



# PARTICIPATORY APPROACH TO SUSTAINABLE VILLAGE DEVELOPMENT (PASVID) IN SUB-SAHARAN AFRICA



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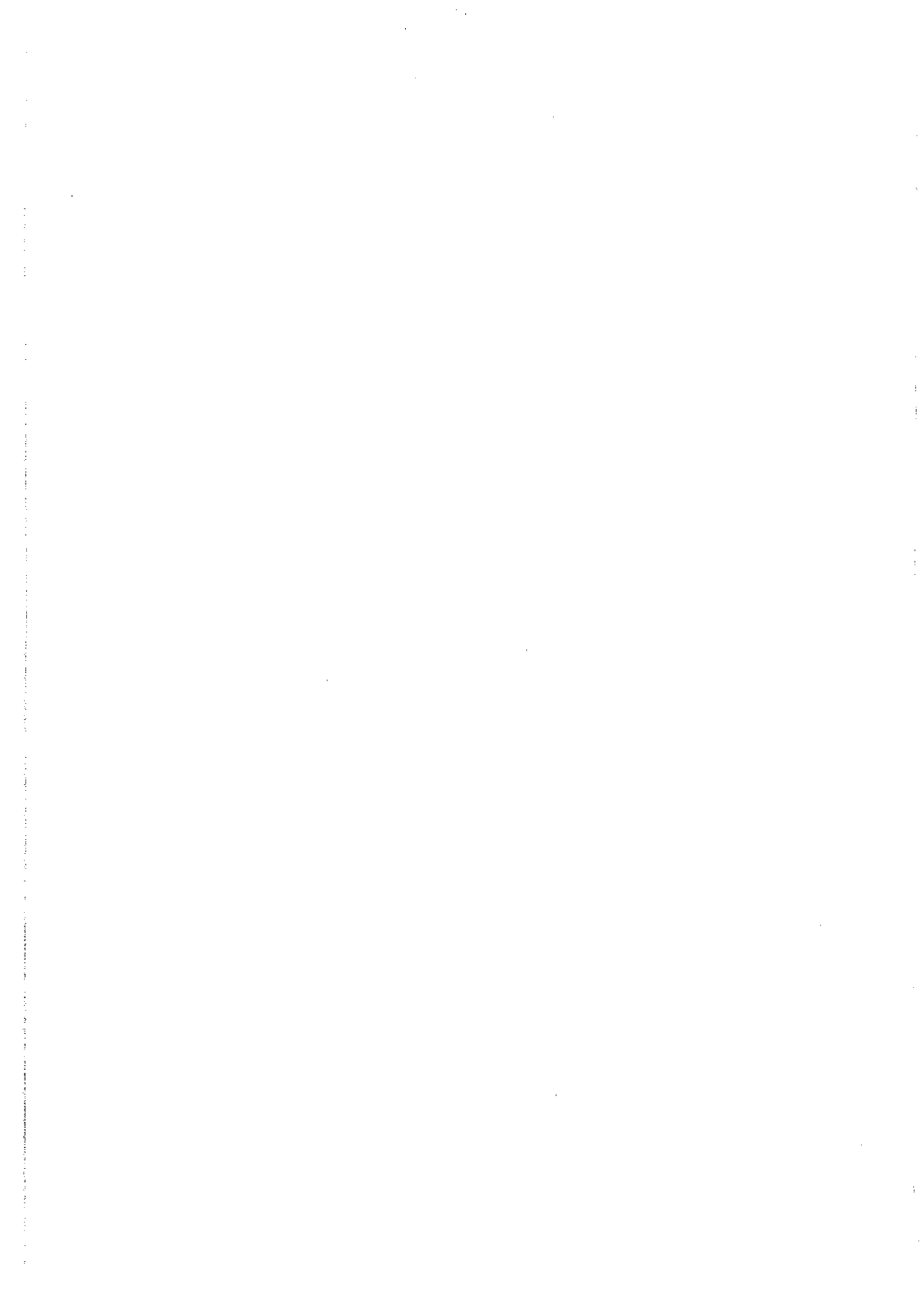
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March 2006

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Japan International Cooperation Agency  
Regional Support Office for Eastern and Southern Africa





**Regional Support Office for Eastern and Southern Africa**

**Participatory Approach to  
Sustainable Village Development (PASViD)  
in Sub-Saharan Africa**

March 2006

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Participatory Approach to Sustainable Village Development (PASVID)  
Sub-Saharan Africa Version

March 2006

JAPAN INTERNATIONAL COOPERATION AGENCY  
Regional Support Office for Eastern and Southern Africa

This work is the second version of Participatory Approach to Sustainable Village Development (PASVID) intended for use in Sub-Saharan Africa. The original PASVID was published in Zambia in August 2000 and the JICA Project for "Participatory Village Development in Isolated Areas (PaVIDIA)" was implemented in 2002 in order to materialize the PASVID model in the isolated areas of Zambia. The original PASVID was modified in accordance with the experiences of the PaVIDIA Project and revised for application in other countries in Sub-Saharan Africa.

This book was compiled by the Agriculture and Rural Development Team in the JICA Regional Support Office for Eastern and Southern Africa, namely; Niki Hikaru (Ph.D.), Furuichi Shingo and Silas Irea. However, substantial contributions were made by the PaVIDIA Project in Zambia, especially Mr. Martin Sekeleti and Mr. H. Kanazawa. Therefore, it should be considered that this book is the fruit of the joint efforts of the PaVIDIA Project and the JICA Regional Support Office.

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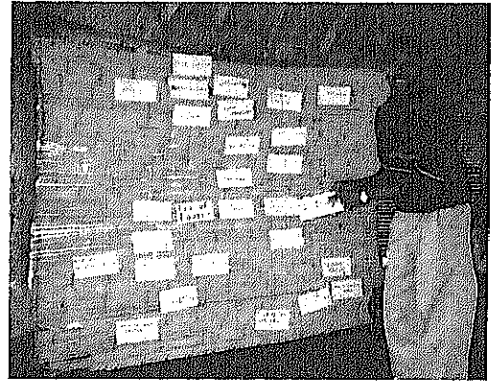
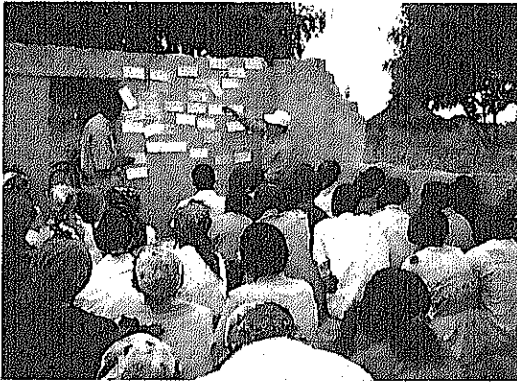
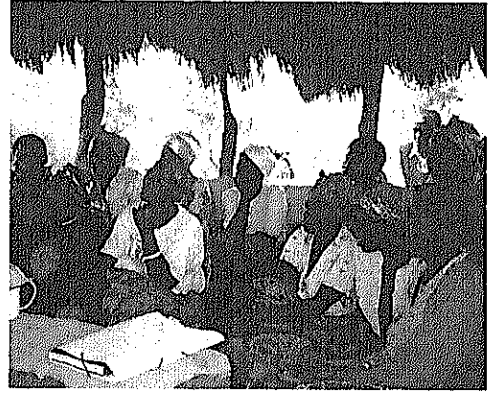
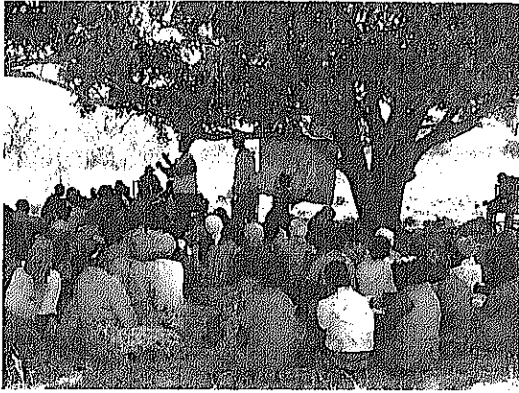


## ABBREVIATIONS AND ACRONYMS

AIDS	Acquired Immuno-Deficiency Syndrome
ANGOC	Asia NGO Coalition
AP	Appraisal Planning
ASIP	Agricultural Sector Investment Programme
CAP	Community Action Plan
CARD	CIRDAP Approach to Rural Development
CEEC	Central and Eastern European Countries
CIPS	Community Information and Planning System
CIRDAFRICA	Centre on Integrated Rural Development for Africa
CIRDAP	Centre on Integrated Rural Development for Asia and the Pacific
CLI	CIRDAP Link Institute
CMC	CIRDAP Member Country
DACO	District Agricultural Coordinator
DANIDA	Danish International Development Agency
DK	Danish Kroner
EACC	East African Cooperation Community
ECOWAS	Economic Commission for West African States
EO	Extension Officer
EU	European Union
FAO	Food and Agriculture Organization (of the United Nations)
FASID	Foundation for Advanced Studies on International Development
G2000/AP	Global 2000/Africa Project
GDP	Gross Domestic Product
GR	Green Revolution
GRZ	Government of the Republic of Zambia
GTZ	German Agency for Development Cooperation
HDI	Human Development Indicators
HIV	Human Immunodeficiency Virus
IA	Implementing Agency
IFAD	International Fund for Agricultural Development
IGA	Income Generating Activity
IPM	Integrated Pest Management
IRD	Integrated Rural Development
IRDP	Integrated Rural Development Programme
JICA	Japan International Cooperation Agency
JOCV	Japan Overseas Cooperation Volunteers
LDC	Least Developed Country
M&E	Monitoring and Evaluation
MAFF	Ministry of Agriculture, Food and Fisheries
MDG	Millennium Development Goal(s)
MP	Micro-Project
NGO	Non-Governmental Organisation
NORAD	Norwegian Agency for Development Cooperation
ODA	Overseas Development Assistance
PACO	Provincial Agricultural Coordinator
PASVID	Participatory Approach to Sustainable Village Development
PCM	Project Cycle Management
PDM	Project Design Matrix

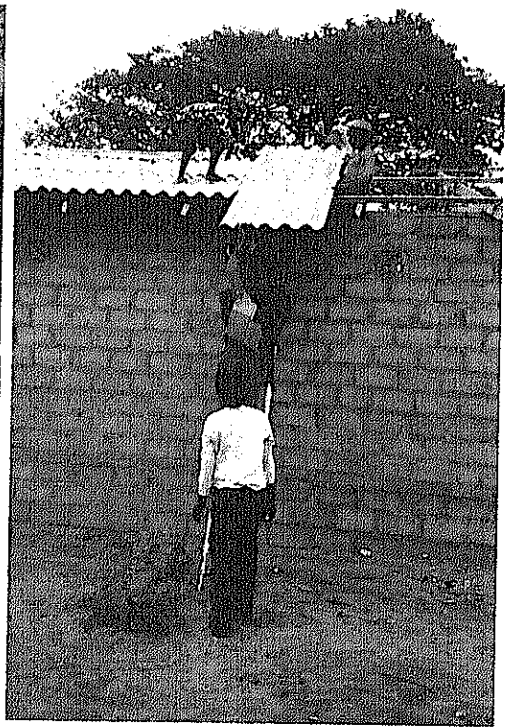
PEA	Participatory Extension Approach
PLA	Participatory Learning and Action
PO	Plan of Operation
PRA	Participatory Rural Appraisal
PRSP	Poverty Reduction Strategy Paper
RDF	Rural Development Fund
RIF	Rural Investment Fund
RR	Resident Representative
RRA	Rapid Rural Appraisal
SA	South Africa
SADC	Southern African Development Community
SAR	Southern Africa Region
SIDA	Swedish International Development Cooperation Agency
SSA	Sub-Saharan Africa
TV	Television
UNDP	United Nations Development Programme
US\$	United States Dollar
USA	United States of America
WTO	World Trade Organisation
ZK	Zambian Kwacha
ZOPP	Objectives Oriented Project Planning

**Modified PCM workshop at village under thatch, blue sky and breeze**  
**- Jubilant villagers with happiness, confidence and strong will -**



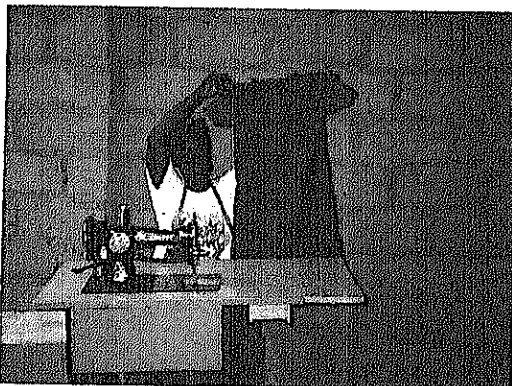
## Communal work with villagers' participation

- Designed and constructed by their own power, joy for spiritual independence -



## Seed Money for small enterprises

- For economic leap and village sustainability -



## FOREWORD

In 2005, Sub-Saharan Africa had 705 million people, 34% of whom lived in urban and 66% in rural areas. There are many isolated villages in the rural areas, where large numbers of people live cut-off from the mainstream flow of events in their capital cities and other urban and peri-urban settlements. These isolated areas are characterised by persistent poverty, low agricultural production and economic stagnation. By merely observing this situation, it is not possible to tell whether it has been caused by an unfavourable climate, poor access to markets, a general lack of information, or limited access to social services. After analysing and recognising these factors as constraints to rural development, experts from various disciplines have initiated many rural projects in Sub-Saharan Africa over the last several decades. But only a few of these projects have shown any positive impact by way of increased agricultural production and improved standards of living. For this reason, there is need to seek new ways of making better use of development financing.

Many of the rural development projects have so far used the Integrated Rural Development approach where several sectors were intended to implement various aspects of one project at the same time. Difficulties arose because it was not possible to mobilise the resources of departments from the different sectors of the economy to work together harmoniously. Further, beneficiary participation in the design, implementation and operation of the projects has been minimal with the top-down methods applied; and budgets failed with bottom-up methods.

These shortcomings prompted the Ministry of Agriculture and Cooperatives in Zambia to experiment on a new Asian approach designed by the Centre on Integrated Rural Development for Asia and the Pacific (CIRDAP) called the CIRDAP Approach to Rural Development (CARD) in a few selected isolated villages. The distinguishing characteristic of CARD was the use of villagers' knowledge and participation in all the stages of the project, and the use of Project Cycle Management and Participatory Rural Appraisal in simplified formats. This methodology showed great promise and was modified and renamed Participatory Approach to Sustainable Village Development (PASVID) and a manual was prepared. Since 2002, PASVID has been used in a JICA-assisted project called "Project for Participatory Village Development in Isolated Areas (PaViDIA)", which has spread into Northern and Western Provinces. One feature of the methodology is the usage of indigenous resources including human knowledge and wisdom, their physical power and natural resources with the ultimate aim of creating a prosperous and autonomous community.

This manual is an adaptation of the original Zambian PASVID version with the hope that the methodology will be introduced in other Sub-Saharan countries. The manual was revised by the Agriculture and Rural Development Team of the JICA Regional Support Office for Eastern and Southern Africa. It is hoped that this manual will be read by both the extension frontline staff and all those involved in rural development in Sub-Saharan Africa. I further hope that the application of PASVID will teach people how to be self-reliant, how to solve their problems through their own efforts; and will result in sustainable development that will fill their lives with hope and happiness, thus sharpening their drive to better their lives.

I wish to take this opportunity to thank the Agriculture and Rural Development Team for the preparation of the manual, and JICA for its financial support in producing the manual and continued support to agriculture and rural development efforts in Sub-Saharan Africa.

Nairobi  
March 2006

Teranishi, Yoshihide  
Representative  
JICA Regional Support Office  
for Eastern and Southern Africa

## PREFACE

Just imagine millions of docile and voiceless folks! Kept on the other side of the developed society, they simply live under thatch, die on soil. They are the rural poor, who make up three quarters of the world's poor. Tired of their battles with harsh nature, discouraged by the weight of life's demands under a merciless economy, they have lost hope in this world, a crucial ingredient in the life of mankind. They cannot make requests or proposals like the urban folks who know that they can get what they are asking for.

Hundreds of researches have been carried out and thousands of projects have been implemented in efforts to alleviate poverty in the rural areas of Africa. Millions of sweet words have been uttered and billions of dollars spent, just to bring the poor up to our society. Despite all these efforts however, their lives have remained unchanged for centuries.

Now, let us stop the utterance of beautiful words and giving hollow speeches; let us leave our computers and pens in offices for a while; instead, let us approach the voiceless folks and listen to their voices before they vanish. And let us walk together with them in search of their hopes. Nevertheless, we must not hand out a single Shilling to those poor in rural areas unless they have the will to stand by their own feet. Otherwise, we shall repeat the same mistake made by many of the previous approaches which only multiplied their dependency.

African history dates back to half a million years ago when Homo Sapiens Sapiens believed to be the first human on earth came to the continent. The ancient Africans migrated to the continent a thousand years ago and were subsequently colonized by Europeans a hundred years ago. Several Sub-Saharan countries pursued socialist policies until a few decades ago.

In these early days of the 21<sup>st</sup> century, let us look back at those bitter foregone eras and forward into the future for true spiritual independence of the rural folks. Spiritual de-colonization is a key aspect of economic emancipation and restoration of the African culture, as Ngugi wa Thiong'o, a Kenyan writer, puts it in his "The Struggle for Cultural Freedoms" (1993).

Against this background, pilot micro-projects were implemented in two villages in Zambia, driven by a strong co-operative culture of mutual and self-help which had been inculcated among village residents. This was in sharp contrast to the previous dependency syndrome which used to be the norm in the village communities. Village residents are now making serious attempts to address their own social and economic development issues and problems to improve their living standards.

The idea of Participatory Approach to Sustainable Village Development (PASVID) has been shaped by learning from the above experience. It is a facilitation challenge targeted at those with demonstrated self-esteem to better their own livelihoods. It uses participatory approaches, but it is not a mere bottom-up approach which used to be unrealistic due to budgetary constraints. PASVID is a "Stairs Approach" in which extension officers or facilitators work as stairs or bridges between the top and the bottom. The approach has high potential in poverty alleviation based on the felt needs of the rural poor, leading to improved livelihoods of the village communities on a socio-economically and environmentally sustainable basis.

PASVID was born through the tireless efforts of the team consisting of Mr. B. Mulenga, Irrigation Engineer, PACO office in Lusaka Province; Mr. M. Sekeleti, DACO of Chongwe District; and Messrs.

J. Lubumbe and K. Banda, both extension officers in Chongwe. The team initiated the pilot micro-projects that embraced and nurtured the PASViD concept in their implementation. Both Mrs. M. A. Sitwala, PACO for Lusaka Province, as well as Mrs. K. M. Katyamba, Japan Desk Officer in MAFF, gave valuable suggestions in the implementation of the project. Mr. L. J. Mwale, Director, of Field Services Department and his Deputy, Mr. J. P. Lungu, gave valuable technical input as well as moral support to the author.

Most valuable support was also given by H. E. Mr. Yoshihiro Nakamura, the Ambassador of Japan in Zambia, and Mr. Ken Okaniwa, ex-Counsellor of the Embassy of Japan in Zambia, who advised the author to initiate the challenge and consequently were instrumental in its realization. Mr. K. Endoh, the First Secretary, and Mr. H. Saka, Second Secretary, both of the Embassy of Japan in Zambia, provided valuable assistance in the initiation of the Pilot Micro-Projects by providing financial support. Messrs. Mitsuo Ishikawa, Resident Representative (RR), K. Ohta, Deputy RR, and O. Tanabe, Assistant RR, at JICA Zambia Office, provided tremendous insight to the author. PASViD wouldn't have been realized if it had not been for the valuable support of all those mentioned and the villagers themselves. While all these contributions are acknowledged, the views and errors that may be contained in this manual are the sole responsibility of the author.

Recognizing that this textbook is a mere compilation of words, which if not utilized in the actual field would come to nothing, the author hopes from his heart that all the assistance rendered by the above mentioned persons could bear real fruit - poverty alleviation - in isolated villages in rural Sub-Saharan Africa.

Lusaka  
August 2000

Niki Hikaru  
JICA Senior Advisor

Almost six years have passed since the above Preface for PASViD was prepared in Zambia. In between, PaViDIA, a JICA Project, was initiated to apply the PASViD methodology and is expanding to the various isolated areas of Zambia year after year. PASViD is becoming a predominant approach to tackle poverty and hunger in Zambia and in the course of project implementation, the approach has been modified to meet the varied situations of the villages. This revised version of PASViD for Sub-Saharan Africa incorporates these vital experiences and modifications. We admire the unceasing efforts of the PaViDIA project team to challenge poverty and hunger in Zambia.

We hope that other countries in Sub-Saharan Africa will apply PASViD following the Zambian model to eradicate poverty and hunger in their rural areas.

Nairobi  
March 2006

Agriculture and  
Rural Development Team  
JICA Regional Support Office

## GUIDE TO THIS MANUAL

This manual is intended to support field staff and other extension personnel in the use of participatory approaches to implement sustainable development projects in relatively isolated rural villages. It is written in two parts: Part I – Conceptual Framework and Part II – Practice in the Field. While the parts are clearly delineated, the numbering of the Chapters is continuous. In order to grasp the gist of the PASVID methodology, it is important that one refers to Part I as needed during project implementation.

Part I of the manual has seven chapters. Chapter 1 is the “Introduction” that presents a bird’s eye view of the rural economic terrain of the developing world. The central problem in the isolated rural areas of Sub-Saharan Africa (SSA) is poverty. The PASVID methodology is intended to be a vehicle for the nurturing of prosperity and autonomy among poor rural communities.

The first part of Chapter 2 is a brief presentation of the poverty situation in SSA – a definition, its causes, attempts that have so far been made to remedy the situation and what should be done in future. It is recommended that as much as possible the reader should consult some of the works cited in this section in order to gain a deeper understanding of SSA’s poverty. The second part of Chapter 2 presents the Japanese Experience which forms the basis of the PASVID approach. Emphasis on self, mutual and public reliance enabled Japanese to reconstruct their lives from the devastation of World War II and made Japan a major world economic power in a space of only fifty years.

Chapter 3 is a brief situational analysis of Agriculture and Rural Development in SSA. The chapter presents the main problems that are conceived to have driven SSA’s agriculture, especially the smallholder sector, into the miserable state in which it now finds itself – with low and declining yields resulting in persistent famines and pervasive hunger. While every attempt has been made to incorporate and discuss the key causes, we are convinced that there could be more, and the reader should feel bold enough to consider them in his/her development efforts. Towards the end, three case studies of national and transnational attempts to forestall rural economic decline in SSA have been presented. Useful lessons can be drawn from these experiences.

PASVID evolved from CARD, a composite methodology synthesized from rural development concepts which had been tried in the past with mixed results. These “Relevant Concepts” are found in Chapter 4 where they are introduced with brief notes. The focus of PASVID is the village, and an attempt has been made to define this entity.

Chapter 5 is a form of case study detailing the “Adoption of CARD in Zambian Villages”. Relatively good results have been recorded in several villages, particularly Chongwe, and this has prompted the need to attempt to spread the PASVID methodology to other villages and countries. That is the essence of this book.

A definition of PASVID, its goals and objectives, target areas, target groups, use of the ‘tripartite league’, the components of a micro-project and the phases of PASVID are discussed in Chapter 6 entitled “Narrative Summary of PASVID”. One should not lose sight of any of the principles laid down in this chapter in the implementation of sustainable village development projects.



The strategy of PASViD is defined in Chapter 7 starting with an exposition of the 'tripartite reliance' – self, mutual and public. The insurance for sustainable development should be viewed as the awakening of the people to the realization that they have something to contribute towards their own development and that they are capable of owning and controlling such development to their advantage. The final outcome should be rural environments that are pleasant to live in as they offer same amenities as those found in the urban centres.

In Chapters 8-12, we have outlined the steps to follow in the identification of the micro-project, selection of the village, planning of the project, implementation procedure and project evaluation, respectively. It is intended that this part of the manual should form a handy reference guide for field extension staff.

Chapter 13 discusses "Sustainable Agriculture" and attempts to relate it to PASViD, noting specifically the emphasis PASViD places on the development of intensive farming systems for small and medium scale farmers. It is among these (as opposed to large scale farmers) that poverty is found. Intensive farming systems are also recommended because they ameliorate the environment.

Chapter 14 is a suggestion on the possibilities for regional dissemination of PASViD by duplicating the Project for Participatory Village Development in Isolated Areas (PaViDIA) which has been successfully implemented in Zambia.

## SUMMARY (PASVID IN BRIEF)

- (1) By definition, PASVID is "a planning and management concept and tool for village development of 50 to 300 households (project unit) aiming firstly at uplifting the livelihoods of the vulnerable groups, such as the poor, women and landless peasants (target group), by involving their lot in all stages of development including project decision-making process from component identification, through planning and implementation. This involvement is intended to vest the villagers with self-help, pride and dignity (objectives). Thus PASVID aims to attain community prosperity and autonomy by making target rural villages as livable and as comparable to urban areas as possible by ensuring that they have the necessary amenities and conservation of comparative advantages, such as abundant natural space, a green environment and clean air. In this way these villages can co-exist as equals with urban developments (final goal)."
- (2) PASVID uses endogenous development philosophy as well as parts of Project Cycle Management (PCM) and Participatory Rural Appraisal (PRA) for its micro-projects (MP).
- (3) The components of an MP are mainly rehabilitation or construction of village infrastructure, provision of seed money for income generating activities, and training. Depending on necessity, extension officers (or field officers) may have transportation costs from the MP budget.
- (4) PASVID is a relatively more cost-effective way than conventional project methods because it uses a minimum project budget (e.g. US\$ 100 per household) only once for MP implementation, and then draws on the village potentiality of man-power, indigenous knowledge and wisdom, and physical resources which can be mobilized in a sustainable manner. Several MPs may be implemented simultaneously.
- (5) PASVID may be considered as a "Stairs Approach" in which the strengths of the 'top-down' and 'bottom-up' approaches are vested. While the extension officers approach the top for the budget, they also approach the bottom or the villagers for needs identification and so as to exploit their knowledge, energy and physical resources in the intended activity. This scenario forms a staircase or bridge.
- (6) This "Stairs Approach" could also be applied to technology advancement, market growth, villagers' psychology and, finally, village advancement. The technostairs from shifting agriculture to environmentally sound agriculture, and market growth from a thatched marketplace in the village to the supermarket in the urban centre can be realised.
- (7) Maximum volition and total autonomy are to be strongly encouraged among the villagers or farmers - organizationally, economically and ecologically - so that transmitted agricultural technology and information are efficiently utilized by the villagers. Sustainable agriculture could thus be readily realized.
- (8) As an essential to the attainment of sustainable village development, sustainable agriculture seeks to stave off soil degradation, improve the stability of production and profitability of every farmer, and harmonize the community and global health of both the environment and human beings.

- (9) The planning stage is most crucial, dynamic and sensitive in the entire process of PASViD. In this stage a modified and simplified PCM (or similar type) workshop is conducted, attended by villagers representing all the strata of the community – the poor, women, young and old, leaders and vulnerable groups such as the physically challenged and so on. During the workshop, a Project Design Matrix (PDM), Plan of Operation (PO) and Risk Management Analysis are prepared in order to manage the project efficiently and effectively.
- (10) Various activities of each micro-project should be implemented by total villager initiative.
- (11) PASViD leads to poverty alleviation through creation of village infrastructure, various opportunities in employment, business and others, use of individual ability and volition with focus on what villagers consider to be beneficial to them.
- (12) After the implementation of the MP, the village economy leaps through various entrepreneurial ventures such as crop diversification, use of recommended inputs leading to yield increase, primary agro-processing, cottage industries, handicrafts, protection of the environment, and so on.
- (13) All in all, the essence of the PASViD strategy is to exploit self-, mutual- and public-reliance both singly and together to realize a prosperous and autonomous community.
- (14) In the final phase, symbiosis among rural areas, urban areas and the natural environment are realized. At this point villagers may enjoy rural amenities and equal standards of living as those found in the urban areas.
- (15) Considering the above attributes of PASViD, it could be viewed as an efficient approach to poverty alleviation at the village level and a way to attain economic prosperity at regional level if applied country-wide among all the countries in a region.



# **PART - I**

## **CONCEPTUAL FRAMEWORK**

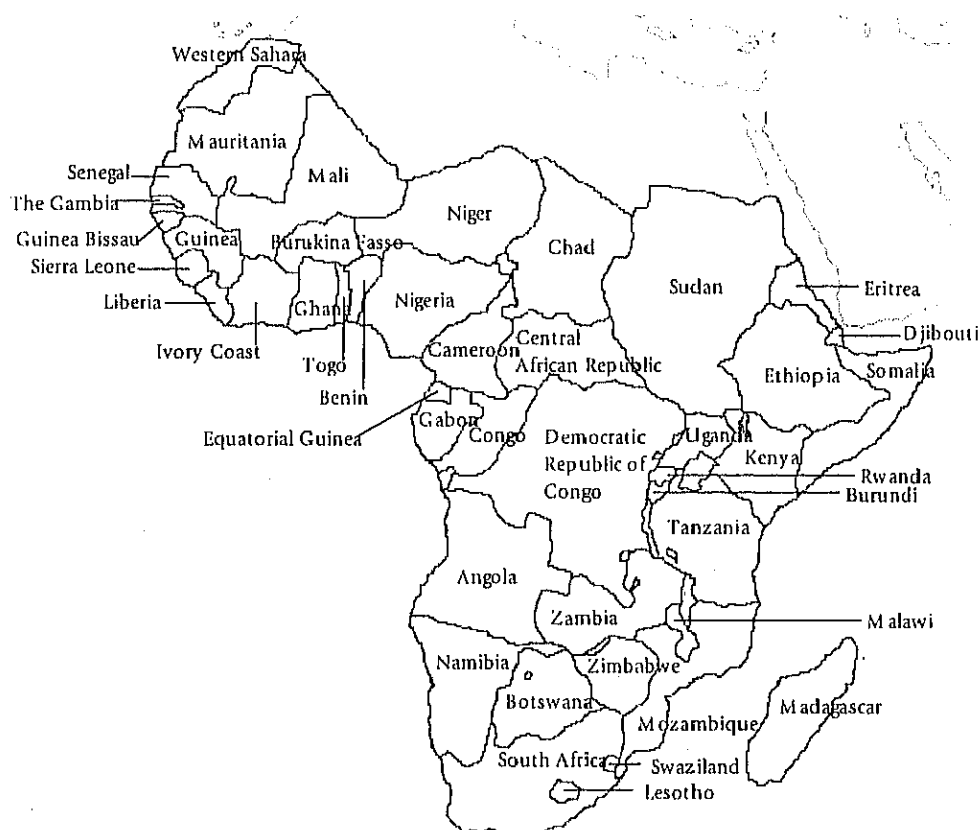


# CHAPTER 1

## INTRODUCTION

Three quarters of the world's poorest, especially those living below the poverty line of US\$1 a day, live in rural areas. In Sub-Saharan Africa (SSA) (Figure 1.1), the figure rises above 70% with some countries such as Zambia registering levels above 80%. This is despite the fact that for many years, rural areas have been part and parcel of mainstream developmental activities. These rural area targeted development activities have used a variety of approaches to try and attain their objectives. They include Integrated Rural Development (IRD) Programmes and different types of participatory approaches such as Participatory Rural Appraisal (PRA), Participatory Learning and Action (PLA) and many others. Participatory approaches were first introduced in rural development programmes in the 1970's.

**Figure 1.1: Map of Sub-Saharan Africa**



*Note: In this definition, some island nations e.g. Cape Verde, Seychelles, etc. are excluded. However, for the purposes of this book, it is important to note that PASViD can be applied also to these countries.*

Source: Author

In spite of these efforts, rural areas have so far not been adequately developed due to a number of reasons, among them those of agricultural and economic nature. Consequently, this situation has contributed towards the emigration of sections of the rural population, especially the younger generation, to the urban areas, with numbers of emigrants increasing year by year. One of the causes of this phenomenon is the availability of employment and other economic and social opportunities in the urban as opposed to rural areas. The emigration of able-bodied rural youth has exacerbated the stagnation of the rural economy which is characterised by low productivity and low product prices, in turn accelerating this manpower outflow. In addition, public support for the agricultural sector, including land reform and improvement of infrastructure, has been slow and inadequate. A combination of these factors has accelerated rural-to-urban migration in most developing countries.

Landless tenant farmers and seasonal labourers are usually the first to migrate due to their greater vulnerability. Remote areas are more prone than areas on the environs of urban centres because of the relatively fewer opportunities in the former. The emigration of the younger generation has considerable negative consequences on future village and rural development in general, due to the depletion of this critical human resource. The docile remain as the poor in villages. Poor or deprived people are vulnerable to the effects of natural disasters and socio-political changes. Once droughts and floods occur in their regions, famine becomes inevitable. Perhaps this is explained by the fact that they are deprived of their entitlements for food during those calamities.

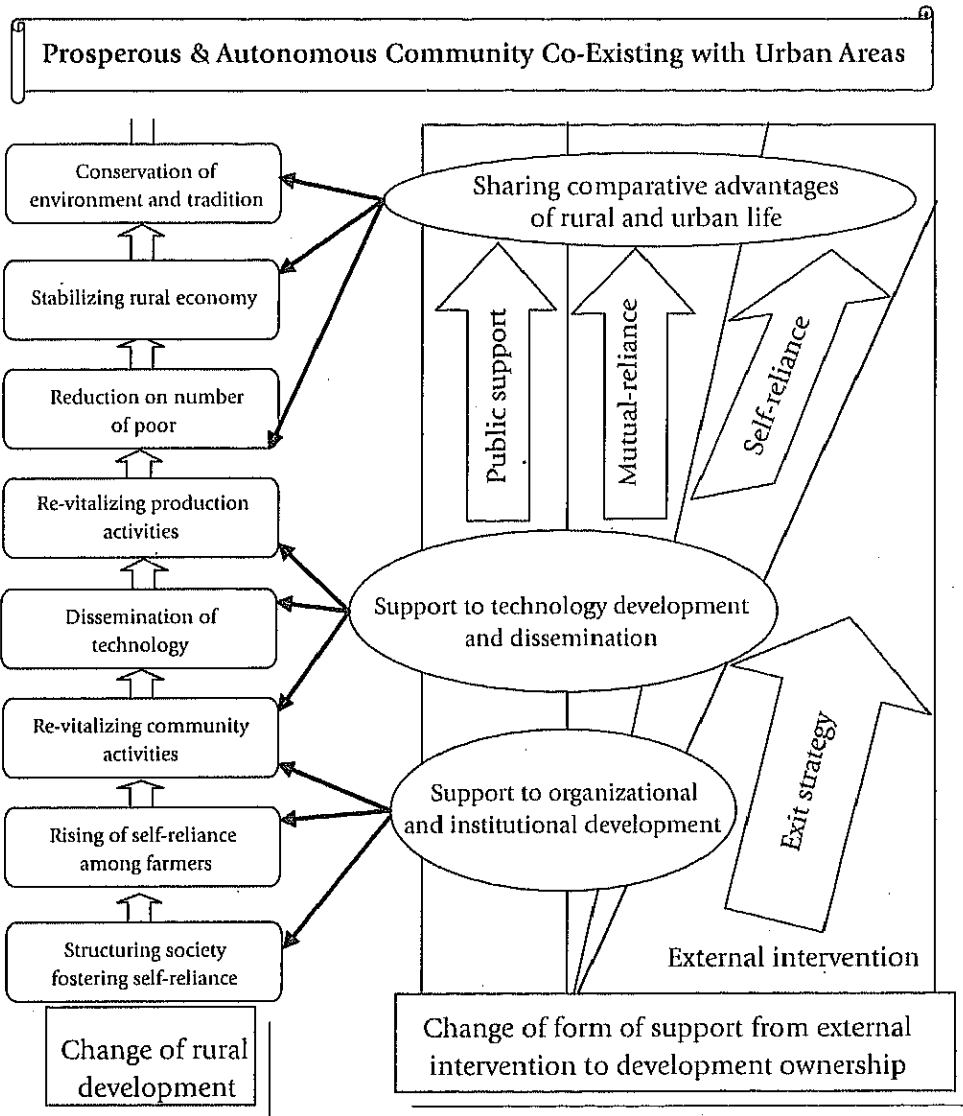
Poverty persists in rural areas despite the thousands of analyses conducted to understand its causes and the many activities designed to avert it. Many efforts have been made to classify poverty as well as to define it and pinpoint its underlying causes; studies, researches, projects, and poverty alleviation approaches have been put in place to understand and explain it; workshops, training seminars, sensitization sessions, sectoral integration programmes designed to discuss and find remedies to it. Amartya Sen has declared that "no famine can occur in a democracy", and so political systems have at times forcefully moved towards democratization partly to exploit this truism. Yet famines and endemic deprivation have continued.

Some of the efforts to fight hunger and famine have however yielded success stories and many useful lessons have been learnt from the unsuccessful efforts. Nevertheless, there has been inadequate feedback from rural development programmes, and this has consequently contributed towards the high rural poverty levels which persist in many developing countries today.

What are the real causes of poverty? How could rural poverty be eliminated? How could villages be assisted to ultimately improve their prosperity and autonomy? How can we deal with such a huge and complex issue with the limited resources at our disposal? **Participatory Approach to Sustainable Village Development (PASVID)** seeks to provide answers to these questions and challenges. This revised version of the PASVID book presents the theoretical constructs of participatory development, reviews relevant concepts applicable to Sub-Saharan African agriculture and draws experiences from the implementation of JICA's Project for Participatory Village Development in Isolated Areas (PaVIDIA) in Zambia, which applies PASVID. PASVID aims to evolve a village into a prosperous and autonomous community co-existing with urban areas with an appropriate exit strategy for the external intervention (Figure 1.2).



**Figure 1.2: How PASVID Works**



Source: Author



# CHAPTER 2

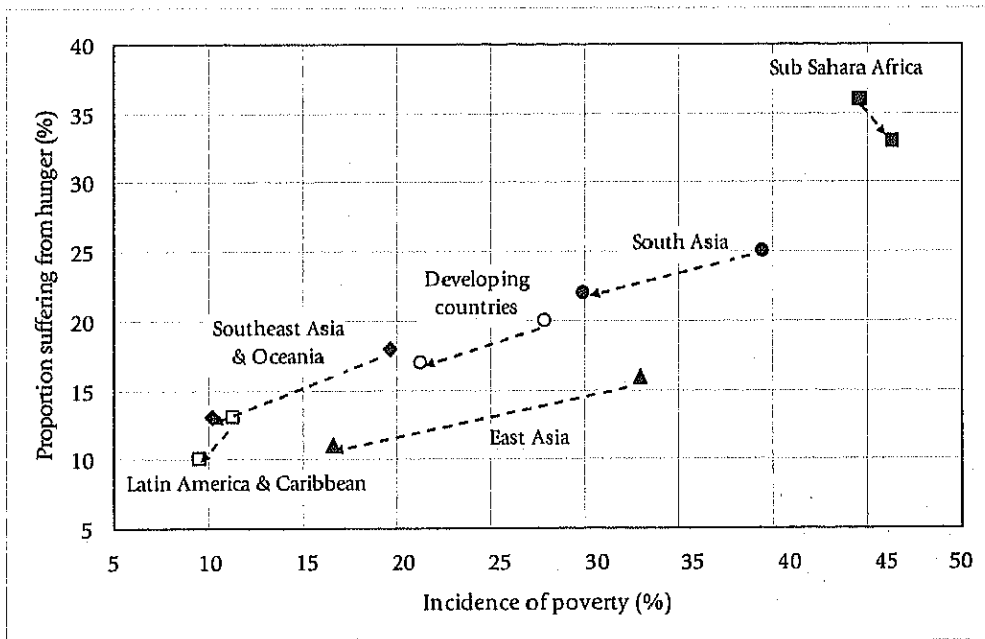
## THE POVERTY ISSUE

### 2.1 The Poverty Situation in Sub-Saharan Africa

#### (1) Glance at poverty

World population was 6.2 billion in 2002 and, at current growth rates it is expected to increase by another 1 billion to 7.2 billion by 2015. Despite this growth in population, between 1990 and 2002, several areas of the world registered declining proportions of people suffering from hunger as well as the overall incidence of poverty (Figure 2.1). Significant achievements were made in attaining freedom from poverty in Asia and Oceania regions and poverty incidence is currently relatively low in Latin America and Caribbean countries compared to other regions. The 2005 report on the Millennium Development Goals (MDG) of the United Nations praises Asian nations for their progress in tackling poverty. In SSA, on the other hand, the proportion of the poor and people suffering from shortage of food are rather high compared to other regions. Moreover, the recorded improvement of their indicators on both hunger and poverty are not favourable.

**Figure 2.1: Regional comparison of increase and decrease of incidence of poverty and people suffering from want of food**



Note: The change in the incidence of poverty is from 1990 to 2001 and the proportion of people suffering from hunger is from 1990/1992 to 2000/2002

Source: Author - based on Report of Millennium Development Goals 2005

Delivering the U.N Secretary-General's Report on the status of the implementation of the Brussels Programme on 10<sup>th</sup> November 2005, the High Representative for Least Developed Countries, Landlocked Developing Countries and Small Island Developing States, observed that:

*"Going by the current trend, an additional 140 million people will be living in extreme poverty in the Least Developed Countries (LDCs) by 2015 compared to 2000. This number will increase from 334 million in 2000 to 471 million in 2015, the final year for the achievement of the MDG<sup>1</sup>".*

Of all regions of the world, poverty is most widespread in Sub-Saharan Africa where half of the entire population - about 300 million people - lives on less than \$1/person/day. Income inequality is also high. The Gini Index (a measure of income inequality) at 45.9, is only exceeded by that of Latin America at 51. Food insecurity is high and increasing. Food availability on a per capita basis has decreased between 1960 and 1990, and by all indications, it will get worse. According to the World Bank projections, Africa will have a food shortage of 250 million tons by 2020. Low and highly skewed incomes and inadequate nutrition have had major negative impacts on the health status of the population.

Poverty in Africa cuts across all sections of the population. But in terms of numbers and severity, African poverty is first and foremost a rural phenomenon. More than 70% of the African population is rural, and, of these, the overwhelming majority are smallholders. The underperformance of agriculture during the last 40 years has increased the numbers, and exacerbated the plight of the rural poor. Poverty reduction strategies in Africa must therefore address the rural population and especially the rural poor.

## **(2) Poverty and Economy**

In response to the deepening economic crisis caused by pervasive poverty entrenched in rural Africa, African governments have taken several measures to address the problem. There have been major efforts to promote regional economic integration in order to increase the size of the domestic market and gain advantages of economies of scale. Through organizations like the Southern African Development Conference (SADC), the Economic Community of West African States (ECOWAS), the East African Community, and the African Union, efforts have been undertaken to contain, resolve, and prevent internal strife and cross-border wars. During the last fifteen years, the majority of African countries have also undertaken far-reaching economic reforms whose aim was to stabilise the economies, remove price distortions through economic liberalization, improve economic efficiency, and foster economic growth. During the last few years, the reform process has been taken a step further, with poverty reduction as the central objective of the exercise, with focus placed on preparation of Poverty Reduction Strategy Papers (PRSP). The results of the effort have been mixed. For the Africa region as a whole, there has been a modest economic recovery since the mid-1990's. For a few countries, like Botswana, the growth rate of the economy has been spectacular, and has been sustained for a long time. In agriculture, there are also a few cases of a remarkable rebound in growth. Mozambique has enjoyed an agricultural growth rate of 9% in recent years, and Uganda's agricultural sector grew by 14% in 2000. The overall picture of the region however, is that of underperforming economies, weak agricultural sectors, and deep and increasing poverty.

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<sup>1</sup> Office Of The High Representative For The Least Developed Countries, Landlocked Developing Countries and Small Island Developing States (2005), Millions More Face Poverty In Vulnerable Countries UN Report.

To reverse the downward spiral in agricultural growth and stem deepening poverty in rural Sub-Saharan Africa, public investment in agriculture, in rural infrastructure, better incentives to farmers, sound economic policies, and higher on-farm private investments are necessary. More importantly, better farming technologies will need to be introduced and their dissemination to farmers are conducted in a staircase fashion, where farmers have to adopt what they can understand and afford one step at a time.

After a long period of weak performance, the economic situation in Sub-Saharan Africa has improved significantly in the last few years. According to the latest available data, for the region as a whole:

- Real GDP growth averaged 4.25% a year during 1995–98, up from less than 1.5% during 1990–94. Per capita output rose at an average annual rate of 1% during 1995–98, compared with an average *decline* of 2.25% a year during the first half of the 1990s.
- After peaking at 47% in 1994, annual inflation dropped to 10 percent in 1998.
- The overall fiscal deficit (excluding grants) fell from almost 9 percent of GDP in 1992 to less than 5 percent in 1998.<sup>2</sup>

These improvements in economic performance are encouraging because they resulted mainly from improved policies in a number of Sub-Saharan African countries and not from favourable external developments.

In the last four years therefore, growth has picked up as a number of countries have pursued policies conducive to macro-economic stability and greater efficiency in production. In many countries, budget deficits have been reduced, inflation has been lowered, the process of privatization has intensified, and the financial sector has been liberalized. Moreover, a serious effort to liberalize external trade and agriculture is under way in several countries, and the need to improve the legal system is beginning to receive the attention it deserves. Because of globalization and the tendency for official development assistance to decline over time, Sub-Saharan Africa is at a turning point. However, the question is how these national economic improvements and favourable conditions contribute to poverty reduction especially among the lowly rural poor.

### **(3) MDGs and Poverty Reduction**

The MDGs are the world's time-bound and quantified targets for addressing extreme poverty in its many dimensions—income poverty, hunger, disease, lack of adequate infrastructure and shelter, and exclusion, while at the same time promoting gender equality, education, and environmental sustainability. The MDGs are also human rights—the rights of each person on the planet to health, education, shelter, and security as pledged in the Universal Declaration of Human Rights and the UN Millennium Declaration. The goals of the MDGs are listed below. Goal 1 may translate as to “reduce by half the proportion of people living on less than a dollar a day and those who suffer from persistent hunger”.

- Goal 1: Eradicate extreme poverty and hunger
- Goal 2: Achieve universal primary education
- Goal 3: Promote gender equality and empower women
- Goal 4: Reduce child mortality
- Goal 5: Improve maternal health
- Goal 6: Combat HIV/AIDS, malaria and other diseases
- Goal 7: Ensure environmental sustainability
- Goal 8: Develop a global partnership for development

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<sup>2</sup> Ernesto Hernández-Catá, Sub-Saharan Africa, Economic Policy and Outlook for Growth, published in *Finance and Development*, A quarterly magazine of the IMF, March 1999, Volume 36, Number 1

The MDGs need to be achieved at the country level, not just the regional or global level, and they are too important to fail. For every country that wants to achieve them, particularly those with basic conditions of stability and good governance, the starting assumption must be that the MDGs are achievable. But countries will achieve the MDGs only if they make them operational - explicitly incorporating their targets and time horizons into key economic policy decisions, national planning documents, and requests for development assistance. This book, however, stresses more on the internal/mental change of the poor by embracing self-reliance, mutual-reliance and public support leading to sustained growth as opposed to emphasising improvement of the MDG indicators.

## 2.2 The Japanese Experience

In modern times, Japan is the sole developed country which has had an experience similar to that of the developing countries – typified by widespread poverty, disease and a general lack of amenities. Japanese born before 1955 experienced great poverty and the majority have worked their entire lives to try and overcome it. There is a widely accepted tacit understanding among the Japanese that the concept of self-reliance or self-help is an important principle in efforts to reduce poverty. The transfer of this principle to the developing world forms the core of Japanese technical cooperation, because Japan believes that its widespread application will lead to sustainable measures that will contribute long-term poverty reduction among communities. From time to time, Japan lags behind other international donors on issues of poverty reduction, but this is not because of the scanty real accomplishment; instead, it is thought to be because of the reserved attitude of Japanese.

It is true that, in the past, there have been many projects which did not achieve their planned objectives. However, Japan's technical cooperation projects have been appreciated and proved their worth in Asian countries where they have directly and indirectly contributed to poverty reduction for many years. For instance, the International Rice Research Institute (IRRI) pays Japan a compliment for its contribution in the generation of Mahsri, a variety of upland rice created in Malaysia using Japan's breeding technology. Regrettably, JICA never gives publicity to this great success story. Japan's cooperation methods can be effective in the application of aid development in Africa where the circumstances are different from those of Asian countries. The following are strengths to support this view:

### (1) Integration of oneself and others (*Shukyaku-ittai* in Japanese)

In Japanese culture every effort is made to integrate oneself and one's efforts with those of others rather than act in a stand-alone manner and claim the credit. The tendency is to sympathize and empathize with others. Harmony is venerable. Therefore, it is only natural that Japanese act, consider counterparts at same eye level, and share same circumstances with people at the receiving end of their cooperation in developing countries<sup>3</sup>. The effects of technical assistance have been realized once togetherness and sharing of ideas with counterparts takes root and continues, although this may involve a considerable duration.

The above approach is backed by Japanese experience and knowledge - that sustainable development can be attained through a process of infusing endogenous technology which is transferable. It is also in the Japanese national character to face the poor with sympathy and, instead of focussing on acts of charity and philanthropy, attempt to enable them surmount their poverty on their own. This is the reason why it has not been necessary for Japan to claim ownership of the various efforts since Japan started its international cooperation in the mid-1950s.

<sup>3</sup> Japan Overseas Cooperation Volunteers (JOCV) is a good example.

## (2) Mind and body togetherness (*Shinshin-ichinyo* in Japanese)

The education of Japanese warriors demanded that one should not mention to others something that one could not perform even though one knew that it was possible. This attitude was adopted by all the Japanese people. It is the maxim called "Actions speak louder than words", leading to success of cooperation projects. Japanese assistance regularly evaluates its own efforts as a process rather than the end results. This is because of the Japanese conviction that the practice of a specific endeavour ultimately improves and develops the society and the economies of nations.

## (3) Mutual reliance

Mutual reliance in village communities, such as *Yui*<sup>4</sup>, *Moyaiyabo*<sup>5</sup>, *Kou*<sup>6</sup>, *Yonai*<sup>7</sup> and other construction and building work<sup>8</sup>, which had been established even before 1867 when a new central Japanese government took power from the warrior kings, can be found at present in a form of regular cleaning of communities. Revitalizing of villages and towns and the "One-Village One-Product Movement"<sup>9</sup> are now promoted in various parts of Japan. This movement has not been designed to make lucrative products; instead, it has been developed as an offshoot of the spiritual culture of the nation. That is to say, where interests compete, priority is given to public rather than private interest. However, it does not mean that the individual is sacrificed; it only means that the prosperity of the community consequently leads to personal happiness and bliss.

## (4) Tacit knowledge

During project formulation, Japanese appreciate that not only knowledge obtained from written sources such as books is important; tacit knowledge heuristically gained by the people through their actions is equally important. For a long time, little effort was made by development agents to integrate and internalise this tacit knowledge because its use was not understood. As a result, Japanese now face great difficulty to explain to and persuade other people not to hold back from expressing their intentions and opinions on issues that affect them on the international arena.

## 2.3 Organic View to Understand Poverty

In Sub-Saharan Africa, poverty reduction strategies applied have tended to be the same as those applied to agriculture when it was dependent on inorganic chemistry – where efforts targeted the most limiting nutrient. Like Liebig's law of minimum<sup>10</sup>, poverty is defined and analyzed in pieces and solutions are attempted one at a time starting with the most limiting reason.

<sup>4</sup> Spirit of mutual reliance is called 'Yui'.

<sup>5</sup> To cooperate and/or share something with others.

<sup>6</sup> Social gathering with specific purposes relating to religion, economy and so on.

<sup>7</sup> In Edo Era (between 1603 and 1867), labour provision institution that people provide labours for paddy field development and its maintenance work, generated from on synergistic relationship of people.

<sup>8</sup> Historically, this word is Buddhist, indicating that there is need for provision of labour by the people when there is need to construct temples and halls. It has been adopted for today's Japanese community activities.

<sup>9</sup> It is not merely simple manufacturing activities, but is a movement of re-vitalizing rural areas by themselves with local resources and traditional skills. It started in Oita prefecture in 1979.

<sup>10</sup> For growth of plants, 10 elements such as carbon, hydrogen, oxygen, nitrogen, sulphur, phosphorus, potassium, magnesium, calcium and iron are necessary. This law indicates that growth of plants depends on the element that is present in the least levels in the environment of the plant. It is said that the law can be applied for any other phenomenon.

These may be, for example, infant mortality rate, school enrolment rate, illiteracy rate and average life expectancy. Enormous resources (funds, personnel, etc.) have been used to conduct research and study poverty reduction by improving the indicator for each of them. Thus, efforts like application of chemical fertilizers have just begun and great sums of money will be spent. And then, there is no doubt the effect will be welcome in the short-term but will not be sustainable in the long-term.

Meanwhile, the Integrated Rural Development Programme (IRDP) model adopted and widely used in the developing world in the 1970s substantially failed even though it had highly idealized objectives. Its cardinal basis was that an integrated approach would work in rural development because the rural economy had players from all the major sectors of the national economy. Its main weakness was eventually found to be that since not all related ministries and agencies could simultaneously give their institutional, human resource and budget commitments, specified programme targets could not be attained. Furthermore, the international donor community also failed to harmonise the intended integration.

Integration, in Japan after World War II, was done internally by both the individual and the community. Poor individuals and communities had to integrate the social environment internally so as to optimise their limited resources. With consistent application of this approach, gradually, the poverty at both individual and community levels was overcome. There appears to have been little by way of external intervention such as detailed research and analysis of poverty.

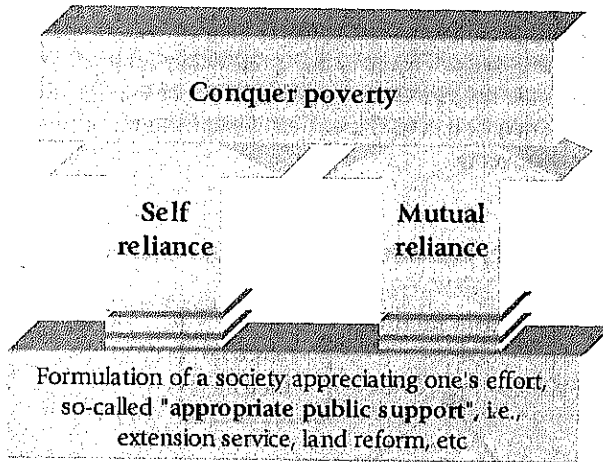
In 1947, Japan started two programmes viz., Agriculture Extension Officer and Livelihood Improvement Extension Officer. These officers became advisors to farmers in terms of life and technology applications. Agricultural land reform and agricultural and rural structural improvement programmes were also put in place. Therefore, the social environment, that eventually integrates and mobilizes individual efforts, was set forth at the same time. In other words, formulation of a society appreciating one's efforts, the so-called "appropriate public support", is a necessary prerequisite for development of a nation - see Figure 2.3.1. This appropriate public support fosters self- and mutual-reliance which are catalytic for development assistance projects.

For all intents and purposes, poverty cannot be overcome without any individual and/or community efforts even in a developed country. If there is an intention to fight against poverty, the effort leads to improvement of life. If not, it would appear that the poor are satisfied with their current situation and therefore there would be no need for mercy interventions. Under such circumstances, gauging poverty using measures applied in developed countries is but sheer waste of time.

Poverty is rooted in a complex blend of natural environment, society, policy, economy, religion and tradition, making it look like an organic ecological environment. Although this complex system and its dynamic external environment can be analyzed and an inorganic prescription applied, new prescriptions are needed continuously due to droughts, cyclones and government disturbances.



**Figure 2.3.1: Relationship between self- and mutual-reliance and public support**



Source: Author

For measures to be effective against poverty, a society must learn to appreciate both individual and community effort and there has to be a continual drive to integrate their actions and find the best way forward. In the process of doing this, there is the danger of developing a dependency syndrome, often fuelled by continuous flow of funds and materials from humanitarian donations. Instead, a society should chart a road where the donor becomes only a contributor in a self-driven enterprise in which players depend on self-help and mutual-reliance.

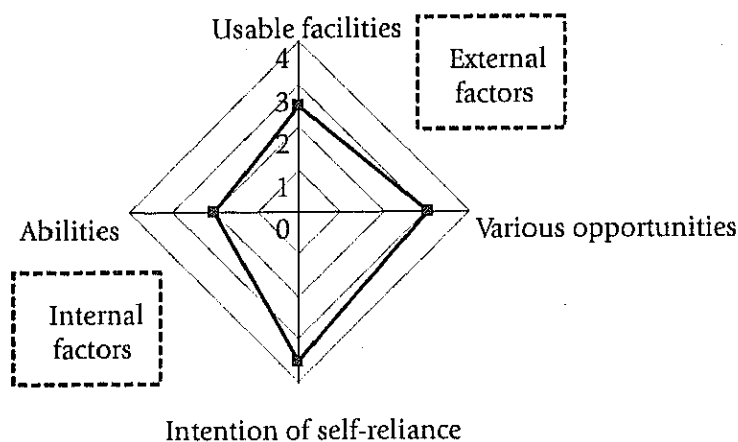
Self-help and self-reliance are possible only when individuals participate in their own development. Participation is the active involvement of a significant number of persons in situations or actions which enhance their well being.<sup>11</sup> Participation leads to empowerment in that it expands people's capabilities, enlarges their choices and thus increases their freedom. Sufficient empowerment should lead to realization of an autonomous society. The degree of autonomy should therefore be an indicator of the level of development. If a simplified life and autonomous activities bring richness, it can be considered that there must be richness in autonomous societies that freely play, hold festivals and enjoy companionship among community members. Thus, although it took more than 100 years to appreciate the necessity of the organic fertilizer in agriculture, and that only about 40 years have passed since the poverty issue was projected and measures taken to address it, another 100 years might be needed to understand poverty in an organic manner.

Incidentally, poverty at individual level is measured using a poverty line set by each country, established in terms of required level of consumption, especially food consumption to sustain normal human daily exertion. It is used as an economic indicator of prosperity. This line is universally set at US\$ 1.00 per person per day. Human Development Indicators (HDI) such as education and health express poverty only at national level. When extension officers introduce poverty alleviation measures to farmers, they are required to have fully understood the situation on the ground so that they can accurately speculate on the potential of each

<sup>11</sup> Cohen, John and Norman Uphoff. "Participation's Place in Rural Development: Seeking Clarity through Specificity." *World Development*, Vol. 8, p214.

farmer. The farmer's willingness to exploit external factors for poverty alleviation such as opportunities for training and internal factors such as own abilities are an indication of the farmer's intention and capability to overcome poverty (Figure 2.3.2). Capability includes physical power, knowledge and skills. Figure 2.3.2 graphically expresses an individual's degree of poverty. Since the scale measures the positive level of each attribute, the bigger the diamond (bold line) i.e. the nearer it is to the extremities of the radar net, the greater the farmer's potential to overcome poverty.

**Figure 2.3.2: Individual poverty radar chart**



Source: Author

## 2.4 Tackling Poverty in a Rural Village

Rural projects aimed at poverty reduction may span one or several sectors of the economy. And, whereas some components of the project may be contributing towards poverty reduction, the project may not be seen and classified as a 'poverty reduction project'. However, today's economic development theory recognises the fact that research, analysis, studies, workshops and training are credible poverty reduction measures and are on the increase. On the other hand, actual implementation of projects seems to be on the decline, resulting in squeezed project implementation budgets.

The limited development finance available should be utilized to promote productive activities and revitalise the economies of isolated and remote rural villages instead of directing the bulk of them to the development of urban areas. Studies and research should also take a back seat as there are already many reports whose recommendations are yet to be utilised. The urgent matter therefore should be to provide an appropriate leading mark, such as technology and information, to individuals and communities who have shown a certain degree of self-reliance/self-help together with creating public support in society and the environment. It is a well-known fact that the "trickle down" hypothesis has failed and it has been observed that the poverty issue does not belong on one side of the dichotomy formed by macro-economic measures and human centered ones. As long as they target the issue of poverty, any measures applied are commendable.

The contributions of the various sectors to a country's development are ranked according to each nation's situation. In order to fully increase and appreciate the contribution of the rural sector, it is necessary to rouse the spirit of self-reliance/self-help in rural areas. Without generating this spirit and producing ownership of development initiatives, the inferiority of projects in terms of efficiency and effectiveness is exposed and their sustainability cannot be anticipated. Motivation must be nurtured among the rural poor.



## CHAPTER 3

# AGRICULTURE AND RURAL DEVELOPMENT IN SUB-SAHARAN AFRICA

### 3.1 Problem Analysis of Current Agriculture in Sub-Saharan Africa

#### (1) Features of African Agricultural Development

It has long been known that Africa's development has stalled. During the 1960s the annual per capita growth rate in GDP did not exceed 1.3%, before falling to 0.8% in the 1970s, and to almost nil during the first half of the 1980s, while the annual per capita growth rate in agricultural production became negative (-1%). Furthermore, these lamentable results seemed general in the continent. The cited record annual per capita growth rates in GDP in the 20 years, 1960-80, lie between 2.5% and 4% for the non-mining countries (Cote d'Ivoire, Kenya, etc.) and went no higher than 6% to 7% for the mining and oil-producer countries (Gabon, Nigeria, etc.) The best annual growth rates in agricultural production in the ten years 1970-79 were no higher than 3%. Industrial growth rates were also modest, despite the extremely low starting point: 3.3% a year for the 1970s as a median of Sub-Saharan Africa as against 1.8% for agriculture and 4.2% for services.<sup>12</sup>

The global epicentre of extreme poverty today is the smallholder farm. Of the roughly 1.2 billion people living in chronic hunger globally, half are smallholder farmers. They live in communities that are, in most of the cases, geographically isolated and burdened by disease, climatic shocks, environmental degradation, social exclusion and violence. Today, most farmers in rural Sub-Saharan Africa are essentially cut off from markets beyond their village, where, unfortunately, given the pervasive poverty, the purchasing power of the population is extremely low.

The African continent is the only region on earth where food production in the past two decades has consistently fallen behind population growth. Many experts blame the continent's harsh climate and limited natural resources, especially in Sub-Saharan Africa, for the failure to boost per capita food production. The key problems that plague African agriculture are:

- Deterioration of the natural environment
- The duality problem
- Erratic rainfall patterns
- Underdeveloped infrastructure
- Low technology level of smallholder farmers
- Underdeveloped markets
- Urbanization
- Land tenure
- Weak public services

These problems of agriculture and rural development in Sub-Saharan Africa are summarized in Table 3.1 and explained in the sections that follow.

<sup>12</sup> Samir Amin, (General Editor) (1990), *Maldevelopment - Anatomy of a Global Failure*, The United Nations University/Third World Forum, Zed Books.

**Table 3.1: Problems and Constraints on Agriculture and Rural Development in Sub-Saharan Africa**

Problems and Constraints	Contents
Duality	<ul style="list-style-type: none"> <li>• Movement of rural population to urban areas and acceleration of urbanization</li> <li>• Youths' drain off from rural areas</li> <li>• Market economy widens economic gap between persons - isolated areas face unfavourable economic conditions</li> <li>• Areas in favourable condition in terms of location are apt to receive development interventions</li> <li>• Enclosure of fertile land by the former colonial land owners</li> </ul>
Degradation of farm land and natural environment	<ul style="list-style-type: none"> <li>• Reduction of organic matter and depletion of various soil elements</li> <li>• Acceleration of erosion and weathering of soil</li> <li>• Loss of forests and desertification</li> <li>• Growth of urban slums and urban sprawl</li> </ul>
Erratic rainfall pattern	<ul style="list-style-type: none"> <li>• High fluctuation of annual and monthly rainfall</li> <li>• Uncertainty of annual and monthly rainfall time</li> </ul>
Less investment on infrastructure	<ul style="list-style-type: none"> <li>• Delay of installation of irrigation and drainage facilities</li> <li>• Less investment on farm and public road system</li> <li>• Lack of marketplace and appropriate handling and storage facilities</li> </ul>
Lack of agricultural inputs and their unaffordable price	<ul style="list-style-type: none"> <li>• Lack of good variety and seeds</li> <li>• High price of fertilizer and farm machinery</li> <li>• Delay and poor choice of mechanization</li> </ul>
Low agricultural technology among small-scale farmers	<ul style="list-style-type: none"> <li>• Shortage of extension officers and lack of budget to facilitate service delivery</li> <li>• Application of modern technology is limited due to low capital for investment</li> <li>• Little means and no facilities for extension service delivery</li> </ul>
Land tenure	<ul style="list-style-type: none"> <li>• Traditional land tenure (Chieftaincy)</li> <li>• Delay of execution of cadastral surveys, land consolidation, demarcation and issuance of deeds</li> <li>• High cost of survey of land</li> </ul>
Weakened public services	<ul style="list-style-type: none"> <li>• Decrease in number of civil servants due to retrenchment</li> <li>• Diminishing public development budget</li> <li>• Underdeveloped information dissemination systems</li> </ul>

Source: Author

### 3.2 Deterioration of the Natural Environment

The African Development Bank (ADB) outline for an environmental policy for Africa considers the following pertinent key issues:<sup>13</sup> 1. Urbanization profile, 2. Forest cover and structure, 3. Vegetation extent and loss, 4. Land use, 5. Water resources and withdrawals, 6. Industrial emissions, 7. Energy use, 8. Traditional fuels consumption, 9. Population and forest resources. Looking at each Sub-Saharan country in turn, it has been established that these countries have both common and unique environmental difficulties as detailed below.

<sup>13</sup> ADB, Policy on the Environment, February 2004.

**Angola:** overuse of pastures leading to soil erosion due to population pressures; desertification; deforestation of tropical rain forest (for timber industry and domestic fuel); loss of biodiversity; soil erosion contributing to water pollution and siltation of rivers and dams; inadequate supplies of potable water.

**Benin:** recent droughts have severely affected marginal agriculture in the north; inadequate supplies of potable water; poaching threatens wild life population; deforestation; desertification.

**Botswana:** overgrazing; desertification; limited fresh water resources.

**Burkina Fasso:** recent droughts and desertification severely affecting agricultural activities, population distribution, and the economy; overgrazing; soil degradation; deforestation.

**Burundi:** soil exhaustion and erosion; deforestation; habitat loss due to human encroachment threatening wildlife populations.

**Cameroon:** water-borne diseases are prevalent; deforestation; overgrazing; desertification; poaching; over-fishing.

**Cape Verde:** overgrazing and improper land use has led to soil erosion; high demand for fuel-wood has resulted in deforestation; desertification; environmental damage has threatened several species; over-fishing.

**Central African Republic:** tap water is not potable; poaching; desertification; deforestation.

**Chad:** inadequate supplies of potable water; improper waste disposal in rural areas contributes to soil and water pollution; desertification.

**Comoros:** soil degradation and erosion results from crop cultivation on slopes without proper terracing; deforestation.

**Congo:** air pollution from vehicle emissions; water pollution from the dumping of raw sewage; tap water is not potable; deforestation.

**Congo, DR:** poaching threatens wildlife populations; water pollution; deforestation; soil erosion.

**Cote d'Ivoire:** deforestation by the timber industry; water pollution from sewage, industrial and agricultural effluents.

**Djibouti:** inadequate supplies of potable water; desertification.

**Equatorial Guinea:** tap water is not potable; desertification.

**Eritrea:** famine; deforestation; soil erosion; overgrazing; loss of infrastructure from civil conflict.

**Ethiopia:** deforestation; overgrazing; soil erosion; desertification; famine.

**Gabon:** deforestation; poaching.

**Gambia:** deforestation; desertification; water-borne diseases are prevalent.

**Ghana:** recent drought in north severely affecting agricultural activities; deforestation; overgrazing; soil erosion; poaching and habitat destruction threatens wildlife populations; water pollution; inadequate supplies of potable water.

**Guinea:** deforestation; inadequate supplies of potable water; desertification; soil contamination and erosion; over-fishing; overpopulation in the forest region.

**Guinea Bissau:** deforestation; soil erosion; over-grazing; over-fishing.

**Kenya:** water pollution from urban and industrial wastes; degradation of water quality from increased use of pesticides and fertilizers; deforestation; soil erosion; desertification; poaching.

**Lesotho:** population pressure forcing settlement in marginal areas results in overgrazing, severe soil erosion, and soil exhaustion; desertification.

**Liberia:** tropical rain forest subject to deforestation; soil erosion; loss of biodiversity; pollution of coastal waters from oil residue and raw sewage.

**Madagascar:** soil erosion arising from deforestation and overgrazing; desertification; surface water contamination with raw sewage and other organic wastes; several species of flora and fauna unique to the island are endangered.

**Malawi:** deforestation; land degradation; water pollution from agricultural runoff, sewage, industrial wastes; siltation of spawning grounds endangers fish populations.

**Mali:** deforestation; soil erosion; desertification; inadequate supplies of potable water; poaching.

**Mauritania:** overgrazing, deforestation, and soil erosion aggravated by drought are contributing to desertification; very limited natural fresh water resources.

**Mauritius:** water pollution.

**Mozambique:** drought in the hinterland has led to population pressures in urban and coastal areas with adverse environmental consequences; desertification; pollution of surface and coastal waters.

**Namibia:** very limited natural fresh water resources; desertification.

**Niger:** overgrazing; soil erosion; deforestation; desertification; wildlife populations threatened by poaching and habitat destruction.

**Nigeria:** soil degradation; rapid deforestation; desertification; recent droughts in the north severely affecting marginal agricultural activities.

**Rwanda:** deforestation resulting from uncontrolled cutting of trees for fuel; overgrazing; soil erosion and exhaustion; widespread poaching.

**Sao Thome & Principe:** deforestation; soil erosion and exhaustion.

**Senegal:** wildlife populations threatened by poaching; deforestation; overgrazing; soil erosion; desertification; over-fishing.

**Seychelles:** water supply depends on catchments to collect rainwater.

**Sierra Leone:** rapid population growth exerting pressure on the environment; over-harvesting of timber, expansion of cattle grazing, deforestation and soil exhaustion due to slash-and-burn agriculture; social strife depleting natural resources; over-fishing.

**Somalia:** use of contaminated water contributes to health problems; deforestation; overgrazing; soil erosion; desertification.

**South Africa:** lack of important arterial rivers or lakes requires extensive water conservation and control measures; growth in water usage threatens to outpace supply; pollution of rivers from agricultural runoff and urban discharge; air pollution resulting in acid rain; soil erosion; desertification.

**Sudan:** contaminated water supplies; wildlife populations threatened by excessive hunting; soil erosion; desertification; natural hazards e.g. dust storms.

**Swaziland:** limited supplies of potable water; wildlife populations being depleted due to excessive hunting; overgrazing; soil degradation; soil erosion.

**Tanzania:** soil degradation; deforestation; desertification; destruction of coral reefs threatens marine habitats; recent droughts affecting marginal agriculture.

**Togo:** deforestation attributable to slash-and-burn agriculture and the use of wood for fuel; recent droughts affecting agriculture.



**Uganda:** draining of wetlands for agricultural use; deforestation; overgrazing; soil erosion; poaching is widespread.

**Zambia:** air pollution bringing about acid rain in the mineral extraction and refining region; poaching; deforestation; soil erosion; desertification; inadequate water treatment.

**Zimbabwe:** deforestation; soil erosion; land degradation; air and water pollution; poaching pressures in urban and coastal areas with adverse environmental consequences; desertification; pollution of surface and coastal waters.

Among the more critical environmental problems highlighted in the above assessment are the destruction of natural resources and ecosystems (forests, water, marine and coastal resources), soil erosion, and air pollution. Africa is losing about 1.3 million hectares of forest each year. An estimated 500 million hectares have been affected by soil degradation since 1950, including 65% of the continent's agricultural land; much of this is the result of over-grazing. Fourteen African countries are already subject to water stress or water scarcity, and a further eleven countries are likely to fall into this category by 2025.

### 3.3 The Duality Problem in African Agriculture

#### (1) Duality in Agriculture: A Definition

Two concepts form a duality when they belong to two different logical levels and one emerges from the other. In the Sub-Saharan Africa context, duality of agriculture means the side-by-side co-existence of large scale advanced technology commercial farming systems (market-oriented production) alongside smallholder low technology and labour-intensive subsistence agricultural production systems both competing for resources (land, capital)<sup>14</sup>. As a legacy of its colonial past, Sub-Saharan African agriculture has retained this duality and the practice is still spreading in some countries particularly due to the need to exploit economies of scale and to produce for standards-conscious export markets of the developed world. Thus the duality scenario implies that a more or less static behaviour of the semi-subsistence sector has persisted, and only the market-oriented sector responds to market signals.

#### (2) Duality of Sub-Saharan Agriculture

The duality that prevails in agriculture in South Africa for example, and elsewhere in Sub-Saharan Africa reflects the contrast in the socio-economic conditions in the particular country and is often a result of past political, economic and social policies.

Before World War II, the main objective of agricultural assistance was to bring the incomes of white colonial farmers into line with incomes of other sectors of the economy. For the period after the World War II, agricultural policy was part of the overall self-sufficiency strategy and aid to the colonial-controlled agricultural sector was intensified. In South Africa, the self-sufficiency objective was further strengthened during the 1970s and 1980s as a result of sanctions and boycotts imposed on the country by the international community due to its apartheid policies.

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<sup>14</sup> European Commission, Directorate General for Agriculture (2002), *Analysis of the Impact on Agricultural Markets and Incomes of EU Enlargement to the CEECs*.

The dual nature of Sub-Saharan Africa's development status is also reflected in its past policies towards and treatment of the agricultural sector. While many developed countries subsidize agriculture, most developing countries have a history of direct and indirect taxation of agriculture through macroeconomic (fiscal, monetary, exchange rate) and sectoral policies. Agriculture was viewed as a "resource reservoir" - in developing countries its role was to provide surplus food, savings and foreign exchange to support industrialization strategies (see 3.9 - "Ujamaa"). South Africa tried to apply both taxation and subsidization at the same time, the latter mainly for white settler farmers with the dual objective of achieving self-sufficiency in the major commodity groups and of supporting the incomes of white farmers. Historical evidence further demonstrates that there has been a policy of squeezing (in terms of opportunities for growth) the African smallholder sector with the aim of channelling labour from agriculture to the mines, factories and white settler farms.

### **(3) Land redistribution option**

It has been said that land reform in South Africa is necessary for reasons that go beyond improved efficiency in agriculture, and its implementation (or lack thereof) will have important social and political consequences with significant implications for economic development. The demise of the black farming sector in the homelands and its low productivity is, to a large extent, the result of land allocation decisions and a lack of access to credit, adequate infrastructure and other agricultural services. International experience shows that failure to address effectively inequities in access to resources and the concomitant poverty and marginalization of disenfranchised social groups may result in social unrest, capital flight and economic decline.

To the extent that a land reform programme will address welfare objectives, policy-makers face the task of reconciling the historical claims of black farmers for access to land while at the same time maintaining a dynamic agricultural sector and expanding the benefits of agricultural growth to rural communities and non-agricultural sectors. Welfare and efficiency objectives will have to be reconciled in cases of individuals who qualify for land or assistance under welfare criteria but do not have adequate farming or other land-use experience.

Experience shows that for land-reform-based rural development to be successful, it is imperative that land tenure rights and arrangements be protected by law or constitutional act. Such legislative acts secure private ownership and sanction various forms of tenure, such as private titles and communal arrangements, which are the prevalent form of landownership in the South African homelands, the grazing lands of Eastern Africa and the Sahel. Local communities are given ample powers to manage their internal land affairs while at the same time guaranteeing a minimum set of democratic rights to their members. A clear legal framework for land rights will remove uncertainty about landownership and, as such, promote investment and environmental conservation.

## **3.4 Rainfall Patterns**

### **(1) Droughts in Sub-Saharan Africa**

Dry-land ecosystems of Sub-Saharan Africa are particularly vulnerable to climate of which rainfall (or precipitation) is the most important component. Temperature, direction and speed, sunshine hours, and humidity are other important components, particularly from the point of view of plant growth. Now, since water is a major

of many characteristics and processes in these dry-land ecosystems, a slight shift in seasonal rainfall intensity, frequency and distribution could potentially lead to major ecological and biogeochemical impacts.

Droughts are a common phenomenon in Sub-Saharan Africa. Rainfall variability at a time scale from years to days is as much a characteristic of climate as the total amounts recorded. Low values, however, do not necessarily lead to drought, nor is drought necessarily associated with low rainfall. Agricultural drought occurs when water supply is insufficient to cover crop or livestock water requirements. In addition to reduced rainfall, a number of factors may lead to agricultural drought, some of them not always obvious. Much more than the occasional widespread and severe climatological droughts which catch the attention of the media, it is this "invisible" agricultural drought which prevents farmers at the subsistence level from achieving regular and high yields. "Invisible" drought is brought about by environmental degradation as much as by climate.

The continent has a long history of rainfall fluctuations of varying lengths and intensities. The worst droughts were those of the 1910s, which affected East and West Africa alike. They were generally followed by increasing rainfall amounts, but negative trends were observed again from 1950 onwards culminating, in West Africa, with the severe drought experienced in 1984.

Since then, starting in 1988, the Sahel has recorded a series of good years (frequently accompanied by floods) which some interpret as the end of the Sahelian drought. The reality is that rainfall will continue fluctuating, and that good and bad years will continue occurring. Some general regional patterns can be recognised, which can be expressed in terms of variability (inter-annual and intra-seasonal rainfall); trends (upward or downward) and persistence, a typical inertia which affects many climatic variables at all time scales. Good and bad years do not occur randomly, but tend to be grouped.

## **(2) Good Years and Bad Years**

Even allowing for differences between countries in individual years, the period 1960-93 has experienced widely different conditions from year to year. The years from 1960 to 1969 were among the wettest of the period, while the seventies and eighties mostly recorded lower rainfall. The downward trend from 1960 to 1970 affected the whole continent, but resulted in negative impacts on food production only in the low rainfall areas.

The years 1973, 1984 and 1992 were bad, while 1963, and to a lesser extent 1989, were remarkable years in that almost the whole continent experienced above average conditions. 1973 is interesting in that it constituted the first poor year after a run of good years. As such, it caught most countries unprepared. In contrast, the impact of 1984, which was more severe than 1973 in climatological terms, was relatively less serious as the economies of many countries (especially in the Sahel) had learnt by now how to cope with such extreme situations.

In 1973 (and less so in 1984) almost all African countries suffered, north and south alike. In contrast, the 1992 Southern African drought was relatively limited in space since the Sahel had one of its good "after 1988" years (with average or above average conditions).

### (3) Regional Patterns

The Sub-Saharan countries can be classified into eight groups of similar behaviour based on rainfall patterns since 1960. The patterns observed in the different groups are not independent. Part of this behaviour is directly linked with the rain-bringing mechanisms in Africa and explains why continent-wide good and continent-wide bad years are infrequent. Each of the groups is characterised by persistence characteristics, trends and pseudo-cycles. The cycles are plotted using the normalised rainfall (precipitation) index.<sup>15</sup>

- i) Sahel and Sudan: *Burkina Faso, Cape Verde, Chad, Gambia, Guinea-Bissau, Mali, Mauritania, Niger, Senegal and Sudan*
- ii) Southern-central Africa and Madagascar: *Madagascar, Malawi, Mozambique, Namibia, Zambia and Zimbabwe*
- iii) Central Gulf of Guinea countries and Tanzania: *Benin, Côte d'Ivoire, Ghana, Tanzania, Togo*
- iv) East and West Gulf of Guinea: *Cameroon, Central African republic, Equatorial Guinea, Gabon, Guinea, Liberia, Nigeria, Sierra Leone*
- v) Southern Africa: *Botswana, Lesotho, South Africa, Swaziland*
- vi) Horn of Africa and Kenya: *Djibouti, Ethiopia, Kenya, Somalia*
- vii) Central-west Africa: *Angola, Congo, D. R. Congo (Zaire)*
- viii) Great lakes countries: *Burundi, Rwanda, Uganda*

### (4) Combating the Adverse Effects of Human Activity on Rainfall Patterns

Deeper understanding is required of how changes in vegetation cover and land-use types, induced by human disturbances (primarily overgrazing of rangelands and deforestation) may bring about changes in soil water distribution and rainfall patterns. In this respect, soil water availability (soil water content) is influenced by rainwater infiltration, which is affected by, topography, soil characteristics, and rainfall pattern.

Deforestation (removal of woody vegetation) is much linked with soil properties. Removal of trees reduces the soil water holding capacity (through various processes and linkages). The amount of soil water available and the atmospheric characteristics of the boundary layer (of both soil and plants) affect rates of evaporation from soil and transpiration from plants (evapotranspiration). Experimental studies comparing transpiration from plants and pan evaporation may give misleading results. The relative contribution of transpiration vs. evaporation to total evapotranspiration is regulated by both soil control (available water, porosity and texture) and atmospheric control (mainly vapour pressure deficit), and possibly also the ecophysiological characteristics of the plant (leaf area, stomata regulation, rooting pattern, etc).

<sup>15</sup> SPI - Standardised Precipitation Index (developed at the Colorado State University, by McKee et al., 1993) is based on a normalised probability distribution of rainfall totals and the index values are the standardised deviation of the transformed rainfall totals from the mean. Thus a range of areas or points can be analysed together and compared. Drought periods are represented by relatively high negative deviations (> -1.5 for example) and various authors have identified different ranges of values to represent different levels of drought.

### **3.5 Underdeveloped Infrastructure**

#### **(1) Economic Infrastructure of Sub-Saharan Africa**

Africa's rural infrastructure is inadequate by almost any measure and its road network is particularly underdeveloped. Africa's people face the longest distances to nearest large markets. A look at the overall scene compared to other regions reveals the following: (a) a fifth of Africa's population is landlocked - all other regions have less than 10 percent; (b) less than a third of Africans live within 100 km of the sea compared to over 40 percent for other developing regions; (c) rail freight in Africa is under 2 percent of the world total, marine freight capacity 11 percent, and air freight less than 1 percent; (d) power generation capacity per capita in Africa is less than half of that in either Asia or Latin America. The poor state of Africa's infrastructure reflects neglect of investment but also the fact that the level of production cannot often justify the required investment and maintenance costs. External investment in economic infrastructure in the period between 1990 and 1996 for Sub-Saharan Africa had US\$26.7 billion compared to US\$41.4 billion for Latin America and the Caribbean and US\$101.9 billion for Asia, of which some US\$71.9 billion for East Asia alone.<sup>16</sup>

This underdeveloped physical and financial infrastructure in Sub-Saharan Africa continues to discourage (industrial) investment in the region although the region is rich in exportable agricultural goods. Key among the desired infrastructure would be infrastructure projects that support, in particular, development of land transport - road and rail road networks - and ports, and the continued upgrading and liberalization of the energy and telecommunications sectors.

#### **(2) Current Situation of Rural Infrastructure**

Rural infrastructure is one of several subsets of activities that are essential elements for African rural transformation. The existence of poor quality or inadequate infrastructure will inevitably impact negatively on the competitiveness of African agriculture through increasing internal transport costs, reducing levels of value-added at origin and lowering transaction efficiencies in the marketing chains, be they national or international. The provision of adequate and cost-effective rural infrastructure will clearly, therefore, underpin the development of agriculture in general and, in particular, facilitate lower-cost production and marketing to enable countries in the region to respond to both national and international market demand. It is important that Sub-Saharan African countries should aim at investment in transport, communication and infrastructure to lower transaction and marketing costs.

The provision of basic rural infrastructure is also a pre-requisite for enabling African countries to stimulate economic growth and to reach the targets for economic recovery and poverty alleviation by 2015, through increasing and diversifying agricultural output and employment, promoting domestic market activity and market integration, and facilitating and developing access to export markets. In addition, complementary actions will be required to improve the market access conditions facing African agricultural (including livestock and fisheries) exports in developed country markets.

<sup>16</sup> a) NEPAD Short-term Action Plan: Infrastructure. May 2002 b) UNCTAD, Document TD/LDC/AC.1/17, 13 June 2001

### 3.6 Low Technology Level of Smallholder Farmers

Agriculture is the mainstay of most Sub-Saharan economies, supporting over 70% of the population and contributing an average of 30% of GDP. An increasing number of countries have taken initial steps to reform their economies by re-emphasizing rural agriculture-led growth. Nonetheless, agricultural productivity has stagnated since 1999, and per capita food production has declined to 1980 levels. The most significant constraints to increasing agricultural productivity include low usage of improved technologies and information, under-capitalization of farmers, poor land use and insecurity of tenure, poor infrastructure, and inappropriate policy and regulatory frameworks that create distortions in markets and disincentives for efficient production.

Due to the very small scale at which farming is conducted, and the stagnation in adoption of drudgery-easing technologies, the hand hoe still remains the key farm implement in the smallholder sectors of all of the countries of Sub-Saharan Africa.<sup>17</sup> For example, in Uganda in 1997, it was estimated that almost 90 percent of farmers used hand tools and human labour only, that animal draft power was used on only 8 percent of the cultivated land, and tractor power on only 2 percent. The situation is similar in most of the other countries of SSA.

The hoe comes in various forms in Africa, but in almost all cases it is of the traditional chop-downwards-and-pull type. The only significantly different hoe that was being used widely was found in Senegal. It is a push-pull hoe that cuts the weeds just below the surface, and it is fitted with a very long handle (180-220 cm). This hoe is used standing upright by both women and men. Since its introduction in 1930, it has been adopted by everyone in Central Senegal for weeding, displacing more traditional hoes.

Various sorts of basic cutting and harvesting tools are found everywhere, with axes and pangas or slashers the commonest. Both the axes and pangas are usually a mixture of imported and blacksmith-produced versions. Locally made and/or imported sickles are also found everywhere.

Locally made rakes and forks, used mainly for compost making and for seedbed preparation in vegetable plots, are found in most of these countries.

Knapsack sprayers are in use for horticultural production particularly in Eastern and Southern African countries, as are watering cans, wheelbarrows, ox-carts, and so on. In West Africa, the carts are predominantly donkey- or horse-drawn. Nowhere are tractors, power tillers, irrigation pumps, or similar motor-powered equipment found in widespread use although contract tractor tilling services exist in Kenya, and horticulture contract farmers use motorised irrigation pump-sets.

### 3.7 Weakened Public Services

When the structural adjustment programmes were prevalent during the early 1990's in many of the heavily indebted countries, large numbers of public service workers including extension officers lost their jobs through retrenchment and early retirement. Accordingly, dissemination of extension messages suffered a sharp decline and has remained low since then. Public extension support and development budgets were also heavily trimmed and total support to the agricultural sector faded suddenly.

<sup>17</sup> FAO, The potential for improving production tools and implements used by women farmers in Africa, A Joint IFAD/FAO/FARMESA Study, February, 1998

As a result of the decline of public services, privatization took the place of the selected policy among governments and donors. This strategy, together with a market-oriented economy, have been promoted by governments ever since. The problem with the strategy is that it suits able farmers - medium and large scale - who can expand their businesses in a free market economy, while the smallholder marginal farmers producing at subsistence level have been left outside of this system. The decrease in the availability of extension services exacerbated this situation.

### 3.8 Market Situation

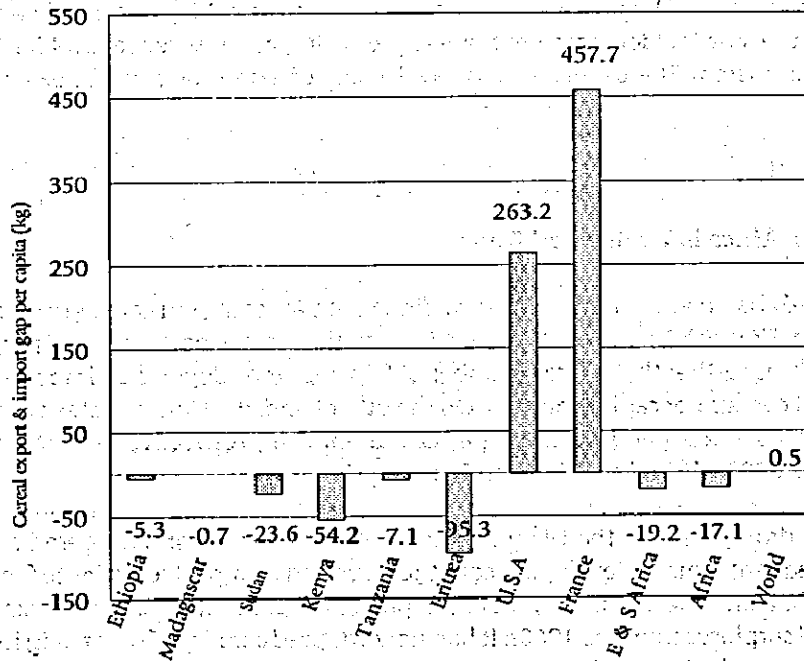
#### (1) Sub-Saharan Africa in World Food Trade

Today, many Sub-Saharan African countries excluding South Africa import cereals to meet their national demand. Figure 3.8.1 shows the cereal importation and exportation gap per capita in 1997 and explains further that a large number of SSA countries depend on importation of at least 17.1 kg of cereals per capita annually. On the other hand, the United States of America and France export 263.2 kg and 457.7 kg per capita annually, respectively, mostly to SSA countries (Hirano, 2003. "Afrika Keizai (African Economy)").

In 1973, a heavy drought struck the Ukraine and Sub-Saharan Africa and triggered a global food crisis. Consequently, many developing countries reverted to imported grains to feed their populations. At that time, the USA had a problem of grain over-production and had maintained carry-over stored surpluses from the 1960s. It had now adopted a policy of offloading its long-stored surpluses onto the international market - corn, soybeans, wheat and others - while at the same time supporting local heavily subsidized production. The export market was the food scarce countries of the world including SSA (Murata 2003).

As would be expected, the unit cost of food produced using the heavily mechanized large scale systems as applied in USA and Europe is much lower than that of food produced in SSA. In other words, these countries may be said to have a comparative advantage over developing countries especially for grain production. However, in addition to this assumption, farming in the developed world is heavily subsidized and therefore competes unfairly with food produced without such government subsidies. This means that smallholder and medium scale farm produce cannot easily command a market share in the international markets.

**Figure 3.8.1: Cereal export and import gap per capita (kg) in 1997**



Note: Average of Africa means average of Sub-Saharan Africa but does not include South Africa. The value for Eastern and Southern Africa was calculated by use of data from FAOSTAT (1999) excluding Zimbabwe and South Africa.

Source: Author's computation based on "Zusestu Africa Economy" (Africa Economy)" by Hirano Katsumi, 2003.

In 1983, the FAO proposed the International Agriculture Adjustment Guidelines on the strength of the above argument and declared that:

- Developing countries that were dependent on food imports should aim at self-sufficiency.
- Access to domestic markets should be improved and farm subsidies should be lowered for developed countries with massive food surpluses so as to allow agro-produce from the developing countries a market share in their economies and therefore stabilize agro-produce trade.
- A new international cereal treaty should be negotiated.

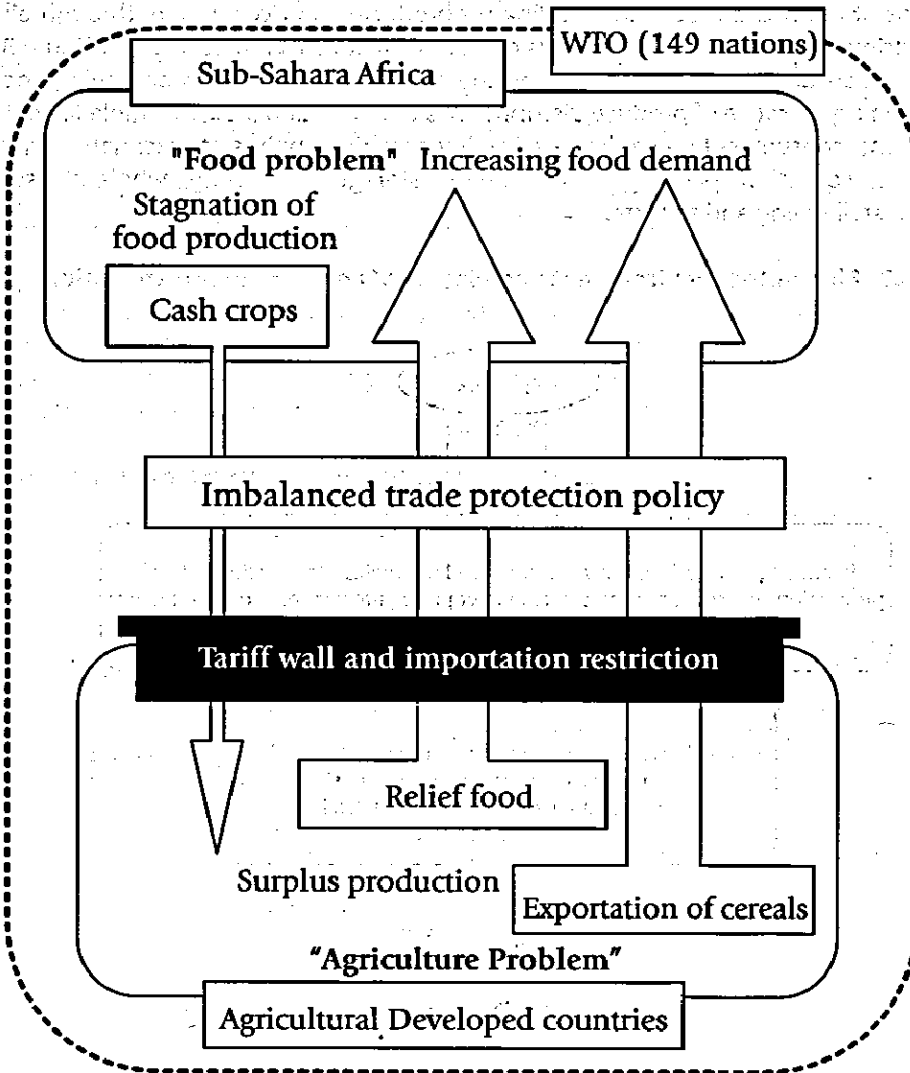
The World Food Summit in 1996 declared its commitment to achieve global food security using the following strategy:

- Implementation of policy to alleviate poverty and inequality and improvement of access to food.
- Pursuing sustainable agriculture and rural development with consideration of the multi-functionality of agriculture.
- All people attain food security through global trade under a trade policy ensuring equal consideration in agricultural trade i.e. elimination of subsidies.



However, this could not be attained as the developed world continued to heavily subsidize their farming sectors. The imbalances depicted in Figure 3.8.2, of food trade between Sub-Saharan African countries and developed countries persisted. The subsidies and application of high tariffs and importation restrictions have therefore kept SSA produce outside of these developed economies. Japan is no exception as it maintains a tariff wall, for example in December 2005; Japan placed tariffs of 778% on rice, 360% on butter and 250% on wheat imports (Sankei Sinbun, (Sankei Newspaper), 17th Dec. 2005”).

**Figure 3.8.2: Imbalance of food trade between SSA and developed countries**



Source: Author - based on "WTO To Sekai Nougyo (WTO and World Agriculture) 2003" and "Jinko To Shokuryo (Population and Food) 2001"

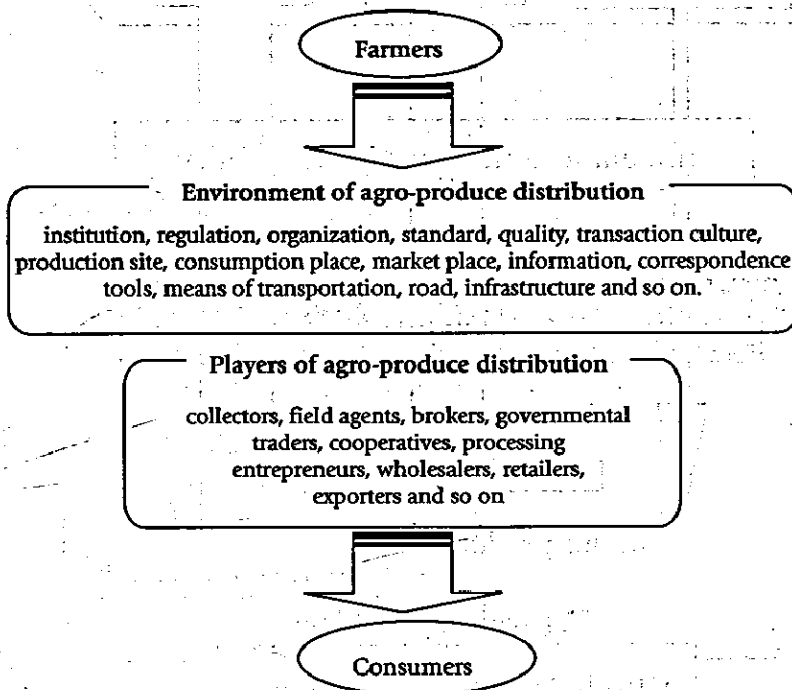
## (2) Produce Marketing and Distribution in Rural Africa

Subsistence farmers in rural Africa may sell part of their production to obtain an income in order to meet their other needs. This section explains how this activity occurs in rural Africa. It is important to note that the range of agro-products may include agro-inputs, capital, technology, consumable goods, loans and labour. However, this section mainly deals only with produce.

### i) Produce distribution

Produce distribution is a mechanism to link up producers and consumers through all the related distribution players and it depends on various factors as represented in Figure 3.8.3. Farmers and consumers sometimes become the distribution players for particular crops as well. The primary purpose of produce distribution is to enrich and assure a stable life of both producers and consumers by enabling availability at various points at reasonable prices. It comprises of collection, packing, transportation, storage, processing, wholesale selling, brokerage, retail selling and so forth.

Figure 3.8.3: Elements of environment and players of agro-produce distribution



Note: The word 'Middlemen' is also used to describe players in the marketing chain between farmers and consumers.

Source: Author.

## ii) Route of produce distribution

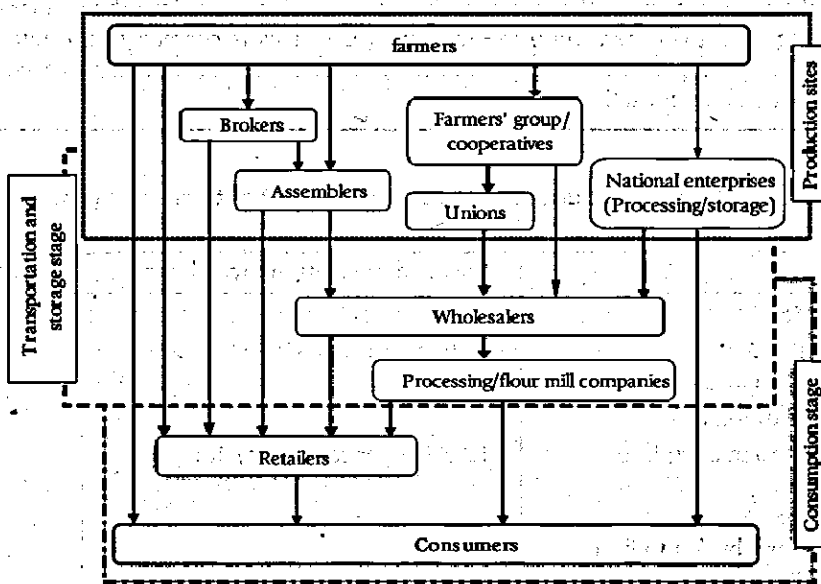
The marketing and distribution route followed by produce largely depends on the crop, production and consumption places, economy and social conditions of farmers and consumers and so on. Figure 3.8.4 illustrates cereal distribution routes in Ethiopia.

The above example shows that agricultural produce proceeds through several stages from harvesting to consumption. Farmers, farmers' groups, various kinds of distribution players, consumers and central and local governments are involved in the distribution process. During the process of produce distribution some players may follow economic rationale based on modern sense of value but some may put a premium on traditional sense of value.

Figure 3.8.4 illustrates that independent brokers and/or collectors often called field agents or assemblers negotiate prices with farmers. To strengthen their bargaining power farmers form groups or associations. Semi-governmental agencies (parastatals) occasionally act as collectors of cereals as a price stabilization measure or to maintain them as strategic food reserves<sup>18</sup>. Collection, transportation, storage, processing and selling activities are shared by transporters employed by wholesalers or retailers and flour milling companies.

For perishable produce such as fresh fruits and vegetables, cold chains are required to ensure that produce reaches the consumer in a fresh state. Horticultural produce intended for the export market is distributed through a route established at the time of signing the grower's contract. Usually, under such an agreement, the buyer provides farm inputs and technical services to the out-grower scheme.

**Figure 3.8.4: Cereal distribution routes in Ethiopia**



Note: Many other routes that are not shown in the figure exist.

Source: Author - based on "Ethiopia Nousanbutsu Ryutsu Kaizen Purojekuto Keisei Chosa (Report of Project Formulation Study on Agro-Produce Distribution Improvement in Ethiopia) 2005"

<sup>18</sup> The National Cereals and Produce Board of Kenya purchases 3.5 million bags of maize (315,000 tonnes) yearly to replenish the strategic food reserve, being presumed loss from crop failure of one cropping season.

### iii) Price formulation

The retail price to the consumer reflects the final value of the item and is made up of the farm-gate price, all the marketing margins as the item changes hands, distribution costs, storage costs and any costs incurred as the item is transformed in content, shape and quality. Most of these costs are basically invisible and that is why the farmer may feel that he has received a price that is too low when compared to the final retail price. The longer and the more complex the marketing and distribution chain, the higher the final price relative to the farm-gate price. Their comparison is therefore a poor indicator of marketing efficiency<sup>19</sup>. Box 3.8 is an example of tomato price formation from farm gate to retail outlet and Table 3.8.1 summarises the calculation procedure of the cost per unit weight of tomatoes of the case in Box 3.8.

#### Box 3.8: Situation of price formulation - example of tomatoes

A small-scale producer with bamboo baskets full of tomatoes camps at the side of an access road waiting for a trader. The trader comes in a pick-up truck and buys the produce for US\$ 0.50/kg. Hired labourers transfer the tomatoes from the baskets to wooden containers that can take 10 kg which are then loaded onto the truck for transportation to the market place.

Along the way a toll charge is paid to an authority. Occasionally too, the authority may ask for a bribe citing violation of various regulations on the produce or the vehicle.

The collector brings the tomatoes to the market place. At the market place, the selling price of tomatoes to retailers is US\$ 0.9/kg. In addition to that, commission fees must be paid to brokers who normally have information on who will buy the tomatoes.

Hired casual labourers transfer the tomatoes from the wooden crates into the retailer's plastic containers/bags and load them onto the retailer's truck. This is charged to the retailer. The retailer then transports his tomatoes to a shop. The tomatoes are weighed and packaged in 500g transparent plastic bags for selling to consumers.

**Table 3.8.1: Calculation procedure of cost per unit weight of tomatoes (unit: US\$/kg)**

Priced Item	Cost and calculation breakdown	US\$/kg
Farm gate price	1kg x 0.50US\$	0.50
Wooden container	0.50US\$ / 10kg	0.05
Labour employed by wholesaler to pack, load and unload		0.02
Transportation to marketplace	1.50US\$ per container / 10kg	0.15
Toll charge		0.01
Marketplace fee		0.01
Commission for a broker to find buyers		0.02
<b>Sub-Total</b>		<b>0.76</b>
<b>Wholesaler Price</b>	<b>0.9kg x 0.90US\$ (sales per kg) + 0.20</b>	<b>1.01</b>
<b>Wholesaler Profit</b>		<b>0.20</b>

<sup>19</sup> Andrew W. Shepherd. 1993. "A Guide to Marketing Costs and How to Calculate Them".

<i>Purchasing price of retailer from wholesaler</i>	$0.81 + 0.20$ (same as sales of wholesaler)	1.01
Market fee		0.01
Plastic container		0.02
Porter's fees in market		0.01
Transportation to retailer's shop	$0.9\text{kg} \times 0.45\text{US\$}$ (per 10kg of a box)	0.04
Weighing, plastic bag and packaging, etc		0.02
<b>Total cost of Retailer</b>	$1.01 + 0.01 + 0.02 + 0.01 + 0.04 + 0.02$	1.11
<i>Sales of retailer</i>	$1.11 + 0.3$ (profit and sales cost)	1.41
<b>Total profit of retailer</b>		0.30

Source: Author - modified from Andrew W. Shepherd. 1993 *op cit*.

#### iv) Problems of agro-produce distribution for small-scale farmers

Small-scale farmers mostly reside in rural areas where the physical conditions of access roads linking them to towns and cities is not favourable, thus limiting their access to markets. This limitation extends to accessibility to farm inputs, information, technology, capital, foods, credit, labour and so on. This forces them to remain at the level of the subsistence producer. Their crops and livestock are intended for feeding their households rather than as a means of earning an income. Any surplus is sold at marketplaces where the farmer is more often than not a price taker – he cannot store perishable produce, he does not wish to take it back home in the evening and so he has to accept the offered price. His cash earnings are therefore generally meagre. This situation can be improved using interventions targeted at the problems depicted in Table 3.8.2

##### a. Infrastructure

Transportation networks such as roads, railways, and waterways are public services which should be distributed to the population equally. However, development project budgets to invest in these costly services are limited. Within limited budgets, authorities tend to invest more in road development in urban rather than rural areas so that the paved road ratio is low in Sub-Saharan Africa<sup>20</sup>.

<sup>20</sup> According to "Rural Poverty Report 2001" by International Fund for Agricultural Development (IFAD), the ratio of Kenya and Tanzania is 32% and 24%, respectively.

**Table 3.8.2: Major factors affecting market accessibility of small-scale farmers**

External factors	Problems
Infrastructure	<ul style="list-style-type: none"> <li>• Poor development of transportation/traffic networks (roads, railways, waterways, etc.) and low paved road ratio</li> <li>• Poor means of public transportation – no vehicles etc.</li> <li>• Low numbers of marketplaces and their malfunction</li> </ul>
Information	<ul style="list-style-type: none"> <li>• Lack of information transfer tools (radios, TVs, newspapers, etc.)</li> <li>• Poor information delivery system</li> <li>• Insufficient information dissemination projects by authority /public organizations</li> </ul>
Internal factors	Problems
Farmers' ability (only related to market)	<ul style="list-style-type: none"> <li>• Weak bargaining power to buyers (due to low production and quality)</li> <li>• Quantitative and qualitative post-harvest loss is large</li> <li>• Lack of capacity/capability of long storage of produce</li> <li>• Isolated from market information (relating to above 'Information' as an external factor)</li> <li>• Low ability of transportation (due to being isolated from favourable market of towns and cities and lack of means of transportation relating to 'infrastructure' as an external factor)</li> </ul>

Source: Author based on "Echiopia Nousanbutsu Ryutsu Kaizen Purojekuto Keisei Chosa." *op. cit.*

Unpaved roads hinder marketing activities of producers and other market players. They cause qualitative loss of produce, lengthen transportation hours and therefore increase produce costs. These roads are sometimes impassable during the rainy season. In its "Rural Poverty Report 2001" IFAD notes that fertilizer and labour costs of villages with paved roads are 14% and 12% cheaper, respectively, than those of villages without paved road.

The marketplace is an important piece of rural infrastructure to support produce marketing. It is characterized by extreme asymmetry of relations between, on the one hand, large numbers of small producers and, on the other, a few buyers. Such market relations are inequitable, frequently uncompetitive, and rarely to the advantage of the small producers. Many rural villages, particularly those in more remote areas where population densities are low, have such limited demand for production inputs, or have so little to sell or barter, that traders do not find it worth their while to visit them. As a result, market dynamism dwindles and producer initiative freezes.

#### **b. Information**

Information on wholesale prices, demand levels and market reliability assists producers to determine the kind of crops, area to be cultivated and time for planting and harvesting. Without such information farmers will always sell at what may appear like throw-away prices at harvest time and sometimes have to buy back what they sold to supply their food needs before the next harvest – as is often the case with grain. The solution should be a wider spread of information conveying tools such as telephone, mobile telephone, fax, TVs and computers linked to the internet which are not found in many of SSA's isolated villages. Relying on gossip and word of mouth from a poorly equipped extension service is inefficient.

#### **c. Ability of small-scale farmers**

Smallholder farmers sometimes rely on relief food especially when natural disasters (floods, droughts etc.) occur because their production cannot feed their families for the entire year and cash from their cash crops cannot meet the shortfall. Insufficient production is attributed to scarce, erratic and poorly distributed rainfall, poor agricultural facilities, lack of good seed, difficulty to obtain agricultural inputs and so forth. Contributing towards this low production are also post-harvest losses due to damage by vermine, pests and diseases as well as losses due to poor post-harvest handling (threshing etc). As for cereals, drying, threshing, and milling works depend mostly on traditional ways so that the losses are generally high. Farmers often do not grasp the actual magnitude of post-harvest losses and their nett effect on profit is not often considered. Perishable horticultural produce is easily damaged by handling methods after harvesting so that cold storage, grading, transportation, etc. are necessary technology and must be improved.

### **3.9 Urbanization**

#### **(1) SSA Population**

Sub-Saharan Africa's population of 570 million people in 1994 (and 702 million in 2005) continues to grow at a rate of 3% per annum. With a doubling time of approximately 23 years, the regions population is projected to increase to 901 million by 2010 and 1.32 billion by 2025<sup>21</sup>. By then Africa will have as many as 4 times the population of North America, twice as many as Europe, and 500 million more than South America.<sup>22</sup>

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<sup>21</sup> Population reference Bureau, 1974.

<sup>22</sup> World Bank, World Population Projections, 1974

Sub-Saharan Africa has the highest fertility and mortality rates in the world along with the highest proportion of young dependents. The population is unevenly distributed with average national population densities ranging from less than 2 persons per km<sup>2</sup> in Mauritania to 181 persons per km<sup>2</sup> in Rwanda. The least densely populated countries (with under 6 persons per km<sup>2</sup>) account for just one-eighth (12.5%) of the total population but occupy 46% of the total area. Conversely, countries with the highest densities (over 50 persons per km<sup>2</sup>) account for 25% of the total population but only 5% of the total land area.

Some of the most densely populated parts of SSA are:

- Several areas in Nigeria, particularly Southern Nigeria (Igboland) and South-western Nigeria occupied by the Yoruba, Northern Nigeria around Kano, Zaria and Sokoto.
- A zone extending from Burundi and Rwanda along the Northern and Western shores of Lake Victoria through Southern Uganda and Western Kenya.
- Pockets in East and Central Africa around southern Malawi, North-eastern Tanzania, the hinterland of Nairobi in Kenya and Central Ethiopia.
- The Bantustans created by the apartheid government as homelands for South Africans.
- The Islands of Comoros, Cape Verde, Sao Thome and Principe.

## **(2) Urban and Rural Population**

Sub-Saharan Africa's population is predominantly rural, about one-third of the population still resides in urban centres. In 1990, the urban population of East Africa was just 20%, West Africa 32%, Central Africa 38% and South Africa 42%.

An important direct consequence of the effects of shortages of rainfall on the agricultural sector is urbanization as people who are unable to sustain a rural livelihood (without food and water) seek refuge in urban areas. More specifically, variation in rainfall may result in permanent internal population movements. Migration has been shown to be an important demographic response to environmental stress in Africa (Krokfors (1995). Thus, severe and prolonged shortages of rainfall and consequent losses in income generated from agricultural production may cause substantial movements of the population from rural to urban areas. The potential importance of this is suggested by the fact that SSA's rate of urbanization has grown by more than 140 per cent since the 1960s and that estimates show that roughly half of this urban population growth has been due to rural-urban migration.

In this regard, the movement of people from rural to urban areas due to rainfall shortages may have negative effects on growth as it may lead to what has become known as over-urbanization, a concept noted back as early as 1954. Particularly, with regard to Africa it has now been estimated that urban centres are indeed not serving as engines of growth as they do in many other developing countries (World Bank, 2000).

Due to this influx of people into the urban areas, in developing countries around the world, cities are struggling to function. They are home to rising numbers of the extreme poor and do not create the jobs that are necessary to achieve growth and meet the Millennium Development Goals (MDG). In the face of the rapid urbanization experienced by most developing countries, these challenges are only going to become more acute unless corrective action is taken. Since the urban economy is an important centre of gravity of economic life and the focus of technological advancement and specialization, making cities work will also benefit rural areas tremendously.



Some of the factors responsible for Africa's population density include those attributable to the physical environment and those that bear a historical perspective, respectively, as follows:

- The low seasonal and annual amount, poor reliability and adverse seasonal distribution of rainfall.
- Infertile soils unsuitable for intensive cultivation. By contrast, the very fertile volcanic soils of the Rift Valley Region of East Africa support a dense population.
- Debilitating and deadly diseases and pests such as sleeping sickness, river blindness and malaria (middle belt of West Africa, parts of Zambia and East African lowlands) cause a drastic decline in population densities in the region.
- Over 50 years of colonial rule caused major changes in population distribution in SSA. The transformation of the landscape through the development of mines, cash crops, trade centres, railways and roads attracted people from far and wide. These factors caused disparities in development.
- Instability and conflicts resulting from the struggle for national independence depopulated several regions in Angola and Mozambique.
- The apartheid system and compulsory re-location of blacks in South Africa.
- In Zimbabwe, South Africa and Namibia, the official policy of land apportionment became a major determinant of population distribution during the 1930s.
- The slave trade encouraged conflicts that led to depopulation of some regions in Africa.
- Modern-day conflicts in the Great Lakes Region, the Horn of Africa and parts of West Africa have caused great migrations of refugees who have raised population densities in some areas and lowered it in others.

Southern Africa is the most urbanized region, with a projected 60% urban population by 2025. Western and middle Africa are about equally urban, and eastern Africa is the least urbanized region. Projections for the individual countries of Sub-Saharan Africa show even greater diversity and at the same time an almost inexorable reach to hit the fifty percent urbanization mark by 2025, when thirty-five of the forty-seven countries in Africa are expected to do so. Therefore, from a relatively modest 83 million urban residents in 1970, Africa increased to a substantial 206 million in 1990. Projections for 2005 put its urban population at 400 million and it will double again in the subsequent 20 years, to 857 million urban residents by 2025. As recently as 1950, Africa was home to only 32 million urbanites; six of every seven Africans lived in rural areas. Africa has been adding urban dwellers faster than any other region for some time, and it is expected to do so into the 21st century.<sup>23</sup>

### **(3) The Effects of HIV/AIDS in Africa<sup>24</sup>**

At the end of 2001, there were 28.1 million Sub-Saharan Africans living with HIV/AIDS. The overall prevalence of HIV among Sub-Saharan African adults, ages 15 to 49 years, is estimated to be an astounding 8.4 percent.

<sup>23</sup> UN Department for Economic and Social Information and Policy Analysis, 1993

<sup>24</sup> Population Resource Centre (<http://www.prcdc.org/summaries/aidsinafrica/aidsinafrica.html>)

Prevalence varies widely across the African continent and between rural and urban populations with the latter carrying greater proportions of the infected. In some West African countries prevalence is less than 2 percent of the adult population, while in countries in southern Africa including South Africa, Botswana, Lesotho, Swaziland, Namibia, Zambia and Zimbabwe, 20 percent and more of the total adult population are living with HIV/AIDS.

HIV/AIDS has had many demographic effects on the population of SSA. Estimated crude death rates in eastern and southern Africa are as much as 50 to 500 percent greater than they would have been without AIDS. In Kenya, the crude death rate is estimated to have increased from 6.5 per thousand to 14.1 per thousand persons due to AIDS. In South Africa, the estimated crude death rate now stands at 14.7 deaths up from 7.4 per thousand persons.

In South Africa, it was estimated that in 2000, HIV/AIDS was the cause of 40 percent of adult deaths aged 15-49 and 25 percent of all deaths. Projections show that without treatment to prevent AIDS, the number of AIDS-related deaths will increase to more than double the number of deaths from all other causes before 2010.

The population growth rate in Zimbabwe has been reduced to nearly zero because of AIDS-related deaths. Sharply reduced growth rates are also seen in South Africa, Botswana, Malawi, Namibia, Swaziland and Zambia. It was projected that by 2003, there would be negative population growth in Botswana, South Africa and Zimbabwe. Negative population growth has never before been projected in a developing country; it is caused by a combination of high HIV prevalence and declining relatively low fertility.

In the 35 African countries that are highly affected by HIV/AIDS, life expectancy at birth is estimated at 48.3 years, 6.5 years less than it would have been without HIV. The projected population of these countries in 2015 is 84 million, 10 per cent less than it would have been without AIDS.

Life expectancy and child mortality rates, two indicators of development that have shown positive trends in recent years, are now being reversed in parts of SSA. The life expectancy of children born in Botswana, Malawi, Mozambique, Rwanda, Zambia and Zimbabwe is now less than 40 years of age; without AIDS, life expectancy would have been between 50 and 71.

In the eight African countries with HIV infection rates over 15 percent, it is estimated that a third of today's 15 year olds will die from AIDS. AIDS mortality is changing the population structure of many African countries. Instead of the "population pyramid" in which there is a gradual reduction in population at higher ages, there is a "population chimney", with a sharp decrease in the number of adults over age 30. As a result, large numbers of children will grow up without their parents, and increased child labor will become unavoidable, more so in urban areas.

### **3.10 Experiences of Rural Development in the SSA Region**

#### **(1) Ujamaa in Tanzania**

##### **i) The Tenets of Ujamaa**

At independence from British rule in 1961, Tanzania wanted to be fully independent, and not be aligned to the West or the East. President Nyerere had strong and clear views on human dignity and equality, the fight against exploitation and about education. These views were solidified in the ujamaa philosophy of villagization and family-hood which did not require

the human resource or heavy investment needed for development of industry. The focus of ujamaa was to make the country self-reliant in food and cash crop production which would generate income for both farmers and the state.

Nyerere's first paper on ujamaa appeared in 1962 and ujamaa eventually became part of Tanzanian policy in 1967 when Nyerere's "Arusha Declaration: Socialism and Self-Reliance" was adopted by the ruling party – Tanganyika African National Union (TANU). Ujamaa is the Kiswahili word for "family-hood" and was used as a term for "African Socialism". The use of the word ujamaa to describe the ideas behind the policies to be developed was intended to reflect "a full acceptance of our Africanness and a belief that in our past there is very much which is useful for our future". An African Socialism was developed. Ujamaa was to be "a belief, a way of life". Nyerere wrote that to eliminate the exploitation of man by man, "Socialism means that no person uses his wealth to exploit others just as a father does not use his status to dominate or exploit his wife, children and other relatives ..." and that "it is the responsibility of the state ... to prevent the exploitation of one person by another or one group by another, and so as to prevent the accumulation of wealth to an extent which is inconsistent with the existence of a classless society". Private ownership of the means of production would inevitably lead to the exploitation of man by man creating a man-eat-man society, the epitome of capitalism. Pure ujamaa meant a classless society where there was 1) respect for each other and for family-hood, 2) common property ownership and 3) the obligation to work. The ujamaa policy argued that if a man in a rural village extends his farm to the point where it is necessary to employ labourers in order to plant or harvest the full acreage, "then, the traditional system of ujamaa has been killed". Co-operative unions, marketing boards and price policies were instituted to protect farmers. Thus, the government controlled both the means of production and the means of exchange.

## ii) Implementation of Ujamaa

Ujamaa was implemented in two main phases:

**a. 1967-74 - "Ujamaa Vijijini"** aimed at a gradual but complete transformation of the rural areas into socialist communities, where all political and economic activities were collectively organized. Mobilization of peasants to set up such communities became a high priority for Government and Party. By 1974, 2.5 million people - 20% of the rural population - were living in 5,000 ujamaa villages mainly located in the less fertile regions of Dodoma and Singida.

**b. 1974-76 - "Operation Vijiji"** required that villagization become an absolute pre-condition for development. Only in nucleated villages could the government provide all necessary facilities and inputs to increase agricultural production. There was no time to await voluntary villagization based on education of the people - all rural people had to settle in a village before 1976. There were widespread concealed incidents of violence and use of state force through regulations, economic measures, threats, burning down of houses and physical violence. By 1976, all rural villages were registered and 13 million people lived there. This villagization, dubbed "socialism from above" resulted in poor agricultural production, frustrations, suffering, political discontent and high costs.

## iii) Lessons

**a.** Villagization was a way to ensure that farmers could be reached by the government in order to help them improve their land-use and agricultural practices. Therefore, creation of nucleated villages to group the farmers to facilitate extension services, supply of inputs and marketing of agricultural produce appeared to be a logical step for the government.

It would appear then that the villagization programme was not the result of ujamaa. Instead, the development of ujamaa seems to have been rather the result of the wish for villagization, and of the need to justify that villagization.

b. If a villagization programme has to be voluntary, then the peasants have to be convinced that real economic gains can be achieved through larger scale production and collective farming, and that social gains can be derived from living in communal settlements. The ujamaa setting did not show that collective farming necessarily led to efficient division of labour, better organisation or greater exertion by the people. Seemingly, not enough attention was given to the rationale of collective farming.

#### **iv) Conclusion**

Following the oil crisis in 1973 which raised the prices of oil and damaged the economies of many poor countries like Tanzania, and several economic crises during the early 1980's, the World Bank no longer tolerated what it called the "Arusha-experiment". The pressure from the donor community grew, and it seemed like ujamaa socialism based on low technology collective agriculture was too fragile for the rapidly emerging economic globalisation. Ujamaa, as a government policy, disintegrated with the retirement of President Nyerere in 1984 though some village governments still remain.

### **(2) Centre on Integrated Rural Development for Africa (CIRDAFRICA)**

#### **i) Introduction**

CIRDAFRICA was an intergovernmental centre established at Arusha in 1979, with support from the Food and Agriculture Organization (FAO) of the United Nations in response to a request made by African States at the FAO's 10<sup>th</sup> Regional Conference for Africa held at Arusha, Tanzania, in September 1978. The aims were to integrate all the African rural people in the development process, improve production, income and living conditions of small-scale farmers and other needy rural groups, and encourage their participation in social and economic life. Initially, 34 African countries ratified the agreement and had an obligation to remit annual contributions for the running of the centre, attend governing council meetings and have a national committee to assist their designated IRD centre.

#### **ii) Centre Objectives and Functions**

The agreement recognized the following facts which formed the key objectives of the centre:

- most African countries were planning their rural development programmes by adopting an integrated approach;
- the implementation and success of such programmes could be greatly enhanced and facilitated through intensified regional cooperation availing itself of a network of national institutions for integrated rural development and through cooperation between such institutions and an intergovernmental institution; and
- this cooperation could best be achieved through the establishment of an intergovernmental Centre carrying out its activities in collaboration with all countries and all governmental and non-governmental organizations and agencies that may be able to provide financial and/or technical support.

For the achievement of its objectives, the Centre had the following functions:

- conduct and, through the national IRD centres, promote or assist research on various aspects of IRD in Africa, with emphasis on alternative approaches leading to more effective field-action programmes;
- hold consultative conferences or other meetings enabling national decision-makers, research-workers, planners and executives to exchange ideas and experiences on integrated rural development and to identify areas in which joint collaborative efforts would be for the mutual benefit of Member States;
- organize training courses in the planning, implementation and evaluation of programmes for IRD, and assist the national IRD centres in organizing their own training courses and workshops;
- provide other technical support to national IRD centres, and maintain liaison with such centres and, give advice to other organizations or agencies concerned with IRD; and
- serve as a clearing house and data bank for information on IRD in Africa and elsewhere and promote the dissemination of information by publications and documentation, including the translation of publications on IRD.

### **iii) Achievements and Difficulties of the Centre**

The centre conducted many studies during its 20-year active life although some of these were said not to address the needs of the member countries. Eventually however, the centre ran into difficulties because of weaknesses in its organizational and management structures, consistency of its mandate, technical programmes as they related to the needs of the member countries, the efficiency of the financial and administrative support services, and the legal regulatory instruments. By 1999, the Centre had only US\$ 253,474 in fixed assets, total debts of US\$ 1,277,256, collectable arrears of US\$ 3,418,554 from withheld member subscriptions and total arrears of US\$ 7,400,000 which included those of countries that had opted to cease membership. Although the FAO funded two studies to restructure and revive the centre in 1994 and 1999, respectively, the centre was liquidated in 2003. Its records are with the Ministry of Agriculture of Tanzania.

## **(3) Rural Development Fund (RDF) - Kenya**

### **i) Project Objectives**

The Rural Development Fund (RDF) was a donor-driven nation-wide rural development fund whose objectives were to:

- support rural development in Kenya by providing finance for small investment projects in rural infrastructure and income generation; and
- provide Technical Assistance to assist in managing the Fund to achieve better results in terms of the number and quality of small investments being completed and brought into use.

### **ii) Main Features**

The Fund was established by Government of Kenya around 1975 and the Project commenced the same year with financial contributions from DANIDA, SIDA, NORAD and the Netherlands Government. Between 1979 and 1995, the project included technical assistance in the form of engineering advisers, financed by and recruited in the Scandinavian countries. This assistance was not indicated in monetary terms in the final evaluation of the project. From 1982 to 1995 a project co-ordinator was included in the project. The main responsibilities of the TA were to provide co-ordination and management support to the operation of the Fund and technical expertise for appraisal of the small projects proposed in the districts. The project closed in 1995.