potential development of the Beles Valley. It is instructive in this regard to relate these two indicators to the degree of food self-sufficiency and head of cattle per unit of 1,000 inhabitants. The percentage of alimentary self-sufficiency calculated for all of Ethiopia is 96.80. Head of cattle number 999.10 per 1,000 inhabitants. These data show the great importance of small-scale farming based on family structure and intensive use of animal-powered technology for the country.

Data from linear programming, however, seem to indicate a substantially different structure based on the predominance of collective agriculture on the model of state farms, on the intensive use of agricultural machinery and on the total absence of draft animals, except for the scenario for manual cultivation with use of animal-powered technology. In other words, the change in the production technology of the Beles area with respect to what the resettled farmers had been used to has profound consequences which directly influence the following: the land-use model, the relationship with the land, the models of destination of resources and the relationship with traditional forms of commerce.

We are not, however, in a position to say how profound the consequences of the changes and phenomena will be. But we feel compelled to emphasize our belief -- and we shall do so more explicitly in the description of the sub-optimal solution below -- that they must be considered an integral part of the results produced by the project and, where possible, as internal constraints of the planning itself.

The last three indicators are intended to provide a concise indication of the economic stability of the Tana Beles area. Thus the volume of saleable production per capita through 1992 expresses the potential wealth producible at the end of the period of stabilization for each

individual scenario; the average percentage increase of the value of saleable production expresses the speed of increase of wealth; while the average percentage variation of total costs per hectare determines the slope of the cost curve, which decreases in the mid-term.

Table 1 - Development indicators for the Beles Valley

Indicators	*Ethiopia*	*Values for the Six Scenarios*					
		A	*B*	*C*	*D*	*E*	*F*
Consumption of fertilizer per ha of cultivated land (in Kg.-through 1992)	4.00	159.75	126.65	96.65	0.00	144.12	22.21
Percentage of mechanization (through 1992)	0.28	5.37	1.50	1.50	3.00	1.78	2.00
Head of cattle per units of 1,000 people (through 1992)	999.10	0.00	0.00	0.00	0.00	0.00	429.39
Percentage of food self-sufficiency (through 1992)	96.80	13.75	37.71	46.25	27.89	18.58	20.05
Value of saleable production per capita -- in birr (through 1992)	---	80.50	17.13	4.87	44.87	69.60	105.02
Average percentage increase in value of saleable production (over 5 years)	---	+94.69	+71.94	+19.88	+21.01	+88.55	+40.52
Average percentage variation of total cost per hectare (over 5 years)	---	-15.50	-25.00	-25.50	-31.86	-19.67	-23.16

Source of data pertaining to Ethiopia: FAO (1984).

By using figure 1 (Total Costs for the Six Scenarios per Hectare) and figure 2 (Performance of Target Functions for the Six Scenarios) we can draw a few broad conclusions for the six scenarios.

First of all, if the choice of one or another productive option were substantially motivated by the economic growth of the area or, better

still, if the primary objective of the Ethiopian government's policy were to attain the highest level of agricultural production for the national well-being, we could take as indicative the relationship between total costs and total net profits. Under those circumstances the scenario which would provide the optimal solution would be the one that calls exclusively for cultivation with the aid of animal-powered technology (F). This scenario would provide the highest level of absolute and relative profits: more than 17 million birr and more than 105 birr per capita through 1992 and costs would be in the next-to-last place.

The scenario for wholly mechnized farming (A) and the scenario for partly mechanized and partly manual farming (E) are in direct competition with one another since they produce the same amount of net profits even though, of the two, the second has substantially lower costs.

The scenario of exclusively manual farming with some use of fertilizers (C) is the least efficient of all. It generates very low net profits and total costs that are in third-to-last place.

The scenarios for exclusively manual farming with use of fertilizers (B) and exclusively manual farming without use of fertilizers (D) show intermediate profits and costs.

In general terms, therefore, it seems that despite the fact that the use of machinery allows for significant substitutions in the work factor and a considerable increase in terms of yield per hectare, the scenarios that project their use do not provide the best economic results.

We should also add that in addition to economic costs and benefits an evaluation of social costs and benefits places significant constraints on the intensive use of mechanized cultivation. The process of technological change forced by the upsetting of traditional production methods and the implications for the overall configuration of the economy of the Beles area require consideration of the sacrifices that would be necessary to attain stability.

In general, such sacrifices seem greater and less justifiable if the scenario providing for exclusively mechanized farming with use of fertilizers and, to some extent, the scenario based on partly manual and partly mechanized farming are chosen for development in the mid-term.

Lastly, we should give proper consideration to the fact that mechanized farming must be supported by substantial economic reserves in order to be sustained and developed as part of a complex technological system and meet the substantial costs involved.

According to Livingstone and Ord (1980) the basic conditions for determining the profitability of mechanization are to be found in its

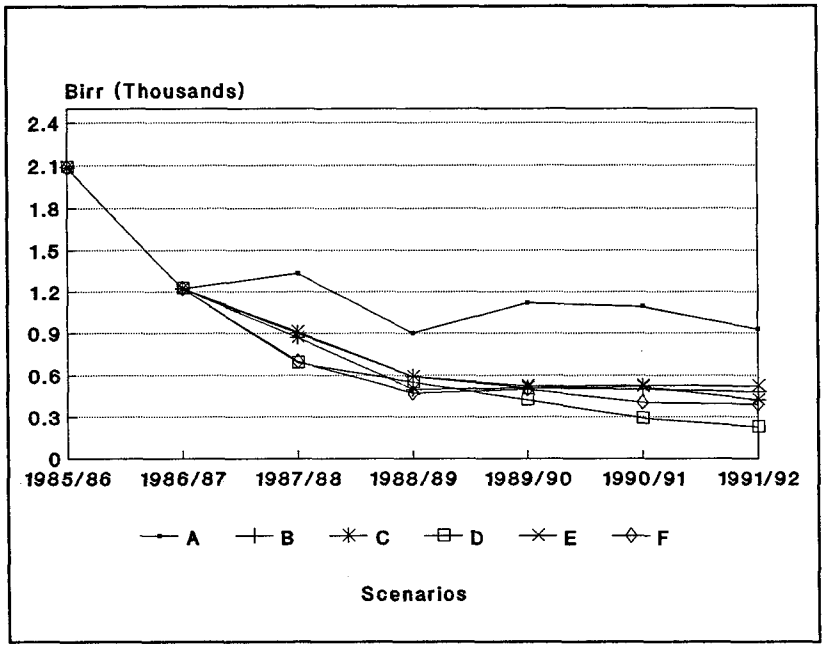


Figure 1 - Total costs for the six scenarios per hectare: 1985-1992

potential to raise the productivity of traditional agricultural economies, which are usually defined as backward or inefficient. This potential, according to the authors, is above all tied to the physical condition of the soils, to the comparisons of costs and benefits derived from tractors use, to the number of family or hired workers, to the extensions of land, and ultimately to the relative efficiency of a superior capital-intensive technique versus a traditional labour-intensive agriculture.[26]

Assuming that these observations are valid, we must say that according to the available information on the types of soil in the Tana Beles area and on the resettled population it does not appear that the conditions for economic efficiency obtain, even though agricultural machinery would yield greater efficiency.[27]

26. For a critique of the notion that traditional agricultural economies are inefficient, see Ghatak S. and Ingersent K. (1984).

27. For an analysis of a similar case see Sanders J.H. and Ruttan V.W. (1978).

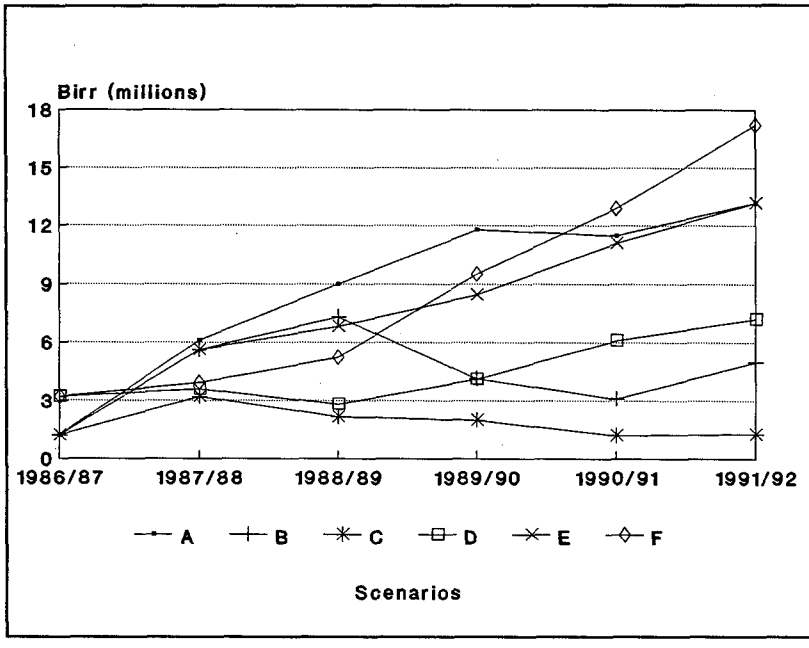


Figure 2 - Performances of the target functions for the six scenarios: 1986-1992

5.4 The search for a sub-optimal solution

Given this state of affairs, we set out to develop a latest scenario based on the literature holding, meetings with Ethiopian experts in the field and direct observation which could, if adopted, take into account important factors affecting the settlers' quality of life.

In this latest scenario we have given due weight to some qualitative factors. In particular, we sought to offer the option of dividing the arable lands into areas farmed collectively with mechanized equipment and areas assigned to families for exclusively manual farming with the traditional use of draft animals. That is, we have made it a condition that the land destined for each single family unit be increased from the current 1,000 m^2 to larger parcels which allow production of enough food for self-sufficiency and for sale of the surplus on the open market. We then sought to broaden the range of products produced by including teff.

We also used a lower, more realistic estimate of yield per hectare than earlier projections. The adjustment was based on data from the RRC inventories in villages as of the beginning of 1988.

We then included in the costs of lands cultivated mechanically the salaries of hired workers on the basis of the estimate of the efficiency of the work as used in the calculation of the coefficients discussed in the scenarios above and on the average salaries being paid in the Beles area.

Finally, it was assumed that the prices of agricultural products used in calculating gross margins would be differentiated according to products from mechanized collective cultivation of land and from family cultivated land.

In particular, the prices of products from mechanically cultivated lands were left at the level set in the six scenarios described above, while prices obtained on the free market outside the Beles area were used for products from family-cultivated lands.

5.4.1 The structure of the sub-optimal solution

The structure of the sub-optimal solution is based on calculations already made in the scenario for exclusively manual cultivation with use of animal-powered technology. We expect that in the final plan cultivated land will cover 60,000 hectares, 40,000 cultivated using draft animals and 20,000 mechanically.

The 40,000 hectares cultivated manually with the aid of draft animals would be assigned in our project to individual families in parcels of approximately 0.8 hectares (0.8 x 50,000 fam. = 40,000). The remaining 20,000 hectares would be cultivated mechanically with wide use of sophisticated technology, including large-scale irrigation systems. This land would be cultivated on the model of state farms.

In addition to land tenure, the two types of land would be differentiated on the basis of the destination of the products obtained: for land assigned to families products would be partly destined for family consumption and partly for sale on the open market at free market prices based on supply and demand; for lands set aside for state farms products would be entirely destined for sale through AMC channels, with prices therefore 60-70% lower than free market prices.

The only cultivation which would be entirely subject to constraints would be mechanized farming, using a cultivation division scheme adopted previously, on tracts of land not exceeding 20,000 hectares.

Farming on land cultivated manually would be only partially subject to constraints, based on the decision to respect certain constraints imposed by the settlers' traditional diet.

The results of the programming and the structure set out below are in a certain sense very indicative. Particularly noteworthy are the high net profits obtained: more than 23 million birr. This is doubtlessly due to the consideration of a different price structure for products cultivated manually and also to the possibility offered to individual families of concentrating on cultivation of the most profitable products.

6. Conclusions

The results of analysis of the sub-optimal solution discussed in the preceding section essentially embody the final conclusions of our work. They amount to the belief that even if the agriculture and the conditions of rural production in Ethiopia are conceived as part of a dynamic process of adaptation to more modern economic policies in which each individual action is correlated to a national policy, including resettlement projects, such a process is not essentially unidirectional nor does it necessarily entail increasing the intensive use of capital.

The various factors affecting agricultural production are individually subject to adaptation to new market conditions, to new political conventions and to new constraints produced by a different use of available resources.

It is not enough to limit oneself, as it is widely held, to constructing technologically advanced systems to provide solutions to specifically productive problems. It is necessary to implement systems which are potentially dynamic and able to harmonize the need for modernizing productive complexes with the need for gradual adaptation to new technologies. It is not enough to limit oneself to exporting technology, not only because this may constitute a fundamental element of cultural and human impoverishment, but also because the solutions sought are not always assured.

The project implemented with Italy's commitment to help Ethiopia in its efforts to free itself from the centuries-old scourge of hunger and famine demonstrates -- and we sincerely hope this will be the judgment on the "Tana Beles Project" -- that technological systems cannot be assimilated in a hierarchical and linear manner. There is no such thing as a technological system, be it more linear or "progressive", which can improve the functioning of an economy in absolute terms compared to

other systems, however backward or "inefficient". There is always a need for cultural mediation in the full and complex sense of the term in order for technologies that provide technical efficiency to be employed in an economically efficient manner.

The results expected of the scenario where cultivation is totally mechanized with the use of fertilizers (A) demonstrate that introducing modern technologies in farming is not in itself sufficient to ensure economic growth. At least not when, as in this case, the "traditional" farming systems achieve higher levels of efficiency.

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5. THE PLANNING OF HOME GARDENING ACTIVITIES IN THE BELES VALLEY RESETTLEMENT VILLAGES

Paolo Dieci and Wolde Selassie Abbute

1. Introduction

Three closely connected priority criteria have been adopted in designing the methodology for the agricultural development plans for the CISP Multisectoral Programme in Beles.

The first is to match design choices against the expectations of the village peasant communities, making it necessary for constant monitoring of these expectations through specific survey systems.

The second criterion relates to the direct involvement of the Peasants' Associations and technicians of the Ministry of Agriculture in each village in the Beles when planning activities.

The third is that the ongoing evaluation should form an integral part of the activities and be the main planning tool.

The survey to which this article refers was carried out in August 1988. It was essentially designed to be a joint assessment conducted by CISP and the extension department of the Ministry of Agriculture of the progress made with the campaign to develop home gardens, in order to plan their future developments.

2. The development of home gardens

The development of home gardens in all the households settled in the Beles area is one of the objectives of the Programme's agricultural development plan, accompanied by the construction of small or medium irrigation schemes mainly geared to fruit and vegetable production (see Table 1a/b).

Home gardening is a part-time and supplementary activity of the households, and is practised on plots of 1,000 square metres.[1]

Table 1a - Variety of horticultural items cultivated in the irrigated sites promoted by CISP Project and their sizes in hectares (March 1990)

Items	*Type of irrigated sites in the villages*															
	With motor-pump													*Without Motor-pump*		
	L 2	*L 3*	*L 4*	*L 5*	*L 9*	*L 10*	*L 14*	*L 16*	*L 23*	*R 3*	*R 4*	*R 5*	*R 7*	*L 12*	*L 15*	*L 30*
Carrot	x	x	x	x	x	x	x	x	x	x	x	x	-	x	x	x
Red beet	x	x	x	x	x	x	x	x	x	x	x	x	-	x	x	x
Onion	x	x	x	x	x	x	x	x	x	x	x	x	-	x	x	x
Green pepper	x	x	x	x	x	x	x	x	x	x	x	x	-	x	x	x
Cabbage(round)	x	x	x	x	x	x	x	x	x	x	x	x	-	x	x	x
Tomatoes	x	x	x	x	x	x	x	x	x	x	x	x	-	x	x	x
Swiss Chard	x	x	x	x	x	x	x	x	x	x	x	x	-	x	x	x
Salad	-	-	x	x	x	x	x	x	x	-	-	-	-	-	-	x
Egg plant	-	-	x	x	x	x	x	x	x	-	-	-	-	-	x	x
Courgettes	-	x	x	x	x	-	x	x	x	x	x	-	-	-	x	-
Cauliflower	x	x	-	x	-	-	-	-	-	x	x	x	-	-	x	-
Water-melon	-	-	-	x	-	-	-	-	-	x	x	-	-	-	-	-
Soya bean	-	-	-	x	-	-	-	-	-	-	-	-	-	-	-	-
Haricoat bean	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Radish	-	-	x	x	x	-	-	-	-	-	-	-	-	-	-	-
Pumpikin	-	-	-	x	-	-	-	-	-	-	-	-	-	-	-	-
Taro	-	x	-	x	-	-	-	-	-	-	x	x	-	-	-	-
Goman (abesha)	x	x	x	-	x	x	x	x	x	x	x	x	-	x	x	x
Cow pea	x	x	x	x	x	x	-	-	x	x	-	-	-	x	x	x
Castor bean	-	-	x	-	-	-	-	-	-	-	x	x	-	-	-	-
Chick Pea	x	-	-	x	-	-	-	-	-	-	-	-	-	-	-	-
Cassava	-	-	x	x	x	x	-	x	-	-	x	-	-	x	-	x

1. Due to the presence of the peasants' houses, cultivable land in the home gardens is no more than 600 - 800 m².

Table 1b - Variety of horticultural items cultivated in the irrigated sites promoted by CISP Project and their sizes in hectares (March 1990)

Items	*Type of irrigated sites in the villages*															
	With motor-pump													*Without Motor-pump*		
	L 2	*L 3*	*L 4*	*L 5*	*L 9*	*L 10*	*L 14*	*L 16*	*L 23*	*R 3*	*R 4*	*R 5*	*R 7*	*L 12*	*L 15*	*L 30*
Banana	x	x	x	x	x	x	x	x	-	x	x	x	x	x	x	x
Papaya	x	x	x	x	x	x	-	x	x	x	x	x	x	x	x	x
Coffee	x	x	-	x	x	-	-	x	-	x	x	x	-	x	-	x
Sugar cane	x	x	x	x	x	x	x	x	x	x	x	x	-	-	-	x
Lemon	-	x	-	x	-	x	x	-	-	-	-	-	-	-	-	-
Orange	-	-	-	x	-	-	-	-	-	-	-	-	-	-	-	-
Zeytun	x	x	x	x	x	x	x	x	-	x	x	x	x	x	x	-
Size in hectares	4	5	4	6	6	6	12	6	5	11	7	10	3	7	8	2

Total size of all the sites: 102 hectares

From the outset, to develop these areas distrubuted among 23,000 families, the Programme designed an operational plan in which the distribution of seed and production inputs was accompanied in every village by the selection of seven dissemination units, training them, both on-the-job and in courses dealing with specific themes (preparing seed beds, fertilization, transplants, mixed cropping, principles of nutritional education) and preparing demonstration home gardens in the village.

Since it was not possible to irrigate these areas in view of the extreme territorial fragmentation and in many cases the excessive distances from rivers, home gardening is being developed in Beles during the rainy season.

Home gardening can prove to be an opportunity for family income generation, both by making it possible to carry out small commercial activities and by reducing expenditure on foodstuffs.

But more importantly than this, the home garden can make a great contribution to improving the family diet.

When defining the cropping plans on the family plots not only have the demands of the local population been borne in mind, but also the nutritional value of the products, the data supplied by a research station installed in the area by the Institute for Agricultural Research, and lastly the cropping plans for the village collective areas which are almost wholly devoted to cereal production, for which the home gardens play a supplementary function.

3. Home garden survey

The source of data for this study are the agronomists in the villages who are assigned by the government to perform different duties related with the general agricultural activities. As a result, 45 agronomists in the different villages are interviewed by a personal (face to face) interview.

Out of the total villages in the resettlement area, only three are not included in this study. These are L6, L13, and RDS50. At the time of the data collection, the agricultural extension workers (agronomists) of L6 and L13 were not available in their respective villages. In addition, RDS50 village was on the process of transferring the village to another site and had no any information.

The interviewed agronomists have arrived at the Beles Valley at three different times: (6) 13.3% arrived at Dec.,1987; (36) 80% arrived at Jan., 1988; (3) 6.7% arrived at May, 1988.

3.1 Crops grown

Based on the responses of the respondents, the main items the peasants in the different villages have cultivated in their home gardens around their houses is shown in Table 2. In the following table and in some others in the proceeding part of this study, the percentages do not add up to 100. This is because the respondents didn't respond only distinctly exclusive answers.[2]

2. After the 1987 and 1988 crop seasons to which the data in this article refer, other crops have been incorporated into the cropping plans for the home gardens and cassava, in particular, has been extensively introduced.

From the above table, one can understand that the dominant cultivations of the peasants in their home gardens is Maize, Soya bean, and Sorghum from the crops; and Goman (abesha), Cabbage, Red beet, Sweet potato, Green pepper, Carrot, and some others from vegetables and related items.

It should be borne in mind that this refers only to the frequencies of crops grown in the home gardens and not to the acreages. An analysis of the cropping organization on the home gardens based on survey reports and direct observation is given in chapter 8.

Table 2 - Main items cultivated in the home garden

Items	*Responses*	*Percentage*
Maize	45	100.0
Sorghum	18	40.0
Soya bean	36	80.0
Millet	15	33.3
Peanut	2	4.4
Sesame	3	6.7
Cabbage (round)	36	80.0
Goman (Abesha)	43	95.5
Carrot	26	57.8
Red beet	37	82.2
Swiss chard	16	35.6
Green pepper	37	82.2
Tomatoes	9	20.0
Sweet potato	27	60.0
Onion	2	4.4
Courgettes	1	2.2
Haricot bean	3	6.7
Cow pea	1	2.2
Pumpkin	1	2.2
Total Respondents	45	100.0

3.2 Problems encountered with cultivating the home garden

While cultivating several items in their gardens, the peasants have encountered several problems. These problems are stated in the following Table 3.

As can be seen from the above table, the main serious problems among the peasants which destroy their home gardening cultivation are destruction by rats, pests, ants, termites, and some unknown reasons for which 77.8% of the respondents responded. Apart from them, scarcity of seeds, lack of ability and enough time to work in the garden as well as some other factors stated are the main problems that hindered their cultivation in their home gardens.

Table 3 - Problems encountered with cultivating the home gardens

Problems encountered	*Responses*	*Percentage*
Scarcity of seeds	25	55.5
Lack of enough ability to work in the garden	10	22.2
Lack of time to work in the garden	14	31.1
Low attitude of peasants towards some home gardening items	2	4.4
Destruction of home gardening cultivation by rats, ants, termites, pests, and some unknown reasons	35	77.8
Unaccustomed types of gardening items by the peasants	4	8.9
Marshy gardening area	4	8.9
Shortage of the gardening area	2	4.4
Lack of the knowledge how to cultivate home gardening items	2	4.4
Total respondents	45	100.0

3.3 Future plans

Inorder to promote the home gardening activities of the peasants in

the villages, future plans have been made for the further improvement. Table 4 shows this point clearly.

As stated in the above table, the future plans include overcoming several problems faced by the peasants while cultivating their home gardening items in the garden; to extend the activity through developing reliable irrigated gardening area near the nearby streams and rivers; widening the size of the existing gardening area of the peasants; and so on.

Table 4 - Future plans for home gardening development

Future plans	*Responses*	*Percentage*
Developing a reliable gardening area near the river	14	31.1
Extending the home gardening activities in the village	13	28.9
Overcoming several problems encountered by the peasants while cultivating home gardening items	12	26.7
Teaching ways of cultivation and improve the know how of the peasants	6	13.3
No plan	7	15.6
Total respondents	45	100.0

3.4 The demonstrative sites promoted by CISP

After having assessed the peasants' private home gardening cultivation, the agronomists have been asked about the role of the demonstrative sites promoted by CISP.

Out of all the villages in the resettlement area, CISP has established demonstrative sites in all the villages except L21,R104, and R105 during the period of data collection for this study. Here, excluding the informants from these three villages, the total respondents are 42 instead of 45 in the first part.

In order to perform the activities of the demonstrative sites in the villages, social workers from the peasants who are trained through

CISP are involved.

The social workers in the different villages work not uniformly in all the days of the week inside the demonstrative site. Based on the responses of the respondents, (28) 66.7% work all the seven days in the week; (13) 31% work six days of the week taking rest on Sundays; and (1) 2.4% work four days in the week.

The products from these demonstrative sites in the different villages are utilized differently. The ways of distribution and their destination is stated in Table 5.

Table 5 - Destination of the products

Destination of products	*Responses*	*Percentage*
Given to the social workers	2	4.8
Given to the village peasants	13	31.0
Sold to the village peasants	9	21.4
Given to the weak members of the association and the village feeding center	14	33.3
No answer	13	31.0
Total respondents	42	100.0

The table shows the fact that the products are mostly utilized by the village peasants especially by the weak members of the association such as patients, old people, pregnant women, women at childbirth and others as well as children in the feeding center.

4. Future planning and conclusions

On the base of the illustrated datas, during further meetings with the Ministry of Agriculture representatives, some points for future planning have been decided.

Out of them, the allocation for some families of plots in irrigated areas during the dry season, according to the criteria of specialization.

This, with the aim of making possible for the families a certain

continuity in the home gardening activity and, at the same time, of encouraging the partecipation of the peasants to the irrigation plans.

A second planning point regards the implementation in the villages of pilot home gardens among the peasants, due to the distance of many houses from the centre of the villages, where usually the demonstration site had been allocated.

In the agricultural campaign carried out in 1989, the demonstration sites have been utilized also as village nurseries, for the production of seedlings to be transplanted near the houses.

In the future, in any case, the main open problem to solve will be the avibility of seeds for the peasants.

Another point that has been stressed regards the general management of home gardening among the Peasants' Associations in Beles Valley. As it has been observed, different rules are existing in the villages about the status of social workers and their working schedule.

At this regard, the role of the concerned authority (the regional office of AEPA - All Ethiopian Peasants' Associations) will be the assessment of common guidelines throught the consultation of the interested Peasants' Associations and the evaluation of the more succesfull experiences already developed in the Valley.

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6. HOME GARDENING IN THE BELES RESETTLEMENT AREA, GOJJAM REGION

Mariarita Capirci and Siria Taurelli

1. Introduction

The resettlement programme carried out by the Ethiopian government in the Beles Valley is part of a broader settlement policy adopted in modern Ethiopia, and which started with the "First Five-Year Development Plan (1957-61)". After the 1972-73 famine, the settlement policy was implemented on a more massive scale by the Relief and Rehabilitation Commission (RRC), set up in August 1974. After the 1984 drought, a new resettlement plan was approved. The plan called for the relocation of about a million and a half people from the Shewa, Wello and Tigray regions to the Illubabor, Kefa, Wellega and Gojjam regions.

One of the goals of the resettlement policy is to use land and water resources which are as yet unexploited, in order to provide drought stricken populations with new agricultural areas, while at the same time creating social services and promoting income generating activities in the new settlements (Eshetu Chole and Teshome Mulat, 1988:168).

In this context the Beles resettlement project was begun in 1985. Before the arrival of the resettled population, the Beles valley was sparsely inhabited by the native Gumuz, who practise hunting, fishing and self-supporting shifting cultivation and, moreover, by Agew, Shinasha, Qimant groups, and by Amhara farmers who spontaneously migrated to the area in the sixties.[1]

1. For an analysis of the Amhara in the Gojjam region, see A. Hoben, (1963, 1973). For a description of the native Gumuz and the other minor ethnic groups living in the Beles valley, see Dessalegn Rahmato (1988). For a general outline of the Gumuz people, see R. Pankhurst (1976) and W. James (1986).

The resettled populations come from the Shewa and Wello regions, and to a lesser extent from Tigray and from Gojjam itself. The relocation of households coming from different regions has resulted in the mixing of various ethnic groups in the new settlement. In fact, the settlers belong to different ethnic groups. Most of them are Amhara, Kembata and Hadiya, while the few are Wolayita, Gurage, Oromo, Agew and Tigrean.

Since 1985, 42 villages have been established in the Beles valley, and the resettlement programme has involved 78,285 people (RRC census, March 1988), affecting an agricultural area of about 20,000 hectares. The project also involved Italian cooperation, through a multisectoral project financed by the Directorate General for Development Cooperation of the Italian Ministry of Foreign Affairs.

This report contains some preliminary results of a research carried out on 250 households in the Beles resettlement area. To analyse the resettlement process, research on the behaviour of the households as production and consumption units,[2] appears essential for the purpose of identifying the variables involved in the setting up and development of a new organization and technological framework.

Chayanov, in his "The Theory of Non-capitalist Economic Systems", maintains that peasant farm organization is built on the employment of the labour of the peasant and his family. The amount of work done represents a trade-off between the needs of the family and the energy required for the labour. This trade-off is determined by a variety of factors such as the type of farming practised, the environment, the distance from the market and above all the size and composition of the family (Chayanov, 1966:1-28).

In the Beles Valley, an analysis of the household economy in the agricultural sector should be limited to the management of the land which is assigned to each household. The amount of land which is

2. In analysing the household, it is important to bear in mind that the relocation had an immediate impact on the structure and role of the households. Among the peoples of the central Ethiopian *plateau*, the household is a significant unit, with its own spatial designation, its mobilization of labour, its organization of production and consumption, and its identity. Among the Christian Amhara, all households within the community traditionally have a relationship with all other households, because of their common membership in the *parish* (village). Furthermore, the simple living standard of the Amhara is improved by mutual aid organizations, generally called *wanfal* or *wamfal* (Shack, 1974:28; Messing, 1957:164-165). In the Kembata and Hadiya case the relationship between the households derives from local aggregate of related patrilinear homesteads and from their common membership in the *sera*, a system of cooperation within the communities (Singer, 1973:367-368; Braukamper, 1980:428; Braukamper, 1983:302).

actually managed by individual household heads does not exceed 0.1 hectare and, according to the resettlement scheme, it is allotted for home gardening activities.[3] While in the settlers' regions of origin home gardens represent a small scale production system, in the Beles Valley they are the main economic activity under the household control.

This research covers the home gardens with a view to studying agricultural production and related factors.[4] These home gardens are developed by the settlers using their own labour and that of their families. The returns from the homestead should provide both additional food products and limited source of income for the households, beside the rations distributed by the Peasants' Associations (PAs) according to the "credits" assigned on the basis of the communal work performed by the household heads in the collective farms, which average approximately 476 hectares per village (data relating to April 1988).

2. Home gardens and produce use

A field investigation was carried out in 1987-88, over a period of fifteen months. Field research was based on the use of direct observation and on structured interviews. A list of items was prepared for each of the 250 households included in the sample. The following main topics were covered: a) the general characteristics of the household (ethnic group, region of origin, religion); b) the home gardens and the use of the produce (plot size, types of crop, crops used for bartering, food habits).

The following analysis is based mainly on the comparison of data from the observation of the different home gardens, broken down by ethnic groups the households belong to. Here it is important to bear in mind that the Kembata, Hadiya, Wolayita and Gurage settlers come from the same area in the South Shewa region, while the Amhara resettled in Beles Valley have been transferred partly from

3. In RRC special settlement schemes, in addition to 2 hectares per household for cooperative cropping, each family is given a homestead plot of 1,000 square meters. These plots are developed by individual households (RRC, 1981).

4. In the area of the research, a training and technical assistance programme for setting up home gardens is now under way as part of the financial aid given by the Italian Ministry of Foreign Affairs and carried out by the International Committee for the Development of Peoples (CISP), to which go our thanks. Particular thanks go to the agricultural extension workers and to the inhabitants of the villages of the Beles area.

North Shewa and partly from the adjoining area of West Wello. The Oromo come from the West Wello. The Tigrean come from Tigray region. The Agew come from the Gojjam region itself.

During the period of this research there were no members of Tigrean households present in the villages selected and no reliable data were available for the Wolayita and Gurage populations.

According to the latest statistics available at the time (RRC census, December 1986), in the villages covered by the research, the average number of households per village was 457, while each household included an average of 3.4 members.

The sampled households in the research were chosen from 25 villages, which accounted for 62.5% of the total number of villages in the area, and were in the first instance selected using a cluster sampling procedure. In the second stage of sampling, ten households were selected from each village, on the basis of two variables: the areas of origin and the ethnic group.

The areas of origin and the ethnic group of sampled households reflect those of the village populations (Tables 1 and 2). Data on the region of origin show that a total of 80% of the sampled households come from Shewa region, 19.2% from Wello and 0.8% from Gojjam.

Table 1 - Region of origin

	Total households		*Sampled households*	
	No.	*%*	*No.*	*%*
Shewa	8,915	78.1	200	80.0
Wello	2,407	21.1	48	19.2
Gojjam	92	0.8	2	0.8
Total	11,414	100.0	250	100.0

As far as the ethnic distribution is concerned, the Kembata represent 24.4%, the Hadiya 27.6%, the Amhara 45.2%, the Oromo 2%, and the Agew 0.8%.

Another important factor taken into consideration was the religion of the sampled households. Table 3 shows data for the religion practised by the 250 sampled households. A total of 54.0% are Ethiopian

Christians, 27.6% are Moslems, 14.8% belong to the Adventist Church and 3.6% are Catholics. While the Amhara, Oromo and Agew practise the Ethiopian Christian and Islamic religions; the Kembata and Hadiya include members of all such religious groups.

Table 2 - Ethnic group

	Total households		*Sampled households*	
	No.	*%*	*No.*	*%*
Kembata	2,735	24.0	61	24.4
Hadiya	3,050	26.7	69	27.6
Amhara	5,321	46.6	113	45.2
Oromo	216	1.9	5	2.0
Agew	92	0.8	2	0.8
Total	11,414	100.0	250	100.0

Table 3 - Religion of sampled households

	No.	*%*
Ethiopian Christian	135	54.0
Moslem	69	27.6
Protestant	37	14.8
Catholic	9	3.6
Total	250	100.0

Although the five ethnic groups discussed in the research have sometimes widely differing life styles, the results have been analysed mainly for the two larger groups, i.e. the Kembata and the Hadiya in one hand (130 home gardens) and the Amhara on the other (113 home gardens), which together represent 97.2% of the sampled households.

For the purposes of this study, the Kembata and Hadiya have been grouped together due to their similar cultural background and to the

fact that they originate from the same *awraja* (province).[5] In the area of origin their livelihood is almost entirely based on subsistence farming. Although cereals, legumes, vegetables, oilseeds and cash crops are cultivated, the most important crop is the ensete (*ensete edulis*). Ensete plays a vital role in the economic and social life of the Kembata and the Hadiya. The ensete-eating people can obtain a constant supply of food from small plots of land. After subsistence farming, trading is the second most important economic activity of these people (Alemayehu Lirenso, 1983:2-3; Singer, 1980:539-540; Pal Singh, 1970:93-94).

On the basis of the research results, the average size of a home garden is 933 square meters, i.e. 979 square meters for the Amhara, and 889 square meters for the Kembata and Hadiya. The average number of crops grown in each home garden is 6.9. Figure 1 shows the land use for the home gardens broken down by crops. Out of the total area occupied by the 250 home gardens (equal to 233,176 m^2), 82.5% is accounted for by cereal crops (corn and sorghum), 6.7% by tubers (sweet potato), 2.5% by legumes (beans and soybeans), 6% by vegetables (cabbage, tomato, beet, onion, cayenne pepper and egg-

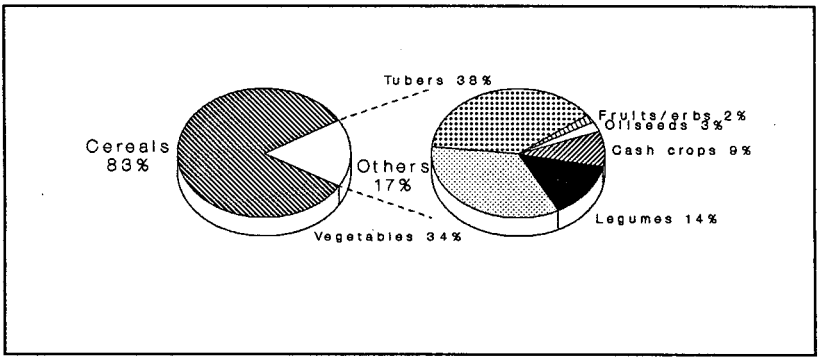


Figure 1 - Home garden land use by crop (%)
Values refer to the total sample of 250 household

5. For material on the Kembata and Hadiya, see: Alemayehu Lirenso (1983); U. Braukamper (1980, 1983); N. J. Singer (1973, 1980). As regards the Gurage and Wolayita, see: W. A. Shack (1966) and R. Chiatti (1979), respectively. As for the Amhara and Oromo, see: A. Hoben (1963, 1973); Dessalegn Rahmato (1987); W. A. Shack (1974); F. J. Simoons (1960); G. W. B. Huntingford (1955); S. D. Messing (1957).

plant), 0.5% by oilseeds (castor-oil plant and sunflower), 1.5% by cash crops (tobacco and cotton), and 0.3% by fruit trees (papaya) and herbal plants (spices and medicinal plants).

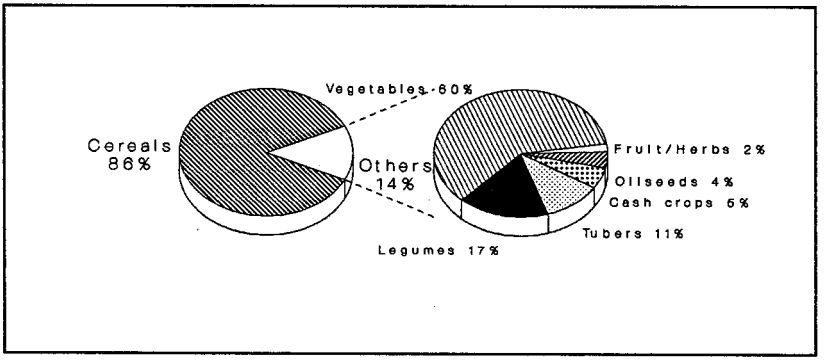


Figure 2 - Amhara home garden land use by crop (%)

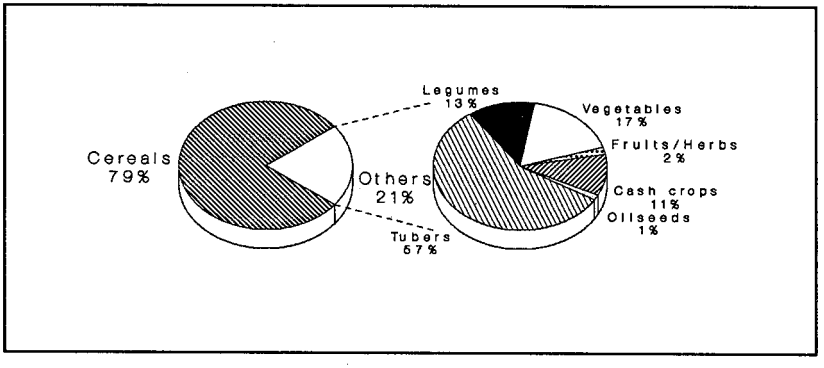


Figure 3 - Kembata & Hadiya home garden land use by crop (%)

Figure 2 and 3 show the distribution of the same data for the total area of the 113 Amhara home gardens (110,602 m^2) and of the 130 Kembata and Hadiya ones (115,564 m^2), respectively. The analysis of data on the land use among the Amhara sub-sample, on one hand, and Kembata and Hadiya sub-sample, on the other, points out some dis-

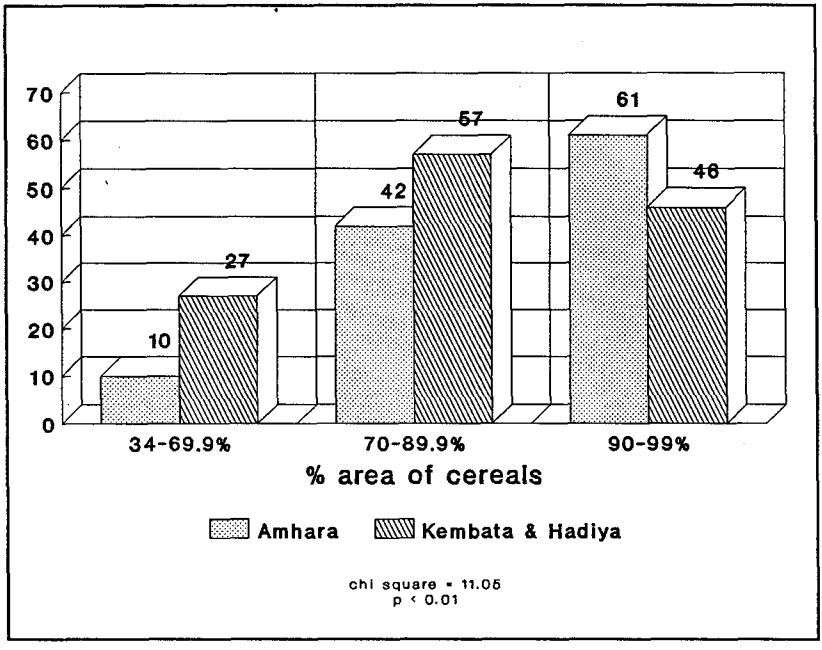


Figure 4 - % area of land used for cereals by ethnic group

tinctive traits characterizing the two systems of crop distribution.

Figures 4, 5 and 6 contain the data concerning the cultivation of cereals, tubers and cash crops. In the analysis a comparison is made between the two sub-samples in relation to the variables taken separately.

Data have been aggregated into two or three classes according to the percentage of crop area out of the total size of the home garden. These percentages have been calculated separately for each home garden.

A comparison of the data relevant to the cultivation of cereals is shown in Figure 4. The first class includes home gardens with a percentage of land used for growing cereals of between 34% and 69.9%, the second class includes the home gardens with a percentage ranging from 70% to 89.9%, the third class includes home gardens with a percentage of between 90% and 99%.

The calculation of the chi-square test in Figure 4 shows that the differences between the distributions of frequencies are statistically

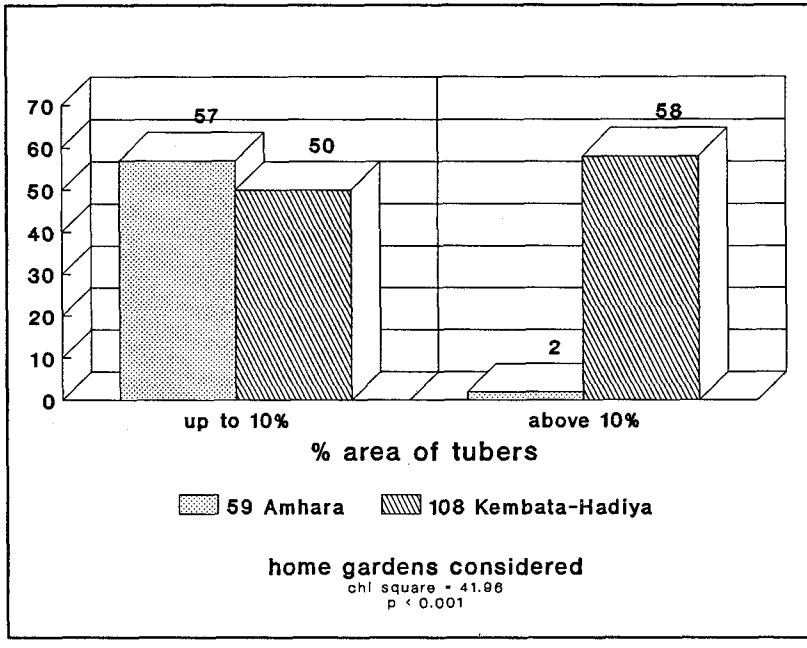


Figure 5 - % area of land used for tubers by ethnic groups

significant at the 0.01 level. The analysis shows that the Amhara make a greater use of cereals.

Figure 5 displays data referring to the cultivation of tubers (sweet potatoes). The first class includes the home gardens where the percentage of land used for tubers is up to 10%, while in the second class the percentage is above 10%. In the analysis only those home gardens where a part of the surface is used for the cultivation of tubers have been taken into account (59 Amhara home gardens and 108 Kembata and Hadiya ones).

The chi-square test indicates a greater use of land for growing tubers among Kembata and Hadiya. In their sub-sample 53.7% of the home gardens have an area used for the cultivation of tubers greater than 10% of the total extent of the home garden. On the contrary, only 3.4% of the Amhara home gardens have a cultivated size greater than 10%. In this case, the differences between the distributions of frequencies are statistically significant at the 0.001 level.

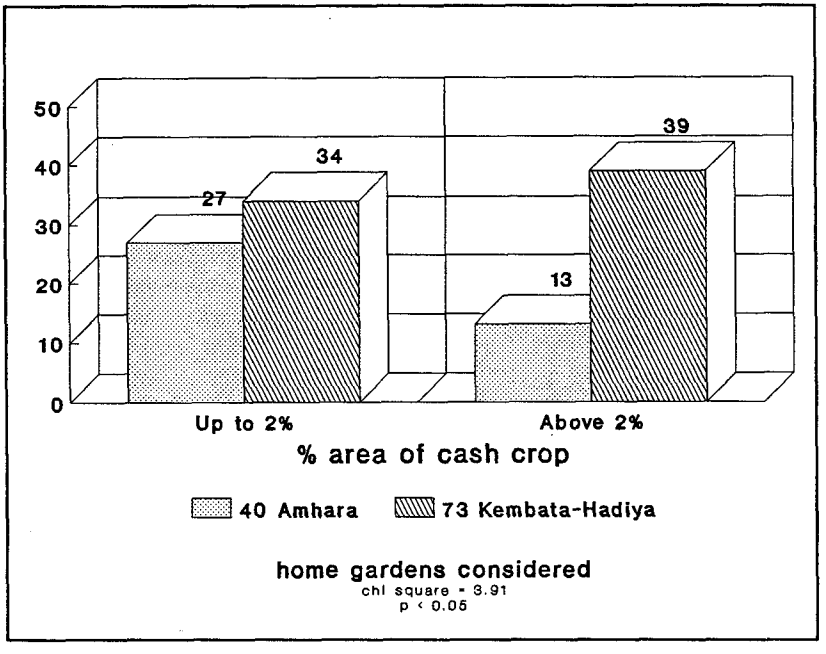


Figure 6 - % area of land used for cash crops by ethnic groups

Figure 6 reports data concerning the use of cash crops (cotton and tobacco) in the two sub-samples. Application of the chi-square test points out differences between the two groups in relation to the variable.

The first class includes the home gardens with a percentage of land devoted to cash crops up to 2%, while the second class includes home gardens with a percentage above 2%. Also in this case only those home gardens where a part of the surface is used for the cultivation of cash crops have been taken into account (40 Amhara home gardens and 73 Kembata and Hadiya ones).

The cash crop is grown on an area which is above 2% of the total plot-size in 53.4% of the 73 Kembata and Hadiya home gardens, and in 32.5% of the 40 Amhara ones. The difference is statistically significant at the 0.05 level.

The chi-square test applied to the data distribution of the Amhara, Kembata and Hadiya sampled households with regard to land use in

home gardens by ethnic groups, has shown that the Amhara use a greater area for growing cereals and a smaller area for tubers and cash crops, in comparison with the Kembata and Hadiya.

The main crops - traded in the markets of the resettlement area - are sweet potatoes, cabbages, spices, cotton, tobacco and cayenne pepper. Other food products yielding a small income are eggs, butter, honey, hens and goats. The distance between the 25 villages studied here and the markets in the resettlement area were calculated as follows: for 7 villages, 1-5 km; for 14 villages, 6-10 km; for 4 villages, 11-15 km.

The basic diet of the settlers is generally composed of cereals (sorghum or corn). Some of the more common forms of prepared cereals are *kitta* (unfermented bread) or *injera* (fermented flat bread). *Injera* is the most common food. Stew, which is known as *wot'*, is also prepared in a variety of forms, differing according to ingredients. *Wot'* prepared with goat meat, chicken or eggs is only eaten on special occasions (religious festivals, etc.) owing to the high cost and scarcity of these ingredients. In the period immediately following the harvest, the staple diet of *kitta* and *injera* is mixed with stews made with beans, cabbage and, rarely, corn, failing the other usual ingredients. Most people eat cayenne pepper daily, and spices are used to prepare *wot'*. Due to the difficulty of finding it in the area, coffee is only occasionally drunk throughout the year.

3. Concluding remarks

On the basis of the research findings, at least in the first phase of the resettlement scheme, we noticed that the resettled population tend to reproduce the social and economic conditions prevailing in their place of origin, despite the changed environmental conditions and the new social and economic structures. This applies especially to crop variety for household subsistence, bartering and trading systems.

In order to analyse the role of the household in the process of social, economic and environmental change, it is indispensable to consider the previous social and productive organization in the settlers' areas of origin and some aspects of the behaviour of households before the relocation in Beles Valley.[6]

6. The traditional social organization is often seen as a "non-economic" factor affecting peasant households, but in fact it may have an important economic role. To this purpose, we recall, among the others, the contributions of Leithmann-Fruh, 1983; Barlett, 1980; Ortiz, 1983; Long, 1984; Mc Netting, 1988.

A significant comment can be made on the different systems of land use in the home gardens of the resettlement area. Although crop distribution seems to be quite homogeneous, it is interesting to note the differences which occur between the Amhara home gardens and the Kembata and Hadiya ones.

A preliminary analysis might explain this difference in terms of distinct socio-economic features and farming systems characterizing the traditional way of life of the two main groups in this research.

The Kembata and Hadiya in their area of origin tend to grow ensete. The cereals among the Kembata and the Hadiya are therefore less widespread than those observed among the Amhara, where the cereals represent the main element of the diet (Alemayehu Lirenso, 1983:3-4; Shack, 1974:18-20; Simoons, 1960:85-90,167).

Furthermore, it should be remembered that the Kembata and Hadiya tend to be more concerned with trade than the Amhara (Alemayehu Lirenso, 1983:16-17; Shack, 1974:18- 27; Messing, 1957:104-105). In the Beles resettlement area, this factor may explain the greater diffusion - in the Kembata and Hadiya home gardens - of crops which can be traded with other households, such as sweet potatoes, cotton and tobacco. With a specific reference to the larger area allotted to tubers in the Kembata and Hadiya home gardens, it is important to note that the sweet potato is extensively consumed by the Kembata and Hadiya (Simoons 1960:111), while the Amhara regard it as a "second-class food" (Simoons, 1960:65-66; Messing, 1957:117).

On the basis of the conclusions reached above, the social and productive organization of the households appears to be one of the elements of continuity between the traditional and the present life style. Taking into account the trends shown by the organization of the home gardens, a more in-depth analysis should be made on the productive strategy adopted by resettled households, in order to obtain information which could be useful for planning future project activities for contributing to the creation of self-supporting communities.

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7. UTILIZATION OF HORTICULTURAL PRODUCTS IN THE BELES VALLEY RESETTLEMENT VILLAGES

Agdaw Asfaw and Wolde Selassie Abbute

1. Introduction

1.1 Profile of the area

The Beles Valley (Pawe) resettlement area is part of the Metekel Administrative Region. The Regional Administration is divided into five Awrajas. Namely: Mandura-Guangua, Debati, Dangur, Wombera and Guba. The region is sparsely populated with less than a quarter of a million people (Dessalegn, 1986:3) and mostly with a hot climate.

The Metekel Administrative region is a homeland of different ethnic groups with their own distinct languages, cultures, and socio-economic formations. These ethnic groups are the Amhara, Agaw, Shinasha, Shanqilla, Oromo and Kumfel. Even though the different ethnic groups have no limited territory of settlement they can be generally grouped as follows: the Agaw and Amhara are mostly settled in the cooler highlands of the region particularly in Mandura-Guangua Awraja; the lowland areas of Mandura-Guangua and Guba Awrajas are entirely homelands of the Shanqilla; the Oromos mainly inhabit the Wombera Awraja with some Shinasha and Shanqilla ethnic groups; Debati Awraja is settled by Shinasha and Shanqilla communities, while Dangur Awraja has Shinasha, Shanqilla and Kumfel ethnic groups (Kidane Mariam, 1987).

The present-day Beles Valley resettlement area is located in the Dangur Awraja and was previously inhabited by the indigenous Shanqilla community. The Shanqilla are an ethnic group who still practice some sort of primitive socio-economic way of life. They largely depend for their livelihood on agriculture (traditional), hunting, and fishing.

Today, the Beles Valley (Pawe) resettlement area is one of the larg-

est resettlement regions populated by settlers from Wello and Northern Shewa (Menz and Gishe, Yifat and Timuga) who are victims of famine, as well as settlers from South-West Shewa (Kambata and Hadiya), Gojjam and Gondar who were suffering from the problem of shortage of cultivable land due to the higher population density in their original regions.

These settlers are settled along both banks of the River Beles. All the villages to the West of the River Beles are considered as the right bank villages and numbered together with a prefixed alphabet "R", "RH", "RDS", and "RUS", and form the whole region of zone one. On the other hand, all the villages to the east of River Beles are taken as the left bank villages and are numbered together with a prefixed alphabet "L" and form the whole region of zone two.

The different ethnic groups that form the resettlement population are: Amhara, Kambata, Oromo, Hadiya, Wolayita, Tigre, Agaw (Wello-Tigray) and few indigenous Shanqilla (Tables 1a and 1b).

1.2 Purpose of the study

The CISP Multisectoral Project aims at improving the living conditions of the resettled population in the Beles Valley (Pawe), by creating a stable economic, social and cultural framework in the area. In addition, the ultimate aim of the programme is to contribute to create a dynamic self-development capable of being self-sustaining and expanding without continuous dependence on outside assistance. As a result, it aims at reducing the temporary living conditions of the resettled population in the villages from regions of Ethiopia who were victims of famine as well as those who suffered from land degradation due to high population density.

The CISP Project is concerned with three different components: Agriculture, Handicraft, and Childcare. Of the three sectors, the aim of the agricultural sector is to tackle the nutritional problems of the resettlement population. The sector has demonstrative home gardening sites in almost all the villages. In addition, it has irrigated horticultural sites with motor-pump and without motor-pump (gravity) in order to develop horticultural products during the dry season in several villages.

Table 1a - List of Settlers in the Beles Valley Resettlement Villages According to their Ethnic Groups and Original Villages

Villages	*Ethnic Groups**								*Region of Origin***			
	A	*B*	*C*	*D*	*E*	*F*	*G*	*H*	*1*	*2*	*3*	*4*
L1	x									x		
L2	x					x			x			x
L3		x		x	x					x		
L4				x	x			#x		x	#x	
L5		x		x	x					x		
L6		x		x	x					x		
L7		x		x						x		
L9		x								x		
L10		x		x	x					x		
L11	x									x		
L12	x									x		
L13	x								x	x		
L14	x									x		
L15	x		x							x		
L16	x									x		
L17		x								x		
L20		x								x		
L21	x	x							x	x		
L22		x		x						x		
L23	x		x						x	x		
L24	x										x	
L26	x										x	
L28	x								x			
L29	x								x			
L30	x								x			
L45	x								x			
L130	x								x			
L131	x								x			
L134	x								x			
R2	x		x							x		

* Ethnic groups: A = Amhara; B = Kambata; C = Oromo; D = Hadiya; E = Wolayita; F = Agaw; G = Tigre; H = Shanqilla.

** Region of origin: 1 = Wello; 2 = Shewa; 3 = Gojjam; 4 = Gondar.

\# The Shanqilla are the indigenous ethnic groups.

Table 1b - List of Settlers in the Beles Valley Resettlement Villages According to their Ethnic Groups and Original Villages

Villages	*Ethnic Groups**								*Region of Origin***			
	A	*B*	*C*	*D*	*E*	*F*	*G*	*H*	*1*	*2*	*3*	*4*
R3	x		x							x		
R4	x			x	x				x	x		
R5	x	x		x	x				x	x		
R6	x	x		x	x				x	x		
R7	x		x							x		
R8			x							x		
R9		x		x	x					x		
RUS46	x								x	x		
RUS50	x								x			
RUS51	x								x			
RDS49	x								x			
RDS51	x								x			
RH127							x		x			
RH101							x	#x	x		#x	
RH102							x		x			
RH104							x		x			

* Ethnic groups: A = Amhara; B = Kambata; C = Oromo; D = Hadiya; E = Wolayita; F = Agaw; G = Tigre; H = Shanqilla.
** Region of origin: 1 = Wello; 2 = Shewa; 3 = Gojjam; 4 = Gondar.
# The Shanqilla are the indigenous ethnic groups.

Apart from this, there is also a home gardening site in the gardens of the Pawe Hospital. Social workers recruited among the peasants are involved in the agricultural activities in the villages. Some of these social workers have been given formal training through CISP. Seeds, seedlings, fertilizers, pesticides, and other technical aids have been supplied to the peasants. A nursery for horticultural and reforestation plants has been created. Moreover, a shopping service is organized at the Almu Town in order to enable the peasants to sell their horticultural products and to develop their income generating source.

Thus, the main aim of this study is to show the utilization of the horticultural products in the resettlement area which are being produced by the CISP Project as well as the related horticultural activities

that are taking place in the villages.

This study lists the various types of horticultural items cultivated on the sites (demonstrative, irrigated with and without motor-pump), the types of results gained, and the destination of the products; in explains the kinds of problems faced by the peasants while cultivating their home gardens; and how peasants have utilized the seeds, seedlings, and others provided for their private home gardening activity through CISP. In this connection it also explains how well the peasants have utilized the private gardening products, whether the peasants have used the products for home consumption or for sale, the destination is clearly pointed, indicating whether they have sold the products in the village or in the market, and what they have bought in exchange.

Furthermore, items cultivated by the peasants outside the seeds and seedlings provided through CISP in their private as well as in the association gardens are listed. The most suitable and the least used horticultural products among the peasants in the villages are clearly stated.

In general, this survey tries to show in more specific details the overall utilization of the horticultural products by the resettlement population. However, this survey is only limited to the horticultural activities undertaken up to the beginning of 1989, even though some of the recent developments in the area are mentioned mainly in the conclusions of this article.

1.3 Methodology

The methodology applied in the study is primarily the questionnaire technique. Prior to the design of the questionnaire, a brief preliminary survey of the area was made to observe the objective conditions of the villages.This preliminary survey consisted of a visit to some of the village sites, and discussions with the association chiefs. Based on the pilot survey, the final questionnaire was designed.

The questionnaire was constructed with open-ended questions in order to allow the respondent to give spontaneous replies to unstructured questions (which do not lead to a particular response), leaving the respondent free to answer as he likes. However, it made the job of classifying and analysing both time consuming and difficult during the study.

The open-ended questions were used in personal or face-to-face interview. During the personal interview, the interviewer explained the

questions to the respondents and obtained complete answers to all the questions, which contributed to the statistical accuracy, validity and reliability. As a result, more reliable data was obtained by applying this method of personal interview which made the study more formal even though most expensive.

As mentioned earlier, classifying and summarizing answers to open-ended questions is difficult. But, to enter each answer to a question, all the answers from the completed questionnaire were sorted and listed in a separate notebook during the study. All the sorted answers were listed under each respective question. Then, the related answers were grouped and coded. By consolidating the related groups, the researcher obtained a usable number of categories. These codes were used in setting the entries in the computer (tabulating device) and the free answer items by the open-ended questions were handled effectively in sorting and tabulating. Thus, this mass of data has been converted into understandable and usable form to aid analysis through cross-tabulation.

1.4 Sample size

The sample size was largely determined by the size of the sampling frame. The size of the population helps to decide whether or not a sample should be used. In this study, there was no need to resort to a sample since it was more practical to contact the entire population of social workers in the village survey sites. Out of 301 social workers in all the villages, the questionnaire was utilized only on 125 social workers from twenty villages selected randomly. The study is only based on the social workers because: a) it was more practical to contact the entire population of social workers in the sample villages. Therefore, there is no need to resort to a sample which always introduces some element of error, regardless of how well it is handled; b) since the social workers form part of the peasants who are directly and actively involved in the activities of the agricultural extension programme of the project, it is commonly agreed that they can know and understand better the utilization of horticultural products in the villages.

Out of the 43 villages in which the project has horticultural sites, twenty villages were selected randomly for this survey. These villages are: L1, L2, L3, L4, L7, L9, L10, L11, L12, L13, L14, L15, L16, L17, L23, L30, L45, R3, R4, and R5.

2. Analysis and interpretation

2.1 Background information on the respondents

All the respondents responded fully to the descriptive background information questions. Of these total respondents, 47.2% were in the 14-30 age group; 48.8% were in the 31-55 age group; and only 4% were above 55. As the age groupings show almost more than 95% of the respondents were within the high working capacity age.

With regard to sex, 80.8% of the respondents were male, while 19.2% of them were female. This shows the involvement of both sexes on the horticultural activities even though the percentage of females is relatively small.

Regarding the marital status of the respondents, 79.2% of the respondents were married, 9.6% were single, 4.8% were divorced, and 6.4% were widowed. Thus, this shows most of the respondents lead married couple life.

As it was stated earlier, the ethnic groups of the Beles Valley resettlement area are: the Amhara, Oromo, Kambata, Hadiya, Wolayita, Agaw (Wello-Tigray), and a few others. In this survey, out of the total respondents, 56.8% are Amhara, 21.6% are Hadiya, 13.6% are Kambata, 4.0% are Wolayita, 1.6% are Oromo, 1.6% are others.

With regard to the original regions of the respondents, 82.4% are from Shewa (Northern and South Western Shewa), 16.8% are from Wello, and only 0.8% are from Gondar.

Considering the respondents' educational status, none of them were illiterate. This could be the result of the intensive literacy campaign in the area. As a result, 48.0% of the respondents were in the literacy campaign programme and the remaining 52.0% have received formal education.

The main role of the respondents in the village horticultural activities includes performing all the activities in the CISP village horticultural sites; distributing seedlings from the sites to the village peasants in order to plant them in their home gardens; showing the village peasants ways of preparing sites before cultivating home gardening items; encouraging the peasants to visit the village CISP demonstrative site in order to enable the peasants to share experience on the ways of developing home gardening activity through direct observation; and supervising and follow up of the private home gardening activities inside the village.

These social workers have the basic knowledge of the horticultural

activities through formal and on-the-job training by CISP. The practical training is given directly on the sites such as: seed sowing, thinning, transplanting, etc.. The theoretical training is given in class and through posters, pamphlets, leaflets, etc., which clearly detail ways of cultivating different crops. In addition, some of these social workers have attended one month training and received an official certificate from the Institute of All Farmers Training Centre which is supervised by the Ministry of Agriculture at Worota in Bahir Dar.

2.2 Utilization of horticultural products

2.2.1 The CISP horticultural products

The agricultural sector of the CISP Project has three different types of horticultural sites in the resettlement area villages.

These are 1,000 square meter demonstrative sites inside the village and an irrigated site near the river with motor-pump and without motor-pump. In other words, these sites can be grouped as rainy season (demonstrative) and all-seasons sites (irrigated).

During the field data collection period of this study, all the 20 sample villages have had demonstrative sites, four an irrigated site with motor-pump, and eleven an irrigated site without motor-pump. In the analysis and interpretation of the data mostly the percentages do not add up to 100. This is because the respondents did not give a distinctly exclusive answer for the open-ended questions in most cases. So there is always overlapping in the categories of the answers. Here, even though it is difficult to add up in order to justify the percentage, it does not create a difficulty in realizing that these are not mutually exclusive categories.

A. Demonstrative sites

The demonstrative sites are meant to provide the peasants with a practical demonstration of the ways of cultivating different home gardening crops. They are intended to enable the village people to acquire the knowledge of the ways of cultivation as well as usage of the products so that they can have a balanced diet and improve their nutritional contents.

The items cultivated from the demonstrative sites are: carrot, red

beet, onion, green pepper, cabbage, tomatoes, Swiss chard, salad, egg plant, courgettes, cauliflower, water melon, soya bean, haricot beans, chick pea, and kenaf.

Out of the products, the most widely cultivated items in the order from the highest to the average based on the percentage of the respondents are: carrot and red beet 91.2%, green pepper 88.8%, onion 87.2%, cabbage 77.6%, tomatoes 76.8%, Swiss chard 72.0%, egg plant 57.6%, and courgettes 52.0%. On the other hand, items cultivated in the order below the average based on the percentage of the respondents are: soya bean 25.6%, salad 16.0%, haricot beans 14.4%, water melon 8.8%, and cauliflower 6.4%. Apart from this, kenaf and chick pea had been cultivated at the beginning in a very small amount even though they are not part of the horticultural items cultivated on the sites at large.

B. Irrigated sites with motor-pump

The irrigated sites with motor-pump are meant to enable the peasants to obtain horticultural products during the dry season as well. These are sites where more reliable horticultural activities are taking place. Here, convenient areas near the Beles River and its tributaries are irrigated with the help of a motor-pump. As a result, it has been possible to cultivate not only the seasonal vegetables, but also fruit plants that stay throughout the year. It has solved the problem of total dependence on the seasonal rain and made it possible to cultivate different varieties of horticultural products. These varieties of items are: carrot, red beet, onion, green pepper, cabbage, tomatoes, Swiss chard, salad, egg plant, courgettes, cauliflower, water melon, soya bean, haricot beans, radish, banana, papaya, coffee, sugar cane, orange, and mango.

Out of the above mentioned items cultivated from the irrigated sites with motor-pump, the most dominant ones according to the number of respondents from the highest to the average are: carrot 85.7%; onion 82.1%; green pepper and tomatoes 64.3% each; red beet, cabbage and banana 75.0% each; Swiss chard 64.3%; courgettes 57.1%; and egg plant 53.6%. On the other hand, items cultivated from below the average to the least according to the number of respondents are: coffee 46.4%; sugar cane 35.7%; papaya, cauliflower and water melon 32.1% each; radish 25.0%; salad and soya bean 10.7% each; orange 7.1%; haricot beans and mango 3.6% each.

C. Irrigated without motor-pump

The main aim of the irrigated site without motor-pump is very similar to the irrigated site by motor-pump. Here, the sites are selected according to the convenience of irrigated them by manual labour (gravity) without cost of fuel and motor-pump.

The items cultivated on the irrigated site without motor-pump are: carrot, red beet, onion, egg plant, courgettes, cauliflower, water melon, soya bean, banana, and papaya. Out of these products, the most widely cultivated ones in the order from the highest to the average based on the number of respondents are: cabbage 87.0%, green pepper 86.5%, tomatoes 82.6%, carrot and onion 81.2% each, red beet 78.3%, and Swiss chard 69.6%. On the other hand, items cultivated from below the average to the least based on the number of the respondents are: courgettes 39.1%, banana and papaya 30.4% each, cauliflower 24.6%, egg plant 20.3%, salad 11.6%, water melon 2.9%, and soya bean 1.4%.

D. Destination of the products from the sites

All the products produced in the villages from the horticultural sites are utilized by the village peasants. As a result, the main destination of the products in the village is that they are sold to the village peasants at a reasonable price. This is performed by the village chiefs and the income goes to the Peasants' Association. Next to the sale, products especially from the demonstrative site are given to the village feeding centre. Apart from the two, an adequate amount is donated to the weak members of the Association. These weak members include old people, patients, pregnant women, and others. A small amount of the products are given free of charge to the members of the Association. Finally, part is given free of charge as well as being sold to government employees (including campaigners) in the village.

E. Most suitable items and best used products

Here, "most suitable" means those items that produce a good yield on the cultivated sites. Where as the best used products means the usage of products by the peasants in the villages. However, one thing to bear in mind is that some items which are best used by some peasants are least used among the other peasants. It all depends on prior experi-

ence and familiarity with the products by the peasants.

The best used items according to the order of importance based on the responses of the respondents are: onion 68.8%; cabbage 52.8%; green pepper 49.6%; red beet 41.6%; tomatoes 29.6%; carrot 28.0%; Swiss chard 19.2%; papaya and banana 8.8% each; egg plant 6.4%; courgettes, haricot beans and salad 2.4%; coffee and sugar cane 1.6% each. Apart from this, 4.8% of the respondents responded pointing the importance of everything.

F. Least used products

The least used items from the products of the sites in the order of the least to the less used ones based on the responses of the respondents are: egg plant 48.3%; courgettes 41.4%; carrot 17.2%; Swiss chard 12.6%; water melon 8.0%; tomatoes 6.9%; radish 3.0%; red beet, cabbage (round), salad, and cauliflower 2.3% each; and soya bean 1.1%. This shows that egg plant and courgettes ranks first and second out of the least used items. These two and the others in this category are least used due the fact that most peasants are not accustomed to this type of products. However, again some of the items which are least used are best used in the previous category. The usage of the products depend on the experience of the peasants with the different types of crops cultivated on the sites.

2.2.2 Private home gardening activities in the villages

The main objective of private home garden is to improve the food supplies of the producer and his family. The surplus provides some goods for trading on the local market, which often gives the villager a small supplementary revenue during a season when other agricultural work is limited and leaves some time available for vegetable growing.

The private home gardening activity is performed by each peasant in the village around his house. The peasants are used to cultivate the private home gardens mostly during the rainy season. For this activity, the peasant gets improved seeds, seedlings, fertilizers, pesticides and other technical assistance from the CISP agricultural component and other governmental organizations such as the Ministry of Agriculture and the RRC which provide them with the necessary materials,tools and experts for the home gardening activity.

A. Items cultivated in the private home gardens provided through CISP

As mentioned above, CISP provides improved seeds, seedlings, fertilizers, pesticides,and other technical aids for the private home gardening activities in the villages. Out of the provided items, the following are the ones cultivated in the private gardens. Based on the percentages of the respondents, the cultivated items are: red beet 49.2%, carrot 42.2%, onion 41.1%, cabbage 33.9%, tomatoes 33.1%, green pepper 32.3%, Swiss chard 29.8%, egg plant 23.4%, soya bean 4.8% haricot bean 3.2%, courgettes 1.6%, and salad 0.8%.

B. Preference of the respondents for the means of distributing items for the private home gardens in the future

As stated already, the two means through which CISP provides home gardening items for the village peasants are seeds and seedlings. The seeds are directly distributed to the peasants in coordination with the village agronomists and the association chiefs. But before distributing them to the peasants, the seedlings are made ready in the nurseries of the CISP agricultural sector. Considering the preference of the peasants for the means of distribution based on the responses of respondents, 36.0% of them preferred only in seeds; where as 21.6% of them preferred only seedlings. However, 42.4% of the respondents preferred both seeds and seedlings. Here, they preferred some of the items to be distributed as seeds and others as seedlings according to the types of items and the most suitable ways of cultivating them.

C. Most important items distributed for the private home gardening activities

The important items distributed for the private home gardening activities include those that have been already introduced to their home gardens and CISP sites as well as those that the village peasants have been used to plant in their original regions. Some items with which the peasants have previous experience have not yet been introduced into the resettlement area for various reasons. The best example is enset (false banana) and guragne goman especially for those settlers from Kambata and Hadiya. The list of the important horticultural items distributed are grouped into two: vegetables and fruit plants.

The vegetables are: green pepper, onion, tomatoes, cabbage, red beet, carrot, Swiss chard, egg plant, courgettes, cauliflower, garlic, taro, salad, water melon, haricot bean , and some others. The fruit plants and related groups are: papaya, banana, sugar cane and others.

D. Items cultivated in the private home gardens outside the items distributed through CISP

The respondents have cultivated items in their home gardens which are not distributed through CISP. They got these items through several other means. These items are sweet potato, pumpkin, berbere, goman (indigenous), garlic (indigenous), onion (indigenous), ginger, black cumin, and some others. Outside the stated items, the most dominant one is sweet potato for which 95% of the respondents responded to it.

E. Assistance of the village agricultural extension agents in the private home gardening activity

The village agricultural extension workers from the Ministry of Agriculture, provide assistance to the peasants in the village regarding the peasants' private home gardening activities. Their assistance includes distributing seeds, providing pesticides, fertilizers, teaching ways of cultivation, supervising the private home gardening activities, and above all coordinating all the gardening activities inside the village.

F. Items sold from the private home gardening products

Home gardening items are not only cultivated and used for home consumption, but also used for sale. The places where the items are sold are in the market and in the village. According to the informants in this study, 57.1% have sold their items in the market, where as 42.9% have sold in the village.

Based on the responses of the respondents, the percentage of items sold in the market from the products of private gardens are: onion 57.1%, carrot 33.3%, red beet 19.9%, green pepper 19.0%, cabbage and Swiss chard 9.5% each, and tomatoes 4.8%.

The markets where the home gardening products have been sold

include those markets inside the resettlement area and its vicinity. These markets including the percentage of respondents who have sold their items are: L7 market 33.3%, L14 and Gilgel Beles markets 16.7% each, and Mambuk 8.3%. Apart from this, 25.0% of the respondents have not specified where they sold their products. The dominant market where they sold their items is L7. This could be due to the site of the market in the centre of the resettlement area and its moderately bigger size.

G. Items bought in exchange

After selling the products from their gardens, the peasants bought several necessities for their life. These necessities include spices, goats, chicken, clothing, grains for wat (sauce), and local drinks. Out of the items bought, spices rank the first for which 39.1% of the respondents responded. Apart from this, the percentage of respondents for other items are: goats 21.7%, chicken 17.3%, grains for wat (sauce) 13.0%, clothing and local drinks 4.4% each.

Thus, the above exchanged items clearly show that how well the peasants have utilized the products of their private gardens not only for home consumption, but also as a source of generating income.

H. Cultivating home gardening items during the dry season

It is obvious that to cultivate home gardening items during the dry season is difficult in most cases it's unless irrigated near the river. Since there are so many streams and the main Beles River in the resettlement area, there is a very good potential that enables the settlers to cultivate items during the dry season. But, due to several factors, not all the peasants have got plans to cultivate horticultural items during the dry season.

However, in spite of the problems they encounter, most peasants have got plans to cultivate home gardening items during the dry season in order to improve their nutrition contents and create source of income as well. Here, some of the peasants have already cultivated different kinds of horticultural items during the dry season near the nearby streams and the main Beles River.

I. Problems encountered while cultivating private home gardens

The peasants have encountered several problems while cultivating their private home gardens. Out of the problems, the most terrible one is destruction by field rats and pests. responded. Other problems that destroyed the private home gardening products are: destruction by ants and termites, army worm, domestic animals, heavy rain, erosion, wild animals and destruction by unknown reasons. Apart from this problem of destruction by the above mentioned means, the other problems include: unsuitable soil type; shortage of free time to work in the garden; shortage of the gardening area; shortage of the home gardening items; shortage of the necessary tools; marshy and stoney garden; and physical weakness to work in the home gardens.

Therefore, the majority of respondents faced one or several of the above mentioned problems while cultivating their private home gardens. However, CISP has taken several counteractions to solve some of the above stated problems by providing pesticides, gardening tools, and other technical aids on soil conservation, drainage, and others.

2.2.3 The Associations' horticultural activity

The association sites are also one of the areas where production of horticultural items have been taking place in most villages. Here, each association in the village (Peasants', Youth, and Women's) has its own sites where they produce horticultural items.

All the horticultural activities in the association sites are implemented in full co-operation with the CISP agricultural sector. Here, the association participates only by assigning people who work in the site, where as CISP provides all the necessary technical aids, supervision and co-ordination.

3. Conclusion

The analysis and interpretation of data items throughout this study consistently showed that the horticultural activities which have been taking place in the Beles Valley resettlement villages have not only been used for improving the nutrition contents in the home consumption; but, also used as a source of generating income for the households.

In some of the villages a reliable horticultural sites are realized with an irrigated vegetable and fruit plants which assisted a great deal in improving the nutrition contents of the villagers. In addition, apart from improving the nutrition content, an income generating source has been created for the peasants by the establishment of a permanent shopping center in the center of Almu town in the resettlement area. The peasants sell their horticultural products in this shop. Furthermore, transport services have been provided for the peasants to enable them sale their items in the markets of the resettlement area on the market days.

Above all, in some villages of the area, a stage of more or less self-reliance has been reached as a result of the intensive imput and technical aids provided through CISP and implemented by the Agriculture sector. In other words, a reliable vegetable and fruit plants for all the seasons are cultivated in these sites. Social workers who are fully capable of performing all the duties of production and management of the horticultural activities in the sites is achieved. In general, these achievements in the agricultural sector guarantees the realization of some of the intended goals of CISP Beles Valley Project (Ethiopia) in the agriculture sector inside the resettlement area.

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8. SMALL-SCALE AGRICULTURE: ASSESSMENT OF THE CISP PROJECT STRATEGIES AND ACTIVITIES

Massimo Tomaselli

1. Introduction

The survey for which the figures are set out in this report was not intended to be a programme evaluation report, which would at all events have to use different methodologies, but rather a micro analysis of the steps already taken by the project towards extending vegetable gardening in the Tana Beles area.

A great deal of space has been devoted to illustrating the data and the statistics in order to provide as clear and objective an overview as possible. The analysis therefore sets out to comment on the wide range of responses which the villages have already made to the stimuli and to the demonstration activities that have been carried out in the field. It should be remembered that the report has deliberately refrained from providing any analysis of the agronomic problems raised during the implementation of the families' activities.

This report on the home gardens reflects all the limitations of the team which cooperated in producing it, but above all it suffers from the drawback of not having been carried out in August-October but only in the period November-December 1988. For this reason there is necessarily a lack of precision, which means that the possible margin of error is quite high, with the result that the quantitative analysis may be considered significant while the qualitative analysis cannot be taken as "certain". It is nevertheless hoped that all our colleagues and anyone interested in the future developments of the programme will be able to use this paper, not so much as a guide but more as a new tool for interpreting the situation of the peasants and their home gardens in Tana Beles.

2. The sample

No data analysis can be better than the actual sample, and for this reason we would like to illustrate the way in which the data has been collected and on the sampling error calculation.

The survey was strictly conditioned by the constraints of uncertainty which may be summarized under three headings:

- the representativity of the subsample;
- the homogeneity of the sample;
- the methodical approach of the enumerator.

2.1 Representativity and homogeneity

These two conditions are generally met by the classification of family types resettled in the area, in terms of a set of features which have been used to set up population groups for the villages. It has been assumed that a population is homogeneous:

- if it comes from the same region;
- if it belongs to the same ethnic group;
- if it was resettled in the same village in the same period.

The subsample was selected by dividing the village area up by lines drawn on the map. Particular care has been taken to the closeness to the demonstration garden and to one of the edges of the village, and to the particular location of the dwellings of the social workers. These showed that they have a positive influence on the families lying on the outskirts of the village. A thorough interview was coupled with a visit to the home garden of the family being enumerated. Because the period November-December was quite late in the year, the survey could only identify the presence of crop residues, and it was on the basis of this that the accuracy of the interviewees' information was assessed. Moreover, the visit was the fundamental element for the qualitative analysis, particularly for the fruit and vegetable crops. The sample selected for each village differed both in number and in percentage terms. The main condition to which the variation in number and percentage depended was the need to reach a minimum statistical validity threshold (designed as far as possible to minimize the sampling error). The time factor had only a limited effect. The villages were divided into

different groups depending upon their population, ranging from a minimum of 350 households to a maximum of almost 600. In every case, no less than 70 persons were interviewed, reaching a maximum of 225 interviewees, while the average number was between 110-120 household units per village. In this way, as the graph shows, the percentages of population considered are representative because they never fall below 15%, while the average for all the villages is 28%, even though there are 4 cases in which this figure exceeded 35%.

Table 1 - Sample. % of households interviewed

Villages	*No. of households*	*Households interviewed*	*% pop. interviewed*
L16	445	70	15.7
L9	444	123	27.7
L4	378	123	32.5
L12	560	102	18.2
L7	470	87	18.5
L23	493	120	24.3
L1	401	144	35.9
L10	459	185	40.3
L30	517	187	36.1
L5	461	225	48.8
L45	366	91	24.8

2.2 Sampling error

The sampling error comprises three elements:

a. E 1: error due to the inaccuracy of the information supplied by the households. The inaccuracy of the information has been calculated by relating the families interviewed to the information which is certainly reliable, and the percentage margin of error was calculated on the difference between these two. The percentage of error was quite small considering the fact that the survey was conducted late in the year, and never exceeded 3%, and in most of the villages, it was lower than 1.2%.

b. E 2: error of inaccuracy due to the subjective impression of the

enumerator. The inaccuracy increases as the number of interviews in the time frame increases. This gives the error rate in one day.

c. E 3: subsampling error. The percentage value of this error is larger. The graph shows six different classes - 100, 200, 300 etc. - corresponding to villages with up to 100, 200, 300 households. Depending on the percentage of persons interviewed, one can determine the percentage of error due to the small size of the subsample.

d. E tot - total error. The average error rate is 6.8%, peaking at acceptable values of 8.74. Unfortunately, it was only in the case of village L 30 that the total error percentage was 3.53.

3. General data on the home gardens

The survey was designed to cover all the activities carried out in the home gardens, in order to better understand the dynamics and the various options and decisions taken by the farmers. A twofold graphic identification was made before selecting, for each village, the percentage of the population growing each crop, and subsequently working out the graphs based upon the group of villages in relation to each crop.

The home garden crops were considered separately in greater detail. The species considered were maize, sorghum, tobacco, beans, soybean, cotton, sunflower, chili pepper, sweet potato, fonio (which was called dauxa in the survey) casterbean, nugu, basil, and groundnut. As far as the villages are concerned, not all of them could be taken into account and a random sample of them was therefore made. The villages, which were monitored personally by the same technician, were: L16, L9, L4, L12, L7, L23, L1, L30, L10, L5, L45.

3.1 Data analysis

We feel that it is essential to look at the complete Table 2 summarizing the data to realize the huge differences between the home garden situations.

What immediately comes to mind is the popularity of cereals and particularly maize, sorghum, fonio (which we have called dauxa in the table). As far as maize is concerned, all the villages grow a high percentage, ranging from a minimum of 71.6% to a maximum of 100%. In one case, the percentage fell below 80% while the standard deviation was 3 and the average 90.5. The only anomalous case for maize - village

L 9 - which recorded 71.5%, also has the highest percentage of sorghum: 56.9%. Considering both crops together, it is interesting to note that the total percentage is around 110-120 (200%), which means that it is almost certain that all the farmers grow one or both cereals and that about 15-20% grew both. Of the cereals, fonio and soybean are certainly the least important in terms of both yields and percentage of farmers growing them. Even though fonio is grown by an average of 28 farmers out of 100 in each village, peaking exceptionally at 54% in village L 23, and 45% in village L 45, the acreage utilized is quite small compared with the two main crops. It was also noticed that the farmers have often privately planted small areas on the edges of the villages near the official fields.

Table 2 - Crops cultivated in the home gardens (in %)

Crops	*Villages*										
	L16	*L9*	*L4*	*L12*	*L7*	*L23*	*L1*	*L30*	*L10*	*L5*	*L45*
Maize	97.0	71.5	100.0	97.0	98.8	97.5	87.2	98.1	87.3	79.1	87.9
Sorghum	45.0	56.9	22.7	16.6	13.7	55.8	23.5	16.7	12.6	22.6	39.5
Tobacco	7.1	82.9	46.3	6.1	75.8	50.0	19.3	6.8	30.5	12.4	28.5
Beans	2.8	1.6	0.8	1.8	4.5	2.5	2.4	6.9	3.6	4.4	8.7
Soybean	2.8	3.2	1.6	2.9	9.1	2.5	4.7	1.7	2.7	4.0	6.5
Cotton	24.2	0.8	0.8	23.5	0.2	25.0	2.1	28.9	5.4	4.4	72.5
Sunflower	5.7	1.6	5.6	1.9	5.7	6.6	1.8	2.1	2.3	3.5	5.4
Chili	35.7	56.9	78.0	90.1	40.2	50.8	75.4	89.5	73.6	41.4	72.5
Sweet Potato	70.0	95.1	95.1	85.2	97.7	81.6	82.9	79.5	76.5	87.5	85.7
Dauxa	22.8	6.5	12.1	11.7	27.5	54.1	14.2	28.7	28.3	23.1	48.3
Casterbean	21.4	21.0	62.6	68.6	43.6	59.7	38.9	61.5	78.7	31.5	72.3
Nugu	17.1	4.0	5.2	19.6	43.0	45.8	38.9	41.5	21.4	31.6	36.2
Basil	41.4	41.4	97.8	88.2	41.4	55.0	79.4	81.5	95.3	75.1	76.9
Groundnuts	2.8	4.0	1.6	0.6	1.2	1.8	8.6	6.2	2.8	6.3	5.4

One general remark about the home garden crop acreages is necessary with regard to certain cereal crops. Maize, sorghum, fonio (and soybean) were grouped together, and for each village the survey examined the average size of the area devoted to these crops. The result, not surprisingly, and which was quite obvious even from a visit to the home

gardens, was that these two crops cover most of the area, ranging from a minimum of 40% to a maximum of over 80%.

A more thorough survey of the use of the acreages has already been conducted and is explained below.

Certain crops, such as tobacco and cotton, suffer from a number of constraints in terms of their distribution by village (either extremely high or extremely low values), where the choice of crop is based on the traditions and customs connected with the ethnic identity of the group. For example, tobacco in such villages as L9, L7 and L23 occupies extremely high acreages (82% - 76% - 50%) whereas in villages such as L5, L30, L12, L16 it always falls below 12%. The same applies to cotton, which is extremely common in villages L16, L12, L23, L30 and L45, where the ethnic group is Amharic, and the values never fall below the minimum threshold of 25% (which is very high for a non-food crop) while the maximum is around 35%, except for village L45 which is an exception, standing at 72.6%. In all the other villages, cotton is grown by less than 6% of the population.

A word should be addressed to the question of bean farming. The percentage of the population cultivating beans is extremely disappointing, for it never exceeds 9%. Despite the ease of acquiring bean seeds on the markets, and the fact that they are available in all the villages at all times, this is a crop that has been almost completely neglected. It is not grown by many farmers, and even where it is grown, the acreages are very small.

It should be noticed that the survey showed that the crops which provide the bulk of traditional oils -- nugu and casterbean -- are grown on a large scale, averaging 51% in all the villages at 51%. However, four villages easily exceed 60% and it is only in one case that the figure falls to 20%. For nugu, the situation is very similar with extremely high values (20-45%) except in two cases (4%). Groundnut and sunflower are not at all common, and at the very best they only reached 8%.

Sweet potato is certainly a crop of prime importance and the levels are high in terms both of dissemination and acreages. Sweet potatoes are never grown in the home gardens by less than 75% of the population, and there are four cases in which this figure exceeds 95%. In nearly all the villages, moreover, 20-30% of the acreage is devoted to sweet potato.

The two traditional spices which are commonly used for cooking -- basil and chili -- are very widely grown, with the percentage varying from 40 to 90%.

3.2 Analysis of the home gardens

The analysis of the home gardens from the point of view of the vegetable crops is designed mainly not only to establish the quantitative level but also the qualitative level, and the impact of the leadership and extension work that has been carried out. In qualitative terms, we have been able to collect reliable data, even though it is less relevant and not decisive for the purposes of our survey. What we would have liked to do is to provide indications on the quality of the crop and the technical level, the perseverance, the conviction and preference of the farmers. But unfortunately the data available to us cannot provide an accurate analysis of this, even though a number of assumptions can be made. An analysis based on a microsample to find out "the opinions of the farmers" is now being conducted, but it is obvious that there is a great difference between a survey of data based on what has actually been done and a survey based on an opinion poll. The former is designed to be a practical aid, whereas the latter merely makes suggestions about the presumed intentions of the interviewees.

3.3 Acreage analysis

The analysis of the percentage of farmers growing the different crops was also coupled with a study of the acreages sown with crops in the home gardens. By combining this second and very rough analysis (with margins of error sometimes above 10%) with the quantitative study, valuable information can be obtained on the actual acreages that can be used by the peasants. The values indicate the average percentage of home garden acreages used for the five different groups of crops by the households interviewed. As stated above, the vast majority of the farmers have opted for a substantial acreage of cereals, leaving tobacco and oilseed crops varying between 5% to 15%, while sweet potato has always covered substantial areas which are estimated more or less everywhere to be above 20%. Unfortunately only between 3 and 14% of the surface area is devoted to vegetables, but we shall be seeing this better shortly.

It should be borne in mind that 100% of the acreage under consideration represents 90-85% of the acreage actually available to the households, because of the exclusion of tares varying from between 80 m^2 and 170 m^2 for each home garden. The percentage of acreage under crops can be divided into: 1) cereals: maize, sorghum, dauxa, soybean; 2)

tobacco; 3) oilseed crops: sunflower, casterbean, nugu, groundnuts; 4) sweet potato; 5) vegetables: carrots, tomatoes, onions, cabbage, Swiss chard, courgettes, egg plant.

Table 3 - Percentage of acreage covered with crops 1, 2, 3, 4 and 5

Villages	*Products*				
	Cereals	*Tobacco*	*Oilseed crops*	*Sweet potato*	*Vegetables*
L16	43	8	15	28	6
L9	38	14	9	28	11
L4	48	8	6	18	18
L12	31	4	28	31	6
L7	56	6	9	26	3
L23	48	9	8	28	7
L1	35	8	14	19	14
L10	65	4	8	15	8
L30	45	3	22	19	11
L5	53	2	21	14	10
L45	38	3	27	28	4

3.4 Production inputs: % of population in receipt of vegetable seeds

The study set out to measure the efficiency and the accuracy of seed distribution in the villages in order to ascertain whether this had acted as a constraint on the dissemination of crops. Every household group that had received all the seeds for the vegetable crops under consideration was positively valued.

Table 4 - % of population in receipt of vegetable seeds

Villages	L16	L9	L4	L12	L7	L23	L1	L10	L30	L5	L45
% of Population	86.5	76.8	91.6	75.4	82.3	68.5	86.9	69.8	81.5	77.4	92.3

The situation seems to be satisfactory because the seed distribution reached high levels in all the villages, peaking in some cases at 92%. The minimum was 68.5% which was still an excellent value because the reference was "seed package completeness". This initial selection among the percentage of seed recipients and the real percentage of persons who have actually sown the various types of vegetable makes it possible to make an initial evaluation of preference for one vegetable crop rather than another.

What appears to be contradictory is that for any one percentage of seeds distributed it is possible to allocate a higher percentage of persons in the same village who have cultivated a given vegetable. This is the case of village L 12, for example, in which the seed distribution was ascertained to be 75.4%, while the percentage of persons actually growing crops was 81.3%. However, it should be recalled that initially the social workers of the village had been supplied with seeds of all the vegetable species for the whole village and that there was potentially enough seed available for 100% of the home gardens. The difference (5.9%) shows that the distribution of seeds was not evenly spread, and demonstrates the influence of personal preference on reception-distribution-planting. That excess 5% shows that the request for goman seeds came from outside the package distribution framework, and that the specific interest in this particular crop was spontaneous, even on the part of those who had not yet received their own share of seed.

4. The data

The tables given below follow the same trends as the first part. The quantitative analysis of each village was cross-referenced for each crop. Then the qualitative aspect was taken into consideration showing the percentage of the cases "declared" to be positive for each crop, and evaluating the percentage of the successful farmers out of the total vegetable farmers, and subsequently out of the total population. In very broad terms, and without taking any account of any specific agronomic problems of individual villages, it was possible to extrapolate figures to identify a population presumed to be "trained" in the simplest vegetable growing techniques. We believe this figure to be far below the real capacity of the peasants, and at all events it takes no account of the different potential that exists there. Another datum which one might deduce from this, even though it is impossible to put an exact figure on it because of the substantial differences between the success of one

crop in one village and the same crop in another village, is the degree of preference for one crop compared with another. However, this datum must be taken on board conditionally, because it may be strongly influenced by other factors.

4.1 Quantitative analysis

As far as the crops cultivated in each village are concerned, the situation is far from homogeneous. Indeed, it is possible to consider two groups of villages: the first, in which vegetable crops never exceed 40%, and the second where they exceed 60% because the percentages of each crop are very high, and never below 25%. The first group comprises the villages L7, L1, L30, L16 and L9, while the second group comprises L4, L12 and L45, the only exceptions being villages L23 and L10, which fall between these two groups.

What emerges most evidently from the overall picture is that villages L16 and L9 are in a particular situation because taken together they never reach more than 40% of all the persons growing vegetable crops. This also applies to village L7 which falls between the villages in which vegetable growing seems to be less common, with a very slight difference.

The sharp differences between the percentages of one crop and another crop in certain villages is sometimes very surprising. Let us take the example of village L16 where onions and egg plants account for barely 5% compared with other crops which vary from 15 to 40%. It is particularly odd that the population does not like onions, because this is one of the most highly appreciated vegetables, traditionally used in large quantities. The question of egg plants can be viewed differently because this is a newly introduced vegetable. If one then looks at the overall picture one can see that it is only in rare and exceptional cases (L16 and L4) that egg plants have proven particularly popular. In 7 of the 11 villages enumerated over 30% of the people grew it.

Another comment is necessary on the particular case of tomatoes, for which the data is not particularly interesting.

Just about everywhere (villages L1, L30, L10, L16 and L45) tomatoes are not at the top end of the percentage scale as one would expect, but often come below other vegetable crops. The figures for tomatoes average around 35-45% and only in one case reach 70%.

Table 5 - Percentage of apparent total population growing vegetables (% of respondents)

Products	*Villages*										
	L16	*L9*	*L4*	*L12*	*L7*	*L23*	*L1*	*L30*	*L10*	*L5*	*L45*
Carrots	40.0	31.7	65.0	61.7	41.3	55.0	42.4	41.5	38.1	37.3	57.1
Tomatoes	30.0	36.5	69.9	57.8	32.1	51.0	38.5	36.5	42.8	31.1	51.6
Chards	12.0	25.2	40.6	58.8	45.9	48.3	35.4	61.9	52.7	26.6	54.9
Onions	4.2	8.9	20.3	19.6	31.0	29.1	48.3	35.4	54.4	21.3	28.5
Courgettes	34.0	20.3	15.4	36.0	31.0	18.3	27.3	39.1	31.9	20.4	34.0
Egg plants	4.2	39.0	12.1	33.3	32.1	39.1	31.4	12.4	38.4	23.5	45.0
Cabbage	11.4	13.8	87.8	81.3	21.0	32.0	51.6	48.3	58.6	35.5	82.4

4.2 Qualitative analysis

The qualitative analysis considered the farmers who said they were satisfied with the yields of each vegetable crop. The two different percentage values that can be taken into consideration here are, respectively, the positive cases of farmers growing vegetables and the percentage of positive cases with respect to the total village population. The first percentage indicates the degree of success with each crop grown. This can be conditioned by a number of factors such as the specific agronomic problems of each village (soils, rainfall, pests, etc.), the technical skills of the farmer, and the farmer's preference for one crop against another.

The second percentage shows the successful cases in the village. This gives us some idea of the size of the population which look after their garden sufficiently to produce a harvest. This is the percentage of the population which we initially deem to be "trained", even though this must be checked as the project moves ahead through the crop seasons. In reality, there is a fairly broad margin of error, mainly because of a number of occasional events which might combine positively. However, we have already said that these percentages are generally an obvious underestimate of the real capacities of the farmers. To provide a complete picture of the situation, it is necessary to consider simultaneously the frequencies in which the percentage of farmers that have cultivated between 1 and 7 vegetable crops.

Table 6 gives us a rough idea of the ability and interest of the farmers with regard to vegetable farming. Indeed, by cross-referencing, it is

possible to see whether a population in a village which peaks at level 6-7 has carried out a serious selection of the vegetables to be cultivated by really opting for one or another, or whether it cultivated all of them simply because this is easier, or out of inertia.

It can be seen that for a certain groups of villages, some vegetables, such as carrots, tomatoes, onions and courgettes, have not been very successful at all. L12, L9, L1, L7, L23 and L4 record lower values, or values at all events around 40%, while more or less everywhere the egg plants and goman reach values that even exceed 60%. In some cases, onions (L9, L4, L12, L7, L10) recorded extremely low values,

Table 6 - Positive cases of farmers growing vegetables and positive cases with respect to the total village population (in %)

Villages	*Cases*	*Products*						
		Carrots	*Tomatoes*	*Chards*	*Onions*	*Courgettes*	*Egg plants*	*Cabbage*
L16	Farmers	35.7	42.8	33.0	66.0	41.0	86.0	90.0
	Village	7.1	12.8	4.2	3.8	14.2	0.9	10.2
L9	Farmers	48.7	60.0	45.1	27.2	28.0	87.5	65.8
	Village	15.0	21.9	11.3	2.4	5.6	34.1	8.4
L4	Farmers	15.0	31.3	38.0	16.0	52.6	33.3	54.4
	Village	9.0	21.9	15.4	3.2	8.1	4.0	41.6
L12	Farmers	31.7	55.9	83.3	35.0	32.4	97.0	40.0
	Village	19.6	32.3	49.0	3.5	11.7	32.3	31.6
L7	Farmers	27.7	53.5	30.0	22.2	11.1	82.1	56.0
	Village	11.4	17.2	13.7	6.8	3.4	26.4	11.5
L23	Farmers	24.2	32.2	37.9	25.7	59.0	76.5	40.6
	Village	13.3	16.6	18.3	7.5	10.8	30.1	12.8
L1	Farmers	28.3	71.4	31.6	47.5	28.9	31.7	71.7
	Village	11.7	26.9	10.8	22.5	7.5	9.7	35.6
L30	Farmers	35.1	28.9	81.4	80.4	50.4	38.9	61.7
	Village	14.3	10.0	49.4	28.1	19.5	45.6	29.2
L10	Farmers	56.3	74.3	81.9	13.4	18.9	25.6	75.3
	Village	21.4	31.0	42.1	7.2	5.5	9.6	43.5
L5	Farmers	61.9	87.1	61.6	43.7	65.2	47.1	75.0
	Village	23.1	27.1	24.1	9.3	13.3	11.1	26.6
L45	Farmers	40.3	38.2	54.0	42.3	51.6	68.0	60.2
	Village	23.0	19.7	29.6	12.0	27.5	30.0	48.7

falling under 20%, whereas tomatoes in villages L5, L10 and L1 seem to have been very successful, exceeding 70%.

However, in this connection one must realize that the cases of success for this crop as a whole reaches a maximum of only 30% of the whole farming population of the village, whereas the percentage for chards is around 40% in more or less all cases. If we look carefully at the village graphs we can easily see that in some of them the percentage of so-called positive farmers in the villages for the whole range of crops does not really reach even 20%. The weakest village of all is L16, followed by L7, then L23 and then L5. On the other hand, L10, L12 and L4 gave good results. It should be noted that the average percentage of positive cases in the villages never exceeds 40%.

We may therefore say with a fair degree of certainty that the percentage of farmers in the villages who are presently trained in vegetable growing techniques vary from a minimum of 10% to a maximum of 40%.

Here is the table giving the frequencies of the percentage of population cultivating between 1 and 7 vegetable crops.

Table 7 - Frequencies of the percentage of population cultivating between 1 and 7 vegetable crops

Villages	*No. of crops*						
	1	*2*	*3*	*4*	*5*	*6*	*7*
L16	6.0	4.0	18.0	0.6	7.2	0.0	4.2
L9	2.5	4.8	6.5	4.9	6.5	4.9	8.9
L4	17.9	0.9	28.4	20.3	4.9	3.3	12.1
L12	19.6	2.9	1.0	21.8	2.7	13.7	19.6
L7	4.6	9.2	1.0	0.1	0.0	10.0	21.0
L23	4.0	2.7	9.2	7.1	2.9	10.8	18.3
L1	3.3	5.9	3.9	3.1	4.0	4.1	27.3
L30	13.6	6.8	2.4	2.6	1.1	23.0	12.4
L10	4.2	1.7	9.9	4.4	0.3	6.3	31.9
L5	1.8	4.4	4.5	3.1	2.0	0.9	20.4
L45	25.3	2.2	3.3	6.6	11.0	5.5	28.5

4.3 Number of fruit trees and production potential

Since the local markets sell fairly small quantities of fruit, we were induced to survey the fruit trees in the villages in order to appreciate the development capacity, but above all to find out approximately what the needs are.

Initially we thought of considering papaya, banana, lemon and orange trees, but as the survey progressed we soon gave up the survey of lemon trees and orange trees because there were hardly any at all in the home gardens. The maximum error potential due to sampling can be estimated at about 2-3.5% for the villages (in the case of lemon trees).

The survey therefore focused on enumerating papaya and banana trees.

As far as the banana trees are concerned, the results were rather disappointing because only 4 out of 11 villages had even a minimal quantity. In decreasing order, villages L7, L12, L45 and L5 had a percentage of 1-2 banana trees, varying from 6.8 to 0.4. It should be borne in mind that in some villages there are also banana groves, varying in size (1-2 has.), which were not taken into consideration for the purposes of calculating production.

With regard to papaya the situation seems to be much better even though there are serious overall shortages. All the villages enumerated have a certain percentage of the home garden with papaya, even though the actual number rarely exceeds two trees. The dissemination percentage nevertheless shows that the fruit is very popular with the population. The minimum percentage was found in village L4 with a value of 6.8% whereas the maximum was village L16 with a value of 34.2%.

When enumerating the papaya trees, consideration was taken of the cases in which the number of trees in the home garden exceeded 2. The top value was 8. The percentages in the latter case were far lower, and only 4 villages recorded them at all. The following table gives a clearer picture.

4.3.1 Production potential

The survey then considered the potential production capacity in order to work out the theoretical requirement.

The situation is completely anomalous when one realizes that the supply campaigns have already been run. Although dissemination has

been a good, it should be noted that the quantities are really small, not to say insignificant.

Table 8 - Percentage of population with fruit trees

	L16	*L9*	*L4*	*L12*	*L7*	*L23*	*L45*	*L5*	*L10*	*L1*	*L30*
% of population with up to 2 papaya trees	34.2	17.1	6.8	21.3	14.9	18.3	23.2	12.2	8.4	12.4	13.6
% of population with between 3 and 6 papaya trees	2.5	0.0	0.0	0.0	2.3	7.6	0.0	0.0	0.0	3.1	2.1
% of bananas up to 3 trees	0.0	0.0	0.0	5.8	6.8	0.0	0.0	3.2	0.4	0.0	0.0

From a rough calculation of the possible yields (30-50 fruits per tree per year) one can easily calculate the theoretical availability of papaya/household/year. If one considers the village with the largest number of trees, namely L45 with 182 papayas, the potential datum would be 13.1 ... which speaks for itself! Considering together the number of papaya trees and the households in the same village, the best ratio is found in village L16 where the value is 18.2.

Let us repeat once again that the only areas considered in this survey were the home gardens and therefore the areas bordering the waterways that often have micro orchards have not been taken into account. However disconcerting, the exactness of the representativity of the data is due to the complete lack of these fruits in the market areas.

5. Assessment of acreages actually cultivated

Since this was a survey specifically designed to analyze the spread of vegetable growing among the farming population, and it was of secondary importance how much of the acreage is actually used for the various vegetable crops in the villages taken as a whole, particularly so close to the beginning of the project. For this reason we shall simply give an overview of the values recorded. However simple, these data can suggest solutions to more general problems of fundamental importance to understanding the prospects for development of vegetable farming in the Beles Valley. The data on which the study was based show the

acreage actually used for growing vegetables, after making allowances for tare and excluding the acreages used for other crops. This is shown by comparing the two columns (4 and 5 in Table 9) showing the available acreages and the acreages actually used for vegetable growing.

What very clearly differentiates the villages is the lack of any uniformity in the acreages used for vegetables. Indeed, the total acreages devoted to vegetable growing vary widely from one village to another. The most telling figures are certainly those for villages L7 and L12 which are the two extreme cases, ranging from 7.3 has. to only 0.5 has. The frequency table also evidently confirms the fact that the maximum frequency is around the average values of 2-3 has., which confirms the tendency for the acreages to increase (although they are still very small) even though vegetable growing seems to be considered of secondary importance in the ambit of the home gardens.

Table 9 - Acreage actually used for growing vegetables, after making allowances for tare and excluding the acreages used for other crops

Villages	*No. 1*	*No. 2*	*No. 3*	*No. 4*	*No. 5*
L16	90	45	6	45	2.25
L9	92	40	11	10	4.40
L4	97	85	18	15	5.70
L12	89	80	6	13	7.30
L7	83	50	3	-	1.50
L23	95	60	7	4	2.00
L1	89	55	14	7	2.80
L10	90	65	8	5	2.25
L30	90	60	11	6	3.00
L5	87	40	10	3	1.50

No. 1 = the % of average acreages usable in the home gardens, excluding tare; No. 2 = the % of average population cultivating home gardens in the village; No. 3 = the % of the average acreage cultivated with vegetables; No. 4 = the total acreage available in the village for vegetable cultivation; No. 5 = the acreage on which vegetable are actually cultivated in ha.

6. Conclusions

The data we have been able to analyze certainly constitute a first ap-

proach to the problems of the home gardens in the Beles Valley. Two brief preliminary comments need to be made regarding the identification of the home garden as an ideal benchmark for understanding the real status of individual farmers. Indeed it was felt that this would supply the instruments both to analyze the possibilities of developing vegetable farming and to study applications of agricultural procedures to be recommended to the farmers. In order to understand the relevance of such a narrow analysis to the much more complex "Tana Beles Project", one must take account of the more general framework of which the CISP Project forms part. We will simply recall the fact that the production of cereals and legumes, which are essential to sustain the population, are all produced thanks to mechanization and that the "exploitation" of the farm acreages, the storage of the products and their distribution are linked to a status which we might define as being "community-based".

The farmers and the population in general have no decision-making role, and they mostly carry out duties in which passive performance predominates. The widespread use of farmers as "unskilled labour" without any responsibility is a constant factor running throughout the cropping season. The status of a paid farm-hand certainly does not facilitate the integration and settlement into the new environment which the population is really supposed to feel as its own. Secondly, it should be noted that in relation to the central production structure the micro surfaces of 1,000 m^2 are the only parcels which are officially allocated to each household group. Ultimately all the individual and independent decision-making possibilities lie in the choice to grow specific crops in what we have defined as "home gardens". The limited room for manoeuvre of each farmer has made it therefore possible for us to study their ability to integrate with new models, but above all to identify the priorities regardless of specific objectives.

A - The use of the home garden to grow cereals predominates over any other crop both in the size of the population that has adopted this technique, and crop acreages. The search for food security by producing and storing small home grown quantities seems to be a priority among all the farmers. This crop breakdown within the parcels therefore seems to be strictly bound up, so much so that the present techniques are not "traditional" models. The present productive trend is therefore marginalizing the amount of land devoted to vegetable growing. Despite the interest in this activity it may be reckoned that it would be difficult for more than 30% of the land to be used for vegetable farming

because of the constraints imposed by the lack of land resources available to the individual households.

B - While there is a shortage of land there is nevertheless a very widespread acceptance of vegetable farming by the population. It is mainly appreciated because of the contribution which vegetables can make to their diet, but above all because of their income-generating capacity thanks to the ease of marketing them in the area. The participation of villages both in the demonstration vegetable gardens and the village parcels are not an exception, and indeed there are very rare cases in which the activity has not managed to attract sufficient interest on the part of a substantial proportion of the village population.

C - Vegetable growing in the family home garden has met with an excellent response to the proposal of new crops. Indeed it is evident that in most cases the seed package has been accepted almost in its entirety. The acceptance of new vegetable crops has been facilitated, *inter alia*, by demonstrations showing their possible culinary processing potential which has made it easier to incorporate some of them into traditional dishes. There is no doubt that there is a marked preference for traditional vegetables such as chili pepper, spinach and cabbage. However, there has been a considerable impact on all the villages, particularly when one realizes that the solutions have generally been moderate. Indeed, the farmers have experimented with at least 2-3 non-traditional crops and there are very rare cases where the new species have been completely rejected.

D - All the activities designed to promote and integrate fruit growing into the home garden have shown that the sensitivity and the response to the proposals have been closely linked to the confidence which individual farmers have in what we might call a hypothetical "success risk". The importance of the community fruit and vegetable parcels has played a fundamental role in this regard. Indeed, it has been noted that the increase in individual activities was mainly in those places where demonstrations were able to prove the efficiency of the system proposed. In some villages one noted a very rapid expansion of fruit and vegetable acreages thanks to the personal work of the households who took over the marginal zones near to the village fruit and vegetable garden, and set up areas for private use. But apart from this it is clear that any individual analysis of each village raises different specific problems. However, it is very important to solve the land tenure prob-

lem more or less officially, in order to understand the mechanisms for developing the activity in certain villages. The fact remains that the participation of the population or the more widespread use of social workers, the distribution of part of the produce to the workers, the share-out of the profits, and the choices of crops, all depend on the approach taken by the Peasants' Association.

E - If one considers the productivity and the size of the areas cultivated during the rainy season it is evident that there is still a long way to go to reach the minimum threshold to meet the villages' food requirements. The quantity of fresh produce is still very low, and almost wholly supplied by traditional produce such as goman and sweet potato. In this connection, it must be borne in mind that the cultivation possibilities increase both in the rainy season and in the dry season, but that because of the aforementioned land problems it is only possible to partially increase production during the rainy season. Bearing in mind that the extension activities are carried out in two different sectors at the same time -- home gardens and village community gardens managed by the pre-cooperative groups -- it is precisely in the latter sector that it is necessary to revitalize the activity which has proven to be a locomotive force with regard to extending the home garden. It is therefore to be hoped that a different approach will be taken to the community vegetable gardens, which should be redirected towards a demonstration function of the real production capacities.

F - As part of the social workers' activities are concerned, one of their most important roles has not yet perhaps been fully appraised. Extension is one element which should be predominant in their work, but in reality it is wholly marginal and in some cases completely absent. We must bear in mind, moreover, that all the proposals have been filtered through this small group of individuals who are in fact becoming the direct promoters of every initiative. At all events, there are many examples in which the dynamism of some of these workers has managed to focalize the attention of the village, and sometimes of the institutions, on this type of activity. The *prise en charge* by the village of the community vegetable garden has almost always been matched by the acquisition by the social workers of the status of "leaders". The ability to dialogue and relate to the village agronomist is a trump card for the successful management of the vegetable gardens. For this purpose the social workers should be selected and trained so that they can play an extension role which is no longer devoted to the manual cultivation of

the village demonstration garden.

The CISP programme to help the population resettled in the Beles Valley seems to have had a certain impact on the local populations mainly with regard to the difficulty of introducing new crops. Certainly the involvement of the population is not yet total and the project does not yet have the instruments it needs to provide appropriate widespread training. The quantitative aspect which has characterized the project in its first phase of implementation should be placed into the background in order to facilitate contact with the farmers and training them in the new cropping techniques.

B. SMALL-SCALE MANUFACTURING AND HANDICRAFT ACTIVITIES

BOX II

Main activities in the handicraft sector of the Programme October 1986 - May 1990

1986-87

- building and furnishing three handicraft centres with a total area of 400 m^2 to be used for training and working the products in the three sectors of the project: bamboo and wood, iron and pottery;
- conducting a survey to identify the traditional instruments for handicraft work, and then selecting them and installing them;
- conducting a survey into the presence of craftsmen in the Beles area: the number of craftsmen per sector, the method of working their products, marketing levels;
- selecting and training craftsmen in each of the three sectors;
- running quarterly training courses for iron work, pottery and wood and bamboo work for 90 local craftsmen;
- follow-up and monitoring of the activities performed by the craftsmen in all the villages in the area;
- setting up a "showroom" of the handicraft products from the Beles Valley, classified according to the ethnic groups concerned.

1988-89

- promoting production and sales centres for all the three sectors in 20 villages;
- running training courses and setting up sectors for working iron, pottery and wood and bamboo for 90 local craftsmen;

- conducting a survey into the productive activities in the craft sector in the Beles area and marketing mechanisms;
- surveying the handicraft activities in three areas of origin of the settlers;
- follow-up and monitoring the activities performed by the craftsmen in all the villages in the area;
- selecting the pottery items produced by all the ethnic groups in Beles, and sending them to Italy in order to prepare an Ethiopian handicraft exhibition;
- setting up a centre to sell the Beles handicraft products at the Bahr Dar Chamber of Commerce;
- cooperating with the animal husbandry plan for the area by producing ploughs for draft animal farming.

1990

- opening a woodwork and bamboo handicraft cooperative;
- opening a pre-cooperative structure for women potters;
- opening a pre-cooperative structure for blacksmiths;
- providing technical assistance to the villages' handicraft production.

9. HISTORY OF ETHIOPIAN HANDICRAFTS AND HANDICRAFT WORKERS

Richard Pankhurst

1. Introduction

Ethiopia has a long history of handicrafts which stretches back to the very dawn of history. It found expression in the country's prehistoric rock paintings - and carvings, as well as in the wonders of ancient Aksum, with its beautifully-constructed palaces and remarkable stele, or obelisks, and its fine coins struck for many centuries in gold, silver and bronze. After the advent of Christianity (which became the country's official religion in the early fourth century) many fine churches were constructed, foremost among them of St Mary of Seyon at Aksum. The beauty of the pictures on its walls were described to the Prophet Muhammed by his wife Umm Habibah who inspected when she found refuge in the old Ethiopian capital during the period of persecution which preceded the acceptance in Arabia of her husband's creed.

After the decline of the Aksumite kingdom Ethiopia became more-landlocked and was based very largely on a subsistence economy. The skill and status of Ethiopian handicraft workers, and the range and quality of their produce, in this period to which we must now turn, reflected both the subsistence character of the economy and the hierarchical development of the society.

2. The Medieval period

Craftsmanship in the Medieval period took place at four distinct levels: firstly, for the peasantry and others of humble station throughout the country; secondly, for churches and churchmen, many of them congregated at major religious centres; thirdly, for the rulers and their courts, mostly situated in the medieval period at "moving capitals"; and,

fourthly and lastly, for the men and women who were clustered around the latter in military or other camps.

2.1 Rural craftsmanship

Rural craftsmanship served primarily the peasantry, who, as we have seen, were largely self-sufficient. They and their families not only grew most of their own food, but also constructed their own houses, and made the greater part of their household furniture, agricultural tools and clothing. Self-sufficiency extended to the lesser gentry, for, Ludolf declares, "every one takes care to supply his own wants either by his own or the pains of his Servants, which it is no hard matter to do, considering how little they have to use". Notwithstanding this attempt there were a number of articles in extensive demand which peasant families, mainly for lack of capital or expertise, could nor produce.

Peasants for the most part lacked the equipment, and skill, required for smelting and the manufacture of ironware. They were therefore dependent on blacksmiths for a wide range of articles, including plough-shares and the blades of axes, hatchets, sickles and knives, as well as spear-heads, stirrups, bullets, needles, tweezers and even pectoral crosses.

Peasant households, which generally had no access to clay suitable for potting, had likewise in most cases little knowledge of pottery-work. They had therefore to make use of the specialised services of potters for such articles as cooking pots and clay *metads*, or plates for the preparation of *enjära*, or bread. *Jäbänas*, or coffee pots, might also be needed, though coffee drinking was far from general as it had long been discouraged by the Church as an unChristian practice.

Most peasant families similarly lacked the equipment necessary for spinning, and more especially weaving. They were therefore not adept at such work, and had to rely on the specialised skills of weavers.

Ironware, pottery, and cloth were therefore produced in the main by specialised craft-workers: blacksmiths, potters and weavers, small numbers of whom could be found throughout the land.[1]

1. Ludolf (1684) 391; Rüppell (1838-40) II, 180.

2.2 Blacksmiths

Blacksmiths tended to be regarded with distrust, fear, and at times even hatred. Oral tradition collected by the Jesuits in the seventeenth century claims that the fanatically Orthodox Christian Emperor Zär'ä Ya'qob (1434-1468) had gone so far as to kill "all" goldsmiths and blacksmiths as "sorcerers". This assertion is not corroborated in contemporary sources, but may contain at least some truth, for Almeida states that fear or hatred of these craftsmen in his day was still "so common" that it was "quite usual" to "suspect nearly all illnesses as coming from sorcerers" and to "attribute them to the blacksmiths". "Many" of the latter paid for their assumed guilt with their lives, as the relatives of their supposed victims killed them "on the suspicion of having caused their deaths by these devilish acts". Barradas, another Jesuit of the period, reports that the populace at large scarcely seemed to believe in the existence of natural diseases, but rather considered them the work of blacksmiths or possibly goldsmiths. It was sufficient for it to be thought that a particular smith was responsible for a person's illness: no proof was required; relatives and members of the public would at once threaten the unfortunate craftsman with death if the patient failed to recover. The blacksmith's trade, Ludolf asserts, was thus "abhorred", as was explained by his Ethiopian informant, Abba Gorgoreyos, who said, with a smile, that "the silly vulgar people could not endure Smiths, *as being the sort of Mortals that spit fire and were bred up in Hell*".

A sizeable proportion of the blacksmiths in the north-west of the country were Fälasas, or Ethiopian Jews. In Dämbeya and some other regions of the north-west "many" of them, according to Almeida, were "great smiths", and lived by making spearheads, ploughshares and other articles. Ludolf agreed, observing that the Fälasas were "excellent smiths" and produced spear-heads and several other pieces of "Workmanship in Iron".

The Fälasa, like other groups differing from Orthodox Christianity, suffered for a time from persecution, and, according to traditions collected by the nineteenth century German Protestant missionary J.M. Flad, were driven to inaccessible or peripheral areas of the country, such as Sämén, Qwara and Celga, where they nevertheless paid tribute to the Ethiopian state. "The craftsmen and artisans amongst them - masons, carpenters and smiths", he declares, were, however, "soon recalled by the Christian king and were well paid in his service". The result was that Fälasa villages soon sprung up in Sämén and in the

neighbourhood of Gondär. "These work-people were joined by others, such as women skilled in pottery, and husbandmen, who established themselves in various parts of western Abyssinia, and supported themselves by their labour". After this "no more" was heard of "persecution and oppression in later centuries".[2]

2.3 Potters, weavers and tailors

Though Alvares and the Jesuits described fine Ethiopian pottery they provide no account of the craftsmen who produced it. This was perhaps not surprising, for potters, as later evidence indicates, constituted an isolated, and largely despised, caste. They nevertheless turned out fine pottery of all kinds. Emperor Lebnä Dengel, thus travelled, Alvares reports, with as many as a hundred jars of mead which were "black, like jet", and "very well made". Other items at court included "many little round porringers of black earthenware", as well as little pots with lids. This picture was later confirmed by the Jesuits. Almeida reported that bowls of black pottery constituted "the dinner service" of poor and rich alike, and that "nothing better was seen even on the table of the Emperor himself", while Lobo agreed that even among the greatest in the land the "vanity of silver" was "unknown".

Weavers, who receive scarcely more attention than blacksmiths in the records of the time, also constituted something of a class apart. Their isolation from the rest of the community was increased by the fact that many of them belonged to a minority religious group, either Fälasa or Muslim.

Many Fälasas, Almeida notes, "lived by weaving", as was later confirmed by Abba Gorgoreyos, who, in a letter to Ludolf, patronisingly referred to them as the "weavers of our cloth". For this reason the German scholar went so far as to assert, though with obvious exaggeration, that the Fälasas were "the only persons" who employed themselves in "weaving Cotton".[3]

The participation of Muslims in weaving owed much, no doubt, to their involvement in trade, for cloth, whether imported or local, had, as we have seen, long been a major article of commerce, and one in which Arabs and local Muslims traded extensively.

2. Beckingham and Huntingford (1954) 54-5, 63, (1961) II, 337, 438; Beccari (1903-17) IV, 61; Ludolf (1684) 390-1; Lockhart (1984) 170; Flad (1869) 9.
3. Beckingham and Huntingford (1954) 54; Flemming (1890) 99; Ludolf (1684) 390.

2.4 Ecclesiastical craftsmanship

The development of the Church, the founding of numerous religious establishments, some of them very wealthy, and the growth of a large class of clergy, created a demand for a wide variety of religious handicraft items. These included processional and hand crosses, ecclesiastical basins and plattens, sistra, bells and chandeliers of gold, silver or bronze, fine curtains and religious tents, priestly vestments, robes and turbans, ceremonial umbrellas and tallow candles, as well as church paintings, icons and scrolls, and religious manuscripts, many of them beautifully bound and illustrated. Some of these articles were made by monks specialising in handicraft activity, but others were the work of secular craftsmen, many of whom lived and worked in the vicinity of religious establishments.

The finest religious artifacts were produced at or in the vicinity of Aksum - where handicraft skills doubtless stretched back to the city's ancient days of greatness - and other great religious centres. Testimony of this is provided by Brother Thomas who claimed that "very fair and abundant" clothes of silk were made in the city, and that there was a "good" iron mine not far away. The latter statement was corroborated by Alvares who noted near the holy city "a very small village" which consisted "entirely of blacksmiths". Aksum was likewise the place, as Bruce afterwards learnt, where the "best parchment" was made, much of it by monks, and was also renowned for the manufacture of fine cotton cloth.[4]

2.5 Church artists

Many church artists were to be found in the principal religious centres, among them Aksum in the vicinity of which "colouring materials", according to Brother Rufa'él, were unearthed for the use of painters.

Such artists, like other craftsmen, toiled anonymously without signing their work, and the names of only a few of them are preserved, often almost fortuitously. One of the earliest painters of whom there is record was a monk called Feré Seyon, who, as indicated in a contempo-

4. Beckingham and Huntingford (1961) I, 75-6, 149, II, 334, 338, 359, 444; Crawford (1958) 143; Girard (1873) 242; Bruce (1790) III, 133. The handicraft skill of the ancient Aksumites is evident *inter alia* in the minting of gold, silver and bronze coins, as well as - even more remarkable - bronze coins inlaid with gold.

rary inscription, painted a picture of the Virgin Child on a panel, now in the monastery of Däga Estifanos in Lake Tana, during the reign of Emperor Zär'ä Ya'qob (1434-1468). Mention is later made, by Alvares, in the following century, of two artists. One, a monk at Mäkäna Sellasé, had taught himself to paint, and was responsible for decorating the wall over the principal door with "two figures of Our Lady very well done, and two angels of the same sort, all done with the paint brush". The other artist was a Venetian, Nicolo Brancaleone, whom Alvares described as "a very honourable person and a great gentleman, though a painter". Brancaleone, he adds, placed his name on his pictures - a practice then otherwise unknown in Ethiopia - and was popularly known as "Marcoreos". Confirmation of both statements was provided a decade or so ago by the discovery by an English art historian, Diana Spencer, of some of Brancaleone's pictures, which sure enough bore the signature *Marqoréwos Färänji*.[5]

2.6 Craftsmanship for the Court and Army

The existence of highly evolved State, with a large court and huge armies, often numbering tens or hundreds of thousands of men, as well as numerous camp-followers, constituted another major focus of demand for handicrafts. The court, with all its pomp and ceremony, was in constant need of many kinds of luxury goods, most of them made from gold or silver, or else from costly cloth or other imported materials. Such items of ostentation included gold, silver and gilt crowns, costly mantles and other articles of apparel made of brocade, silk shirts, and tents, besides decorated swords, spears and shields, ornamented saddles and finely wrought bridles and riding equipment. Though most soldiers brought their own weapons, clothes and supplies with them, the congregation of vast numbers of warriors also generated a considerable demand for spears and shields, which were often lost or broken and had to be replaced. Soldiers and their families, who tended to be better-off, and to dress better, than the populace at large, also exercised a significant demand for items of clothing of all kinds. At the town of Bärära, one of the early sixteenth century royal capital in Säwa, for example Emperor Lebnä Dengel employed a number of tailors, for the

5. Crawford (1958) 143; Chojnacki (1983) 21, 419 and fig. 206; Beckingham and Huntingford (1961) I, 279, 332, II 340, 357; Spencer (1974) 201-20.

most part Muslims, who also made covering for the royal horses.[6]

2.7 Craftsmen in moving capitals

Throughout much of the medieval period the country, as we have seen, had no fixed capital. The monarch, his courtiers and soldiers were constantly on the march from one camp, or "moving capital" to another. Craftsmen, like other camp followers, accompanied the court and army on their peregrinations. Alvares, who witnessed this, notes that "all who practise the smith's craft" had land allocated to them at camp. Their area was situated on either side of the market square, and took up "a very big space" like a "large village".[7]

Craftsmen were in such demand that Emperor Lebnä Dengel (and many of his successors) took a keen interest in the acquiring them from abroad. He wrote for example to King Joao of Portugal in the 1520s "as brother does to brother", saying:

> "I want you to send me men, artificers, to make images, and printed books, and swords and arms for all sorts of fighting; and also masons and carpenters, and men who can make medicines, and physicians, and surgeons to cure illnesses; also artificers to beat our gold and sell it, and goldsmiths and silversmiths, and men who know how to extract gold and silver and also copper from the veins, and men who can make sheet lead earthenware; and craftsmen of any trades which are necessary in these kingdoms, also gunsmiths".[8]

Some efforts was also made at about the same time to dispatch a few Ethiopians abroad for training. An ambassador from Lebnä Dengel was sent to Goa with four slaves, two to be taught to be painters, and two others to be trumpeters - but whether they ever returned to their native country is not recorded.[9]

2.8 Artists in royal employ

Though Ethiopian artists were almost invariably churchmen some left the Church and entered the Emperor's service, as did most of the

6. Beckingham and Huntingford (1961) I, 302-5, 325-6; Basset (1882) 245.
7. Beckingham and Huntingford (1961) II, 443.
8. Beckingham and Huntingford (1961) II, 505.
9. Beckingham and Huntingford (1961) II, 483-4.

few foreign artists who settled in the country. The first of whom there is record was a *Färänj*, or Frank, who, according to the chronicles, painted an unorthodox picture of the Virgin and Child, for Emperor Bä'edä Maryam (1468-1478), thereby evoking some popular anger. In the following century a Venetian artist, Hieronimo Bicini, was reported by his compatriot Zorzi to have acted as "secretary" to Emperor Lebnä Dengel for whom he painted "Many things". This artist, whose work appears to be no longer extant, was in possession of a large estate in Säwa, and often resided with the monarch, and is said to have played chess with him "night and day".[10]

3. The Gondär period

3.1 Pre-Gondärine building activity

The later years of the seventeenth century and the beginning of the eighteenth witnessed a considerable amount of building activity at a succession of short-lived capitals: Emfraz (also known as Guba'é or Guzara), 'Ayba, Wändegé, Qoqa, Gorgora, Dänqäz and Azäzo. Some of this construction work, at least as far as concerned palace-building, was carried out under the direction of foreigners - though the labour force must have been always primarily Ethiopian. Emperor Susneyos's palace at Gorgora was built under the inspiration, and supervision, of the Spanish Jesuit Pero Paes, who, according to Belthazar Telles, "gave Directions for making Hammers, Mallets, Chizzels and all other Necessary Tools, handling them himself, and teaching the new workmen to dig, hew, and square the Stones for the Fabrick". He is said to have likewise taught "all the Joyners, and Carpenters". The palace at Dänqäz, on the other hand, was erected for Susneyos, his chronicle states, by a Banyan, i.e. Indian, called 'Abdäl Kerim, who was also responsible for erecting the first stone bridge over the Blue Nile. The head workman for the palace was an Egyptian called Sädäqä Nesrani who was assisted by artisans from Egypt and "Rome", i.e. Constantinople, a name also sometimes applied to Greece. Many of the building workers, according to Almeida, were, however, Indian stone masons brought over by Jesuits. Another development of this period was the introduction - or more probably in fact the re-introduction - of mortar,

10. Basset (1882) 96; Crawford (1958) 162-3, 166-9.

around 1621, which took place when "an intelligent person from India discovered a kind of fine, light and as it were worm-eaten stone", similar to that used for the manufacture of lime in Gujarat. One - or more - of these craftsmen may later have been engaged in the construction of the great palace of Emperor Fasilädäs at Gondär, for the Yamani ambassador al-Haymi, who inspected it in 1648, reported that its "master-builder" had been an Indian.[11]

3.2 The development of Gondär

The founding in 1636 of Gondär, the first long established capital for several hundred years, led to an immense increase in the demand for handicrafts in and around the city. Many skilled workers therefore emerged, or were attracted from the neighbouring countryside, or from lands further afield.

The craftsmen of Gondär and its environs included a sizeable number of Fälasa whom Bruce later described, doubtless with his customary exaggeration, as "the only potters and masons" in the country. Fälasa potters, he claims, "greatly excelled", and "in general" lived "better than the other Abyssinians", who, however, attributed this to the former's "skill in magic" rather than to their "superior industry". Fälasas were also to the fore as thatchers, and held an "exclusive" position in this profession. One of the roofs constructed by them was the split-cane ceiling of the palace of Emperor Iyasu II (1730-1755) which, the Scotsman asserts, was "gaier than it was possible to conceive". Some Fälasa craftsmen lived, like the Muslims, lived in a special quarter of the city, while others occupied several nearby "small villages", which were inhabited almost entirely by "masons and thatchers". Some of these villages were "situated out of the reach of marching armies", for they would otherwise have been "constantly raided, partly from hatred, and partly from hopes of finding money".

Though the first of the Gondärine castles was said, as we have seen, to have been designed by a master craftsman from India, an Ethiopian builder soon came prominently to the fore. He was a certain Wäldä Giyorgis who erected palaces for both Emperor Yohannes I and his son Iyasu I. He is described in one chronicles as a man "endowed

11. Pankhurst (1982) 94-112; Tellez (1710) 206; Esteves Pereira (1900) 224-5; Beckingham and Huntingford (1954) 188; Peiser (1898) 37-9.

with intelligence", and in another as "able, intelligent, and of good renown". Craftwork at the Gondär palaces was also carried out, according to Bruce, by a number of Greek artisans, whose sons were later involved in decorating the residence of Iyasu II. Its ornamentation included mirrors from Venice set in gilt frames, and wooden casings covered with ivory.

The existence of the court, and army, at and around Gondär, also led to the emergence of a class of tent-makers. Much of their work was carried out at Emfraz, south-east of the capital, where "a number of Mahometan tent-makers lived". Their responsibilities included loading the Emperor's tents and baggage, which they did with "surprising expedition", but though they conducted the mules and baggage to war they never participated in actual fighting.

The Gondär period also witnessed a resurgence of Ethiopian painting, in both manuscript illustration and church decoration, and constituted a "remarkable" and "new" era, as art historian Stanislaw Chojnacki has argued, of more "naturalistic" compositions in which many local motifs and scenes were introduced into religious themes. Royal and princely patronage of art at this time also found expression in the practice whereby a painter would place beneath his work, usually of the Virgin Mary of Crucifixion, a representation of the ruler or other noble who had commissioned the work. This custom, which began during the time of Emperor Fasilädäs, flourished in the eighteenth century, and resulted in the painting of numerous pictures of the redoubtable Empress Mentewwab and her son Iyasu II. Though Ethiopian artists generally speaking did not sign their paintings, some working on manuscripts in scriptoria of the Gondär period placed their names temporarily on unfinished sketches, probably as an indication as to who was responsible for their completion. Several such works were for one reason or another left unfinished, with the result that the identities of four eighteenth century artists, by name Sirak, Asab Rufa'él Fanta, Wäsän, and Hezekiél, are preserved for posterity.

Though craftwork in the countryside probably remained largely unchanged, the Gondär period was thus a time when artisans and artists increased both in numbers and skill, particularly in and around the capital and several other urban or religious centres. This development contributed to a great flourishing of the country's culture.[12]

12. Bruce (1790) II, 633-4, III, 123, 190, 195, 376-7, 380; Guidi (1903) 60, (1912) 89; Combes and Tamisier (1838) IV, 84; Chojnacki (1983) 242, 246-7, (1964) 10-1; Pankhurst (1984) 107-12. One of many great churches built in the Gondär area this time was

3.3 Handicrafts in Säwa

Gondär seems to have served as a point of diffusion for handicraft work in other parts of the country. Tradition, embodied in the writings of the modern Ethiopian historian Asmä Giyorgis, suggests that craftsmen from the metropolis made their way to Säwa in the eighteenth century, during the reign of the local ruler Abbeyyé who is said to have "received them well". These workers included "many" Fälasa who entered his service and whom he treated "respectfully". They made him axes and chisels with which the people of Säwa cleared the forest of Yefat, as well as sickles, hoes and ploughshares which enabled them to cultivate the province more efficiently.[13]

4. The Nineteenth Century

The more abundant documentation of the early nineteenth century provides many glimpses of Ethiopian handicraft workers - and their work.

4.1 Blacksmiths and the iron trade

Blacksmiths were responsible throughout the nineteenth century for the manufacture in many parts of the country of a wide variety of articles of considerable economic and military importance. These included ploughshares and the iron parts of pick-axes, sickles and other agricultural implements, as well as knives and razors, spear-heads, daggers, swords, bullets and spare parts for rifles, besides tent-pegs, hammers, pincers, drills, nails, hatchets, saws and files, steels for striking fire, pans on which to cook bread, bits and stirrups for horses and mules, chains and rings, tweezers, scissors and needles.

Smelting was carried out over a charcoal fire with the aid of one or more pairs of home-made bellows fashioned from sheep or goat skins. Pearce, describing an operation in which several blacksmiths were involved, states that the latter would throw the ore into a large charcoal

that of Däbrä Sähay at Qwesqwam, founded by Empress Mentewwab, whose gifts of manuscripts, church paraphernalia - and other treasures - were recorded in a contemporary chronicle: Guidi (1912) 101-8.

13. Bairu Tafla (1987) 513.

fire which they then blew with several bellows, each man working two such instruments, one in each hand. When the metal was completely hot it was "taken out of the fire with large awkward pincers, or thongs, and held by one man upon a large flat stone, while two or three others, with large, round or rather oval stones, strike it in turn, with all their might with both hands". This action was repeated until the metal was "free from all earthy matters, and fit to use".

The ore having thus been produced, a blacksmith wishing for example to make a sword, would obtain a piece or iron of convenient size, whereupon, Combes and Tamisier explain, he would heat and beat it until he had given it the requisite shape. The blade was then worked over with a file, after which it was again put in the fire and tempered, by thrusting it into water, and then finally sharpened on a stone. Spearheads and swords were produced in more or less the same manner, while needles were made by beating small pieces of metal into thin strips, which were they were filed sharp at the ends, and pierced with a sharp-pointed piece of metal to produce the eye.

Though most blacksmiths made exclusive use of simple, locally made tools, a few had access to foreign files, which as Combes and Tamisier noted in the 1830's, were then being imported via Massawa. A decade or so later the French Scientific Mission reported that though ordinary stones often served as an anvil, blacksmiths also sometimes made use of specially-made tools, such as hammers, pincers, chisels, files and shears. Such implements, according to a subsequent report by Girard, were imported from Europe.[14]

4.2 Blacksmiths, Fälasa and belief in Buda

Many blacksmiths in the nineteenth century, as in the past, were Fälasa, as noted by both Dufton and Stern. The former recalls that Fälasa craftsmen who were often accused of being *budas*, or sorcerers.

The old idea that blacksmiths possessed supernatural powers found expression in the widespread conviction that they could turn themselves into hyenas at night. Salt, the first foreign traveller to notice this belief, reported in 1810 that "a very strange" superstition, "inconceivably strong throughout the country", held that "all workers in iron"

14. Pearce (1831) II, 202-3; Combes and Tamisier (1838) IV, 67-72; Rüppell (1838-49) II, 225; Rochet d'Héricourt (1841) 297; Lefebvre (1845-8) III, 245-6; Girard (1873) 192.

were regarded as *buda*, with the power of transforming themselves into hyenas, "capable of preying upon human flesh". The prevalence of this belief was confirmed by Pearce who noted that blacksmiths were thought, "even by their nearest neighbours", to be capable of turning themselves into hyenas or other beasts, and that their "evil eye" was held responsible for "all convulsions and hysteric disorders", which were far from uncommon. The "greater part" of those believed possessed by blacksmiths' evil spirits, according to Parkyns, were women who had despised a *buda*'s proffered love. The result of these beliefs was that the blacksmiths of Ethiopia, like the alchemists of medieval Europe, were "the terror of the countryside", as Combes and Tamisier aver. "Few people", according to Parkyns, would therefore "venture to molest or offend" any worker in iron. Blacksmiths, though feared, and, according to Combes and Tamisier, relatively well paid, suffered greatly. They were "not allowed the privilege of being in common society", Pearce states, and were even denied Christian burial, while Parkyns asserts that their trade, which was hereditary, was "considered as more or less disgraceful".[15]

Blacksmiths lived moreover in constant danger of persecution. The story is told of an iron-worker of Encätkab in Sämén who had gained his living by making spear-heads and repairing rifles, but, having been accused of having relations with the Devil, was obliged to flee to Gondär. There too he was charged with sorcery, and forced to make his way to Tegré, Bägémder, Amhara and Gojjam, before eventually returning to Bägémder, where he sought refuge in a cave and lived as a beggar. Interviewed by Combes and Tamisier, he is quoted as exclaiming:

"Oh, if instead of being a blacksmith I had worked the land or adopted the occupation of a soldier, I would not have had to exile myself. I would still be in my native country, in the midst of a family which loved me; and here I live alone in a cave which wild animals will perhaps one day dispute with me. Oh! why was I born a blacksmith? My skill in that art made my entire life miserable".[16]

Other cases of victimisation were reported by Parkyns who states that it was not unusual for friends and relatives of a sick person "to-

15. Dufton (1867) 165; Stern (1862) 193; Salt (1814) 426-7; Pearce (1831) II, 286, 339-42; Parkyns (1853) II, 144-5, 160-2; Combes and Tamisier (1838) IV, 72, 76-7; Lefebvre (1845-8) III, 245.

16. Combes and Tamisier (1838) IV, 73-6.

procure charms with which to force the spirit by which he was supposedly possessed to declare his name and residence". They would then go in a body and apprehend a blacksmith who would be ordered to "quit his victim" - and to add force to this injunction the party would point spears at his breast and threaten him with death. Such threats were by no means empty. A blacksmith accused by a soldier of being responsible for his illness was seized by order of Däjazmac Webé, and, after some investigation, "condemned, with part of his family, to be put to death". Prejudices against blacksmiths, though general, varied in intensity from region to region. They were thus more intense in Tegré and Amhara, Combes and Tamisier assert, than in Säwa. Even in the latter province, however, it was not unusual for blacksmiths to live in isolated communities. There were two villages of blacksmiths, Morat and Zalla, in the vicinity of Fecce, where the inhabitants, as Soleillet later learnt, lived entirely apart from the population at large.

The prejudice against blacksmiths, it is interesting to note, did not, however, extend to armourers, who, the French Scientific Mission records, were never accused of sorcery. The charge was moreover confined to Ethiopian blacksmiths, and, Combes and Tamisier claim, was never directed against European ones.[17]

4.3 Weavers

Weavers, who likewise constituted a class apart, also tended to belong to a minority group, for most either Fälasa or Muslim. Fälasa involvement in weaving was reported by Flad who asserts that this trade in the north-west was "entirely confined" to members of the community except at Gondär where it was mainly carried out by Muslims. Fälasa weavers were predominant in Bägémder, where the missionary Stern, describing the village of "Atshergee", recalls that the Fälasas' looms, which were the clumsiest imaginable, stood under sheds at the entrance of the village, and formed both the means of their subsistence, and a slight barricade against the inroads of wild beasts".

The majority of weavers in most of the north were, however, Muslims who were particularly important at Gondär, as well as throughout Tegré. Testimony to this is provided by several observers. Rüppell for

17. Parkyns (1853) II, 158, 160; Combes and Tamisier (1838) IV, 77; Lefebvre (1845-8) III, 246; Soleillet (1886) 288.

example noted that weaving was "entirely" done by Muslims, and Combes and Tamisier that the latter enjoyed "almost the monopoly" in the field, while Dufton later remarked that "all the manufacturers of cotton cloths" were followers of the Prophet.

Most weavers made use, as Parkyns says, of "a very rough kind of handloom, placed over a hole in the ground", but a few seem to have had equipment obtained from Arabia. The more sophisticated frames, Combes and Tamisier assert, were probably imported by pilgrims of Därita or Aleyu Amba returning from Mecca.[18]

4.4 The traditional loom

The typical Ethiopian loom was simple, but efficient. It was made by striking two stakes perhaps as high as a man into the ground a metre or so apart, and keeping them firm by the attachment of a third piece of wood or pole tied horizontally to the top of them. Towards each end of the latter pole a string made of wool was lowered to subtend a thin piece of wood perhaps a span long which served as a kind of balance from each end of which two other strings held the reeds or combs. These latter were made of a couple of long, thin, horizontal pieces of wood or cane joined together by innumerable strings between which the weft passed. From each reed, a string or thong led down to a kind of stirrup made of a single flat piece of wood upon which the weaver's foot was placed, a peddling motion of his feet causing the two reeds to rise and fall alternately. Also subtended from the horizontal pole was a somewhat stronger reed made of two long horizontal beams joined at frequent intervals by vertical bars or thin twig-like pieces of wood or cane. This latter reed was used to strike, on beat, the weft threads.

Perhaps a metre behind this equipment a couple of smaller vertical stakes were erected, also about a metre and a half apart, upon which would be fixed a second horizontal pole. This latter acted as a roller on which the woven thread was gradually wound as the work proceeded. To prevent it from unwinding, the upright pole nearest the weaver's right hand was shaped to fit into one of a series of holes cut in the corresponding end of the roller. As more and more cloth was woven, the weaver would wind up the roller, and secure its immobility

18. Flad (1869) 24-5; Stern (1862) 193, 267-8; Parkyns (1853) II, 41; Rüppell (1838-40) I, 367; Combes and Tamisier (1838) IV, 66; Dufton (1867) 92; Lefebvre (1845-8) III, 244-5.

by means of the locking device.

Three other stakes were also stuck in the ground to hold the warp. The largest and strongest was placed several metres in front of the loom, a second, considerably smaller, stake some metres to its right, and the third, usually smaller again, immediately beside the loom on the weaver's right. The warp thread originated near the smallest stake to which it was tied and every now and then released by the weaver. The thread, which was so placed as to form something of a circle, then passed round the two remaining stakes before entering the loom on the side opposite the weaver. By this simple expedient the warp was kept tight and prevented from sagging.

The shuttle, which was about a span long, was made of wood and shaped like a hollow canoe. In it the bobbin - a simple piece of bamboo - was fitted horizontally by means of a thin reed which ran through it to prevent it from falling out, while at the same time allowing it to rotate and the thread to unwind. From the bobbin the thread passed out of the shuttle by means of a small hole cut in one of its sides.

The weaver, who sat on the ground with his feet in a hole perhaps two feet deep, used both his feet and his hands. By a peddling motion of his feet he alternately raised and lowered the two reeds, thus shedding the warp threads, while with his hands he threw the shuttle from side to side, beat up the weft with the third reed, and from time to time released some of the warp at his right and rolled the woven material on the roller immediatly in front of him. These operations were invariably carried out in the open air a few yards from the weaver's house, and a nightfall when the work come to an end the weaver took up his stakes, and rolled the warp around them. The whole contraption would then be replaced in its former position at daybreak for further labour.[19]

4.5 Potters

Potters, like blacksmiths and weavers, had, as we have seen, long constituted an isolated, and largely despised, class which consisted of both women and men. Like the blacksmiths and weavers again, a considerable proportion of potters in the north-west were Fälasas, as Rüppell records.[20] Stern, who described those he saw as "industrious",

19. Combes and Tamisier (1838) IV, 65-6; Lefebvre (1845-8) III, 244-5; Ferret and Galinier (1847-8) II, 394-5; Rochet d'Héricourt (1841) 298-9; Girard (1873) 243-4.
20. Rüppell (1838-40) II, 181.

reports visiting two villages of Fälasa potters, at Gorgora Eyla and Atshergee. In the former, he recalls:

"Men and women ... were busy moulding pots and pans and other useful domestic utensils. Lathe and moulds they do not require to give shape to their manufacture, necessity having taught them to dispense with every implement in carrying on their craft. Their dexterous fingers give form to the clay, and the sun and a good fire dry and temper it afterwards. The articles they make are very strong, and this, as the poor people naïvely told me, is a serious obstacle to their industry".[21]

Earthenware was used for the manufacture of all sorts of cooking and food receptacles, such as bowls, dishes, pitchers and jars of many shapes and sizes, as well as the *gullelat*, or clay centre-piece, often placed at the apex of churches or thatched houses. Such artifacts were usually red or black, the colour depending on the method of firing.

Most potters, a majority of whom were probably women, worked only with their hands, and had no equipment whatsoever, though a few of the more sophisticated, according to Girard, used a horizontal potter's wheel, as well as a spatula or scoop.[22]

4.6 Tanners

Tanning was widely practised, and, since it did not require capital equipment, was largely carried out - with considerable expertise - by the ordinary peasantry rather than by specialist craftsmen. "All the Abysinians", Combes and Tamisier claims, thus knew how to make skin containers. There were, however, also a number of professional curriers, many of whom were Muslims as Rüppell notes. These and other turned out a wide range of goods, among them saddles, shields, scabbards, cartridge and other belts, tents, thongs, straps, bags and pouches, sleeping skins, articles of clothing, and parchment.[23]

21. Stern (1862) 265. See also 193, 268, and Lefebvre (1845-8) III, 249.
22. Combes and Tamisier (1838) IV, 82; Girard (1873) 243.
23. Combes and Tamisier (1838) IV, 77-8; Rüppell (1838-40) I, 367; Lefebvre (1845-8) III, 242.

Flying and tanning were carried out with considerable expertise. The hide of a goat would frequently be separated from the carcass with only the head removed. The first cut, according to Johnston, who had many opportunities to witness the work, would be a circular incision around both haunches and around the tail. The hide would then be stripped over the thighs, two smaller incisions being made around the middle joint of the hind legs to enable them to be drawn out. A stick was next placed to extend these extremities, and by it the whole carcass was suspended from the branch of a tree; by some easy pulls around the body, the skin was then gradually withdrawn over the forelegs which had earlier been cut around the knees to allow them to be taken out. After this, the head was removed, and the skin pulled inside out over where it had been. The inside of the skin was then rubbed all over with a stone to remove any pieces of flesh which might remain.

The next stage depended on whether it was desired to remove or retain the hairs on the skin. In the manufacture of hides, i.e. skins without hair, the flayed skin was usually stretched in the sun to dry, this being done, according to Parkyns, by nicking pegs through them into the ground. Dried in this manner the skin became "hard and stiff," but was kept "in a dry place for a long time". To soften the texture, a mixture of clotted milk and linseed flour was spread on it, and allowed to soak in for a night. The skin was then taken, folded, fur outside, and trampled on and worked by the feet for a considerable time every morning until it became "as soft as a piece of rag." After each "pedipulation" it was covered with fresh grass pressed down on it by heavy stones, to prevent its drying till the process was completed. After this operation had been continued for some days, the number of which depended on the quality of the skin, the fur was easily cleaned of whatever dirt might have become attached to it, and the membrane of the skin was then peeled off, leaving it "quite white" and as soft "as chamois leather."

Skin bags were made in a somewhat different manner. The skins, Johnston states, were made into sacks by the apertures around the neck and legs being secured by a double fold of skin, sewed together by means of a "slender but very tough thong" which rendered the seams "quite air-tight", and the aperture around the haunches was likewise "gathered together". The skin bag was then "distended with air", and left for days until "slight putrefaction" commenced, at which stage rubbing with a rough stone soon cleaned its surface of the hair. After this

considerable amount of labour was required, for at least one day, to soften the distended skin by beating it with heavy sticks, or trampling upon it for hours together, the labourer supporting himself by clinging to the bough of an overhead tree or holding on to a wall. In this way, whilst drying, the skin was "prevented from getting stiff", and, further to ensure this, it was "frequently rubbed with small quantities of butter". When there was "no chance of the skin becoming hard and easily broken", the hole was opened to allow the air to escape. A "very soft flaccid leather bag" was thus produced, which, for several ensuing days, afforded an amusement to the owner when otherwise unoccupied by "rubbing it over with his hands". Such bags were used as containers for "almost all the produce of the fields", including cotton, grain and flour, which were kept or transported in them.

Tanning was also carried out, according to Johnston, by extending the skin loosely upon four sticks which raised it about a foot from the ground, thus forming a kind of trough into which raised it about a foot from the ground, thus forming a kind of trough into which was strewed the pounded bark of the *kantuffa* acacia (*Petrobolium lacerans*). The hollow was then filled with cold water, which in the course of a few days became a strong red infusion with which the whole surface was frequently washed, after which the leather was trodden on until it was soft. Another method, as described by the French Scientific Mission and others, was to soak the skins for six to eight days in a pot containing a mixture of cattle urine and the crushed astringent fruit of the *imboy* (*Solanum marginatum*), after which they might be rubbed with the juice of lemons or washed in running water, before being stretched on stakes to dry, or covered with some milk, and again rendered supple by treading.

In the preparation of skins, where it was desired to retain the hair, as in the case of lion, leopard, fox, sheep or other pelts, the fur was placed on stakes, hair downwards, and left to dry in the sun for one or two days. The pelt, as the Italian geographer Antonio Cecchi later noted, was then covered with butter, milk, or linseed oil paste, and on the third day would be trodden over to render it supple.

Fine skins were produced in many parts of the country, notably at Gondär, as well Morät in Säwa, whose inhabitants, according to Krapf, also particularly "skillful" in this field.[24]

24. Johnston (1844) II, 369-73; Parkyns (1853) II, 13-4; Lefebvre (1845-8) III, 240-4; Isenberg and Krapf (1843) 255-6; Combes and Tamisier (1838) II, 46, IV, 77; Rüppell

Craftsmen using the simplest of tools, mainly axes and hatchets, fashioned a considerable variety of household and other artifacts. These included doors, door-frames and other parts of the house, mortars for crushing grain, and items of furniture, such as beds, chairs and headrests, as well as the wooden parts of plough and other agricultural tools and pears. Most of these articles were crudely produced by peasants with only minimal experience of woodwork, but there were also more skilled, and specialised, craftsmen who produced objects of greater sophistication, including rifle-butts.

Carpenters would begin by splitting trees with wedges, after which, the French Scientific Mission explains, they would "very cleverly" plane the pieces into boards with the aid of an adze. Though rustic labourers had virtually no equipment a few of the best-equipped carpenters in the more important towns used a number of important tools, including adzes, chisels and saws for cutting, gimlets and wimbles for drilling holes, and the compass and carpenter's line for making accurate measurements. The use of such equipment was later confirmed by Girard who noted that some of the most fortunate craftsmen had carpenters' lines, braces and gimlets. Planes were also used by workers making butts for rifles and pistols, as well as relatively sophisticated articles of furniture.

House-building in some parts of the north-west was carried out by Fälasas, some of whom are said to have also repaired the mausoleum of the *Abuns*, or heads of the Ethiopian Church, at Jenda.

The construction of traditional houses was far from costly. The Englishman Coffin for instance built a house for no more than eighty Maria Theresa thalers. The break-down was:

Materials:	
15,000 canes for covering	10 thalers
500 small spurs of wood	10 thalers
Large pieces of wood for doorways, etc.	20 thalers
1,600 loads of hay, carried by children	10 thalers
	50 thalers

(1838-40) I, 367, II, 180-1; Cecchi (1885-7) I, 292-3. For examples of leatherware see Duchesne-Fournet (1901-3) II, Plates XIV and XXI.

Labour:	
4 builders' work for 12 days	8 thalers
One thatcher	4 thalers
Mixing of clay by men, women and children, and its carriage and that of stones to builders	8 thalers
	30 thalers
Total:	80 thalers[25]

4.9 Basket-making and carpet-weaving

Basket-making, which needed skill, but no equipment, was carried out exclusively by women. This work was of considerable importance, for basketry was widely used, in the manufacture of containers for all kinds of foods, both solid and liquid, as well as both the *mäsob*, or basket-table, and the parasol. Basketware was sometimes rendered watertight, for the containing of liquids, by the application of the juice of the *qwalqwal* (*Candalabra euphorbia*).

Several rural areas of high elevation where sheep and goats flourished, were noted for their use of wool. The population of the Sämén mountains for example included a number of weavers of small carpets which, according to Salt, were "much superior" to what might have been expected of rural handicraft work. Among the people of highland Mäns in Säwa there were likewise many carpet-makers, who worked with goats' hair (and wool?), as well as tent-makers who made use of thick black woollen cloth.[26]

4.10 The Craftsmen of Gondär

Gondär, in the early nineteenth century, was still, as for the previous two hundred years, the country's principal handicraft centre. It was "the

25. Combes and Tamisier (1838) IV, 82; Lefebvre (1845-8) III, 246-7; Stern (1862) 254-5; Girard (1873) 199; Pearce (1831) I, 243-4.

26. Combes and Tamisier (1838) IV, 82-3; Parkyns (1853) I, 138; Salt (1814) 426; Valentia (1809) III, 162; Dufton (1867) 165; Stern (1862) 254-5; Isenberg and Krapf (1843) 255-6. For examples of basketry see Duchesne-Fournet (1901-3) II, Plates XIX and XX.

only town", Combes and Tamisier declare, "where one finds ... the professions of the tailor, miller, baker and a mass of others unknown in Abyssinia". Other occupations represented in the city, according to Arnauld d'Abbadie, included weavers, curriers, leather-workers, harness-makers, blacksmiths and forgers of spears, swords and knives, saddle-makers and sandal-makers, parchment-makers, book-binders, scribes and copyist, goldsmiths and copper-workers, embroiders of women's shirts, priests' clothes and saddle cloths, makers of shields, and carpenters, turners who fitted wood in rifles, and makers of drinking vessels. Most of these craftsmen, as far as we can tell, were male, but the city's population also included numerous women who specialised in basketry and pottery.

The handicrafts of Gondär, in its hey-day, included some of the finest possible description, but, with the city's decline, deteriorated markedly in quality. By the 1830's the capital's silversmiths, who had once fashioned priceless crowns, were reduced, Rüppell states, to making neck-chains and finger-rings, and shamelessly adulterated their gold and silver with zinc and tin. Some blacksmiths still turned out iron bullets (which were preferred to lead as they could penetrate the stoutest shield whereas the latter only flattened themselves and bounced off), but armourers often soldered over holes in rifles so badly that if a weapon was over-charged the metal often sprayed out dangerously. The city's large tanned hides, which sold for a third of a Maria Theresa thaler each, nonetheless won the German traveller's unqualified praise, and were said by Combes and Tamisier to be demanded even by the Arabs. The carpets of Gondär were likewise highly regarded.

Other notable handicrafts were produced by jewellers, who, according to the French Scientific Mission, worked in gold, silver, tin, zinc and copper, as well as by horn-workers who made rhinoceros-horn sword-handles, and skilfully wrought goblets from ox horn. The city's tailors, a few of whom by the 1840's were using tools imported from Europe, likewise made a variety of articles, including ceremonial shirts and cloaks for the chiefs, ornate clothes for the higher clergy, fine burnooses for the well-to-do, and richly embroidered dresses for noblewomen, as well as colourful saddle-cloths for the horses and mules of the aristocracy. The city's shoemakers, who made skilful use of knives and awls, supplied those comfortably off with slippers unknown in the country at large.

The masons of Gondär were also highly regarded though they had, according to the French Scientific Mission, little equipment beyond a plumb-line. The city's builders were, nevertheless, so well regarded that

King Sahlä Selassé of Säwa, when erecting the church of Mädhané 'Aläm at Ankobär, sent for carpenters from Gondär. Half a century later a master carpenter from the city was likewise to go to Säwa with nine assistants who were employed by Menilek in constructing his palace at Entotto.

The carpenters of Gondär, who cut down trees and squared timber into planks, seem to have been relatively well equipped. They possessed, according to the French Scientific Mission, such tools as saws, adzes, gimlets, braces and compasses. Veritable artists, they turned out chairs, beds, rifle-buts, and delicate objects of wood-work, some of the best of which were fashioned from the *kosso* tree (*Hagenia abyssinica*). Considerable use of wood was also made by another of the city's specialised workers - the charcoal-makers.

Gondär, as a religious as well as a political and commercial centre, also had many skilled artisans catering for the needs of the Church, such as calligraphers, artists and book-binders. Rüppell, who praised their craftsmanship, exclaimed that one could only wonder at the elegance of the tooled leather binding of Gondäri manuscripts. This work, acording to the French Scientific Mission, was normally carried out by *däbtäras*, or lay clergy. Other craftsmen produced fine, and often intricate, church metalwork, mainly of silver, copper and zinc.

One other lesser-known category of craftsmen at Gondär deserves to be mentioned: the makers of small mirrors who fashioned these highly prized artifacts from glass and mercury which were imported separately by way of Massawa.

Much of the handicraft work of the city and its environs was carried out, as in the surrounding countryside, by Fälasas and Muslims. The Fälasas, some of whom were settled in a village by the Qäha river, played a major role in construction. Their chief employment, according to Salt, consisted in "building and thatching houses", and their skill in these fields was "most to be admired". Fälasa house-builders worked, according to Coffin, for one Maria Theresa thaler per six-day week, while a thatcher would complete a roof for a piece-rate of four thalers. The extent of Fälasa building activity was also emphasised by subsequent observers, such as Plowden who termed them "the best masons in the country", and Dufton who later went so far as to affirm that "all the builders and the artisans" were Fälasa. The Fälasas of Gondär, as elsewhere, were likewise prominent as blacksmiths, and were so important as potters that Rüppell went so far as to assert that they were responsible for all the city's potting.

The Muslims were also much involved in craftwork. They provided

most of the city's weavers, and were also active in embroidering women's shirts, as well as in making caps for the Muslim population.

Gondär also had a community of foreign craftsmen, consisting mainly of Egyptians and Greeks, some were involved, according to Rüppell, in the repair of rifles. Because of the difficulty of obtaining new weapons their services were always in great demand. The city was also renowned for its parchments, carpets and tanned hides.

Some of the neighbouring Qemant, who lived outside the city to the west, were also to the fore as craftsmen. They supplied the capital with most of its wood, and were said by Plowden to have been "skilful carpenters". Another group of craftsmen catering for the needs of the old metropolis were the stone-workers, many of whom lived on the island of Däq in Lake Tana, and produced well-fashioned stone grinding-mills.

The civil wars of the early nineteenth century, and the subsequent looting of the city by Emperor Téwodros in the 1860's, led to the decline of craftsmanship in and around Gondär. Flad reported in 1869 that "a great number" of Fälasas had fled to Bägémder, Bäläsa and Lasta. Some had been "received by the King's command", and were "employed in his work", while "others earned a livelihood by their trades" - presumably, as in the past, mainly as blacksmiths, weavers, potters and house-builders.[27]

4.11 Other urban and religious centres

Though Gondär was in its day the country's most populous urban centre, and hence the location of the largest number of craftsmen, skilled workers also congregated at other provincial centres where their services were in demand by rulers and churchmen, as well as by the population at large. The majority of such handicraft-workers lived, according to Pearce, "most undisturbed" lives. Even if blacksmiths suffered, as we have seen, from many trials and tribulations, most other craftsmen were respected, and "considered the best Christians". Those

27. Combes and Tamisier (1838) IV, 85-6; Arnauld d'Abbadie (1868) 162, 164-5; Rüppell (1838-40) I, 367, II, 179-82; Ferret and Galinier (1847-8) II, 431; Lefebvre (1845-8) II, Part II, 45, III, 244, 246-9; Guèbrè Sellassié (1930-1) I, 72-3, 209-11; Valentia (1809) III, 67, 161; Salt (1814) 426; Pearce (1831) I, 244; GB House of Commons (1868) 110; Dufton (1867) 92; Krapf (1867) 461; Flad (1869) 10-1. The high status of the carpenters of Gondär is apparent from an engraving of one of them, Gäbrä Selassé, as depicted in Lefebvre's *Atlas*, Plate 30.

who worked in gold, silver, or brass, or who followed the carpenters' trade, were in particular "esteemed as persons of rank". Many craftsmen, as in the old days of moving capitals, travelled extensively. Whenever the desire seized them they would thus leave their abode, and establish themselves, Arnauld d'Abbadie says, in another town. They might, alternatively, attach themselves to one of the great lords, and journey over the country in the wake of an itinerant army.[28]

4.12 Aksum

Aksum, the religious capital of Ethiopian Christendom and site of the great church of St.Mary of Seyon, had numerous skilled craftsmen in the service of the Church. Many of the inhabitants of the city and its neighbourhood were "celebrated", Salt records, in the preparation and use of parchment, as was confirmed by such later writers as Combes and Tamisier who claim that Aksum parchment was the most highly regarded in the entire country.

Ecclesiastical craftwork was also produced at many smaller, lesser-known monasteries, for example in the early nineteenth century at Myolones in Säwa, where the monks, according to Johnston, worked as blacksmiths while the nuns made earthenware vessels.[29]

4.13 Adwa

Adwa, at this time the principal political and commercial centre of the north, was a notable handicraft centre renowned for a wide range of goods. The "chief production", according to Salt, was a cloth, the manufacture of which was so considerable that it created a "great demand for cotton" throughout the neighbouring lowlands. The coarse cloth of Adwa, which circulated throughout much of Tegré instead of money, was "considered unrivalled", while the finer weaves were thought "little inferior" to those of Gondär. Some, "worn by the principal men of the country", took several months to make, and sold for as much as 12 Maria Theresa thalers each. Christian weavers usually produced three in a year; Muslims more, but inferior in quality, and

28. Pearce (1831) II, 286; Arnauld d'Abbadie (1868) 165.
29. Salt (1814) 426; Combes and Tamisier (1838) IV, 78; Johnston (1844) II, 320-2.

hence cheaper. The majority of the city's weavers, like those of Tegré as a whole, were Muslim.

Adwa also boasted a number of tailors. One of whom record remains was a Greek, Demetrius, better known as Sidi Pétros, who, according to Parkyns, had been a "long time" in the country, and was "well acquainted with its customs". There were also numerous tanners whose work was prized, Combes and Tamisier say, far and wide, as well as leather-workers who made shields, saddles and slippers.

The goldsmiths and silversmiths of the city also enjoyed a great reputation. Some of the most prominent were Greek and Armenian immigrants who in the passage of time were succeeded by their half-Ethiopian children and grand-children. Several of the city's jewellers, according to Parkyns (who knew them well) were, whether they liked it or not, "obliged to be rogues". They made "a tolerably good thing of their business", but did this by appropriating a large proportion of the gold and silver entrusted to them for their work. Given Maria Theresa thalers with a high silver content, they returned alloy "scarcely so good as a Turkish piastre", and one goldsmith received 30 Venetian sequins for a job on which he used only seven and a half. Remarking that it might seem "scarcely fair" to "tell tales out of school" as he had worked with these jewellers, and was therefore familiar with their "secret goings-on", Parkyns declares, "they are more to be pitied than blamed. They are considered almost in the light of slaves ... that is, they are not allowed to leave the country; and though treated with considerable kindness, and even some distinction, their supplies are neither overplentiful nor very regularly paid".

The early nineteenth century jewellers of Adwa included two Greeks, Avostalla, who made crowns, crosses and church bells, and Mika'él, who had fled from Khartoum "with a quantity of silver which had been given to him to be worked", and an Armenian, Haji Yohannes, who was said to have once been an illegal coiner. There was in addition a jeweller of Ethio-Greek descent, Wäldä Giyorgis, who turned out highly prized silver drinking-cups.

The city also had a number of blacksmiths who as elewhere were despised, and a group of armourers. Most of the latter were foreigners - Copts, Armenians and Greeks. One of them, the afore-mentioned Avostalla, constructed a cannon for Wäldä Gabre'él, a local governor of Tegré, who, to obtain the metal required, ordered the purchase of all the brass in the province. Three months later sufficient had been collected for the Greek to cast the weapon, under the direction of a Turkish soldier called Isma'él. Its carriage was built by an Ethiopian Muslim

carpenter, Haji Nuro. The gun was duly tested in Adwa market, which greatly terrified many of the citizens. When fired with a small charge, the weapon performed admirably, but, on being subsequently more heavily loaded, exploded, sesiously injuring poor Isma'él. Haji Nur, who lived to tell the tale, later became head-carpenter to Ras Wäldä Sellasé, a subsequent ruler of Tegré. Other armourers of the time included an Armenian, Yohannes, and an Italian, Valieri, who on at least one occasion mended a cannon for Däjazmac Webé. Though some armourers thus occasionally repaired or attempted to cast pieces of artillery, most were concerned exclusively with the maintenance of rifles. Adwa, as the provincial capital of Tegré, also had many craftsmen working on the production of military supplies of all kinds, including spears, swords and shields, as well as gunpowder and bullets, most of which were made either of iron or stone. The latter were often preferred as they were thought capable of penetrating any shield whereas those of iron were considered scarcely harder than lead.[30]

4.14 Other towns of the North and North-west

Specialist craftsmen, though in smaller numbers, also foregathered at other provincial capitals of the north, among them Antalo, Addigrat and Cäläqot in Tegré, and Därita and Qoräta in Bägémder. Antalo, Ras Wäldä Sellasé's capital in the early years of the century, had several foreign skilled workers. One of them, Nasar Ali, a Macedonian, constructed a horse-drawn grinding mill, which, according to Salt, "excited great admiration". The town was likewise renowned for its tanning and leatherwork. Cäläqot, where Ras Wäldä Sellasé also resided, likewise had a number of fine craftsmen. They included the Ras's "chief painter", who struck Salt as "a very ingenious man". Something of a philosopher he once said, "I am like a man blindfolded: I go muddling in the dark, until I produce something". Another worker of the town was an Armenian leatherworker called Nazaret. Addigrat too had a number of craftsmen, who included a lapsed German missionary carpenter by name Aichinger who designed an Ethiopian Orthodox church for the then ruler of Tegré Däjazmac Säbagades.

30. Valentia (1809) III, 78-9, 161; Salt (1814) 425; Holland and Hozier (1870) I, 398; Parkyns (1835) I, 241, II, 15, 36-7, 43, 45-7, 276; Combes and Tamisier (1839) IV, 66, 77; Pearce (1831) I, 257-8, II 213, II 15; Ferret and Galinier (1847-8) II, 40-3; Lefebvre (1845-8) I, 53-4, II, 195; Arnauld d'Abbadie (1868) 37, 211.

Därita, a commercial centre on the trade route south of Gondär, was particularly renowned for its leatherwork, which was finer, according to Combes and Tamisier, than cotton cloth. The craftsmen of the town also produced beautiful cords of silk which served as money throughout the neighbouring provinces. Qoräta likewise had a significant population of craftsmen who benefited from the town's status as a place of asylum, which enabled them to produce better crafts, Rüppell claims, - including brassware - than most parts of the country.

There were also a number of specialised craftsmen in Gojjam, many of them attached to the court of Däjazmac Berru Gosu. The latter was "fond of superintending his smiths and other workmen", in whose labours, Beke says, he seemed to take even more interest than did King Sahlä Sellasé of Säwa, for he not only directed, but often actually took part in their work. No accounts of their work are, unfortunately, preserved.[31]

4.15 Ankobär and Angoläla

Numerous craftsmen, including several foreigners, congregated in the principal towns of Säwa. One of the first was a Greek artist who travelled from Gondär to Säwa where he entered the service of King Wäsän Sägäd (1808 - 1813). This painter, according to Rochet d'Héricourt, was asked by the monarch to decorate his tomb at Qundi with frescos of battles and royal hunts.

Many craftsmen, mostly Ethiopian, were later attached to King Sahlä Sellasé's palaces at the twin Säwan capital of Ankobär and Angoläla. The monarch, whose court, according to Combes and Tamisier, was "the most brilliant in the country", took a keen interest in handicraft work. "Though much absorbed in the cares of the war", he is said to have found time to "direct himself towards the industrial arts which he loved with passion", and insisted that "all handicraft work be carried out under his eyes". His love of such work was so great, the Frenchmen go so far as to claim, perhaps because of their Saint Simonian fervour, that "the principal personages of his court were workers whom he treated with the greatest consideration". Be that as it may,

31. Salt (1814) 361, 393-4; Combes and Tamisier (1838) II, 46, IV, 77; Isenberg and Krapf (1843) 503, 512-3; Lefebvre (1845-8) II, 55-6; Rüppell (1838-40) II, 225; Beke (1840-3) 416; Shepherd (1868) 73-5; Markham (1869) 199; Hozier (1869) 109; Holland and Hozier (1870) I, 342.

there can be no denying the travellers' report that Sahlä Sellasé's palace were crowded with carpenters, masons and craftsmen engaged in making gunpowder, repairing rifles and producing intricate jewellery and other articles of gold, silver and ivory. Their workshop also turned out magnificent pieces of cloth which were said to rival those of Gondär, as well as shields, arm-bands and rifle-plates, razors, scissors and needles, ivory bracelets, drinking-horns, and chessmen, besides, Harris says, "all manner of curious amulets and devices". This picture is confirmed by Krapf who states that blacksmiths, weavers and other craftsmen were gathered together at the Ankobär and Angoläla palaces, and that the King frequently visited them to watch their work which had to be altered if not pleasing to him. No total estimate of the number of craftsmen gathered at the two towns is available, but Krapf believed that the King employed no less than 600 spinning women, two hundred of whom produced fine cotton cloth which the monarch presented to his governors, favourites and family, while the remaining four hundred span ordinary cloth, mainly for the soldiers. A number of craftsmen were also lodged at another of Sahlä Sellasé's establishments, situated at Mähäl Wänz, where Harris saw blacksmiths, armourers, jewellers and illuminators of manuscripts, all "plying their craft ... under the royal eye".

There was in addition a number of blacksmiths in royal employ working in an ironworks, outside Ankobär, at the village of Gureyon by the Caca river. Its blacksmiths, according to Harris, broke the ore into small pieces which were then roughly pulverized, mixed with a large proportion of charcoal, and placed in a clay furnace which resembled an ordinary smith's hearth, but was furnished with a sloping cavity below the level of the blast pipes. Four pairs of hard-worked bellows were then used to bring the ore to fusion point, whereupon the iron, together with the dross, sank to the bottom. The metal, on setting, was broken and re-fused, after which the dross flowed off, and the pure metal was discharged in lumps, or pigs, which by repeated heating and welding were wrought into bars. Owing to the "very rude and primitive apparatus" employed, ten hours of "unceasing toil" were, however, needed to produce a mere two pounds of "very inferior iron".

Prominent among the craftsmen of early nineteenth century Säwa was Ato Cakol, Sahlä Sellasé's principal armourer. Trained by working with a Greek called Elias who was active in the 1820's, he was capable, according to Combes and Tamisier, even of making an entire rifle. There were also a number of foreign craftsmen. Besides the aforesaid Elias, they included two other Greeks, Demetrius and Johannes, who a

decade or so later built the monarch's palace at Angoläla and a grinding-mill on the Ayrara river. Another craftsman at Ankobär was Stefanos, an Armenian silversmith who was active for a few years in the 1830's, but fled when accused of coining money. There was also a Greek or Armenian merchant called Pétros who is said to have introduced the art of dying leather red and green.

Specialised handicraft work also took place elsewhere in Säwa. The inhabitants of the highlands, notably around Däbrä Berthan, produced tents and other articles of black wool, while to the east many of the Muslim Argobbas in the lowlands were employed in weaving, and, though using "very inferior" equipment, are said by Graham to have turned out cloth which was both "well made and cheap".

Ankobär, the most important of the above-mentioned Säwan settlements, maintained its population of craftsmen for much of the nineteenth century. In the 1870's Cecchi, reported that the inhabitants still included a large number of skilled workers, among them tanners, saddlers, blacksmiths, joiners, wood-cutters and carpenters, masons, stone-workers, many of them engaged in the manufacture of grinding-stones, dress-makers, sewers, goldsmiths, charcoal-makers, scribes, painters, and traditional-style physicians and surgeons.[32]

4.16 Jewellers

Jewellers who were to be found, as we have seen, exclusively in the principal political, commercial and religious centres, worked mainly in gold, silver and brass.

Gold jewellery was not in widespread use, for only members of the ruling family, as we have seen, were allowed to wear it. The precious metal, out of which the local jewellers fashioned their artifacts, came partly from local mines, and partly from Venetian sequins imported mainly by way of Massawa. This money was in such demand that coins worth 2 3/8 Maria Theresa thalers at the port fetched, according to the French Scientific Mission, almost three at Gondär.

32. Rochet d'Héricourt (1841) 216, (1846) 244; Combes and Tamisier (1838) II,349, III, 8-9, 23-4, IV, 67-9, 72, 84; Harris (1844) II, 31, 44-89, 100-1, 262, 389; Lefebvre (1845-8) III, 246; Isenberg and Krapf (1843) 57, 62, 120, 247; Krapf (1867) 23-4; Graham (1867) 33; Johnston (1844) II, 60; Burton (1894) II, 223, 231; Soleillet (1886) 131-2; Beke (1840-3) 201, 307; Barker (1906) 273, 288; Cecchi (1885-7) I, 292. On the Saint Simonian attitude to workers, which may have coloured their accounts of Sahlä Sellasé's craftsmen see Pankhurst (1969) 169-223.

Most of silver jewellery was made from Maria Theresa dollars which were then being imported in the course of trade in increasing numbers, and were valued, according to Johnston, only as a means of enabling their owners to "adorn themselves or their women". All the coin entering the country, he believed, ultimately found its way into the crucible, except such as fell into the hands of the king, and were deposited in the royal treasury. From these useful coins the jewellers of Ethiopia made a great variety of crosses of all shapes and sizes, for both religious and secular use, as well as hairpins, earrings, necklaces, lockets, bracelets, rings and anklets, ear-picks, ornaments for shields, swords, spears and guns, and sundry paraphernalia for horses and mules.

Brassware, which in some areas, Combes and Tamisier believed, was less common than silverware, was used in the manufacture of a wide range of articles, among them incense-holders, sistra, small bells, bracelets, chains, jugs and bowls for washing purposes, shield, sword and scabbard ornaments, and sundry mule collar and harness decorations. The workers in brass were praised by several foreign observers, including Salt, who thought the best were found among the Oromos, and Rüppell, who stated that the craftsmen at Qoräta made finely worked and very attractive church ornaments and harness decorations.

Jewellry, as will see in a later chapter, was extremely popular among Ethiopian women, causing the often critical Stern to observe that those who possessed the means carried their love of trinkets to "such an excess" that they often had "more than three pounds weight of silver bells, chains and little scent boxes dangling down their bosom", besides "other *et ceteras*, such as rosaries, bangles and an endless variety of charms".[33]

4.17 Horn and ivory ware

Horn-carving, which required some modest equipment, as well as skill, was carried out by specialised craftsmen. Many of them fashioned ox, buffalo, ibex and other horns into such articles as drinking vessels and sword handles. Some such artifacts were of considerable size as the horns of *sanga* cattle were often as much as two feet or two feet eight

33. Lefebvre (1885-8) II, Part II, 81; Johnston (1844) II, 335-6; Combes and Tamisier (1838) IV, 79-81; Stern (1862) 315; Salt (1814) 426; Rüppell (1838-40) II, 225; Heuglin (1857) 52, (1868) 257. On jewellery see Duchesne-Fournet (1908-9) II, Plates XV, XVI; Moore (1969); Kobariewixz (1973) and Kamil (1975).

inches long and eight to ten inches wide at the base. Carvers in horn made use of a mould and a simple but efficient lathe which was based, Johnston says, of "two sticks placed in the ground, not more than three inches above the surface". From the centre of each end of the mould an arm projected about six inches long, which was armed with a bit of iron. These iron points were received in the short stick supports, and the mould, with the horn upon it, then revolved freely. The workman sat upon the ground, and with his feet pressed hard against a stick, supported it against two stones, placed at a convenient distance in front of his work. This formed a rest for his cutting instrument, which he held in his left hand, and pressed against the horn, whilst with his right he wheeled backwards and forwards the mould by a small catgut. The drinking horns were finished by a piece of round wood being fitted like a thin cork into the lower and smaller end. To make a drinking vessel an ox-horn of the desired size would be selected, and cut to the required length, after which it would be softened with hot water, fixed on a conical wooden mould, and left on it for several days. When formed to the required shape the horn would be placed on the lathe to receive a series of circular cuts with which the outside was usually decorated.

Hornware was produced in many parts of the country. Some of the best, according to Salt, came from Gojjam, but the craftsmen of Säwa were said by Johnston to have also displayed "considerable ingenuity". Many of the most popular earrings of Säwa were cut from the long black horns of the *sala*, a species of antelope common in Adäl and the neighbouring low countries. Describing this manufacture in detail, Johnston observes: "The solid extremities of the horns only are used, so that not more than two earrings can be made from one horn, which is at least two feet long. The earrings are large and clumsy, but, considering the simple means employed in making them, are not despicable works of art. Each is turned in two pieces, ... with small straight shafts projecting from the inside centres. These shafts are made so that one receives the other, and the earring thus formed looks like two small wheels connected by a small axle. To receive them into the ear a very large hole is required, and the axis of one of the halves being first introduced, the other is fixed upon it, and the lady then turns round, to ask how the ornament looks". Besides these horn earrings, which were sometimes ornamented with "an inlaid star of silver", the workers in hornware also made "neat little bottles", each about two inches long, and "turned in a very ingenious manner", which were used to hold *kohl* to decorate the eyelids.

Ivory, though exported in large quantities, was also used by local

carvers, some of the finest of whom worked at Sahlä Sellasé's palaces, and, according to Combes and Tamisier, produced excellent bracelets and chessmen.[34]

4.18 Shoe-makers

Shoe-makers, though unknown in the country at large, were to be found, as we have seen, at Gondär and a few other urban centres. They plied their profession, according to the French Scientific Mission, with the aid of a pattern, a piece of ivory to mark out the desired shape, a curved knife for cutting the leather, two awls (one for making holes and the other for threading the cord), and a needle to stitch the border.[35]

4.19 Harär

The great commercial city of Harär, in the south-east of the country, was also an important centre of handicraft activity. The town was renewed in particular for its tobes, or pieces of cloth, which, according to Richard Burton - the first known European writer to enter its walls - were "considered equal to the celebrated cloths of Shoa", and "far" surpassed "in beauty and durability, the vapid produce of European manufactures". The book-builders of Harär were likewise very accomplished, and won from the famous Orientalist the comment that he could not "but admire" their bindings, for "no Eastern country save Persia surpasses them in strength and appearance".[36]

5. Conclusions

Any examination of the history of Ethiopian craftsmen reveals the creative genius of the Ethiopian people, as well as their importance in the country's economy - and civilization. Handicrafts, such as those here described, were functional and often elegant - but in the last

34. Combes and Tamisier (1838) IV, 83-4; Lefebvre (1845-8) III, 244; Parkyns (1853) I, 157; Johnston (1844) II, 333-5; Valentia (1809) III, 149; Isenberg and Krapf (1843). For examples of hornware see Duchesne-Fournet (1908-9) II, Plate XVIII.

35. Lefebvre (1845-8) III, 248.

36. Burton (1894) II, 40.

century or so have come under increasing competition from cheap mass-produced factory articles, mainly imported from abroad. Ethiopian handicrafts, which are so often works of beauty, are, however, well worth preserving - deserve to be preserved, and must be preserved. Ethiopia's handicraft workers must be encouraged in their labours. This can be done by helping them to develop, and improve, their techniques (for example, by better methods of firing to make potteryless fragileand more durable). It can also be done by opening up greater markets for the craftsmen's produce, both within the country itself and in Italy and the wider world - where Ethiopia's handicrafts would be source of considerable fascination, and would command good prices.

Ethiopia, needs international help in this, as indeed many other fields. The country, one of the poorest in the Third World, suffers from the fact that it tends to be ignored by the principal donor countries (the British and French for example reserving most of their aid for their former colonies and dependencies). Ethiopia, though one of the countries in greatest need of development assistance, is thus punished for the "crime" of maintaining its age-old independence.

There is therefore need for international exhibitions of Ethiopian handicrafts, as well as for the building of links between the Ethiopian craftsman and the Italian - and European - public. Many people in Europe would love to possess beautiful Ethiopian handicrafts: to have fine hand-made pottery and baskets on their tables, as well as to wear some of Ethiopia's unique jewellery...

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10. LOCAL HANDICRAFTS IN THE FRAMEWORK OF THE DEVELOPMENT OF THE BELES VALLEY

Paolo Dieci

1. General contents of the training programme for developing handicrafts in the Beles area

When the CISP Programme for the Beles area was defined, a specific operational sector focusing on local handicrafts was incorporated for a number of reasons, most of which have already been discussed in other articles in this book, and which are summarized, at all events, in the Programme's general objective: to foster the development of off-farm productive activities based on the exploitation and enhancement of the settlers' skills and interests which they developed in their areas of origin.[1]

The feasibility mission identified the sub-sectors, mainly iron working, pottery and bamboo and woodwork. These sectors were defined in terms of the demand for manufactured products and services which could be provided using these techniques, access to the raw materials (in the case of iron this was possible because there is a large local building site, the "Tana Beles Project") and information acquired on the main off-farm activities practised by the settlers in their areas of origin.[2]

Training courses were also geared originally to trading activities, both in order to insert these into the training programmes and to

1. See in particular the essay by P. Dieci and V. Roscio.

2. The decision to include the bamboo sub-sector was very largely motivated by the need to use a raw material that is readily available, and at the same time to safeguard the existing well-established woodlands which have already been partly damaged by the agricultural extension campaigns. The local authorities also specifically requested this. For the use of the wood an agreement was subsequently concluded with the local authorities under which the Programme has been able to use some of the material formerly stored in the villages after the deforestation work connected with the agricultural campaigns.

experiment with the impact of the activities on the local markets before setting up any cooperative or pre-cooperative type structures.

Before the training activities were designed, the Programme identified the craft skills already existing in the villages, partly to ensure that the working techniques were not only preserved but also improved and exploited, using the ethnic and cultural pluralism of the resettlement area.

This survey also included identifying forms of handicraft work practised by the Gumuz population, which is the only long-established ethnic group in the area, in order to gradually incorporate some of its members into the training activities.

In the initial phase of the Programme three workshops were therefore set up, equipped according to the production needs and with all the necessary tools and instruments, and quarterly training courses for each subsector have been given there.[3]

1.1 Training courses

The main objectives of these courses, each of which generally caters for 10 persons per subsector, were to make it possible to set up village handicraft centres, and to select the personnel needed to manage future cooperatives which would develop from the three workshops already mentioned.[4]

The training courses mainly comprised four modules one for each subsector, and dealing with different subjects:

3. Two craft workshops have been built measuring 150 square metres, for iron and wood and bamboo work, and another one 100 square metres in size for pottery work. The workshops are supplied with electricity produced by a generator and are fitted out with tools, workshops and stores. The pottery workshop has settling tanks and an oven to bake the pottery. The wood and bamboo workshop has tanks to treat bamboo in order to make the material more resistant. Alongside the workshops there is a display room for the products. In each workshop one area has been set aside for an office, and another one to store the raw materials. The Programme was advised by the Handicraft and Small Scale Industry Development Agency (HASIDA) with regard to fitting out the craft workshops and choosing the working instruments, including a number of traditional tools of Ethiopian handicraft. During 1987 a residential building was set up near the workshops in which trainees taking courses could stay during the week returning to their villages for the weekends.

4. The workshops, which were subsequently used as the offices for the cooperatives, were built in an area within the jurisdiction of village L5 near the administrative centre for the zone.

- theory, design and planning;
- research;
- production activities;
- marketing and bookkeeping.

The "theory, design and planning" component mainly dealt with the following subjects:

- basic techniques and tools for planning and design;
- organizing the workplace;
- organizing work in terms of role and function;
- rules of safety at work;
- the product life cycle;
- the technical and economic assessment of the end product.

The "research" component in the training courses was designed not only to exploit existing skills but also to encourage the acquisition of new productive skills both by improving the quality of the handicraft products already known, and introducing the production of new articles.

The "production activities" component is the one to which the greatest amount of time has so far been devoted in the training courses, and it has included such subjects as:

- using working tools;
- choosing, procuring and storing raw materials;
- maintaining working tools and instruments;
- repairing the manufactured items;
- techniques for working and decorating the articles;
- defining "prototypes", and the functional decentralization of labour.

Quite obviously this component is the one in which th subsectors differed the most.

The last component, namely "marketing and bookkeeping" was used to introduce the following subjects:

- analyzing market opportunities for individual products;
- organizing the marketing of products and transportation;
- registering income and expenditure, and managing the cash book.

During the first three years of activity, groups of 20-25 persons per subsector have established their production and commercial work in the laboratories in order to set up cooperative structures. The other trainees have been urged to set up village handicraft centres, and to periodically attend updating and specialization courses in the three workshops.

2. General features of the craftsmen living in the area

In the months of July and August 1988 the Programme surveyed 13 villages in order to acquire analytical data on the general features of the craft work practised in Beles, and altogether 39 craftsmen were interviewed.[5]

This survey, which was conducted about 18 months after the start-up of activities in the sector, made it possible to record, albeit with a certain degree of approximation, a number of trends in the organization of handicraft work in the Beles Valley, and some of the craftsmen's emerging expectations and demands, and it was used in order to plan the ongoing activities.[6]

2.1 Age, sex and nationality of the craftsmen interviewed

Table 1 provides the data on the age group and sex of the craftsmen interviewed. The nationalities of the respondents were as follows: Amhara 27, Kembata 6, Wolayta 2, Oromo 2, Hadiya 1 and Gurage 1. 21 of the 27 persons of Amhara nationality came from the Wallo Region and 6 from Showa. The 6 Kembata craftsmen came from Showa

5. The survey focused on the craftsmen working in the subsectors with which the Programme is dealing. Craftsmen from 13 villages representing the various resettlement poles in Beles were interviewed. More specifically, the villages were L130, L12 and L11 on the left bank of the Beles river, R4, R6, R7, R8, R9, RDS50, RUS50, RUS51, R49, and R46 on the right bank.

6. The CISP Programme in Beles began in September 1986 but the craft training activities, after the workshops had been created and furnished, only began at the beginning of 1987. With regard to the development of training activities to enhance technical skills, with particular reference to Ethiopia, the following works were consulted: R. Hakemulder and J. Last, 1980; Wolde Selassie Abbute, 1989; European Institute of Education and Social Policy, 1984; ILO, 1985; ILO, 1980; UNESCO, 1985. The publications of the Centre de Developpement Communautaire - Centre d'Etudes pour l'action sociale, Kinshasa, were of great help in particular.

Table 1 - Age and sex of respondents

	Male	*Female*	*Total*
18 and under	2	1	3
19 - 25	2	4	6
26 - 40	14	4	18
41 - 50	7	3	10
over 50	2	-	2
Total	27 (69.2%)	12 (30.8%)	39 (100%)

like the Wolayta and Oromo craftsmen, and the other two Hadiya and Gurage craftsmen.

2.2 Educational level

Table 2 gives the educational background by sex. To interpret these data one must bear in mind that the Ethiopian school system comprises 12 grades, of which the first six are the equivalent of primary education.

Table 2 - Educational background of respondents by sex

	Male	*Female*	*Total*
No education	6	9	15
Having attended Literacy Campaign courses but not primary school	14	2	16
Second grade State school	1	1	2
Third grade State school	3	-	3
Fifth grade State school	2	-	2
Sixth grade State school	1	-	1
Total	27 (69.2%)	12 (30.8%)	39 (100%)

In the resettlement area, the Ministry of Education has attributed particular importance to promoting "Adult Education" by running "Literacy Campaigns" mainly to teach reading and writing in the Amharic language.

The Programme has taken account of this priority attributed to literacy by incorporating into the training courses the same literacy campaigns in order to enhance the craftsmen's managerial capacities.

2.3 Labour organization

The craftsmen's fields of activity by sex are given in Table 3.[7]

With regard to the main problems of adapting to the new geographical environment, 33 of the 39 respondents, or 84.6%, mentioned malaria as the main constraint on performing their production activities.

At the time the data was gathered, a farm labour organization system was being used in Beles under which each individual was required to work in exchange for food rations. The storage, conservation and distribution phases were managed by the village authorities after the harvest.

However there were some cases in which, because of particular needs of the villages or because of inability to work in the fields,[8] some people were directed to other functions by the village authorities themselves in exchange for the rations designed for the peasants.

Table 3 - Areas of craftsmen's activity by sex

	Male	*Female*	*Total*
Pottery	1	12	13
Iron	13	-	13
Bamboo and wood	13	-	13
Total	27 (69.2%)	12 (30.8%)	39 (100%)

7. This clearly shows that all the women interviewed worked as potters. This fits in with the long-standing national custom under which this particular craft activity is mainly practised by women.

8. This type of exception mainly related to people who were either sick or very old.

However, this labour organization pattern did not foster the development of off-farm professional specialisms. This situation seems to be confirmed in the data on the 39 craftsmen interviewed, only 4 of whom said that their only occupation was handicraft work, while the other 35 were mainly engaged in farming.

During the survey, information was gathered on the patterns of labour organization.

On this basis a typology was then defined covering the work carried out privately in people's own homes, the work performed in the village associations (the Peasant's Associations or the Women's Associations in the case of women), and in both.

More specifically, 9 of the 13 potters said that they worked in Women's Associations, 3 worked privately (of whom the only male was 1) and 1 worked in both.

As far as the blacksmiths were concerned, 10 said that they worked in the Peasant's Associations and 1 worked privately, while 2 gave no reply.

10 of the 13 wood and bamboo workers said that they worked in Peasant's Associations, while 3 of them combined this with private work.

2.4 The destination of the products

Within the group interviewed, products appear to be disposed of differently depending upon the particular craft. All the potters said that their products were marketed, compared with only 8 of the 13 blacksmiths, and only 3 of the 13 wood and bamboo workers.[9]

2 of the remaining 5 blacksmiths gave no reply and 3 said that their products or services are given away free to the Associations. This

9. This reply only referred to the destination of the articles in periods in which the craftsmen lived in the villages. During the Programme's training courses, products were normally marketed as a matter of course by the trainees themselves. At all events, it is mainly on the village markets that the craft articles are sold, on Sundays, and in a number of major markets. Of all the interviewees it was the residents in the villages on the left bank who said that they went to the weekly market (open on Saturdays) in front of the airport built by the Tana Beles Project near village L7 close to the regional hospital. The residents from the villages along the right bank of the Beles river, on the contrary, said that they went to the weekly market (also open on Saturdays) at Gel Gel Beles, just outside the resettlement area along the road to Addis Ababa (545 km away).

latter reply was also given by 10 bamboo and wood workers.[10]

It should be noted that only 4 of the interviewees said that they handled the marketing of their own products, and in most cases marketing was completely taken over by the Associations. 3 of these 4 were potters, who said that they personally earned 20, 15 and 10 birr per month from this activity,[11] and 1 was a blacksmith who earned 15 birr a month from the sale of his products.

Only 3 potters said that they were given a monetary incentive from the Associations.

Table 4 gives the data on the period dating back to when the craftsmen began their activity, showing the differences between the potters, the blacksmiths, and the wood and bamboo workers.

Table 4 - Years of experience of the craftsmen interviewed in terms of craft

	Pottery	*Iron*	*Wood and Bamboo*	*Total*
1 - 2 years	3	1	3	7
3 - 5 years	4	2	2	8
6 - 10 years	2	3	3	8
11 - 15 years	4	1	1	6
over 15 years	-	6	4	10
Total	13	13	13	39

2.5 Methods for learning handicraft techniques

Most of the craftsmen interviewed (22, or 56.4%) said that they had learned their skills from another member of the family. 8 were potters, 11 blacksmiths and 3 wood and bamboo workers.

30.8% of the respondents, namely 12 persons, said that they had

10. It must be recalled the blacksmiths not only make specific articles (knives, buckets and pails, stoves, agricultural tools, etc.) but in Beles and elsewhere they are also involved in repairing agricultural equipment supplied to every Peasant's Association. Since 1988, with the commencement of the animal husbandry project in the area, the blacksmith's work has also been geared to producing blades for ploughs.

11. The American dollar is worth 2.07 Ethiopian birr.

learned their craft from other craftsmen in their areas of residence. 1 potter, 2 blacksmiths and 9 wood and bamboo workers belonged to this group.

Only 5 of them (12.8% of the total respondents) said that they had learned their craft techniques at the CISP training courses.

Table 5 provides the data on the ways in which the respondents learned their craft in terms of nationality.

Table 5 - Method of learning craft by nationality

	In the family	*From other craftsmen*	*From CISP courses*	*Total*
Amhara	14	9	4	27
Kembata	5	1	-	6
Wolayta	2	-	-	2
Oromo	1	1	-	2
Hadiya	-	1	-	1
Gurage	-	-	1	1
Total	22	12	5	39

Table 6 shows the data on persons who had attended the training courses promoted by the Programme.

Table 6 - Interviewees' attendance at CISP training courses by craft

	Pottery	*Iron*	*Wood and Bamboo*	*Total*
1 Course	4	-	3	7
2 Courses	3	2	3	8
3 Courses	1	1	-	2
No Course	5	10	7	22
Total	13	13	13	39

It should be borne in mind that from the very beginning of the CISP Programme to the time the survey was conducted, 3 three-month training had been organized in each of these subsectors.

That some craftsmen attended two or three courses can be explained by the start-up of the selection process of future members of the Cooperatives to which reference was made at the beginning of this paper.

All the respondents were asked to state the monetary value of their products, independently of whether or not they could market them. It is interesting to note that whereas all the 17 craftsmen that had attended at least one training course gave a specific value, only 10 of the 22 that had not attended any training course replied.

3. Expectations of the craftsmen in the Beles area

The 39 craftsmen interviewed were asked to give their main needs regarding the organization of their work in future. This made it possible to acquire information on the problems they felt most keenly and proposals for solving them.

This section deals with some of the comments made, quoting verbatim the remarks made by the artisans as faithfully as possible.[12]

Interview no. 1
Male, 35, Kembata, wood and bamboo worker, married with four children: I need tools to work. If these were supplied I could produce more articles of a better quality and could become famous throughout the area.

Interview no. 2
Male, 35, Amhara, blacksmith, married with one child: I need hammers, an anvil and other tools. If I get them I can work hard and improve every aspect of my life.

Interview no. 3
Female, 17, Amhara, potter, married with two children: At the moment I have no problems in finding raw materials or equipment. In future I want to work harder to maintain myself and have whatever I need.

12. It should be recalled that the interviews were carried out in the Amharic and Kembata languages.

Interview no. 4
Male, 36, Kembata, wood and bamboo worker, married with three children: I mainly need a set square and a flat saw. I want to produce more and better quality products to buy clothing for me and my family and to build myself a better house.

Interview no. 5
Male, 49, Amhara, blacksmith, married with three children: I need materials, particularly hammers and an anvil. I want to be able to work longer hours.

Interview no. 6
Female, 42, Amhara, potter, married with one child: I want a small potter's wheel and a sieve. I want to work longer and raise my living standards and that of my relations.[13]

Interview no. 7
Male, 46, Hadiya, wood and bamboo worker, married with no children: I need tools such as a yardstick and chisel and wood to work. I also need to take a training course to improve my skills and then to be able to buy clothing and food for my family.

Interview no. 8
Male, 28, Amhara, blacksmith, married with two children: I really need training. I also need tools. I could produce many things and become famous and also make this village famous.

Interview no. 9
Female, 35, Amhara, potter, married with three children: I need a sieve and a place where I can work with more room. I would like to work more and harder. I also need containers for the clay. In this way I could buy many things for my children, otherwise it would be better to give up making pottery and only work in the fields.

Interview no. 10
Male, 38, Amhara, wood and bamboo worker, married with two chil-

13. The potter's wheel was introduced into the area by the CISP Programme, which provided both pedal-operated wheels set up in the central laboratory and small hand-driven wheels which were given to the trainees at the end of the courses for the work they perform in their own villages.

dren: I need a saw, a working top and a yardstick. I would like to work more and sell my products to raise my living standards.

Interview no. 11
Female, 45, Amhara, potter, widow with three children: I need clay and sand to improve the potter's clay compared with what is available to me. If I had more I could work harder and better to help my children.

Interview no. 12
Male, 18, Amhara, blacksmith, unmarried: I have a great problem in obtaining raw materials such as iron and metal. I would like to be able to sell my products.

Interview no. 13
Male, 38, Amhara, wood and bamboo worker, married with two children: I need, a saw, a hammer and a working surface. I also have a problem in obtaining wood. If I could work better I could improve my health by buying food and improving my home.

Interview no. 14
Female, 40, Amhara, potter, married with four children: I need to find a quarry with better clay after which I could improve my living standards and buy the things I need for the home.

Interview no. 15
Male, 55, Amhara, blacksmith, married with one child: I need all my working tools. At the moment I have nothing. I know my job and would like to practise it to earn and better myself.

Interview no. 16
Male, 42, Amhara, wood and bamboo worker, married with four children: I would like to become a famous carpenter in the village and the Region, but I need time and tools such as a saw, a yardstick, a hammer, a chisel. I cannot go on like this without materials and equipment and without being able to sell my products.

Interview no. 17
Female, 46, Amhara, potter, married with two children: I need a larger container for water and potter's clay. I would like to improve my family's standard of living thanks to my work.

Interview no. 18
Male, 29, Amhara, blacksmith, married with three children: I need a vice, a hammer, and a file. With this equipment I could produce more and keep all my relations.

Interview no. 19
Male, 45, Amhara, wood and bamboo worker, married with three children: I need equipments such as a plane, a yardstick, a file and a hammer. I also need to take a course to learn more. I need this to improve my work and raise my income.

Interview no. 20
Male, 18, Amhara, blacksmith, married with no children: I need different types of hammers, a file, an iron saw and other equipment. I could produce many tools for the village and sell them on my own. I would like to live in a town with all comforts.

Interview no. 21
Female, 20, Oromo, potter, married with one son: My problem is finding good clay. If I could solve this problem I could help my family with my work.

Interview no. 22
Male, 44, Amhara, wood and bamboo worker, married with one son: I need an equipped workshop and wood to work with. I could produce more tools of better quality and help my family.

Interview no. 23
Male, 28, Amhara, blacksmith, married with two children: I need hammers and iron saws. I would like to use my work to help improve the Peasant's Association and secondly to improve my living standards in order to acquire everything that is not distributed to us.

Interview no. 24
Female, 29, Gurage, potter, married without children: What I need very much is good quality clay. I would like to allot, to enhance the security of my family and village.

Interview no. 25
Male, 51, Amhara, wood and bamboo worker, married with three children: I need equipment such as a hammer, file, saw and others. I also

need the cooperation of the village and raw materials. I would like to earn a lot of money with my work, to share the money with the village and keep something for me and my family.

Interview no. 26
Female, 20, Wolayta, potter, divorced with one daughter: I need good clay for my work. I would like to work more to acquire clothing for me and my daughter.

Interview no. 27
Male, 38, Amhara, blacksmith, married with seven children: I need a vice, a punch and iron. In this way I could live happily from my work.

Interview no. 28
Male, 29, Amhara, wood and bamboo worker, married with one son: I need paint and wood. My plan is to work more and better to become a famous carpenter throughout the area.

Interview no. 29
Male, 40, Wolayta, blacksmith, widower with two children: I need equipment and iron. I also need good food to give me the strength to work. I would also like enough time to work as a blacksmith. If I cannot get this it would be better to work like a peasant in the fields alone.

Interview no. 30
Female, 22, Kembata, potter, married with three children: My main problem is finding good quality clay. If I could solve this I could run my family and provide clothing and other commodities.

Interview no. 31
Male, 20, Amhara, wood and bamboo worker, married with no children: I need a vice, a flat saw, and a worktop. At the moment I am improving my knowledge, and in the future I shall work hard. I could also eventually teach others what I have learned and help my family with my work.

Interview no. 32
Male, 45, Oromo, blacksmith, married with two children: I need equipment like a file, and an anvil. I would like to work more to sell my products and improve my home and to buy more food.

Interview no. 33
Female, 25, Kembata, potter, widow with five children: I have a serious problem getting clay. I urgently need to get some so that I can work and help my children.

Interview no. 34
Male, 45, Amhara, wood and bamboo worker, married with two children: I need a worktop, a drill, and a vice. If I had these instruments I could apply my knowledge and help my village and my family.

Interview no. 35
Male, 36, Kembata, blacksmith, married with two children: I need an iron saw, a file, a hammer and other equipment. I would like to produce more to raise my income.

Interview no. 36
Female, 30, Amhara, potter, married with six children: I seriously need good clay to produce high quality pottery. I would then like to sell my own products and buy everything I need, particularly clothing.

Interview no. 37
Male, 30, Amhara, wood and bamboo worker, married with two children: My main need is working tools. Others have already acquired good equipment from CISP: I would like to work more and have a good income for my family.[14]

Interview no. 38
Male, 19, Amhara, potter, divorced without children: Mainly I need a workplace with a lot of room. I could apply my knowledge and teach others.

Interview no. 39
Male, 35, Kembata, blacksmith, widower, with no children: Even though I took a training course at Mandura I am not working because I have no tools. I therefore need tools to work and raise my standard of living.[15]

14. At the end of the first quarterly training course the Programme not only issued the diplomas jointly with the Ministry of Education, but also gave the trainees work boxes containing tools to be used in their villages.

15. Mandura is about 30 km from the last village in the resettlement area along the road to Addis Ababa.

Clearly, a number of constants run throughout all these ideas expressed by the 39 craftsmen interviewed, and they have been carefully examined during the ongoing planning process. The main point is the need for equipment and suitable work places. This has probably been aggravated by the way in which the transfers took place.[16]

There is also the fact that potters find it particularly difficult to get suitable raw materials, and often complain about the poor quality of the clay, which does not produce sturdy products. There seems to be a difficulty here mainly linked to their poor familiarity with the new environment in which they live and of the kind of soil present there.

To provide a practical response to these needs, the Programme carried out a survey in the area to identify the zones in which the soil is particularly suitable for potter's clay, with the possibility of building pottery production poles there.[17]

Another need which is often expressed by the interviewees relates to the need to devote more time to craft work, which is generally squeezed into the brief moments during the day when they are not working on the farms. In particular, the group of 39 craftsmen surveyed fully expected to exercise their own activities as an occupation, to earn money from it and be able to acquire goods such as the foodstuffs not included in their rations, clothing and home building materials.

Generally speaking, the need to practise their craft activities intensively was linked with their expectations to improve their quality of life.

4. Possible ways of developing handicraft work in the Beles Valley

According to the replies given by the group of craftsmen surveyed, the labour organization of the craftsmen at the time the survey was taken seemed to be strongly dependent upon the socio-economic system at the time, based on collective agricultural work and the distribution of food rations.

This being so, handicraft work was viewed as a supplementary activity to farm work, and only occasionally able to provide any direct supplementary financial benefits to the craftsmen in addition to his food rations.

16. In discussions before and after the survey from which these interviews were taken, many settlers said that they had left their areas of origin very hastily, and without being able to take with them their property, tools and other personal belongings.

17. See, in this connection, the essay by Adriano Leverone published in this book.

At the same time, the conditions were not suitable for craft specialization, and some of the craftsmen ran the risk of losing the technical skills they had acquired in their places of origin. In this case, reference was made to the shortage of time for craft work, and the lack of room and appropriate working tools, judging from the interviews reported in the previous section. In other words, the data confirmed the impression that no craft-based economic system exists.

In order to lay the bases to create one the Programme dealt with three problem areas.

The first was the specialization of the craftsmen in terms both of their technical skills and the organization of work and marketing. The second was the degree of "flexibility" of the local social and political system, and hence of the willingness of the local authorities to introduce novelties into the organization of labour and the management of local resources. The third problem area related to the marketing possibilities that actually exist in the resettlement area or areas bordering on it. These three problem areas were used as three separate spheres of activity and priority survey areas.

The extension of the training courses and the approach taken by them have made it possible not only to enhance the technical skills of the craftsmen, who have set up production centres in their own villages with the assistance of the Programme, but also to set in motion a specialization process for groups of craftsmen belonging to the three subsectors, who have already begun their first cooperative and pre-cooperative experiences focused on off-farm activities in the Beles Valley.[18]

These structures, which have also received legal recognition by the local authorities, have enabled their members to become self-sufficient in food and independent of the food rations, thereby giving them the possibility of working full time in their chosen craft without having to work on the farm lands.

The urbanization process which has taken place in the Beles area in relation to the promotion of Metekel to the status of a Region and of Almu Town to that of a regional capital,[19] with the resultant transfer of

18. This is followed by a description of the way in which the wood and bamboo Cooperative functions. The expression "pre-cooperative" in this connection indicates structures which operate like cooperatives, but are still awaiting their legal recognition.

19. During 1989, Metekel was promoted from the status of a Province to that of a Region, when the Gojjam was divided into three regions which included West Gojjam with its capital in Bahr Dar, and East Gojjam with its capital in Debre Marcos, in addition to Metekel itself with its capital in Almu Town.

offices, logistical facilities and administrative structures, has certainly had a positive influence on the marketing opportunities and on the structuring of new dwelling units in the villages which are suitable to accommodate domestic utensils and property that were difficult to house in the former *tukuls*.[20]

One of the Programme's objectives is to conduct a more thorough survey of the market potential for handicraft work in the future, and particularly to see whether it is necessary to set up sales centres outside the area, under the direct management of the Cooperatives.

The Cooperatives referred to here are mainly based on production and marketing groupings, while the work within the cooperatives is distributed on a functional basis depending on individual skills.

In the case of the wood and bamboo workers' Cooperative,[21] for example, which has taken the name of "ANDEGNA", which in Amharic means "The First", indicating that it was the first structure of its kind set up in the Beles area, the distribution of labour provides for the following functions:

- production, which is divided into production of wood items, bamboo items, and the preparation of timber pieces for the work;
- management, which incorporates the sub-functions of clerical work and recording orders, accounts and stores.

The distribution of the profits takes place within the Cooperative on the basis of a points system, which takes account of the number of hours worked and the quality of the performance, and these assessments are drawn up and approved by the assembly on a monthly basis. It is the president and treasurer's duty to carry out the instructions of the assembly.

In the first three months following its constitution, the Andegna cooperative, to which 24 craftsmen belong, distributed on average 100 birr per month to each member, and made a provision of about 1,000 to

20. Under the housing programme the "Tana Beles Project" built 25,000 new dwellings (see "Tana Beles Project", Ethiopia, 1989) with a bamboo frame, a metal sheet roof and walls made of mud and straw using the mixture known as *cikka* in Amharic. The new dwellings stand on foundations 25 square metres in size of which 17.5 square metres are covered, comprising the 3.75 square metre cooking area, and the main room, 13.75 square meters in size, in which many families have placed chairs, tables and above all boxes, which are used not only as table tops but also to protect food and clothing.

21. The Andegna Cooperative was officially inaugurated in the presence of representatives of the regional *Shengo* on 12th March 1990.

raise its capital. The average monthly revenue in this period was about 4,000 birr, with 600 birr a month being used to buy expendable materials.

This cooperative, which was created after several years of training activity, adopts its own rules and regulations within the framework of national regulations, including the assignment of points on the basis of which the craftsmen receive their income.

After March 1990 Ethiopia set about a fairly complicated process of revising the criteria for socio-economic planning, placing the emphasis on the need to make greater use of private enterprise, even in the rural environments, and to encourage the growth of the cooperative system in different sectors.

This being so, the local administrative and institutional system has been taking up an attitude whereby the production structures promoted by the Programme are considered as places of socio-economic experimentation.

One extremely strongly-felt need in an area like Beles, where huge quantities of foreign aid have been concentrated thanks to the commitment of Italian cooperation, is to exploit and extend those activities which can become self-sustaining in the future and at the same time generate supplementary income to complement the income from farming.

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11. POTTERS BETWEEN ADAPTATION AND SURVIVAL IN THE BELES RESETTLEMENT AREA (ETHIOPIA)

Stefano Berterame and Loredana Magni

1. The social impact of resettlement and adaptation strategies

The resettlement of the population in rural areas and the adaptation strategies developed by the settlers to survive in the new environment are the main issues dealt with in this paper. The research for the paper was carried out in the Beles Resettlement Area (Western Ethiopia) during an eighteen month stay there. The study was conducted mostly among the potters of the villages. They were chosen because of their peculiar adaptive behaviour developed in a critical situation caused by the resettlement.

Resettlement is a solution adopted by many African governments to solve certain problems arising in the newly independent states. Even during the colonial period resettlement was practised for the purpose of developing areas of interest to the colonial power.[1]

In our study we focus our interest on the performances of a relatively homogeneous group, i.e. women potters, who belong to different ethnic groups and, although coming from different areas, have faced the same resettlement situation.

Our choice was dictated by our interest in studying the reaction of a so-called marginal group (the potters are traditionally outcasts - Shack, 1974:24 - and the role of the women in the resettlement process is usually underestimated) in the relocation process.

1. Among the authors that have studied resettlement and related problems see: Chambers (1966, 1970); Arthorpe (1968); Colson (1971); Goering (1978); Barlett (1980); Hansen and Oliver-Smith (1982); Fecado Gedamu and Tamrat Kebede (1984); Scudder (1985); Dewar, Todes and Watson (1986); Bjeren (1985); Dessalegn Rahmato (1986, 1987); Clarke (1987); Oberai (1988).

The women that we have studied represent different adaptation strategies that can be developed in a resettlement situation. All show that their role in the survival of the family is central to reach the self-subsistence stage necessary for adapting to new environment.

2. Social, cultural and environmental characteristics of the Beles Resettlement Area

2.1 Generalities

The Beles resettlement area was chosen by the Ethiopian government in 1981 when a first project was defined by the Relief and Rehabilitation Commission - RRC for the location of 2,000 settlers (RRC, 1981:12). The first settlers arrived in March 1985.

The area is located 450 km Northwest of Addis Ababa and 150 km from the Sudan frontier. The Beles Valley is in the Gojjam Region and belongs to the *Metekel Awraja* (a District which has recently become a Province in the new administrative organization), even though it is administered with a special status. The "Tana Beles Project", sponsored by Italian government, started work in the area in March 1986 and covers an area of 220,000 hectares.

The population, according to the RRC March 1988 census, is 78,285 with an average family of 3.48, settled in 47 villages (Figure 1).

The aim of the "Tana Beles Project" was to rehabilitate the victims of the drought areas of Shewa, Welo and Tigray, improve the services to the local population and increase agricultural production by optimal land-use through new inputs, in order to develop from a subsistence agriculture to commercial agriculture.

When the project started the Beles area was considered by the authorities as virtually unoccupied land with agricultural potential, although this definition does not seem accurate since the local settlements (Gumuz) were scattered over the area in a complex land-use and land distribution system.[2]

2. The Gumuz are also known as Shankilla, which is used as a pejorative term by the people of the highlands. The name Shankilla is also used in a extensive way to indicate all the population living near the border with Sudan. The Gumuz were considered for centuries uncivilized and primitive by the highlanders, who customarily sacked their lands and sold them off as the slaves. This created problems between the various nationalities of the settlers and the Gumuz.

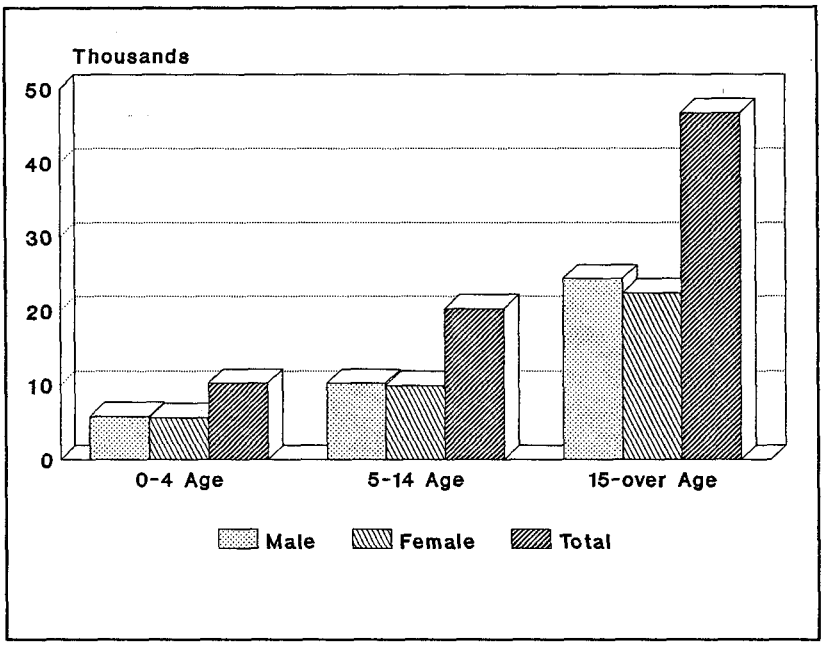


Figure 1 - Population by age in Beles
Source: RRC Census, March 1988

2.2 The ethnic mix

The local people are Gumuz, present in the whole *Awraja* of Metekel, and the resettlement programme has had a great impact on their social system (Dessalegn Rahamato, 1986:122).

Many groups of families that used to live on the banks of the river Beles were pushed out of the project area to find new lands for their agricultural activities. The only contact between the Gumuz and the settlers takes place mainly in the local markets and there are reports of several conflicts between them. Some settlers are said to have been killed by the Gumuz.

The other local groups present in the vicinity are the Agew of Gojjam and the Shinasha, but these ethnic groups did not oppose the resettlement programme, mainly because it did not take place in their area.

The transfer of Amharas, Oromos, Tigreans, Agews (coming from Welo, different from the Agews group from Gojjam), Kembatas, Hadiyas, Welayitas, Gurages have changed the balance and the kind of relations existing previously. Inside the same project area the mix of nationalities has produced a social system that, in a few square kilometres, epitomizes a large part of the ethnic complexity of the whole of Ethiopia.

2.3 From economy ratios to possible self-reliance

Agriculture plays a central role, since the main goal of the programme is to create a self-reliant community in the area. Since 1985 the farmers have been working on co-operative farms where production is stocked in central warehouses and distributed according to a "credit" system.

The agricultural work is organized collectively in the villages to support the mechanical work done by tractors. Agricultural work is usually a duty for the household head, but all household members work on sowing, harvesting and threshing. Participation in the collective tasks allows the family to earn the "credits" required to receive the RRC rations or, more recently, to get them from the village authorities.

A supplementary source of food is family agriculture, which includes the crops developed in the area near the house (theoretically 1,000 m^2).

Very few cattle are present in the area because of the tse-tse fly, but the number of goats, and also of hens and chickens, is growing.

2.4 The village and the services

The villages of the Beles resettlement area have been designed in accordance with the villagization rules (i.e. geometrically in lines and rows, 500 houses, 1,000 m^2 of area for each house, and services such as schools, clinics, co-operative shops, water supply, etc.).

The villages are grouped into six Districts (*Woreda*) and are governed by the Administrative Village Council, which includes the leaders of the various Associations (Peasants' Association, Women's Association, Youth Association).

Primary education up to the third grade is usually organized through schools located in 33 villages. In some villages there are schools up to the sixth grade which serve 7/8 villages at the same time.

The health system is based on the village clinic where a health assistant is present. A central hospital exists and a new one is soon to be completed. The main problem in the area is malaria, which kills many people every year, especially in the September-October period.

In every three or four villages it is possible to find a cooperative shop which sells several items at government prices. The main trading activities occur in the markets periodically held in the area and in the vicinity. The markets are the places where the redistribution of several goods obtained in different ways takes place and where it is possible to understand the real economic needs of the settlers, aside from formal categories of ration and collective agriculture system.

3. The handicraft economy and the social, cultural and productive characteristics of the potters in the Beles Valley

3.1 Adaptation strategies

Since resettlement there has been a reshaping of the traditional agricultural subsistence economy that was a characteristic among the people of the highlands. The markets, as we said before, are the connection points of several goods redistribution processes that are a fundamental means of survival for many farmers. In the Beles markets it is common to see farmers selling their rations to buy salt or onions. Some women prepare *tella*, *borde*, *areqe* (local beer and alcohol) obtained from their ration to earn money to buy spices. Settlers from Kembata and Hadiya Awraja (Southern Shewa) prefer to cultivate tobacco in their home garden and sell it during the year. Some settlers go to distant markets to buy items at a low price and sell them in the valley at higher prices.

Among these adaptation strategies it also is possible to consider the handicraft economy that can develop out of the agricultural system or together with it, maintaining relative autonomy.[3]

3. Regarding the tradition and the culture of handicraft in Ethiopia we refer readers to scholars who have studied the phenomenon, such as: Conti Rossini (1937), Dei Gaslini (1939), Simoons (1960), Pankhurst (1964), Shack (1966, 1974), Cassiers (1971), Karsten (1973), Hakemulder (1980). For the purpose of the present paper suffice it to recall the traditional prejudice against craftsmen in Ethiopian society which means they are a separate caste in every community. After the 1974 revolution this separate condition of the craftsmen was abolished but the remains of this cultural tradition are still alive especially in the rural areas.

We have closely studied the pottery workers in the Beles area to verify our hypothesis concerning the adaptation strategies for particular reasons:

- the number of potters compared with other craftsmen;
- pottery work is mainly done by the women;
- the other handicraft activities performed by the men are considered as a service of the craftsmen to the village and they are considered on a par with the farmers. This means that the handicraft activities of carpenters, blacksmiths, weavers and others do not generate an income for them. They get ration credits like the other farmers.

For these reasons, pottery-making is a real income-generating activity that can be considered part of the adaptation strategies developed by the people settled in the area (Figures 2 and 3).

3.2 Pottery activities in the Beles Valley

In the potters' villages in April 1987, according to the areas of origin, out of a total of 366, 216 (59%) come from northern Shoa, Wollo, and southern Tigray and are mainly Amhara, with some Tigrean and few Agew. The remaining originate from southern Shoa and are Kembata, Hadiya, Wolayita and very few Gurage. Pottery is mainly a female activity, since only 46 men are involved in it. 44 of them belong to the Hadiya, Kembata and Wolayita group and 2 to the Amhara group (Figure 4).

Standard production includes some basic kitchenware that is present in every house, but also includes some implements not used for cooking purposes (e.g. *gullilat* - a dome cover for the extremities of the hut straw roofs, incense burner, human figures for children, etc.). The products present in every village number four or five (*dist, insra, mitat, jebena, ga:n*).[4]

The potters' work is organized in two ways: as private production and in the collective cooperative production in the Village Centre. In some cases is possible to find potters who work partly in the Village Centre

4. *Dist* is a pot used to prepare sauce; *insra* a container for water; *mitat* a circular clay plate to bake *enjera*; *jebena* a coffee pot; *ga:n* a big jar to brew local beer.

and partly in their house.

Private production exists in almost all the villages and involves the women who are not working in agriculture. They have the help of their husband for the heaviest tasks (digging the clay, gathering wood and grass, pots cooking and transport to market).

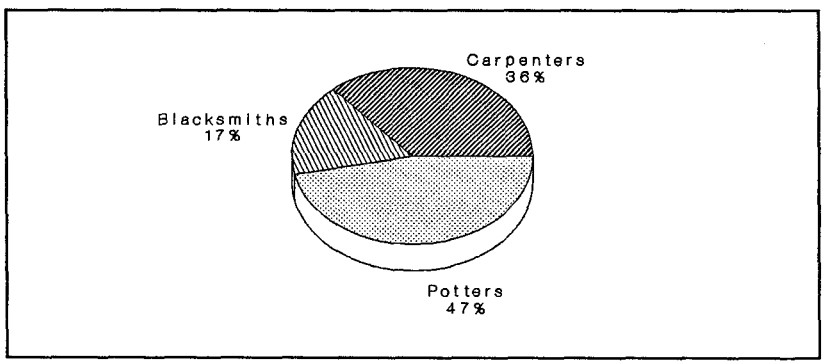


Figure 2 - Craftsmen in Beles Villages
Source: CISP survey, April 1987

The Village Handicraft Centres are present in most of the villages, and the women engaged in them obtain points from this activity, ration credits and sometimes even a share of the income.

4. Innovation, adaptation and survival among the potters

The first difference which can be noted between women working in the farm and those engaged in pottery is the different economic and social status of the latter. The particular working conditions of the potters free them from agricultural collective work and from full dependency on the rations. The main fact is their relative independence of the ration economy for their subsistence. The monthly income of a potter can reach 60-100 birr (30-50 US$) which affords a much higher standard of living than is possible with the food ration.

Potters' households are in any case considered different from standard farmers' households because of the strong traditional prejudice

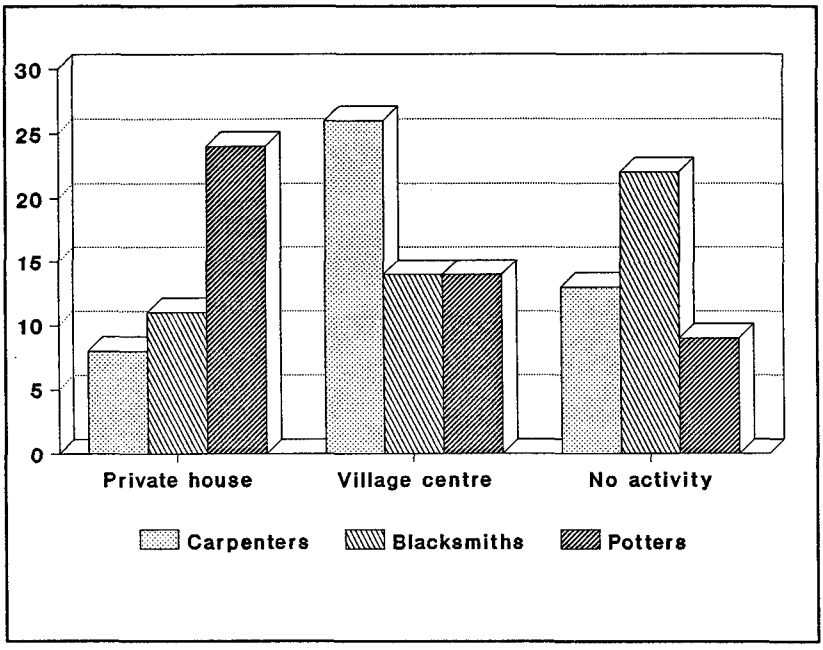


Figure 3 - Craftsmen's working environment in Beles Villages
Source: CISP survey, April 1987

against craftsmen, and particularly against potters. This prejudice stems from the fact that they did not have land to cultivate and that they were therefore regarded as inferior, like all people working with their hands, except farmers.

The potters we observed by means of interviews and direct observation come from 20 villages in which pottery is practised (private and/or organized by the village). Of the 24 potters selected, there are 12 Amhara, 6 Wolayita, 4 Kembata, 1 Hadiya and 1 Gurage.

The average age is 27.8 years. The potters generally have a low educational level. Only 3 have attended primary school for a few years. Their main religion is the Coptic-Orthodox (18 out of 24) and there is a Muslim minority (4 Amhara, 1 Gurage, 1 Kembata).

The average potter's household is composed of 3.6 individuals. The family has mostly a nuclear structure, even if some families were separated by relocation. The potters we studied are mainly married (18),

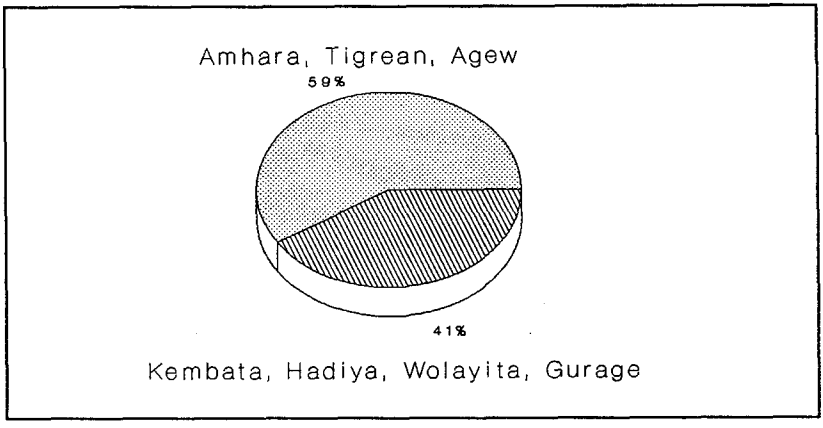


Figure 4 - Potters by ethnic groups in Beles Villages
Source: CISP survey, April 1987

five are divorced and one is single. There are no widows, and four women are heads of family since they are divorced.

The analysis of daily life, handicraft activity and agricultural work lead us to draw some distinctions. Pottery making is linked to the periodic markets and to the demand for certain goods. In the case of the Village Centre there is no close linkage between marketing and production and the pots can remain in the stores for many months.

The private potters work five days a week because their work plan follows the markets, some of which are held on Saturdays and others on Sundays. This means that potters organize their weekly work to be ready to sell on the market days. Usually the market chosen is not the nearest one but the one where is possible to sell at the best prices. The takings on a normal market day are around 15-25 birr (roughly 7-12 US$).

After the preliminary interviews, some potters were selected for a deep semi-structured interview (life history). A total of 15 life histories (12 Amhara, 2 Kembata and 1 Gurage) were collected for 24 potters studied during the survey. The items contained in the life history are, in addition to general information, the situation prior and subsequent to resettlement.

4.1 Pre-resettlement

4.1.1 The family and the house

The house and the social status of the family are recalled by resettled potters in a very positive way. The potters remember owning a well-built house and properties that they no longer have in the new environment. Comparison with the resettlement condition makes these memories particularly poignant. Even though all the potters come from rural areas, they do not recall any particular famine or drought before that of 1984-85 which caused their dislocation.

4.1.2 Religion and the Community

The Community plays an important role in the development of the potter's life. The potters from Kembata and Hadiya Awraja recognize the importance of the potters' group in their village, whereas the Amhara refer themselves first to their religious community.

On the Muslim side, there is also the transmission of the faith by the family, but the few Muslim potters interviewed say that they would prefer to become 'real Amhara' by joining the Christian Coptic religion.

4.1.3 Handicraft

Female initiation is the starting point for the working activity for most of the potters. Most of them say that from the day of their 'clitoridectomy' they stopped "playing with the soil" and started working with it. In some cases the pottery activity started when they established their family. Anyway, the pottery activity is a fundamental moment in their life and they consider it much more than mere work.

4.1.4 Marriage

Marriage is recalled by every potter in great detail, and the wedding remains the fundamental rite of passage in their life. From the life history there seems to be no great ritual difference between ethnic groups or religious affiliations.

Some women have denounced their passive role in choosing their husband. Others experienced a dramatic impact with their new condition.

4.1.5 History, The Empire and the Revolution

The memory of past events is that of women who are native of rural areas. Events are recalled when they have had a direct effect on their daily life. The Emperor is not a clear figure in their minds while the local feudal rulers are well remembered for their exploitation of the farmers' work. For them, the Revolution started with the redistribution of the land and the literacy campaign is considered a consequence of the revolution.

4.1.6 The drought

The famine that led them to resettlement started as a climatic event ("there was no rain", "the sun was too strong") against which nothing could be done and all attempts to delay the crisis had little effect. The crisis of the family subsistence economy started with the period of austerity and the reduction of consumables. The next step was the sale of animals (from hens and ending with the cattle). After this, the land was usually abandoned and assistance sought in the urban areas. At this stage the family started to split up and be shaken by the crisis, and some of the rules that had previously governed family life were broken under the effect of the famine.

4.2 Resettlement

4.2.1 The choice and the decision

The choice to leave the highlands does not seem to have been the result of an individual decision. In some cases, the promises and the guarantees given by the authorities removed the last doubts and made the people decide to go. Sometimes the division of the family, the lack of subsistence (not only material but also social) were the driving forces behind their decision to choose the alternative of resettlement. Some of them decided to follow their husband or some relatives.

4.2.2 The journey and the arrival

The trip was usually long and sometimes fraught with problems. The first impact with the new area was characterized by insecurity and a feeling of precariousness. Life in the village immediately appeared very hard. Nevertheless, all the families started to organize their minimum subsistence.

4.2.3 Daily life

Daily life in the area is linked to the ration distribution system which is the main source of subsistence. To obtain the ration each farmer has to earn "credits" from farm work. Some supplementary food can be purchased at the market or grown in the home garden.

Adaptation is the main problem, and economic activities like trade, craftwork and home gardening seem to offer a possible solution to overcome this.

4.2.4 Cultural identity

Rebuilding a social identity in the new environment is one of the strongest needs felt by the women interviewed. Religious worship, reinstated after more than two years after resettlement, is one of the main factors contributing to this process. Ethnic identity is also important and there are attempts to maintain it even in the new settlement. Each ethnic group avoids too many contacts with the others, especially with the local people (Gumuz).

The profession of potter remains, in all cases, the fundamental element for rebuilding a social role.

4.2.5 Social integration

The adaptation to the new situation and the integration into the new social reality are so problematic for some of the women that they would like to go back to their place of origin. Otherwise, some women have found a role for themselves in the village by learning or developing pottery work.

4.2.6 Aspirations and prospects

A first attitude of potters towards the future is planning to improve their standard of living and social status, beginning with handicraft, which is the resource enabling them to reach these goals.

Another attitude is to wish to go back to their village of origin and to feel that they have no prospects in the area. In this case, pottery work is considered a routine task, a family heritage that must be maintained, but that is not useful to improve their standard of living.

4.3 An attempt to define a typology

Our study has so far dealt with the effects of resettlement on human behaviour. We have tried to analyze the factors affecting the displacement and the socio-cultural situation in the new area.

In the case of the potters, the physiological, psychological and social stress they experienced makes them develop different adaptation strategies which can be classified into three types: Family dynamic (conventional name Almaze); Innovative dynamic (conventional name Belaynesh); Traditionalist Static (conventional name Ceccolech).

Other adaptive behaviour patterns of the resettled women may include the selling of home gardening products and the production of traditional alcoholic drinks (*tella*). Some women have become active members of PAs or Women's Associations, thus playing an important political role.[5]

4.3.1 Family dynamic

The Almaze strategy is the result of an immediate answer to resettlement. The Almaze have known since their arrival in the area that is not possible to go back to their village of origin and realize that it is necessary to plan their life in the new area.

5. Conventional (or fictitious) names are used, instead of the original ones, in order to maintain the anonymity of informants.

This plan revolves around the resettler's ability to support the family and handle social relations, that were characterized by the pottery activity. The potters' group meets together in the common places (i.e. the clay quarry and the market). Reconstruction of the relationships broken by resettlement represents the first step towards maintaining a certain level of independence. This attempt becomes apparent when the potters, despite the prejudice that people have about them, decide to ameliorate their status by keeping their tradition as potters.

4.3.2 Innovative-dynamic

Belaynesh decided to start pottery-making after resettlement. In many cases this has meant fighting against traditional prejudices, especially for those lacking a family pottery tradition but who decided to work pottery anyway. For the potters who adopted the Belaynesh's strategy, it was clear since the beginning that agricultural farming was not an economically viable strategy as it used to be in the highlands. It was necessary to find a solution through another activity. Learning pottery techniques leads them to enter the Village Centre and have a responsible role in the potters' association. The women like the Belaynesh have also their own private activity from which they earn a little income. Among this kind of potters, we find greater planning capacity than among the Almaze.

4.3.3 Traditionalist-static

The traditionalist static potter (like the Ceccolech) is a potter because of family tradition and has maintained this activity in the new settlement partly because it is her routine occupation, and also to avoid the hard work in the fields. The Ceccolech does not believe too much in the possibility of having a better life in Beles and she is always thinking of going back. She does not care too much if she works privately or for the village. She does not plan for anything and she is only hoping to go back.

5. Conclusion

As a partial conclusion of this research it may be said that the reset-

tlement programme initially organized for the male farmers (the RRC had already experimented male resettlement in the first phase) cannot be successful if provision is not made for the whole family which forms the basis of the subsistence economy. The women in this case play a central role and seem to have a better adaptive attitude than the men. The women, and especially the potters, can change their status in several ways (divorce, profession, income generating activities, etc.) while the men have a more restricted range of possibilities.

For the potters working privately, even if their income generating activity remains complementary to the ration system, it can offer the possibility for an independent development inside the resettlement area.

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12. PRODUCTION OF POTTERY IN THE DEVELOPMENT OF THE BELES VALLEY

Adriano Leverone

1. Introduction

As part of the training and technical assistance supplied for the development of local handicrafts, special attention has been given to the production of pottery. At present there is a pre-cooperative organization of women potters that is capable of producing and marketing these products in the area; in addition to creating a source of cash income which specifically benefits the women, these activities have provided an ideal opportunity to cultivate the skills and abilities of the resettled population through training and assistance tailored to the varied nationalities and cultures involved.

This report takes the form of a short technical manual for practical use, and not only provides an accurate account of the programme itself but may also be a useful resource for implementing similar cooperative ventures to support the economies of a rural area by developing handicrafts.

2. The programme contents

2.1 Technical features

In order to implement the operational plan for this sector, a preliminary survey of traditional techniques used in production of pottery was carried out.

Once the problems had been identified and evaluated, a plan was formulated based on requirements for realization of the complex production cycle.

The programme then went through several main phases described below. Specific training courses were designed for each of these activities.

2.1.1 Identification of quarries located in areas near operations centres

This task was made rather difficult because of the scarcity of suitable raw materials for the pottery.

2.1.2 Processing the raw material

Procurement and separation in special vats. Composition of clay pastes to obtain a product with suitable plasticity, limited shrinkage and deformity, and good consistency, both raw and baked.

2.1.3 Techniques for mixing clays

2.1.4 Traditional moulding techniques

A quantity of clay to be moulded is placed on the ground and before the potter's wheel technique was introduced the object was moulded by working around it.

When the original clay is not sufficient, additional small sticks of clay (doves) are superimposed upon it in a spiral, joining them one to another until the desired shape is obtained.

This kind of work is performed standing, and bending over the mould, which is physically tiring to the whole body.

2.1.5 Moulding techniques using earth and straw moulds

Moulds are constructed to support large-sized pieces (*gan*) during the moulding, so that the clay does not collapse and the product can be removed without further manipulation.

2.1.6 Moulding techniques using plaster moulds

This technique speeds up the production of *Metads* with respect to traditional techniques.[1]

2.1.7 Moulding techniques using hand-operated and foot-operated wheels

The introduction of these new production tools has made it possible for the craftsmen to work while seated.

This improves production and quality, and takes less time and less energy.

2.1.8 Moulding objects of standard shapes

Redesigning traditional shapes, making them more functional while respecting their original characteristics. Examples: spouts, handles, rims, etc.

Special attention has been devoted to redesigning the fitting between the opening of the container and its lid.

The results are quite significant: tighter closure of the containers; less fuel wood is required to cook food; and hygienic conditions are improved by keeping out foreign matter.

2.1.9 Finishing techniques

Various techniques are employed to make the surface of the product smooth and to reduce the absorbency of the baked product.

2.1.10 Drying techniques

2.1.11 Baking techniques for hardening the mould

Baking is the critical phase in obtaining a good product. It is essen-

1. *Metad* is a plate used for cooking *injera*, which is the staple food in Ethiopia. It is obtained from cereals, particularly *teff*.

tial to know which factors determine the final result: a) selecting the appropriate raw material; b) positioning the product during baking; c) choosing the fuel and the quantity needed to give the mould optimal consistency.

3. The production process from raw material to the end product

Because of the resettlement of the population in the Beles valley, the women potters have made changes in their pottery production to cater for the demand for containers that are suitable for cooking local foods.

The containers are sold in the village and at the weekly markets. The most important are the Saturday market at Glgel Beles and the Sunday morning market at Village L7.[2]

These events offer an opportunity to evaluate the production situation on the basis of the shapes and market demand.

Products put up for sale are of varying shapes, although their function is the same.

The differences are attributable to the different ethnic groups (Amhara, Kembata, Wolayta, Hadiya) producing in the same valley or village.

Initially, the products reflected the features of their original traditions; subsequently they underwent aesthetic changes due to the influence of the others. For example: covers, handles, surface treatment such as glaze, decorations, etc.

Pottery is produced in almost all the villages in the Beles area. All the people who work at this activity are related to one another.

Before the 1974 Ethiopian revolution this work was considered unrewarding. Acceptance by people from other social backgrounds was rather difficult. Subsequently, pottery-making was recognized and put on the same level as other activities.

By ancient tradition, this kind of work has been performed by women. Men take part in a few phases of production -- polishing, baking and transporting products to market.

2. The *Glegel Beles* village is located approximately 20 kilometres from the administrative centre of the resettlement area and is the next village to it along the road that links it to the rest of the Metekel region. Village L 7, on the other hand, lies a short distance from the administrative centre of the area and is a transit centre partly because the regional hospital is nearby.

Production consists of articles for everyday use. Pottery has become indispensable for everyday needs; and at the same time it characterizes the productive and economic life of the women potters.

The production carried out in the course of the year can be divided into two separate periods: a) the dry season, from November to May; b) the rainy season, from June to October. Obviously the most favourable period for pottery-making is the dry season.

During the rainy season production comes to a virtual halt because of a number of difficulties in acquiring the clay raw material and fuel: impassable roads made muddy by incessant rain; long distances to the quarries because the river cannot be crossed; the difficulty of extracting wet clay; the need to make pottery indoors in a restricted space; the need for lengthy drying times for the objects before baking; the difficulty of obtaining dry fuel in larger quantities than are needed in the dry season. It is used to heat articles and wet ground before baking.

Acquiring the raw material is one of the primary tasks in the production of articles.

Careful selection of materials determines the quality of the end product.

Unfortunately, not all articles are produced in a satisfactorily sound condition. In most cases this is due to the use of an unsuitable clay for moulding, which, after baking, gives the articles very little mechanical strength and crumbles with use.

The most active centres in pottery production are those with clay quarries in the vicinity of the village.

In a few villages, production is non-existent because of the absence of clay. In others, on the other hand, in order to work, artisans have to travel long distances to get the raw material.

The daily pottery production phases are as follows during the course of the week:

MONDAY:	acquiring raw material; extracting it from the quarry, and transporting it to the village; mixing the clay paste.
TUESDAY:	moulding begins.
WEDNESDAY:	moulding is completed.
THURSDAY:	finishing: smoothing and glazing; drying.
FRIDAY:	completion of drying period; baking.
SATURDAY:	baking; sale of products in the village and market.
SUNDAY:	sale of products on the market.

Pottery is not usually produced on a full-time basis, but work is interrupted by other tasks, such as work in the fields or family duties.

The output of the working week depends upon the amount of clay transported at one time, approximately 45 kg.

Income from total sales of the end product is about 20 Birr.

3.1 From the quarry to the clay paste

The quarries that supply the raw material are not usually near the production sites; consequently, the women potters have to leave homes in the early hours of the morning to be able to return home the same day.

There are no particularly large quarries, and most of the potters, if the distances allow it, extract raw material from the largest one located in village R4 on the right bank of the Beles river.

The quarry area measures approximately 17 meters by 10 meters.

Suitable raw material is found at a depth of approximately 80 centimetres below ground level. The surface material is rich in organic substances and is discarded.

It is alluvial sedimentary clay with a virtually irregular granulometric spectrum, characterized by a sandy content which varies with the direction of the clay seam.

Using a *matrebea* mattock, the potters extracts the raw material, checking its quality from time to time to ensure homogeneity, digging channels in the ground that are often interrupted by roots and large stones.

It is heavy work because of the practical difficulties the worker must overcome to fill a 50 kg sack with clay.

Not having donkeys or other means of transportation available, the potters have to carry the clay on their back to the production centre.

A variety of techniques are employed to process the raw material into clay paste: the clay is used immediately upon extraction from the pit, either alone or in combination with other clay; the clay is subjected to a drying process by exposing it to the air and sunlight until all of the moisture in it has evaporated.

When it is completely dry, the clay is crushed with a pole, and then soaked in water and kneaded by hand until the correct plastic consistency is attained making it suitable for moulding.

As individual batches of clay are not always suitable for production,

other components may be added to the raw material to render it suitable for manufacture.

It was discovered that a good baked produced (terra-cotta) is obtained by combining two clays: Black clay - (Village R2) 70%; Red clay - Village L5) 30%.

The red clay increases the plasticity of the paste mixture.

It contains a high percentage of iron oxide which imparts a reddish colour to the clay after baking.

Chamotte is added to the clay paste when larger pieces have to be moulded. The percentage varies from 5 to 10%.

Chamotte is crushed pottery, obtained by using a mortar and a wooden pestle.

Once sifted to a granular size of approximately 0 - 4 mm, it is added to the paste to reduce excessive shrinkage and deformation of the mould during drying and baking.

3.2 Finishing processes on the products made by potters in the Beles Valley

Once moulding has been completed, the articles are partially dried to the point of "leather hardness". The potter then proceeds to finish the product. Finishing techniques reflect the traditions of the artisan's village of origin.

A stone is normally used by all the women to smooth the products.

The surface is smoothed by exerting pressure in such a way as to eliminate surface roughness.

Friction and the contact of the stone against the side of the article produce a unique sound which varies with the shape of the article.

Usually the potter accompanies this sound with a repetitive *sotto voce* song which is even more beautiful when several artisans are singing and working together.

After baking, the article has a porous surface and shows the marks left by the stone.

A further finishing operation takes place when the object is polished by lightly rubbing a damp cloth over the surface previously smoothed with the stone.

After baking, the article is shiny and has a less porous surface.

When the finishing operation performed with the stone has been completed, a thin layer of red clay is applied to the body of the article which seals the pores and alters the hue of the paste substrate.

After baking, the article is porous and the surface is red-brown in

colour.

This technique should be used to produce a uniformly smooth article with a less porous surface. The surface may be further smoothed using a stone and polished with a cloth moistened in water mixed with crushed castor-oil plant seeds.

After smoothing, a metal-tipped instrument may be used to engrave and decorate the object. This decorative technique is a specialty of the potters from the Wollega region.

3.3 Preheating

Before proceeding to the baking phase the articles must be thoroughly dried and preheated because exposure to the heat of the fire can cause a sudden thermal shock resulting in irreparable breakages.

The articles are baked before sunset, having been exposed to sunlight all day and therefore sufficiently warmed by the sun.

The ambient temperature during the rainy season is too low for the items to dry thoroughly.

Complete evaporation of residual water contained in the interstices of the clay particles is completed by arranging the objects around the fire.

The large shapes (gan) which are more likely to break are also heated internally, using live coals up to the moment of baking.

3.4 Pottery baking technique

The pottery hardening technique employed by Amhara potters from the Wello region consists of baking the articles using fuel wood, especially tree bark.

The fuel supply is obtained by stripping the bark from dry trees and, at times, from green trees as well.

The fuel wood is used to make a bed of embers for baking. The bark is then placed between one item and another while stacking them, and is finally used to cover the whole batch to be baked.

Approximately half a cubic metre of dry bark is required to bake twice that volume of articles. This is the quantity needed each week, because the Craft Centre in village R 49 usually bakes its pottery production once a week.

By using this technique, the trees in the village have dried out. Over

time the problem has spread and caused irreparable damage to the forests.

A sensitization programme aimed at the potters who use this technique has been carried out in order to save the woodlands.

Straw may be used for baking with the same results and without causing damage to the local woodlands.

3.5 Open-air baking technique

Dry branches are arranged in a circle on the ground to a depth of approximately 20 centimetres. The diameter varies according to the size of the articles to be baked.

The dried and preheated articles are arranged on the fuel wood, with the largest in the centre and the others piled around it one on top of another.

When the stacking is completed, the whole is covered with straw to a depth of approximately 30 centimetres.

When the fire is lit the straw burns quickly. For a volume of articles equal to 1 cubic meter, the baking time is approximately 20 minutes.

To bake large articles, more fuel of the same type is used, so that complete hardening of the objects, which glow red-hot, is obtained by the longer baking time. When the fire is out, ashes from the burned straw are left covering the articles and protect them against sudden cooling.

Results of the baking operation are evaluated when the articles are uncovered while still slightly warm.

3.6 Technique of decorating with ashes

Almost all the pottery made by the various ethnic groups living in the Beles Valley lacks decorative colour. Exceptions include pottery made by Hadija and Kembata potters in the Wollega region, Southern Ethiopia, which is partially decorated with ashes. Before baking, when the article is partially dried to "leather" hardness, a stick made of wood or a piece of bone is used to engrave the surface with grooves. Decoration is in the form of geometric patterns.

Once completely dry, the article is smoothed and then hardened by baking. The kind of baking affects the colour of the end product, which varies from glossy blue-black when baking time is short to a red-brown

colour.

A mixture of finely sifted ashes mixed with water is applied to the grooves of the previously-engraved decoration. Since the baked clay is porous, it absorbs the water from the ashes. When the article is dry, the potter removes excess ash by hand, leaving what is in the grooves, thus producing a decoration in the form of a white-grey pattern against the background of the baked clay colour.

At this point the article is finished; further finishing touches may be applied by giving a gloss to the surface of the article. This involves the use of a natural tree resin.

The resin is dissolved by boiling it in an earthenware pot over a fire until a lump-free liquid of the proper density is obtained.

The liquid is then applied to the porous surface of the article. This covers it with a thin transparent film, which protects the decoration underneath and brings out the colours in the article. The whole surface has a glassy shine to it.

This treatment is purely for decorative purposes because on contact with water the natural patina dissolves and the surface return to its state following baking.

Using this technique benefits the potter, however, when the article is sold, because it is easier to sell and commands a higher selling price.

4. Pottery among the Gumuz

4.1 Introduction

The Gumuz people are the original inhabitants of the Beles valley. Their livelihood depends on agriculture, hunting and fishing. In the area of village L4 there are 35 dwellings with 135 inhabitants.

Since 1986 these inhabitants have adjusted to the presence in their valley of resettled individuals from a variety of ethnic groups and regions.

Except for the pottery articles needed for cooking food, the Gumuz people use little pottery compared with other populations.

They use dry pumpkins to carry liquids and other foodstuffs; this container is light and sturdy at the same time.

Four potters in the village produce pottery. Their pottery is produced to meet specific requirements, and is not to generate income, with the exception of a container called *ticha*.

Even though many artisans in the Beles valley produce pottery using

techniques brought in from other regions, the production of the Gumuz people has not been influenced either in technique or shape, and has remained traditional.

The pottery made by this group is characteristic as regards the clay paste used, the method of processing the modelled forms, and baking glazing.

4.2 Timing for the production of a Gumuz ticha container and organization of the work

Dimensions after baking: diam. 60 cm., height 85 cm.

Extraction of clay raw material and transport to village	180 minutes
Mixing of clay and other components	60 minutes
Crushing the baked clay (chamotte)	60 minutes
Cutting straw	30 minutes

1st Day:	from 07.00 to 14.00hrs	Complete moulding
2nd Day:	from 07.00 to 08.00hrs	Finishing and smoothing
3rd Day:	from 17.00 to 18.50hrs	Baking the ticha
3rd Day:	from 18.50 to 19.15hrs	Treatment with liquid
3rd Day:	from 19.15 to 19.30hrs	External glazing
3rd Day:	from 19.30 to 20.30hrs	Cooling on hot coal

4.3 Composition of clay paste for the moulding of articles

Black plastic clay 80%
Chamotte .....10% ϕ 1 - 8 cm approx.
Straw ..... 10% length 1 - 10 mm approx.

4.4 Stages in the production of the ticha container

Each stage of work in the production of a pottery article, from moulding to baking, takes place out of doors. Thus, the clay paste used for production must be resistant to deformation and breakage resulting from draughts and ambient heat.

The clay must be sufficiently plastic to be worked under such condi-

tions.

The raw clay removed from the quarry cannot be used as it is. Other components must be added in a lengthy operation before moulding.

Following extraction the clay is dried and then softened with water in an earthenware container.

After several days the clay is made into a paste by adding chamotte obtained by crushing broken or unused pottery articles between two stones.

This component, which is added to the paste with a granular size up to approximately 8 mm in size, reduces excessive shrinkage in the clay paste and helps avoid fractures and deformation.

When the first stage of mixing has been completed, the paste is then combined with straw pieces cut to a length varying from approximately 1mm to 10 mm.

The straw strengthens the structure of the material and acts as a binding agent for the raw material.

To mould the articles, a hole is dug in the ground approximately 30 cm deep and 25 cm wide; it is lined with clay and serves as the support for the article being manufactured. The container is moulded using the "dove" technique. This consists of superimposing a number of small rolls of clay in a spiral, joining them one to another until the desired shape is obtained.

The tool used during this stage is a stick cut from the rind of a dried pumpkin, shaped according to the shape of the article being manufactured.

Once the shaping operation has been completed, the container is partially dried. A stone is then used for a further smoothing operation to eliminate excessive rough spots and any holes on the sides.

The kind of paste used makes the smoothing stage of the operation somewhat difficult.

When the mould reaches "leather hardness" it is removed from the ground. Completion entails final finishing, smoothing and rounding the base.

The item is then placed in direct sunlight until it is thoroughly dry.

The baking process entails placing the container horizontally on a bed of dry branches arranged on the ground. More wood is used to cover the article.

Baking takes place before sunset so that the batch to be baked is sufficiently warmed during the day to avoid a thermal shock from sudden exposure to the heat of the fire.

Baking time varies with the dimensions of the article and fuel

availability.

Ordinarily a *ticha* is baked alone using approximately half a cubic foot of hardwood as fuel.

The fire is started slowly over a period of 15 minutes until the wood is burning well.

During the hardening phase the fire is fuelled with more wood for approximately an hour. At the same time the form is moved by a long stick with extreme care in order to obtain even baking.

When the fire is almost out, the form is extracted from the glowing embers and subjected to a cooling treatment by spraying on the hot sides, inside and out, a liquid obtained from green bark dipped in water.

When the pottery comes into contact with this liquid the clay takes on various attractive hues, varying from dark brown to pink violet.

From the comments of the potters who use this technique, it appears that the treatment gives the end product greater consistency.

Subsequently, when the container is in the cooling stage a film of animal dung diluted with water is applied to the outside. This coating has the property of filling any holes and slight scratches on the surface.

When all the treatments have been completed, the form is placed in a vertical position with the bottom up and the mouth on the ground on the still glowing embers so that the container can cool slowly.

After baking, the articles are rather heavy and very fragile because of crumbling of the pottery.

The *ticha* is also sought by people of other ethnic groups. It is used for the fermentation of the local *t'alla* and *borde* beer, and as silos for the storage of grains.

Although it is large, the *ticha* container is somewhat heavy and delicate. Two persons are needed to transport it to market.

The form is covered in a wrapping made of green tree branches. It is slung from a long pole borne on the shoulders during transportation.

4.5 Gumuz pottery items

Ticha:	a pottery item used to make borde (local drink)
Antarsa:	a pottery item used to make wat
Kuula:	a pottery item used as a container for borde
Mashakua:	a pottery item in which genfo and kita are made, seeds are roasted, etc.

4.6 Typical food of the Gumuz nation

Name: Shanqilla	Amharic	English	Pottery items in which food is prepared
Inga	genfo	porridge	mashakua
pehtuha	dubba	pumpkin	antarsa
gousha	asa	fish	"
opa	adenguarre	haricot beans	"
baga	goman	cabbage	"
mitguilanga	qitta	bread	nashakua
waga	ingudai	mushroom	antarsa
keya	borde	local beer	ticha
hecha	boya	cassava	antarsa
mechenqopa	nifro	boiled seed	mashkua
jampa	ageda	cane stem	-------
bucha	siga	meat	antarsa
niffure	ocholoni	ground peanut	mashakua

C. EDUCATION AND CHILD-CARE ACTIVITIES

BOX III

Main childcare and preschool education training activities. October 1986 - May 1990

1986-87

- building and furnishing a kindergarten, also to be used as a centre to train kindergarten teacher instructors, with a total surface area of 300 m^2;
- selecting and training 15 kindergarten teachers selected from the villagers;
- setting up an art and craft museum of the ethnic groups in the Beles Valley at the training centre;
- starting up activities in the first kindergarten with about 120 children aged between four and six.

1988-89

- opening another six village kindergartens for about 1,800 children aged between four and six;
- designing supplementary food and health education plans for the kindergartens;
- initiating a nutrition education programme in all the kindergartens, including school vegetable gardens;
- selecting and training another 20 kindergarten teachers;
- carrying out a survey on the impact of the activity on the households, interviewing the children's mothers and recording their main expectations;
- training the selected teachers in Addis Ababa in cooperation with the Teachers Training Institute of the Ministry of Education.

1990

- opening two village kindergartens to cater for a total of 2,000 children aged between four and six;
- monitoring and providing technical assistance to operate all the kindergartens in the area;
- running updating and refresher courses for all the trained teachers;
- carrying out a preliminary survey into the possibility of the future self-sustaining viability of the kindergartens;
- training the selected teachers in Addis Ababa in cooperation with the Teachers Training Institute of the Ministry of Education.

13. PRE-SCHOOL EDUCATION AND PRIESTS' SCHOOLS IN PAWE RESETTLEMENT AREA

Francesca Agneta and Massimo Tommasoli

1. Resettlement, education and adaptation to a new environment

Agricultural resettlement, of either a spontaneous or a planned nature, is not new in Ethiopian history. Wood argues that between 1950 and 1974 cultivated land increased by 25% following the spontaneous settlement of over one million people. Different experimental resettlement programmes were implemented during the imperial government, for a total of 20 thousand households in 28 sites between 1960 and 1974 (Wood, 1982:161). The Awash Valley Authority was responsible for the sedentarization of Afar nomads during the sixties; in 1976 a Settlement Authority was created and in 1979 all the settlement-related matters referred to the newly-established Relief and Rehabilitation Commission (RRC). In the most recent years, resettlement could be considered as part of a nation-wide new land settlement policy including also villagization, which aims at the establishment of new villages grouping together over 33 million peasants by 1994.

1.1 Villagization, resettlement and the 1984-85 drought in Ethiopia

In general terms population distribution in Ethiopia is influenced by the country's geographical structure. The majority of the population practises a rain-fed agriculture and is concentrated in the temperate zone of the country which lies at an altitude from 1,500m to 2,400m (*weynadega* areas) and in the cold zones at altitudes of over 2,400m (*dega* areas). Over 75% of the Ethiopian population lives in these areas. In Eritrea, Tigray and Wollo, small nuclei of settlements can be found, made up of small groups of huts, situated on elevated areas near cultivated plots of land. More scattered groups of huts are dotted

throughout the highlands of Gojjam, Gondar, Shoa and Gamo Gofa, while throughout the rest of the plateau settlements are of a more diffuse type (Eshetu Chole and Teshome Mulat, 1988; Wood, 1985).

In recent years the objectives of rural development have been defined in terms of a social agriculture, aimed, among other things, at achieving radical changes in the traditional types of settlements. Since 1985 the government has introduced a national programme aimed at redistributing the population in the territory by villagization and resettlement schemes. The Ethiopian government has started the villagization programme in order to facilitate access to such basic services as health, education, water supplies, transport and communications facilities. The increase of agricultural production, the strengthening of Producers' Co-operatives and of Service Co-operatives and the safeguarding of national security are other objectives of villagization.

Though sharing such objectives to some extent, mainly resettlement schemes aim at reducing demographic pressure in overpopulated regions, particularly in those areas prone to soil erosion or vulnerable to drought. Resettlement programmes envisage the transfer of peasants, even on long distance, to sparsely populated areas to settle new territories. These projects cope with problems which are only partially similar to those inherent in villagization, because of the different dynamics faced by settlers in moving from zero production to a subsistence level, the effect on the environment, health conditions, social change, the organization *ex novo* of grass-roots institutions and of social services, to mention only a few of the basic principles.

Among the many problems raised by a resettlement programme, the ones directly relating to this particular study are those pertaining to the organization of a formal educational system, particularly in the preschool sector. The study deals with the Beles valley resettlement area where Italian cooperation has funded development programmes in the agricultural, sanitary, artisan and educational sectors.

1.2 Resettlement in the Beles Valley

The area in question is situated in the basin of the Beles river, a tributary of the Blue Nile, to the south of Lake Tana in the province of Metekel (Gojjam region) in the north-west of Ethiopia. The Beles valley is at an altitude of between 1,000 m and 1,500 m above sea level. The area covered by the project is 220,000 hectares, with a length of about 60 km and a width of 30 km. The climate is sub-humid tropical,

with a rainy season from April/May until the end of September and a dry season from October until April/May.

The main centre of the resettlement project is Pawe, located about 55 km from Chagni, the capital of the Metekel province. The resettlement, also known as the "Tana Beles Project", is divided into six administrative districts.[1] Between April 1985 and March 1988 42 villages have been established in the Beles Valley.[2] From a census taken by the local RRC office, in November 1987 there was a population of 78,735 inhabitants with an average of approximately 1,875 persons per village. On the basis of such data, it has been calculated that 31,941 people are under the age of 15, equal to 40,6% of the population. In table 1 the census results are given, divided according to age, sex and district.

According to findings made in September 1987, provided once again by the RRC, the average household has about 3.4 persons and the average family has about 1.3 persons under the age of 15. Finally, the average number of families per village, which should be about 500 according to the planning schemes, is actually 508.

Population relocation got under way in April 1985 and was concentrated in the period from April to November 1985. Most of the people who were relocated came from Shoa and, to a lesser extent, from Wollo. The ethnic variations within this group show a predominance of Amhara, Kembata and Hadiya, with a minority of Wolayta, Guraghe and Oromo and a small group of Agew. Recent transfers involved population from Tigray region.

Before the arrival of the settlers, the Beles Valley was inhabited by an indigenous group, the Begga, who practised hunting, gathering and shifting cultivation. Reliable demographic data on this people have never been collected, but according to estimates it is believed that, at the beginning of the resettlement programme, around 15,000 to 20,000 Begga lived in the area. Even if some of these people have since moved away from the area, some fairly substantial nuclei of Begga still remain and some are integrating themselves into the new production system by adopting pluvial farming methods.

1. The subdivision of the area into six districts is fairly recent. Until September 1987, in fact, there were only three districts. The decision of the National Assembly (*Shengu*) of the Popular Democratic Republic of Ethiopia, constituted on September 12th, 1987, by which the country is to be divided into 5 autonomous regions and 24 administrative zones instead of the current 14 regions, should be taken into consideration. Within this framework the province of Metekel will become an administrative zone with Chagni as its capital, whereas it is currently part of Gojjam.

2. The following data do not refer to villages established since March 1988.

Table 1 - Beles Valley population by age, sex and residence (November 1987)

Age	*Sex*	*District of residence*												*Total*	%
		First	%	*Second*	%	*Third*	%	*Fourth*	%	*Fifth*	%	*Sixth*	%		
0-5	M.	1,377		965		1,168		845		1,153		1,181		6,689	
	F.	1,490		1,173		840		897		1,125		968		6,493	
	Tot.	2,867	17.6	2,138	14.9	2,008	17.5	1,742	18.0	2,278	17.4	2,149	15.3	13,182	16.7
6-14	M.	2,283		2,131		1,216		885		1,640		1,645		9,800	
	F.	1,873		1,745		1,112		905		1,623		1,701		8,959	
	Tot.	4,156	25.6	3,876	27.0	2,328	20.3	1,790	18.5	3,263	25.0	3,346	23.9	18,759	23.8
15-30	M.	2,183		2,077		1,683		1,406		1,709		1,982		11,094	
	F.	2,321		2,116		1,539		1,727		1,883		2,075		11,661	
	Tot.	4,504	27.8	4,193	29.2	3,222	28.2	3,187	33.0	3,592	27.5	4,075	29.0	22,755	28.9
31-55	M.	2,240		1,610		1,812		1,200		1,998		1,745		10,605	
	F.	1,716		1,591		1,640		1,206		1,364		1,676		9,193	
	Tot.	3,956	24.4	3,201	22.3	3,452	30.2	2,406	24.9	3,362	25.7	3,421	24.4	19,798	25.1
> 55	M.	429		468		304		333		289		591		2,414	
	F.	306		465		128		200		280		448		1,827	
	Tot.	735	4.5	933	6.5	432	3.8	533	5.5	569	4.4	1,039	7.4	4,241	5.4
Tot. M.		8,512		7,251		6,183		4,723		6,789		7,144		40,602	
Tot. F.		7,706		7,090		5,259		4,935		6,275		6,868		38,133	
Total		16,218		14,341		11,442		9,658		13,064		14,012		78,735	
%			100.0		100.0		100.0		100.0		100.0		100.0		100.0

Source: RRC, Pawe.

The Begga are not, however, the only indigenous ethnic group in the Metekel province. This indigenous population also includes the Agew, the Shinasha, the Qimant and the Oromo. According to Dessalegn Rahmato's estimates (1986:9-10), the Begga amount to about 72,400 people out of the 296,200 inhabitants of the Metekel province; this was the figure given in the national census of 1984. The Begga would there-

fore be the 24.4% of the total provincial population.[3]

The "Tana Beles Project" is a so-called "conventional" resettlement area. In other words it is a resettlement established in a previously almost totally uninhabited area, thus differentiating it from an "integrated" resettlement scheme which provides for relocation to areas where human settlements of quite substantial proportions already exist. In general terms the main objectives of the programme include the cultivation of approximately 100,000 hectares of land, the creation of a social and economic framework, eventually providing alimentary self-sufficiency and the integration of the area into the regional economy.

A feeding centre for the distribution of supplementary food rations was set up to provide assistance to children 4 years of age or under and other vulnerable groups such as pregnant women, nursing mothers, the elderly and the sick. A hospital has also been organized, where an Italian team operates, and some small rural clinics have been equipped to help the population in coping with the difficulties involved in adapting to new environmental and sanitary conditions.

The Ethiopian organizations currently present in the area include the RRC, the Workers' Party of Ethiopia (WPE), the Ministry of Agriculture and the Ministry of Construction. At this stage of the programme they are coordinating aid and development activities in the programme. Other important organizations, such as the Peasants' Associations and youth and women's associations, have also been set up in some of the villages.

1.3 Literacy programmes and formal education in the Beles Valley

Generally speaking we can identify certain factors which have a major influence on the educational and social problems in the area.

3. The term "Shanquella" has a pejorative meaning when used by the people of the highlands. Furthermore the term is somewhat imprecise, once again with negative connotations because it is also used in Ethiopia to refer to other populations who reside along the border between Ethiopia and Sudan, populations submitted to the Amhara, especially during the last century. Highland people consider the "Shanquella" uncivilized and primitive. This, as one can well imagine, creates many problems in social relations between the various groups of settlers and the Shanquella who live in the Beles valley. The use of the alternative term, "Gumuz", indicating a linguistic group similar to the Shanquella who live in a adjoining area, was proved by Dassalegn Rahmato to be unsatisfactory (1986). His informants made use of the term "Begga" when referring to themselves. The authors preferred to follow this indication in the present article.

Obviously the first of these concerns the disorientation brought about by relocation and the abandonment of one's own place of origin. There are also the significant social and economic factors which define one's social status within a social grouping as well as the traditional value systems provided for the individual by his/her community.

In the second place, it is worthwhile remembering the difficulties involved in the impact of an unknown environment on the individual as well as the inherent difficulties determined by the initial lack of productive activity, sanitation problems, climatic conditions (when compared to the highlands climate) and the relationships established among the various ethnic groups. Apart from all this and closely linked to the above-mentioned factors, there are also the problems involved in the adaptation to a new environment, distinguished by that "trial and error" methodology which is typical of all settlement processes in new territories.

The final factor is due to the political and institutional constraints represented by the direction in which the programme is pointed, that is in conformity with the agricultural reform of 1975 and with the development plans of the Popular Democratic Republic of Ethiopia.

The educational institutions currently present in the area were partly established by the Ministry of Education (primary schools and literacy centres), partly by Italian cooperation in collaboration with other national agencies and Ethiopian Ministries (kindergartens) and partly by the Ethiopian Church (*yeqes temhert bet*).

Table 2 shows the educational structures present in the Beles Valley in March 1988. The information includes the five kindergartens that were opened between February and December 1987, one of which is a teacher training demonstration centre and the others are distributed throughout the districts of the resettlement area. Another important factor regarding aid to children in the area, which is worthwhile remembering, are the feeding centres where personnel from the Ethiopian Nutrition Institute (ENI) work.

The orphanage project is administered by the Children's Affairs and Social Reunification Task Force of the RRC. In 1986 it was estimated that there was a total of 921 orphans in the Beles Valley. Table 3 gives a view of the distribution of a sample of 470 orphans, or "unaccompanied minors" as they are defined by the RRC, meaning children between the age of three and fourteen who have no close relatives in the area.

The RRC reports that 41 of these orphans are in the preschool age bracket and it plans to set up 41 orphanages, 16 of which are already

Table 2 - Educational institutions in the Beles Valley (March 1988)

Institutions	*Districts*						*Total*
	1st	*2nd*	*3rd*	*4th*	*5th*	*6th*	
Villages	7	8	7	7	7	6	42
Primary schools	7	5	7	3	6	5	33
Kindergartens	1	1	1	1	1	-	5
Orphanages	3	5	2	2	4	-	16

Table 3 - Orphans in the Beles Valley by age and sex

Age	*Males*	*Females*	*Total*
0 - 4	10 3.1%	15 9.9%	25 5.3%
5 - 9	81 25.4%	66 43.7%	147 31.3%
10-14	228 71.5%	70 46.4%	298 63.4%
Total	319 100.0%	151 100.0%	470 100.0%

operational. The organization of the standard orphanage is based on the presence of two mother assistants to whom 12 orphans are entrusted (with a ratio of 6 orphans per assistant), and who are responsible for cooking for the children, washing their clothes and teaching them personal hygiene. The mother assistants are not given any specific training. Food is provided by the RRC.

As far as formal education is concerned, there are 33 primary schools in the area whose facilities are used for the literacy campaign as well. In table 4 there is an out-line of the educational profile of the area regarding primary school education. There are 185 primary school teachers, 145 of whom are men and 40 women. All of the teachers are Amhara and have studied up to the twelfth grade, after which they received a diploma from the Teachers' Training Institutes of Bahr Dar or Gondar following a year's course. The number of students per class varies from 30 to 50.

Only 8 of the existing primary schools cover the entire six-grade course; other 9 cover up to the fifth grade, and 16 up to the fourth one. All the 33 schools have the first three classes. As far as building material is concerned, the situation is still precarious. In the second district, for example, three schools have corrugated roofs and cement floors, only one school has cement walls while all the others are built of bamboo and straw with earth floors.[4]

As far as non formal education is concerned, there are literacy centres attended by the population. They are divided into men's, women's and children's classes and scheduled at different times during the day, so as not to interfere too much with the daily working routine. Data on the teachers involved in the literacy campaign are presented in Table 5.

The increase of teachers selected from the resettled population by the end of 1985 can be seen as an indicator of partial consolidation of the resettlement scheme.

Table 4 - Primary school pupils in the Beles Valley by sex, formal education and district

District	*Prim. sch.*	*Pupils classified according to formal education and sex*														*Grand total*
		1st gr.		*2nd gr.*		*3rd gr.*		*4th gr.*		*5th gr.*		*6th gr.*		*Total*		
		M	*F*	*M*	*F*	*M*	*F*	*M*	*F*	*M*	*F*	*M*	*F*	*M*	*F*	
First	7	812	571	424	232	359	120	96	21	74	17	73	16	1,838	977	2,815
Second	5	411	277	315	262	227	74	106	26	-	-	-	-	1,059	639	1,698
Third	7	475	444	395	315	394	200	158	41	66	13	75	10	1,563	1,023	2,586
Fourth	3	250	271	263	162	194	63	70	19	18	12	11	1	806	528	1,334
Fifth	6	602	498	335	225	280	134	101	17	60	7	44	10	1,422	891	2,313
Sixth	5	279	292	277	166	245	107	31	9	-	-	-	-	832	574	1,406
Total	33	2,829	2,353	2,009	1,362	1,699	698	562	133	218	49	203	37	7,520	4,632	12,152

4. For an assessment of preschool education, both of the formal system and of the traditional one, the reader is referred to section 4 of this study.

Table 5 - Teachers serving in the literacy campaign in the Beles Valley by sex and origin

Year	Literacy campaign round	Teachers from the resettled population			Teachers from other provinces			Beles primary school teachers		
		Males	Females	Total	Males	Females	Total	Males	Females	Total
1983/84	13th	-	-	-	250	39	289	-	-	-
1984/85	14th	120	-	120	-	-	-	68	13	81
	15th	-	-	-	323	109	432	68	13	81
1985/86	16th	287	16	303	-	-	-	116	33	149
	17th	230	11	241	-	-	-	123	34	157
1986/87	18th	272	15	287	-	-	-	92	30	122

2. A traditional educational institution: the *yeqes temhert bet* (priests' school)

The traditional school organised by the Ethiopian Church has, since its origins - which can be traced back to about 327 A.D. - played an essential role in the education of young Ethiopians, including those between the ages of 4 and 7. The modern preschool programme has been oriented towards this particular group. Even nowadays these traditional schools, known as *yeqes temhert bet*,[5] take in a large number of children. Suffice it to say that in Addis Abeba there were 334 *yeqes temhert bet* with 29,185 children (an average of 87.4 pupils per school) as opposed to the 84 government kindergartens with 11,110 children (that is 132,3 pupils per kindergarten) in 1982 (Ministry of Education, 1984a: 69).

Apart from the uncertainty as to its origins, ecclesiastical education was codified between the thirteenth and sixteenth centuries and since then has remained more or less unchanged. Even though it is geared towards the training of priests, monks and deacons, the ecclesiastical school in Ethiopia has provided many civil functionaries throughout history. The complete curriculum includes reading and writing during the first two years up to the study of the Psalms of David (*Dawit Medgem*) and continues, for those who follow the entire course, with in

5. For an analysis of the *yeqes temhert bet*, please see Teshome G. Wagaw, 1979; Haile Gabriel Dagne, 1971 and 1976; Imbakom Kalewold, 1970; Girma Amare, 1967.

depth study of such subjects as liturgical music and dance, law, poetry, exegesis, theology, literature, history, mathematics, philosophy, ethics and other subjects pertaining to ecclesiastical life.

The *yeqes temhert bet* we are referring to still follows the traditional curriculum of ecclesiastical education to a great extent. Before studying the Psalms of David, the pupils learn the Amharic alphabet, made up of 231 different characters and the sixteen most common diphthongs, and then the Epistle of Saint John (*Fidele Hawariya*) and the Acts of the Apostles (*Gebre Hawariya*) (Teshome G. Wagaw 1979:10-21).

The Ethiopian government recognizes the value of the *yeqes temhert bet*, especially when taking into consideration their wide distribution throughout the country and the experience accumulated since their establishment. Nevertheless, the Ministry of Education has underlined some of the limitations of the *yeqes temhert bet*, criticizing especially the teaching methods, which are based on corporal punishment, the lack of structures and the inadequacy of the teaching programmes, which are concentrated on the teaching of Amharic (Ministry of Education, 1984a:70).

In the *yeqes temhert bet* there is no minimum age limit for entering. Usually parents send their children when they reach the age of four, following a popular belief that if a child begins to study Amharic on the day of his fourth birthday, he will be successful in his studies.

Teaching is entrusted to a priest who is the sole person responsible for the school and who is paid a very small salary of about 1 Ethiopian birr per child (equal to about one half a US dollar) by the pupils' parents. Lessons are held in the open air. There is no fixed number of pupils per school and no enrolment period. This makes the class size quite variable, ranging from a minimum of 10 to a maximum of 150 children per priest. In this situation it is quite common for the priest to teach the older children directly while they, in turn, teach the younger ones.

Despite its limitations, the traditional system of education has some positive results. After having attended the *yeqes temhert bet* in fact, the majority of the students can read and write using the Amharic alphabet.

3. A formal educational institution: the kindergarten

Modern preschool education in Ethiopia was first introduced by the international community and was addressed to the children of French,

English, German and American families in their respective private schools.

Before the 1974 revolution, the responsibility for preschool education was largely assumed by non-government agencies and government involvement, especially in terms of investments in infrastructures and personnel training, was episodic and insubstantial. The few existing centres were, in any case, in urban areas and the rural population could only benefit from the traditional education provided by the ecclesiastical organizations. From 1974 onwards the government encouraged cooperation between government and non-government organizations and other grass-roots associations to strengthen the educational structures in the country, including those concerned with preschool education.

The Ministry of Education's task is one of teacher training, manual preparation, curriculum development, the preparation of teaching aids, particularly text books, and also the supervision of kindergartens. Other institutes involved in the preschool educational sector are the following: the Ministry of Labour and Social Affairs, which runs the "Children's Villages" and is also involved in running some of the country's kindergartens, the Urban Dwellers' Associations, the Peasant's Association, The Revolutionary Ethiopia Women's Association and other private and religious organizations. Since 1981 the National Children's Commission, set up by Proclamation 208, has joined these organizations.

In Ethiopia the number of kindergartens has increased from 77 in 1973 to 573 in 1983. In 1973 the total number enrolled was 7,573, with an average of 98.4 children per kindergarten, while by 1983 this number increased to 52,749 and the average number of children per school had fallen to 92.1 per kindergarten. Nevertheless the estimated target group of preschool age children was 3,279,800 (Ministry of Education, 1984a:73). This means that only 1.6% of all children in the preschool age group attended a kindergarten in 1983. Given this factor, along with the inadequate educational standards in some of the new kindergartens, we have some idea of the sector's needs in terms of investments and the training of specialized staff. According to certain preliminary estimates the number of preschools had climbed to 630 in 1984 with 4,000 teachers, 2,750 of which were trained in the Kindergarten Teachers Institute, established in 1978 in Addis Ababa by the Ministry of Education in collaboration with UNICEF (Ministry of Education, 1984b:54). The courses organized by the Ministry in these institutes last for approximately three months.

In 1976 the first curriculum for kindergarten education was prepared by a group of teachers from government and non-government institutions, convened by the Ministry of Education. In 1980 the Curriculum Department of the Ministry prepared a revised version of the curriculum that is currently in use.

In the guide to the 1980 curriculum the kindergarten is defined as an institution where children between the ages of 4 and 6 are provided with such necessary services as education, hygiene and nutrition, based on the country's objective conditions (Ministry of Education, 1984a:75). In the curriculum emphasis is placed on the contribution given by the preschool educational system to the physical, mental, emotional and social development of the child and play is considered to be an essential part of the methodology.

The curriculum allows for priority areas of activity dedicated to language development, as well as activities devoted to mathematics, adaptation to the environment, music, manual labour, crafts and physical education.

4. The pre-school educational system in the Beles Valley

4.1 The ecclesiastical structures

When speaking of the traditional educational system in the Beles Valley, we will only deal with the Christian Amhara institutions, leaving an in depth analysis of Islamic institutions such as the Koranic schools, linked to the existence of some mosques and the organization of the brotherhoods of the relocated Moslem population, to a later date. Given the close relationship between the traditional educational methods and the presence and organization of the Ethiopian Church in the area, a preliminary analysis of the current ecclesiastical structures in the area is necessary to have an idea of the system's situation in the Beles Valley.

First of all we should keep in mind that the Beles Valley was the object of spontaneous settlement by people from the highlands, especially by the Amhara, from the end of the seventies onwards. One of the settlements established by the migratory flow is the village of Dek, at the foot of the mountain range that fixes the boundaries of the Beles basin in the south-east. There is a *yeqes temhert bet* in the village, created eight years ago, with fewer than twenty students. The church in Dek has 18 priests and deacons in all. There has also been a primary school

in the village for the last eighteen years, with classes from first grade to sixth, approximately three hundred students and five teachers.

As far as the settlement plan area is concerned, the Church has, till now, built and consecrated thirteen churches, mostly concentrated in the third district with six churches, while there are two in the second and sixth district and only one each in the other districts. Two more churches will soon be consecrated. It is worthwhile noting that all the priests are settlers and were priests in their district of origin as well. The priests cultivate the communal land along with the rest of the population until such time as the church is completed; from that moment on they are supported by the community. Each church also has a secretary in charge of administration who draws up a detailed list of the faithful under its jurisdiction and the contribution due from each of them. Apart from the priest and secretary, each church has a few deacons. A lay representative elected by the community who serves as the contact between the church and the faithful. Every Sunday morning after services the priests organize meetings with the lay adults on pastoral matters relating to particular aspects of the scriptures.

The majority of the already consecrated churches, that is five, have been dedicated to the Virgin Mary (*Qidist Maryam*), while three are dedicated to St. Michael (*Qiddus Michael*) and two each to the Saint George (*Qiddus Giorgis*) and the Arch-Angel Gabriel (*Qiddis Gabriel*) and one to Jesus (*Quiddis Iyesus*). The churches were built with contributions from the Peasants' Associations and sometimes from the Youth Associations. From an ecclesiastical administrative point of view the churches in the Beles Valley are dependent on the Chagni Church. Nevertheless one of the priests in charge of one of the largest churches in Beles also serves as coordinator for the clerics who live in the resettlement area.

4.2 The traditional system

Compared to the ecclesiastical system described above, the traditional educational system is not very well consolidated as yet. There is only one *yeqes temhert bet* in a village in the third district and one will soon be opened in another village not far away. It is therefore premature to analyze the impact of this structure on the educational system in the area. We can, however, describe its organization.

The only existing school is taught mainly by the priest but the deacons also serve as teachers on occasion. The population of the village

comes from the province of Menz Gishe, located in the north of Shoa. The school is held in the open air, within the church perimeter. The pedagogic method used in the school reflects the traditional one described above, mainly based on memorization by repetition.

There are about thirty-five pupils, almost exclusively males between the ages of 5 and 9, except for a few who are between 12 and 15. The lessons usually last 4 hours a day from 9 until 4, with a break of two hours between twelve and three, but they may go on for up to six hours. In a normal lesson the pupils are divided in groups, each group being assigned to a deacon who reads aloud extracts from religious texts which are then repeated by the children. During the following lesson the children study the letters of the alphabet written on large cards. The teacher corrects any eventual mistakes made by the deacon. According to the priest, corporal punishment is not used, as it was in the areas of origin, due to the fact that the children, recently resettled, could become ill because of the changed environmental conditions.

The teaching material used consists of Biblical texts: St. John's Epistle, the Psalms of David, a book of the hours and some texts in *Ge'ez*. Some material produced by the Ministry of Education for the literacy campaign is also used, for example the Amharic alphabet printed on large cards, and exercise books lent by parents who take part in the literacy campaign or which have been purchased in nearby markets. Blackboards, chalk, copybooks, pens, pencils and chairs are not used.

4.3 The formal system

The introduction of the formal preschool educational system into the Beles Valley is due to the a multisectoral programme supported by the Italian cooperation. Along with sectors regarding agriculture and crafts, the project also includes initiatives relating to social mobilization and training in this sector. The programme was developed in collaboration with the Ministry of Education, the Ministry of Labour and Social Affairs, the National Children's Commission, the Ethiopian Nutrition Institute and the University of Addis Ababa.

The first kindergarten in the Beles resettlement area was opened in February 1987. This structure was organized as a pilot demonstration centre with the task of providing both a theoretical and practical training in the techniques of preschool education to a staff selected from among the resettled population. This personnel took on management responsibility for similar educational centres. In September 1987, in

fact, four other kindergartens were opened. The new buildings have been constructed by the Peasants' Associations.

In the enrollment of children the access of pupils from the various ethnic groups was considered important in view of: (a) the value that contact between children of different ethnic and social groups has in fulfilling the pedagogic activity based on the theme of cultural identity and relationships among cultures; and (b) the demonstrative effect this activity has on the staff being trained so that prejudices and ethnocentric behavior can be overcome.

Therefore, in the total of 1,128 children attending the five kindergartens, beside the relevant number of Amhara (485) and of Hadeya (400), a small group of Begga children (17) is also included. Table 6 illustrates the data relating to pupils enrolled by ethnic group and age.

Table 6 - Pupils enrolled in the 5 kindergartens in Beles Valley according to ethnic group and age (July 1988)

Ethnic group	*Age*						*Total*	
	4 years		*5 years*		*6 years*			
Amhara	150	46.6%	143	37.5%	192	45.2%	485	43.0%
Hadeya	106	32.9%	135	35.4%	159	37.4%	400	35.5%
Kembata	51	15.8%	43	11.3%	6	1.4%	100	8.9%
Wolayta	10	3.1%	33	8.7%	8	1.9%	51	4.5%
Oromo	-		24	6.3%	7	1.6%	31	2.7%
Guraghe	-		-		25	5.9%	25	2.2%
Tigrini	-		-		19	4.5%	19	1.7%
Begga	5	1.6%	3	0.8%	9	2.1%	17	1.5%
Total	322	100.0%	381	100.0%	425	100.0%	1,128	100.0%

As far as the teacher training programme is concerned, 33 apprentice-teachers qualified at the end of a four month course in the model kindergarten (see Table 7).

The teachers are already employed in the other kindergartens that have opened in the area. It is important to bear in mind that out of the 33 apprentices, 9 teachers trained in this programme attended a four month advanced course organized by the Ministry of Education in

Addis Ababa. The 33 apprentices selected (all residents of the resettlement area) are between 21 and 33 years of age and their level of education varies between the sixth and the twelfth grade. Twelve of them are women. Finally, most of the teachers come from Shoa.

Table 7 - Diplomated teachers and trainees in the training preschool education course by formal education, sex and district (July 1988)

District	*Formal education and sex*								*Total*
	6-8		*9-10*		*11-12*		*Total*		
	M	*F*	*M*	*F*	*M*	*F*	*M*	*F*	
First	1	2	3	2	3	-	7	4	11
Second	-	1	2	1	2	-	4	2	6
Third	-	2	-	-	2	-	2	2	4
Fourth	-	1	1	-	1	-	2	1	3
Fifth	3	3	2	-	1	-	6	3	9
Sixst	-	-	-	-	-	-	-	-	-
Total	4	9	8	3	9	-	21	12	33

5. Concluding remarks

As we stated at the beginning of this report, it seems somewhat premature to draw any general conclusions from data which only concerns the first phase of such an important process of social, economic and cultural change as the one analyzed in this paper. Nevertheless certain phenomena that deserve further study can be stressed.

First of all it is worth noting that traditional socialization systems have already been reproduced by part of the relocated population, especially by the Amhara. It is important to stress that, beside the primary schools, the literacy centres, and the kindergartens, some traditional educational institutions were working less than a year after the arrival of the first settlers.

Apart from the differing curricula, structures, kind and quality of personnel, it must be noted that the foundation of churches and the reorganization of priests' schools were the results of an autonomous drive which is directly involving the Amharas in the resettlement area.

An analysis of the reasons justifying the Amhara community's support to local churches and traditional schools is necessary. This fact sheds some light on the emphasis which resettled Amharas give to the re-organization of traditional churches and priests' schools. It seems to indicate the need for re-affirming one's own ethnic identity, in a critical situation where inter-ethnic conflicts have already occurred, especially among the Begga, who are the host population, and all the other ethnic groups.

The traditional systems of the Begga and other ethnic groups living in the resettlement area before the arrival of the new settlers are, on the other hand, already undergoing modifications which we intend to study by analyzing the reactions of the Begga children enrolled in kindergarten.

In terms of the formal educational system, it is necessary to study the impact of the educational facilities, not only on the children but on their families as well. Furthermore, the training of qualified personnel in the educational sector is another field of study in order to evaluate the ability of people who have undergone resettlement to learn pedagogic tehniques and practices, as well as the possibility of using such personnel in social mobilization activities involving the entire population.

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14. THE EFFECTS OF CISP CHILDCARE PROGRAMME IN THE BELES VALLEY RESETTLEMENT AREA

Graziella Lodetti and Edoardo Pelamatti

1. Introduction

The CISP Project is concerned with, among others, the childcare sector. Its basic concern is to carry out childcare programmes addressed to children between 4 and 6 years old in education, hygiene, nutrition, and others. Since its commencement, the sector has been undertaking activities such as establishing kindergartens in different villages; giving childcare education on diet, and personal and environmental hygiene; training teachers and social workers involved in the childcare activities; distributing supplementary food to the children in the kindergartens; implementing preventive healthcare programmes in collaboration with the medical personnel working in the area. Thus, up to now the sector has done a great deal of work in all these spheres of childcare activities.

The main aim of this chapter is to describe and explain in detail the effects of the activities of the programme on improving the conditions of children in the area.

Up to now, seven kindergartens in seven villages have been established by the programme. These are L5, L6, L17, L45, R5, R6, and R127. Apart from the R6 kindergarten which was only established very recently, all the others have been functioning at full capacity.

Considering the physical facilities of the above kindergartens, except L5 which is a demonstration one, all are built with bamboo walls, corrugated iron sheet roofs, and earth floors. These buildings are divided into different rooms such as: classrooms, office, kitchen, latrine.

The kindergartens are equipped with different tools and equipment for teaching the children such as: seats and tables, cupboards, teaching aids, paints, books, papers, maps, chalk, posters related to the childcare programme. In addition, they have child feeding utensils such as:

cups, pots and ladles; gardening tools such as: hoes, watering cans, plastic buckets, iron buckets, plastic tubes, shovels; for play-grounds: see-saws, wooden swings, rope and tyre, drums; for crafts: sewing machine; and others.

The demonstration L5 kindergarten is fully equipped with all necessary materials apart from being built with cement walls and floors, glass windows as well as iron frame roofs. It has also a museum and a library. This kindergarten is used as a centre for training teachers locally with some basic knowledge of Childcare activities by the experts involved in the programme. It is also a centre where all the teachers meet at weekends in order to share experiences, and exchange ideas and views. Apart from local training, those teachers who meet the criteria of the preschool teachers training institute have been taking training courses in the institute in Addis Ababa. The numbers of teachers at the moment by sex and training is shown in Table 1.

Table 1 - Numbers of teachers by sex and training

Kindergarten	*Sex*		*Training*		*Total*
	M	*F*	*Local in L5*	*Formal in A.A.*	
L5	-	4	4	-	4
L6	3	-	3	-	3
L17	2	2	2	2	4
L45	2	1	2	1	3
R5	5	2	5	2	7
R127	1	3	3	1	4
Total	13	12	19	6	25

All the teachers selected by the programme come from the resettled population. This choice is dictated by the need to ensure that the education process continues beyond the programme, and to make use of the existing human resources in Beles. The 6 teachers sent to give the specialization courses in Addis Ababa, and who are already working in the kindergartens that have been built, are to be joined by a further 9 who will be setting up new kindergartens over the coming months in their own villages.

The Syllabus follows the Ethiopian pre-school education curriculum: language, mathematical concepts, environment observation, physical exercise (sports), music, and manual work.

As stated earlier, children between 4 and 6 are enrolled in the kindergartens. The total number of children enrolled in the 1989/90 programme excluding the recently established 'R6' kindergarten are given in Table 2.

Table 2 - Number of children enrolled in 1989/90 programme

Kindergarten	*4 years*	*5 years*	*6 years*	*Total*
L5	59	58	42	159
L6	56	56	60	172
L17	45	56	60	161
L45	56	59	60	175
R5	64	83	108	255
R127	55	42	59	156
Total	335	354	389	1,078

Since the commencement of the CISP childcare programme in the Beles Valley resettlement area, two groups have completed the kindergarten programme and joined the regular elementary schools in the villages.

The number of children who completed the kindergarten programmes as well as the number of children who joined the elementary schools are shown in Table 3.

In order to follow up the activities of the childcare programme, several surveys have been conducted. Two of the surveys that have been conducted are presented below: "The effects of the 1987/88 kindergarten programme on the children who joined the elementary schools" and "The opinion of kindergarten children's families on the activities taking place under the childcare programme".

Table 3 - Number of children who have completed the kindergarten programmes and the number of children who have joined the elementary schools, per year

Kindergarten	*Number of children who completed the kindergarten programmes*		*Number of children who joined the elementary school*			
	1987/88	*1988/89*	*1988/89*		*1989/90*	
L5	65	60	27	41.5%	52	86.7%
L6	--	81	--	--	43	53.1%
L17	60	49	60	100.0%	49	100.0%
L45	59	55	52	88.1%	44	80.0%
R5	129	152	84	65.1%	113	74.3%
R127	8	12				
Total	321	409	223		301	

2. Effects of the 1987-88 kindergarten programme on the children who joined the elementary schools

The aim of this survey was to analize the effects of the childcare programme on those children who completed the programme in 1987/88 and joined the elementary schools in 1988/89.

In order to reach the intended objective of the study, 23 teachers in the first grades of four elementary schools (L5, L23, L17, and R5) were interviewed through a questionnaire. The appropriate times selected to interview the teachers were two months -- February 1989 (end of the first semester) when 30.4% of the informants were interviewed, and June 1989 (end of the second semester) when 69.4% of the informants were interviewed.

These two months are very appropriate because they are the months when the semester programme finishes according to the Ethiopian curriculum. So this enables the informants to give objective judgments on the standards of the children based on the performance of the semester results.

The village elementary schools included in the study were L5, L23, L17, and R5. The remaining two kindergartens, L6 and R127, were not included in the study because: a) L6 kindergarten had no children who had completed the programme because it was only established one year

earlier; b) R127 kindergarten had children who had completed the programme but due to lack of an elementary school in the village only a few of them decided to join elementary school in the villages which are very far away.

Of the four selected elementary schools, three were in the same villages as the kindergartens; but the L45 kindergarten was not.

The differences noticed by the (teachers) respondents in the first grade of the elementary schools between the children who completed the kindergarten programme and the children who did not are indicated in Table 4.

Table 4 - Differences noticed by the (teachers) respondents in the first grade of the elementary schools between the children who completed the kindergarten programme and the children who did not

Differences	*Responses*	*Percentage*
Much	1	4.4%
Some	16	69.6%
No difference	6	26.0%
Total respondents	23	100.0%

The academic performance of children is stated in Table 5. The responses show that almost all the children scored high and satisfactory marks. The responses of respondents on the behavioural conditions of the children are stated in Table 6. According to the responses the children's behavioural conditions are therefore excellent, very good and good. The opinion of the respondents on the overall performance of the children, shown in the Table 7, is based on the following categories: poor and weak in all academic subjects; more active in sport, music and art; good in all activities, performance and behaviour; no difference. The dominant opinion of the respondents on the overall performances of the children is that many of the children are good in all activities.

Finally, the respondents suggested several points for the further improvement of the kindergarten programme in the future: give priority and much credit to academic subjects; initiate the children to attend the kindergarten programme regularly; teach polytechnical education

Table 5 - Children academic performance

Performances	*Responses*	*Percentage*
Very high marks	1	4.4 %
High mark	11	47.8 %
Satisfactory marks	11	47.8 %
Total respondents	23	100.0 %

Table 6 - Behavioural conditions of the children

Behavioural Conditions	*Responses*	*Percentage*
Excellent	5	21.7 %
Very good	11	47.1 %
Good	6	26.1 %
Bad	1	4.3 %
Total respondents	23	100.0 %

Table 7 - Overall performance of the children

Overall Performance	*Responses*	*Percentage*
Poor and weak	2	8.7 %
More active in sport, music and art	6	26.1 %
Good in all activities	13	56.5 %
No difference	2	8.7 %
Total respondents	23	100.0 %

related with the environment; appropriately using teaching aids; regularly observe the differences between academically weak and bright children.

Thus (9) 39.1% of the respondents responded to give priority and credit for academic lessons; (1) 4.3% responded to initiate children to attend the kindergarten programme regularly; (1) 4.3% responded to give priority for academic subjects as well as to use teaching aids effectively; (1) 4.3% responded to teach polytechnical instructions related with the environment and use of teaching aids effectively; (2) 8.7% responded only use of teaching aids; (2) 8.7% responded to observe regularly the differences between weak and bright children academically; and (7) 30.4% responded to keep up with what has been already on progress.

In general, the explanations stated in the aforementioned part of this study try to show the positive effects the childcare programme has had in different spheres of performances, activities and behaviour by studying the standards of the children who have completed the programme and joined the elementary schools.

3. Opinion of kindergarten children's families on the activities taking place under the childcare programme

The main objective of this survey was to collect the opinion of the parents of the children who attended the kindergartens. Enquiries were made on a sample of families on the following main topics: the activities their children attended in the kindergartens; their children's academic performance; their interest in children's activities through discussions with teachers; possibilities of strengthening the activities of childcare programmes in their village kindergarten; the willingness to contribute to kindergarten management; and their suggestions for further activities and services in future phases of the programme.

The following kindergartens were selected: L17, L45, and R5. 66 families (10%) were selected randomly for the interviews. 25 respondents (37.9%) were male; 41 (62.1%) were female. Personal interviews with open-ended questions were carried out while collecting the data. The data were collected in May and June 1989. Tables nos.8-12 show the main results of the survey.

Table 8 - Parents' opinion on the most important activities carried out in the kindergartens

Activities	*Responses*	*Percentage*
Music	65	98.5 %
Mathematical concepts	55	83.3 %
Hygiene	41	62.1 %
Language	31	47.0 %
Sports	2	3.0 %

Table 9 - Children performance

Results/Services	*Responses*	*Percentage*
Milk and Bread	53	80.3 %
Counting	50	75.8 %
Singing Songs	46	69.7 %
Language (Reading, Writing (Speaking, and Listening)	42	63.6 %
Personal Hygiene	41	62.1 %

Table 10 - Discussion topics between parents and teachers

Discussion topics	*Responses*	*Percentage*
How well the children follow the kindergarten programme	16	51.6 %
Whether the children quarrel with other children	6	19.4 %
In order to treat the children carefully	8	25.8 %
To serve milk and bread properly	1	3.2 %
How well the children behaves in the kindergarten	3	9.7 %

Table 11 - Parents' suggestions on kindergarten activities

Suggestions	*Responses*	*Percentage*
Provision of regular, proper and enough milk & bread	23	56.1 %
Careful handling of children in the kindergarten	6	14.6 %
Provision of health treatment for the children	4	9.8 %
Provision of clothing	5	12.2 %
Proper and careful teaching	19	46.3 %
Teaching academic subjects instead of songs	2	4.9 %
Keeping the hygiene of the children properly	1	1.5 %

Table 12 - Parents' contribution area

Parents' Contribution Area	*Responses*	*Percentage*
Boiling milk	1	26.2 %
Looking after the children	18	29.5 %
Keeping the garden	12	19.7 %
Cleaning the rooms	6	9.8 %
Manual capacity	44	72.1 %
Contributing money	3	4.9 %
Total Respondents	61	100.0 %

From the analysis of the opinions of the families stated in the tables above it is possible to argue that the parents: had a good understanding of the activities taking place in the kindergarten based on the curriculum; had a positive opinion of the results their children gained and the services provided by the programme; were available for an active kindergarten activities follow-up through discussions with the teachers

about their children; and above all, had a quite fully enthusiastic willingness to contribute according to their capacity towards the kindergarten activities.

4. Concluding remarks

This short survey provides a certain amount of significant data on the families' attitudes towards the kindergartens, and can be used for a broader consideration of the question of community participation in implementing the programme, and hence the conditions for the handover.

As stated above, the kindergartens were set up in the initial stage of the resettlement process (when the plight of the weaker sections of the population appeared more dramatic) to meet a real and widespread need for child care.

The immediate, massive influx of children confirmed that this was a real and objective need, and demonstrated the positive way in which the local people had welcomed the service.

Despite this, the participation of the families, the village communities and the institutions themselves, in running the activities in the first part of the programme, was rather weak, not to say non-existent.

On the one hand the re-settled people seemed to reject, or at least merely to put up with, the fact that they belonged to a new environment; on the other, production needs relegated services to the lowest political priority level, with the result that the kindergartens which were developed as programme structures, were simply used passively by the population, without their active participation.

Several factors subsequently emerged to change this attitude:

- the health and hygiene situation, and the general quality of life, improved;
- the territorial structures were consolidated. Villages were completed, taking on their own features, with their own administration and organized services;
- the people settled on a more permanent basis, and the sense of be longing developed until they were gradually able to begin taking part in social and community life.

In addition to these factors, a number of activities under the programme proved to be particularly effective in involving the participa-

tion of the people and getting them to take over certain responsibilities for the management of the kindergartens:

- after building the first demonstration kindergarten managed almost exclusively by the programme, it was decided to get the villagers themselves to build their own village kindergartens in the local style and using the most easily available materials (CISP supplied the tools and the funding). This policy made the most of the existing craft skills in the villages, developed a spirit of solidarity among them people and above all reinforced the idea of working for the common good;
- for every kindergarten a management committee was created. The members of the villages therefore had to decide on the policies, the contents and the methods to be used to manage them, while the programme helped them to identify their priorities and provided material support;
- the kindergarten was used as the focus of other initiatives: health-care (medical screening), nutrition (feeding demonstrations, vegetable gardening), assistance (distributing clothes) and leisure activities involving the whole community. The kindergarten was often used for meetings of the associations (peasants, youth, women's associations), literacy classes, and dress-making classes, and became the focus of attention for the whole village.

We consider that the initial aim to create a service that would be capable of meeting the needs of the people and be self-sustaining at the end of the programme, has been partially attained.

The survey, whose results are given above, shows that the vast majority of the families consulted have fully grasped the significance and the function of the kindergartens and are very interested in their activities. Moreover, all the families said that they were willing to make a contribution towards running the children's educational services, according to their capacities.

In two villages (R6 and L131), the kindergartens were built only recently in response to the demand from the local people, who were wholly responsible for the scheduling and planning, with no extra help from the programme. The data on these two kindergartens are not given in the survey.

While the conditions are now ripe for real community participation in carrying out the pre-school education activities, there are still a number of institutional and financial difficulties awaiting solution

before there can be a complete hand-over.

The economic conditions in the Beles Valley make it rather unlikely that the village will be in a position to sustain the kindergartens. One particularly difficult problem will be paying the teaching staff, which has so far received a monthly pocket money allowance from the programme.

At the same time there is a political difficulty: the absence of any national legislation governing pre-school education. It is to be hoped that the recently-created Regional Parliament will be able to put forward legislative proposals in this regard.

In methodological terms, the hand-over (for which all the main details have been worked out already) will have to undergo a period of experimentation before the executing agency finally leaves the area.

In this case, the Project would be viewed as a childcare social policy experimental laboratory, and could also monitor and evaluate the progress made, to provide the local planners with the information they need to draw up and implement standards and criteria for managing kindergartens in future.

15. PRE-SCHOOL ACTIVITIES AND HEALTH EDUCATION IN THE BELES RESETTLEMENT AREA

Rosa D'Arca

1. Introduction

Resettlement policies - although designed as part of development strategies - involve social costs that affect the vulnerable groups of the population. Children are particularly sensitive to the disruption of the old social environment and to the inconveniences of the new settlement. Poor child care is but one of the consequences of setting up a new productive system.

In the Beles Valley the Ethiopian government has carried out one of its most important resettlement operations as part of the plan to transfer groups of population from overpopulated plateaus and from drought affected areas. Since 1985 more than 70,000 people have been resettled in the Beles area.

As part of the Italian co-operation programme CISP is carrying out in the area a multisectoral programme with the general aim of consolidating the productive and social networks at the village level.

The present paper describes the background, the assumptions, the policy options and the actual initiatives involved in a child care programme supported by CISP since 1986.

2. Social and health conditions of the resettled people in the Beles Valley

In the period between October 1985 and April 1986 more than 75.000 individuals were resettled by the Ethiopian Government in the Beles Valley, in the Metekel Region. The settlers belonged to different nationalities - Amara, Hadiya, Kembata, Oromo, Wolaita. Most of them originally came from the Wollo, Showa and Sidamo regions. A

group of new settlers, amounting to about 5.000 individuals, most of whom came from Tigray, was transferred during the first few months of 1988.

The total population living in the Beles resettlement area on January 1989 is 78,359, as shown in Table 1.

Table 1 - Population of the Beles Resettlement Area

Age groups	*Male*	*Female*	*Total*	*%*	*Cum.%*
0 - 4	6,310	6,327	12,637	16.13	16.13
5 - 14	10,210	9,851	20,061	25.60	41.73
> 15	23,951	21,710	45,661	58.27	100.00
Total	40,471	37,888	78,359	100.00	

Source: CISP. Modified from Tanafai, Studio Pietrangeli, 1989.

21,629 households are present in the area, with an average of 3.6 members per family. Among the household chiefs, 2,018 (9.3%) are women.

During the first stages of the project, priority was given to agricultural activities, including the clearing and preparation of the land to put under cultivation. Therefore, all the settlers able to work have been involved in these activities, women and teenagers included.

By the end of 1986 46 villages had been set up. Drinking water fountains connected with a water supply pipeline and health posts were available in almost every village; every two or three villages there is a primary school and a feeding centre - whose task is to distribute food supplements to the risk groups.

Since 1986 the area has been served by a temporary bamboo hospital, with a mixed Ethiopian-Italian staff. Hospital records show that malaria is the most common cause of death. Major diseases are tuberculosis, Acute Respiratory Infections, entero-parasites and sexually transmitted diseases. Ophthalmic diseases, particularly Vitamin A deficiency and trachoma are frequently detected in the district. Among children under 5, malaria, anemias, multivitamin deficiencies and acute respiratory

infections were recognized as major diseases, as well as a prevalence of 13% moderate/severe wasting (Table 2).

Table 2 - Major diseases among settlers

* Malaria
* Tubercolosis
* Acute Respiratory Infections
* Entero-parasites
* Sexually transmitted diseases
* Vitamin A deficiency
* Trachoma
* Malnutrition (13% moderate/severe wasting among under 5)

Source: Ethiopian Ministry of Health, 1988.

Poor health conditions are also due to the ecology in the receiving area, that is significantly different from that in the areas of settlers origin, including endemic diseases, agro-climates and cultures.

Malaria was almost unknown among the settlers in their place of origin. The influx of about 70,000 non-immune susceptible settlers as of 1985 has dramatically changed the epidemiology of the project area, also because the newly established villages are located in close proximity to rivers and numerous small streams which become the ideal breeding grounds for the Anopheline vectors. These factors led to a progressive increase in the prevalence of malaria during the years 1985, 1986 and 1987 with a prevalence rate of 4.6%, 11.2% and 21.5%, respectively, during the month of peak transmission.

3. Pre-school activities and health education

In the framework of resettlement, children's care was one of the major issues the settlers had to tackle. The proportion of children under five only was 16 percent of the entire population and the organization of work did not allow the mothers to look after their children properly. Furthermore, families were disrupted by the resettlement and no elderly relatives lived in the area.

It is well known that poor child care is a major factor contributing to

morbidity. Therefore, the organization of a network of village kindergartens was regarded as an important objective to achieve. The population itself felt the need for such a service, as reported by local officers. The target group were children between 4 to 6 years. Older children could in fact attend primary schools whereas younger were partially supported by feeding centres.

Although the Ethiopian Government has paid attention to the preschool education and the Ministry of Education has issued a national curriculum, kindergartens have been rarely experienced in rural areas.

In the resettlement situation, kindergartens could be regarded as a means for implementing an active health promotion strategy rather than as being strictly an education institution.

Kindergartens could first of all provide preventive health care. Diseases such as the enteric parasites or gastrointestinal infections - highly prevalent in the area - could indeed be combated by the promotion of suitable health and hygiene practice among the children themselves and their families. Children can be considered as vehicles of health information for the whole family. They discuss at home of what they have learnt in the kindergarten and repeat plays, dances and songs with their older or younger relatives. Health education messages presented in this way stand a good chance of being passed on.

Children's health status can also be more easily monitored in an organized structure such as a kindergarten.

Finally, kindergartens can become centres of attraction for the children's families and village communities and can therefore disseminate health education messages concerning hygiene, sanitation, appropriate nutrition and appropriate use of available resources. Through kindergartens it is possible to have frequent and close contacts with children's families, especially with the women, who are otherwise too busy to participate in specific initiatives. It is worth remembering the great importance of the women as receivers of health messages, since the household duties and the education of children are their responsibility.

True participation and sustained efforts by the local population are necessary to deal with problems such as houses and village water drainages, the building of pit latrines and so on.

The area enjoys many facilities: rural roads, bridges, water, health posts, hospital. An education programme can be particularly useful in encouraging a correct and full use of such resources.

4. Health promotion initiatives in Beles kindergartens

In the Beles resettlement area CISP has set up 9 village kindergartens and one training centre. More than 2,000 children aged 4 to 6 from among all the ethnic groups have been looked after by local teachers.

In co-operation with the Ethiopian educational authorities the elements of the national curriculum considered of primary importance for the area have been emphasized in the planning of the activities for children. They consist of learning the Amharic language, the fundamentals of numeracy, physical education, music and art education. Learning the national language (Amharic) is also an important way of encouraging the integration of different nationalities, whose languages are so different that the children would not be able to communicate with each other.

In addition to this, also health and nutritional education initiatives have been implemented. Activities involving children have been based on the principles of concreteness and repetitiveness. Simple personal hygiene practices have been undertaken daily by the children attending the kindergartens in an attempt to introduce healthy habits. Children wash themselves every day, use latrines, clean the classrooms, wash their hands and their cups before and after meals. Older children help and supervise the younger ones.

In each kindergarten a demonstration garden of not less of 1,000 square metres is cultivated by the children with horticultural species, mostly local green leaf vegetables. The aim of gardening is to educate children to the consumption of vegetables. In all the kindergartens the children's families have shown interest in this kind of cultivation and agree that vegetables should be distributed among the children. The initiative has been replicated in most of the primary schools of the area and has been recommended by the Regional authorities of the Ministry of Education as an effective educational tool.

In early 1989 a health survey was carried out among 1,139 children in five kindergartens, in cooperation with the Italian Medical Team.

The survey data show that while the nutritional situation of the sample seems quite good - one should remember that the data refer to a group of healthy children - malaria (plasmodium parasitemia) and enteric parasites are quite common (20.2% and 31.2%). Finally, signs of xerophthalmia have been detected in 8.2% of the children examined.

The main conclusions of the survey are that the health situation of the children assisted in the kindergartens is relatively good. On the other hand, vitamin A deficiency and the enteric parasites burden af-

flicting children have been singled out as serious problems. In addition to the appropriate prophylaxis, it has been strongly recommended that efforts should be made both in the specific field of health education and in implementing a latrine building programme, as well as in encouraging the use of appropriate vitamin A rich foods - such as dark green leaf vegetables and papayas - by children's families.

More over, in co-operation with the Ministry of Health, a programme of building pit latrines and water drainage channels in the kindergartens has been implemented, with the two-fold aim of providing sanitation infrastructures for the children and of setting an example of healthy behaviour for their parents.

A service of daily milk distribution has been organized - along with the Ministry of Education guidelines - with the help of the village communities, which provide volunteers to prepare and distribute the milk.

5. Children's families and village communities

Habits and information learnt in the kindergartens are then communicated to the children's families both through the children themselves and through the many contacts that the families have with the pre-school structures. Some of the initiatives implemented in the kindergartens, such as the pit latrine and the horticultural gardens, have deliberately been designed to provide examples for the children's families.

Furthermore, the families are encouraged to discuss with the local teachers matters concerning their children and their educational activities, either at periodic meetings and in informal talks.

The involvement of the village communities is another aspect stressed by the initiative: indeed factors necessary for the adequate functioning of these pre-school structures include not only the co-operation , say, of the Ethiopian authorities, but also the ability and the willingness of the local communities to run and support these facilities. The decision to undertake pre-school activities in a new village is the result of strong demand for this service from the local communities, which often spontaneously provide the manpower and the building materials for the kindergarten, as well as sending local staff to attend the training courses.

Once implemented, the kindergartens represented organised infrastructures for the mother as well. Pilot income generating activities

have been undertaken for women in three out of eight villages by means of the provision of manual sewing machines and dress materials.

It has been planned to set up a "Children's Committee", designed to act as a village institutional framework within which the children's educational and health problems can be discussed with the village health assistants and the families.

6. Role of the local teachers

The local teachers have been regarded as the means for transmitting the health education messages, since they are in daily contact with the children and their families. Therefore, special attention has been paid to the selection and training of local personnel working in the kindergarten: all the participants on the training courses have been selected from among the settlers and are representative of the various nationalities, since existing linguistic problems are particularly widespread among women and children, only a small percentage of whom use Amharic as their mother tongue; once trained the pre-school teachers work in their own villages; the presence of female teachers has been encouraged. It is not easy to identify suitable candidates for training since few of the settlers have completed formal education (12th grade) and most of them are demanded for other more remunerative jobs.

"On the job" training is the method that has been adopted for the local teachers. It comprises theoretical and methodological sessions on the main aspects of health and nutritional education with as well as practical activities with children of the concepts taught. The Ethiopian Nutrition Institute and the Italian Medical Team have contributed extensively to the preparation of special sessions on health and nutritional problems in the area, followed by practical stages on food preparation, child health and diseases. Also audiovisuals on child health play an important part in local teacher training.

Continuous monitoring of the activities has been carried out by CISP expatriates by means of weekly supervision visits to the village kindergartens, weekly meetings with the village teaching staff and a bimonthly retraining session in the training centre.

Teachers are able to identify sick children and to refer them to the village health posts. They frequently provide liaison between the health assistants and children's families and in some cases help ensure treatment is carried out correctly. The local teachers have also participated actively in the health survey. The outcome of the health survey has

been a topic for discussion by the teaching staff with regard to the important role the educational system can play in promoting health.

The decision to select local personnel to manage the initiative has produced good results, since it bypassed the linguistic and cultural obstacles which would otherwise have been encountered by other Ethiopian technicians working in the health and education sectors. Since the teachers are settlers themselves, their recommendations are easily understood and accepted by the people. When suitably motivated, they are able to direct the settlers towards a correct use of the existing resources, for instance, water and health structures.

In August 1988 CISP carried out a survey on the level of communication between the kindergarten system and the families. Groups of 15 mothers of children attending the kindergartens were interviewed in each village by means of a questionnaire. Of the interviewed women, 33.2% were Amhara, 29.0% Hadyia, 21.6% Kambata, 6.2% Wolaita, 7.8% Gumuz and 2.2% Oromo. The survey data (Table 3) show that 65% of the mothers have monthly talks with the teachers, and 80% of the latter group two or more times a month. Among the main points of discussion with the teachers, the mothers have quoted the children's health situation and the cleanliness of the classrooms.

Of those interviewed, 92.4% considered personal hygiene practices as important activities for their children's development. Environmental education and sanitation were also mentioned by 58% of the mothers. To the question as to which additional services the families would like for their children, 70% asked for an increase in the supplementary food services, while 8% demanded more mother and child care services, including health treatment. The pre-school service was welcomed by the resettled population. 80% of the interviewed mothers have asked for it to be improved and extended mentioning, among other reasons, the fact that the kindergarten allows them to make use of their time without having to worry about the children.

Table 3 - Mothers' attitudes towards kindergartens activities

* 65% have monthly talks with the teachers
* 92,4% consider personal hygiene important
* 58% consider sanitation and environmental education important
* 80% ask for an extension of the pre-school education service

Source: CISP, 1988.

7. Conclusions and recommendations

In conclusion, I would like to make three final remarks.

(i) Child care is a strongly perceived need in this resettlement situation. This is why the various activities of the kindergarten have received strong support from the village communities, both in terms of villagers working voluntarily in the implementation of specific initiatives and in terms of devoting village infrastructures and areas to the programme.

This is an example of how community involvement can be gained when people are asked to participate in initiatives to which they themselves give high priority. However, in order to achieve full involvement of the local communities in the management of the child care system, people should be given access to the definition of the priorities of the programme, to the analysis of its economic sustainability and to the evaluation of its main outcomes.

(ii) When efforts are devoted to the reconstitution of social and productive networks, as in the present case, intersectoral collaboration between the educational and health services is capital. This mutual support can best be obtained when common objectives are shared and when training activities are appropriately coordinated. With the help of different Ethiopian and external institutions working in the Beles resettlement area, a local network of skilled people has been established in many productive and social sectors. Local leadership of this kind could take the responsibility for tackling specific problems such as child care and, in general, help overcome the emergency situation of the recent resettlement.

(iii) Finally, the present experience of health promotion through kindergartens could also contribute to the production of a "module" that could be repeated in other rural areas of Ethiopia.

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II. FUTURE PROSPECTS AND HAND-OVER STRATEGIES FOR THE BELES VALLEY

16. THE CORNERSTONES OF DEVELOPMENT: TRAINING, PRIVATE COOPERATIVES, MARKETING STRATEGIES AND HANDING OVER

Paolo Antonioli

1. Introduction

Nearly four years have gone by since the first steps were taken to set up the "Tana Beles Project" and within its framework the CISP Multi-sectoral Programme, and some considerations can now be made on the results attained, the current situation and the expectations amongst the settlers and the further possibilities of development examined.

It is necessary also to ask: how deeply rooted are the results obtained and what further financial and technical aid is required to ensure both that the results will be durable and that the standard of living of the settlers will improve?

2. The results obtained in the first four years

Conditions in the Project area have greatly improved since the operations started and in general the population of approximately 80.000 people distributed in forty-seven villages have access to facilities which are probably not available in many of the other agricultural areas of Ethiopia: fresh drinking water in all villages, a new housing programme to replace of the previous *tukuls*, a good road network, a modern hospital and first aid clinic in all villages, a malaria eradication programme which has greatly improved the situation in this field, various markets and shops, hotels and restaurants in different locations, a Post Office, a regular bus service to Chagni and from there to Addis Ababa and Bahr Dar, and an Airport with a regular air service to the Capital. Sports activities are being encouraged and are taking place

both at the village and regional level. Primary schools are operating and are distributed in such a way that basic education is now available to all children. Kindergartens are operating in nine villages, for a total of eleven villages benefiting from their activity, for children between the ages of four and six.

The activities of the Project and a considerable influx of people connected with the various branches of Government Administration or involved in private business activities have also brought to the area a certain distribution of cash which is beginning to provide the settler families with a slow but gradual increase in purchasing power.

The villages have been able to acquire not only a substantial and ever increasing number of goats (to the point where such activity may in the future have to be carefully controlled to avoid problems for agriculture and forestry), but also, thanks to a successful anti tze-tze fly campaign, they are now starting to have some cattle. The area still lacks and needs a banking facility, although this matter is being examined by the local authorities.

In the fairly near future telephone facilities should be available; a bus service connecting the various villages has also been programmed thereby fulfilling a greatly felt need.

In this situation the majority of the settlers are now beginning to feel more radicated to their new homes, to have a better outlook with regard to future lives and are therefore more willing to work.

Consequently new initiatives and developments are now attracting the interest of the people and there is a greater awareness of the possibilities and resources offered by the Project area.

There is not only a very large agricultural area (about 20.000 hectares) available for the cultivation of cereal and oil seed crops during the rainy season. In fact the Beles Valley area offers a considerable amount of partly still untapped perennial water resources, provided not only by the river Beles itself but also by a number of its small tributaries that do not dry up even during the dry season. Two dams, one on the little Beles and one nearly completed on the river Beles itself will certainly improve the availability of the water in future.

Whereas the land in the valley is chiefly black vertisol (about 60% of the total) with the presence in certain areas of red ultisol, many areas along the banks of the large and small rivers are characterised by the presence of sandy soils. Therefore in many cases the land along river banks offers ideal condition for the cultivation of a variety of horticultural and fruit crops.

Although a considerable amount of deforestation has by necessity

taken place to provide the required agricultural land for the settlers and the necessary roads, buildings and housing, large forests still enclose the area, and provided that a careful and constant reforestation programme is carried out, enough timber and bamboo should by available in the future to satisfy the requirements of the developing handicraft activities specialising in the manufacturing of wood and bamboo furniture and other house building materials such as doors and windows, of which the whole settlement area has a great need with an ever increasing demand.

3. Needs for the future

It is relevant to note at this point that the great distances from other centres of production and the transport difficulties and costs for the above mentioned items offer great advantages to local production, particularly when such local production is also in a position to compete in terms of quality.

Future activities and technical assistance in this sector will also have to devote considerable attention and obtain the best cooperation from all local interested parties for the best employment of good timber sawing techniques to avoid useless and unnecessary wastage of logs, especially as far as high quality hard wood is concerned, of which the already scarce *cordia* seems to be the principal kind in the region.

Together with the need for products that can be made with wood or bamboo and which can therefore provide jobs for skilled trained personnel, there is also quite obviously a considerable demand for all kinds of household and farm tools and implements and their maintenance and repair. Trained craftsmen are now able to produce and repair, using the most basic and simple equipment, a large variety of the above mentioned goods, but whereas at this time a sufficient amount of scrap metal is available from the Project workshops, in the future a problem may arise with regard to the availability of such scrap metal and in this context efforts will have to be made to solve the problem of future supplies.

The abundance of clay soils, both black and red, offers an unlimited supply of raw material for pottery work which produces items traditionally largely used by all the families for different household needs. This kind of activity, familiar to many women even from their places of origin, substantiated with new technology and with possible further technical improvements, is also a source of income on which many

families could rely provided a suitable way of improving marketing activities could be found. The possibility of utilizing the clay soils for the production of different kind of bricks and tiles is also being examined to enlarge the scope of pottery activities and provide more jobs and income.

The opening of one shop by the CISP Project, located in the busy centre of Almu Town, is now providing a successful outlet for the horticultural activities and a better cash income for the handicraft workers. In fact it has been possible to observe various stages of progress in relation to the development of production:

- the attempt to attain self sufficiency;
- sales on the field (or in the workshops) to customers from nearby villages;
- sales on the village market;
- sales on larger markets covering a group of villages;
- finally the sales through a shop.

Each stage, of course, marks an improved sales technique and brings a better price to the producer, but at the same time it requires a more personnel organization, transport facilities and improved product presentation, packaging and storage of some sort.

Needless to say, for the future, especially considering the climatic situation, cold storage could become a necessity, or at least a very limiting factor, with all the inherent financial and technical difficulties that would have to be solved, considering the geographical, climatic and social conditions in this very remote area.

4. The settlers' reactions to the Project

How has the gradual development of this process of slow but constant general improvement of the settlers' conditions been achieved in these four years and how has it been possible to obtain a favourable reaction from the settlers themselves in the face of the disastrous conditions of emergency under which the whole Project started?

A large mass of people (about 80,000) originating from very different parts of Ethiopia and of quite different ethnic groups, with therefore different languages and customs, and with the vast arriving from the highlands of the country, found themselves in a virgin territory, plagued by malaria, offering farming conditions and soils that were very

different from the lands they were used to.

These populations, principally Amhara, Kembata, Hadya, Wolaita and Tigrinian, had also different backgrounds as far as their original activity was concerned. Not all were farmers; many were small landowners, but also very often part-time traders, and in many cases the farming consisted especially in pastoral activities.

Undoubtedly the terrible 1984 drought had reduced these population to extreme poverty, famine and sickness, but under normal condition agricultural activity was easier in their home lands. Families were divided, arrangements for transport and final reception were scanty and disorganized, to say the least, and the end result was that the settlers started their new life in the Beles Valley in a very demoralized, unhappy and famished condition aggravated by the ravages of malaria.

It is also important to note that housing had to be provided for all this new population and the settlers had to devote a great amount of their time and labour to building of their own houses.

During the initial stage all the houses consisted of tukuls. Subsequently the "Tana Beles Project" provided most of the settlers with improved types of dwellings. In fact the settlers on their arrival in the settlement area found conditions far different from what they had been led to believe on their departure.

Under these conditions, of course, it is very difficult to arouse in people any interest or attract attention for anything except the satisfaction of the most basic necessities of life. Therefore to initiate and expand with the settlers capable of generating a permanent trend of constant development various different approaches had to be followed.

Another chapter of this book has extensively examined and pointed out the strategy followed to overcome the enormous initial difficulties that have just been evidenced and the steps taken during the initial stages in order to get the Project under way. Once operations started and the most elementary needs of settlers (basic food, housing drinking water, medical assistance, clothing) began to be met, it became imperative to try to create and stimulate interest in other directions.

In return for their work on the approximately 20,000 hectares of the agricultural land pertaining to the "Tana Beles Project", the settlers were given their monthly food rations. These rations consisted basically of cereals (rice, maize, sorghum) and small amounts of oil seeds (peanuts, soybeans) plus allowances of sugar, salt, and oils. Very clearly an unbalanced diet was being provided, especially as regards protein and particularly vitamin requirements. The need for vegetable and fruit was obvious. It was also obvious that vegetable (but naturally not fruit)

could be provided by the small allotments (0.1 hectare) each family had received around their houses, during the rainy season. But during the dry season, and therefore for about six or seven months, no fresh vegetables would be available and no reasonable of fruits at all throughout the year. Even the traditional and ever present *barberrè* (hot pepper) became very scarce during the dry season and increases in price in very considerably during that period.

As has already been pointed out, another major obstacle by the quality of the soils, mostly vertisol, not favourable in any case for the majority of vegetable products. Every effort was made to aid the settlers in the best utilization of their small plots of land. In each village a demonstration centre was gradually provided with a group of trained local settlers (social workers) and became the source of seeds and seedlings for the settlers' home gardens.

Some have reported more extensively in this text the results obtained by this work, limited by seasonal problems, amongst others. The most effective solution was offered by the possibility of utilizing the land along the banks of the Beles and of the many small rivers which offer a certain amount of water throughout the year. The soil in many of these riverbank lands is often rich in sand and ideal for many vegetable crops (e.g. carrots, onions). In certain cases, some of which still have to be fully exploited or further explored, it has been possible to utilize these waters in a natural way (small dams and canalization), but mostly small-medium motor pumps have been employed.

5. The development of horticultural activities: problems and prospects

It is important to note, on the basis of past experience, that one major limitation on the choice of sites along river banks is the distance of these sites from the village since family participation in horticultural work is extremely important and in fact represents the key to success; any distance which may prevent or hamper family groups from joining in the activities will have a negative influence on the success of the enterprise.

The gradual development of this horticultural activity has passed through various stage, as pointed out elsewhere, and naturally necessitated a considerable amount of work in the field especially for training, since the farming experience of the settlers did not include any significant activity either in irrigation work or in horticulture and fruit growing.

The training was fundamentally *on the job training*, in other words the work was carried out on the irrigated horticultural sites under the supervision of qualified instructors, who had already been trained, effecting the operations so as to show practically how the work should be done.

On the other hand selected workers were also sent to follow courses organized with the cooperation of the Ministry of Agriculture in Regional Agricultural Institutions. Actually experience showed that visit to exiting sites organized for farmers of a different villages, where possible accompanied by Peasants' Association authorities and the village agronomist, were of great importance and extremely useful. Subsequently these visits became a routine part of training programmes having shown their usefulness not only for their training value, but also because of their stimulating effect, not only on the farmers themselves, but also on the village authorities, by making them aware of the possibilities and advantages offered to their community.

The various steps through which the activities in this sector developed were the following:

- limited production of vegetables and fruit to supply the village with essential vegetables for children, the sick and the elderly and pregnant women;
- increased production of vegetables and fruit to satisfy all the village requirements;
- production on an ever increasing scale, with the available water being the only constraint on further expansion, intended for sale to generate cash for the producing village.

Each stage, of course, opened the way (meaning in fact the eyes of the workers and of the village administration) to the next step and effectively stimulated the will of the settlers to make further efforts.

The third stage itself automatically and naturally had to face the problems of marketing. The demand for vegetable and fruit products in an isolated, but largely populated area, and where none are easily available is understandably quite considerable.

On the other hand, the monetary circulation in the Beles Valley was and still is extremely limited. In spite of this vitally limiting factor a significant and ever increasing influx of Government Administration and trained technical personnel and workers from outside the area have the purchasing power and also the need for vegetables and fruit.

So the farmer settlers gradually realised that there would be the price differentials and the advantages by gradually moving their products from: sale on the site itself, to sale on village market, sale on a large market, sale in a shop in the town.

These gradual stages allow an increasing profit to farmers and are extremely important since the improvement of income can allow also an improvement of farming techniques and will permit in the future purchase of necessary tools, equipment, fertilizers, seeds, pesticides and other essential materials.

At the time these observations are being taken one outstanding and indispensable requirement for the future satisfactory development of horticultural activities in the Beles area is becoming obvious and urgent. In fact will be essential for the survival itself of any significant production of vegetables: due to the remoteness of the area and the distance from supplies a local production of vegetable seeds will be of outstanding advantage to the farmers.

For this purpose the CISP Project, in its second phase, is planning, in cooperation with the local interested Government Departments, to establish in the most practical and simple way a seed production centre capable of providing the whole area with the fundamental seed requirements. This centre, which might very well operate as a farmers' cooperative, and would be based on one of the existing irrigated sites, could also provide a further source of income for the farmers involved and might also solve a problem which currently affects not only the settlement area, but also most of the Metekel Region.

The problems arising from the difficulties for the farmers in obtaining a regular and reliable source of seeds are in fact the last major concern as regards the future of the over 100 hectares of irrigated horticultural and fruit producing sites now operating in 16 villages. The farmer have recently shown that they are quite capable of carrying on their activities on their own with only occasional technical assistance. More help may be needed to further expand production in other villages, but certainly the existing centres seem to be capable of an autonomous existence, except for seed supplies. Whether in the future the farmers will organize themselves as Cooperatives or will continue to operate as part of the current Peasants' Association organization remains to be seen, also in the light of social and political developments of Institutions in Ethiopia.

6. Setting up cooperatives

At this time horticultural farmers are operating within the frame of village institutions and unfortunately the cooperative farming experience during the recent years in Ethiopia is not very conducive to new experiences. But one could say that the existing situation might represent a *de facto* cooperative operated by groups of farmers tied by family or common origin bonds willing to work together under a respected and accepted leadership.

Progress towards the establishment of a self sufficient autonomous cooperative organization was relatively easier and faster in the field of craft activity. This was due to the fact that groups of selected trainees, after a period of intensive training in the CISP handicraft centres (carpentry, pottery, ironcraft), having mastered the necessary techniques, also showed remarkable initiative and the determination to face the risk of private enterprise, in spite of the still very uncertain local conditions. Their period of training, during which a certain amount of production had naturally been made, had shown them that a considerable interest and request had been created anyway by their own and their instructors' efforts and every refinement of their craft showed them the very real possibilities offered by united efforts, and the first incomes deriving from the training period activities laid the base and gave them the necessary encouragement to tackle the uncertainties of independent action. A great deal of mostly moral support, but also practical advice as well as help for the first steps in accounting, management and even proper relationship between partners (or cooperative members), was necessary for some time before operations could move in an efficient and smooth way.

Finally, having overcome the bureaucratic difficulties involved in the setting up of a Cooperative and meeting the requirements necessary to obtain legal status (particularly the number of members and the capital), in December 1989 the first Cooperative of the Beles Valley was at last a reality.

6.1 The Cooperative's activity and organization

It may be interesting to consider here a few abstracts from the first report on the Cooperative's activity and examine the organizational structure it chose to follow.

The Pawe Resettlement Area Wood and Bamboo Works Producers'

Cooperative is a self-managed organization established in December 1989 by 24 members and assisted by CISP. Most of the members at present are the previous trainees of CISP bamboo and wood works training centre with some basic knowledge of the craft and recruited only from the settlers.

All the members of the Cooperative are grouped into different working groups: wood sawing group; bamboo products group; wood products group.

The organizational structure of the Cooperative has been established as shown in the Figure 1.

Letters explaining the membership of the Cooperative members were prepared and distributed to the respective village authorities of the members.

Agreements were made on the working programmes of the members; basically to work all day during the week except Saturday afternoon and Sundays.

A regulation regarding the monthly payment of the members for each month was established and approved unanimously by the members at a general meeting of all members based on the motto of the workers' Cooperative: From each according to his ability and for each according to his work. To arrive at this conclusion, an evaluation criteria was established based on the following five points:

- knowledge of the craft;
- ability to apply the knowledge effectively and practically;
- ability to handle and use tools and equipment carefully and effectively;
- smooth interaction with other fellow members of the Cooperative during the work;
- punctuality and diligent presence during the activity.

Each one of the above mentioned criteria of evaluation has a range of points from 1 to 4:

Four points:	very good
Three points:	good
Two points:	fair
One point:	poor

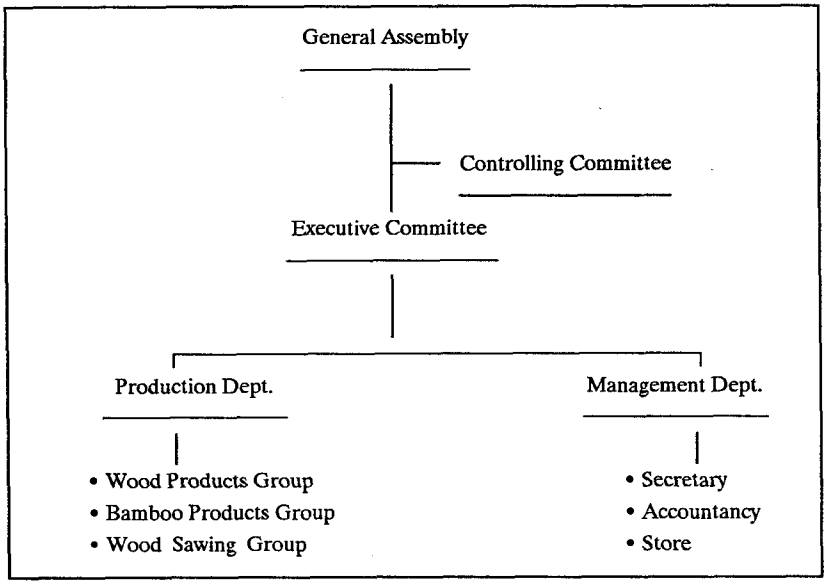


Figure 1 - Organizational structure of the Pawe Resettlement Area Wood and Bamboo Works Producers' Cooperative

The total points of the above mentioned evaluation criteria add up to twenty. As an example, it can be noted that the members of the Cooperative scored during the month of January 1990 the following points:

4 members scored 20/20
3 members " 19/20
6 members " 18/20
7 members " 17/20
2 members " 16/20

Based on the points each member has scored, the daily pay is then obtained in the following way:

20 points:	4.00 birr/day
19 points:	3.75 birr/day
18 points:	3.50 birr/day

17 points: 3.25 birr/day
16 points: 3.00 birr/day

As a result, and considering that the total working days during the month of January 1990 were 26, the payments to the Cooperative members for that month were as shown in Table 1.

Table 1 - Payments to the Cooperative members

No. of persons	*Points scored*	*Amount per day*	*Total working day*	*Amount per month*	*Total*
4	20	4.00	26	104.00	416.00
3	19	3.75	26	97.50	292.50
6	18	3.50	26	91.00	546.00
7	17	3.25	26	84.50	591.00
2	16	3.00	26	78.00	156.00
Total payment					2,002.00

It is important to note at this point that the average worker's pay in the Beles Valley area is at the present time around 1.90-2.00 Birr per day, as in most agricultural regions of Ethiopia.

The management of the Cooperative keeps the following procedures for the control of accounting and the monitoring of all activities:

- payment details description book, payment register book, and pay order voucher for the members;
- production order book with the necessary details and codes of the different products;
- income and expenditure register book with the relevant details;
- monthly evaluation and monitoring register book based on the established criteria;
- a book to register and keep the minutes of the meetings of the Cooperative.

The capital of the Cooperative is being gradually built up with monthly payments of the earnings; entrance fees have also been established for new members; these fees also go to into the capital.

Due to the increasing amount of orders received by the Cooperative, it soon became necessary to only accept orders with an advance cash payment and with a clear understanding that deliveries would not take place before one month from the date of the order.

From the production of chairs, beds, boxes and cupboards, the Cooperative has now branched out into the manufacturing of office desks, windows and doors for homes; there is still plenty of potential for further growth, provided that some more machinery and equipment could be provided to speed up certain operations, in particular for sawing the bamboo processing; the possibility for the Cooperative to establish subsidiaries in various villages also exists, for the preparation of simple parts of furniture to be afterwards assembled at the main workshop, but only a second phase of the Project could solve some of the organizational and transport problems connected also with the now insufficient premises available to the Cooperative. The capital which is being built up may also soon allow the Cooperative to have access to bank loans available for cooperation activities for further growth and development and thus increase the use of manpower.

As mentioned previously, a considerable independent activity is being carried out by ex-trainees of the metal handicraft centres. In fact the real possibility of establishing a Cooperative in the iron sector exists but has been hampered by the consideration that a ready source of indispensable scrap iron may be lacking in the future and also by the insufficient numbers of trained settlers, since many of the trained personnel are now active in their own villages where their craft is very much in demand for local necessities. Therefore, also because of family accommodation problems, some of these workers are reluctant to abandon their village activities to face the risk of private enterprise in a Cooperative. However after the success achieved by the wood and bamboo cooperative sufficient interest has been aroused to justify further exploration on this matter. At this time a group of workers, practically a *de facto* Cooperative is successfully operating producing a variety of different articles, ranging from iron knives, hoes and spades to metal stoves and other cooking instruments which find a ready if not eager market in the area. The income being generated by this activity for the workers appears to be satisfactory and is certainly above the average and comparable to that of the members of the Cooperative. Here again the establishment of closer ties with the workers active in

about fifteen villages, all ex-trainees, could be beneficial and conducive to further developments.

Unfortunately until now the crucial problem of future raw material supplies has not been solved and will have to be the object of a very careful examination in the near future so as to avoid setting up structures lacking a solid base of development in the coming years.

Pottery work, traditionally carried out by female members of the families in Ethiopia, thanks to the activity of the CISP pottery centre, is being carried out by a number of well trained if not expert women, who can help the family budget through their efforts but cannot expect for the time being to set themselves up with a Cooperative status, inasmuch as pottery products have a very limited added value possibility. The potential for further progress in this sector is quite apparent however and in more directions than one. Not only could the quality of the products be improved by the use of more sophisticated techniques and equipment (e.g. ovens), but the vast supply of raw materials readily available locally points in the direction of the production of other items which might be highly appreciated locally and in nearby areas, such as tiles and particularly bricks. A successful experience in this sector could easily open the road to the employment of more people and create the basis for the setting up of a Cooperative in this field.

7. Conclusion

The settlers, once trained and made aware of their skills and the potential emerging from their training, have shown that they are able to keep growing by themselves and face the difficulties of independent activity. A second phase of intervention is now needed to enable this long suffering population to consolidate their future and guarantee the development for which the basis has been laid.

17. CONCLUSIONS

Paolo Dieci

1. Foreword

It is not easy to draw any conclusions from this book, for two main reasons. Firstly, because the issues it deals with vary so widely, and are discussed both theoretically and historically along with other papers describing progress with the practical implementation and analysis of the results of the multisectoral Programme implemented by CISP. Secondly, there is the question of the political background against which the book has to be viewed. It comprises papers and articles mostly written between June 1989 and July 1991, and the political situation in Ethiopia changed radically throughout this period.

As for the comparative lack of homogeneity of the issues dealt with in "Resettlement and Rural Development in Ethiopia" is concerned, it must be stated at once that this was one of the book's intentions: the idea was to examine a cooperation programme, and then analyze general issues connected with it. It was while analyzing the methodologies employed to develop the irrigated areas and the home gardens, for example, that we developed an interest in examining the whole complex issue of criteria for planning agricultural development in Ethiopia, and the influence that the ideological assumptions and economic objectives might have on these criteria.

At the same time, the verification of the results obtained through the establishment of the handicraft production units suggested the need to take a historical approach to examining the impact of the craft traditions on the economy and on Ethiopian art.

This being so, the book also demonstrates the inherent complexity of any cooperation programme, in the sense that such programmes, as well as the policy and methodological choices that are connected with them, give rise to far more general theoretical and historical/political questions than the programme itself taken in isolation.

Hence the need to approach a programme from many different points of view, with consultants working on a truly interdisciplinary basis.

As far as the second set of difficulties are concerned, namely the rapid changes in the political situation in Ethiopia over the past two years, one might attempt the following "reading" of events.

In 1989, when the former government, based on the hegemony of the only political party (the Workers' Party of Ethiopia), saw that it had obviously lost its internal support, and in view of the changed international situation, it declared that it wished to introduce substantial political and economiç reforms, moving in the direction of a "mixed" economy and gradually developing pluralism. But apart from the greater economic power acquired by the small farmers with the drastic reduction in the role of the Agricultural Marketing Corporations, these reforming intentions were never implemented during 1989, 1990 and the first half of 1991.

There are two main factors which accounted for this. Firstly, the incapacity (or lack of will) on the part of the government of the day to run the complex, and complicated, machinery of the State and the party in the declared direction. The resistance of the bureaucrats to the political and economic changes that had already been evident in the Eastern European countries were also felt in Ethiopia, without the citizens being given anything to enable them to understand what was happening in their country, let alone actually take part in it.

The second factor, which was to lead to the final collapse of the Derg government and then the installation of a new government promoted by EPRDF, was the simultaneous military advance of the opposition and the collapse of the "loyalist" army.

At the beginning of July 1991, the national reconciliation conference was held in Addis Ababa, and Ethiopia's political agenda was filled with critical issues that had never been discussed for 17 years: multiparty democracy, a negotiated settlement of the Eritrean problem, ways of drafting and deciding on a new democratic constitution.

2. Problem areas for the definition of development strategies in Ethiopia

It is obviously impossible, as things stand at present, to even make a "guesstimate" of the effects on Ethiopian society of the political changes that led to the downfall of Mengistu Haile Mariam's govern-

ment and the installation of a transitional government.

What is certain is that the problematic context in which any development programme for Ethiopia has to be set, whether it is merely a national programme or one sustained by international cooperation, gives no cause for optimism.

According to the 1984 census, Ethiopia had a population of about 45,000,000 covering 1,222,000 km^2, with an annual growth rate of 2.9%.[1] In 1990, life expectancy at birth was 45.5 years, while infant mortality in 1989 was 226 per thousand live births (UNDP, 1991). In 1989, the real average per capita income was $119.02 (World Bank, 1990). And in 1988, Ethiopia's foreign debt accounted for 51% of GNP, which was 5.8 billion dollars (UNDP, 1991). According to some forecasts, by the year 2000 the cereals deficit in Ethiopia should reach 2,499,000 tons (Faught, 1988). A further factor of aggravation which cannot be ignored with regard to the completely fragile nature of the socio-economic structure of the country is the burden of military expenditure over the period 1960-1986, which rose from 1.6 to 8.6% of the GNP (UNDP, 1991). In 1986, the ratio between ODA for social investments and arms imports stood at 0.13 (UNDP, 1991).

There is no doubt that there are two factors that have had a negative impact on the history of Ethiopia over the past century (even though in reality they existed even earlier): famine and war.

Innumerable records exist to demonstrate this "historical" dimension of the problem of famine in Ethiopia, the earliest records dating back to the 9th century (Pankhurst, 1986). Between 1889 and 1892, one-third of the whole of Ethiopia's population is reckoned to have been killed by famine (Pankhurst, 1986).

In more recent times, 1974 was not only the year of Ethiopia's revolution, but also of a tragic famine on a momentous scale. In reality, as Ethiopian scholars have pointed out, the widespread dissemination of information about the 1974 famine was due not so much to the unusual nature of the event, but to the enhanced role of the mass media and the keener attention being shown by the industrialised countries than in the past to the reality of under-development.[2] The effects on the rural population of the country of the famines that had stricken Ethiopia in 1958-60 and 1966-68 were no less tragic than the 1974 famine (Mesfin Wolde Mariam, 1984).

1. The census data are given in: Henze (1988).
2. This opinion was voiced by Mesfin Wolde Mariam (1984).

Not only drought, but also the absence of storage and transport facilities, the failure to make widespread use of the water resources that exist in the country for irrigation purposes, the difficulty of effectively protecting harvests from plagues of locusts, caterpillars and other pests, and an increasing imbalance in the distribution of the population underlie Ethiopia's famines.

In the twenty year period from 1958 to 1977 it has been calculated that at least one *awraja* in Ethiopia was stricken by famine on 469 occasions in a whole year. The number of persons killed by these famines in Eritrea, Tigrai, Wallo, the northern areas and the southern areas of Shewa and the pastoral areas of Harerghe, Bale, Sidamo and Gamo Gofa, is put at 2.5 to 5 million. In 1959, in the region of Tigrai alone about 400,000 people died of famine. In 1973, in 5 *awrajas* in the Wallo region it is estimated that 20% of the 106,000 people resident population died (Mesfin Wolde Mariam, 1984).

The extent and the seriousness of the famine in 1983-84 provoked an unprecedented reaction throughout the whole world, mobilising people's emotions and solidarity in vast sections of the population.

In many parts of Ethiopia the rainy season runs from June to September. In 1983 and 1984 the rainfall was far below the expected levels during those months in the regions of Wallo, Tigrai, Bale, Harerghe and certain parts of Sidamo.

The rainfall recorded by the National Meteorological Services Agency in the period 21-31 July 1983 in the Gondar region, and the region of Eritrea and in parts of Tigrai, was 50-70% below normal. In the eastern zones of Tigrai and Eritrea, in the north-west of Harerghe and the lowlands of Arsi and Showa, in the north of Sidamo and the north of Gamo Gofa, rainfall in 1983-84 was 70% below the normal levels at various times (RRC, 1984).

In the Wallo region, following the 1983-84 famine, the number of people needing food rations distributed by the RRC in the absence of any other possible sources of sustenance was estimated to be 1,790,840 above that of any previous relief operation.

In Tigrai, the at-risk population as far as food security was concerned numbered about 1,300,000. In Eritrea 827,000 people were estimated to be in need of food aid.

In the Sidamo region in the period 1983-84, lack of food did not depend upon the climate in the same way as in other regions but rather, according to the official appraisal of the RRC, by the over-population of the area compounded by a moderate drought. At all events, in this region food aid was estimated to be necessary for 698,410 people.

In addition to the population urgently requiring food aid following the 1983-84 famine there were also the estimated 435,860 people in Showa, 419,120 in Harerghe, 376,500 in Gondar, 188,200 in Bale, 187,000 in Gamo Gofa, 72,360 in Arsi, in Keffa, in Illubador and in Gojjam and, lastly, 45,000 in the Administration of Assab (RRC, 1984).

It was after the 1983-84 famine that Ethiopia decided not only to implement food aid plans and soil conservation programmes for the most severely drought-stricken areas, but also to extend large-scale resettlement programmes.

From 1960 to 1974 the imperial government had in fact, albeit experimentally, embarked upon resettlement plans involving a total of 20,000 households (Sahale Mariam Mogus, 1982).

From the end of 1984 to January 31st 1986, 591,227 persons, accounting for 204,657 households, had been transferred from Tigrai, Wallo, Showa, Gondar and Gojjam. In the latter case the transfers were carried out on a regional scale (RRC, 1984).

The aims of resettlement and the legislative framework under which this policy was framed have been analysed elsewhere in this book;[3] likewise, emphasis has been given to the heated debate that emerged around the resettlement programme at international level regarding the reasons for the transfers, the criteria for choosing the new areas to be settled, the conditions under which the transfers occurred and the quality of life of the settlers in their new areas of residence.

Naturally the work of the Italian cooperation in the Beles Valley also formed part of this debate, and conflicting stances have been taken up regarding it, followed subsequently by studies and analyses including this book.

During 1985, sacks of wheat were dropped by air to the famine-stricken regions of Ethiopia to be collected and distributed to the families there.

Even symbolically, waiting for food to arrive "out of the blue" summed up the situation of hundreds of thousands of Ethiopian families in those years.

Against this background, resettlement seemed to be one of the possible strategies for coupling the provision of relief to the famine victims with a reduction of the peasants' dependence on external aid, by extending the country's agricultural frontier.

However, a number of obstacles arose between this initial strategy

3. See, in particular, the article by P. Dieci and V. Roscio.

and reality, which seriously hampered the effectiveness of the resettlement policy.

The lack of any structures for first asylum, including facilities to deal with the expected health problems, compounded by a lack of an adequate knowledge of the territory chosen for the transfers, and above the effect that malaria would have had on this territory, were negative factors on the resettlement on the Beles Valley.

The one critical feature which has most seriously affected the resettlement strategy in Ethiopia has been the essentially coercive nature of the whole process, beginning with the first population transfers that were only marginally voluntary.[4] Moreover, the locally planners made virtually no provision whatsoever for the settlers to manage their own production, or to be allocated any land of their own -- particularly in the period 1985-88 -- except for the 1000 m^2 home gardens for each household. As a result, the small farmers had no interest in staying in their newly settled lands.

The CISP Multisectoral Programme has endeavoured to introduce substantially novel features to these criteria, and the results are briefly summarized below.

Examining the problematic background to the development of contemporary Ethiopia, one cannot obviously forget the military conflicts in the country. Many factors explain these conflicts, because they vary in terms of their origins and development. One aggravating factor over the past 17 years has nevertheless been the lack of any kind of democratic system in which these conflicts might have been dealt with. In the absence of a "public" political dialectic between the various groups and movements in the country, the vast majority of the people have been unable to do anything other than sit back and watch the military conflict unfold. It is our view that one of the main duties of the new government which came to power in 1991 is to create systems for political participation and public consensus appropriate to the features and peculiarities of such a multiethnic population as Ethiopia has.

3. The main features of the multi-sectoral programme implemented by CISP in the Beles Valley

In conclusion, here is a summary of some of the features of the

4. We were frequently told by settlers in the Beles Valley that they were forced to leave their home regions.

multisectoral Programme which might be used in the future developments of the work there.

The multisectoral Programme to support the resettled population in the Beles area was set in motion in October 1986 as an emergency measure; in other words, it was designed to attain certain short- and medium-term objectives to meet the immediate needs of the people.

In the planning phase, the main thrusts of the scheme were defined in such a way as to meet the immediate needs in an overall plan which would create a stable development process.

In general terms, the plan set out to place the settlers in conditions which would enable them to work out the development scenarios for the area, involving not only specific training plans but also helping to set up production structures in the agricultural and off-farm sectors, on the basis of which income-generating activities could immediately be developed. At the same time an ongoing system for monitoring the results was put into place, based upon a survey of the expectations of the people living in the villages, their requests and their needs.

One of the methodological approaches which may be emphasised here is the practice of carrying out fact-finding surveys not only to acquire detailed information on the impact of the technical assistance plans (for example, reconstructing the farmed areas in every village in the home gardens and the related cropping plans, or the monetary income earned by the craftsmen as a result of their training courses), but also to find out what the beneficiary populations themselves felt about the effectiveness of the schemes and how far they met up with their expectations.

The technical and socio-economic fact-finding surveys, to the results of which much of this book is devoted, were therefore the methodological instruments that were used to actively involve the village communities not only in implementing the schemes but also in planning them.

A second aspect of the planning which we would like to emphasise relates to the criteria for promoting income-generating activities. The schemes promoted in the agricultural and handicraft fields have made it possible to develop a number of private cooperative and pre-cooperative structures.

In these cases, the methodology followed was to conduct intense training activities before the cooperative and pre-cooperative groups were set up, taking account of the people's pre-settlement occupational experiences.

At the same time, in order to define the models for the cooperatives,

drawing on existing experiences elsewhere in Ethiopia, we felt that it was absolutely necessary to ensure that every member had a real economic and financial return from the beginning.

In the socio-economic reality of the Beles area, in the initial phase of any cooperative structure, in whatever sector it operates, it is difficult for every member to be able to reap any significant monetary benefits, if any profits that are generated are to be distributed among all the members of a Peasants' Association (and in Beles every Peasants' Association had an average membership of 500). In other words, a cooperative which is based upon the personnel belonging to the pre-existing Peasants' Association runs the risk of not meeting up with the economic expectations of its members, and at the same time it may not be able to take account of and use all the existing professional vocations.

In this connection, it should be borne in mind that the Peasants' Associations in Beles, in practice, were co-extensive with the villages, and they had grown up as the settlers had moved into the area, mainly depending upon the date of their arrival.

It is for this reason that, both in the case of handicraft work and agriculture, we opted for a cooperative model in which groups of persons belonging to one or more Peasants' Association pooled their efforts and divided the profits, establishing a contractual relationship with the Peasants' Association to which part of the profits were paid, on the basis of predetermined percentages.

Quite clearly, the number of members of each cooperative or pre-cooperative varies in terms of the scope of their productive activity, but in no case it is ever greater than the number which the promoters consider to be the maximum to ensure that the members have what they consider to be a satisfactory return. It is then the duty of the cooperative, once formed, to lay down the rules and procedures for the admission of new members who wish to join as the cooperative grows, and depending upon the new specialized personnel requirements.

A third part of the multisectoral Programme which we would like to emphasize here relates to the link between child care, pre-school education and child health-care. Here again, the book sets out the results achieved by the Programme beginning with the training of the kindergarten teachers and the promotion of village kindergartens.

In this sector, the Programme set out to promote a policy of dialogue and interaction between the institutions working in the area, such as the Ministry of Education, the Ministry of Health, the Ethiopian Nutrition Institute and the Ministry of Agriculture (with regard to setting up

home gardens in the kindergartens). In a situation in which it is absolutely necessary to cater for urgent food and health problems, there is sometimes the risk of scattering energies and of having a plethora of institutions and organizations working in the area, which, while positive in itself, often leads to poor coordination.

In view of this risk, and to attempt to avoid it, the Programme's underlying aim has been to develop management committees around the kindergartens, to support them, with educational activities, including health and sanitation to be jointly planned by representatives of all the institutions in any way involved in promoting child education and health care.

This methodological approach also reveals a more general objective: to encourage dialogue on the substance of the projects between the programme and the local institutions. Development cooperation only has any meaning if it enhances rather than mortifying the technical and planning capabilities of the recipient country, at the same time fostering technical, methodological and strategic dialogue in various areas.

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APPENDIX

FIRST ONGOING PLAN OF WORK IN THE AGRICULTURAL SECTOR UNDER THE CISP MULTISECTORAL PROGRAMME IN BELES, DRAWN UP IN JANUARY 1987

Vittorio Baldioli

1. Introduction

This document was drafted during a mission to the Beles area in 1987. The plan of work described below relates to three activities scheduled under the CISP Programme based on the Convention concluded with the Ministry of Foreign Affairs on 18th August, 1986. The activities comprise:

- technical assistance and training to develop home gardens and irrigated village gardens;
- creating irrigated perimeters;
- village reforestation.

During the mission, a plan of work was drawn up taking the following elements as characteristic features of the development of the Programme's agricultural sector: the situation relating to the allocation of lands for home gardening, and the situation connected with the distribution of farm implements to the settlers' families.

As far as the land allocation is concerned it was noted that not all the households in every village had the 1,000 m^2 planned for the home gardens.

Moreover, the families did not have the agricultural implements they needed to work the home gardens. In fact, after the distribution of land that immediately followed the first resettlement phase, no equipment whatsoever was given to the settlers. What agricultural implements did

exist in the villages were mainly managed by the authorities (village chief or associations) and were used to farm the collective lands.

In view of these factors, during the operational phase of the Programme stress was placed on the demonstrative aspect of the home garden agricultural Programme, and hence the extension aspect.

The plan of work is divided into four activities: home gardens, village irrigated gardens, irrigated perimeters and reforestation.

This document has been used to guide the field work of the technical staff for the Programme's agriculture sector during the first year of activity.

A comparison between this document and other contributions in the book referring to subsequent phases of the operation will make it possible to identify the main changes that have occurred in the planning process throughout this period.

However, this first operational plan comprises the main terms of reference of the CISP Multisectoral Programme's agricultural sector, and it therefore reveals some of the main initial reasons for it.

The operational plan set out below does not spell out in great detail the training activities which subsequently accompanied every phase of the operation to eventually emerge as its main component.

2. Home Gardens

2.1 Definition

The expression "home garden" refers to the area surrounding the dwelling of the household (*tukul*), within the area of the village. This area is privately cultivated.

2.2 The present situation

The descriptions and remarks that follow refer to the month of January 1987 and are based on fact-finding missions carried out in several villages in the area.

2.2.1 Acreages

The size of the home gardens established under the resettlement

programme was 1,000 m² per household. However, from observations conducted in several villages (L1, L2, L3, L4, L5, L7, L14, L17, R3) and from rough measurements made in villages L1, L3, L4, L5, and R3, the average size was actually about 400 m². But making allowances for the areas occupied by the tukuls and the non-cultivated areas because of tree stumps and bamboo rhyzomes, the area actually cultivated by each household is reduced on average to about 200 m².[1]

2.2.2 Land preparation

The weeding, clearing and ploughing was carried out manually by the assignees of the land after it had been staked out by the resettlement agency, limited to the site in which the tukul were to be built later on by the farmers themselves.

When the land was staked out the equidistance was not always maintained to ensure that everyone had 1,000 m². Once the land allocation had been completed, moreover, the households often broke up spontaneously, which led to the building of "satellite" tukuls on the allocated areas.

2.2.3 Cropping systems adopted during the previous farm season in 1986

According to the observations made by the mission, the estimated cultivated acreage is broken down as follows: 80-90% under cereals (sorghum and maize), and 20-10% under sweet potatoes.

A few scattered areas are under chickpea.

2.2.4 Cultivated acreages

Considering the large percentage of unutilized land, mainly due to the incomplete clearing of the land and poor land preparation due to

1. After the collection of the data on the sizes of the home gardens (carried out in January 1987) it was noted that in many villages every household actually had 1,000 m² available to it. One explanation for the difference between the situation at the beginning of the resettlement programme and the subsequent situation may be the villages and the siting of the houses were reorganized after an initial period in which the newly-arrived settlers had to be given lodgings very quickly, according to the criteria laid down by the local planners.

the inadequacy of agricultural equipment and/or seeds, the total productive acreage of the home gardens in the area of intervention is about 300 ha (30 villages x 500 households x 0.02 ha/household).

2.3 Rainfed farming actions scheduled for the crop season (ending in September 1987)

The main actions relative to the preparatory phase of the first crop season (1st February - 15th May 1987), the preparatory phase for the first full crop season (15th May - 30th September 1987) and the preparation for the second season (November 1987 - March 1988) are as follows.

2.3.1 Agricultural extension of rainfed crops in the home gardens

This will involve about 30 villages covering a total gross area of about 600 has., and specifically comprise:[2]

a) sensitizing the farmers to the need to clean up the areas of the home gardens in order to have a larger acreage available for cultivation. In order to improve their awareness of this need, the project's basic commitment will be: to identify farm implement requirements for individual use, to advise the institutions responsible for distribution of the requirements, and to distribute seeds and fertilizers directly in proportion to the acreages properly cleared and prepared for sowing. Seeds and young plants for transplanting to be distributed will mainly be legumes (beans, dolochos, soybean, etc.) and fruit and vegetables (chili pepper, tomato, egg plant, papaya) in order to foster the diversification of the crops presently being grown (which are almost exclusively cereals today) in order to encourage the farming of crops which will make a better contribution to a balanced diet.

b) setting up seed farms near the small village irrigated areas, to produce young fruit and vegetable plants to be transplanted into the home gardens in the rainy season.

2. After the 1987 crop season 44 villages were given technical assistance to the home gardens.

c) building a 1,000 m^2 demonstration parcel in several villages in order to demonstrate the ideal type of home garden in terms of the cropping system, the possibility of mixed cropping, seeding and fruit tree planting density, and cropping techniques.

The parcel should preferably be located near the present domestic water supply point.

2.4 Quantifying personnel, manpower and production facility requirements

2.4.1 Technical personnel

In addition to the Italian technical personnel scheduled for the Programme -- two agronomists -- the extension system must use Ethiopian technicians, representatives of the Ministry of Agriculture at the district level and who already live in each village. These technical and administrative personnel, who will handle all the programmes relating to the points indicated in 2.3.1 above, and will design teaching aids on the main extension themes (crop calendars, and cropping methods and operations), will be joined at the level of each village by a number of other extension workers (depending upon the population of the village in question).

These latter extension workers can be selected from a group of young farmers already pre-selected on the basis of the information collected by the "agronomist" representing the village.

The project will be able to encourage the personnel, who will be recruited after this selection phase, by giving them a monthly lump sum allowance and productivity bonuses.

2.4.2 Seed requirements

As indicated in section 2.2.4 above, the total acreage that can be cultivated in all the 30 villages considered is 300 hecteres.

The planned crop breakdown is as follows:

a) *Sweet potato* (50% of the acreage, or 150 hectares). Sweet potato is to be given an important place in the cropping system on account of its nutritional value, but also for the following reasons:

- it is already widely grown in the area and it is therefore easier to find the plant stock locally;
- it is easy to conserve.

The total requirement, considering 40,000 cuttings each 30-40 centimetres in height on average, is about 6 million. The plant material needed can be acquired from the farmers themselves.

b) *Pulses* (20% of the acreage, or 60 ha). Pulses are presently not grown on home gardens, and particular stress must be placed on extending them in view of their nutritional value and importance to a balanced diet, as well as their agronomic value. Their introduction will be facilitated by the fact that they can be grown together with sorghum and maize. The seed needed to cover the acreage will be supplied by the project according to the needs of each village.

c) *Maize and sorghum*. Both crops together will account for 28% of the cropping system covering 84 ha (51 ha maize and 33 ha sorghum). The local availability of seed raises no problems because these crops have already been grown in the previous season on collective areas and in home gardens. The seed will be procured directly from the farmers.

d) *Vegetables*. For the first crop season in the home gardens under rainfed cropping, the young plants, preferably grown in seedling pots (to make better use of seeds and to ensure less damage during transport) will be obtained from the seed-beds set up in the village gardens (see 2.3.1 b). Assuming that these crops account for 2%, according to the planned cropping system, the total acreage under vegetables in the home gardens will be 6 hecteres with the following provisional breakdown:

- chili pepper 4 hectares;
- tomato 1 ha;
- egg plant 1 ha.

e) *Fruit trees*. During the first crop season it is planned to introduce papaya which was fairly successful during the previous season. With at least 2-3 saplings being distributed to each household, the total requirement of young plants which will be produced in seedling pots in the nurseries set up in the village gardens, will be about 32,500 for the whole of the project area.

2.4.3 Personnel required

a) to set up the demonstration parcels of home gardens at village level (clearing, cleaning, ploughing and preparing the land for sowing): 30 villages x 0.1 ha/vill. x 600 man/days/ha = 1,800 man/days.

b) to farm the parcels: 30 villages x 0.1 ha/vill. x 180 man/days/ha = 540 man/days.

c) to load and unload seed supplies and young plants: 30 villages x 20 man/days = 600 man/days.

2.4.4 Farm implement needs

To run all the 30 home garden demonstration village parcels, assuming that for the preparation work the labour force will use equipment already supplied to the villages or loaned under the project, the following implements will be needed:

- 120 blade hoes;
- 60 three-pronged hoes;
- 60 axes.

2.4.5 Fertilizer and personnel requirements

In the home gardens (cultivated acreage and demonstration parcels):

- 303 has. x 0.15 t/ha D.A.P. (diammonium phosphate) = 45.5t;
- 303 has. x 0.05 t/ha 46% Urea = 15.2 t;
- loading and unloading personnel 200 man/days.

2.4.6 Insecticide requirements

According to the quality of insecticide available in the Ministry of Agriculture store at Chagni, the following amounts will be required:

- Lindano (0.5% active principle) 750 kg.;
- Dieldrin (18% active principle) 150 litres;

- Malathion (50% active principle) 300 kg.;

When estimating these quantities, to be used for 300 ha in the whole area, account has been taken of the alternative use of the three products depending upon the intervention requirements.

2.4.7 Equipment and personnel requirements for pest control treatment

- portable sprayers 15;
- rubber gloves 50;
- masks 25;
- overalls 25;
- pest treatment personnel 250 days.

3. Village irrigated gardens[3]

3.1 Description

These are only present in a few villages and are set up near water courses, which are not always perennial. Altogether they cover an cultivated area of just over 1 ha. Many of them are only a few hundred square metres in size.

The vegetable crops grown, in order of importance are: chili pepper, red beet, Swiss chard, savoy cabbage and tomato. The fruit trees are banana and papaya.

These areas have been prepared manually, and the ground has been manually tilled and is therefore not very deep.

Irrigation is performed manually using 4.5-litre plastic bottles which are supplied to the people to transport and to store water for domestic consumption.

Very often the state of the fruit and vegetables is precarious because of a lack of irrigation and in the case of some species, such as tomatoes,

3. Initially, the operating plan for the agricultural sector drew a distinction between tending the village gardens and setting up 5 has. irrigation schemes, taking 25 has. as the total target for irrigated farming. Subsequently, after a technical survey of the potential for extending the village gardens by mobilizing the associations of peasants, young people and women, and at the same time examining the expectations that had been raised by the prospects of irrigated farming (particularly the income opportunities available to households and the villages), the programme increased the hectares to be irrigated to 105.

because the seed has degenerated because it has not been renewed.

No pest control measures are taken to treat the soil or the leaves, and no fertilizer is used.

Table 1 - General features of the village gardens L1 and R3

	L1	*R3*	*TOT.*
Total gross acreage (has.)	1.5	2.0	3.50
Gross acreage currently cultivated (has.)	0.11	0.15	0.26
Gross acreage (has.)	1.39	1.85	3.24
Unused acreage (has.)	0.40	0.60	1.00
Net acreage for fruit and vegetable production (has.)	0.85	1.15	2.00
Net acreage of seed farms to produce fruit and vegetable plants for the home gardens and village gardens (has.)	0.25	0.25	0.50
TOTAL NET CULTIVABLE ACREAGE (has.)	1.10	1.40	2.50
Distance from water point to the irrigation water distribution point (m)	200	300	
Total lift (h) m	15	25	
Diesel motor pump supplied (9 hp; 2" delivery circumference)	1		
Diesel motor pump supplied (15 hp; 2" delivery circumference)		1	

3.2 Scheduled intervention

3.2.1 General interventions

The project is designed to operate in several village gardens, providing selected seed, fertilizers, controlled pest control products and technical assistance with cropping methods.

3.2.2 Specific interventions

In villages L1 and R3, where there are possibilities of extending the present acreages, the project will not only provide the supplies mentioned above, but also irrigation equipment comprising motor pumps and feeder pipes as well as the fuel needed to operate them.

Part of each garden will be directly managed by the project to set up seedbeds to supply the plant material needed for the home gardens. General features of the village gardens L1 and R3 are shown in Table 1.

3.2.3 Seed requirements for seed farms to produce plants for home gardens and village fruit and vegetable crops (in seedling boxes). Production area 2.5 has.

The seedlings are supplied to the villages in seedling boxes. The programme will therefore set up and manage the seed nurseries and distribute the seedlings (Table 2).

Table 2 - Seeds requirements. Production area: 2.5 has.

Crop	*% of total area*	*has.*	*seeds (kg/ha)*	*total kg. seeds*
Chili pepper	20	0.5	0.5	0.250
Red beet	20	0.5	1.5	0.750
Tomato	10	0.25	0.5	0.125 (1)
Carrot	10	0.25	5.0	1.250
Savoy cabbage	10	0.25	1.5	0.375 (1)
Swiss chard	10	0.25	1.5	0.375 (1)
Pumpkins and courgettes	5	0.125	3.0	0.375 (1)
Leeks	5	0.125	6.0	0.750
Onion	5	0.125	6.0	0.750
Peppers	2.5	0.0625	1.0	0.0625 (1)
Egg plant 1	12.5	0.0625	0.5	0.0316 (1)

(1) Consider that the minimum commercial packages in Ethiopia weigh 250 or 500 grams depending on the species.

3.2.4 Materials requirements (Production Acreage: 2.5 has.)

Table 3 - Materials requirements (Production Acreage: 2.5 has.)

seedling boxes ϕ 5÷6 cm; h = 15÷20 cm;	252,000
seedling boxes ϕ 10÷12 cm; h = 25÷30 cm;	40,625
sprinklers 10-1.	60
blade hoes	100
spades	30
machetes	30
pick-axes	30
5 kg hammers	10
rakes	60
rolls of polyethylene sheathing (ϕ 80)	1,000
rolls of polyethylene sheathing (ϕ 60)	500
2" and 1" sleeves	50
outlets for 2" and 1" sheathing	100
ϕ 2÷3mm string	
portable sprayer pumps, 15÷20-litre	10

3.2.5 Fertilizer requirements (Production area: 2.5 has.)

Table 4 - Fertilizer requirements (Production area: 2.5 has.)

D.A.P. (diammonium phosphate)	0.9 t
Urea (46% N)	0.3 t
Potassium sulphate	0.5 t

3.2.6 Insecticide and fungicide requirements (Production area: 2.5 has.)

Table 5 - Insecticide and fungicide requirements (Production area: 2.5 has.)

Lindano (0.5% p.a.)	25 kg.
Dieldrin (18% p.a.)	5 lt.
Malathion (50% p.a.)	15 kg.
Ditiocarbammati	45 kg.

4. Design and construction of pilot irrigated perimeters

4.1 Introduction

According to the CISP Multisectoral Programme which comprises the creation of 5 irrigated perimeters totalling not more than 25 ha (5 perimeters of 5 ha each)[4] for fruit and vegetable production and seed nurseries for fruit and vegetable seedlings and forestry saplings, this programme depends on the availability of tilling, ploughing and ring roll equipment which CISP does not possess.

4.2 Schedule of interventions

4.2.1 Photo-interpretation

Photointerpretation using aerial photos on a scale of 1:20,000 in order to identify the most appropriate sites on which to set up the irrigated perimeters according to the following main criteria:

- proximity to perennial water sources and villages;
- the morphology, slope and density of natural vegetable cover on the land;
- the closest possible proximity to existing or planned roads.

This study phase led to the identification of 11 potential sites in the areas of villages L1, L3, L4, L5, L7, L17, L21, L26, R3, R5, R7. For each area on the aerial photographs a surface was staked out averaging 60 ha/site totalling about 670 hectares in order to proceed to produce the relief maps of the areas.

4.2.2 Relief maps of the sites and areas identified

These maps, to a scale of 1:5,000, were made using photo restitution based on photographs to a scale of 1:20,000 with the support of the Ethiopian Mapping Agency's 1:50,000 contour map, and checked against the maps produced by Studio Pietrangeli on a scale of 1:10,000.

4. At the present time (May 1990) instead of the 5 x 5 ha irrigated perimeters originally scheduled, the programme has set up 15 irrigation schemes covering a total of 105 has. Of these, 13 use motor pumps.

4.2.3 General design of the irrigation and drainage system and the standard water intake and deviation works

Based on the maps mentioned in 4.2.2 above, this general plan is now being drawn up.

4.2.4 Field survey of the 5 selected sites

With this operation the project will simultaneously make the final choice of the 5 sites for the irrigated perimeters to be created, and survey them using levelling measurements on the ground. Following this operation the contour markings on the map referred to in 4.2.2 above will be adjusted, if necessary, as will the overall plan.

4.2.5 Drafting the operational plans

These will be drawn up to a scale of 1:2,000 referring to the gross surface area proper (60 has.), and more specifically: 5 perimeters x 10 has. net + 20% tare.

4.2.6 The topographical marking on the ground of the tracings and aforementioned works under the project

Two topographers will be used for one month each to perform this task.

4.2.7 Clearing and tilling the irrigated perimeters involved in the projects (60 has.)

Depending on the possibility for the CISP Programme to acquire machinery from the "Tana Beles Project", which is more wide-ranging than this one, it is estimated that the following equipment will be required for each irrigated perimeter (60 has.):

- 200 HP FIAT Allis - 15 working days;
- 50 hp tractor with trailer - 30 working days;
- 140 hp tractor with a twin ploughshare - 15 working days.

4.2.8 Building first irrigated perimeters

This work will refer to at least the first two irrigated perimeters, postponing the others to the next dry season beginning 15th September 1987.

4.2.9 Rainfed cultivation of the irrigated acreages mentioned in the previous paragraph

Until the irrigation season begins on 15th September 1987 these acreages will be sown with appropriate crops for rainfed cropping, as far as possible using legumes (beans, dolichos, soya, chickpeas, etc.) not only to provide the Project zone with sufficient quantities of legume seeds (which are very scarce today) but also to improve the agronomic features of the soil.

5. Village Reforestation Programme

5.1 Objectives

One of the main objectives is to produce, during the first season, about 150,000 saplings of tree species to be used both to constitute future fuel wood resources and also to be used for environmental purposes, such as providing shade, lining the internal avenues of the village, fencing in the village area itself, embellishing the civic centres, etc., and a further 150,000 in the second season.

In terms of acreages, taking an average of 2.0 x 2.5 m for each tree, the total acreage planted would be about 150 has. In terms of family labour this Programme would require each family nucleus to plant an average of about 20 saplings.

5.2 Nursery acreages

Considering the need to grow the largest number (25%) of saplings to meet requirements, making allowances for failures and trees damaged during transportation, and considering the amount of tare for the areas used for roads and services inside the nurseries, the total gross area of nursery land required is about 2,500-3,000 m^2.

5.3 The species concerned

According to the availability of seed from the Ethiopian authorities, and also based upon the results obtained from the previous season by the "Tana Beles Project", the main species that can be grown in the nursery are: Eucaliptus camaldulensis, Cordia africana, Acacia albida, Acacia saligna, Acacia nilotica, Albizia lebbek, Melia azedarach, Delonix regia, Acacia caffra, Croton macrostakys, Casuarina equisetifolia, Azadiracta indica, Moringa stenopetala, Parinsonia aculeata, Sesbania grandifolia, Jacaranda mimosifolis.

5.4 Establishment and management of nurseries

5.4.1 Establishment

The work began in mid-January 1987 using the Project technical staff and labour force.

While awaiting the supply of seeds and planting pots the preparatory work on the hedges around the nursery and the construction of shady areas is continuing.

5.4.2 Nursery management

The nurseries will be managed completely by the Project in relation to the technical management, managing the equipment and hiring the necessary labour.

5.4.3 Sensitizing the villages

The phase preceding the distribution of saplings to be transplanted will be used to sensitize the villages involved in the reafforestation programme. This activity, which will be managed by the Project, is designed to involve the families in the planting of the saplings to be transplanted in the village area.

5.5 Material and labour requirements

Except for the seeds, whose weight and quantity will depend on the tree species available at the time, all the other resources required will be supplied by the Project.

5.5.1 Equipment

Table 6 - Equipment

Diesel motor pump complete with tubing	1
Sprinklers	10
Hoes with handles (bladed and fork)	20
Pick-axes with handles	5
Spades with handles	5
Rakes with handles	15
Machetes	10
5 kg. sledge-hammers	5
Secateurs	4
Measuring tape	1
Mason's ruler	5
Wheel barrows and/or hand barrows	25
Wire sieves	5
Pails	5
Axes	3

5.5.2 Other materials

Table 7 - Other materials

Seedling boxes	400,000
Insecticide	2 kg.
String	25 kg.
Soft wire	40 kg.
Miscellaneous (to be specified)	

5.6 Organization of transport and planting of seedlings

5.6.1 Transport to the 30 villages concerned

Project vehicles will be used to supply the young seedlings grown in planting pots and packed into crates.

5.6.2 Planting out the seedlings

The preparatory work for planting out the young seedlings and planting them definitively will be directly carried out by the people in each of the villages concerned and according to distribution procedures and time-scales to be agreed upon between the Project technicians, the agricultural extension team and the village authorities.

Abuns	heads of the Ethiopian Church
adenguarre	haricot beans
ageda	sugar cane
antarsa	a pottery item used to make *wot'* and *dubba*
areqe	local beer and alcohol
asa	fish
awraja	province
barberré	hot pepper
birr	Ethiopian monetary unit
borde	local beer and alcohol
boya	cassava
däbtäras	lay clergy
dega	cold zone of Ethiopia which lies at an altitude of over 2,400m
Derg	the military committee formed in June 1974
dubba	pumpkin
enset	*ensete edulis* or false banana
genfo	porridge
goman	cabbage
gullilat	a dome cover for the extremities of the hut straw roofs, incense burner, humen figures for children, etc.
Gumuz	the Beles Valley native population
ingudai	mushroom
injera	fermented flat bread
kebele	local urban dwellers' association
kitta	unfermented bread
jäbänas	coffee pots
mashakua	a pottery item in which *kitta* and *genfo* are made, seeds are roasted, etc.
mäsab	basket-table
metads	cooking pots
nifro	boiled seed
ocholoni	ground peanut
sala	a species of antelope common in Adäl

sera	a system of cooperation within the communities
Shengo	parliament of soviet
siga	meat
teff	a food grain
t'ella	local beer and alcohol
ticha	a pottery container used to make *injera*
wamfal	mutual aid organization
weyna dega	temperate zone of Ethiopia which lies at an altitude from 1,500m to 2,400m
woreda	district
wot'	stew
yeqes temhert bet	priests' school

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Ethiopia, a country with a long and uninterrupted history, comprising diverse ethnic groups, languages and cultures, will continue to attract the attention of scholars in both the social sciences and the natural sciences. Linguistically and ethnically the country is "a museum of peoples and cultures" which, when adequately investigated, will contribute greatly towards our knowledge of the languages and peoples of the Horn of Africa. There is complete unanimity among people in various walks of life in general, and researchers in particular, that the problems of the peace, security and development of the Horn of Africa must be thoroughly examined and investigated. In order to do this it is vitally important to understand and fully appreciate the complex and interrelated geopolitical problems of the area generally, and the individual states that comprise it, particularly. The inescapable conclusion is therefore that intensive multi-disciplinary research must be launched urgently. This book, based on the results of implementation and research activities carried out in the Beles Valley, can be included in the framework of recent trends of Ethiopian studies.

Paolo Dieci, expert in planning and implementing development programmes, is the General Secretary of CISP. He took part in the feasibility mission for the CISP Project in the Beles Valley on behalf of the Italian Ministry of Foreign Affairs in the spring of 1986; he was in charge of the CISP Programme in Ethiopia from October 1986 to December 1988, and since 1989 he has been managing the Programme from Italy, carrying out frequent field missions. His main publications include: "A Programme of Information in Italian Schools Concerning Health and the Implementation of Primary Health Care in Somalia", in *Proceedings of the Third International Congress of Somali Studies*, Il Pensiero Scientifico Editore, 1988; *Chronicles of Italian Colonialism. The Horn of Africa* (in It.), Edizioni Associate, 1991.

Claudio Viezzoli, an economist, has been working for the past seven years on economic development issues and the effects of structural adjustment policies in the LDCs, publishing a number of papers and articles on the subject. These include: "Contradictions in Rural Development. The Case of the Tana Beles Project in Ethiopia" (in It.), in *La Questione Agraria*, No. 32, 1988; "Real Exchange Rate Determination in LDCs: Analytical and Methodological Issues" (in It.), in *Economia, Società e Istituzioni*, Year II/No. 3, Sep.-Dec. 1990. He has also conducted research at the Commission of the European Communities as an expert on Eastern European countries and the Soviet Union, and as a member of the Management Unit of the "Services and Structures for Internationalizing Italian Industries" project of the Italian National Research Council.

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