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TRAINING PROGRAMME ON FOOD SECURITY AND VULNERABILITY ASSESSMENT

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PREPARED AND CONDUCTED BY:
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TABLE OF CONTENT

	Page
1.0 THE SOCIO-ECONOMIC AND ENVIRONMENTAL CONDITIONS OF ETHIOPIA	1
1.1 Introduction	1
1.2 Natural Environmental Condition	2
1.2.1 Location, Size and Administrative Structure	2
1.2.2 Physical Set-up and Climatic Condition	2
1.2.3 Agro-ecological Zones	3
1.3 Socio-Economic Conditions	5
1.3.1 Social Services	5
1.3.2 The Resource Base	11
1.4 General Food Situation and Constraints to its Attainment	22
1.4.1 An Overview Trends in Food Situation	22
1.4.2 Constraints and Means of Attaining Food Security	25
2.0 ISSUES ON DEVELOPMENT AND AN OVERVIEW OF THE ETHIOPIAN ECONOMY, DEVELOPMENT POLICIES AND STRATEGIES AND THEIR IMPACTS ON FOOD SECURITY	28
2.1 Conceptual Issues In Development	28
2.1.1 What Development?	28
2.1.2 Growth Versus Income Distribution	30
2.1.3 Planning: Markets, and the Role of the State	31
2.1.4 Problems Attributed to State Intervention Developing Countries	36
2.2 An Overview and Performance of the Ethiopian Economy	38
2.2.1 A Brief Review of Pre-Reform Macroeconomic Situation	38
2.2.2 A Brief Review or Pre-Reform Macroeconomic Situation	39
2.2.3 Reform Measures (Structural Adjustment Programme) Undertaken by the TGE	40
2.2.4 Macroeconomic Developments Since the Launching of the Reform Programme (Structural Adjustment Programme)	41
2.3 Government Policies and Strategically Relevant to Food Security	43
2.3.1 Macro Economic Policies	43
2.3.2 Agricultural Development Led Industrialization (ADLI)	43
2.3.3 Sectoral Policies	45
2.3.4 The Food Security Strategy (FSS)	46
2.3.5 Land Policy	47
2.4 The Impact of Macroeconomic Policy on Food Security	49
2.4.1 Exchange Rate Policy	49
2.4.2 Fiscal Policy	50
2.4.3 Monetary Policy	51

CCRDA

Page

2.5 Policy Measures to Ameliorate Adverse Impacts of Macro-Economic Reform 52
2.5.1 Programmes Implemented to Conbate the Impacts of Macro Economic Policy Chance 54
3.0 FOOD SECURITY 57
3.1 Food Security concept and Definitions 57
3.1.1 Concept of Food Security 57
3.1.2 Definition of Food Security 58
3.1.3 Essential Elements for Defining Food Security Concept 58
3.1.4 Food Security Sources and Possible Option 59
3.1.5 Food Security Indicators 61
4.0 FOOD INSECURITY 63
4.1 What is Food Insecurity? 63
4.2 Causes and Types of Food Insecurity in Ethiopia 63
4.2.1 Chronic (Seasonal) Food Insecurity 64
4.2.2 Transitory (Acute) Food Insecurity 64
4.3 Who are the Food Insecure Group? 65
5.0 DISASTERS: CAUSES AND EFFECTS 67
5.1 Definition and Causes 67
5.2 Classification of Disasters 68
5.3 Effects 69
5.4 Who are the Most Affected? 71
6.0 EARLY WARNING SYSTEM AND FOOD INSECURITY (VULNERABILITY) ASSESSMENT IN ETHIOPIA 73
6.1 Introduction 73
6.2 Definition of Key Terminologies and Important Consideration in Vulnerability Assessment 73
6.2.1 Definition of Terminologies 73
6.2.2 Important Factors and Key Consideration in Vulnerability Assessment 74
6.3 Famine Early Warning and Response: a Brief Review from the International Perspective 75
6.4 Early Warning System (EWS) 77
6.4.1 Objective of the EWS 77
6.4.2 Levels of Operation 77
6.4.3 An Overview of the Ethiopian Early Warning System: Background, Functions, and Institutional Structure 77
6.4.4 Early Warning Indicators, Food Security Indicators, and Use of Baseline Information for Interpreting Data 79

CCRDA

Page

6.5 Data Collection Methods and Procedures 82
6.5.1 Data Collection Methods, Their Comparative Advantages and Disadvantages 82
6.5.2 The Practice in Ethiopia in Context of Food Insecurity Vulnerability/ Monitoring 84
6.6 Outputs of the Food Security Monitoring in Ethiopia 92
6.6.1 Early Warning Reports 92
6.6.2 Report Dissemination 93
6.7 Food Insecurity Indicators 93
6.8 Food Insecure Groups in Ethiopia 94
7.0 HOUSEHOLD COPING STRATEGIES WITH FOOD SHORTAGES 100
7.1 The Concept and Definition of Household Coping Strategy 100
7.2 What Indigenous Coping Strategies Exist? 101
7.3 Factors Limiting the Development of Indigenous Coping Strategies 104
7.3.1 In Settled Farming Areas 104
7.3.2 In Lowland Pastoral Areas 106
8.0 FOOD SECURITY PLANNING AND INTERVENTIONS 107
8.1 Definition and Types of Planning 107
8.2 Methods Food Security Situation Assessment 107
8.3 Food Security Planning and Intervention Programmes 108
8.3.1 Selective Area and Population Group-Based Targeting 110
8.3.2 Agro-ecology Based Targeting 115
9.0 PROJECT PREPARATION, IMPLEMENTATION, AND MONITORING AND EVALUATION 120
9.1 Introduction 120
9.2 Basic Concepts 120
9.2.1 Projects 120
9.2.2 Policy /Strategy/Programme/Projects 121
9.2.3 Projects Cycle 122
9.2.4 Blueprint Approach vs the Adoptive Approach 123
9.2.5 Project Environment 125
9.3 Project Identification 126
9.3.1 Sources of Project Idea 126
9.3.2 Methods of Project Identification 127
9.3.3 Approaches to Project Identification 129
9.3.4 Analysis of Participants (Interest Analysis) 130
9.4 Project Formulation 132
9.4.1 Project Framework (Background) 132
9.4.2 Logical Framework Matrix 132
9.4.3 Components of Logical Framework Matrix 133

CCRDA

Page

9.5 Evaluation of Projects 137
9.5.1 Cost Effectiveness 137
9.5.2 Cost Benefit Analysis 137
9.5.3 Appraisal Criteria and Investment Decision 142
9.6 Project Implementation 144
9.6.1 Action (Work) Plan 144
9.6.2 Pert/CPM Net Working 145
9.7 Monitoring and Evaluation (M&E) 147
9.7.1 The Need and Role of Monitoring and Evaluation 147
9.7.2 Stages of M&E 154
9.8 Common Problems in Project Planning and Implementation 154
9.8.1 Introduction 154
9.8.2 Causes for Project Failure 154

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Part I

THE SOCIO-ECONOMIC AND ENVIRONMENTAL CONDITIONS OF ETHIOPIA

By
Berhanu Legesse

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1.1 INTRODUCTION

Ethiopia is located from 3^0 N to 15^0 N latitude and 33^0E to 48^0E longitude. It is bounded by Eritrea in the North, by the Sudan in the West and Northwest, by Kenya in the South, by the Somalia Republic in the East and South East, and by Djibouti Republic in the North East.

With an area of about 1104.3 thousands of km^2, Ethiopia ranks among the largest countries of Africa in physical size. It is the third most populous nation of the continent with only Nigeria and Egypt exceeding its present estimated population of 61.6 million (CSA, 1998). The population is distributed unevenly over the country with the majority concentrated in the cool-warm temperate highlands of the North, the Northwest, the Southwest, Southeast and central highlands. The nomadic population occupies the vast and relatively dry lowlands of the East, South, West and the rift valley.

Ethiopia is predominantly an agrarian country where over 85% of its population's main stay is rain-fed agriculture. Small holders, who produce most of the country's food, largely for their own use, dominate the agricultural sector. In fact, the agricultural sector has been performing extremely poorly, so much so that even the task of keeping the rate of increase in production in pace with the rate of increase in population has become a formidable one.

With per capita GNP of US$110 (UNDP, 1998) about 46 percent of the country's population has been estimated to lie below the absolute poverty income level (MEDaC, 1999), defined as the level below which a minimum nutritionally adequate diet plus essential non-food requirements are not affordable.

Despite the country is considered to have a rich natural resource base including arable land, with only 15 percent under cultivation, poverty and destitution still characterize the majority of its rural population. Inadequate provision of social and economic infrastructure, limited manufacturing operation and growing unemployment are also common characteristics.

With the above mentioned problems, it is believed that the causative factors of poverty and social deprivation are more complex and needs further investigation into the various dimensions for alleviation.

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1.2 NATURAL ENVIRONMENTAL CONDITION

1.2.1 Location, Size and Administrative Structure

As it has been stated in the introductory section, Ethiopia is found in between 3° and 15° North of the equator. Its location near the equator, together with its extensive altitudinal range, has rendered the country suitable for human settlement based on a big range of crop production system and pastoralism.

With an approximate area of 1,104.3 thousands of km^2 (111,811,000 hectares), the country is divided into 9 national regional states and 2 town administration which consists of 63 zones and 535 Weredas (for details see the table 1)

Table 1: Administrative division

Regions	No. of Zones	No. Weredas
Tigray	5	36
Afar	5	29
Amhara	10	98
Oromiya	12	180
Somale	9	52
Beneshangul-Gumuz	3	20
SNNP	9	77
Gambela	2	9
Hareri	1	9
Addis Ababa	5	28
Diredawa	2	4
TOTAL	**63**	**532**

Source: CSA, Population and Housing Census, June, 1998 and Regional Planning and Economic Development Bureau.

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1.2.2 Physical Set-up and Climatic Condition

Ethiopia is a country of great geographical diversity. In millions of years of geological history, erosion, volcanic eruptions, tectonic movements and subsidence have occurred and still continue to occur accentuating the unevenness of the surface. Therefore, the phsiogrpahy of the country is a close manifestation of the underlying geology.

In general, the country is made up of massifs, plateaus, and lowlands. Massifs have general elevations of more than 2600 meters (the highest peak at Ras Dejen, 4620 m. above sea level), and covers nearly 11% of the area of the country. The plateaus have elevations of 1600 to 2600 meters, and make some 42% of the total area. Both the massifs and the plateaus are deeply dissected by numerous streams, which feed major rivers including Blue Nile, Tekeze,

Mereb, Awash, Omo, Wabi Shebelle, Baro and Akobo. The lowlands that have elevations of less than 1600 meters (the lowest point being the Afar Depression about 110 m. below sea level) cover some 47% of the area.

The Great Rift Valley separates the Western and Northern Highlands from the southeastern and eastern highlands. On their other sides of these highlands there is vast semi-arid lowland areas in the east and west, and especially in the south of the country.

The climatic conditions closely follow the topographic conditions. The higher areas being wetter and cooler, the lower areas drier and hotter. In terms of temperature, the highest mean maximum temperature (40°c) is registered in the peripheral lowlands of the country between March to June. The Afar Depression experiences the highest mean maximum temperature in the country, which is 45°c from April to September. On the other hand, the lowest mean temperatures of around 0°c. or lower are observed at night in the highland areas between November and February (NMSA, 1989).

The duration, amount, and spatial distribution of the rainfall depends upon location of a place relative to Atlantic and Indian Oceans and the Red Sea; air pressure and air circulation systems; and variation in elevation. While the central, eastern and northeastern areas of the country experience a nearly bimodal or two peak (spring and summer rains) rainfall distributions, mono-modal or single peak rainfall pattern characterizes the southwestern and western areas. The southern and southeastern areas also have a bimodal rainfall pattern but different timing than the central, eastern and northeastern part of the country.

In general, about 50% of the country receive annual rainfall ranging from 800 mm. to 1600 mm. Only about 10% of the country, mostly in the Southwest, get annual rainfall that is more than 1600 mm., while about 40% has only less than 800 mm. But, for about 55% of the country, the variation of the annual rainfall may be as high as 50% or more. Interms of effect, on the highland slopes and runoff have adverse effects, while on the lowlands high temperature and evaporation have a similar effect.

1.2.3 Agro-ecological Zones

The vastness of its geographic area, topography, climate, and soils, natural vegetation and its water resources combined in one way or another have given rise to a highly diversified agro-ecological, land use and production systems which in turn resulted in different level of agricultural production.

Different experts have tried to classify the country into its agro-ecological zones, some defined interms of climatic zones and altitudes. Accordingly, there are 5 major agro-ecological systems or zones: Semi-desert, Kolla, Weina Dega, Dega and Wurch.

The semi-arid agro-ecological areas have elevation below 500 meters and very low rainfall. It has an inhospitable climatic condition and is inhabited by pastoralists. Areas included in this

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ecological zone are the Southeastern low lands, particularly the Southern part of Somali Region and Eastern part of Oromiya Region.

The Kolla agro-ecological zones are characterized by hot and dry climate with an elevation of between 500 and 1500 meters above sea level and receives very scanty amount of rainfall annually. Although there is crop reproduction along the river courses the majority of the population are pastoralists. Areas like the Northern part of Somali, from Oromiya the Rift valley and lowlands of Eastern block, Southeastern and Southwestern Borena, Southeastern Bale and southern extremes of Harerge, and also about 50 percent of Southern Nations, Nationality and Peoples Region are included in this classification.

Weina Dega and Dega agro-ecological zones are important interms of settlement and agricultural production (crop and livestock). These are highland areas with an elevation of 1500-2500 meters and 2500-3500 and having sub-tropical and temperate climate respectively. In these agro-ecological zones are included the Northern escarpment, the intermediate highlands of central and Western Oromiya, the highlands of Oromiya and the Southern tip.

The fifth agro-ecological zone is wurch, which consists of areas with high mountain ranges and peaks with altitudes of above 3500 meters, and cool climate. Areas like the Northern massifs, the massifs of Bale and Arsi, and high mountains in Guraghe and North Omo are included in this classification.

Another way of classifying the agro-ecological zones is based on the potential for agriculture and livestock production. Accordingly, those in the North, rift valley and Southeastern highlands are low potential zones, while the Southern, Southwestern and central parts of the highlands are classified in high potential zone.

In general, the highlands have very favorable climate with the major portion of the land having a growing period that exceed 180 days. The lowlands in the East, South, Northwest and Northeast have arid and semi-arid climate with very low growing period, and are mainly inhabited by pastoralists. Shifting cultivators and hunter-gatherers occupy the sparse populated humid and sub-humid lowland of the West and Southwest.

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1.3 SOCIO-ECONOMIC CONDITIONS

1.3.1 Social Services

In general, social services in Ethiopia are poor and deteriorating. At the same time the available facilities and the provision of services have a definite urban bias. A brief overview of the situation with respect to the quantity and coverage of the main social services in Ethiopia will be the main content of the next section. For health services, education, and domestic rural water supplies the situation can be summarized as follows:

a) Health Service

A healthy population has long been recognized as an essential input into the development process. Improving the health and nutritional status of the poorest members of society is an important first step in assisting them out of the poverty trap by contributing to their human capital potential.

Ethiopia has extremely poor health status relative to other low-income countries. Nearly one-fifth of children born do not reach the age of five. Less than 50 percent of the population is within 10 km of a health facility of any kind. The number of people per Doctor in Ethiopia is about 42,319 compared with 25,000 in low-income economies in Sub-Sahara Africa. The number of people per nurse is about 12,543 in Ethiopia compared with 2,200 in Sub-Saharan Africa. In Ethiopia, per thousands of live births, 105 children is dying while the figure for Kenya is 57.

At national level, hospital to population ratio, health centers to population ratio, and hospital bed to population ratio was 1:644,694; 1:214,630, and 1:4927 respectively in 1999. These rates are on average three times lower than the Sub-Saharan Africa Averages. Their distribution among regions and between urban and rural areas has been uneven. Those Urban Regional Administrations/State like Addis Ababa, Diredawa and Hareri are well-off compared to Amhara, Oromiya and Somali Regional States.

In the same manner the health professionals to population ratio of Afar, Amhara, Oromiya, Somali and Southern Regional States are in the worst condition as compared to the national average. In general, the potential health service coverage of these regions is lower than the national average, which is by itself worst than the Sub-Sharan African countries level.

Looking the distribution of health facilities and personnel, it is clear that the distribution is some how skewed in favour of urban areas as can be seen from table 2 below.

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Table 2: Basic Health Indicators for the Year 1998/99

No.	Indicator/Region	Tigray	Afar	Amhara	Oromiya	Somale	Benshangul -Gumuz	SNNP	Gambela	Harari	Addis Ababa	Diredawa	National
1	**Health Professionals**												
1.1	Doctor to Population Ratio	1:30709	1:74250	1:68615	1:66140	1:83767	1:16344	1:43021	1:14714	1:2610	1:7413	1:7463	1:42319
1.2	Nurse to Population Ratio	1:5411	1:12913	1:18052	1:18526	1:25546	1:4151	1:19349	1:6059	1:5923	1:2598	1:4135	1:4135
1.3	Health Assistance to Population Ratio	1:2625	1:9659	1:7362	1:7399	1:10784	1:2922	1:7183	1:2747	1:1194	1:2552	1:3060	1:5949
2	**Health Institutions**												
2.1	Hospital to Population Ratio	1:299417	1:594000	1:1132143	1:803481	1:1200667	1:261500	1:1213200	1:206000	1:30800	:1731143	1:102000	1:644694
2.2	Health Center to Population Ratio	1:143720	1:237600	1:299057	1:285447	1:327455	1:130750	1:146169	1:68667	1:154000	1:127579	1:153000	1:214630
2.3	Hospital bed to Population Ratio	1:3465	1:22000	1:10226	1:9553	1:14466	1:2433	1:13245	1:2168	1:210	1:606	1:1239	1:4927
3	**Other Indicators**												
3.1	Infant Mortality Rate (per '000 live births)	123	118	116	118	96	139	128	99	113	78	115	105
3.2	Under Five Mortality Rate (per '000)	181	174	170	173	137	206	189	142	166	108	168	172
3.3	Potential Health Service Coverage (for 1996/97)	45	11	37	42	25	41	37	50	62	75	86.4	48.5

Source: Ministry of Health, Health and Health Related Indicators, August,1999

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Communicable diseases and nutritional deficiencies are the two major contributing factors for the poor health status. Communicable diseases are caused by poor hygiene and environmental factors such as overcrowded housing conditions, contaminated water supply and substandard waste management.

The causes of malnutrition are complex and reflect the multi-sectoral nature of the development process itself. Among the major factors causing the very high rates of malnutrition in Ethiopia include food insecurity, defined as the lack of access to adequate quantities and quality of food because of very low levels of entitlements through transfer and low purchasing power of consumers due to low income, savings, and limited productive assets. About half of the children under five years are for example, malnourished. Daily per capita calorie supply is much lower than the Sub-Saharan Africa level.

In general the population has limited access to basic services. Health service is available only to 48.5 percent of the population while the actual utilization rate is much lower than this. Availability of immunization services is for example 67 percent, while those immunized on average yearly are only 13.6 percent of the target population.

b) Education

Education has a vital role to play in Ethiopia's development. Investing in peoples' education boosts the living standards of households by expanding employment opportunities, raising productivity and enhancing earning power.

The Education Sector, in general, is characterized by low enrollment at all levels. According to the Ministry of Education Statistics for the year 1997/98, about four out of ten primary school age youth attends a primary school (gross enrollment ratio of 41.8%), while the average rate of enrollment for the African region was 70 per cent. Secondary education is accessible to less than one out of ten youths (with the gross enrollment ratio of 8.9%). Tertiary education is open to only a small fraction of those completing a secondary education.

In the same year, there were 10,752 primary schools including 504 non-governmental schools, and 382 secondary schools with 34 non-governmental schools. There were also 15 Technical and vocational schools.

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Table 3: Basic education indicators for the year 1997/98

Indicators	Tigray	Afar	Amhara	Oromiya	Somale	Benesha-Ngul Gumuz	SNNP	Gambela	Hareri	A.A	D.D	National
Primary Gross enrollment ratio	56.1	8.4	34.6	39.6	11.6	69.9	55.7	83.5	77.1	82.0	58.9	41.8
Secondary Gross enroll-ment ratio	7.0	1.5	6.7	7.5	0.5	6.2	7.6	12.4	41.2	45.4	21.6	8.9
No. of Secondary Schools	790	80	2760	4067	167	254	2192	110	43	240	49	1075.9
No. of Secondary Schools	23	3	84	126	3	9	80	6	3	41	4	382
Students-teacher ratio (primary)	52	22	47	42	20	47	58	39	24	47	42	47
Students-teacher ratio (secondary)	37	13	40	33	15	23	36	31	38	49	43	38
Students-class room ratio (primary)	60	42	52	57	69	54	69	56	45	71	64	60
Students-class room ratio (secondary)	65	54	71	63	44	47	70	66	61	75	67	68

Source: Ministry of Education, Education Statistics, 1999

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As can be seen from Table 3 above, apart from the low level of performance, education in Ethiopia suffers from persistent disparity among regions and between sexes. In regional states like Afar and Somali, where a significant part of the population are living a nomadic way of life, the indicators are very low. The education of girls lags behind boys.

The problem of the sector is not only related to access (expressed by enrollment ratio) but also with quality and efficiency. Low quality of education is caused by inadequate facilities, shortage of books, inadequate teacher training and poor curricula.

Inefficiency is explained by the existence of repeaters, which has serious implication on labor and financial resources. One of the major reasons cited by dropouts for withdrawing from the school was the need to work. In general, the proportion of dropouts declined as expenditure group increased. Conversely speaking, the proportion of pupils who managed to remain in the school system was higher for households whose expenditure group was higher.

Education, in whatever way it is spread among the population, develops the capacity and creates the opportunities to apply the knowledge and skills available in society for productive ends. For instance, studies indicate that maternal education is more important than income in reducing child mortality. Therefore, access to education is a pre-condition for sustainable social and economic development.

c) Water Supply

Despite the generally abundant water resources in Ethiopia, most population and particularly, the poor do not have access to an acceptable water supply. Access to safer drinking water in Sub-Saharan Africa is about 36 percent. This contrasts sharply with the rate for Ethiopia, which is about 23.9 percent for the country as a whole, but only 14.7 percent for the rural areas (1994 census result). Thus, 81.3 percent of the rural population use unsafe drinking water that exposed them to water borne diseases.

The rural water coverage varies from 5.2 percent in Afar region to about 16.6 percent in Gambela Region. In urban areas like Hareri, Addis Ababa and Diredawa, the coverage is very much higher at 98.1 percent, 98.4 percent and 98.2 percent respectively.

Various studies report the importance of water to the rural communities. In one survey made in the Southern Ethiopia (Jean-Marc, 1991), households rated water as the most important problem in the community above health, transport and power. The study also reported that water carriers spend a mean time of roughly 30 minutes on each trip while an average household undertakes 1.7 trips per day. Thus, the rural poor, particularly the women, are spending considerable time in obtaining water.

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Table 4: Regional distribution of drinking water coverage by source (1994)

Region	No.of Housing Units		No.of Housing Unit with safe drinking water *		No.of Housing Unit with unsafe drinking water		Safe drinking water coverage in percent		
	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban & Rural
Tigray	115,421	571,455	85,331	60,722	30,090	510,733	73.93	10.63	21.26
Afar	20,161	160,661	14,734	8,370	5,427	152,291	73.08	5.21	12.78
Amhara	285,203	2,700,065	228,277	411,064	56,926	2,289,001	80.04	15.22	21.42
Oromiya	406,169	3,297,070	309,867	520,389	96,302	2,776,681	76.29	15.78	22.42
Somale	70,087	401,585	33,542	36,077	36,545	365,508	47.86	8.98	14.76
Bensh-Gumz	8,499	91,762	4,676	13,557	3,823	78,205	55.02	14.77	18.19
SNNP	142,212	2,001,362	101,008	310,347	41,204	1,691,015	71.03	15.51	19.19
Gambela	6,268	29,075	4,540	4,824	1,728	24,251	72.43	16.59	26.49
Harari	17,445	11,819	17,126	1,327	319	10,492	98.17	11.23	63.06
Addis Ababa	374,742	5,565	368,851	1,980	5,891	3,585	98.43	35.58	97.51
Dire Dawa	36,382	13,720	35,696	3,244	686	10,476	98.11	23.64	77.72
TOTAL	**1,482,599**	**9,284,139**	**1,203,648**	**1,371,901**	**278,941**	**7,912,238**	**81.19**	**14.78**	**23.92**

* Safe drinking water includes from sources of Tap, protected well and protected spring

Source: CSA, the 1994 Population and Housing Census of Ethiopia.

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1.3.2 The Resource Base

The core for any strategy to address poverty and improve the food situation in Ethiopia, there has to be improvements in economic growth and in particular growth which leads to increased employment opportunities. In the near and medium-term, economic growth will depend almost entirely on the revival of agriculture, which contributes about 45 percent of GDP and 85 percent of foreign exchange earnings. As about 80 percent of the population depends directly on agriculture, and nearly 40 percent of the poor are found in rural areas, improved agricultural performance is essential for generating higher levels of effective demand, help meet growing foreign exchange requirements and basic needs, and increase employment opportunities.

Agricultural activities depend on the accessibility of land. The agro-ecological differences of the land resources have shaped the different parts of the country's settlement patterns, methods of production and utilization of the resources. It can be said that the highlands have relatively more fertile soil than the low lands. This means that the highlands with higher rainfall, lower temperature and better soil are more suited to sedentary farming. In contrast the low lands that are drier and hotter with relatively poorer soil have hardly been used for farming. Instead the lowlands have been the habitat of nomadic pastoralists.

Regions vary in their potential arable land distribution. Highest potential arable land is found in Illubabor, Wellega and parts of Shewa of Oromia Region, Sidamo and Keffa parts of Southern Region and in Gojjam zones of the Amhara region. Low arable land potential is found in Harerghe zone of Oromiya, the Wollo part of Amhara, and Tigray Region.

The extent of over and under utilization of arable land is found by comparing the existing land under crop with the potential arable land. North and southwest of Shewa, most parts of Tigray, the whole of Wollo, most parts of Hararghe and parts of Hararghe and parts of Gonder are places where there is over cropping, while parts of Gonder, Gojjam have moderate amount of underutilized land.

However, with the given amount of arable land and the fast growth of population, the land holding of each peasant will become very fragmented and reduce the income of the household to get the needed amount of food. Thus, land becomes a scarce resource and the situation forced the peasant to look other options of off-farm activities. Therefore, off-farm activities are becoming an important resource base.

This section focuses on the resource potential and the undertaking of sectoral activities in different parts of the regions.

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a) Human Resources

If properly handled population is a resource for development. However, as Herrin (1985) points out, analysis of the interrelationships between population and development can be started with the basic population dynamics of fertility, mortality and migration, which influence the demographic outcomes interms of size, age-structure and spatial distribution of the population. The resulting demographic outcomes, in turn affect socio-economic processes which include saving/investment; land and labour utilization; consumption of goods and services; public expenditure, etc. These are expressed by socio-economic outcomes in terms of nutritional/health status, income, employment, environmental quality, etc.

Consider the high population growth of Ethiopia resulting from a rapid increase in fertility. This high population growth is one of the major factors that create additional requirements for food and other basic needs. This increment associated with the crop production situation of the country affected socio-economic outcome interms of nutritional status of the people.

Demographic Structure

The total population size of Ethiopia, according to the 1994 census was found to be 53,477,265 of which 26,910,698 (%) were males and 26,566,567 (%) were females. On the other hand, the projected population size of the country for the year 1999 was 61,672,000 of which 50.1 percent male and 49.9 percent female.

While total fertility rate increased from 5.8 in the 1960s to 7.5 in the 1990s, crude death rate decreases from 20 per 1000 population in the 1960s to 18 per 1000 population in the 1990s. This resulted a high population growth rate, which is about 3 percent. The high rate of population growth in recent years has affected the age distribution of the population. The percentage of the population 14 years and younger increased from 42.0 percent in the 1960s to 47 percent in the 1990s. This will accelerate the rate of population growth and raise the proportion of those dependent on the working population and will thus also have a negative effect on the rate of saving, capital formation, domestic investment, and economic development.

Spatial Distribution

The size, growth rate, and distribution of the population among the 9 National Regional States and 2 Administration can be compared from table 5 below.

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Table 5: Population distribution by Region (1998)

Regions	Population Size (in'000)			Approximate Population Growth Rate	Percentage of Total Population
	Both Sexes	Male	Female		
Tigray	3,494	1,718	1,776	2.88	5.83
Afar	1,160	653	507	2.38	1.93
Amhara	15,412	7,723	7,689	2.88	25.73
Oromia	21,046	10,513	10,533	3.12	35.14
Somale	3,510	1,605	1,605	2.63	5.86
Beneshngul-Gumuz	509	257	252	2.82	0.85
SNNP	11,753	5,841	5,912	3.31	19.62
Gambela	200	102	98	2.56	0.33
Hareri	150	75	75	3.44	0.25
Addis Ababa	2,354	1,136	1,218	3.09	3.93
Diredawa	294	148	146	4.53	0.49
National	59,882	30,071	29,811	3.03	

Source: CSA, the 1994 Population and Housing Census

Population is not evenly distributed over the country. The first three most populous regions, Oromiya (35.1%), Amhara (25.7 %) and SNNP (19.6 %) accounted for 80.4 % of the country's population. The number of population by itself does not describe much unless it is related with the other resources. For this in the next section of the paper comparison of population density will be given interms of cultivated land.

Although the difference is not high, there is variation in regional population growth rate. While regions such as SNNP and Oromiya have population growth rate greater than the national average, regions, like Afar, Gambela, Somali, and Benshangul have growth rates less than the national average. Since Diredawa and Hareri are urban centers, they have a different population growth rate of 4.53 and 3.44 percent respectively.

In general, as has been described in the previous section of the paper, the common character to all regions of the country could be the poor level of socio-economic status. Although to varying degrees, there is considerable shortage of food, health services, education facilities, farmland, and fuel-wood which is partly attributable to population pressure.

b) Agricultural Development Resource

Agriculture has an important role in the Ethiopian economy through its big share and direct influence on the economy itself. However, while playing a major role in the country's economy, the sector has been performing poorly in the recent decades. Sectoral output and yield has been very low due to poor cultural practices, recurrent drought and soil degradation, unfavorable policy environment, low levels of investment and low technological improvement in the sector. The following sub-sections will briefly discuss and assess the development situation of the country's agricultural sector.

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Agricultural Land Use

Small-scale farmers who have been exercising rain-fed mixed farming with traditional technologies dominating the agricultural sector. These farmers on the average account for about 95 percent of the total area under crop and about 90 percent of the total agricultural output.

Land is the basic resource for agriculture in which farmers depend upon for their livelihood. Around 66% of the estimated 111.5 million hectare of total land, is considered potentially suitable for agricultural activities. From this suitable part 14.8 percent is currently cultivated and 41 percent used for grazing and browsing.

Table 6: Estimate of area under different land use by Region for private peasant holdings 1997/98 (in `000 hectare)

Regions	LAND UTILIZATION						All Land
	Temporary Crop	Permanent Crop	Grazing Land	Fallow Land	Wood Land	Other Land	
Tigray	515.62	1.27	6.66	29.94	.38	26.02	579.89
Afar	15.78	.27	.36	3.20		1.16	20.76
Amhara	2,501.45	32.87	66.46	108.02	4.20	76.05	2,789.07
Oromiya	3,149.73	271.84	414.69	288.15	9.97	175.51	4,309.89
Somali	51.59	3.70	15.49	5.56		5.16	81.50
Benishangul Gumuz	136.58	3.28	1.37	4.25	.01	2.35	147.84
S.N.N.P.R.	608.48	241.04	91.75	63.96	20.64	68.83	1,094.69
Gambela	13.21	1.77	.04	.25	.07	.64	15.98
Harari	4.49	1.45	.01	.14		.20	6.29
Addis Ababa	7.11		.85	.10		.49	8.56
Dire Dawa	4.69	.72	.03	.42	.02	.29	6.17
Total	**7,008.74**	**558.21**	**597.71**	**503.99**	**35.30**	**356.70**	**9,060.64**

Source: CSA, Agricultural Sample survey (1997/98): Report on Land Utilization

As it can be seen the estimates of area under different land uses for 1997/98 from the Table 6 above, temporary crops such as cereals, pulses and oil seeds occupied about 7 million hectares which is 77.4 percent of the total area used for different agricultural activities. The two largest regional states, Oromiya Regional State and Amhara Regional State consists about 45 percent and 36 percent of the total temporary crop land respectively.

On the other hand, permanent crop land, grazing land and land that was left fallow accounts 6.2%, 6.6% and 5.6% respectively of the total area used for different agricultural activities. Land for permanent crop such as: enset, coffee, chat, fruits and tobaco is largely found in Oromiya and SNNP (together account 91.8% of total permanent cropland).

A look at the land use for different temporary and permanent crops by size of holding in the following table indicates the situation of the private peasant interms of land resource

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Table 7: Estimates of Area peasant holding (1997/98 E.C)under all crops by size of holding for private (in `000 Ha)

Major Crops	SIZE OF HOLDING (Hectares)							
	< 0.10	0.10-0.50	0.51-1.00	1.01-2.00	2.01-5.00	5.01-10.00	>10.01	Total
Creals	463.14	3365.05	1264.98	395.84	75.36	9.75	25.82	5599.94
Pulses	123.52	561.82	99.82	18.81			28.190	837.34
Oilseeds	28.55	246.06	83.58	19.81				380.50
Others	95.36	82.30	8.38	2.48				190.96
All Temporary	710.57	4255.23	1456.76	436.94	84.75	9.75	54.79	7008.74
Enset	84.67	115.57	15.55					224.44
Coffee	61.10	98.92	19.05	8.84	2.38	5.40		195.70
Total Permanent	216.10	266.97	43.22	20.56	5.95	5.41		558.22

Source: CSA, Agricultural Sample survey 1997/98 (1990 E.C), Report on Land Utilization, volume IV, Statistical bulletin No.193, December, 1998

About 80% of the temporary cropland is utilized for cereals. Interms of land holding, of the total land under cereals 91 percent belongs to those farm plots which have a size of a hectare and below a hectare. Specifically, 60 percent of the total land under cereals are categorized to those farm plots ranging in size between 0.10 and 0.51 hectare.

In general, per capita cultivated land holding averaged around 0.5 hectares but is even substantially less in some densely populated highland areas and southern region. According to the CSA's Agricultural sample survey of 1997/98, out of the 8.7 million households engaged in temporary crop production 45.8 percent have per capita holdings which average less than 0.51 hectare. The percentage for those engaged in permanent crop production are even higher, which is about 96 percent.

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Crop Production

Domestic agriculture has remained the major source of food, raw materials and provides cash crops for export. As a supplier of food, its performance has unfortunately flattered both in absolute size and on a per capita basis. Food grain production, which is a major component of the crop sub-sector, has not shown any significant improvement over the past three decades. The total food grain production in 1985 which was about 4,855 thousands of metric tons increase to 6,579 thousands, of metric tons in 1990 with an annual increase of 5%; and it increased to 8,100 thousands of metric tons in 1998 with an average annual increase of 2.5%.

Until the late 1950's, with its considerable agricultural potential, the country had been self-sufficient in staple foods and was classified as a net exporter of food grains. However, since early 1960's domestic production was unable even to meet the basic minimum food grain

requirements. Hence, the gap has been partially fulfilled both by commercial imports and food aid.

Table 8: Estimates of area, production and yield of major crops (both seasons) for selected years

Crop Type/Category	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98
Total Area ('000 ha)						
Cereals	4443.0	5414.0	6448.5	7670.5	7436.8	6312.7
Pulses	1032.6	867.5	919.6	1005.6	1012.3	1520.4
Other (mainly oil seeds)	373.3	322.1	342.0	394.4	484.5	363.8
All Crops	5848.9	6603.6	7710.1	9070.3	8933.7	8196.9
Production ('000 qt.)						
Cereals	59987	64187	65891	92654	93591	74349
Pulses	7339	7853	7947	8662	8609	7323
Other (mainly oil seeds)	1036	1108	1172	1963	2168	1817
All Crops	68362	73148	75010	103279	104368	83489
Yield (qt/ha)						
Cereals	13.50	11.85	10.22	12.08	12.58	11.78
Pulses	7.10	9.05	8.64	8.61	8.50	4.82
Other (mainly oil seeds)	2.77	3.43	3.43	4.98	4.47	4.99
All Crops	11.68	11.07	9.73	11.39	11.68	10.19

Sources: CSA, various issues

Total area cultivated under major crops has been increasing at the rate of approximately 18 percent per annum from 1992/93-1995/96 and started to decrease from then on wards. On the other hand, for the same period the annual average growth rate of production of major crops was approximately 10 percent per annum. Thus, it shows that the food production increased at the rate less than the area expansion; and hence, the productivity of the sub-sector has been below expectations.

Out of the total area under major food crops cereals accounted for more than 80%. Interms of production also cereals production accounts about 89% of the total crop production. If we consider the growth rate or change of the yield (i.e. production per hectare), the overall yield of major crops for 1992/93 was 11.68 quintals per hectare and has decreased by 12.7 percent for the year 1997/98.

In Ethiopia the need for growth in food grain production is critical to successful growth and food security. Crop yields in Ethiopia lag behind yields in comparable African countries. Despite the occurrence of drought in some years there is considerable potential for increasing productivity on cropland by applying modern techniques of production. Therefore, future growth in agriculture will depend on increased access of farmers to important factors of production which includes: land, labor, and capital (fixed as well as operating capital), improvements in public infrastructure and support services, and improved technology including the use of increased fertilizer.

The use of improved technology by the small farmer is not without constraints. If fertilizer is considered as an example, currently there are two major constraints to the increased use of

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fertilizer by farmers. First the supply of fertilizer has been unreliable in terms of timing and quantity. The Second constraint is the fact that much of the land production is in the hands of small farmers who have no way of financing the purchase of fertilizer. Even if there is as a good credit system in place, many of the farms are in the hands of people who are too poor to afford the cost of additional food or fertilizer

Livestock Farming

Among the various agricultural production systems livestock is the second largest contributor (about 30%), next to crop production (60%), of the agricultural GDP. Livestock provide food (milk, meat, egg, etc.), are sources of cash income which is used to buy food grains, clothing and other consumer goods, draught power (for cultivation, transportation, etc.), and serve also as a security and saving.

Livestock are an integral part of nearly all farming systems in Ethiopia. About 74 per cent of the livestock are owned by cultivators and the remaining by pastoralists who gain their livelihood from rearing livestock in the semi-arid lowlands in the Southern, Southeastern and Northeastern parts of the country. Despite the huge resource interms of number and grazing land, the livestock sector production and productivity is unsatisfactory.

According to the 1998/99 Agricultural Sample Survey (CSA, 1999), in the country livestock number has been estimated at 35 million cattle (in Oromiya 44%, Amhara 25%, and SNNP 20%), 12 million sheep (in Oromiya 38%, Amhara 33%, and SNNP 15%), and 9 million goats (in Amhara 29%, Oromiya 28%, and Tigray 15%). With respect to equines, there were 5 million equines (in Oromiya 44% and Amhara 30%) of which 527 thousands are Camels (in Afar 48%, Somali 28% and Oromiya 17%).

As those regions where the greatest numbers of livestock live are also crops cultivated areas, livestock feed is deficient other than agricultural residues. In addition, to poor nutrition, prevalence of diseases and insufficient veterinary services, poor animal husbandry practices, and poor genetic potential of the local breeds are some of the reasons that are detrimental to increase productivity of the livestock sub-sector. Thus, if these constraints could be resolved, then there are untapped potentials, which the livestock sub-sector could contribute to the food security in Ethiopia.

Livestock directly and indirectly contribute to food security. Its direct contribution includes the consumption of meat and milk. The indirect contribution includes draft power, manure and also income from sales to purchase food items. Since the potential market for livestock products is the urban population, the extent of income from the sales depends on the income and preference of the urban consumers. In a situation where about 50 percent of the urban population are in income category below the poverty line, the income from the sales might not be as expected. However, export markets complement this domestic market.

Estimates made by MEDaC's Policy Analysis Department indicates that meat production of beef (cattle), mutton (sheep), goat meat, camel meat and chicken meat for 1996/97 was about

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414,506 metric ton. Beef, mutton and goat meat account for 61.3, 20.5, and 17.4 percent respectively. The per capita meat production of this year was 7.4 kg per head per annum, with a growth rate of 2%, which was much lower than the 1984/85 level (i.e., 9.9 kg. per head per annum).

An estimate made by the same institution for national account purpose indicates that milk production consisting of milk from cows, goat, and camel had been 1219 million liters for 1996/97. Milk from cows goat and camel accounts 68.1, 16.5 and 15.4 percent respectively. Considering this production on per capita basis, it had been about 22 liters per head (at a growth of 1.7 %) which was less than the 1984/85 level (i.e., 25.5 liters per head)

Forest and Wild Life Resources

Historical records refer to the abundance of forest in the country in the 19th century. Deforestation was accelerated towards the beginning of the 20th century, and the closed natural forest covered about 3.37 percent of the available land in 1960s. By now, although getting actual data is difficult, the coverage will be less than the stated percentage. There is also about 100,000 hectare of human-made forests.

Coniferous or as often referred temperate forests are predominantly found on plateaus, mountains and massifs of Oromiya region in particular in Shewa, Arsi, Bale, Borena and Harerge. Remnants are also found in the Eastern portion of the Amhara region and Northeastern highlands of Southern region.

Broad-leaved forests are found in the most humid part of the country. In particular in the Oromiya Region (in parts of the Western highlands and in some parts of central Eastern highlands of the region). They are also sparsely found in the Western part of the Amhara region including North Gonder, South Gonder, West Gojjam and East Gojjam Zones.

Wood land and Savannah vegetation prevails at an altitude 400-2000 meters. It is found in parts of Oromiya including Borena, central and Southern Bale, Southern, Eastern and Northern Harerge and the lakes region, the plains of the eastern and Southern region, and the Eastern and Western boundaries of the Amhara Region.

Forests and woodlands provide wood for construction, household furniture industries, and fuel. They also provide other useful products including incense, myrrh and gums, grazing for livestock especially during the dry season and foraging for honey-bees. The broad-leaved Southwestern forests also produce important spices such as Korerima and Coffee.

Currently, thick forests have remained only in less accessible areas, reserves and controlled hunting places, and government protected forest areas. The major causes of deforestation included lack of alternative substitutes for energy consumption, expansion of farmlands, increasing demand for forest products and population pressure. The recently occurred wild fire also flared up about 50,000 hectares of forests in Bale, Borena and Wondogenet areas.

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The diversity in climate, vegetation and terrain of the country helped for the establishment of wildlife reserves and controlled hunting areas. The Afro-Alpine, which are habitats of Walya Ibex, Semien Fox and mountain Nyalas contains the Semien mountain park and the Bale mountain national park. The lowland parts of the country, in particular, the Rift Valley Lakes region and the Awash Valley contain the Abijata-Shalla, Awash, Nechisar and Yangudi parks. The Somali region also contains up to 25 percent of the species and a larger portion of the endemic. The availability of the wildlife and birds make Ethiopia and outstanding destination for all tourists coming from Africa, America and Europe.

c) Water Resources

Ethiopia is considered to be "water tower" of Northeastern Africa. All rivers originating from the country, except for the Awash and the Omo flow into neighboring countries. There are also about 18 natural and artificial lakes. While the rivers are potential for irrigation, the lakes are important source of fishery development.

Irrigation

Despite the existence of 11 major river basins, which have high potential for irrigation and hydroelectric generation, their actual utilization level is low. As we can see from Table 9 below, the potential gross irrigable area is about 3.5 million hectares. From this potential only 4.6% are utilized. From the capacity of generating 135,311 GWh/yr Hydropower energy only 1.3% are utilized.

In a country where most of the farming activities depends on rainfall, but in contrast, which exercise a frequent year drought, the importance of irrigation is immense. By increasing the area of the irrigable lands and practicing multiple cropping, it is possible to increase food production.

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Table 9: Major river basins of Ethiopia and their potential

No	Basin	IRRIGATION			HYDRO ELECTIRC GENERATION			LOCATION
		Potential gross irrigable area (ha)	Net area under irrigation (ha)	Per cent Utilized	Potential in (GWh/Year)	Utilized	Per cent	
1	Abay (Blue Nile)	977915	21010	2.1	70036	715	1.0	Amhara (23.2%) Oromiya (65.7%) Benesha.Gu. (11.1)
2	Rift Valley Lakes	122300	12270	10.0	12240	-	0.0	SNNPRS, Oromiya
3	Awash	204400	69900	34.2	5589	440	7.8	Amhara, Oromiya, Afar
4	Omo-Gibe	450120	27310	6.1	Not available	-	-	Oromiya, SNNPRS
5	Genale	435300	80	0.02	12508	-	0.0	Somalia,Oromiya, SNNPRS
6	Wabi Shebelle	204000	20290	9.9	6143	543	8.8	Oromiya Somali,Harari
7	Baro	748500	350	0.05	19826	-	0.0	Gambella, Oromiya
8	Tekeze	312700	1800	0.57	8969	-	0.0	Amhara, Tigray, Beneshangul/Gu.
9	Mereb	37560	8000	21.3	Not available	-	-	Tigray
10	Ogaden	none	none	-	-	-	-	Somalia
11	Afar	3000	none	0.0	-	-	-	Tigray, Afar, Amhara
	TOTAL	3495795	161100	4.6	135311	1698	1.25	

Source: BCEOM 1997 Abbay River Basin Integrated Development Master Plan, Conservation Strategy of Ethiopia Volume 1.

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Fishery Development

About 100 species of fish are endowed (existing) in a number of lakes, reservoirs and rivers. Although no exhaustive and systematic stock assessments are undertaken, the resource potential is expected to be high. Estimates from the surface area of major lakes indicate a potential yield of 60,000 tones per annum. The present annual production is about 5000, tones per year.

The Rift valley lakes basin accounts for about 50 percent of the total inland fish production. Fishing is very limited and is practiced only for local subsistence. The demand for fish is also seasonal, particularly where orthodox Christian's predominate.

d) Other Economic Activities

Mineral Resource

Mining in Ethiopia is in its infancy. The mineral wealth of the country is not properly inventorized. However, from the exploration attempts and the geological surveys under taken so far, it is possible to know that there are different mineral deposits in the different parts of the country.

The Southern Ethiopia is endowed with gold, tantalite, nickel, quartz, coal and oil shale. The Western Ethiopia has resources of platinum, gold, base metals, iron and phosphate. The Northern Ethiopia is known by its marble, salt, cement raw materials, gold, base metal, and potash. In the Eastern Ethiopia base metals, marble, granite, gypsum and natural gas are available. While in the lakes region Soda ash are available; in Mugger limestone, and in Blue Nile Basin Gypsum are abundant.

Although the mineral potential is significant, the production so far is very minimum (contribute less than 1% to the total GDP). Part of the explanation for the low performance have been the low-level of indigenous utilization of minerals, restricted participation of private sector, insufficiency of the country's trained personnel and technical material resources.

Manufacturing Industries Development

Given the very close link and contribution of agriculture to industry, without the development of the agricultural sector there would be no industrial development. Therefore, the agricultural sector's poor performance over the last nearly three decades has been reflected on the performance of the manufacturing sector.

The manufacturing sector contributes not more than 12% to the GDP and about 15% of export earning. While of the manufacturing industries about 75% of the value added are coming from medium and large scale enterprises, the rest is contributed by the small-scale enterprises.

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About 60 percent of the value added of the medium and large scale manufacturing sector in 1996/97 was generated by four industrial groups: food, beverage, leather and shoe, and textile (CSA, 1997). They also account about 70 percent of the sectors employment.

Although reliable and time series data are unavailable with respect to small scale and cottage manufacturing industries, survey made by CSA in 1995/96 indicates that almost 50 percent of employees in small scale industries represent unpaid family labour whereas 96 percent of employment in cottage/handicrafts industry was accounted for by family workers.

In terms of employment by output, almost 80 per cent of the total employment in the small scale manufacturing was involved in the food, wood and furniture and metal production where as about 93 per cent of the cottage/handicrafts industry under food, and Beverage, and textile production. In terms of income generation, these activities are part of the very important off-farm income generating sectors.

Petty trading, which includes unregistered and unlicensed household-managed economic establishments/activities, such as: small shops, sales of local drinks and food play a significant role in the rural people's income generation. Mostly the initial capital (ranging from Birr 250 and above) have sources from own saving, borrowing and /or assistance from friends and relatives. Other activities having significant role as sources of income and food security for the poor include artisan activities, garment production, etc.

As these activities are not registered, it is hardly possible to shade light on their performance in quantitative terms. But, there is a general belief that many households both in urban and rural areas depend for their livelihoods from these economic activities.

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1.4 GENERAL FOOD SITUATION AND CONSTRAINTS TO ITS ATTAINMENT

While describing the food situation of a country, it would be appropriate to mention such relevant terminology as food security. According to the United Nations definition food security is defined as "the ability of a household members to assure themselves sustained access to a sufficient quantity and quality of food to live active, healthy lives". Thus, the coming analysis is focusing on the food availability (supply) and access (food entitlement) in the country.

1.4.1 An overview of Trends in Food Situation

There are at least three sources in which food is available to the population in Ethiopia: domestic production (supply), food aid and commercial imports.

The depressed conditions in the agricultural sector have been reflected in weak performance in food production. According to table 10 (below), total domestic food supply during the

period production year was only on the average 67% of 225 kg/yr, a minimum food requirement recommended for an average person. Even if we consider the food availability (i.e. including food aid and commercial import), the per capita availability for the aforementioned years is on the average 71.6% of what is recommended.

Table 10: Food production and availability in Ethiopia (in '000 tons)

Crop Type/Category	1993/94	1994/95	1995/96	1996/97	1997/98
Domestic Supply					
Grains	6945.0	7492.0	10328.0	10437.0	8100.0
Net Grains	5903.2	6368.2	8778.8	8871.4	6885.0
Enset and roots	670.0	670.0	670.0	670.0	670.0
Milk	254.5	344.5	366.8	366.8	366.8
Meat	125.6	178.8	184.6	184.6	184.6
Domestic Supply	6953.3	7561.5	10000.2	10092.8	8106.4
Food Availability					
Commercial imports	20.4	N.A	N.A	N.A	N.A
Food Aid	980.0	683.0	351.0	387.0	475.0
Total Imports	1000.4	683.0	351.0	387.0	475.0
Exports	23.0	N.A	N.A	N.A	N.A
Total Availability	7930.7	8244.5	10351.0	10479.8	8581.4
Per Capita					
Population(in million)	53.2	54.9	56.7	58.1	59.8
Per capita Production	130.7	137.7	176.4	173.7	135.5
kg/head	149.1	150.2	182.5	180.4	143.5
Per Capita Availability					
Food Balance					
At 225 kg/head (2100 calorie)	-4037.9	-4106.5	-2409.7	-2591.3	-4873.7

Note:

1. Net grain supply is less of 15% for seeds and loses
2. Estimates of Enset and root crops from 1994/95 onwards assumed to be similar to 1993/94; and also estimates of milk and meat for the years 1996/97 and 1997/98 are assumed to be similar to 1995/96.
3. Livestock products, enset and root crops are expressed interms of grain equivalent

Source

(i) Food Security Program Report of the Multi-Donor Team, March 15, 1999

(ii) Tesfaye & Debebe (1995), 'Food Security Analysis', paper presented on the Inaugural and First Conference of the Agricultural Economics Society of Ethiopia.

Considering the year 1997/98, it can be seen from table 10 that, the average per capita availability of food is about 135.5 kg/head/yr which represent only 60% food self sufficiency. The food situation is not any better at present. It even will be worse than the previous year, as about 8.5 million people need emergency food aid.

Due to differences in agro-ecological conditions, all regions do not contribute equally to the country's domestic food supply. Table 11 below depicts the general picture of the food production situation observed in 1998/99 in the country considering only the major crops (which accounts about 85% of the domestic food production).

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Table 11: Estimates of production of major crops by Region (1998/99)

Regions	Total Production ('000 of quintal)	Population (in '000, 1998)	Average Per Capita Production (in qt.)
Tigray	6,530.9	3,494	1.86
Afar	183.5	1,160	0.16
Amhara	28,532.5	15,412	1.85
Oromiya	41,109.1	21,046	1.95
Somali	262.3	3,510	0.07
Benishangul Gumuz	1,776.8	509	3.49
S.N.N.P.R.	7,044.1	11,753	0.60
Gambela	222.8	200	1.11
Harari	46.5	150	0.31
Addis Ababa	74.3	2,354	0.03
Dire Dawa	55.6	294	0.19
Total	**85,838.4**	**59,882**	**1.43**

Note: Major crops include cereals, pulses, and others (many oil seeds).
Source : CSA, Agricultural Sample survey (1998/99), Area and production for major crops, bulletin No. 200

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As we can see from Table 11, Amhara and Oromiya Regions constitute 81% of the total major crop production and 60% of the total population of the country. In particular areas like Arsi, Wellega, Bale and West Shoa in the Oromiya Region and Gojjam and Gonder in the Amhara Region are relatively food self-sufficient.

Although Afar and Somali Regions mainly depend mainly on livestock products and the Southern Region on Enset and root crops for their food consumption, the per capita production figure reveals that the chronically food deficit areas are mainly found in Afar, Somali and SNNP Regions.

In general as different studies show, the dominant poverty and food problems prevail in the rural areas where drought and war make them more vulnerable; and also many poor and food insecure people are densely settled into regions of relatively low productivity such as Hararghe, Wello, North Shewa, Somali, etc.

Since Hareri, Addis Ababa, and Dire Dawa are urban centers, the food security of the people living in these areas depend on their income generated on other activities than crop production.

Food aid has for nearly three decades been playing an important role in the availability of food (as a one source of food supply) in Ethiopia. Since the drought-related food crisis and famine of the 1984/85, food grains imported as food aid have averaged about 703,500 tons per year (Food Security Program, 1999) and there has been a tendency for the amount to rise both in 1999 and the year 2000.

1.4.2 Constraints and Means of Attaining Food Security

Food insecurity are of two types: chronic food insecurity and transitory food insecurity. A significant number of the people who are in the first category include rural resource poor, whose farmland size owned, number of livestock and other income producing assets are inadequate to produce or purchase sufficient food; the urban poor that are self-employed and part-time workers in the informal sector who have few alternative forms of employment; and the urban unemployable due to age, disability, etc.

On the other hand, transitory food insecure people include those rural crop dependents and pastoralists in the drought prone areas, rural people affected by war, and the refugees.

Most rural households are unable to maintain/ensure their food security due to a combination of factors, including rapid population growth, shrinking/declining size of average farmland size holding, low level of productive technology, years of civil unrest, and declining food production.

Fast growth of population increases demand for additional food, shrinks the size of average farmland size holding by increasing demand for arable land, leads to the destruction of trees because of the need for additional fuel wood and pasture which results environmental degradation.

The almost constant cultivated land per household and an increasing population must result in the diminution of the per family farm size. This may not be bad in itself if the land is cultivated intensively/productively with an increased yield per unit. However, labour productivity seems to be decreasing overtime. Factors such as soil degradation and the use of backward technology are worth mentioning.

Soil degradation is the most immediate environmental problem facing Ethiopia. The loss of soil, and deterioration in fertility, moisture storage capacity and structure of the remaining soils, all reduce the country's agricultural productivity. As FAO's study reveals (FAO 1986), almost 75 percent of the Ethiopian highlands are estimated to need soil conservation measures of one sort or another if they are to support sustained cultivation. Areas like Northern and Eastern Highlands are greatest need of conservation while the major areas of the south and west in which current agricultural expansion is undertaking have the highest potential erosivity.

Inadequate feed and water resources, inadequacy of veterinary services provided, occurrence of diseases are some of the reasons that reduces livestock resources, and thus contributing to the food insecurity problem. The situation could improve with changes in management of grazing that would entail cutting and carrying fodder instead of letting the animals range freely, improving the livestock extension services.

Although it is not the only one, access to food can be achieved through the growth in income.

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If the main source of growth in the country is agriculture, as it has been mentioned in the previous chapters, it also needs to be recognized that growth will vary considerably from year to year since the sector is still to a large extent dependent on rain-fed production. Therefore, it is important to look at other options of agricultural production than rain-fed for an increase in income, welfare and food sufficiency.

In regions, which are vulnerable to recurrent drought, the challenges of scarcity of water resources could only be met with irrigation schemes, which operate with modern technology. Thus, by bringing more irrigable land under cultivation food crop production can be increased.

The best way of reducing poverty and increasing access to food is to expand the job opportunities. Limited available job opportunities in the formal sector coupled with the increasing urban labour force on account of demographic factors has given rise to the ever expanding informal sector employment in urban Ethiopia. According to ILO estimate (1993), labour absorption by this "sector" in urban areas could reach up to 60 percent of urban employment.

Interms of occupational distribution, service workers, shop and market sales workers and crafts and related trade workers accounts for the lion's share (about 85%) of urban informal sector employment.

With the growth of agriculture, there would be good prospects for increased activity in the service sectors such as input and output marketing and small-scale enterprises that are of agro-processing type which add value to agricultural production. Other activities such as trading, labour-based road building, etc. also creates a substantial number of short-term jobs which can provide much needed additional off-farm income and food security to a large number of rural households.

Transitory food insecurity/serious shortages and famine due to the recurrent disasters has been a growing and recurring problem mainly in the past three decades; and food aid has played – and will continue to play – an important role in famine prevention and mitigation process. However, the challenge is to ensure relief aid for immediate survival and at the same time begin to lay the foundation for recovery and rehabilitation of these groups so that they can again begin to support themselves and become active participant in building the economy.

Therefore, for sustained development assistance, the relief food aid has to be integrated with generation of employment through public works. Such activities as forestry, soil conservation, construction of community facilities and irrigation works can be good examples of public works programmes.

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REFERENCE

BCEOM (1997) Abbay River Basin Integrated Development Master Plan. Data Collection, site investigation Survey and Analysis, Section 1, Main Report, Addis Ababa.

CSA (1997), Report on Cottage/Handicraft Manufacturing Industries Survey, Addis Ababa.

CSA (1998), Report on the 1994 Population and Housing census, Addis Ababa.

CSA (1998), Agricultural Sample Survey (1997/98): Report on Land Utilisation, Volum IV, Statistical bulletin No. 193, Addis Ababa.

CSA (1999), Agricultural Sample Survey (1998/99): Report on Area and Production for Major Crops, Volume I, Statistical Bulletin No. 200, Addis Ababa.

CSA (1999), Agricultural Sample Survey (1998/99): Report on Livestock, poultry and Beehives population, volume II, Statistical Bulletin No, 206, Addis Ababa.

Environmental Protection Authority and MEDaC (1997), the conservation strategy of Ethiopia: The Resource Base, its utilization and planning for sustainability, volume I, Addis Ababa.

FAO (1986), Ethiopian Highlands Reclamation Study, Final Report, Rome.

Herrin, A.N. (1985) Towards operationalizing the concept of Integration
Of population and development planning: The Philippine Experience, NUPRI Research Paper Series No.21, Tokyo, Japan.

Jean-Marc , Mangin (1991), "rural Water Supply in Southern
Ethiopia: Failures and alternatives", Canadian Journal of Development Studies, Vol., No.2

Ministry of Education (1999), Education Statistics, Addis Ababa.

MEDaC, Welfare Monitoring Unit (1991, Poverty Situation in Ethiopia, Addis Ababa.

Ministry of Health (1999), Health and Health related indicators Addis Ababa.

National Meteorological Service Agency (NMSA), 1989, Climatic and Agro-climatic Resources of Ethiopia, Addis Ababa.

Tesfaye Z. and Debebe H. (1995), food Security in Ethiopia: A situation Analysis', Paper presented on the inaugural and First Conference of the Agricultural Economics Society of Ethiopia.

World Bank (1987) World Development Report 1987, New York: Oxford University Press.

UNDP (1998), Human Development Report 1998.

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Part II

ISSUES ON DEVELOPMENT AND AN OVERVIEW OF THE ETHIOPIAN ECONOMY, DEVELOPMENT POLICIES AND STRATEGIES AND THIR IMPACTS ON FOOD SECURITY

By
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2.1 CONCEPTUAL ISSUES IN DEVELOPMENT

2.1.1 What Development?

Because the term development may mean different things to different people, it is important at the outset that we have clear perspective on its meaning and measurement criteria.

a) Traditional Measures

Development has traditionally meant the capacity of a national economy whose initial economic condition has been more or less static for a long time, to generate and sustain an annual increase in its ***Gross National Product (GNP)*** at rates of 5 to 7% or more. (A measurement similar to GNP, Known as the gross domestic product, GDP, is also used). A common alternative economic index of development has been the use of rates of growth of income per capita or per capita GNP to take into account the ability of a nation to expand its output at a rate faster than the growth rate of its population. 'Real' per capita GNP is normally used to measure the overall economic well-being of population - how much of real goods and services is available to the average citizen for consumption and investment. As a principal indicator of development and economic wellbeing/welfare, GNP per capita gives no indication of how national income is actually distributed and who is benefiting most from the growth of production. Rising level of absolute and per capita GNP can camouflage the fact that the poor are no better off than before. To give an extreme example, suppose that an economy consisted of only 10 people and that 9 of them had no income at all and the 10^{th} received 100 units of income. The GNP for this economy would therefore be 100 units of income and per capita GNP would be 10. Now suppose that every one's income increases by 20% so that GNP rises to 120 while per capita income grows to 12. For the 9 individuals with no income before and still no income now. Such a rise in per capita income provides no cause for rejoicing. The one rich individual still has all the income. And GNP, instead of being a welfare index of society as a whole, is merely measuring the welfare of a single individual.

Economic development in the past has also been typically seen interms of the planned alternation of the structure of production and employment so that agriculture's share of both declines and that of the manufacturing and service industries increase. Development strategies have therefore usually focussed on rapid industrialization often at the expense of agriculture and rural development. These principal economic measures of development have often been supplemented by casual references to non economic social indicators like:

- Gains in literacy
- Schooling
- Health conditions and services and
- Provision of housing for instance

These social indicators of development were utilized to form what is known as the Human Development Index of the United Nations.

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Prior to the 1970's therefore development was nearly always seen as an economic phenomena in which rapid gains in overall and per capita GNP growth would either "trickle down" to the masses in the form of jobs and other economic opportunities or create the necessary conditions for the wider distribution of the economic and social benefits of growth. Problems of poverty, unemployment and income distribution were secondary importance to "getting the growth job done".

b) Development Redefined

The experience of development activities during the 1950's and 60's in many developing countries did not change the levels of living of the masses signaling that something was very wrong with the "narrow definition" of development. Thus during the 70's economic development came to be redefined interms of the reduction/elimination of poverty, inequality and unemployment. 'Redistribution from growth' became a common slogan. A country's development was measured interms of what has been happening to unemployment, inequality, and poverty. If one or two of these central problems have been growing worse (if the three problems exist), it would be strange to call the result 'development' even if per capita income doubled.

This assertion was neither idle speculation nor the description of a hypothetical situation. A number of developing countries experienced relatively high rates of growth of per capita income during the 60's and 70's but showed little or no improvement or even an actual decline in employment, equality and the real incomes of the bottom 40% of their population.

By the earlier growth definition, these countries were developing, by the newer poverty, equality and employment criteria, they were not. The situation in the 1980's and 90's worsened further as GNP growth rates turned negative for many LDCs and governments, facing foreign debt Problems. These problems forced many governments to cutback on their already limited social and economic programmes.

Development is therefore increasingly conceived as a multidimensional process involving major changes in social structures, popular attitudes, and national institutions as well as the acceleration of economic growth, the reduction of inequality and the eradication of poverty.

c) Three Objectives of Development

- To increase the availability and widen the distribution of basic life sustaining goods such as food, shelter, health, and protection;
- To raise the levels of living including (in addition to higher incomes), the provision of more jobs, better education and greater attention to cultural and humanistic values all of which will serve not only to enhance material well being but also to generate greater individual and national self-esteem; and
- To expand the range of economic and social choices available to individuals and nations by freeing them from servitude and dependence not only in relation to other people and nation states but also to the forces of ignorance and human misery.

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2.1.2 Growth Versus Income Distribution

Although much of the economic analysis has been strangely silent on the relationship between economic growth and the resulting distribution of income, a large body of theory in essence asserts that highly *unequal* distributions are *necessary* conditions for generating rapid growth. In fact, in the 1960s and early 1970s and then again to a more limited extent in the 1980s with the neoclassical resurgence the explicit and implicit acceptance of this proposition by economists from both developed and underdeveloped countries tended to turn their collective and individual attentions away from problems of poverty and income distribution. If wide inequalities are a necessary condition of maximum growth and if, in the long run, maximum growth is a necessary condition of rising standards of living for all, through the natural trickle-down processes of competitive and mixed economic systems, it follows that direct concern with the alleviation of poverty would be self-defeating. Needless to say, such a viewpoint, correct or not, provided a psychological, if not conscious, rationalization for the accumulation of wealth by powerful elite groups.

The basic economic argument to justify large income inequalities was that high personal and corporate incomes were necessary conditions of *saving*, which made possible investment and economic growth through a mechanism such as the Harrod-Domar model. If the rich save and invest significant proportions of their incomes while the poor spend all their income on consumption goods, and if GNP growth rates are directly related to the proportion of national income saved, then apparently an economy characterized by highly unequal distributions of income would save more and grow faster than one with a more equitable distribution of income. Eventually, it was assumed, national and per capita incomes would be high enough to make sizable redistribution's of income possible through tax and subsidy programmes. But until such a time is reached, any attempt to redistribute incomes significantly would serve only to lower growth rates and delay the time when a larger income pie could be cut up into bigger slices for all population groups.

A Counter Argument

There are four general reasons why many development economists believe the foregoing argument to be unacceptable and why greater equality in developing countries may in fact be a condition for self-sustaining economic growth.

First, common sense, supported by a wealth of recent empirical data, bears witness to the fact that unlike the historical experience of the now developed countries, the rich in contemporary Third World countries are not noted for their frugality or for their desire to save and invest substantial proportions of their incomes in the local economy. Instead, landlords, business leaders, politicians, and other rich elites are known to squander much of their incomes on imported luxury goods, gold, jewelry, expensive houses, and foreign travel or to seek safe havens abroad for their savings in the form of capital flight. Such savings and investments do not add to the nation's productive resources; in fact, they represent substantial drains on these resources in that the income so derived is extracted from the sweat and toil of common, uneducated, and unskilled laborers. In short, the rich do not necessarily save and invest significantly larger proportions of their incomes (in the real economic sense of productive

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domestic saving and investment) than the poor. Therefore, a growth strategy based on sizable and growing income inequalities may in reality be nothing more than an opportunistic myth designed to perpetuate the vested interests and maintain the status quo of the economic and political elites of Third World nations, often at the expense of the great majority of the general population. Such strategies might better be called "antidevelopmental".

Second, the low incomes and low levels of living for the poor, which are manifested in poor health, nutrition, and education, can lower their economic productivity and thereby lead directly and indirectly to a slower-growing economy. Strategies to raise the incomes and levels of living of, say, the bottom 40% would therefore contribute not only to their material wellbeing but also to the productivity and income of the economy as a whole.

Third, raising the income levels of the poor will stimulate an overall increase in the demand for locally produced necessity products like food and clothing, whereas the rich tend to spend more of their additional incomes on imported luxury goods. Rising demand for local goods provides a greater stimulus to local production, local employment, and local investment. Such demand thus creates the conditions for rapid economic growth and a broader popular participation in that growth.

Fourth and finally, a more equitable distribution of income achieved through the reduction of mass poverty can stimulate healthy economic expansion by acting as a powerful material and psychological incentive to widespread public participation in the development process. By contrast, wide income disparities and substantial absolute poverty can act as powerful material and psychological disincentives to economic progress. They may even create the conditions for an ultimate rejection of progress by the masses of frustrated and politically explosive people, especially those with considerable education.

In conclusion, however, promoting rapid economic growth and reducing and inequality are not mutually conflicting objectives. The World Bank reached a similar conclusion in its 1990 report on poverty when it declared:

discussions of policy toward the poor usually focus on the trade-off between growth and poverty. But the review of country experience suggests that this is not a critical trade-off. With appropriate policies, the poor can participate in growth and contribute to it, and when they do, rapid declines in poverty are consistent with sustained growth.

2.1.3 Planning: Markets, and the Role of the State

a) Planning: Theory Versus Practice

The principal economic arguments for planning are market failure, divergences between private and social valuations, resource mobilization, investment coordination, have often turned out to be weakly supported by the actual planning experience. Commenting on this planning failure, Killick has noted that:
it is doubtful whether plans have generated more useful signals for the future than would otherwise have been forthcoming; governments have rarely, in practice, reconciled private

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and social valuations except in a piecemeal manner; because they have seldom become operational documents, plans have probably had only limited impact in mobilizing resources and in coordinating economic policies.

To take the specific case of the market failure argument and the presumed role of governments in reconciling the divergence between private and social valuations of benefits and costs, the experience of government policy in many countries has been one of often *exacerbating* rather than reconciling these divergences, government failure rather than market failure. To illustrate the point, let us look again at four crucial areas where private and social valuations tend to diverge and where the impact of government policy has often tended to increase rather than reduce these divergences.

Factor Prices, Choice of Technique, and Employment Creation

A presumed conflict between two major planning objectives, rapid industrial growth and expanded employment opportunities, has typically resulted in the neglect of employment creation in the interest on industrial growth. Public policies that have raised the level of wages above labor's shadow price or scarcity value by various devices such as: minimum wage legislation, tying wages to educational attainment, and structuring rates of remuneration at higher levels on the basis of international salary scales. Similarly, we have seen that investment depreciation and tax allowances, overvalued exchange rates, low effective rates of protection, quotas, and credit rationing at low interest rates all serve to lower the private cost of capital far below its scarcity or social cost.

The net effect of these factor price distortions has been to encourage private and public enterprises to adopt more capital-intensive production methods than would exist if public policy attempted to correct the prices. In short, private valuations of benefits and costs often dictate more capital-intensive methods of production when true social valuations would point to more labor-intensive technologies. This divergence between private and social valuation is one of the major reasons for the slow growth of employment opportunities. Within the mystique of development planning, the more powerful mystique of forced industrialization remained a high priority for many years. Contrary to the expectations of its most vocal advocates, planning has had a far from salutary effect on efficient resource allocation in most developing countries. Planning advocates would probably claim that their arguments still hold. The problem has been planning, not the mere fact of planning.

Rural-Urban Imbalances and Migration

A second major area of divergence between private and social valuations where, until recently, LDCs economic policy appears to have been counter-productive to social concerns relates to the widespread phenomenon of rural-urban migration. Government policies that are strongly biased in favor of urban development, as revealed by the existence of sizable urban-rural income differentials and disparities in locational economic opportunities, have stimulated an excessive outflow of rural migrants in search of limited but highly paid urban jobs. With growing urban unemployment and stagnating agriculture, the continued heavy

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influx of rural migrants represents a net social loss to society in the context of both lost agricultural output and higher social costs of their urban accommodation.

Demand for Education and the Employment Problem

Economic signals and incentives in many LDCs have served to exaggerate the private valuations of the returns to education to a point where the private demand for more years of schooling is greatly in excess of the social payoff. The tendency to ration scarce high-paying employment opportunities by level of completed education and the policy of most LDC governments to subsidize the private costs of education, especially at the higher levels, have together led to a situation in which the social returns to investment in further quantitative educational expansion seem hardly justified in comparison with alternative investment opportunities (e.g., the creation of productive employment). But as long as private benefit-cost valuations show high returns and in the absence of effective policies LDC governments will continue to face extraordinary public pressure to expand school places at all levels.

Structure of the Economy

As a final example of the way in which planning and government policy have often contributed to the maintenance or exaggeration of socially incorrect signals and incentives, consider the emphasis on import substitution. A wide range of external and internal pricing policies, including: special tax concessions to foreign investors, overvalued foreign exchange, higher effective tariff rates designed to lower the costs of capital and intermediate-goods imports, quotas, subsidized interest rates, credit rationing to new industries, and a whole array of bureaucratic industrial licensing procedures, have served to provide an artificial stimulus to import substituting industrial expansion. But we also learned that for the most part, the experience of import substitution, especially in Latin America, has failed to meet planned expectations in terms of the eventual realization of low-cost efficient production by local industries. Moreover, the heavy emphasis on urban industrial growth and the concomitant attempt through an economic policy of distorted signals and incentives to reward private industrials activity have greatly contributed to the stagnation of the agricultural sector.

b) Reasons for Plan Failures

In view of the foregoing examples, we may conclude that the gap between the theoretical economic benefits of planning and its practical results in most Third World countries has been quite large. The gap between public rhetoric and economic reality has been even greater. While supposedly concerned with eliminating poverty, reducing inequality, and lowering unemployment, many LDCs planning policies have in fact unwittingly contributed to their perpetuation. Some of the major explanations for this have to do with failures of the planning process itself; and these failures in turn arise out of certain specific problems.

Deficiencies in Plans and Their Implementation

Plans are often overambitious. They try to accomplish too many objectives at once without consideration that some of the objectives are competing or even conflicting. They are often

grandiose in design but vague on specific policies for achieving stated objectives. Finally, the gap between plan formulation and implementation is often enormous (many plans are never implemented).

Insufficient and Unreliable Data

The economic value of a development plan depends to a great extent on the quality and reliability of the statistical data on which it is based. When these data are weak, unreliable or simply nonexistent as in many poor countries, the accuracy and internal consistency of economy wide quantitative plans are greatly diminished. And when these unreliable data are compounded by an inadequate supply of qualified economists, statisticians, and other planning personnel (as is also the situation in most poor nations), the attempt to formulate and carry out a comprehensive and detailed development plan is likely to be frustrated at all levels. In such situations, it can be both foolish and wasteful of scarce high-level human resources to engage in an extensive planning exercise.

Unanticipated Economic Disturbances (External and Internal)

Because most LDCs are open economies dependent on the vicissitudes of international trade, aid, and private foreign investment, it becomes exceedingly difficult for them to engage in even short-term forecasting, let alone long-range planning.

The oil price increases of 1974 and 1979 obviously caused havoc in most LDCs development plans. But the energy crisis was only an extreme case of a general tendency for economic factors over which most LDC governments have little control to determine the success or failure of their development policies.

Institutional Weaknesses

Much has been written about the institutional weaknesses of the planning processes of most developing countries. These include the separation of the planning agency from the day-to-day decision-making machinery of government; the failure of planners, administrators, and political leaders to engage in a continuous dialogue and internal communication about goals and strategies; and the international transfer of institutional planning practices and organizational arrangements that may be in-appropriate to local conditions.

In addition, there has been much concern about incompetent and unqualified civil servants, cumbersome bureaucratic procedures, excessive caution and resistance to innovation and change, interministerial personal and departmental rivalries (e.g., finance ministries and planning agencies are often conflicting rather than cooperative forces in LDCs governments); and lack of commitment to national goals as opposed to regional, departmental, or simply private objectives on the part of political leaders and government bureaucrats. Hence, with this lack of national as opposed to personal interest, the political and bureaucratic corruption becomes pervasive in many governments.

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Though it is beyond the scope of this section to deal further with these substantial institutional weaknesses, one cannot underestimate their importance in holding back the structural and institutional reforms needed to accelerate economic and social development. They are critical factors, in addition to the three previously mentioned, in explaining the widespread failures of development planning.

Lack of Political Will

Poor plan performance and the wide gap between plan formulation and plan implementation are also attributable to a lack of commitment and political will on the part of many Third World leaders and high-level decision makers.

We might add, parenthetically, that such a political will to develop on the part of national leaders (a commitment toward eliminating poverty, inequality, and unemployment and promoting aggregate per capita GNP growth) will require an unusual ability to take a long-term view and to elevate national social interests above factional class, ethnic, or tribal interest. It will also necessitate the cooperation of the economic elites, who may correctly see their privileged positions challenged by such a development posture. Thus, a political will to develop entails much more than high-minded purposes and noble rhetoric. It requires an unusual ability and a great deal of political courage to challenge powerful elites and vested interest groups and to persuade them that such development is in the long-run interests of all citizens even though some of them may suffer short-term losses. In the absence of their support, be it freely offered or coerced, a will to develop on the part of politicians is likely to meet with staunch resistance, frustration, and growing internal conflict.

c) Government Failure, Resurgence of Markets Over planning

Problems of State Intervention and the Rise of Market Preferences

As a result of the disenchantment with central planning and the perceived failure of government intervention, a growing number of (mostly Western) economists, some finance ministers in developing countries, and the heads of the major international development organizations have begun in recent years to advocate the increased use of the market mechanism as a key instrument for promoting greater efficiency and more rapid economic growth. U.S. President Ronald Reagan became famous for his reference to the "magic of the marketplace" in a 1981 speech at Cancun, Mexico. Several Third World countries had already instituted major economic reforms in the direction of the free market in the hope that the "invisible foot" would provide a more powerful kick toward economic growth and development than the "visible hand" of central planning. If the decade of the 1970s could be described as a period of increased public sector activity in the pursuit of more equitable development, the 1980s and 1990s witnessed the reemergence of free market economics as part of the ever-changing development orthodoxy.

Among the early converts were some of the Latin American countries, including Chile (1973), Uruguay (1974), and Argentina (1976), although presumably their right-wing governments needed little "enlightenment". More recently, others have jumped on the free market

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bandwagon, ranging from traditionally more market-oriented countries such as Kenya, Peru, the Philippines, and the Ivory Coast to formerly socialist-inclined countries such as India, Sri Lanka, Tanzania, Jamaica, and Turkey. As part of their domestic market liberalization programmes, these countries have sought to reduce the role of the public sector, encourage greater private sector activity, and eliminate distortions in interest rates, wages, and the prices of consumer goods. The intent of such changes is to lubricate the wheels of the market mechanism. In addition, these countries have sought to improve their comparative advantage in the international economy by lowering exchange rates, promoting exports, and eliminating protection. Moreover, the spread of market mania is not limited to LDCs. Almost every former Second World country from the USSR republics to Eastern Europe is now in the painful process of transition to a market economy.

Among the international organizations preaching the virtues of the free market, the IMF is one that requires substantial market liberalization programmes and policies to improve comparative advantage and promote macroeconomic stabilization as conditions for access to its higher credit windows. The World Bank also carefully scrutinizes its project lending to ensure that the projects proposed could not otherwise be undertaken by the private sector. Furthermore, WB emphasizes joint ventures between governments and private enterprise as part of its structural adjustment lending.

What are the reasons behind all of this sudden "market madness"? In part, it has been fostered by the East Asian success stories, notably South Korea and Taiwan, which relied extensively on private enterprise, particularly in the later stages of development. However, for the most part it has arisen from the growing dissatisfaction with government intervention in general and central planning in particular. Many observers attribute the poor rates of growth, massive inflation, high debt, and growing balance of payments deficits during the 1970s and 1980s to the rising burden of public spending, excessive price distortions, and inward looking trade policies.

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2.1.4 *Problems Attributed to State Intervention in Developing Countries*

- Individuals may know more about their own preferences and circumstances than the government.
- Government planning may increase risk by pointing everyone in the same direction (i.e, governments may make bigger mistakes than markets).
- Government planning may be more rigid and inflexible than private decision, because complex decision-making machinery may be involved in government.
- Governments may be incapable of administering detailed plans.
- Government controls may block private-sector individual initiative if there are many bureaucratic obstacles.
- Organizations and individuals required incentives to work, innovate, control costs, and allocate efficiently; and the discipline and rewards of the market cannot easily be replicated within public enterprises and organizations. Public enterprises are often inefficient and wasteful.

- Different levels and parts of government may be poorly coordinated in the absence of the equilibrating signals provided by the market, particularly where groups or regions with different interests are involved.
- Markets place constraints on what can be achieved by government. For example, resale of commodities on black markets and activities in the informal sector can disrupt rationing or other nonlinear pricing or taxation schemes. This is the general problem of "incentive compatibility".
- Controls create resource-using activities to influence those controls through lobbying and corruption often called rent seeking or directly unproductive activities.
- Planning may be manipulated by privileged and powerful groups that act in their own interests; and planning creates groups with a vested interest in planning (e.g, bureaucrats or industrialists who obtain protected positions).
- Governments may be dominated by narrow interest groups interested in their own welfare and sometimes actively hostile to large sections of the population. Planning may intensify their power.

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2.2 *AN OVERVIEW AND PERFORMANCE OF THE ETHIOPIAN ECONOMY*

2.2.1 *Some Economic Features*

With a total land area of 1.128 million square kilometers and a population of approximately 60 million people (by the end of 1998), Ethiopia is the second most populous country in Sub-Saharan Africa. At a growth rate of about 3% per annum, Ethiopia's population is projected to reach the 100 million mark by 2020. Roughly, 85% of the population live in rural areas. Nearly 50% of the population is made up of either young people below 15 years or elderly. The resultant high dependency ratio exacerbates the country's poor state of development, particularly in the rural areas where most of the basic and essential social infrastructure is lacking. The country's altitude ranges from 110 meters below sea level to 4620 meters above sea level. Most of its population is concentrated in the high lands with about 80 per cent of the population living in less than 40 per cent of the total area of the country; while the remaining 20 per cent of the population living on more than 60 per cent of the total land area of the country. Ethiopia has diverse physical features, i.e., lattudinal, climatic, soil and other conditions which result into a multitude of agro-ecological zones which allows the country grow a large variety of annual and perennial crops and sustain pastoral activities.

The country's development potential lies in its huge working force, arable land, and other natural resources. About 60 per cent of the country's land area is estimated to be suitable for agriculture of which only 25% is currently believed to be under the cultivation of perennial and annual crops. The country has also the largest livestock herd in Africa although its contribution to GDP currently ranges between 12 and 15 percent.

Notwithstanding its great potential for agricultural development, Ethiopia is, according to the UNDP Human Development Report for 1998, the sixth poorest country in the world. Its per capita income of USD 110 is roughly one quarter of the average for Sub-Saharan Africa. Life expectancy is low at 50 years, and both infant mortality and malnutrition are comparatively high. Adult literacy remains low at 24% and only one in four Ethiopians has access to health and potable water facilities. Total population literacy rate in the country was 22.3% in 1996.

The agricultural sector is the mainstay of the Ethiopian economy accounting for about 50% of GDP, 70% of the raw materials required by the industrial sector, and 90% of export earnings. It is also the major source of employment and the primary source of income for at least 85% of the population. During the two decades ended in FY 1991/92, the contribution of the agricultural sector of GDP declined by about 25% leading to increased poverty.

The decline in agricultural production can be attributed to: (i) neglect and the market distortions introduced during the Derg regime, including the expropriation of farmlands and forced villagization; (ii) internal conflicts which dislocated large numbers of people from their farmlands and diverted scarce resources away from productive investments; (iii) adverse weather conditions including severe, periodic droughts; (iv) the poor agricultural production technologies and land use and management systems practiced by the country's dominant peasant farmers; and (v) deforestation and loss of soil fertility leading to land degradation.

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Admittedly, an in-depth analysis of the current status of poverty in Ethiopia is lacking. However, the 1995/96 Household budget and 1996 Welfare Monitoring Survey strongly suggest that half of the country's population cannot meet the minimum daily calorie intake per adult of 2200 Kcal recommended by the WHO. In other words, 50% of the population in the country cannot meet their daily minimum nutritional requirement. Moreover, it is found that poverty is higher in rural areas than in urban areas. Some 52 percent of the population who live in rural areas are unable to acquire the minimum food requirement; while only about 36% of the population in urban areas are unable to acquire this minimum.

2.2.2 *A Brief Review of Pre-Reform Macroeconomic Situation*

The policy environment as reflected in administrative allocation of resources in favor of the socialized sectors, factor market distortions, and price controls (including interest rate and exchange rates), coupled with the protracted civil war and natural calamities (such as drought) had resulted into a dismal performance of the Ethiopian economy throughout the period of the defunct Military Regime which was overthrown by EPRDF forces in May 1991.

The annual average growth rate of GDP by industrial origin at 1980/81 constant factor cost averaged a mere 2.0 percent during the decade ending in the 1990/91 F.Y. which marks the downfall of the Military Regime. Given the growth rate of the population of Ethiopia which averaged 2.9 percent, per capita GDP (income) had been declining at the rate of a little less than 1 percent during the same period.

Such a dismal performance of overall GDP had resulted from the stagnation and decline in the performance of agriculture and allied activities which contribute about 50 percent to overall GDP. It had witnessed an annual average growth rate of agricultural value added of 1.2 percent during the same period. Industry which accounts on average for about 12 percent of GDP had exhibited an annual average growth rate of 1.3 percent during the same period. The service sector which accounted for the residual had recorded an annual average growth rate of 3.6 percent. Within the service sector trade, hotels and restaurants had even been declining at 7.8 pa. The only sub-sector within services that had exhibited a significant growth was the public Administration and Defense sub-sector with an annual average growth rate of about 6 percent.

The stagnation of the 1980's had resulted into severe macroeconomic imbalances. By the end of 1990/91 F.Y. which also coincided with the fall of the Military Regime, the performance of major macro variables turned out to be as follows:

- GDP at 1980/81 prices had declined by 4.4 percent;
- Inflation has soared to an all time high of 21 percent;
- Foreign exchange reserves in weeks of import stood at 4.7 weeks only;
- Current account balance as % of GDP (excluding grants) stood at 6%;
- Government revenue (excluding grants) stood at 10.6 percent;
- Government expenditure on defense at 48% of recurrent expenditure;
- Budget deficit excluding grants as % of GDP at 11%;
- Domestic bank financing of the deficit as % of total deficit excluding grants at 56%;

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- Broad money growth at 19 percent;
- Private transfers as a ratio to GDP at only 2%;
- Investment as a ratio of GDP at 10.4%;
- Domestic saving as a ration of GDP 5.6%;
- Saving investment GAP 4.8%;
- Utilization capacity of industries and organizations 25%;
- Merchandise import as a ratio to GDP at only 11% (of which fuel 1.2% and other imports at 9.9%); and
- Merchandise export as a ratio to GDP at only 3% (of which Coffee 1.4% and others 1.6%).

2.2.3 *Reform Measures (Structural Adjustment Programme) Undertaken by the TGE*

The new (Transitional Government of Ethiopia - TGE) had taken power in the midst of these severe macroeconomic imbalances that called for swift liberalization and adjustment policies in an attempt to redress them. To this effect, the TGE had confronted at least two critical tasks immediately after it assumed power: the need for liberalization and macroeconomic stabilization and a long term objective of poverty reduction and its ultimate eradication.

A New Economic Policy aimed at replacing the previously centrally planned economy with a market-oriented economy was formulated and effected through rationalizing the role of the state in the economy, encouraging private investment, mobilize external resources and drafting sectoral strategies and programmes which have been deemed appropriate to managing the Ethiopian economy. The TGE's New Economic policy has served as a framework to designing the ADLI strategy and for the subsequently launched Economic Reform Programme (ERP) in 1992/93. Hence, the fiscal year 1992/93 marked a turning point in the macroeconomic scene of the country. A package of reform measures had been undertaken through the ERP. The first phase of the ERP (1992/93 – 1995/96) focused on two major objectives: liberalization and stabilization.

CORDA

a) On the Fiscal Front

- Government's policy pursued towards managing fiscal deficit at a sustainable level via avoiding inflationary financing especially financing from the banking system.
- Enhance Government revenue on the one hand, and rationalize and control growth in Government expenditure (with emphasis on infrastructure and social service).
- Instituting fiscal federalism (decentralization of revenue collection and expenditure programmes).
- Improving the efficiency of fiscal administration by restructuring the IRA and ECA.

b) On the External Sector

Exports

- Liberalization of the external sector as reflected in the devaluation of the currency by around 58 percent in USD terms and 142 percent in terms of local currency.
- Suspension of taxes and subsidies on all exportable except coffee.
- Encouraging private sector participation in the export sector currently about 80% of export of coffee which accounts for more than 60% of merchandise export earnings is handled by private exporters. Overall, more than 60 percent of merchandise export earnings come from private exporters.
- Introduction of the foreign exchange auction system (to start with a retail auction) and currently wholesale foreign exchange auction in which all commercial banks (both private and public) and investors with foreign currency demand exceeding $500,000 USD participate.
- Foreign exchange surrender requirement has been relaxed (50% immediately surrendered, 40% can be sold to any bank of the exporters choice within 3 weeks of receipt, and 10% can be retained by the exporters themselves).

Imports

- Tariff regime has been overhauled with massive cuts on tariff rates (230% to 50%);
- Streamlining and reduction of the number of tariff bands and tightening the scope of tax exemptions on tariffs (327 to 138);
- Weighted average tariff rate (weighted by the number of items in each tariff band) was reduced from 50% to 21%.

Monetary Aggregates: Money supply growth has been targeted to grow parallel with the growth rate of nominal GDP.

CCRDA

2.2.4 *Macroeconomic Developments Since the Launching of the Reform Programme (Structural Adjustment Programme)*

Macroeconomic Development since the launching of the ERP has witnessed at least two important achievements: **stability and economic recovery**. From 1992/93 - 1997/98, growth in real GDP averaged 6 percent per annum. The highest growth attained was in 1992/93 (12 percent) followed by an 11 percent increase in 1995/96 F.Y. The overall performance of the macroeconomic since the launching of the ERP has been satisfactory except 1993/94 and 1997/98 which have been mainly caused by a less than satisfactory performance of agriculture owing to weather related factors (rain failures for the former and El Nino and its consequences for the latter).

The measures pursued in the fiscal and external fronts have also fared positively. Accordingly, Government revenue excluding grants has increased from 11 percent of GDP in 1991/92 (just one year prior to the Reform) to over 19 percent in 1997/98 F.Y. Rationalizing

Government expenditure has resulted into a reduction in defense expenditure from around 50% of recurrent expenditure (1989/90) to around 18% by the end of 1997/98 while expenditure on infrastructure and social services has significantly increased. Budget deficit (excluding grants) has been brought down from around 11% of GDP in 1990/91 to 5% of GDP in 1997/98.

Measures being pursued in the external area has also greatly facilitated the performance of the export sector. Export of goods and non-factor services has witnessed an annual average growth rate of 30.4% during the period spanning the years 1992/93 - 1997/98. The share of export of goods and non-factor services which stood at around 8 per cent in 1992/93 has increased to about 16 per cent of GDP in 1997/98. Merchandise import (import of goods and non-factor services) has witnessed an annual average growth rate of about 27 percent. The share of merchandise import in GDP has also increased from a pre-reform level of around 11 percent to around 22 per cent in 1997/98.

The positive out-turn of supply side of the economy coupled with Government's prudent demand management policy (fiscal and monetary) has helped maintain on average one digit inflation during the whole of the period of the ERP ending in the 1997/98 F.Y. The relative stability of the exchange rate has also helped maintain inflation within limits envisaged while launching the ERP in 1992. Growth in broad money (M2) was brought down to around 10 percent in 1997/98 F.Y. from around 20 percent in 1991/92 F.Y. External resource mobilization has also to do a lot in achieving the stated objectives of stabilization and economic recovery while launching the ERP in 1992.

Over all, during 1992/93 - 1998/99, on the average, the growth rate of GDP was 5.8, of which agriculture contributed 2.5%, industry 10% and services 9.3%. The rate of per capita agricultural production during the same time has however been on the average a little less than 0.5%.

Investment as a proportion of GDP which was 10.4% in 1990/91 has increased to 20.2% by 1997/98. On the other hand Domestic Saving as a proportion of GDP increased from 5.6% to 7% during the same time. The saving investment gap has however widened to 13.2% in 1998/99 compared to 5.6% during 1990/91.

It could be concluded, until 1998/99 encouraging progress has been made in almost all macro-economic parameters. Since the beginning of the Ethio-Eritria conflict, however, it would simply be difficult to illustrate that the gains of the reform programme are fully sustained.

CCRDA

2.3 GOVERNMENT POLICIES AND STRATEGIES RELEVANT TO FOOD SECURITY

2.3.1 Macro Economic Policies

Besides restoring peace and political stability the government of Ethiopia has introduced a number of macro economic policy reforms to transform the economy from a centrally planned system into a market based economic system.

A New Economic Policy (NEP) in November 1991 whose major principles are reducing the role of the state in the economy, promoting domestic and foreign private investment, enhancing public involvement in development, mobilizing external resources and involving regional administrative organs in economic management was declared and being implemented since November 1991.

The ***Economic Reform Programme*** which was envisaged to be undertaken in three overlapping phases namely stabilization, structural reform, and further structural reform was under implementation since 1992. Through this reform programme, substantial progress has been made in correcting price distortion, lifting restrictions and regulations imposed on the private sector, reducing macro economic imbalances, and limiting the role of the state.

Within the framework of the new economic policy and the economic reform programme producers cooperatives have been dissolved; private commercial farms are being encouraged; public investment in state farms has been drastically reduced; all compulsory food grain quotas have been abolished; and free food grain trade has been restored. All these achievements in one way or another contribute to the attainment of food security objective at large.

2.3.2 Agricultural Development Led Industrialization (ADLI)

Although the government does not have agricultural sector polices, it has designed a strategy (ADLI) which serves as an overall development strategy. ADLI aims to use agriculture as the base for the country's overall development. Central to this strategy is the objective to enhance the productivity of small farmers and to improve food security both in the rural and urban areas.

Within the framework of ADLI the government of Ethiopia has initiated a five year agricultural development programme with the objective of closing the country's food gap in the medium term. Under ADLI the government has introduced the following agricultural production promotion policies

a) Fertilizer Supply and Distribution

To promote fertilizer use by increasing the number of farmers, the GOE has taken steps to encourage, inter-alia, private sector participation in the marketing of fertilizers. The GOE has

CCRDA

also issued Proclamation No. 106/1994 providing for the establishment of "National Fertilizer Industry Agency" with the major objective of promoting the supply of fertilizer and encouraging the development of fertilizer industry as well as creating an enabling environment for capacity building in fertilizer supply and distribution, pricing, quality control and environmental protection. Government subsidy on fertilizer was lifted since 1998.

Limited capacity to import and meet the demand for fertilizers, late delivery, high prices of fertilizers which may probably be beyond the financial reach of subsistence farmers are factors affecting the application of fertilizer in the short run.

b) Improved Seeds Supply and Distribution

The Ethiopian Seed Enterprise (ESE) is virtually the sole producer of seeds in the formal sector. The amount of seeds produced by the ESE is insignificant compared to the need. The issuance of proclamation No. 56/1993 providing for the establishment of the National Seed Industry Agency (NSIA) and the National Seed Industry Council and proclamation No. 154/1993 to convert the Ethiopian seed corporation in to an autonomous commercial enterprise, are important steps to actively encourage domestic private seed enterprises in the production and distribution of improved seeds.

c) Conservation of Natural Resources and the Environment

The Government's programme to increase food production is foreseen to be undertaken within the context of conservation and rational utilization of natural resources, through reforestation programmes, water and soil conservation and appropriate watershed management and catchment development. The National Environmental Protection Policy was adopted in April 1997. The policy includes measures to integrate on-farm conservation practices with the technological packages that are being promoted at the individual farm level.

d) Agricultural Research and Extension

Increasing efforts are being made to gear agricultural research and extension to the needs of small farmers. Until recently, agricultural research was less focused on small farmers. Also, the extension service remains inadequate, both in terms of number and quality of staff. The GOE's policy is to improve the extension agent to farmer ratio from 1:4000 to 1:500 and to provide continuous training to extension agents to upgrade their skills. Efforts are also being made to gear extension service to the requirements of the various agricultural production systems in the country.

e) Marketing and Price Policy

Within the framework of macro-economic reforms, the GOE's policy is to continue to promote competitive private sector and market determined input and output prices.

The GOE's objective is to increase agricultural production and to attain food security within the framework of comparative advantage in international trade. In this regard one of the major

CORDA

objectives of the ADLI strategy is, in addition to food crops, to increase production of export crops.

2.3.3 *Sectoral Policies*

Certainly the problems of food security cannot be fully addressed by what is done in the food sector alone. It needs concerted and complementary actions in other critical sectors. In this regard the government has introduced new sectoral policies in the areas of population, education, health, women, etc.

a) Education Sector Policy

The Education Sector Development Programme emphasises the expansion of primary education, improvements in its quality, and a more equitable distribution of educational opportunities. The sector investment priority is set by the higher economic returns from investing in primary education, particularly in a predominantly agrarian environment where it would have impact on growth through increases in output and productivity. The education programme also address high priority needs in secondary and tertiary education, and in technical and vocational education in recognition of the inter dependence of these sectors with primary education. A five years Education Sector Development Programme with an earmarked amount of Birr 12.5 Billion started implementation since 1997/98.

b) Health Sector Policy

A new health sector strategy has been developed and implemented since the transition period the corner stone of which is built around the principles of decentralization, prevention and development of an equitable and acceptable standard of health. In line with the strategy, a health sector development programme was designed and started implementation since 1997. The objective of the progrmme is to develop a health system which provides comprehensive and integrated primary care services, based at community-level health facilities. There will be an emphasis on the preventive and promotive aspects of health care, while not neglecting essential curative services. Total resources earmarked over five years is Birr 5 Billion which is fully secured from Ethiopia's development parterres.

c) National Population Policy

Realizing and accepting the importance of demographic factors in development planning and in the effort to match the resource generation capability with the demand for goods and services, the government adopted national population policy in April 1993. The major goal of the policy is to harmonize the rate of population growth and the capacity of the country for the development and rational utilization of natural resources. The **investment policy** and the **national policy on women** also have bearings on food security.

CORDA

2.3.4 *The Food Security Strategy (FSS)*

Given the magnitude and severity of food insecurity in the country, the government has given top priority to solve the problem and consequently developed the National Food security strategy in December 1996. The strategy was presented for discussion to the donor community and to all concerned government bodies and reached a consensus to further formulate food security programme. The food strategy will address both the supply and the demand sides of the food equation which are elaborated as availability and entitlement respectively. It contains three components:

a) economic growth and employment;
b) additional entitlement/access and target programmes including health and nutrition interventions; and emergency capabilities.
c) Each of these components will contribute to food availability and food entitlement using two sources, increasing domestic self-reliance on the one hand and maintaining aid assistance on the other.

To increase food production, hence availability, the strategy focuses on the diffusion of a simple technology package, off the shelf within small holder agriculture in areas of reliable rainfall. This is what is being done since 1994/95 on an increasing scale through the national extension programme.

To increase availability of food and access to it the strategy focuses on two things, sound macroeconomic and technology policies which give the maximum sustainable incentives to food production and reduction of marketing costs through the provision of infrastructure and promotion of competition.

The strategy will also include extensive construction of new roads, and rehabilitation of the existing roads in rural areas so as to reduce marketing costs and improve distribution of food. Provision of market information will also be strengthened in order to increase market integration, with further reduction of costs.

The food entitlement in turn is designed to focus on chronically vulnerable and drought prone areas. The basic idea is to direct development towards reducing vulnerability and ensure self-provisioning in the long term.

Ethiopia's strategy to securing food entitlement in the long term is to build the capacity of households to attain food security on their own while in the short term and medium term the aim is to prevent death due to starvation. The strategy expects continuation of food security assistance to cope with household level food insecurity that will certainly persist over the medium term.

The key elements of food entitlements strategy include building the resource base of poorer rural households, increasing employment and incomes in both rural and urban areas and providing targeted transfers to selected households with special needs.

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The transfer of resources through food assistance will be governed by two principles: (i) shifting external assistance from in-kind to financial flows, and (ii) arranging procurement of food for relief distribution from domestic production rather than from imports. Food assistance to poor households would be provided through, first, employment income generation schemes linked with the priorities of the rural areas in such activities as construction of roads, water supply and sanitation as well as small-scale irrigation; and second, through targeted programmes designed to transfer resources both to develop capacity for self-reliance (through provision of inputs), and to support selected vulnerable groups who will not be capable of attaining self-reliance in the short to medium term.

The special needs of pastoral areas will be addressed through a separate package based on the proper understanding of the life of the pastoral people. Priority attention will be given to increase the knowledge base in order to come up with appropriate extension packages to transform the pastoral economy.

2.3.5 *Land Policy*

Land is the fundamental/basis of the livelihood of the farming population. Poverty reduction hinges upon improving the livelihoods of farmers and it is here that land policy would play a critical role.

The latest available data on the size and distribution of land holdings in Ethiopia (based on the 1996/97 CSA Agricultural Survey) shows that the average size of cropped land per holding is 1.02 hectares. Close to 63 percent of holdings in Ethiopia are less than 2 hectares and about 28 percent are less than 1 hectare. The table below summarizes the average crop land area per household for the four major regions. It highlights the stress on land in the SNNP where the average area of cropland per holding is only 0.5 hectare. Such an area makes it difficult and not enough to provide enough food for an average size family. It could be inferred from the data that basic cause of poverty in Ethiopia is the severe shortage of assets on per capita basis.

Number of Households, Total Crop Land Area and Average Holding Per Households by Major Region for Private Peasant Holdings, 1996/97

Region	Households Number ('000)	Percent	Total Crop Land Area ('000)	Percent	Average Crop Land Area (Household Hectare)
Amhara	2570.21	29.6	3154.81	35.75	1.23
Oromia	3252.56	37.47	3939.73	44.64	1.21
SNNP	2050.63	23.62	1015.10	11.50	0.50
Tigray	579.26	6.67	483.85	5.48	0.84
Ethiopia	8682.3	100.00	8825.06	1000	1.02

Source: Agricultural Sample Survey, 1996/97 Report on Crop land Utilization, Private Peasant Holdings Meher Season, CSA Statistical Bulletin 171, June 1997.

CCRDA

The Constitution under article 40 number 3 and 4 clearly reflect that both rural and urban land ownership is vested with the state and the people while farmers have been granted the right to freely use the land, rent or transfer their right to use the land.

Currently debates have continued on the type of the land tenure most appropriate to Ethiopia. There are largely two blocks of thinking on this issue. Those who argue that land ownership should remain with the state underline that it would avoid the accumulation of land in the hands of the few and ensures equitable utilization by farmers. Such a position, it is argued, is justified given the situation of Ethiopian farmers in the past, where land has been in the hands of the few while the Ethiopian peasantry has been marginalized and transformed into tenancy with the fruits of its labour snached by powerful landlords.

Further, state ownership will ensure that farmers who constitute 85% of the population of the country will not be alienated from their source of livelihood. If, instead, land is privately owned, they argue, it is likely that farmers might be forced to sell their source of livelihood, i.e., their land. Under such circumstances, the farmers will either be turned into tenants or be forced to migrate to urban areas where there is no employment opportunities. Migration under such conditions is bound to exacerbate the situation in urban areas leading to social chaos.

The proponents of such arguments further assert that state ownership with free user right by farmers will create a conducive environment for the government to provide support to the farmers in the form of fertilizers, credit, improved seeds and technology packages in order to raise their productivity and emancipate the farmers from food poverty. Private ownership of land does not guarantee higher productivity. This is substantiated by the proposition that land has been privately owned during the era of the emperor while it would be noticed that the life of farmers had been in grave conditions during that time. In developing countries like Ethiopia, the proper utilization of land and raising its productivity critically depend not so much on the type of ownership, rather it is the degree of commitment and practical support of the state through integrated interventions.

The other block in the debate on land tenure advocates for a reform of the present land tenure system*. They argue that the prevailing land tenure system has the following main weaknesses.

a) Lack of tenure security;
b) Lack of legitimate institutions to ensure the rights of land holders;
c) Discriminatory practices in land distribution; and
d) Discouragement of the mobility of the rural population.

The system has given rise to diminishing family holdings and pasture, and to environmental degradation. Because of the high sense of tenure insecurity peasants cannot employ sound land management practices and are reluctant to invest on the land. It is further argued that the land tenure system is also responsible for the recurrence of food shortages and famine as per capita farm plots which are less than a hectare and continuously getting smaller, in a majority

* A representative argument of this block is the work of Desalegn Rahamato, Forum for social sciences. Refer to for instance Economic Focus, Vol.2 No. 4 August 1999.

CRDA

of rural areas, do not allow farmers to produce food enough for themselves even in a year under normal circumstances.

The greater mobility of peasants out of agriculture is desirable according to such arguments since this will further facilitate and stimulate mobility of land-land will move from those who do not use it to those who efficiently do. The destination of a mobile peasantry would naturally be the urban areas where there is very little livelihood opportunity, like employment. To avoid pressure and chaos on urban towns caused by such mobility, the measure that need to be taken is not to block this mobility, rather create employment opportunities that would absorb such influx. The option given under this argument is land should be privately owned and that land holders be given the right to dispose of their land in any way they choose. The land policy accordingly must enable the rural population to move out of agriculture and seek alternative employment outside of agriculture.

2.4 THE IMPACT OF MACROECONOMIC POLICY ON FOOD SECURITY

Analysing the magnitude and extent of each macro-economic policy impact requires a complex model and comprehensive study which is beyond the scope of the current task. However the possible impacts of each policy measures and the vulnerable groups to be affected by the policy, etc. could be identified or indicated.[1]. Thus, in what follows the highlights of the possible impacts of each macroeconomic policy measures on food security are presented.

2.4.1 Exchange Rate Policy

Before 1991 Ethiopia has fixed its currency with the American dollar at a rate of 2.07 Birr = 1USD. This policy has overvalued the Birr and was believed to have discouraged the production of export and encouraged imports. Exchange rate was liberalized under the new economic policy, and in 1992 the Birr was devalued from its fixed level of 2.07 Birr per 1US$ to 5 Birr per 1US$. Further the exchange rate was made to be determined through weekly auction market since May 1993. Currently, the exchange rate is between 8.1 Birr and 8.2 Birr in the auction market.

Devaluation by making the domestic currency cheaper, i.e., for every dollar worth of export, the exporter receives more than he used to receive in domestic currency while the importer pays more domestic currency for every dollar worth of import. The major objectives of the devaluation was to improve the balance of payment deficit through encouraging export, import substitution and simultaneously discouraging imports. However, aside from this intended impact devaluation may have unintended effect on the poor households.

[1] The Ethiopian government has initiated a study on poverty situation and the social consequences of the economic reform programme. The study has identified the number of the poor and vulnerable in urban and rural areas including those that recently were impoverished, displaced people, returning refugees and demobilized solders

CCRDA

Every household participate on the market either as a buyer or as a seller. In either cases, the household will be affected by the measure of devaluation. If the household is a buyer (consumer) his expenditure or real consumption will be affected. On the other hand, if the household is a seller (producer) his/her revenue from sale will be affected.

Farmers who produce exportable product, on the one hand will benefit from the increase in the revenue they receive from the sale of their export, while on the other hand they pay more for the imported input (fertilizer, pesticides, herbicides, etc.) they use. Thus, other things remaining the same the net benefit that the farmer gets from devaluation depends on the relative increase in the price of his output and the price of imported input he utilizes. Thus, both the output and input prices farmers face are very important and they affect the decision which crop to produce and the amount of resources (land, labour and capital) to be invested.

As devaluation tends to increase, the price of tradable agricultural inputs such as fertilizer, pesticides, fuel for tractors, etc., households producing non-tradable goods using imported inputs will face increase in their cost of production and consequently their real income decline.

Individual and household access to food is determined by the prices they have to face in the market for food and other basic needs, their income from their own labour or through selling their own production and services. Increases in the price of tradable food commodities resulting from devaluation, which benefit food producers, can reduce the food security of net food purchasers. Equally, other basic goods such as clothing and fuel are also likely to rise with a devaluation, putting pressure on limited budgets.

The predominance of subsistence agriculture and the non tradability of the staple food Teff which constitute substantial proportion of the agricultural production might diminish the influence of devaluation on food security situation. Furthermore, the double-edged impacts of the policy under discussion, and the various other factors affecting food security situation has made the task of identifying the impact of devaluation on food security very complex which is beyond the scope of this study. However, one can comfortably acknowledge the positive impacts of the policy on increasing the production of coffee and the income of its growers.

CCRDA

2.4.2 Fiscal Policy

Budget deficit depending upon the way it is financed can create problems of inflation, debt crisis and crowding out of the private sector. With the objective of reducing the budget deficit, and ultimately controlling the macroeconomic problems associated with its financing the government has adopted contractionary fiscal policy. The budget deficit can be reduced either by cutting government expenditure or increasing government revenue. However in a country like Ethiopia where the tax base is narrow and tax administration is inefficient increasing government revenue in the short run is difficult task. Thus, measures were taken to reduce government expenditure by limiting the role of the state only in areas where its intervention is needed. In this regard, the following measures were taken:

- About half a million ex-solders were demobilized;
- In the process of restructuring civil service institutions many workers were retrenched; and
- Subsidies on many basic consumption items and subsidy on fertilizer were removed, etc.

It is clear that these measures resulting from the contractionary fiscal policy has a negative impact on the poor. The removal of subsidy from fertilizers which was about 20% has increased the price of fertilizer and affected the application of fertilizer by poor farmers. The removal of subsidy from wheat, sugar and other basic consumption items has hurt the rural poor. Retrenched workers and demobilized ex-solders have lost their income.

Attempts to cut public expenditure may affect various agricultural support services, such as the provision of extension services, or the financing of public sector research initiatives, which could lead to improved crop varieties or more effective production techniques.

Regarding taxes, the government has taken the following measures:

- Reduce the maximum income tax rate from 85% to 40% and increased the tax free income from 50 Birr to 120 Birr;
- Profit tax was reduced from 50% to 35%; and
- Export tax was removed except on coffee.

These tax measures by increasing the disposable income can have a positive impact on the purchasing power of the consumers. This in turn will improve the access to food.

2.4.3 Monetary Policy

The major short run objective of the monetary and credit policy was to control inflation. One of the sources of inflation is excess supply of money resulting from efforts of the government to finance its deficit by borrowing from domestic banks (money creation). With the objective of controlling inflation, the government has adopted tight monetary policy. As a result, non monetary sources of financing the budget deficit was encouraged and credit to the government was restricted. To enforce this autonomy has been granted to the National Bank. Banks have been allowed to vary the rates they charge between the administratively set maxima and minima.

The reform in the financial sector has affected the availability (though very insignificant compared to the need) of credit at preferentially low interest rate for the rural and urban poor. Farmers were given credit for buying inputs through service cooperatives with out collateral; urban households were offered long-term credits for building houses. A tight Monetary Policy will raise interest rates and make credit less available. Although there is no significant change in the market interest rate after the reform, poor households do not have access to credit due to the problem of collateral.

The economic reform programme has played significant role in facilitating the movement of food products from surplus area to food deficit areas, however, this alone cannot solve the

CCRDA

problem of food security unless supported by increase in domestic production. However, besides favorable macroeconomic policy environment and other factors, agricultural production depends heavily on favorable weather conditions, i.e., availability of rainfall. During the period of 1993-1999 agricultural production was growing at a rate lower than the population growth rate worsening the food security situation in the country.

Despite the economic reform programme, food insecurity still remains the major problem in the country. In the late 1980's, it was estimated the domestic food production provided about 1620 Kcal, while the total availability including imports was about 1770 kcal per person per day. This situation has worsen in 1990's. Based on an average of 1992-1995, food availability was estimated at an average of only 1688 kcal per person per day. This is about 20% below the weighted average of 2100kcal set by the government as the minimum acceptable requirement per person per day.

2.5 *POLICY MEASURES TO AMELIORATE ADVERSE IMPACTS OF MACRO-ECONOMIC REFORM*

In the previous section it has been discussed that changes in macroeconomic policy and parameters have significant effects on the availability and access to food. The impacts of these changes are severe and painful to the already food insecure and vulnerable groups who are on the border line and can shift in to food insecurity with the slightest shock in the economy. An important way to protect the undesirable effects of policy changes on the poor is through targeted programmes, which are specially designed for a benefit of a specific groups of people (i.e., the poor) - to help them through short-term stress and calamities.

Targeted assistance programmes in the urban and rural areas embrace the following:

a) <u>In urban areas</u>:

- Income transfers such as food related voucher schemes;
- Cash delivery programmes;
- Provision of commodities and services at subsidized prices to vulnerable groups; and
- Urban public works programme.

b) <u>In rural areas</u>:

- Public works programme (cash - for - work or food - for - work) based on the improvement, rehabilitation, upgrading and extension of rural infrastructure;
- Voucher system for the poorest farmers which would provide them with inputs for their farms such as oxen, seed, hand tools, fertilizer, pesticide, veterinary drug, etc.; and
- Direct assistance to the aged, infirm and female headed poor households along the lines of the urban voucher schemes.

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The objective of income transfer programmes is to transfer a level of income that is feasible to the household income of the poor to offset the erosions in their local incomes. Out of the income transfers programmes, voucher scheme programme is known for its potential to implement a transfer programme without causing distortions in the normal market prices of good sand services. The exercise of this type of intervention is non existent in our cure.

Provision of commodities and services at subsidized prices, as one of the alternatives that would assist the poor, on the other hand, has a disadvantage of distorting prices and market demand, and on top of that it involve expensive administrative structures for distributions and demand other interventions by the government such as floor price schemes to the producers to safeguard them from commodity price distortions. Besides, the meager purchasing power that the chronically poor posses in subsidized commodity markets, it greatly reduces the participation of the poor and these programmes may not have a direct utility to the poor, for the non-intended beneficiaries receive the bulk of benefits from such programmes.

The least distortive income transfer, obviously, is a well targeted cash transfer which the recipient could use for purchasing goods and services at prevailing market prices. However, cash delivery programmes are highly insecure and prone to fraud practices and preventive measures entail huge administrative costs and policing activity, all of which may still not guarantee a theft-proof and fraud-proof system. In comparison with voucher schemes, the latter is less attractive for robbery and fraud because of the transaction processes involved before cash values are realized from vouchers.

On the other hand public works programmes help to cushion the effects of economic reform on the poorer sections of the population by providing opportunities for gainful employment which would not otherwise be available. In this context, public works programmes can be considered to be targeted at the poorer sections of the community, in that only the chronically poor will chose to do hard physical work return for a bare survival wage.

Food-for-work is such a programme that provides temporary food wage employment to supplement or replace the income of the poor during crisis and slack agricultural seasons. The other type of public works programme is the cash-for-food programme. This scheme is designed for such section of the population where food supply is in a good condition and lack of purchasing power is observed. This type of programme is believed to help in areas where food is still available at reasonable prices, that recipients of cash could tap into regional markets where food deficiency is not observed. Public works programme is the most exercised intervention in the Ethiopian Case.

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2.5.1 *Programmes Implemented to Combat the Impacts of Macro Economic Policy Changes*

a) Ethiopian Social Rehabilitation Fund

The Social Rehabilitation Fund was created to assist community-based income generating activities for displaced people, demobilized soldiers and other poor socio-economic groups. The major objectives of the ESRF were:

- To assist target groups in their efforts at rehabilitation and integration;
- To promote participation of communities in identification, preparation and implementation of micro projects; and
- To promote the involvement of NGOs and small scale private entrepreneurs in rehabilitation and development.

b) Safety-Net Programme

Beginning in 1994, the government designed and implemented a Safety-Net Programme (SNP) that was targeted at retrenched workers, displaced people, returning refugees, demobilized soldiers, female households, the unemployed, the aged, disabled, orphan and poor farmers with food insecurity. One of the important concerns of the government at the time was the welfare of redundant workers to be released from the public sector. Accordingly, the government implemented a specific programme for the retrenched under the SNP. This programme provided various options for the retrenched workers in forms of early retirement, alternative employment elsewhere in the public sector, payment of compensation, or joining a share company.

Under SNP, the government also set up a revolving credit fund, which provided concessional loans to cooperatives of x-soldiers and retrenched workers to assist them in entrepreneurial endeavors. Significant portion of the SNP fund was allocated to help protect poor farm households from the short-term negative effects that were expected to result from the economic stabilization and adjustment programs. A labour intensive public works programme was also designed under SNP to alleviate poverty among the poorest of the poor in urban areas.

c) Intensified Agricultural Extension Programme

The government provides top priority to the development of agriculture, small-scale farming in particular. Beginning from 1993, the government has been subsidizing the sale of fertilizer to the small farmers with a view to cushioning the impact of devaluation on the price of fertilizers. This has recently been abandoned in order to avoid possible distortions this might create on the fertilizer market. The government continues to encourage the distribution and use of fertilizer. Under the agricultural extension programme, the government also supports

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the distribution of improved seeds and the assignment of agricultural agents who will work with the small farmer on permanent basis.

The government also took a major step foreword to enable small holders with no capacity to finance the purchase of fertilizer and improved seeds to acquire this capacity through letting them access to enhanced credit.

d) Credit Provision to the Urban Poor

The government has implemented a new credit scheme beginning in 1994 that has the following major objectives:

- To create new sources of income for the urban poor, who have no such source; and
- To enhance the productivity of the urban poor who are engaged in small income-generating activities.

The credit scheme targets poor households in selected towns with a monthly income below Birr 50. The scheme puts caveat that female-headed households and unemployed school drop-outs make up at least 50 per cent of total beneficiaries.

Programmes implemented to offset the adverse effects of major economic reforms on targeted groups of the poor were initiated at a time of substantial political, economic and social trauma in the country. Review need to be made to draw lessons for future similar undertakings.

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REFERENCES

A.P. ThirLWall, (1994), "Growth and Development with special Reference to Developing Countries", Fifth Edition.

Yujiro Hayami, (1997), Development Economics from Poverty to the Wealth of Nations Michael Todaro (1997), Economic Development 6th edition.

World Bank, Various World Development Reports.

Killic, Tony (1989), A Reaction too Far, Economic Theory and the Role of the State in Developing Countries.

Food Security Strategy of the Government of Ethiopia, 1996.

Draft Food Security Programme of the Government of Ethiopia.

UNDP, Human Development Report 1996.

ADLI, Agricultural Development Strategy of the Government of Ethiopia.

The New Economic Policy of the Government of Ethiopia.

MEDaC (1999), Poverty Situation in Ethiopia, March 1999, Addis Ababa.

MEDaC Post-Reform Macro economic Developments in Ethiopia, Unpublished, 1999.

MEDaC (1999), "Draft Evaluation of the Performance of the Ethiopian Economy" Various Sector Evaluation Reports.

CSA Agricultural Sample Survey 1996/97. Ethiopian Economic Association, Economic Focus, Vol. No. 4, August 1999.

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Part III

FOOD SECURITY CONCEPT AND DEFINITIONS

By
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3.1 FOOD SECURITY CONCEPT AND DEFINITIONS

3.1.1 Concept of Food Security

If "**food security**" is the objective, a clear understanding of the concept of food security is essential to better explore the underlying causes and dimensions of food insecurity at different levels. Does it refer to a nation, community, household or individual? Is **food security** a measure of the ability to acquire food, or of the amount and kind of food actually consumed? Does it refer to access in the present or in the future? Over the years, the term **food security** in general has been used in all these ways.

Food security is a concept that can generally be addressed at the global, regional, national, sub-national, community, household and individual levels. The concept of food security has been developing since early 1970s. The concept on household food security in particular is a more recent development; and the bulk of the literature dates from the 1980s. When we look into the evolution of food security, the initial concern in the 1970s focused on the global, regional and national food supply or stocks (i.e, food security was conceived as adequacy of food supply at global and national levels). Such view favoured macro level food production and supply-oriented variables which overlooked the micro-level food access.

Equating national food security with food self-sufficiency is another problem area that need to be clearly understood. Many countries that used to be considered as self-sufficient in food were found to be food insecure due to the fact that they either lack an efficient food system or the capacity to raise the level of food entitlement. This indicates that attaining macro-level food self-sufficiency does not ensure the achievement of household food security.

Available information (UNDP, 1992), indicates that over the last two decades, there has been an increasing trend in per capita food output in the world. A significant proportion of the population in developing countries, however, have been **suffering from hunger and malnutrition**. For example, the **calorie supply** at the global level in 1990 was more than 110 percent compared to the total requirement. During the same period, however, over 100 million people were seriously affected by famine, and more than a quarter of the world's population were suffering from food shortages (Ibid). Such facts indicate that global level food availability does not guarantee food acquisition at national and household levels.

Since early 1980s, there have been two main shifts in the way the term "**food security**" is used: first to focus on "**access to food**", the ability to acquire food, as well as on "**supply**"; and secondly to focus or worry about the food security of households and individuals, as well as national food security.

The concept of food security gained wider attention since early 1980s as the result of **debates on the question of "access to food"**; and the central focus on the unit of analysis shifted from global and national levels to household and individual levels. Increasing attention has been paid to household and individual levels food security because of the growing understanding that, expanded food production, food supply and sufficiency at macro-level (although is

CCRDA

necessary) will not ensure that all families and individuals will be able to secure their food needs. Analysis of national food security should focus on how **domestic production, marketing and trade can achieve the goals of national food availability and household and individual access to food, including adequate nutrition**.

3.1.2 Definitions of Food Security

There is no single definition to micro-and/or macro-level food security. Food security is one of the **major components of food policy analysis (along with production policy, price policy, trade policy and food aid). Food security is related to technological changes in agriculture** and best addressed within the framework that takes account of the **linkages among the various sectors** of the economy. Maxwell and Frankenberger (1992) cited about 200 definitions and developments in the concept of household food security. However, some definitions are more cited than others. Many of the definitions are adjusted to suit the particular needs and priorities of individual users. The following are some of the many definitions of household food security that are widely cited by writers and researchers (as cited in Maxwell, 1992):

1. According to the United Nations (1990), household food security is defined as **"the ability of a household members to assure themselves sustained access to a sufficient quantity and quality of food to live active, healthy lives"**. This may happen as a result of adequate home production of food and/or adequate economic and physical access to food supply.

2. The UN Food and Agriculture Organization (FAO) defines food security as **"ensuring that all people at all times have both physical and economic access to the basic food they need"**; and

3. The World Bank (1986) defines the term `food security' as **"access by all people at all times to enough food for an active, healthy life"**.

3. 1.3 Essential Elements for Defining Food Security Concept

Availability of food in sufficient quantity and quality, **sustainable access to food, entitlements, and risks** related to any of these elements, are the **essential determinants** of household food security. Essential elements often used in defining (explaining) the food security concept include the following:

- **availability of food;**
- **access to food;**
- **sustainability;**
- **food entitlements;**
- **vulnerability; and**
- **livelihood security**

Availability of food in sufficient quantity and quality, and access to food (or the ability of people to acquire food in sustainable manner) are the two most determinants of food security at all levels. However, the first does not ensure the second. That is, Food may be available but

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households or household members may not have the ability to acquire it (mainly due to **lack of purchasing power**). In order to ensure household and individual food security, the available food should be **accessible or affordable**.

3.1.4 Food Security Sources and Possible Options

The concept of food security in general integrates a number of important issues the magnitude of which ranges from micro to macro economics. In order to attain the goals of food security, an overall consideration in terms of policy and programme development covering all aspects of the food system is required. In particular, success in production and distribution plays an important role in influencing the food security status of a household/individuals or a society at large. The **main determinants of agricultural production** include commodity (input) prices, quantity/quality of labour and other factors such as land, technology, and government agricultural policy and institutional services.

The chronic and recurrent acute food insecurity problems in Ethiopia have been experienced in the past three decades is mainly as a result of a combination of: **(a) widening gap between food production and population growth; (b) productive resource decline (including farmland scarcity and soil degradation); (c) natural disasters; and (d) lack of appropriate development policy environment.** The country's annual structural food deficit has been steadily growing. Currently, the national annual food production deficit amounts to about a million ton. Such trend is likely to continue for the foreseeable future unless concerted development policy efforts are made to accelerate domestic food production and supply. Some **possible policy options to attain these goals** include:

- **providing effective agricultural development extension support to producers to enhance food production and productivity;**
- **policy support to bring previously unused land under cultivation;**
- **improving the land tenure policy;**
- **improving/introducing effective production incentives to producers (such as: introducing effective input support,**
- **marketing, credit and other appropriate extension services;**
- **introducing income/employment generating schemes;**
- **providing asset building/protection support to producers;**
- **introducing conservation-based development schemes, etc.**

These and other development support options that need to be explored if the growing food insecurity (food gap) is to be reduced; and at least a substantial portion of the food demand is to be met from the domestic production. In its immediate sense, **food security policy deals only with production, marketing and consumption of food**.

Food security in general is a broad and integrated concept which requires improvement at both micro and macro economic situations. Its attainment requires an overall considerations in the **whole system of food chain (production, distribution, and consumption processes)**. The success in the **whole food system plays an important role in influencing not only the nutritional well-being of individual members** of a household or a society at large, but also the health condition.

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In the Ethiopian situation where over 85% of the total population are employed in agriculture (depending on farm production and income), the **link between food security, agricultural production, and nutrition and health is not questionable**. As regards the link between national food output and access to food by households, however, can be looked from two angles: (a) the link between national food availability and access by households, and (b) the link between food output and food availability at the national level.

At the micro level, agricultural income is the main indicator for determining the income position of rural households and level of poverty for countries whose economy/employment is dominated by agriculture like Ethiopia. **Rural poverty** could be determined by measuring the level of agricultural income and productivity in the absence of income from assets and transfers. **Chronic food insecurity is directly related to poverty** as such type of food insecurity (food shortage) is caused by the inability of the household to produce, purchase or to have access to food.**The problems of rural poverty and food insecurity can not, therefore, be overcome unless agricultural productivity improves through enabling economic policy environment**.

a) Sources (Possible Options) of Household Food in Ethiopia

In Ethiopia, the livelihood of rural people is dependent on t ıip of key productive factors including (in order of importance) draught animals, l ıttle, farmland, family labor, farm implements (e.g, sickles, digging hoes) and smal he level of ownership of particular productive assets such as draught oxen, breedir l farm land determines the seasonal or annual production and income (and thus food security) of rural households. This level also broadly determines the coping abilities of households in periods of food crises. Of all the productive assets indicated, the ownership or otherwise of draught oxen most markedly determines annual household income flow and economic differentiation among rural households.

Specific sources of household food security in Ethiopia (Dagnew, 1993 & 94) include:

a) **food production** (mainly based on crop and livestock
b) husbandry) **cash income** from different sources (mainly market-based);
   - domestic trade
   - sales of family labor (wage employment)
   - rental income
   - international trade

c) **reserves of food (stocks) or other assets**;
d) **Institutional assistance programmes** (including credit/financial support, food aid and related assistances by government and non-government agencies); and
e) **remittances.**

The **main sources of food security** (food economy) for rural people in Ethiopia by agro-ecologies and geographical locations are:

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a) **Crop production as primary and livestock production secondary** for settled farmers mainly in medium and highland parts of the country (including in associated lowlands within those agro-ecologies);
b) **Livestock production as primary and crop production secondary** in semi-nomadic or agro-pastoralist societies (eg., Borena and Ogaden); and
c) **Livestock production as the only source of food security** (eg. Ogaden and Afar). Some pastoralists in such geographical areas, however, supplement their incomes from some trading activities undertaken by selected adult family members. These are the **dominant sources of food economy** for the respective rural people
d) by agro-ecologies and geographical locations (Ibid).

3.1.5 Food Security Indicators

A number of indicators have been identified along with the development of the concept of food security to make monitoring of food situation possible. The utilization of the indicators varies between the **characteristics of the investigations, procedures and level of aggregation**. In most cases, the purpose and depth of investigations, however, greatly influence the use of indicators. Different types of household food security indicators are classified into three main categories, namely: a) **supply indicators**, b) **food access indicators**, and c) **outcome indicators** (Frankenberger, 1992).

The **major indicators** that reflect **food supply situation** include:

- **meteorological data**
- **information on access to resources**
- **agricultural production data**
- **market information**
- **information on food balance sheets**
- **information on pest damage**
- **institutional and market infrastructures**
- **regional conflict, etc.**

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Food access indicators are relatively more effective to monitor food situation at household levels. Their use as well varies between regions, seasons and social strata reflecting various strategies in the process of managing the diversified sources of food. Specific food access indicators include:

- **land use practices**
- **dietary change**
- **change of food source**
- **diversification of income sources**
- **diversification of livestock**
- **livestock sales**
- **sale of production assets**
- **access to loans/credit**
- **seasonal migration**
- **Distress migration**

Outcome indicators, such as the level and changes in food consumption and the amount of food in stores serve as proxy estimates for measuring household food situation. Specific outcome indicators include:

- **household budget and expenditure**
- **food consumption frequency**
- **subsistence potential**
- **nutritional status**
- **household perceptions of food insecurity**
- **storage estimates**

Outcome indicators can be disaggregated at lower level as opposed to food supply indicators. The problem with outcome indicators is that some of the **indicators like anthropometric results** may not exactly indicate the **level of food crisis** since nutritional intake is affected by a number of factors like health care.

The following are also important elements that generally affect (determine) rural household food security in all areas despite existing variations within and between societal locations, occupations and social groups:

a) **the average level of household income;**
b) **the magnitude and probability of seasonal and annual fluctuations of income around the average (variation in income position);**
c) **the value and form of stocks a household can maintain;**
d) **level of asset ownership;**
e) **sources of income and nature of employment;**
f) **availability of family labor;**
g) **market price and household purchasing power; and**
h) **terms of trade between livestock and crop products.**

Improving food security requires increasing the purchasing power of the poor, boosting the overall food production and supply, and establishing appropriate market stabilization schemes. Increased food supplies and purchasing power must be linked to elements of any long term food security efforts at appropriate levels. In the short-term, it would be appropriate to meet the more immediate food security needs of the poor by redistributing aid assistances through relief-oriented development programmes.

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Part IV

FOOD INSECURITY

By
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4. FOOD INSECURITY

This section will discuss on the meaning/definition of food insecurity, causes, and indicators of household food insecurity (food shortages) relating to the Ethiopian objective situation.

4.1 What is Food Insecurity?

In contrast to " **food security**", the term food insecurity, could be defined as the lack of access to enough food both in quantity and quality on a sustainable basis. According to FAO (1981 and 1991, in Maxwell, 1992), `**food insecurity**', is defined as "**a situation in which the individuals of a society have neither the physical nor the economic access to the nourishment they need**". In some cases, there may not be enough food at the time and location required to fulfil the needs of all members of the community, whether it be a nation, region, a village or a household. This dimension constitutes the problem of the physical availability of food supplies. This implies that **in order to provide physical access to food for consumers (households) at community-levels, it would be necessary to establish an efficient distribution system, including processing, storage, transportation and marketing to ensure the distribution of food products within a specific country, region or locality in the desired time**.

In the absence of the above mentioned basic services or facilities, food insecurity would lead to serious human suffering, and dislocations (including family break-down, distress migration and death). Variations in food availability or price instability can contribute to a growing food insecurity seriously affecting food consumption (including individuals dietary intake).

There are two types of food insecurity, namely: **Chronic and transitory food insecurity**. According to World Bank (1986), "**chronic food insecurity is a continuously inadequate diet caused by the inability to acquire food**"; while "**transitory food insecurity** is a temporary decline in household's access to enough food".

When we look into the distinction between these two states of food insecurity: **transitory (exceptional) food insecurity** is often triggered by seasonal instability in food supply or availability, fluctuations in food prices and/or incomes, which themselves may result in periodic variations in individual food consumption and nutritional status - and in its worst form, it produces famine. **Poverty** in general, on the other hand, is the major determinant of **chronic food insecurity**. Chronic food insecurity affects households that persistently lack the ability either to buy enough food or to produce their own. The poor in general do not have access to adequate means of production to gain access to sustainable food supply in quantities needed for a healthy life.

4.2 Causes and Types of Food Insecurity in Ethiopia

In examining the causes of food insecurity in Ethiopia and in African situation at large, it is useful to distinguish between **long-term trends, which affect the vulnerability of individuals, households and nations, and sudden shocks** which trigger food systems into crisis. Generally, all the causal factors for both chronic and transitory food insecurity (food

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shortage) discussed above apply to the Ethiopian situation as well. **Poor agricultural growth, unequal distribution of productive resources and income, rapid population growth and urbanization are important causes for the growing chronic food insecurity and poverty problems**. Drought, war and growing refugee problems are also the main causes of transitory food insecurity in Ethiopia like in many other African countries.

Inappropriate policies of governments and/or donor agencies have also been important contributory factors for both **chronic and transitory food insecurity** in most African countries including Ethiopia. Specific casual factors for chronic and transitory food insecurity in Ethiopia are briefly described in the following subsections (in their respective order).

4.2.1 Chronic (Seasonal) Food Insecurity

In many parts of Ethiopia, rural people often face seasonal food shortages, generally between June and September in most intermediate and highland areas; between January and July in some southern parts of the country (eg., Wolaita); and between November and March in some pastoral and semi-pastoral areas of the country (eg., Ogaden). Specific causes of seasonal cyclical food shortages in generally crop dependent areas include:

a) seasonal rainfall variation (irregular rainfall distribution);
b) lack of draught oxen;
c) inadequate farm size, and soil fertility decline; and
d) shortage of basic farm inputs and implements;

These are key factors responsible for the seasonal shortfall of rural food production and supply (in order of importance). Lack of productive assets particularly in **medium and highland agro-ecologies** are the most underlying causes of seasonal food shortages.

In the **pastoral and agro-pastoral areas**, seasonal rainfall variation, shortage of pasture and water for livestock, and food price increase are the primary causal factors for the seasonal food insecurity (often November-March).

A growing number of both rural and urban population in Ethiopia and in Sub-Sahara african countries are at risk of falling below the thresholds (below poverty line) than are actually counted as being food insecure at a given time. Available information (Debebe & Maxwell, 1992) indicates that, about 27 million people in Ethiopia are food insecure; and nearly 19 million (43%) of the rural people are under poverty line (IFAD, 1989). With very rare and expensive irrigation practices, Ethiopian agriculture is highly vulnerable to climatic variation. A decades experience shows that, a year of good harvests, with improved access to food for many poor households, has been followed by poor rains and a sharp deterioration in food supplies the following year.

4.2.2 Transitory (Acute) Food Insecurity

Transitory food insecurity refers to sudden or exceptional food shortages caused by certain or a combination of disasters often faced by the vulnerable social groups, the assetless poor in particular as the first victims.

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The specific causal factors of such serious food insecurity problems are:

a) **rain failure at critical times in the agricultural cycle (e.g, in crop planting and/or flowering stages);**
b) **human and animal disease outbreaks;**
c) **crop pest and disease outbreaks;**
d) **hailstorm, flood and related hazards leading to serious harvest failure and livestock loss;**
e) **sharp grain price increase coupled by sharp decrease in livestock prices (i.e,**
f) **unfavourable terms of trade);**
g) **declining/lack of purchasing power;**
h) **food availability decline in local markets, and**
i) **declining or lack of labor demand during crisis situations which further aggravates the magnitude of household food insecurity.**

Recent studies (Dagnew, 1993) indicate that the lowlanders (Kolla peasants and pastoralists) are particularly vulnerable to the recurring disaster-induced food shortages and famines (mainly due to drought, disease and pest outbreaks). In alleviating such problems and their socio-economic impact, a combination of disaster prevention, preparedness and management interventions (i.e, relief, rehabilitation and development-oriented intervention) by government and/or non-government agencies is required.

Drought has been the major immediate cause of the alarming level of food insecurity in many regions of Ethiopia. At the household level in particular, the resilience of food production and livelihood systems has been undermined in many cases, by years (recurrent) drought, leading to the depletion of family assets and the erosion of community social security structures.

4.3 Who are the Food Insecure Groups?

Maxwell (1992:2-4) notes that " many indicators are used to identify vulnerable groups at local level. **Early warning systems commonly assemble data on production, incomes, assets, coping strategies and community support mechanisms". Data on nutritional status of children** (eg., child growth and weight) is also one other indicator reflecting generally the **past undernutrition** that commonly prevails within the poverty groups.

In terms of determining the economic status of rural households, available information (Ibid) indicates that the level of asset ownership and annual incomes can be used as the two main indicators. However, in many cases, obtaining a near-correct annual income of peasant households may be a difficult task. The same information source indicates that the size and types of productive assets and sources of income earning activities (employment) could be considered as the main indicators of the total seasonal or annual household income. Others, like the availability of active family labor, buying or selling of labor, and changes in consumption patterns (eating habits) can also be used as subsidiary indicators of the income/economic status and the general food security situations of households.

The appropriate way of analyzing the problems of food insecurity is to start with people often vulnerable to a lack of food (at a household and individual levels), and then move

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to assessing the national food production and self-sufficiency situations. Generally, statistical sources are not that helpful for describing the socio-economic characteristics of the food insecure. However, household and local/community level studies, and **new methods of rapid and participatory rural appraisal** help for the proper identification of the food insecure social groups.

According to Maxwell (Ibid), the food insecure groups in the African situation (including Ethiopia) fall into the following five main categories:

a) **families that are poor in the ownership of productive and non-productive assets, but live in surplus agricultural areas;**
b) **the resource-poor living in disaster-prone and other marginal areas;**
c) **poor pastoralists mainly in lowland areas;**
d) **the urban poor; and**
e) **refugees, displaced persons and others affected by War/civil conflicts.**

In general, **the rural landless people, female-headed households, the urban poor and, in some areas the elderly and the handicapped feature with increasing prominence among the food insecure groups.** The majority of the food insecure groups in African situation are the rural poor and those often affected by war or civil conflicts.

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Part V

DISASTERS: CAUSES AND EFFECTS

By
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5. DISASTERS: CAUSES AND EFFECTS

5.1 Definition and Causes

The National Policy on Disaster Prevention and Management issued by the Government of Ethiopia in 1993, defines disaster as 'an event in which a society or community undergoes acute deprivation of food and other necessities due to natural and man-made calamities to such an extent that normal function of the society or the community is disrupted and that it cannot subsist without outside intervention.

Others define the term as the product of the interaction or interface of a hazard such as earthquakes or floods and a vulnerable system such a city, a community or a building. This definition indicates that a disaster occurs as a result of a failure in human interaction with the physical or social environment. According to this definition,

Disaster = Hazard + Vulnerability,

where **hazard** is a potentially dangerous or damaging event such as flood, earthquake, cyclones, chemical explosion, oil spill or nuclear leakage. **Vulnerability,** on the other hand, may be defined as conditions that make people suffer losses from the effects of hazard events.

In the absence of vulnerability conditions, one should not expect hazard events to trigger disasters. Thus the two components of a disaster must be present for a disaster to occur. Without a vulnerable system there cannot be a disaster. It is, therefore, the relationship of man and these natural forces that determine whether a disaster will occur, and if so the magnitude of the disaster. When people do not live in harmony with these natural forces by interfering with them, then they turn them into disasters.

Behind most disasters there are somewhat hidden causes which quite often assume chronic behavior. These causes are sometimes called underlying causes or vulnerability situations. They are nothing but the socio-economic and ecological conditions that make people prone to disasters.

If vulnerability is such an important component of a disaster, what then are the factors that influence vulnerability? Let us, for example, consider human vulnerability, letting aside other types of vulnerability such as vulnerabilities of physical infrastructures and economic assets. Some of the fundamental causes of human vulnerability include:

- Lack of access to resources (material or economic vulnerability)
- Disintegration of social patterns (social vulnerability)
- Degradation of the environment and inability to protect it (ecological vulnerability)
- Lack of strong national and local institutional structures (organizational vulnerability)

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- Lack of access to information and knowledge (educational vulnerability)
- Lack of public awareness (attitudinal and motivational vulnerability)
- Limited access to political power and representation (political vulnerability)
- Certain beliefs and customs (cultural vulnerability)
- Weak buildings or weak individuals (physical vulnerability)

Source: Megacities: Reducing Vulnerability to Natural Disasters (Quoted from Natural Disasters: Protecting Vulnerable Communities, by Y.F. Aysan).

Natural phenomena such as earthquakes, volcanoes, floods, and cyclones have been in existence in the past and will continue to exist in the future. It is not yet possible, and probably may not be so in the years ahead, to prevent the occurrence of natural hazards. The question is 'Are these natural hazards disasters? Do they necessarily trigger disasters?' The answer is 'It depends'. If any of these events occur in an area where there are people, physical structures or economic activities, then it has the possibility of spelling a disaster. For such an event to become a disaster it must affect people: kill, injure or dislocate them, and destroy their property. Thus the occurrence of a drought or flood on an inhabited island would not be a disaster.

5.2 Classification of Disasters

Disasters are commonly classified using two approaches. One of them is based on the speed of the impact of the disaster. Disasters like earthquakes, volcanoes, cyclones, chemical explosion, and other major accidents are sudden disasters that we do not know long in advance about their occurrence. They are known as fast-onset (quick-impact) disasters. The opposite is called slow-onset or creeping disaster. Such disasters can be detected several months before their impacts are felt, thus they provide adequate lead time for making preparedness measures in place so as to be able to act in a timely fashion before the situation develops into full-fledged disaster. Examples of such disasters are drought and drought-induced famine.

The second classification is based on the cause of the disaster: natural vs. man-made. Earthquakes and volcanoes, land slides, epidemics and pest infestations are examples of natural disasters while civil war, chemical explosion and pollution from nuclear leakage are man-made disasters. This classification, however, has a major limitation. It focuses on the event or factor that finally triggers the disaster and forces households or communities suffer the adverse consequences of the event.

Let us consider a drought-triggered famine, as has mostly been the case over the past few decades in Ethiopia. According to the second classification, it would be designated a natural disaster. But this is quite misleading and could have serious implications on the choice of appropriate interventions to deal with the root cause of the problem. Truly, drought can trigger famine, but only in poor countries. A similar or even much stronger drought in the affluent countries such as the United States or Australia may devastate crops and result in huge economic losses but would not at all spell famine. On the other hand, drought could easily

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precipitate famine in most Sub-Sahara African countries including Ethiopia. It is factors such as poverty, environmental degradation (ex. over-intensive farming and over-grazing) and rapid population growth that turn hazards such as drought, pestilence, floods, etc into major disasters in these low- income countries. These conditions are what make people too weak to cope with the adverse effects of the hazards. That is why the same hazard may have entirely different effects on different households, communities or countries.

Famine, which quite often threatens and at times afflicts much of the Third World countries, is largely a man-made problem. It is mainly caused by mistaken policies and inefficient management rather than by natural catastrophes. In Africa, for instance, well before a drought provokes famine, deep rooted conditions such as over-cultivation, over-grazing, over-population, and lack of know-how on proper irrigation techniques adequately contribute to famine situation.

In the case of flood and drought disasters, it is human action that largely causes and exacerbates their effects. People misuse land by clearing vegetation (deforestation and over-grazing) as well as over-cultivation. By so doing, they are undermining the land's ability to absorb large quantities of rainwater. This causes rainwater to ran quickly off in flashfloods, washing away both soil and crop.

The role of human action in exacerbating the vulnerability situation is also observed with regard to cyclones, earthquakes, volcanic eruptions and tsunamis (tidal waves). From time to time increasing numbers of people are living in areas prone to these hazards, thus increasing their exposure to these natural forces. If people tried to avoid such dangerous areas or stopped living in dangerous housing or dangerous grounds, they could significantly minimize their vulnerability to the ill effects of these events.

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5.3 Effects

The effect of a disaster largely depends, among other things, on the type of the disaster, the intensity of the disaster, the degree of vulnerability of the affected area and the effectiveness of the disaster preparedness and response arrangements in place. The consequences of a volcano or an earthquake in a densely populated urban area where economic and social infrastructures are heavily concentrated could be much more disastrous than it would be in a rural area. The time of the day when the disaster strikes is also critical for some types of disasters. A fast-impact disaster that strikes during the night, when people are asleep, has more deadly consequence than that which occurs during the day. The presence or absence of an adequate and efficient disaster preparedness system that would be fully operational in the event of a disaster would also make a big difference on the impact of a disaster.

Disasters have both immediate as well as long term effects. The extent and nature of the effects vary according to the particular hazard and the particular environment that is at risk. The tables below indicate some of the potential effects of natural disasters. Table 1 provides some examples of disasters with serious impacts on human lives while Table 2 gives a list of

some of the potential primary and secondary effects of natural disasters. This, of course, should not be taken as an exhaustive listing.

Table 1: Examples of disasters with serious consequences on human lives.

No.	Hazard	Year of Occurrence	Place or Country	Associated Death Toll	Note
1	Volcanic eruption	1815	Tembero, Indonesia	56,000	The total death was caused by both the eruption and the subsequent tidal waves
2	Earth quack	1976	Tangshan, China	242,00*	The toll is even much higher by estimates outside China,
3	Cyclones (wind storms)	1983	French Polynesia	17	25,000 people were homeless and 10,000 houses were displaced
4	Storm surges	1970	Bangladesh	15,000-300,000	The deaths occurred due to drowning from floods from rivers, heavy rains and storm surges
5	Floods	1931	China	1-3.7 million	Caused by the flooding of the Yellow River
6	Famine	1984	Ethiopia	Close to one million	
7	Civil strife	1994	Rwanda	Over 800,000	The ethnic based genocide was also cause for displacement of well over a million people

Source: Form Items 1-5, the Source is 'Natural Disasters: Acts of God or Acts of Man?

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Table 2: Potential Effects of Natural Disasters

Effects	Social or Human Effects	Physical Effects	Economic Effects
• Primary effects	• Fatalities • Injuries • Loss of income or employment opportunities • Homelessness	• Ground deformation or loss of ground quality • Collapse of and structural damage to buildings and infrastructure • Non-structural dame to buildings and infrastructure (e.g. component damage)	• Disruption of businesses due to damage to buildings • Damage to industrial plants and equipment • Loss of productive work force, through fatalities, injuries, and relief efforts • Disruption of communication networks • Costs of response and relief
• Secondary effects	• Disease or permanent disability • Psychological impact of injury, bereavement, shock • Loss of social cohesion due to disruption of community • Political unrest where government response is perceived as inadequate	• Progressive deterioration of damaged buildings and infrastructure which are not repaired	• Losses borne by the insurance industry, weakening the insurance market and increasing premiums • Loss of markets and trade opportunities, through short-term business interruption • Loss of confidence by investors, withdrawal of investment • Costs of repair, rehabilitation, medical and welfare assistance

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Source: Megacities: Reducing Vulnerability to Natural Disasters, p. 15

5.4 Who Are the Most Affected?

Although a disaster may strike all on its way, it is almost always the poor that are pounded the heaviest. Their vulnerability exposes them to the full force of the hazard. They are the worst affected because they have little or no option to be in some other place where it is relatively safer. The well-off families, on the other hand, live in well-built and well-located houses and can afford to buy grain even if crops completely fail. The poor do not have the luxury and the means to do so. So, whatever disaster we think of, be it flood, drought, earthquake, volcano, cyclone, gas leak or famine, it is always the poor who are the hardest hit.

REFERENCE

Hareide, D. (1991). **Vulnerability to Famine.**

Independent Commission on International Humanitarian Issues (1985). **Famine: A Man-made Disaster?**

Institution of Civil Engineers (1995). **Megacities: Reducing Vulnerability to Natural Disasters.**

Institution of Civil Engineers (1995). **Structures to Withstand Disasters.**

TGE (1993). **National Policy on Disaster Prevention and Management.**

Timberlake, L. (1985). **Africa in Crisis - the Causes, the Cures of Environmental Bankruptcy.**

Wijkman, A. and Timberlake, L. (1984). **Natural Disasters: Acts of God or Acts of Man?**

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Part VI

EARLY WARNING SYSTEM AND FOOD INSECURITY (VULNERABILITY) ASSESSMENT IN ETHIOPIA

By
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6.1 Introduction

In a country like Ethiopia where quite a significant portion of the population is chronically food insecure and suffers from a high risk of acute food insecurity, the presence of a system that forewarns of impending food shortages or famine is crucial for implementing preparedness measures that mitigate the effects of the crisis. This paper is intended to introduce the concept of early warning system in general, the relationship that ought to exist between warning and response, and the operations and uses of the system that is in place in Ethiopia. Attempts are also made to discuss the various indicators, data collection processes and techniques employed for food insecurity or vulnerability monitoring. The last part of the paper provides an impression of the magnitude of food insecurity in the country and identifies the socio-economic groups that experience food insecurity on a permanent or temporary basis.

6.2 Definition of Key Terminologies and Important Considerations in Vulnerability Assessment

This section attempts to introduce briefly the main concepts and definitions of key terminologies used in the paper.

6.2.1 Definition of Terminologies

Early Warning System: is a system of data collection established to monitor people's access to food, inorder to provide timely notice when a food crises threatens and thus to elicit appropriate response (Davis, 1991).

Livelihood Protection: Means ensuring that people do not take drastic measures to avoid famine which will threaten their ability to be self-supporting in the future.

Famine: There are wide differences in the definition of the term. But most definitions seem to agree on the key elements that characterize it. Famine is characterized (Riely, 1995) by:

a) sharp deterioration in economic conditions, which lead to reductions in consumption;
b) extreme social disruptions; and
c) some degree of excess mortality

Vulnerability: This is a term used to represent "... defenselessness, insecurity and exposure to risks, shocks and stress ... and difficulty in coping with them". (Ibid.)

Famine Vulnerability: It can not be equated to poverty. The key elements in the concept include risk and variability in household income which could lead to variability in consumption (Ibid.)..

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Vulnerability Assessment: Refers to the assessment of the root causes of famine among communities or among specific groups of households.

Famine Early Warning Analysis: is the assessment over time of the changes in the factors or variables that lead to famine.

6.2.2 Important Factors and Key Consideration in Vulnerability Assessment

A combination of both long-term and short-term factors determine the level of famine vulnerability. The main long-term factors (Ibid.) include:

a) increases in population pressure and the resulting deterioration in the natural resource base which limits productivity in the crop and livestock sectors in particular,
b) adverse policies which distort the functioning of the economy in general, with particular bias against the rural poor in many cases; and
c) repeated crisis situations which lead to the erosion of household assets and a deterioration in the long-term productive capacity of affected populations.

The short-term factors that affect the level of famine vulnerability include:

a) adverse changes in the pattern of rainfall, which threaten crop and livestock production, agricultural employment and other productive activities;
b) market failure which leads to sharp rises in food prices or the collapse of prices for livestock and other goods and services households produce for sale; and
c) conflict and civil war which disrupts household productive activities as well as their access to assets and market for food and employment.

Household food consumption is usually difficult to directly assess. However, because of the strong relationship observed in developing countries between household incomes and consumption, an indirect way of assessing food consumption is used through the assessment of incomes. This means that any fluctuations in household incomes have a direct impact on the household's food consumption. thus an understanding of the factors that influence incomes and food access for a specific group of households is central for both early warning and vulnerability analysis.

Crop and livestock productions are quite often the main engagements and sources of income for rural households. But many are not limited to these undertakings. To minimize risks associated with these activities, households attempt to diversify their income sources. This is their most important strategy to help them cope with changes in their incomes and consumption. They may resort to wage employment, petty trading, handicraft activities, receiving remittances etc., in addition to the usual productive activities. Hence,

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- identification of the important income sources (components) for various communities or household groups;
- estimation of the relative importance of each income source;
- identification of the most important variables or determinants that influence each individual source of income; and
- identification and monitoring of the relevant indicators that measure the changes in each of the income components.

constitute some of the key elements in vulnerability assessments and early warning activities. Detailed discussions on the choice and analysis of appropriate indicators for monitoring and assessment of vulnerability is presented in section 8.4.4.

6.3 Famine Early Warning and Response: a Brief Review from the International Perspective

The objective of any famine early warning system is to provide information that triggers adequate and timely response to prevent acute food insecurity and/or famine. If that is the case, what do EW Systems do to meet their objective of predicting severe food shortages or famines? In other words, what should they monitor to be able to give advance warning on where and when an impending food crisis will occur?

The choice of the indicators to be monitored is usually determined by what people in the early warning business perceive as the conditions, events or processes that precede famine. The selection of indicators has shown considerable improvements with the evolution of the theory of famine. In the earlier years, when famine was conceived as purely a result of a decline in food availability, Early Warning Systems focused on monitoring the performance of indicators such as food production and stock levels. There are quite a number of systems that are still heavily inclined towards monitoring the determinants of food supply.

The coming of the theory of entitlement in the 1980's had a noticeable influence on the choice EW indicators. Indicators of effective demand for food such as prices and terms of trade got incorporated in several EWS. Lately, the importance of the behaviors or actions of households or communities threatened by food shortages as useful early warning tools is gaining more and more appreciation although monitoring them proves to be rather difficult but not impossible. Since one can not rely on a single indicator to provide consistent early warning, many early warning systems are now evolving into multi-indicator systems including the use of coping strategies of vulnerable households for early prediction of famine. Ethiopia's EWS is one such system.

Should each and every pre-famine condition and event be monitored? Would it be practical to consider all the determinants of household food security as monitoring tools? Are all indicators sensitive enough to detect slight changes in food availability or access to food? Can they all be measured early enough to enable decision makers make appropriate and timely interventions?

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The answer to all the above questions is "No". A number of considerations should be made in the selection of indicators. Among them are:

- Resource limitations
- Appropriateness of the indicators
- Level of accuracy required, and
- Timeliness

Availability of resources including capacity not only to collect but also to process and analyze the data has to be assessed. Similarly, whenever there are changes in the food security situation, the indicator should be able to pick up some aspect of these changes. Otherwise, it is worthless collecting data on an indicators if it does not provide relevant information. The other two criteria, accuracy and timelines, are in most cases incompatible. A high level of accuracy usually does not allow for a timely generation of the required information. One has to make a kind of balance between the two.

Next, let us briefly review the situation of EWS in the Sahel and the Horn of Africa where famine is increasingly becoming a regular threat. With the exception of the Ethiopian EWS, which came into existence following the drought-induced famine of the early 70's, nearly all of them were set up during the five years that accompanied the major famine of 1984/85. Both national governments and donors were awfully embarrassed by the consequences of the famine and they were, therefore, concerned with the establishment of information systems that predict or forewarn the likelihood of famine. Ample attention was given to improving data collection methods, developing of indicators, and utilization of advanced information technology such as use of remotely sensed satellite imageries.

This being the case, have all EWS been successful in fulfilling their objective? Some were successful while some others were ineffective in achieving their goals. Where they failed, has the failure to do with the internal workings of the systems or are there other crucial factors that inhibit their success?

Despite the considerable attention given to improving the capacity for prediction, as mentioned above, it appears that not so much concern has been bestowed to enhancing the response side. Because of severe resource limitations, nearly all national governments in Africa rely on the international relief system (Donors, NGO's, etc.) for responding to famine threats. Thus, whether or not a timely prediction of a possible crisis enjoys a timely and adequate intervention to avert the crisis depends on the rules of the game of the international relief system.

Recent works have identified two main reasons why the EW information has not always triggered timely response. The first one is that the international relief system tends to respond when it knows with certainty that famine is in hold. It is less prepared to act early enough to prevent it. The second and most important reason that tends to determine both the timing and the magnitude of the international response is not the severity of the crisis, but rather the relations between the national governments and the international donors. The reactions of

CCRDA

donors to the 1984/85 and the 1994 Ethiopian famine would better illustrate this point. Donors' severed relations with and their lack of confidence in the then Marxist military regime discouraged donors from acting so quickly to avert the unprecedented crisis of 1984/85. On the other hand, because a favored government was in power, donors responded in a remarkably timely fashion in turning away the 1994 food crisis.

This is not meant to say that there are no other reasons that constrain the timely response from the donors side. In fact factors such as competition for relief resources; inappropriateness, lateness or unreliability of information; little or no commitment or political will by own government because of other priorities, logistical and other bottlenecks can not be dismissed as totally irrelevant. But it should be noted that the two factors mentioned earlier are the ones that heavily influence decisions on interventions. As long as this policy or predisposition of donors is not reversed the goal of preventing famines using EWS as useful tools would not be realized, at least in the context of most African countries. There should be genuine commitment by the relevant actors, in particular the donors, for forging a strong link between prediction and response (i.e., between warning and the appropriate intervention).

6.4 Early Warning System (EWS)

6.4.1 Objective of the EWS

The main objective of the EWS is famine prevention and livelihood protection through the provision of timely and accurate warning information to relevant decision makers. EWS also has the potential to provide useful data for development and food security planners.

6.4.2 Levels of Operation

EWS can be set up at different levels: global, regional, national, sub-national, zonal, and woreda levels. Examples of the first two are FAO's Global informations and Early Warning System on Food and Agriculture, and IGADD's Early Warning System covering the Horn of Africa, respectively.

6.4.3 An Overview of the Ethiopian Early Warning System: Background, Functions, and Institutional Structure

The Ethiopian Early Warning System emerged in the aftermath of the early 1970's drought-induced famine which claimed the lives of well over a hundred thousand people in the northern part of the country. Awareness of the need for a system that continuously monitors and provides information on the food supply situation of the country led to the establishment of the EWS in 1977 within the former RRC (the present DPPC). Though it has had a number of technical, conceptual and institutional limitations it has played crucial roles in the DPPC's preparedness and planning efforts in containing food emergencies. It has been successful in predicting large scale famines. It is the oldest and the largest such system in Africa. Some of its important functions include:

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- Assessment of food security situation of the rural areas of the country through the regular monitoring of most of the conventional early warning indicators.
- Undertaking of seasonal or ad-hoc food situation assessments.
- Alerting the government, donors and NGO's on current food situations as well as prospects.
- Determining areas and estimating numbers of people in need of emergency assistance.
- Estimating the duration and amount of relief assistance required to address actual or threatened food emergencies.
- Monitoring emergency response.

Until recently, the system had been highly centralized. Now, in line with the government's decentralized administrative arrangement, the EWS is decentralized and its structures has been expanded to cover all administrative levels. Cognizant of the multi-sectoral nature of EWS's activities, relevant line departments are represented on the Early Warning Committees formed at al levels. At the central level, the members of the committee are the DPPC, MoA, CSA, NMSA, MoH, and the Ethiopian Mapping Authority. The DPPC is the secretariat of the National Early Warning Committee and is the lead agency in coordinating the other member agencies as it relates to the activities of the committee.

The EWS enjoys the support and collaboration of some NGO's, UN and bilateral agencies in the area of early warning data collection, provision of secondary data useful for early warning data analysis, and participation in food security assessments. These agencies are partly involved in the collection of early warning and food security-related information mainly to support their own operations in the country. SCF-UK, through its Nutrition Surveillance Programme, monitors the food security situation in selected zones of Tigrai, Amhara, Oromiya and SNNPR. Food Security Monitoring is also undertaken by CARE-Ethiopia, CRS, SCF-USA, UNEUE, FEWS/EU and WFP. The information so generated by these agencies is then fed into the EWS. Recently, some NGO's and aid agencies have started to participate in seasonal and disaster area assessments organized by Early Warning Committees. Such joint efforts not only enhance the food security assessment capacity but also contribute to the credibility of the information generated by the system.

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Despite the system's successes in providing advance warnings on all the big famines (those that threatened large areas of the country) since 1984, it has continued to suffer from credibility crisis in the eyes of a number of donors on the grounds that it tends to exaggerate beneficiary numbers and that the methodology it employs in arriving at the numbers in need of relief assistance is not transparent. Estimates of relief food needs have also raised strong criticisms on the EWS. It is often argued that what is normally distributed to relief beneficiaries is far less than what is required as estimated by the system (amount distributed is significantly less than amount pledged by donors, and the amount pledged by donors is almost always short of estimated requirement). The fact that famine situations have been contained using relief food resources which were well below the estimated requirement has posed major challenges on the reliability of EWS's needs estimates. If households in the affected communities could get through the hard times with the irregular and inadequate relief rations

without disrupting their lives and livelihoods then the case against EWS's inflated needs estimates would be very strong.

There could, however, be another possible dimension to the scenario. In the face of an inadequate or absence of relief supplies, affected households may choose to ensure the survival of their family members at the expense of their long term productivity. They may, for instance, be forced to take drastic measures such as the sale of productive assets (e.g. draft oxen, and other productive animals) and other valuable household items to be able to raise some cash for purchasing food. Such measures, especially if repeated, could erode the asset or productive base of the households and make them much more impoverished and vulnerable to minor shocks in the future.

As regards the methodology for estimating the size of beneficiaries, it would be admitted that the current Early Warning System lacks a clear and transparent methodology. The practice has been that the initial estimates originates from the grass root level: the peasant associations and the woredas. These estimates are adjusted, as necessary, at each of the higher administrative level. When the regional estimates reach the early Warning Department of the federal government, a further adjustment, quite often a reduction, is made. The EWD adjusts the figures based on a number of considerations, such as relief history or degree of vulnerability, population size, and the intensity and magnitude of the prevailing problem of the affected areas.

To address many of the technical, conceptual and methodological weaknesses of the system an enhanced system development work is now underway with the financial support of UNDP. It is hoped that this effort will help the system to work towards strengthening its workings by introducing new tools of data analysis and fine-tuning its needs assessment methodology, and ultimately improving its image among its users, particularly donors.

6.4.4 Early Warning Indicators, Food Security Indicators, and Use of Baseline Information for Interpreting Data

As the name indicates, rapid onset disasters do not give adequate lead time to enable advance warning on their occurrence. Thus our warning system is mainly involved in the prediction of slow onset disasters such as drought related famine. When a quick onset disaster strikes, the system has an additional responsibility of undertaking an impact assessment and suggest to decision makers on appropriate interventions that help minimize the impact of the disaster on the lives and livelihoods of the affected communities.

How do we make advance warnings on a possible threat of acute food insecurity triggered by a slow onset disaster? This is done by monitoring the performance of variables known as warning indicators. These are processes or events that influence the main determinants of food security. Let us take crop production, one of the determinants of food security. Factors that have a bearing on crop production include: amount and distribution of rainfall, quality of land preparation, availability of inputs, area planted, crop damages, etc. These are not the only variables that influence crop production. All these form a set known as crop production

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indicators. To the extent possible, the performance of each of these indicators is closely monitored throughout the cropping season to assess whether they have been positively or adversely affecting crop production in different areas. Likewise, other indicators have similarly been defined on the basis of food security determinants.

The patterns or sequences of the coping strategies employed by households in response to actual or potential food shortages help to define many of the indicators useful for food security monitoring. All the coping mechanisms of households could be categorized into three sets depending on what stage they occur on the food shortage-famine continuum. The first one refers to those responses and conditions that occur before food consumption starts to decline. The second group of responses occur simultaneously with the decline in food consumption or access to food. The third and last set of responses are made when households have failed to cope with the food crisis. These three sets of coping mechanisms form the basis for defining three types of indicators that can be used to monitor the food insecurity situation of households. These are:

a) **Leading or Early Indicators:**

- Crop failure\unusual deterioration in conditions of rangelands or livestock
- Significant deterioration in local economic conditions (increases in food prices, increases in unemployment, unusual disappearance of primary food stuff from the market), etc.

b) **Concurrent or Stress Indicators:**

- Unusual out migration of able-bodied household members in search of food or work,
- Appearance in the market of unusual amounts of personal and capital goods (e.g., jewelry, farm implements, draft animal),
- Unusual increases in land sales or mortgages,
- Increases in the number of people seeking loans,
- Increased use of wild foods,
- Reduction in the number or size of meals, etc.

c) **Trailing or outcome Indicators:**

- Signs of acute malnutrition
- High rates of morbidity or morality
- Increased land sales
- Consumption of seed
- Family disintegration
- Permanent out migration of entire household, etc.
- (**Source**: Maxwell & Frankenberger, 1992)

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At present, the Ethiopian Early Warning System uses quite a number of indicators which may be classified as follows:

- Climatic indicators
- Crop production indicators
- Livestock performance indicators
- Market indicators
- Indicators of other income generating activities
- Indicators of other sources of food, health, nutrition, and education indicators

(For a comprehensive listing of indicators under each category, please refer to Column 1 of Annex 1. The list is by no means exhaustive).

Since it is very difficult to obtain quantitative information on most of the indicators, qualitative information, usually comparing current situation with what "normally" happens, is collected on a regular basis. This raises an important issue regarding the availability of a comprehensive information known as **base line data**. To enhance early warning data analysis and to have good knowledge of the local food economy relevant basic information should be collected, preferably by agro-econological zone, and be available for easy reference. The baseline information should take normal seasonal patterns into account. Such a data would serve as a bench mark against which current situations would be compared.

Let us illustrate the use of base line information for early warning/food security data interpretation and analysis with examples. If a report indicates cases of migration from an area, this may not be a cause for concern if the base line information on that area reveals that some household members normally move out of their area in search of temporary employment during a certain part of the year. If, on the other hand, the observed migration has abnormalities in terms of magnitude, seasonality, direction of movement or type of people migrating then it could be a signal of distress. When such unusual events occur, where they have occurred and why they have occurred should be identified. Similarly, if an indicator shows of a poor condition of livestock in an area, it may deserve little or no attention provided that the base line data indicates that livestock "normally" lose weight and their conditions decline at this time of the year. When making the analysis, if an indicator shows deterioration it is always useful to cross-check the information against other indicators to verify the reason for the deterioration and to assess the significance and likely impact of the deterioration. Indicators should also be compared with their seasonal "normas" or patterns to pick up any abnormal seasonal trends. (Some of the types of information that need to be collected and organized for a woreda base line data is shown in column II of Appendix 1).

If there is a deterioration in an indicator, does that provide sufficient proof for a worsening food insecurity situation in the area? Of course not! No single indicator should be interpreted in isolation. If viewed separately, an indicator could give a totally erroneous picture of the situation. If, for example, an indicator shows of a crop failure in an area this should not be sufficient to conclude that that community would face a major food crisis in the months

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ahead. A number of questions have to be asked to get a comprehensive view of the likely food situation in the area. How important is that crop in the community? what is the share of crop production to overall income in the area? What is the rating of the other sources of income? Are their other sources of food like grain reserves from the previous year(s)? These and other considerations could reveal that the community has other means to cope with the crop production shortfall, and that external support requirements could be minimal. It should be well known that most communities do not depend entirely on one source of income. Years of experience have taught households that income diversification provides a considerable degree of protection against an unstable food access. The figures below throw some light on the importance of different income sources in the rural areas of Ethiopia.

Table 1: Source of Income (Percentage of Total Net Income Per Capita) for Sample households by Agro-Econological Zone

Income Source	Agro-Ecological Zone*		
	Highland	Lowland	Pastoral
Cropping	54	47	20
Livestock	18	9	52
Wages	11	1	13
Fuel Products	5	35	0
Handicrafts	3	1	12
Transfers	6	4	2
Commerce	2	1	0
Rental Income	1	2	1
Total	**100**	**100**	**100**

* The highland zone includes Adele Keke, Debre Birhan, and Gara Godo. the lowland zone comprises Dinki, Doma, and Korodegaga. The pastoral zone is represented by Beke Pond.

(Source: **Famine and Food Security in Ethiopia** Lessons for Africa, 1994)

Of course, the importance of each income source varies from area to area or from one household to the other. Those sources of income, that individually appear far less important, constitute quite a significant share of the total annual income when considered as a whole.

6.5 Data Collection Methods and Procedures

6.5.1 Data Collection Methods, Their Comparative Advantages and Disadvantages

There are several types or conventional as well as non-conventional data collection methods in use depending on the needs of the user of the data. A brief description of each, comparative advantages and disadvantages are given below.

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a) **Census**

- provide a kind of picture of profile of the situation of a country at the time of the census and serve as a basic national inventory.
- require the mobilization of huge resources (human, material and financial) to conduct the operation.
- pre and post census activities take quite a long time, in some cases upto 3-4 years to obtain results.
- use structured questionnaires.
- go for a 100 per cent count or enumeration and therefore produce a reliable data.
- are not free from errors, especially errors of enumeration and processing.
- are usually repeated every ten years.
- will continue to be useful for any national statistical programme

b) **Sample Surveys**

- are reliable and scientific data collection methods.
- allow inferences or conclusion to be drawn about the entire population based on investigations on a sample of the population.
- Use structured questionnaires for data collection
- Planning the survey, processing and analysis of the data require high level of statistical skill and processing facilities.
- require quite a considerable amount of resources, but much less than that of a census. They take a relatively longer time and can not be used for rapid data collection purposes.

c) **Case Studies**

- The target groups or the focus of the studies are a small number of individuals or groups. These individuals or groups are not randomly selected. The selection is purposive, and only those that meet certain characteristics of interest are considered.
- The investigations are quite demanding, i.e. they require professional skills and considerable time.
- They usually employ open-ended questions.
- The results of the studies can not be generalized to the population the cases are drawn from.

d) **Rapid Rural Appraisals (RRA)**

- do not use formal survey techniques with structured questionnaires.
- use check list to collect qualitative data on impressions, opinions, values as well as factors influencing specific events.
- do not produce statistically sound results.

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- have been used to obtain a fairly good knowledge (insight) of some aspects of the target area or population with a minimum amount of time and resources.
- almost always use purposive or deliberate choice of the target group.
- have proved to be rapid and cheap methods of collecting data, providing quick results to policy or decision makers.
- have been useful in food security monitoring by providing quick results using informal methods (they have been most useful in crisis situations which demand meeting of short deadlines) (Ibid., 1992)

e) **Participatory Rural Appraisals (PRA)**

- use semi-structured questionnaires (i.e., some closed and some open ended questions).
- follow the principle that the grass-root or the community is not only part of the problem but also part of the solution, and that their active involvement produces better results. They consider target groups not as passive on lockers that simply take in solutions that come from above, but as active stake holders with considerable potential for high participation, among other things, in the collection and provision of reliable data provided that they have the right motivation.
- are gaining more and more popularity in recent years, and agencies, especially NGO's working at grass-root levels, use them in the design, planning and implementation of projects.
- are not as quick and cheap as the RRA's, but are useful tools for obtaining reliable and sustainable results.

6.5.2 The Practice in Ethiopia in the Context of Food Insecurity/ Vulnerability/Monitoring

Two levels of food security monitoring exist in the country. They are the national and sub-national food security monitoring.

a) **National Food Security Monitoring**

The purpose of the national food security monitoring is to determine whether the country is in deficit of food or not and to provide information on the magnitude of deficits or surpluses. Such information is used for assessing food import requirements or assessing the potential for exportable volumes of food. The main monitoring tools is what is known as "food balance sheet" which basically uses six types of data:

i) **Supply side data**

- Beginning in-country stocks (mainly stocks of EGTE and EFSRA)
- Total domestic food production (both Meher and Belg, includes estimates of all food crops including root crops)
- Total food imports

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ii) Demand/Utilization

- Domestic utilization (food use, feed use, seed use and other uses)
- Total Exports
- Closing Stock

The amount on the supply side always balances with the amount on the demand/utilization side. When total domestic requirements exceed total national supplies then the country would be in deficit, and therefore there would be a need to fill the gap through commercial imports or food aid or both. This type of monitoring cannot provide information regarding deficits or surpluses at regional, zonal or woreda levels.

For several years now this assessment has been done entirely by the FOA/WFP. The EWS is now planning to incorporate this type of assessment in its regular food security assessment system. To this end a model for bringing together the required data and analyzing such data has already been designed under the on-going system development programme.

b) Sub-National Food Security Monitoring

The central task of the EWS is the monitoring of the sub-national food security situation in the country. The monitoring system, provides, among other things, information on areas and size of populations at risk or likely to be at risk of food shortages, the type, amount and duration of assistance required to mitigate the situation.

Data for sub-national food security monitoring purposes are collected using three different but complementary methodologies. They are regular surveillance, one-off seasonal rapid assessments, and baseline data collection. Each will be briefly treated below.

i) Regular Surveillance

The main objectives of regular surveillance are to regularly monitor the major indicators of food security and to be informed of a rapid onset disaster at the earliest possible opportunity following the event.

Information on the performance of a set of early warning indicators (see Annex 1 for this set of indicators) in most of the crop-dependent areas is collected on a monthly basis at the woreda level using two standard questionnaires (formats). One of them, the crop questionnaire, is used to collect data not only on crops but also on other food security related variables such as conditions of livestock and rangelands, health situation, prices of fire wood and labour, school attendance, availability of drinking water for both human and livestock consumption, and current and future food situations. The woreda MoA, in collaboration with member agencies of the Woreda Early Warning Committee, is responsible for completing the assessment forms on a regular basis. The main sources of information are the woreda development agents, peasant association chair persons or community leaders, and the relevant

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line departments at the woreda level, chiefly the administration, health and educational offices.

The second tool is a standard market questionnaire. Information on prices and supplies of food grains, livestock and important livestock products, and reasons for abnormal market behaviors are collected monthly at the woreda capitals of most cropping areas. This is again done by the woreda MoA.

Completed forms are transmitted to the zonal Disaster Prevention and Preparedness Department which shoulders the responsibility of collecting all the completed forms from the different woredas and passing them over to both the Regional DPPB and the Early Warning Department of the DPPC with the minimum of delays.

The data is then processed and analyzed to generate information which is used to prepare monthly early warning reports. It is also used to provide additional background information for one-off assessment missions.

Although the woreda level information is the backbone for the regular monitoring system, there are other types of national level secondary data which are fed into the monthly monitoring system. They are satellite and rain gauge data. Daily, dekadal and monthly NDVI, CCD and REF images are used by the EWS. Dekadal and monthly rain fall data is obtained from NMSA.

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ii) One-Off (Seasonal) Rapid Food Security Assessments

These are rapid appraisals mounted to collect quite a considerable amount of information on food security indicators over a large area. The data are sometimes collected through inter-agency assessment missions with DPPC as the lead agency. Rapid assessment methods such as "key informant" interviews and field observations are employed to collect needed information on a regular basis. Their benefits lies in that they are undertaken within a short period of time at a relatively low cost. They often take only one to two weeks. In some cases, it may even go up to a month. One of their common characteristics is that they do not employ scientific and statistically sound methods of data collection like sample surveys.

Rapid rural food insecurity assessments serve a number of purposes. They can be used to:

- verify conflicting information that have been received through the regular monitoring network.
- confirm or reject claims by local officials of a worsening food insecurity situation which have not been detected by the regular monitoring mechanism.
- assess the impact of quick on-set disasters which by their very nature could not be detected early enough before their occurrence.

assess overall prospects for food security until the next harvest (in the case of crop-dependent woredas or until the next rains (in the case of livestock-dependent woredas)

The major food security assessments undertaken by the EWS are:

- Pre-harvest crop assessments
- Pastoral area assessments
- Disaster area assessments

iii) Pre-Harvest Crop Assessment

These assessments for the Meher and Belg seasons are conducted in October and June, respectively, usually as a joint exercise between the federal government, the regional governments, interested donors and NGO's. The Meher pre-harvest crop assessment deserves special importance in that it is the basis for launching emergency appeals to donors in December every year. It provides initial estimates on beneficiary numbers, areas affected and relief requirements during the following year.

The Belg pre-harvest assessment, though not as important as the Meher one, is similarly carried out with the involvement of relevant agencies, donors and NGO's. Unless there has been a major fall in Belg Crop production the findings of the assessment are not used for requesting donor pledges for emergency food aid. It is rather used to evaluate whether the food situation will improve or deteriorate in the Belg growing areas following the harvest.

iv) Pastoral Area Assessments (PAA)

These are done twice a year, right after the main and small rainy season of the pastoral communities with the intention of assessing the impact of the rains on the pastoral and livestock conditions. These assessments look into the main variables that influence the food economy of the livestock-dependent populations to find out if there are significant changes that adversely affect availability of or access to food. When there is a general convergence of information confirming of an impending food problem the number of people likely to encounter major reduction in consumption is estimated together with the duration the assistance that would be required.

v) Disaster Area Assessments (DAA)

Unlike the others, disaster area assessments are conducted on an ad-hoc basis, i.e. when situations call for them. The field staff of the Early Warning Department of DPPC are usually deployed for the purpose. Depending on the magnitude of the problem and the interest shown some UN agencies, donors, NGO's, regions and zones participate in such missions. DAA's are mounted when:

- an unpredicted disaster hits an area

or

- an earlier predicted food crisis is reported to have considerably worsened affecting much more people than anticipated

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The assessment usually looks for signs of food distress by observing the behavior of stress indicators or late outcome indicators. Nutritional assessment in the form of anthropometirc measurements on children under five is a common component of the DAA. The main purpose of the DAA is to measure the impact of the disaster and recommend appropriate mitigative or even rehabilitative interventions. Disaster assessment data is collected using rapid assessment methods such as "key informant" interviews and field observations on an irregular basis.

The EWS also collects seasonal quantitative data on crop production through agricultural sample surveys by the CSA and informal data collection methods by the MoA. Sample survey on nutritional status and food security situations is available from SCF (UK) through its nutrition surveillance programme which is being implemented in selected zones of the country.

vi) Baseline Data Collection

Baseline agricultural and socio-economic data are very useful for EWS activities. Thus EWS is one of the large users of such data. Most of the baseline data is collected by other agencies using different data collection methods including: censuses, sample surveys, remote sensing techniques, and "key informant" methods.

vii) Procedures and Techniques of Rapid Food Security Assessments in Ethiopia

Assessment Planning

- For key assessments like the pre-harvest assessments the National Early Warning Committee convenes to decide on the timing of the assessment, number of assessment teams to be deployed, coverage of areas, and the contribution (man power and field vehicles) of each relevant line ministry toward the assessment.

- The timing and purpose of the assessment is communicated to the regions so that they get prepared to join the assessment missions from the center. The regions then alert the lower level governments to complete their own assessments at woreda level and expect the national/regional teams.

- The DPPC makes an official request to the relevant donors, UN agencies and NGO's asking them to participate in the assessment. They are also asked to indicate the zones they prefer to go to for the assessment. Their assistance in the provision of field vehicle (s) is also sought.

- A half-day briefing session is organized for participants of the assessment at the national level. The objective of the briefing before the teams are dispatched to their respective areas is to discuss:

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a) the objective and focus of the assessment;
b) the reporting requirements (reporting formats, date of submission, etc.);
c) the methodology to be used;
d) other issues pertinent on the mission and give clarification of questions raised by participants; and
e) The forum also serves to get the participants know each other.

Before the teams depart they are provided with:

a) a brief guidelines for rapid assessment;
b) the necessary data collection and reporting forms;
c) the appropriate check-list;
d) baseline information like population figures by PA's or woredas, historical figures on beneficiary levels, etc.;
e) provisional schedule (itinerary) which is flexible enough to be modified as the need arises; and
e) letters of introduction to the regions to be visited.

Team Composition

Assessment missions usually include staff from one or more of the following government agencies:

- the DPPC
- the MoA
- NMSA
- Ministry of Health
- the CSA
- Ethiopian Mapping Authority

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The missions could also get additional staff at various administrative levels (regional, zonal and woreda). It the assessment has a national significance, it is often conducted with the collaboration of NGO's, bilateral and UN agencies.

Briefing and De-briefing at Regional, Aonal and Woreda Levels

As the teams arrive at the regional, zonal and woreda capitals they request the secretariat of the Early Warning Committee to organize a briefing session with representatives of the relevant line departments at the level. The purpose of the briefing is to

- brief local officials on the objective of the assessment
- obtain a briefing on current situation of crop, livestock, market, wage labour, other sources of food and income. This allows to get a general impression on the food security situation at the next lower level., and get information on areas where food problems have occurred or are likely to occur.

- collect any other relevant data at the level.
- collect , where applicable, information on estimates of beneficiary number
- identify the areas for the next level field visits (i.e. which zones to be visited is decided by the region; which woredas to be visited is decided by the zone, etc.)

Before a team leaves the woreda, the zone, or the region it is required to provide a short de-briefing to the relevant officials at that level. The focus of the de-briefing is on:

I. areas visited by the team
II. review of the team's main findings
III. highlighting areas which are likely to need assistance and why
IV. as necessary, outlining the implausibility of some of the claims and findings of the local officials.

Getting an opportunity for receiving major comments of the local officials on the findings of the team.

Selecting Woredas for Visits

Given the time constraint, it may not be possible to visit all woredas in a zone. Thus a method for choosing a reasonable number of relevant woredas is applied. This is how the selection process goes.

- Based on information from the zonal officials we list down the woredas where relief needs have been requested, likely to be required or a need for close monitoring has been identified.
- From the above list those woreadas that are inaccessible are stricken off.
- The remaining woredas may still be too many to be covered within the time available. So a good estimate is made on the number of woredas that could be visited within the given time. We use what we call "representative" or purposive selection method. The relevant and accessible woredas are grouped into similar (homogenous) groups based on specific characteristics. The grouping may be based on farming systems (e.g. Meher dependent, Belg dependent) or on other important features. Then we select at least one woreda from each category and conduct the visit. This approach is likely to give a representative picture of situations in the affected but not visited woredas.

Data Collection Methods at Woreda and Sub-Woreda Level

Relevant information is collected using three methods:

- Community interviews
- Household/individual/interviews
- Field observation

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i) Community Interviews

Three types of interviews could be considered at the community level. They are:

a) Interviews with woreda officials
b) Interviews with "key informations" and
c) Interviews with a cross-section of local resident (community group interview)

- The woreda officials provide detailed information on food security related situations and prospects.
- The key informant interviews include individuals with a considerable knowledge of the community (e.g. PA chair persons, elders, tribal or religious leaders, school teachers, development agents, local NGO staff or local traders).
- When time allows, the mission requires a group of local residents (e.g., poor farmers, rich farmers, female-headed households, artisans, etc.,) to come together for a group a interview.
- The community interviews are conducted using a check list that contains a set of key questions on which the interview focuses on (structured questionnaire are not usually used). The open-ended nature of the questions allows for flexibility.

ii) Household Interviews

The type of interview is conducted only when the PA may require food aid but where the wereda or community interviews do not give a complete and plausible justifications. The interview is done by talking to individuals at their homes, on farms or on the road. As time is usually scarce, the interview will be highly focused on very important elements (the interviewees should be asked to identify the changes in the key food security variables from previous or normal years).

In all types of interviews, every precaution is taken not to pose "leading" questions, i.e., questions that will tend the interviews give a wrong picture of the situation in the hope of securing relief assistance.

iii) Field Observation

This is an important method of collecting information. Visual inspections of food stock, crop, and livestock conditions, and examining the physical appearance of people especially of children, help to form some impressions. Where possible market spot-checks are also made to get some idea on market conditions.

(Most of the materials in section vii above is adapted from the forthcoming EWS Field Assessment Manual)

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6.6 Outputs of the Food Security Monitoring in Ethiopia

6.6.1 Early Warning Reports

- The various primary and secondary data collected through the regular surveillance and the various assessments (seasonal or ad-hoc) are processed and organized to facilitate analysis. Although much of the data processing work to-date is done manually, computer-supported tools and models are now being developed to enhance data processing and analysis activities considerably. The results of the analysis are written up in early warning bulletins. These are:

- Monthly Early Warning Reports: These usually carry the main information collected through the regular surveillance system. Ad-hoc reports from regions/zones and highlights of a disaster area assessment could also be included in the monthly bulletin as necessary.

- Seasonal Reports: The findings of each of the Meher and Belg crop pre-harvest assessments are published in December and August, respectively.

- Annual Early Warning Report: This is usually published in February/March. It provides an update of the Meher pre-harvest assessment based on the findings of the regional post harvest assessments. The report depicts the annual food security prospect for the new year, usually assuming that Belg production in the new year will be normal.

- **Pastoral Area Assessment Report**: The findings of the twice-yearly assessments of the food security situation in the pastoral areas are usually written in two early warning bulletins; one published in August and the other in January. The January report is quite often incorporated into the Annual Early Warning Report.

- **Disaster Area Assessment Reports**: These are not regular reports. They are written up following disaster area assessments. If no such a thing occurs, which is most unlikely, there would not be a DAA report. The reports are quite often used for internal consumption purpose to help commissioners make decisions on resource allocations to the disaster affected area (s).

- **Special Flash Reports**: These are exceptional ad-hoc reports published when it is necessary to report on a very serious and urgent event that calls for the immediate attention of the policy and decision-makers.

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6.6.2 Report Dissemination

The above reports usually come out in the form of texts, maps, graphs or tables, quite often leaning towards a textual structure. With the exception of the Disaster Area Assessment reports, all others are distributed to a wide cross-section of users in the country and overseas using hand delivery, postal services, meetings and FAX as medium of transmission. Arrangements are now underway to introduce E-mail and internet to allow much more rapid and cost-effective report dissemination. The major users of the EWS reports are the government (Disaster Prevention and Preparedness Committees at various levels, Ethiopian embassies), donor organizations, UN agencies, NGO's operating in the country, some local and international research institutes, and libraries.

6.7 Food Insecurity Indicators

Because of the complex nature of the variables that influence the food security of households it is not possible to give an exhaustive list of variables that could be indicative of a fall in the current or future food consumptions. There is no standard list of food insecurity indicators that apply for every affected household or community. Coping strategies employed in the response to an actual or threatened food problems vary between communities, and even between households in the same community. Below is a list of some of the indicators of the presence or likely presence of acute food insecurity situation in an area. It should not be assumed to be a complete list. Some of the indicators are observed way before the famine process sets in while others are objective and visible manifestation of famine conditions in full progress.

- Poor crop growing conditions
- Deterioration in conditions of livestock
- Drastic fall in or total loss of incomes:
  - total or significant crop failure
  - unusual loss of livestock
  - reduced waged labour opportunities or a fall in prices of waged labour
- Depressed livestock prices with the resultant decline in the terms of trade between livestock and food commodities.
- Unusually high volumes of livestock being offered for sale.
- Appearance on the market of unusual amounts of capital goods such as farm implements, jewelry, or productive livestock such as draft oxen or breeding animals.
- Mortgaging or sale of land.
- Increased migration of able-bodied members of households in search of unskilled employment.
- Unusual migratory movements of pastoralists with their herds.
- Increased petty trading.

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- An unusual rise in loan taking and in the numbers of people failing to met their debts (borrowing of money or food from outside kinship relations or close friends at an unusually high interest rates).
- Unusual increase in the supply of fuel products (firewood, charcoal, cow dung, etc.) to markets.
- Sharp declines or absence of supplies of food commodities on markets.
- Unseasonal price rises of food commodities.
- Increased gathering of wild foods (wild fruits, roots, leaves, animals, etc.)
- Reduction of number of meals per day (jumping meals)
- Reduction of size of meals.
- Consumption of taboo or toxic foods.
- Consumption of seeds.
- Increased levels of food stress related malnutrition and low birth weight.
- Lethargy.
- Family disintegration.
- Unusual increase in the number of beggars and prostitutes in towns and cities.
- Mass migration.

6.8 Food Insecure Groups in Ethiopia

The population of Ethiopia is among the most food insecure in Africa. This basically emanates from its deep rooted poverty. A couple of comparative indicators show that Ethiopia's GNP/cap in 1992 was $US 110 against an average of $US 530 for the entire Sub-Sahara Africa for the same year. There is also a big contrast on the level of daily calorie supply. According to UNICEF's State of the World's Children Report published in 1994, during the period 1988-90 the daily calorie supply as per cent of requirement was only 73. Sub-Sahara Africa met 93 per cent of its requirement for the same period. These figures speak for themselves on how poverty is well entrenched in the country.

Increasing unemployment in both the rural and urban areas, severe limitations in farmland holdings exacerbated by rapid population growth, declining soil fertility through centuries of soil erosion, low growth due to inappropriate development policies, and recurrent drought in parts of the country are among the most important contributory factors for the increasing food insecurity in the country. Consequently more and more people are finding it difficult to gain access to adequate food. The country has a huge number of food insecure people. According to indications from an analysis undertaken in 1992, around 27 million people could be food insecure in Ethiopia during the same year (Debebe and Maxsess 1992). This includes both types of food insecure groups: chronic as well as acute food insecure. Usually the number of people that annually suffers from transitory or acute food insecurity is in the range of 2 - 5 million. This figure could go up to 8 - 10 million in the event of a large scale famine.

Of the total food insecure population, the rural resource poor forms the largest social group. Refer table below for the share of each food insecure social group as estimated in 1992.

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Table 2: Share of Food Insecure Groups in Ethiopia, 1992

Category	Share (%)
Chronic, rural	50.5
Transitory, rural	24.3
Urban, employable	14.2
Displaced	7.5
Refugees	2.8
Urban, Unemployable	0.7
Total	**100**

Source: **Linking Relief and Development**, IDS Bulletin, vol. 25, No. 4, October 1994.

With little or no land of its own, and worsened by lack of oxen and other agricultural inputs, the majority of rural households are not able to produce or purchase enough food to meet their minimum requirements. Chronic food shortage also affects the pastoralists, particularly the poor. Repeated shocks of drought have brought their herd sizes to such a low level that they do not enjoy access to sufficient food from their livestock products or the sale of their animals. The other food insecure group is the urban poor. This group has little or no income to enable it purchase food stuff that meets its basic needs. Low income households employed in the informal sector and those social groups outside of the labour market forms the chronically food insecure in this category. The table below shows the category of the different food insecure households in Ethiopia, which also generally reflects the existing vulnerable groups in other African countries.

Table 3: Classification of Food Insecure Households in Ethiopia

	Rural	Urban Others	
Chronic	Resource poor households • landless or land-scarce • ox-less • poor pasoralists • female-headed households • elderly • disabled • poor non-agricultural households • newly established settlers	Low income households employed in informal sector Groups outside the labour market • elderly • disabled • Some female-headed households	• Refugees • Displaced • Ex-soldiers
Transitory	Less resource poor households vulnerable to shocks, especially but not only drought, • farmers and others in drought-prone areas • pastoralists • others vulnerable to economic shocks (e.g. in low potential areas)	Urban poor vulnerable to economic shocks, especially by those causing food price rises	Groups affected by temporary civil unrest

Source: Ethiopia, Food Security Strategy, (Draft Copy), 1996.

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REFERENCES

Buchanan-Smith, M. and Davies, S. (1995). **Famine Early Warning and Response: The Missing Link.**

Buchanan-Smith, M. and others 91991). **' Early Warning in the Sahel and Horn of Africa: The State of the Art: A Review of Literature'** In Burchanan Smith, M., and Davis, S., 1995. **Famine Early Warning and Response - The Missing Link,** p. 4.

Casely, D.J., and Lury, D.A. (1982). **Data Collection in Developing Countries,** (Second Edition).

D'Souza, F. (1988). **FAMINE AND THE ART OF EARLY WARNING: The African Experience.** University of Oxford, Department of Biological Anthropology and Save the Children Fund, UK.

Debebe, A., and Maxwell, S. (1992). **'Vulnerability Profiles and Risk Mapping in Ethiopia',** mimeo. **In Linking Relief and Development: An Ethiopian Cast Study.** IDS Bulletin, Vol. 25, 4p. 65.

EWD/DPPC (1995). **Guidelines for Early Warning System in Ethiopia,** pp. 7 - 76.

EWD/DPPC (1997). **Rapid Assessment Manual.** (Draft Copy). pp. 3 - 41.

GOE (1996). **Ethiopia: Food Security Strategy,** (Draft Copy), p. 11.

Maxwell, S., and Frankenberger, T.R. (1992). **Household Food Security: Concepts, Indicators, Measurements** (A Technical Review). pp. 77 - 121.

Riely, F. (1995). **'Vulnerability Analysis in the FEWS Project',** FEWS Working Paper 2.9, pp. 2 - 27.

UNICEF (1994). **State of the World Children. In Linking Relief and Development: An Ethiopian Case Study.** IDS Bulletin, Vol. 25, No. 4, p. 65.

Webb, p., and Braun, J. (1994). **Famine and Food Security in Ethiopia: Lessons for Africa,** p. 68.

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Annex 1

1. Early Warning Indicators Used in Crop Dependent Areas of Ethiopia	2. Some of the Base Line Data that Need to be Collected in Crop Dependent Areas
Indicator	Base Line Data
A. Climatic Rainfall • onset and cessation • amount and distribution • adequacy of rainfall for crop production/livestock production	Normal start and finish of rainy season (s) Long term average, amount of rainfall, and number of rainy days by agro-ecology (a.e) • Size of cultivable land, by agro-ecology • Long term average of area planted, by a.e. • Usual planting date by crop for each cropping season
B. Crop Performance Indicators • Area prepared • Area planted • Date of planting • Cropping pattern • Crop damage (crops affected, cause and severity of damage) • Availability and use of inputs • Crop production • Crop performance – phonologically stage – crop condition	 • Crops grown in each cropping season ranking them by importance, by agro-economy • Climatic hazards by agro-ecology • Major crop pests and diseases by a.e • Major cash crops grown • Time-series data on supplies and utilization of modern agri-inputs by agro-ecology • Calendar showing phonologically stages of crops by a.e and cropping season • Long term average production by crop • Relative importance of Meher and Belg crops by a.e

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1. Early Warning Indicators Used in Crop Dependent Areas of Ethiopia	2. Some of the Base Line Data that Need to be Collected in Crop Dependent Areas
C. Livestock Performance Indicators Livestock disease Water and pasture adequacy Physical condition of livestock Livestock herd size (qualitative)	• Importance of livestock (L.S) in the production system, by a.e • Focus of animal husbandry • Herd composition • Use of animals • Endemic animal diseases • Normal seasonal patterns of watering grazing (seasonal availability of water and and pasture) • Normal seasonal patterns of L.S condition • size of herd by type and a.e
D. Market Indicators • Price and supply of main food crops • Price and supply of main cash crops • Price and supply of livestock • Price and supply of milk/livestock products • Cross-border trade • Physical access to market	• Time series data on prices of main food crops • Normal seasonal patterns of supply of main food crops • Importance of cash crops in the area (its estimated share to total income) • Time-series data on prices of L.S • Normal seasonal patterns of supply of L.S • Importance of cross border trade for the area • Commodities traded, source of supply • Usual seasonal patterns of cross-border trade • Locations of markets • Normal physical access to markets

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1. Early Warning Indicators Used in Crop Dependent Areas of Ethiopia	2. Some of the Base Line Data that Need to be Collected in Crop Dependent Areas
E. Indicators of Other Income Generating Activities • Daily wage rate in towns • Opportunities for waged labour • Price and supply of fire wood (fuel products) • Other main sources of income • Patterns of migration	• Normal seasonal patterns of wage rate • Normal seasonal patterns of waged employment opportunities • Where do people normally go for employment? What time of year? At what scale? • Normal seasonal patterns of fuel products and supply (firewood, charcoal, animal dung) • Sources of income (ranking these sources by a.e) • Normal seasonal patterns of migration in terms of direction of movement, magnitude of migration and reason
F. Other Sources of Food • Food reserves from past harvests	• Areas and per cent of population which normally produce surplus food which could be carried over to following year, by a.e
G. Health, Nutrition and Education Indicators • Incidence of epidemic diseases • Consumption patterns – Ranking of main food stuffs – Size of meals – number of meals • Evidence of malnutrition • School attendance	• Seasonality of endemic diseases • Seasonality of epidemic diseases by type of disease and a.e • Normal seasonal patterns in the ranking of main food stuffs, by a.e • Information on normal size and # of meals per day, by season • Normal seasonal patterns of school attendance Other baseline data • Population by a.e • History of recent disasters and relief • HH coping mechanisms to food problems etc.

Source: **Adapted from Guideline for Early Warning System in Ethiopia**, 1995.

a.e = agri-ecology

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Part VII

HOUSEHOLD COPING STRATEGIES WITH FOOD SHORTAGES

By
Dr. Dagnew Eshete

CCRDA

7.1 THE CONCEPT AND DEFINITION OF HOUSEHOLD COPING STRATEGY

In describing the concept of coping strategy, common terms or phrases like **"coping mechanism"**, **"coping technique"**, and **"survival methods"** are often used interchangeably by writers and researchers. In this context, **"coping strategy"** means **"coping mechanism"** or **"coping technique" implying a forward planing approach** mainly at a household and individual levels. The term **"response"** is also used for individual actions aimed at survival in the face of disaster-induced food crisis or famine. **"Coping strategy" could be defined as a mechanism by which households or community members meet their relief and recovery needs, and adjust to future disaster-related risks by themselves - without outside support** (Dagnew, 1993). According to Davies (1993), **"coping strategies are the bundle of poor people's responses to declining food availability and entitlement in abnormal seasons or years".**

There is a growing body of literature on the household coping mechanisms, notably empirical studies from Africa and Asia, that focus on the differences between seasonal and disaster (mainly drought) - related food shortages; differing household aims; the timing and sequence of stages in the coping strategy; and the constraints which influence the choice of the strategy. Several responses for example, reducing food consumption, sales of livestock, borrowing, collection and eating of wild foods (plant and/or animals) or migration may be undertaken by different household members at the same time or sequentially, as part of the overall strategy; while some responses may be undertaken simultaneously (Dagnew, 1993 & 94).

A better understanding of household coping mechanisms demands a recognition of the nature of all stages or categories of response. Household responses to various degrees of food shortages are often based on:

(i) production-based responses;
(ii) market-based responses; and
(iii) non-market based responses, such as the use of different institutional and societal income transfer systems (Ibid).

Rural households have been adopting a variety of coping strategies in response to both seasonal and disaster-related food shortages. Previous studies (Ibid), on food shortages and famine show that all households are not equally vulnerable to either seasonal and disaster-related food shortages and famines of differing magnitudes. The rich usually have access to food and seldom starve. In periods of serious food shortages, the poorest income groups may not have the same options open to them for coping with food shortages as those who are better-off. For instance, the poor peasant household may find it more difficult to obtain credit facilities from local sources and may have fewer assets to liquidate. The poor income groups are more often constrained by high dependent worker ratio or **"dependency ratio"** in the family.

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7.2 WHAT INDIGENOUS COPING STRATEGIES EXIST?

In Ethiopia, people from different cultural, regional and agro-ecological backgrounds have experienced a long history of **recurring famines of varying severity**. With such differences in background, responses made by households of different income groups in periods of food crisis may be expected to show significant variations.

Traditionally, rural people derive most of their family consumption requirements, from domestic food production, largely from crop and livestock production activities. Most often, failure to achieve self-sufficiency in food production forces rural people (both crop producers and pastoralists) to get involved in **market-based economic activities** (such as asset sales, petty trading, food purchases, borrowing and selling family labor, etc). **Failure to achieve self-sufficiency does not only drive households to depend on market-based food supply sources, but also to depend on non-market based income and food supply sources, the character of which depends on the economic status of households and the magnitude of food scarcity**. In this context, non-market based household responses include dependence on generally unmarketed food supply sources such as wild foods. This in general, indicates that there is a high scope for building on existing local coping strategies in disaster prevention, preparedness and management (Dagnew, 1993).

This paper, based on two fieldwork information (1990/91 and 1993), has considered the following three contrasting regions (see tables 1-2) for assessing the traditional household coping strategies with disaster-related food shortages:

a) Wolaita district in the southern region to represent horticulture and cereal, and livestock dependents;
b) North Wollo to represent mainly cereal crop and livestock dependent people in different agro-ecologies; and
c) the Ogaden to represent the pastoral and agro-pastoral societies.

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Table 1: Percentage Distribution of Sample Households' Responses on Their Coping Strategies in the Face of Serious Food Shortages in the Disaster Periods of 1984/85, 1987/88 and 1990/91 (N = 522)

Sl. No.	Coping Methods	HH Responses 1984/85 (%)	HH Responses 1987/88 (%)	HH Responses 1990/91 (%)
1.	Change cropping pattern	46	54	36
2.	Reduce consumption	82	85	78
3.	Purchase food and reduce consumption	92	87	92
4.	Intensify secondary occupation+	61	59	60
5.	Support of kin and friends	29	19	13
6.	Borrow grain and money	37	25	27
7.	Sale of small animals	20	19	17
8.	Temporary migration to seek employment	9	7	4
9.	Rationing consumption++	64	64	57
10.	Eat wild food (wild plants & animals)	58	36	24
11.	Sale of wood grass, leaves and handicrafts	33	31	35
12.	Depend on relief food	74	61	27
13.	Sale of productive assets	53	29	25
14.	Begging	4	4	5
15.	Sale of household possessions*	18	4	3
16.	Distress migration and family separation	19	6	5
17.	Others**	3	4	4

Note:

+ Intensifying secondary occupation including petty trading, family labour hire and renting of animals within the community by both sexes, basket making from wild plants and spinning cotton. Brewing local alcoholic drink is performed by women for sale as the crisis deepens as a major household task.

++ Rationing consumption involves distributing whatever food is available among the members of households as food crisis deepens (before and after divestment).

* This refers to key non-productive asset sales (inluding dwelling house, bed, etc.) adopted by famine victims as a pre-migration survival strategy. Disposal of other less important non-productive asset takes place before the disposal of key productive asset takes place.

** Others, inlude collection of wild food and coffee leaves, carrying water, making local grinding stone mills for sale, asset mortgaging and leasing, etc. Both household response figures/percentages do not add up vertically. This is because each respondent has given more than one answer.

HH = Household

Source: Dagnew, 1993 (survey data, 1990/91).

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Table 2: Examples of Indigenous Coping Strategies by Geographical Locations and Occupations in Ethiopia.

Coping Strategies Practiced by Settled Farmers (Highlanders)	Coping Strategies Practiced by Pastoralists and Agro-Pastoralists (Lowlanders)
1. Changing cropping pattern (crop diversification) 2. Reducing food consumption (in amount, quality and number of meals, etc., 3. Sales of small animals 4. Borrowing grain & money 5. Sales of family labor locally and through temporary migration 6. Asking support from kin and friends (including support from religious institutions) 7. Some petty trading activities 8. Shared rearing of livestock (for use of products including sharing of offsprings) 9. Sales of productive assets 10. Depend on relief food 11. Slaughter animals to save family lives (by lowlanders) 12. Eating wild food, and 13. Household and/or village-level distress migration (involving short and/or long distance migration - permanent and/or temporary).	1. Sales of animals (small animals first and then big animals depending on the problem of magnitude) for food purchase 2. Reducing food consumption 3. Support from kin and among clan and sub-clan members (including gift of animals for use of product and slaughter for food, labor support etc.) 4. Long distance migration with animals in search of water and grass 5. Slaughter animals for family consumption, and 6. Eating wild food (though wild food is gradually disappearing).

Source: Dagnew, 1993

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The above tables (tables 1-2) attempt to demonstrate the similarities and differences in coping strategies that are practiced by settled farmers (in rain-fed agriculture, such as in North Wollo and Wolaita) and pastoral societies (such as in Ogaden) based on the 1990/91 and 1993 fieldwork information.

Rural households in Ethiopia have been adopting a variety of coping strategies in response to both seasonal and disaster-induced food shortages (to ensure family food security in times of crisis). According to Dagnew (1994), existing household coping strategies with food shortages in the country could be summarized in the following generally sequential categories:

a) **Self-insurance (risk-minimizing) strategy** such as changes in the agricultural production strategy including cottage industrial production;

b) **Adaptive (income stabilization) strategy** which includes intensifying secondary economic activities;

c) **Asset disposal strategy** (e.g, sales of productive and non-productive assets, slaughtering of animals for family consumption by pastoralists); and

d) **Distress migration and family separation** (including the abandonments of child/family members as a means of survival).

7.3 FACTORS LIMITING THE DEVELOPMENT OF INDIGENOUS COPING STRATEGIES

Many factors limit the development of existing indigenous coping strategies in Ethiopia. That is, there are significant variations in the factors limiting the household coping abilities (ways of coping against unfavorable situations) between different geographical and agro-ecological zones; and the needs of intervention support would also vary accordingly.

Major factors limiting the development of useful indigenous household and local coping strategies by agro-ecological/ geographical locations, requiring appropriate institutional interventions include the following;

7.3.1 In Settled Farming Areas

Factors limiting the development of useful indigenous coping strategies in the **highlands and associated lowlands** include:

- **rainfall variation affecting seasonal production (including recurring total failure of rainfall);**
- **gradual soil erosion and degradation, inadequate productive asset ownership and decline;**
- **growing problem of general productive resource distribution and land carrying capacity problem in particular aggravated by uncontrolled, fast population growth;**
- **poor/lack of marketing infrastructure, credit and pricing policy support for family income stabilization;**
- **lack of irrigation support in potential areas for sustainable production;**
- **poor/lack of access to production inputs for sustainable crop and livestock production activities;**
- **lack of the means for income generating activities to better cope with exceptional crisis situations periods;**

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- **lack of sustainable local-level employment sources and the declining means for income generating activities to better cope with exceptional stress/crisis situations;**
- **lack of access to pest, disease and drought-resistant innovations such as improved seeds and livestock breeds;**
- **lack of appropriate training in disaster prevention, preparedness and management to develop the coping capacity of local people;**
- **the negative impact of the inappropriate application or untargeted free distribution of food aid in the past nearly two decades;**
- **worsening terms of trade; and**
- **civil conflicts.**

One key feature revealed by a recent study (Dagnew, 1993 & 94) is that the choice of coping strategy against deepening food shortages in disaster prone areas of Ethiopia (e.g, in Wollo, Tigray, and Wolaita) showed some distinct variation according to income groups. In particular the following strategies were used largely by the poor:

(a) temporary migration in search of wage-labor as an income stabilization measure;
(b) high dependence on income from secondary and marginal economic activities;
(c) begging and intensifying dependence on collection and eating wild foods;
(d) Sales of household possessions (including dwelling houses);
(e) distress migration, family separation and abandonment.

The rich did not use these strategies during the particular crises years of the 1980s and early 1990s. Significant differences also exist in the other coping strategies (eg, reducing consumption, changing cropping pattern, etc.) in terms of differences in the number, type, intensity and frequency of adoption of each coping technique; which in turn primarily depends on the level of asset ownership, income status, level of food reserve of each household, family labor availability, and on the magnitude of the crisis situation.

In general, the poor have fewest or no assets and reserves; and when famine occurs, it is often households from this social group who fall below the threshold of collapse much faster than other income groups. It is often the poor who are first forced to engage in short-term and marginal economic activities like the collection and sales of grass/wood/leaves, and wild food, begging, reliance on wild foods and relief distribution for consumption during the peak crisis periods. They are first, too, to lose their credit-worthiness and are forced to reduce drastically their food intake. In the end, desperately, they sell their assets. In Ethiopia, the rich and many of the middle income groups have been able to cope with the recent crises periods by drawing upon their reserves and gradual selective asset sales. Households from the poor income group do not have the same options open to them for coping with serious food shortages.

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7.3.2 In Lowland Pastoral Areas

Many limiting factors to household coping strategies mentioned above are also common in lowland pastoralist and agro-pastoralist areas despite variations in their degree of magnitudes. The major factors that greatly contribute to the weakening of the indigenous coping strategies in the lowland pastoral areas which

also require appropriate interventions include:

- **seasonal weather instability, and the recurring drought problem in particular;**
- **poor transport and marketing infrastructure;**
- **lack of access to development inputs for sustainable livestock and crop production activities (e.g, lack of drought-resistant seed & pasture, lack of veterinary, water and pasture development support);**
- **Livestock decline both in size and quality;**
- **lack of training and pastoral extension support to promote income generating activities of household and to strengthen their capacity in managing disasters;**
- **worsening terms of trade between livestock and crop products;**
- **civil conflict.**

In conclusion, the more access households have to key productive assets and permanent income earning activities (regardless of their social backgrounds, geographical and agro-ecological locations), the more self-sufficient they become in food; they are in a better position to cope with disaster-induced food crisis. **The more households are deprived of the key productive assets and the minor regular income-earning sources, the more they are vulnerable to disaster-induced food crisis which can be catastrophic.**

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Part VIII

FOOD SECURITY PLANNING AND INTERVENTIONS

By
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8. FOOD SECURITY PLANNING AND INTERVENTIONS

8.1 Definition and Types of Planning

Planning is a process to set a future course of action (including advance decision making). It is a continuous (on-going) activity. Common types of plans includes: (a) development plans (short-term, medium-term, and long-term development plans); (b) contingency (emergency) plan; and (c) relief plan. Food security planning includes all these types of plans.

An understanding of a **planning concept and the logic to planning processes** is important. Planning logics can apply equally to major tasks (i.e, planning an overall operation to relatively minor day-to-day activities). The planner also needs to constantly monitor progress and adjust the objectives to take account of new realities. Planning should take place in both stable and in exceptional circumstances.

The success of any operation plan depends upon the quality of planning and how prepared the agencies and communities are to implement such an operation, and on the timing and size of their response. For example, a relief plan to be prepared must ensure a balance between provision of adequate measures (in time, type and size) to prevent distress and greater vulnerability without undermining useful indigenous coping mechanisms, and not to increase long-term vulnerability and dependency. A relief plan contains the plans of concerned agencies for relief and rehabilitation projects in times of emergency; and it also includes proposals for improving the local/community-level capacity to prevent disaster in future.

All planning efforts begin with a situation assessment, and the above indicated planning types are no exceptions. In most cases, field workers and development experts know simply from experience the appropriate time to plan. In disaster prone and food deficit areas, basic risk assessment and data gathering and analysis need to be undertaken for proper disaster preparedness and prevention measures.

Needs and resources assessment is an essential ingredient in all planning processes (including food security planning). In order to plan effectively one requires to understand the prevailing situation by assessing both needs and resources. On the basis of needs, one can set objectives. An understanding of resources can help in the development of a strategy (operation plan) to reach the objectives. Needs and resources assessments are essential steps prior to understanding any planning exercise.

8.2 Methods of Food Security Situation Assessment

In order to undertake regular food security situation assessment particularly in areas prone to recurring disaster- induced food shortages and famine, it would be most appropriate to develop and use **food situation indicators.** Several indicators are used to identify vulnerable groups and assess the food security or insecurity situations at the local and household levels. **Early warning information at local level including information on household-level**

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production, incomes, assets, coping strategies are among the most important indicators for food security assessment. Available information sources (Dagnew, 1993) indicate that the information including:

- **rainfall situation;**
- **crop (including harvest) and pasture situation;**
- **stock position (reserve situation);**
- **asset sales (eg. livestock sales);**
- **anthropometric (nutritional status) data, including human health situations;**
- **changes in food habits;**
- **terms of trade between crop and livestock products;**
- **market price situation (food supply and price situation);**
- **purchasing power of the people;**
- **labor movement and demand for labor;**
- **deviation from regular nature of economic activities (e.g, intensifying secondary or**
- **marginal economic activities;**
- **income position and household income sources to cope with a growing food insecurity;**
- **crop and animal pest and disease situations;**
- **instability caused by ethnic or social conflict, war, etc.; and**
- **migration are important indicators for emerging and/or existing food insecurity problems**. That is, most of these indicators show/confirm the existing problems of food insecurity in differing magnitudes; while some others (eg, rain failure, poor crop and pasture situations, etc.) indicate the emerging or impending food insecurity problems as warning indicators that facilitate for taking appropriate preventive measures.

8.3 Food Security Planning and Intervention Programmes

Maxwell (1992:11-12) notes that "policy in the 1970s and for much of the 1980s concentrated on achieving national goals of food production and self-sufficiency; often with **intense government involvement through grain marketing parastatals and, in some cases, state farms**. **Food security planning** was to be run from the center, with fixed goals and many multi-sectoral initiatives. ... Food security policies for the 1990s need to begin with the diversity and complexity of food security as experienced by the food insecure themselves. The primary focus needs to be on individuals and households who lack, or fear they may lack, secure access to enough food at all times for an active, healthy life".

Proper food security planning is a process which should involve a strong local government participation. Such grass-roots based planning approach is likely to be more successful than over-centralized, top-down approaches. **Micro-level food security planning** should promote the data collection processes, planning and implementation with the communities on which the beneficiary groups depend.

As regards the **social composition of the food insecure groups** in Ethiopia, rural people (small farmers and pastoralists) still predominate. However, poor pastoralists, landless,

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members of female-headed households, the urban poor and those displaced by war and/or civil conflicts are becoming increasingly prominent and most vulnerable to any sudden disasters. In order to improve the food security and the general livelihoods of these social groups, specific or appropriate policies and strategies to be designed need to take these varying needs into consideration.

On the basis of the policy documents reviewed (Dagnew, 1993 & 1995), the relief, rehabilitative, and relief-development linked efforts that have been going on in many disaster-prone areas of Ethiopia are some of the aspects of food security-related interventions by the government and donor agencies. Camp-level feeding (nutrition), health, sanitation and related rehabilitative programmes that have been provided for both returnees and refugees, and relief-development linked projects in some parts of the country are examples of such interventions to be cited which have been designed to facilitate the coping ability of affected people. However, the past institutional efforts to develop effective policies that address (alleviate) the country's growing problem of poverty (worsening socio-economic problems) through an effective programme of poverty alleviation and famine prevention measures have not been encouraging.

The types of institutional interventions required pre-crisis, during crisis and post-crisis periods are: Preventive, emergency, rehabilitative and interventions linked to long-term development programmes. Proper (targeted) disaster prevention, preparedness and development approaches will not only improve the food security situation at a household and local levels, but also promote the general livelihood security of households or societies at different levels.

Food shortages and people's vulnerability to the recurring disasters could be prevented (or at least reduced) through building the capacity of households and communities in managing disasters. That is, traditional and newly evolving household and community-level coping strategies with food shortages, disease, etc. need to be developed through improving their disaster prevention, preparedness and management capacity. **One important way of stimulating or building on useful indigenous coping mechanisms is through strengthening the socio-economic role of peasant associations and other community-level institutions such as Service Cooperatives, religious institutions, and local committees** (including village-level informal social and financial mutual support groups or committees like Edir, work teams, etc.).

In order to solve the growing food insecurity problems among the food insecure social groups and to improve the general livelihood security, food security planning should consider the following approaches or strategies (in order of importance):

- **a selective area and population group-based targeted approach. This must embrace a strategy for protecting key productive assets from distress sales during emergency periods and appropriate research and technology dissemination;**
- **an agro-ecology (area)-based targeting approach;**
- **land tenure reform allied to a conservation-based development approach;**
- **a systematic and well-planned food and nutrition strategy;**

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- **population control in the form of improved family planning measures and voluntary settlement in less populated areas with agricultural potential.** Above all, the first two key policy implications require a more urgent attention. The following brief discussions will concentrate on these key policy implications.

8.3.1 Selective Area and Population Group-based Targeting

This refers to the application of **(a) emergency, and (b) rehabilitation-development planning and implementation approaches based on the priority needs of the needy population groups in areas vulnerable to natural and/or human-made disasters**. This approach involves the proper allocation of national manpower, financial aid, and investment resources in order of priority.

The agricultural sector in Ethiopia has been the dominant source of the economy (in which over 85% of the population have been employed) for the past many generations. However, because of the poor/stagnating agricultural production performance and very high variability from year to year (as the main underlying causes), the overall food security situations at macro and micro-levels have shown a sharp decline particularly in the recent two decades. **Growth of the agricultural production will still remain central, and the agricultural sector a priority for resources**. However, growth in production (including other non-agricultural production sectors) needs to be targeted or directed specifically to enhancing the employment and production-related incomes of the poor or the food insecure groups. **Generally institutional support need to focus on strengthening labor-intensive small-scale production and other supplementary non-farm income generating activities (e.g, petty trading), with special emphasis on resource-poor and marginal areas**.

The dominant issues which primarily focus on the ways of promoting building on useful indigenous coping mechanisms (strategies suggested) for enhancing sustainable family food security and the livelihood security at large include the following:

a) <u>Targeted Productive Asset Strategy</u>

Earlier we discussed the productive asset position (e.g, the ownership of plough oxen, breeding cattle, farm implements, land distribution, etc.) of rural households in Ethiopia. The economic impact of the ownership or otherwise of these key productive assets has been discussed based on the findings of the previous household and village level studies. The results of the study have shown that **over 38 percent of the sample peasants in the country do not own key assets like draught oxen and other productive assets which are their sources of livelihoods**. Over 31 percent of the poor and some middle peasants are reported to possess one oxen. Most of the samples in the poverty group reported that, they lost their oxen and other productive assets as a result of the recurring drought and disease outbreaks since the 1984/85. Moreover, **the average land ownership is about 1 hectares/household and many peasants are limited to a very small garden plot only. The number of landless is also increasing alarmingly from year to year. This is an urgent problem that must be tackled both in medium and long-term programme in a sustainable way**.

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The other important asset-related problem that poor peasants often face is the **seasonal seed and fertilizer supply shortages** they suffer as a result of their lack of purchasing power. Poor farmers are unable to maximize their seasonal farm activities, particularly at peak planting seasons of the year when the rainfall situation is favorable; and in consequence suffer a progressive deterioration of their economic status and increased vulnerability to any sudden disasters.

b) Production and Income Diversification

In order to better ensure a sustainable micro-level food security, household-level production and other income generating activities need to be diversified. This includes the diversification of crops (annual and/or perennial), livestock husbandry, and other off-farm income generating activities through the proper utilization of family labor and other available productive resources by seasons. Balancing between **food and cash crop production,** and/or between **crop and livestock production** are important approaches to cite which may enable not only households but also the country at large to attain a sustainable food security.

Irrigation support is another important aspect to be considered in the process of micro-level food security planning (for enhancing sustainable food production).

In Ethiopia as a whole, irrigated farming practices are very rare. Greater emphasis should be placed on the introduction of small-scale irrigation practice, which requires only the improvement and extension of traditional stream-diversion and furrowing systems. This will offer a chance for poor farmers' labor to be utilized for diversified and intensive double-cropping to ensure sustainable family food supply in some potential areas.

c) Targeted Marketing, Pricing and Credit Support

Food security planning should also look into the provision of **appropriate institutional marketing, price regulation and credit services**. In most areas of Ethiopia, lack of **input and output price regulation, poor marketing infrastructure and credit services** are among the many major contributing factors for the decline of food production and supply at local and household levels (in generally food deficit areas in particular). Proper institutional marketing and credit services (targeted by area and population groups or socio-economic groups) would play important role for sustainable food production and supply and in securing community and household-level food security.

Hence, in order to improve the local and household-level food security, **food security planning/intervention needs to consider** the following specific institutional services:

- **provision of improved credit and marketing institutional support;**
- **targeted financial and asset institutional support which would significantly improve the economic status and purchasing power of the poor;**
- **policy support in food grain, inputs and stock market (supply and price) stabilization and regulation, including subsidy and the improvement of the terms of trade between crop and livestock products; and**

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- **the establishments of key transport and communication networks at least up to major relay and secondary market centers (including the opening of new market centers at strategic locations and provision of associated support).**

d) <u>Targeted Relief and Development Linked Support</u>

This refers to the efficient use of relief and development resources (including better use of food aid) for the vulnerable poor, particularly in disaster-prone areas. Maxwell (1992:12) notes that "food security policies should aim towards establishing efficient and equitable food systems, resilient in the face of drought or other shocks. They should provide secure safety nets against destitution, preferably in ways which simultaneously promote long-term development. ... **Food security interventions generate a larger pay-off and are more cost-effective if they are targeted on the most food insecure**, whether through geographical targeting, focusing on food consumed primarily by the poor or community management".

A relief-development linked plan is prepared to provide appropriate relief and development linked assistance to the vulnerable social groups. Relief assistance is provided to the affected population in a manner which ensures that such efforts contribute towards rehabilitation and long-term development. Relief and rehabilitation plan, for instance, enables to extend relief and rehabilitation assistance to disaster victims through measures designed to relieve current distress and build up future capabilities to meet the challenges of disaster-related crisis. The preparation of such plans is bottom-up, and must identify measures needed to provide effective relief and rehabilitation support to the most needy people. Specific relief and rehabilitation measures among others include:

- **implementing employment generation schemes;**
- **provision of drinking water in areas where water shortage is critical;**
- **distribution of gratuitous relief to the old, infirm and disabled (non-able bodied) social groups during disaster period;**
- **making efforts to meet fodder scarcity;**
- **introducing of cattle camps for taking care of livestock;**
- **health care for human population and livestock;**
- **provision of supplementary nutrition to the most vulnerable social groups like children and women;**
- **distribution of food aid; etc.**

Relief and rehabilitation plans should assess the nature and duration of operations, and identify specific projects, wherever possible. More over, these plans will identify the priorities in execution in relation to areas, types of relief measures and type of employment generation schemes. Such plans are initiated at the Woreda level.

As part of the relief plan, employment generation scheme (EGS) emphasizes relief assistance to able-bodied persons to be provided based on their participation in the development linked programmes. EGS provides a means of distribution of income to deprived sections of communities, build-up the assets of an area so as to improve its resilience to disaster-related problems, and create conditions and strengthen the infrastructure to enhance future

CCRDA

development in disaster-prone and food deficit areas. EGS is also designed to ensure the full participation of women, and be productive.

Linking relief and development offers positive benefits. According to Smith and Maxwell (1994), "better `development' can reduce the need for emergency relief; better `relief' can contribute to development; and better `rehabilitation' can ease the transition between the two". Relief and development interventions are implemented harmoniously to provide poor people with secure livelihoods and efficient safety-nets, mitigating the frequency and impact of shocks and easing rehabilitation. Relief food is not used not for direct free distribution, but rather as a wage to pay for development work. Hence, disaster affected people, rather than receiving food free, they are employed to build roads, plant trees, develop irrigation facilities or carry out soil and water conservation works. **Such planning approaches enhance increased incomes and reduce future vulnerability**. Wages could be paid in cash, with relief food being sold through the food marketing system to stabilize prices and generate cash to pay for public works. Relief works are popular means for linking relief and development.

e) **Strengthening the Traditional Coping Mechanisms**

Food shortages and people's vulnerability to the recurring disasters could be prevented (or at least reduced) through building the capacity of households and communities in managing disasters. That is, traditional and newly evolving household and community-level coping strategies with food shortages, disease, etc. need to be developed through improving their disaster prevention, preparedness and management capacity.

A special institutional targeted policy measure that assists household coping strategies (e.g, seasonal cropping strategies, off-farm and other means of income generating activities, etc.) needs to be adopted in the planning process. This approach would be effective through introducing appropriate measures such as input and output pricing policies, marketing and credit policies, and subsidies which would increase the purchasing power of the poor income groups, especially in stress periods. Such a policy should also place particular emphasis on contingency planning which focuses on the creation and strengthening of:

- **seed and food grain reserve schemes** (either for stock or holding in reserve at strategic locations for distribution during or after stress periods); **and**
- **draught and breeding animals purchase**. These could be distributed free or at subsidized prices or through low interest credit scheme depending on individual household economic position. Past experience and early warning information should be utilized to decide which policy options and planning approach (including) is to be adopted.

f) **Short and Long-Term Targets**

The following are policy suggestions drawn from the previous studies which aim at solving both fixed and variable productive asset-related problems for those population groups with little or no income and low purchasing power:

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Emergency-Linked Income Transfer & Asset Protection Measures: Income transfer measures could be practical through relief food-aid either free or through EGS to the most needy social groups in times of serious food crisis; seed, fertilizer and farm tools distribution as post-recovery support; expanding the participation of the affected poor in various employment-based safety net programmes and projects. This includes people's participations in food-for-work and/or cash-for-work projects and programmes, etc., which enhance savings for productive asset purchases, improved income and family food security.

Emergency-linked policy support need to be provided with the aim to **protect key assets** from distress sales and ensure at least the minimum level of family food security. Special policy attention must be given to establishing a workable early-warning system, and to the proper use of such early-warning information for appropriate intervention measures. **Early-warning information would allow proper institutional contingency planning to tackle an impending or future disasters**. This can be accomplished through institutional disaster preparedness measures, including building essential reserves for saving human and animal lives, designing alternative strategies of asset protection from distress sales, etc. Crucially, **interventions must center on protecting peasant assets from distress sales**; only then is sustainable development and household-level food security a feasible goal. The policy measure includes the provision of emergency relief (including EGS) for target groups in times of serious food shortages. Households with active family members should be motivated to participate in community-based socio-economic and infrastructural development activities (basis for future/long-term food security or development) through EGS (using relief food or monetized aid resources for wage payments).

Provision of low interest or interest-free (revolving) credit for selected poor households with particular focus on food deficit areas. Such a credit facility should be earmarked for purchases of key productive variables and/or fixed assets for sustainable seasonal food production and ultimate food self-sufficiency. This should include the provision of low interest or interest-free revolving funds that would have positive multiplier effects;

Many short-maturing income generating activities often included in the normal seasonal/annual production or economic plans (e.g, selected varieties of cereal, vegetable and root crop production through use of irrigation water from micro-dams, ponds and river diversions; increasing other farm and non-farm fast income generating sources) also need to be considered for shorter-term or emergency-linked measures as may be appropriate. Short-term policy should primarily focus on rural employment creation or developing income generating sources, such as through proper mobilization of community-level resources with zero or minimal institutional cost outlay (e.g, using food aid resources for food-for-work type of participatory development activities).

Other possible short-term or emergency-linked measures for absorbing unemployed rural labor include:

- **expanding food-for-work or cash-for-work projects; and**
- **provision of appropriate supports for local cottage industries.**

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Support should also be given in conjunction with improved marketing arrangements and greater credit provisions. On-job and on-site training should be expanded as may be appropriate. All these measures would offer additional income sources for the rural poor and enhance their ability to feed their families; this would eventually lead to a long-term sustainable family food self-sufficiency.

Price Stabilization Measures: **Both short and long-term policies must include price stabilization measures**. Along with the other **famine-prevention schemes** indicated earlier (e.g, grain reserves), **price stabilization** (price control) schemes offer one of the most important policy approaches. The **purchasing power** of the poor, particularly in periods of food crisis, can thereby be increased. Food supplies may be secured by **developing grain reserves at strategic locations**. These reserves could be built up through local purchases during periods of crop harvest (when output prices are very low) or through regional imports, etc. Such an approach would create an effective solution for resale at subsidized prices (when market prices tend to highly increase in times of food scarcity) to population groups with the lowest purchasing power. This better secures the food supply entitlements of the poor. This approach could apply to both seed needs and livestock in similar stress situations.

8.3.2 Agro-ecology Based Targeting

The study (Dagnew, 1993) revealed that peasants living in Kolla agro-ecologies in particular are more vulnerable to serious disaster-induced food shortages than people who live in Dega and Woina-Dega areas. Household food shortages have been caused by **(a) recurrent mainly drought-induced production failures, and (b) the highly erratic nature of seasonal rainfall**, often resulting in total and/or partial crop losses and poor grazing pasture for their animals. People who live in such an agro-ecology often experience a high incidence of human, livestock and crop disease and pest outbreaks, as well as other environmental hazards. Peasants in this agro-ecology also have less opportunity for crop diversification practices to secure their household food needs compared to other agro-ecologies due to **high rainfall variability; and irrigated farming practices are non-existent (very rare).** These findings have important policy implications.

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Specific and valuable (emergency-development linked) policy support services are needed for the rural people with particular reference to people living in disaster-prone lowland areas in order to develop people's coping mechanisms. Proper disaster prevention and preparedness measures (i.e, comprehensive emergency relief-linked development strategies) should include the following alternative combination of support services as may be appropriate:

a) **establishing and continuously improving an early warning network down to the**
b) **community-levels;**
c) **timely and effective use of early warning information so appropriate policy decisions may be taken in good time;**
d) **Promotion of adaptable production technologies** (such as, the introduction of drought resistant and better yielding crop varieties, small scale irrigation techniques, improved farm tools, etc.) and developing local skills through appropriate training schemes.
e) **Diversifying rural household income sources,** such as through promoting different income generating activities or secondary income sources in disaster-prone areas greatly

contribute to family income stabilization and ensures food security in disaster periods. This includes cottage industries (e.g, handicraft, carpentry, pottery), petty trading, development of horticulture (gardening), etc.

f) **Promotion of food grain and seed reserves, livestock and feed preservation centers at strategic locations in drought-prone areas.** Although the approach may sound some what expensive, establishing livestock preservation camps to be run by government institution (MoA) would be important in order to counter the adverse effects of drought (ie, to save lives of animals from serious shortages of fodder and drinking water, health deterioration, and to minimize distress sales of animals) in vulnerable areas.

g) **Construction of ponds and watering points for animals, including water supply sources for human consumption in drought-prone areas**;

h) **Provision of better human and animal health services.** Previous studies (Dagnew, 1993) indicate in lowlands in particular, the problem of human and livestock disease outbreak in times of disaster (drought) has been a growing concern. **This needs an appropriate policy attention for: improving veterinary services to prevent animal deaths from serious diseases such as trypanosomiasis, anthrax, rinder pest, etc.; and improving public health facilities to prevent serious diseases such as malaria, typhoid, typhus, meningitis, etc.** This requires the strengthening of the community health extension services with particular focus on disaster-prone areas. This will have a direct impact on the productive capacity of households contributing to their resilience against disaster-induced crisis in communities.

i) **Provision of improved grain and livestock marketing facilities** such as:

j) **establishing/improving marketing infrastructures** (eg, establishing communication facilities, roads, opening new market centers in inaccessible areas);

k) **stabilizing market prices** (food supply and price regulations);

l) **facilitating for better terms of trade** between crop and livestock products in times of serious food shortages. During the periods of drought-induced stress the grain prices sharply increase, while livestock prices often sharply decrease. On the other hand livestock (e.g, oxen) price tends to increase post-disaster recovery period. This is a problem that requires a serious institutional policy attention for appropriate and sustainable solution in disaster-prone areas.

m) **Laying the foundation for longer-term solutions that include conservation-based development work**;

n) **Restoring soil fertility** by applying various measures of soil and water conservation; afforestation, and other appropriate technologies for improving both sustainable food crop and animal production; and

o) **Provision of appropriate training and extension education services to communities in disaster-prone areas to better manage disaster.**

All the above listed short and medium-term measures are vital packages of the overall strategy that need to be well incorporated and strengthened in the regular long-term development programmes for the regions with similar problems and resource endowments. Moreover, for disaster area management programmes to be effective, **contingency planning** is essential.

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In sum, policy makers must recognize and devise appropriate intervention measures to strengthen peasant households' existing useful coping mechanisms in the face of a hostile environment and to promote the development of new adaptive strategies. This raises policy issues which involve the above short and medium-term alternative intervention measures as packages of the overall development strategy, and will help increase household production-based incomes and decrease household vulnerability to crisis situations. Above all, **development strategies must be targeted** on the poor and the needy households because their plight is the most desperate.

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REFERENCES

AESE (1995). **Food security, Nutrition and Poverty Alleviation in Ethiopia: Problems and Prospects. Proceedings of the First Annual Conference of the Agricultural** Economics Society of Ethiopia (8-9 June, 1995).

Dagnew Eshete, (1995). `Differential Socio-economic Impact of Food Shortages and Household Coping Strategies: A case Study of Wolaita District in Southern Ethiopia', in: **Africa Development** Vol. XX, No. 1, 1995.

- - - - - - - (1993). **The Impact of Food Shortages On Rural Households of Different Income Groups and Their Crisis Coping Strategies: A Case Study of WolaitaDistrict in Ethiopia**. Ph.D. Thesis, Sussex University, Brighton.

- - - - - - - (1993). **Types and Roles of Community-Level Institutions: A Case Study of Wollo and Ogaden in Ethiopia**. Unpublished Report.

- - - - - - - (1993). **A Review of SCF-UK's Nutritional Surveillance Approach in Wolaita of Southern Ethiopia**. Consultancy Report Submitted to the Office of SCF-UK, Addis Ababa (Dec.1993)

- - - - - - (1994). **Food Grain Marketing, Distribution Mechanisms and Problems in Wollo and Adjacent Administrative Zones: Implications For Household Food Security and Policy.** A Draft Research Report Prepared for Save the Children Fund (UK) in Ethiopia, Addis Ababa.

Maxwell, S. (1992). `Food Security in Africa: Priorities for Reducing Hunger', in: **Africa Recovery**, No. 6:1-12.

Maxwell, S. and Frankenberger, TR. (1992). **Household Food Security: Concepts, Indicators,Measurements: A Technical Review**. Jointly Sponsored by UNICEF and IFAD, New York, 1992.

Maxwell, S. et al (1990). `Is Food Security Targeting Possible in Sub-Saharan Africa? Evidence From North Sudan, in: **IDS Bulletin**, Vol. 21, No. 3:52-60

Holt, J. & Lawrence, M. (1991). **An End To Isolation: The Report On The Ogaden Needs Assessment Study 1991**. London: Save the Children Fund (UK), October 1991.

Sen A. (1981). **Poverty and Famines: An Essay on Entitlement and Deprivation**. Oxford: Clarendon Press, 1981.

Chambers, R. (1983). **Rural Development: Putting the Last First**. New York: Longman Scientific and Technical, 1983.

CCRDA

- - - - - - (1989). `Editorial Introduction: Vulnerability, Coping and Policy, in: **IDS Bulletin**, Vol. 20, No. 2:1-7 (April,1989).

Longhurst, R. (1986).`Household Food Shortages in Response to Seasonality and Famine', in: **IDS Bulletin** Vol. 17, No. 3:27-34 (July, 1986).

Casely, D.J &Kumar, K. (1990). **Project Monitoring and Evaluation in agriculture**. London: John Hopkins University Press, 1990.

Casely, D.J. & Lury, D.A (1982). **Monitoring and Evaluation of agriculture and Rural Development Projects**. London: John Hopkins University Press, 1982.

Gittinger, J.P (1982). **Economic Analysis of Agricultural Projects**. EDI series in Economic Development. London: John Hopkins University Press, 1982

GOE (1996). **Food Security Strategy**. Prepared for the Consultantive Group Meeting 10-12 December, Addis Ababa 1996.

- - - - (1994). **National Food and Nutrition Strategy**. Addis ababa, may 1994.

- - - - (1981). **Guidelines To Project Planning in Ethiopia**. Addis Ababa: Development Projects Study Agency, 1991.

GOE/NOP (1996). **Population and Environment in Ethiopia**. Proceedings of the panel discussion held at Ghion Hotel, 1 February 1996, Addis Ababa.

UNHCR (1996). **Contingency Planning. A Practical Guide for Field Staff** (August 1996).

IDS (1981). **`Rapid Rural Appraisal', in: IDS Bulletin**, Vol. 12, No.4, 1981.

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Part IX

PROJECT PREPARATION, IMPLEMENTATION, AND MONITORING AND EVALUATION

By
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9.1 INTRODUCTION

Besides the low level of investment due to shortage of international capital, little foreign exchange earnings and low level of domestic saving, development effort in Ethiopia is hampered by the poor performance of projects. Failure to implement projects in line with the budget allocated, time schedule and objectives predetermined, is a common phenomenon among most of project implementation practices in Ethiopia.

Experience of project implementation in Ethiopia has shown that many problems which contributes for project failure have their origin in project planning. The success or failure of a project starts from the initial idea or inception of a project. Any mistakes committed at the beginning tends to appear through out the project life often multiplying in the later phase serving as breeding ground for more other problems.

Furthermore, the failure of so many development projects is partly attributed to reluctance on the part of project planner to appreciate the significance of past project practices. Projects are frequently designed as if time began with the project implementation schedule, past project failures and lessons from them are seldom examined critically and used as an input for planning projects.

The inefficiency, negligence and little attention given to **monitoring and evaluation**, in addition to other factors, have also impeded the success and reduced the efficiency and effectiveness of investment on development projects.

It is with this background that this section of project planning is included in the training. The intended objectives of this part of the training is to familiarize participants with:

- Basic concepts of project planning and practical issues associated with project cycles
- Techniques of project identification, formulation, and implementation and their application
- Common problems associated with project performances with reference to Ethiopian experience

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9.2 BASIC CONCEPTS

9.2.1 Projects

A project is the investment of ***capital*** in a time-bound interventions to create ***productive assets.*** In this definition capital refers not only to physical and financial resources, but it also includes the energy and inventiveness of people (i.e., human capital). Similarly, the assets created may be human, institutional or physical. Thus, projects are a way of concentrating and combining scarce human and material resources to achieve specific goals.

The key aspect that distinguishes a project from day to day operational activity is that a project is defined (restricted) in terms of objective, time, resource and location. That is:

- A project has a specific defined objective and certain expected outputs to fulfil its objective;
- A project is time-bounded (i.e., its starting and completion date is defined);
- Only a pre-determined limited budget is available to do the project; and
- A project is undertaken in a specific geographic location and has targeted beneficiaries.

Projects, over their limited time frame and resource, create assets, systems, schemes or institutions which continue in operation and yield a flow of **benefits** after the project has been completed. Projects differ from one another depending on the output they produce, the length of time they require and their area of emphasis. In this regard there are:

- Projects of long and short duration.
- Projects producing goods, services, knowledge (research, training), information (mineral exploration).
- Projects with their area of emphasis rural or urban, agricultural, industrial, transport etc.

The size of projects should be kept small close to the minimum size that is economically, technically and administratively feasible. Besides, if the project is too big in size there is a danger that high return from one part will hide low return from other part.

9.2.2 Policy / Strategy/ Programme/ Projects

Projects should be considered with in the framework of development policies and strategies. **Policies** are the overall development objectives that show the vision or the long-term desirable targets, which serve as umbrella or framework with in which development activities take place. Reducing poverty, improvement of income distribution, reducing regional imbalances, etc., are some examples of **policy statements**.

Development strategies are packages of ways and means by which available resources are put in their best use to achieve specified objectives (DPSA, 1990). For example to realise a national target of reducing poverty different strategies, such as enhancement of agricultural production, expansion of employment opportunity, increasing the provision of social service, etc. could be used.

Projects are essential tools through which development objectives are realised or translated in to practice[1]. In J.P.Gittinger's words, **projects are the cutting age of development** (J.P.Gittinger, 1982). However, the need to link appropriate policies to appropriate project is an increasingly important element for successful realisation of development objectives through the implementation of projects.

In realising development objectives one can use **projects or programmes**. **A programme** is a

[1] It should be known that in addition to projects economic policy instruments (taxation and other fiscal policies, monetary and credit policies, investment policies etc.,) play a crucial role in realising development objectives

coherent framework of action to achieve certain global objectives comprising separate sets of activities (grouped under different components), which are oriented towards the attainment of specific objectives. **Programme**, therefore, consists of interventions on a larger scale than a project and may actually include several projects whose specific objectives are linked to the achievement of higher-level common objectives. Thus, projects provide the detailed investment and management plans that should support the attainment of broader programme objectives.

The main advantages of the project approach:

- As projects are focused on a certain area, sector, issue, beneficiaries etc., it providesconceptual framework for gathering and analysing information on specific issues;
- It allows the role and responsibilities of the management to be clearly defined;
- It encourages conscious and systematic examination of alternatives; and
- It facilitates control of investment funds by both implementers and financiers.

The main disadvantages of the project approach:

- The project success in yielding the desired result depends on the quality of data used in the preparation of the project. Unrealistic assumptions about the project's output, input, prices, management etc. may lead to failure to attain objectives.
- Projects are too small in relation to the whole economy. It is a partial analysis focused in to a specific issues in a particular area compared to the wider national development issues. Thus it is very difficult to abstract their potential impact in the rest of the economy.
- Benefits (or costs) do not always lend themselves easily to measurement (as in the case of externalities; this will be discussed more extensively later in the course). This can render comparison of alternatives complicated.

9.2.3 Project Cycle

The project cycle concept aims to embraces two main points:

- Project development should pass through a series of consecutive steps to help ensure that projects are well planned, properly appraised, adequately financed and effectively implemented; and that
- Lessons learned during implementation should be feed back in to the planning process to improve the design and implementation of future initiatives.

Many versions of the project cycle have been produced, most of them having as their basis the idea that projects go through a number of clearly defined stages in the process of their establishment. A well known version is the one which is produced by UNIDO in 1979.

Although there are variety of project cycles depending upon the purpose and financier of the project, most of them highlight **important stages in the cycle**:

(a) Identification
(b) Preparation/ Formulation

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(c) Appraisal / Selection
(d) Implementation
(e) Monitoring and Evaluation

a) Identification

Identification is the stage at which the project is defined as an idea or possibility worthy of further investigation and study. At this stage more projects could be identified than actually pass through the remainder of the project cycle. As identification of project is the starting point in the project cycle, problems or weaknesses encountered in this stage, unless solved, will be carried over through out the remaining stages of the cycle. Thus, utmost care should be taken in identifying proper projects. Through a quick screening project proposals which are technically unsound, risky, have no market for their output, very costly in relation to their benefits etc. are eliminated at this stage.

b) Formulation

The formulation (preparation) stage involves the definition of alternatives for the project, followed by the selection and planning of the optimum alternative, covering such aspects as size, location, technical details, market and institutional arrangements.

At the formulation stages, the identified project idea will be elaborated in a more detailed study. All possible activities will be examined. The project will be clearly defined in terms of its goal, objectives, output activities and inputs. The investment cost and other financial calculation will be estimated more accurately. The project beneficiaries, assumptions and risks will be analysed at this stage. The formulation stage is where we will have complete information about the project.

c) Appraisal

Appraisal is the process in which all aspects of the project are reviewed, in order to make decision whether the project is implemented or not. Appraisal should cover technical, institutional, financial, economic, social and environmental aspects of the project. Appraisal is usually conducted by governments or donors or shareholders who will ultimately finance the project.

d) Implementation

No matter how well a project has been identified, prepared and appraised its development benefit can be realised only when it has been properly executed. Implementation is the stage at which the actual project construction is undertaken. It is at this stage that the largest proportion of the project cost spent.

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e) Monitoring and Evaluation

This is the stage where the results of the project are evaluated against the designed project plan. This stage consists of investigating and reviewing the effects of the completed project, to see whether the benefits which were planned to flow from it have been realised and whether these benefits have had their intended consequences. Further it is a stage which is useful for learning lessons from the project experience to use it in future project design.

9.2.4 Blueprint Approach vs the Adaptive Approach

a) Blueprint (Traditional Approach)

The project concept within the project cycle is some times known as the blueprint (traditional) approach. This is because, the project cycle suggests that projects need to be systematically and carefully planned in advance and implemented strictly according to the defined plan (the blueprint of the project).

The traditional project cycle, has been particularly well suited to infrastructure and capital intensive projects in stable economies with well established institutions and predictable government policies. The traditional project cycle is not easily adapted to the participatory, risky and volatile conditions.

The blueprint approach is too rigid and inflexible, that it places too much reliance on prior comprehensive data gathering, planning and control (all of which often appeared to be inadequate in developing countries) and that it did not give sufficient importance to the acceptability of the proposed intervention to intended beneficiaries.

As it was mentioned above the blueprint approach fits best to infrastructure and capital intensive projects. However, there is another important class of projects which are often people based occurring mainly in the agricultural, rural and social sectors. These projects basically involve institutional and human development activities whose success highly depend on the participation of the beneficiaries. In this case the blueprint approach needs modification. In the Blueprint approach participation has often been equated with explaining the project to key stakeholders instead of involving them in decision making. Project designs are not adjusted to changing conditions in a timely way. Furthermore, in the blue print approach, project designs are not adjusted to changing conditions in a timely way.

b) The adaptive approach

Based on the above considerations adaptive approach to development projects was introduced. The new cycle, essentially a learning cycle, recognises that development occurs increasingly in complex and uncertain environments that are not amenable to precise long term planning or centralised management. The adaptive approach copes with uncertainly and complexity of project environment by considering projects as policy experiments and planning them

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incrementally and adaptively by desegregating problems and formulating responses through a process of decision-making that joins learning with action. The adaptive approach comprises a four-stage sequence:-

(a) experimental
(b) piloting,
(c) demonstrating, and
(d) mainstreaming

The adaptive approach being a learning cycle has three basic stages of learning:

a) Learning to be **effective** in assisting intended beneficiaries to improve their living conditions or to attain other development goals;
b) Learning to be **efficient** in eliminating ineffective, unnecessary, overly costly or adverse activities and identifying methods that are appropriate for large scale application; and
c) Learning to **expand** the application of effective methods by creating appropriate and responsive organisation to carry out development tasks.

The adaptive approach is more applicable to projects in the rural and social sectors than projects in the industrial and infrastructure sectors, partly because rural and social development is intimately affected by the reaction of people (as project agents and beneficiaries) and is therefor less easy to plan and define in advance. By contrast the blueprint approach remains important for capital intensive projects where there is a paramount need to plan and account carefully in advance.

9.2.5 Project Environment

The project environment can be defined as the whole set of people, things and institutions which surround the project and inter-act with it. The project environment includes a whole range of factors, many of which will have a direct bearing not only on the way the project is actually implemented but also on its output and its intended impact. Therefore, it is vital that project planners and managers develop their ability to understand the characteristics of the project environment.

Although there are many models (input/output, actor/factor, etc.) which categorises the project environment, only one model (the degree of control) is described here. The degree of control model uses the A.I.C. concept to analyse the project environment.

A = **The appreciated environment**: made up of the conditions, agencies, institutions, persons who are outside the project organisations, which affect the project, but which are not influenced or controlled by the project management or financier. In such environment the project planner or manager must have to understand and assess the effect of this environment on the project.

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I = **The influenced environment** made up of persons, etc. outside the project organisation, who can influence the project and in turn can be influenced by the project. The project management power in this environment is persuasion and guidance.

C = **The controlled environment** made up of persons and activities within the control of the project. Thus, the project should be planned in such a way that control over these elements of the environment is specifically provided. The power available for the project management over this environment is directory, instruction and control.

9.3 PROJECT IDENTIFICATION

9.3.1 Sources of Project Idea

In principle, project identification should be an integral part of the macro planning exercise, with sectoral information and strategies as the main source of project ideas. In practice, however, projects may not be derived from national or sectoral plans. It may depend on the personal experience and imagination of those entrusted with the task of initiating projects or the interests of financiers and donors may influence identification of projects. In some cases project ideas may arise as a response to crisis or threats to public welfare or to take advantage of opportunities. However, in general one can distinguish two levels where project ideas are born, the macro level and the micro level.

At a macro level essential information needed for project identification could be obtained by reviewing:

- National policies, strategies and programmes;
- Regional and sectoral policies, strategies, and programmes;
- General surveys, resource potential surveys, investment opportunity survey, master plans, census, etc.;
- Economic evaluation reports highlighting constraints, problems, needs and demands; and
- Development experience of other countries, etc.

At a micro level project ideas emanate from:

- Analysis of company goals;
- New demands imposed by customers and suppliers;
- Initiatives created in response to incentives provided by the government; and
- Technological change imposed by results of R&D or efficiency improvement.

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9.3.2 Methods of Project Identification

a) Analysis of Problems

In a country like Ethiopia, where many problems remain unsolved, and the provision of basic human needs is at its rudimentary stage, most problems and ideas for projects have been around for several years before getting the attention of the authorities. In such cases the project planner has to:

- list all the problems in the area of his/her interest, and then rank the problems in order of their importance; and
- finally select one major problem for further study.

Decision on which problem to address among other factors may depend on:

- the extent of the problem (its coverage in terms of area and number of people affected);
- consequences of the problem (the damage it may create);
- its effect on other problems;
- amenability to solution (its practicality); and
- priority of the government and the community.

After picking-up a problem, the next step is to identify possible interventions for solving the problem. This task requires a careful analysis of the factors related to the problem and identification of the major cause or source of the problem. This can be done by using **problem tree analysis.**

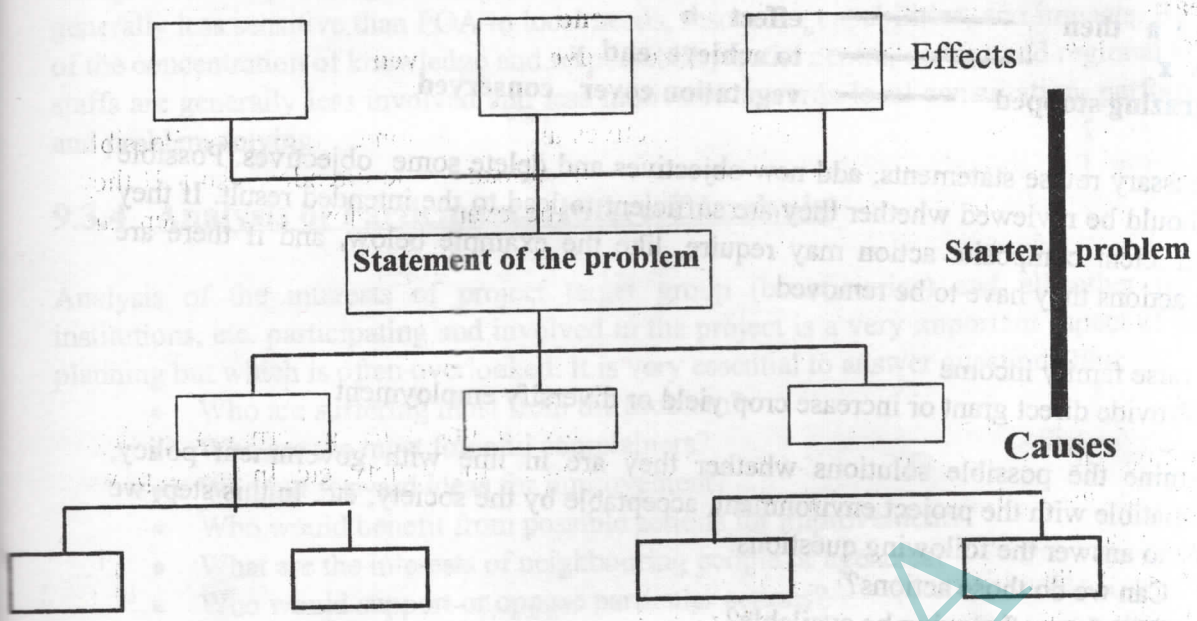
Basic Procedures in Problem Tree Analysis:

- Step 1: Identify major problems existing within the stated problem situation.
- Step 2: Write up short statement of the 'starter problem/core problem'.
- Step 3: Write up causes of starter problem.
- Step 4: Write up effects of starter problem.
- Step 5: Form a diagram showing the cause-effect- relationship in form of a tree.
- Step 6: Review diagram as a whole and verify its validity and completeness.

Problems are always expressed in negative sense. After listing all the problems in an area or a sector we have to select the core problem. The core problem is the negative statement which has the most links of relationship with other mentioned cause and effect. After the core problem is selected the various cause of the problem situation are identified and listed below the core problem (the problem statement). Similarly the various effects are identified and listed above the problem statement. In the problem tree vertical links can be used to show cause - effect relationship, while horizontal links are used to show joint cause and combined effects.

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The Problem Tree



b) Objectives Analysis

Formulating a project from problem tree to project concept and objectives is a set of techniques to:

- describe the future situation that will be achieved by solving the problems;
- identify potential alternatives for the project;
- clarify the intentions of the project; and
- identify the means-end-relationship.

Basic Procedures in Objective Tree Analysis

1) Restate all problems of the problem tree in to positive conditions that are desirable and realistically achievable. A problem is a statement of negative condition; an objective will be achieved by a positive action to overcome that condition. See examples in the table below.

PROBLEMS	POSITIVE ACTION	OBJECTIVE
Children are underfed	Increase food for children	Children eat adequate food
Families have low income	Raise family income	Families have adequate income
Crop yields are low	Increase yields of crop	Crop yield reach regional average
Health coverage is low	Increase health services	Health coverage reach the national average

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2) Examine the means-end-relationship to assure validity and completeness of diagram i.e. to check if each positive statement is reasonable for a particular working conditions. The casual logic of the cause-effect-relationship will be transformed in the operational logic of the means-end-relationship.

If cause a then effect b
Means x to achieve end y
Overgrazing stopped vegetation cover conserved

3) If necessary revise statements, add new objectives and delete some objectives. Possible solution should be reviewed whether they are sufficient to lead to the intended result. If they are not sufficient composite action may require, like the example below, and if there are redundant actions they have to be removed.

Effect: raise family income
Action: Provide direct grant or increase crop yield or diversify employment

4) Examine the possible solutions whether they are in line with government policy, compatible with the project environment, acceptable by the society, etc. In this step, we have to answer the following questions:

- Can we do those actions?
- Will future financing be available?
- Do those actions fit the government policy?
- Are the risks acceptable?
- Can we try another way?
- Will the interest groups co-operate on those actions?
- Will the benefits go to the needy groups?
- Do those actions fit market conditions?
- Do those actions fit natural conditions and cycles?
- What will happen to the result if this action fails?
- In what area can we apply those actions?
- Who can do these actions?
- Are the interests of minorities and the disadvantaged people protected?

9.3.3 Approaches to Project Identification

There are two approaches of project identification; the **comprehensive planning (top-down) and the participatory planning (the bottom-up)**. **The participatory approach** emphasises the consultation of local people and project beneficiaries in identifying projects. **Community consultation and participation** are currently widely used by donors as an effective way of identifying and analysing local problems. This approach provides project planners and executing agencies with acceptability, congruence of needs and solutions, mutual understanding, realisation of felt needs, participation and shared responsibility, feedback and direction.

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In comprehensive planning (top-down) approach, project idea emanates from planning units and central agencies, experts by reviewing national, regional and sectoral policies identify projects. This approach assumes the existence of authoritative and objective decision-makers whose action can, if they are carried out correctly, ameliorate economic and social problems. Comprehensive planning concentrates power over resource and decision making, and is generally less sensitive than POA to local needs, resources, capabilities, and impacts. Because of the concentration of knowledge and responsibility at the centre, district and regional project staffs are generally less involved and less motivated towards local consultation, performance and problem solving.

9.3.4 Analysis of Participants (Interest Analysis)

Analysis of the interests of project target group (beneficiaries) and all other persons, institutions, etc. participating and involved in the project is a very important aspect of project planning but which is often overlooked. It is very essential to answer questions like:

- Who are suffering most from the problem?
- Who are the most forceful complainers?
- Who put forward ideas for improvement?
- Who would benefit from possible actions for improvement?
- What are the interests of neighbouring people or agencies?
- Who would support or oppose particular actions?
- Who would not care for a particular action (i.e., neutral or disinterested)?

A) Basic Procedures In Interest Analysis

- Collect: Write down all persons and groups connected with or influenced by the project;
- Classify: Categorise them (target group implementing agencies ...);
- Describe: Characterise (structure, status);
- Analyse: Interests, motives, potentials, problems of each group;
- Evaluate: Identify consequences for the project work.

b) Detailed interest analysis

- **Characteristics**
  - Quantitative aspects (number, % , quota, ...)
  - Social characteristics (religion, culture, ...)
  - Status (formal, informal, ...)
  - Structure (organisation, person, ...)
  - Functions of the group.

- **Interests**
  - Needs and wishes
  - Interests (openly expressed, hidden, vested)
  - Motives (hopes, fears, expectation, ...)
  - Attitudes (friendly , neutral, hostile; attitudes towards implementing agencies ...)

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- **Potentials**
  - Strength of groups (resource, rights, monopolies, ...)
  - What could the group contribute to the project?

- **Problems**
  - Weaknesses or shortcoming of the group
  - What could the group refuse to give to the project?
  - Main problems (group's point of view)

- **Implication For Project Planning**
  - In which way should the group be considered?
  - Which action should be taken (in regard to the group)?
  - How should the project react towards the group?
  - The planning team decides on the criteria for analysis of all groups, institutions etc.

After the interest analysis is made, the project planner will have a clear picture of potential supporter and potential opponents of the project, which have to be considered in the process of formulating and implementing the project. However, this interest analysis should be tried again and again in the process of formulating and implementing the project, as there could be changes in some categories as people learn more about the project.

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9.4 *PROJECT FORMULATION*

9.4.1 *Project Framework (Background)*

One has to distinguish between Logical Framework Approach (LFA) and Logical Framework Matrix (LFM). LFA involves **problem analysis, objective analysis, participant analysis, alternative analysis**, etc.; while the output of this approach is the **vertical logic of the Matrix**.

The project framework (or logical framework matrix) is an analytical tool which helps planners and managers to think through the logic of their projects by making the logical relationship between inputs, activities, outputs and purpose more transparent. The logical framework matrix requires the planners to specify how the activities and outcomes will be monitored and evaluated. It provides a basic analytical structure; helps to establish some common planning principles among users, and is a very useful way of presenting a summary of what a project intends to do and how.

The logical frame work (project frame work) was initially **developed in 1969** for the USAID. It was **originally initiated as a project evaluation tool** to help USAID increase its accountability to the congress.

However, widespread use and **application of Log Frame begun in 1980's** after the **Germans used Log Frame approach as a participatory planning tool** involving project beneficiaries and other key stakeholder groups in the planning process. Since then various forms of Log Frame were used by different donors and project planners.

The major contribution of the logical framework analysis is the teamwork that is undertaken in the process of preparing the **Log Frame**. It is the team process and the corresponding exchange of ideas that increases the over all quality, appropriateness, realism, and responsiveness of the design. Without the team process, Log Frame approach is less effective. Thus, the Log Frame approach is generally believed to have enabled project planners with:

a) more informed and realistic project designs;
b) more appropriate technological packages;
c) greater responsiveness to beneficiaries needs; and
d) increase commitment on the part of project teams (and beneficiaries) to the project implementation process.

9.4.2 Logical Framework Matrix

The logical framework matrix is a powerful tool for summarising all the essential elements of a project. By presenting the whole project in one matrix, **project planning matrix** provides a summary of:

- Why a project is carried out?

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- What a project is expected to be active?
  - How the project is going to achieve these results?
  - Which external factors are crucial for the success of the project?
  - How we can assess the success or failure of the project?
  - Where to find the data required to assess the success of the project?

9.4.3 Components of Logical Framework Matrix

Although the degree of details and complexity of the framework depends on the nature and size of the project, **the project framework consists of a matrix which has four columns and four or five rows** (depending on whether or not activities and inputs have been combined).

The **vertical logic** identifies what the project intends to do, clarifies the casual relationships, and specifies the important assumptions and uncertainties beyond the project manager's control (columns 1 & 4).

The **horizontal logic** provides a framework for project monitoring and evaluation through the specification of **key indicators of measurement, and the means by which the measurement will be verified** (column 2& 3).

The major components of the project framework matrix are arranged in columns. These columns are:

- Column - 1 The narrative summary
- Column - 2 Objectively veritable indicators
- Column - 3 Means of verification
- Column - 4 Important assumptions

a) Narrative Summary

The narrative summary systematically presents the essential elements of the project, viz:

- project goal (overall objectives);
- project purpose (objective)
- project result (Output)
- activities
- resources required (inputs)

In some cases the narrative summary further includes **tasks**. In these case, the Log Frame is difficult to comprehend because it will be burdened by details.

The Project Goal

The goal of the project is the higher order objective towards which the project is expected to **contribute**. A single project can not fully attain its goal (the over all objectives). The attainment of the goal requires implementation of many other projects and may need longer

CCRDA

time beyond the life span of the project. (Thus, the key word to the concept of goal is to contribute).

Improved health conditions, improving the living standard of the people, improved nutritional status, reduced crimes etc., are some examples of project goals.

Purpose of the Project

The project purpose (objectives) is the near term impact or the immediate result of the project. In other words it is the change (improvement) that the project is expected to achieve. The key word for the concept of the project purpose is to achieve.

Project purposes are generally described in terms of the factors that contribute to the achievement of the project goal - overall objectives (e.g, increased consumption of safe drinking water, increased health service coverage, improvement in the level of nutrition among poor families, more informed and capable people, improved local management system, etc.).

The purpose statement should be a single objective, stated as explicitly as possible. To avoid multiple objective statements, be alert of conjunctive phrases which masks compound objectives, such as: in order to, by means of, which will lead to, through, etc. For example, a project purpose stated as **"to increase rice production, in order to increase farmers' income"** has a weakness as the accomplishment of one is not synonymous with the attainment of the other; but is merely an implicit assumption. Without stable prices for instance, farmers income could be unaffected, or even reduced. In such cases, the two objectives should be separately stated with the intended causative relationship defined at separate levels with independent indicators of achievements.

Results of the Project (Output)

Outputs refer to the specific result and tangible products produced by performing numerous activities and tasks throughout the life of the project with the application of available resources (inputs). Thus, outputs are the key components of the project and they are the result for which the project is held directly accountable.

The term outputs is often used to mean the physical outcome of a production process. However, in this case output of the project could be physical or conceptual quantifiable or non quantifiable.

Construction of wells for the provision of safe drinking water, construction of clinics which provides advice and medication for patients, irrigation scheme that allows farmers to increase production are examples of results/outputs of a project.

Activities

Activities are the actions undertaken by a project to produce the planned outputs using the resources allocated (inputs). Producing one output usually requires carrying out a number of

CCRDA

activities. Activities should not be over-detailed in the Logframe matrix; it should be a brief summary of major actions or components for each output just enough to outline the strategy for accomplishing each and to provide basis for work-breakdown. The key word to the concept of activity is **to do.**

Inputs

Inputs are the resource (financial, material, technical, humanpower, etc.) to be used by the project for the production of project output.

b) Objectively Verifiable Indicators (OVIs)

Once the logical relationship between the elements of the project is established in the narrative summary column (vertical logic), the next step is to define realistic and plausible measure of success at each level of the project plan. In the Log Frame this stage is represented by the objectively verifiable indicators column.

The OVIs add measurable detail to each of the general statements presented in the narrative summary column. As much as possible, the indicators should be precise and quantifiable, in order that these can be no ambiguity about success or failure in achieving them. In other words, the indicators should be objectively verifiable (i.e., two independent observers would come to the same conclusion and the result would be communicated in an unambiguous way to a non-observer).

It is essential that, the OVIs are negotiated with beneficiaries and other key stockholders; and that they define success criteria that are important and meaningful to them.

c) Means of Verification (MOV)

Means of verification (MOV) is the source of data that enables verification of the status of each indicator. Common MOV include project records, progress reports, interviews of project staff and beneficiaries, data collected by other agencies and surveys, etc.

i) At the goal level, since this is beyond the project operational level, the data is usually found in well established secondary sources such as national publications which is absent in our country for many sectors.

ii) At the purpose level source of data could be from:
- infrequent evaluation survey conducted by the project.
- secondary sources statistical bulletins, national census
- periodic project progress reports.

iii) At the output and activity level, periodic (monthly) progress reports are important sources of data.

CCRDA

The means of verification confirms that the chosen indicators are realistic since that specify how they are to be verified. They also facilitate project evaluation by establishing in advance how the criteria for success should be verified.

d) Assumptions

Assumption are the key conditions, existing in the external environment, which would affect the progress or success of the project but over which the project has no control. Understanding and evaluating these factors is an essential part of good project design. The important thing is that the assumptions identified should be monitored during project implementation to give advance warning of implementation constraint. Failure to realistically assess these constraints or risk is a common source of project failure.

Log Frame demands that all important hypotheses, assumptions and risks relevant to a programme are made explicit. One should start working through the assumptions by starting from the bottom of the Log Frame. Identify assumptions at the level of activities, outputs and objectives. Each level should contain the necessary and sufficient conditions for the next level above to be achieved. The output must exist before the purpose can be achieved. However, the existence of the output alone does not guarantee the achievement of the purpose. It is only when the assumption is correct that the project purpose could be achieved.

The following are examples of assumptions:

- Prices of inputs and outputs should remain stable (no major price changes).
- Local institutions will collaborate in project planning and implementation.
- Input supplies are adequate and timely.
- Government policy does not change in the short-run, etc.

CCRDA

9.5 *EVALUATION OF PROJECTS*

Decision to invest on a project should be made very carefully because of the high opportunity cost of investment, the irreversibility of investment decision, and the long-term impact of projects. Especially when investment resources are scarce like the situation in poor countries, the rational allocation of resources and investment decision is of primary importance. The governments in these countries in order to successfully play their role, have to deploy the resources at their disposal in the most rational way. There are two methods of evaluating projects depending on their nature and objectives. These are **Cost Effectiveness** and **Cost Benefit Analysis.**

9.5.1 Cost Effectiveness

This method is used to analyse non tangible projects (i.e., projects whose benefits are not measurable but their costs are). It is mainly applied to social projects, like education, health, etc., whose benefits are not easily converted in to monetary terms. It is a criteria used to select the most efficient/cheapest way of performing a given task.

Cost effectiveness can be achieved either by minimising the amount of investment cost per unit of output produced or by maximising the amount of output produced per unit of investment.

9.5.2 Cost Benefit Analysis

a) Commercial Profitability Analysis

Commercial profitability analysis is concerned with assessing the feasibility of a new project from the point of view of its financial returns. The projects direct benefit and costs are calculated at the prevailing (expected) market prices. The analysis is used to appraise the soundness and acceptability of a single project as well as to rank projects on the basis of their profitability. Commercial profitability analysis comprises:

- investment profitability; and
- financial analysis.

Investment profitability analysis

Investment profitability analysis deals with measurement of profitability of the resource used on the project. In other words, it is an assessment of the potential earning power of resource committed to a project without taking into account the financial transaction occurring during the project life. Investment profitability analysis is also an assessment of the feasibility of investment for each financier of the project (equity holders, joint ventures, financial institution). Investment profitability analysis can be divided in to two categories (static measurement and dynamic measurement).

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i) Static measurement

Simple rate of return = the ratio of net profit in any normal year to the initial investment. If this ratio is grater than the current rate of interest in the capital market, the project is considered to be good.

R = F / I where, R = Simple rate of return on total investment
F = Net profit in a normal year after making provision for depreciation, interest charge, and profit taxes
I = Total investment comprising equity and loan

Pay back period is the length of time from the beginning of the project until the net value of the incremental production stream reaches the total amount of capital investment, in other words it is the time needed for a project to recover its total investment through its net cash earnings. This method fails to consider earnings after the pay back period.

Pay-back period and the simple rate of return are referred simple or static since they do not take in to consideration the whole life span of the project, but rely on one model period (most frequently one year) or at best on a few period. Furthermore, their application is based on the projects annual data (i.e., all inflows and outflows enter the analysis at their nominal non-discounted values as they appear at a given time during the project's life).

Dynamic measurement provide the financial performance of the project over the entire life span of the project. These measures are considered to be more reliable than the static measures which are determined for a single period. The investment analysis of development projects must take account of time since investing means incurring costs in the hope of drawing grater benefits in the future.

ii) Compounding and Discounting

A Birr today worth more than a Birr in the future. This is because money has time value due to the following reasons:

- In general, people prefer current consumption than future consumption (psychological explanation).
- The remunerative power of money, i.e., money can be employed productively to generate positive returns. One can earn at least the banks interest rate if he decides to postpone his current consumption (opportunity cost of capital).
- The general rise in price reduces the purchasing power of money through time.

CCRDA

Net Present Value (NPV) is defined as the difference between the discounted sum of benefits and the discounted sum of costs.

$$NPV = NCF_0 + (NCF_1 * R_1) + (NCF_2 * R_2) + \ldots\ldots + (NCF_n * R_n);$$

Where, NPV = Net Present Value

NCF = Net Cash Flow of the project at year 0, 1, 2, ...n

R = Discount factor in year 1, 2, 3, ...n

The projects NPV other things being equal, increases with large cash inflow but decreases with a high discount rate and cash outflow. Mathematically this can be written as:

$$NPV = \sum_{t=0}^{N} \left(A_t / (1+k)^t \right)$$

$where \quad t = 0 \cdots n$

$A_t = net\ cash\ flow at\ time t$

$k = a \quad discounting rate$

The term $(1+k)^t$ is also referred to as the discounting factor

A project is acceptable if its NPV ≥ 0

A project is rejected if its NPV < 0

The Internal Rate of Return (IRR) measures the discount rate that makes the NPV equals to zero. It is the maximum interest that the project could pay for the resource used if the project is to recover its investment and operating costs.

$$NPV = \sum_{t=0}^{N} \left(A_t / (1+R)^t \right) = 0$$

$where \quad t = 0 \cdots n$

$A_t = net\ cash\ flow at\ time t$

$R = \quad INTERNAL \quad RATE OF \ RETURN (IRR)$

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Comparison of Appraisal Techniques

Method	Advantages	Limitations
Payback	Simplicity Emphasis on speed of return, hence preference for least risky projects Evades the hazards of dealing with cash flows in future periods	difficulties in stipulting investment outlay when it is staggered over time ignores total cash flows (beyond payback period) ignores time value of money
Simple Rate of Return	Percentage based valuation Based on profits Focus on performance	ambiguities in computation techniques used ignores scale of investment based on the accounting notion of profits ignores time value of money
NPV	takes account of time value of money focus on project's worth, hence impact on owners' or investors' wealth and utility takes account of the investment scale assumes interim re-investment of proceeds at cost of capital solution always determinate conceptually clear and theoretically superior to IRR	does not give an idea about the safety margin of the investment varies under different discount rate favours projects with short term benefits
IRR	takes account of time value of money investors' preference for rate of return concept gives an idea about the safety margin of investment probably superior to NPV from a practical point of view (is based on a rate of return concept and does not require knowledge of a discount rate)	does not take account of the investment scale assumes interim re-investment of proceeds at the project's own rate of return solution not always determinate (multiple IRR or no solutions at all possible) runs into problems with mutually exclusive projects

CCRDA

Financial analysis

i. Liquidity Analysis

Financial analysis is an assessment of the adequacy of the flow of cash through out the construction, running in and operational periods. Cash flow data which is used in the investment profitability analysis do not include all outlays and receipts affecting the projects cash balance, it only includes cash flow that are related to the flow of real resources used in the project. Liquidity analysis deals with the cash position of the project taking in to consideration the financial transaction which are not related with the flow of real resources such as:

- Debt service charges both principal and interest
- Payment of dividends
- Payment of insurance and re-insurance

Liquidity analysis helps to ensure smooth flow of cash and avoid cash deficits in some years of the project life.

ii. Capital Structure Analysis

In the course of project preparation the capital structure envisaged should be looked at closely with a view to judging the enterprises financial viability. In general, the combination of equity capital and loans will determine the project's equity-debt ratio, which is the most commonly applied indicator of an enterprise's capital structure.

DER = L/Q where, DER = Debt - Equity Ratio
L = Long-term loans
Q = Equity

b) Economic Analysis

Cost-Benefit Analysis Why Economic (ECBA)?

i) The scope of commercial cost benefit analysis is limited on finding the profits of projects in monetary terms and not on its real contribution to the welfare of the society. Projects may be implemented to achieve other basic national objectives, such as:

- Balanced regional development;
- Increasing the standard of living of the poor;
- Increasing the provision of basic services to the society, etc.

ii) Commercial profitability covers only direct effects leaving aside externalities both benefit and cost.

- Provision of infrastructural service in an area has indirect positive effect (indirect benefit which is not considered in financial analysis.
- Pollution of a chemical plant has negative impact (indirect cost).

CCRDA

iii) Commercial profitability analysis uses market prices which may not reflect the economic prices of outputs and inputs due to imperfect market.

- Distorted national price structures
- Restricted labour movement
- Currency overvaluation
- Strong local industry protection

iv) Commercial profitability uses market discount rate which may not reflect the social time preference of resources (social discount rate)

Principles of Economic Cost Benefit Analysis

- **With and without principle:** is the analysis of the incremental effect/impact of the project if implemented or not. It should be clear that the with and without principle is not the same with before and after analysis, because with and without analysis allows the analysis to distinguish the changes due to the project from those which would have happened without the project.
- **Every thing within the border principle:**
  - All benefits and costs attributable to the project are taken into account without considering special beneficiaries.
  - All external effect are taken into account, i.e., all costs and benefits to other individual and institutions affected by the existence of the project.
- **Shadow pricing principle:** tries to correct distorted market prices and establish prices that reflect the opportunity cost of resources forgone to the society. Thus, it is a reliable indicator of economic value when price distortion exists.
- **The selective valuation principle:** tries to identify the major project variable which should be subject to economic valuation. Resources which prominently figure out in the cost and benefit of the project at market price and input and outputs whose prices are distorted should be considered in the process of selecting project variables subject to economic valuation.
- **Principles of equal treatment:** of all projects states that projects should be treated equally during evaluation by using some parameters derived from the national context. These parameters should be equal for all projects.

9.5.3 Appraisal Criteria and Investment Decision

Though proper selection among projects takes place at the appraisal stage of the project cycle, many projects might be dropped by the planner due to many reasons before they reach the appraisal stage. It is only those who managed their way through to the appraisal stage that are legible for appraisal. Thus, selection of projects starts at the identification stage and continues through out the project cycle as the planner gets more and more information about the project. However, in the criteria for evaluating projects are mainly technical and micro in nature. At the stage of appraisal, projects are evaluated against broader and multifaceted criteria. Project designs must be subject to appraisal, the detailed checking of its evidence, its logic, its judgement and its assumptions. Thus, appraisal checks whether the project:

CCRDA

- Can be done;
- Whether it is worth doing; and
- Whether the proposed project is the best to solve the problem.

Structure of the appraisal process

The flow of questions in the appraisal process can be categorised in to the following eight streams:

1. **Rationale:** Are the logical connections between the situation—problems identified—Project concept—objectives—components—output—activities—the situation?
2. **Social:** Do project activities and results fit social and cultural conditions, trends, and policies particularly in terms of social justice?
3. **Environmental:** Do project activities and results minimise damage and maximise improvements to the environment?
4. **Financial:** Does the project improve financial flows of agencies, business and persons?
5. **Economic:** Does the project make a net gain to the economic conditions over time, over area and over social groups?
6. **Technical:** Are the ways and means proposed capable of achieving the project objectives?
7. **Institutional:** Do project activities fit in with and strengthen the organisations involved and their method of operation?
8. **Sustainability:** Are the innovations from the project sustainable in the area and repeatable in areas with similar problems?

CCRDA

9.6 *PROJECT IMPLEMENTETION*

Implementation of project involves a series of activities which needs to be planned, operated and controlled. The logical framework matrix could be an important starting point for planning the implementation of the project. Based on the information (about inputs, activities, output, etc. of the project) provided on the narrative summary column of the logical framework matrix, the project is divided in to manageable components or activities. This is generally referred to as the **Work Breakdown Structure** (WBS) or **Action Plan**. Four primary factors can be determined for each individual activity, each activity being a task which can be carried out independently from other project activities. These are the:

- sequence of project activities;
- resource requirements for undertaking the activity;
- estimated time it will take to complete the activity; and
- responsibility for undertaking it.

9.6.1 Action (Work) Plan

Action plan is a plan (Schedule) for converting the inputs (material, funds, knowledge, etc.) into outputs. It is the timetable of the activities to be under taken to produce the desired output.

The preparation of action plan must start at the initial stage of project planning, and it should be rectified and detailed using the additional data obtained at various stages of project cycle.

Preparation of detailed action plan is a highly technical task, which requires specialists pertinent to the activities to be performed. However, all action plans must contain certain information and must fulfil minimum standards.

a) Contents of Action Plan

A good action plan for implementation of a project must contain the following essential items:

1. Description of each output and major subdivision, i.e., the amount to be produced, the length of time it needs, the amount of money it requires.
2. The major break-down of project activities to be under taken to produce each output. The amount & types of activities to be performed, the length of time it needs, the amount of money it requires.
3. The relative share of each group of activity out of the total activity in the project. In comparison with their contribution (time to be consumed, cost to be spent and importance attached, etc.).
4. If the project is on-going, the status of the project at the beginning of the year should be mentioned and for all projects the cumulative status of the activities at a definite time interval should be calculated and shown.

CCRDA

5. Major events should be selected (i.e., happenings) as a "Mile stone" for indicating progress of the project. The specific point in time that an event or happening is to occur should be clearly identified so that it can be mentioned at a later date.

b) Salient Features of Action Plan

1. **The work plan should be realistic**: It should take into account consideration both internal and external factors which may affect the activity of the project. It should foresee potential problems, which will hinder progress, etc.
2. **The work plan should be intelligible**. It should be presented in a simple and transparent way so that any uniformed reader could understand how the planned output to be produced and what the current work status should be.
3. **The work plan should be informative**. It should provide information about the project as much as possible.
4. **It should be amenable;** i.e., it should be prepared in such a way that the project activity could be monitored and evaluated at any point in time.

9.6.2 PERT/CPM Net Working

PERT (Programme Evaluation Review Technique) and **CPM (Critical Path Method)** are project management techniques which have been created to plan, schedule, and control complex projects.

There are many variations of CPM/PERT which have been useful in planning costs, schedule man power and machine time. CPM/PERT can answer the following important questions:

- How long will the entire project take to be completed? What are the risks involved?
- Which are the critical activities or tasks in the project which could delay the entire project if they were not completed on time?
- Is the project on schedule, behind schedule, or ahead of schedule?
- If the project has to be finished earlier than planned what is the best way to do this at the least cost?

a) Essential Steps in CPM/PERT

1. Define the project and all of its significant activities or tasks. The project (made up of several tasks) should have only a single start activity and a single finish activity.
2. Develop the relationship among the activities. Decide which activity must precede and which must follow others?
3. Draw the "network" connecting all the activities. Each activity should have a unique event numbers. Dummy arrows are used where required to avoid giving the same numbering to two activities.
4. Assign time and/or cost estimates to each activity.

CCRDA

5. Compute the longest time path through the network. This is called the **critical path**.
6. Use the network to plan, schedule, monitor and control the project.

Five useful questions to ask when preparing activity Network:

1. Is this a start activity?
2. Is this a finish activity?
3. What activity preceeds this?
4. What activity follow this?
5. What activity is current with this?

Some activities are serially linked; the second activity can begin only after the first activity is complete. In certain cases, the activities are concurrent, because they are independent of each other and can start simultaneously.

Each activity in a CPM/PERT network is represented by an arrow symbol. Each activity is preceded and succeeded by an event, represented as a circle and numbered.



CCRDA

9.7 MONITORING AND EVALUATION (M&E)

9.7.1 The Need and Role of Monitoring and Evaluation

In a country like Ethiopia, where project planning is in its rudimentary stage and project implementation is carried out in a restrictive situation, the execution of projects is immersed in problems both foreseen and unexpected. Further more, the dynamic and complicated environment, in which projects are performed, makes the prevalence of problems inevitable even for projects carried out under ideal planning and implementation conditions.

Therefore, regardless of the quality of the plan, successful execution of projects is unthinkable without organising efficient M&E system, through which actual and potential problems are identified and solved.

M&E as part of integrated management system have the following purposes:

1. To ensure that implementation of projects/programmes are kept in line with the time scheduled, resource allocated, and objectives predetermined.
2. To provide a flow of timely information to the stakeholders about the progress and achievements, of the project.
3. To identify projects/programmes lagging behind schedule, costing more than the budget allocated and deviating from their objectives, analyse the cause, and provide remedial solutions.
4. To identify actual and potential problems, and enhance learning and understanding of the reason for successes and failures, provide information for decision making.
5. To assess the extent to which projects are achieving their objectives in an economical and timely manner.
6. To assess the impact, relevance and sustainability of projects, etc.

Through fulfilling the above functions M&E play important and significant role in the process of economic growth. Among these roles the following deserve mentioning:

1. Keeping the implementation of projects in line with their timetable and budget allocation, M&E ensures that resources are used for the intended purpose and saves resources that could have been wasted through cost over-run and delay of project completion.
2. By ensuring early project completion M&E will facilitate the provision of resources for other development projects.
3. By providing information of the strength and weakness of implemented projects and disseminating lessons from experience, M&E improves the quality of planning and its applicability.
4. The Responsibility of providing information for the M&E system has facilitated the organisation of integrated information system and the culture of using it.
5. The accountability of implementing agencies for not performing projects according to their plan has entailed the organisation of M&E system at all levels starting from the project to the centre.

CCRDA

6. By organising information on projects, it serves as a data bank for planners researchers, donors, etc.

In general, the aims of both monitoring and evaluation are to improve the overall management of programmes/projects; and to enhance their performance by providing of information and feedback on the implementation and performance of programmes/projects to all parties concerned.

Every project document should include Monitoring and Evaluation plans. The M&E plan should answer the question: when work plans and progress reports are prepared? When, how, and by whom will the programme/project be evaluated?

a) Monitoring

Monitoring is a management process which systematically seeks to supply to the stakeholders information on the progress of implementation of a programme/project in order to facilitate timely decision making. Thus, it is the continuous or periodic review of programme/project implementation by management to assess delivery, identify difficulties, ascertain problem areas, and recommend remedial actions.

The purpose of monitoring is to:

- ensure that the project/programme is making progress;
- identify deviation from the original plan;
- measure effectively of management and financial soundness;
- measure effectiveness of the delivery of inputs;
- on line assessment of impact; and
- assess understanding and interests of stakeholders.

Thus, monitoring is primarily concerned with the delivery process, ensuring that inputs through activities, are transformed into outputs, and analysing their quality and quantity.

b) Evaluation

Evaluation is a management process which attempts to determine as systematically and as objectively as possible, the relevance, effectiveness, efficiency, sustainability and the impact of activities in the light of pre-determined objectives. Thus it is a systematic process which assesses both the extent to which the stated objectives have been achieved and the worth or value of a project/programme. It involves both observation and measurement and then comparison of what has been observed with some criterion or standard of what is considered an indication of good performance.

CCRDA

Why Evaluate?

The following are some of the reasons why a project/programme is evaluated:

- To examine the clarity of the project objectives, the ease with which they can be measured, and the possibility of their being achieved;
- To assess how effective/successful the work is, and what progress it is making towards achieving its objectives;
- To find out what impact the project is having;
- To see how efficient the work is, in terms of using resources;
- To look at the long-term implications (whether the work is sustainable or not);
- To show donors and others that the activities of the project had an impact;

What obstacles are there to effective evaluation?

- When the project is poorly designed and confuses its objectives with the results expected from the project;
- When the objectives of the project are vaguely defined or impossible to measure;
- When those in charge of the project do not wish its weaknesses to be revealed;
- When information systems are deficient or lack credibility; and
- When personnel feel betrayed because the evaluation does not satisfy their expectations of the project.

What is Process Evaluation?

- It measures the activities of a programme;
- It is concerned with assessing the process of programme implementation;
- It is a practical way of finding out which parts of a plan have worked during implementation and which parts have not;
- It enables us to find out whether or not self-assigned tasks/products have been carried out. That is, by referring to the action plan which says, produce 18 workshops, and you count them at the middle of the year and find out that you have done only 6, which implies that you may not be able to accomplish the annual target;
- It looks at whether the project is accomplishing its original institutional or strategic objectives. It can help determine what has been done to date and what has not yet been done according to the plan;
- It can help identify areas of the project which need to be changed in order for the project to be strengthened; and
- It addresses participants' perceptions and reactions to HIV/AIDS interventions, and identifies the factors which support or hinder these activities.

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What is Outcome Evaluation?[2]

- It measures the desired changes in knowledge, attitude, skills and behaviour of your target population, which have been identified as needs in your needs assessment evaluation, and written as specific objectives for your project.
- There can be short term, medium term or long term outcome evaluation.
- Changes in knowledge can be measured easily at the end of a workshop, while changes in behaviour take longer, and can usually be measured at the end of a program.
- Changes in behaviour do not immediately flow from changes in knowledge, therefore it is important for programs to design, implement and evaluate changes in attitudes and skills as well.
- A realistic outcome evaluation cannot expect much more than 80% change in knowledge, 50% change in attitudes and skill, and 20% change in behaviour.
- In order to measure change, we must know the status of the population before the intervention, hence the importance of conducting needs assessment and an evaluation plan before the implementation of the project.

9.7.2 Stages of M&E

The task of M&E commenced by organising baseline information against which projects are monitored and evaluated through the selection and development of appropriate **indicators**.

a) Development of Indicators

Indicators are objective and specific measure of changes or results expected from a project or a programme. Indicators are important M&E tools used to measure the performance of projects (objectives, activities, output, and input). It facilitates the reporting monitoring and evaluating of projects.

Indicators Should be SMART

- **Specific:** Key indicators need to be specific and should relate to the condition the project seeks to change. Cement delivered to a project site can not be an indicator for the number of houses constructed.
- **Measurable:** Each indicator should be measurable. Quantitative indicators are often preferred when ever possible as they are easier to manage.
- **Attainable:** The indicators (or information) must be attainable at a reasonable cost using an appropriate collection method. Some information may require huge amount of resource and time, in such cases we may need to change our indicators.

[2] The use of the words **outcome and impact** may vary from funder to funder; so it is important to determine how each funder uses the concepts. Some define "impact" as the immediate change in the population, and "outcome" as the long-term changes in the population.

CCRDA

- **Relevant:** Indicators should be relevant to the management information needs of the stakeholders who will use the data. Information must be sorted, screened, aggregated and summarised in different ways to meet different needs.
- **Time-bound:** An indicator needs to be collected and reported at the right time to be used for management decision.

Types of indicators

1. **Baseline Indicators:** These are pieces of information used to describe the situation when the project was formulated. They are called baseline data because they are the bases against which progress will be measured and monitored. Baseline indicators are sometimes called **Beginning of Project Status** (BOPS).
2. **Progress Indicators:** These are indicators used to measure the progress of activities. Sometimes they are called benchmarks, major events or milestone. They serve as signpost that shows how project activities are doing towards the production of the output.
3. **Performance indicators:** Performance indicators are the process measure or specifications or results expected at the output level of a project.
4. **End of project status indicators**: It measures the conditions achieved at the completion of the project.
5. **Impact indicators**: It is used to measure the fulfilment of development objectives. It is usually used in ex-post evaluation.

b) Data Collection

After developing appropriate indicators the next step is to collect data and gather the necessary information required for M&E exercise. Depending upon the nature of the data and the urgency with which it is needed, data is usually collected through a regular management information system (MIS)[3] for monitoring purposes with a particular design, frequency and specified format. Monitoring reports are prepared too frequently, in too much detail. Often, however, there is lack of reporting discipline. In many cases, formal monitoring by reports is a low priority and reports are submitted late, incomplete, or not at all, consequently data collected is often inaccurate.

Limiting the flow of data to a few key indicators is a useful approach to management information control. A clear distinction should be made between information for management

[3] Management Information system (MIS) is a set of organised procedures with three components:

1. Rules or criteria for deciding what information is required
2. A process appropriate methods of data collection, analysis and reporting; and
3. A mechanism by which information is used to influence activities of the organisation

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decision making and data for accountability and activity service statistic record purposes. Thus, we need to clearly define the different types of information that stakeholders require. The following are attributes of quality information:

i) Conciseness

Good information should be concise. There is usually a large amount of information that could be collected; too much detail can be confusing and distracting. There are limits to the amount of information we can collect, absorb and effectively use. More information is not better information. Thus, we have to be ignorant of what we do not need to know (optimal ignorance).

ii) Completeness

Information should be complete in relation to the objective the information is required for. It has to consist all the basic issues that are desired to be addressed.

iii) Accuracy/Reliability

Accurate and reliable information is important for effective decision making. However, the accuracy and reliability of information depends on many factors (the method of data collection, the sample, the data collectors, etc.). The accuracy and reliability of information can always be enhanced by connecting the same information by more than one method and from more than one source.

iv) Timeliness

Information needs to be provided at the right time for timely decision making. In most cases there is a long delay in the flow of information.

v) Relevance

Information flow should be related to actual responsibility. Information need by the field project staffs, project managers, donors, beneficiaries is not the same.

vi) Cost effectiveness

Information needs time and resources to collect. The amount of resource spent on data collection should depend on the size and resource spent on the actual project. The use of the data should be worth the cost and effort collecting it. Timely information is the key to effective action which enables the project implementers to make early and valid diagnosis based on symptoms exhibited.

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c) Data Analysis and Reporting

Once baseline data has been collected, it then needs to be analysed in order to turn it into information that can guide decision making. The following are some of the main methods used in analysing monitoring data:

- Comparing the plan with the actual by calculating the ratio of planned over actual.
- Considering trends over time. This helps us to see whether things are getting better or worse over time.
- Comparison with certain benchmark. This helps in a situation where there is no clear planned target for the activity being reviewed or monitored.
- Comparison with work norms/standards many service delivery activities can be usefully monitored by establishing, and then collecting information on work norms or standards.

Project progress reports could be presented on a certain time interval depending on the recipient and the size of the project. The important thing is that the reports contain useful information and are available at the right time to help managers make decisions.

Comparision of Monitoring and Evaluation

Criteria for Differntiation	Monitoring	Evaluation
Time	It is carried out continuously throughout the life of the project	It is conducted at the end of certain period Mid-term, annual, terminal ex-position
Responsibility	Continuous self-assessment by implementers	Independent and impartial assessment by outsiders, i.e., it is external review
Emphasis	It emphasises on inputs, process and outputs, i.e., details of activities and problems	It is higher order review of effectiveness, efficiency, relevance and impact
Method	Diagnostic It is basically conducted to identify and assess problems and recommend Remedial solutions	Conclusive, it is primarily a learning instrument to improve future Interventions
Information	Project document, action plan, and progress report suffice	In addition to information from the project studies or surveys may require

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a) Planning Problems

The success or failure of a project starts from the initial idea or inception of a project. Any mistakes committed at the beginning tends to appear through out the project life often multiplying in the later phase serving as breeding ground for more other problems.

Experience of project implementation in Ethiopia has shown that many problems which contributes for project failure have their origin in project planning. Either some essential factors for success are over looked or invalid ideas slip through during the planning stage. Among the problems in this stage the following needs mentioning:

- wrong project identification and investment decision;
- over optimistic time and cost estimates;
- lack of clearly defined project objectives;
- failure to incorporate social environment;
- low community participation in planning; and
- less emphasis on capacity development.

b) Problems at the Investment (Implementation) Stage

Investment phase is the stage in which the actual implementation of the project is executed. Execution of projects, unlike their planning, deals with the real dynamic work which is full of problems rather than concepts and assumptions.

Although most of the problems affecting the performance of project implementation have their origin in poor project planning, there are also other problems arising from institutional, material, technical (e.g, skilled manpower shortage), managerial (management problems), and financial, etc. environment in which the projects are operating

c) Problems Related to Externally Financed Projects

Due to low domestic saving rate and other factors, the Ethiopian economy is unable to finance investment programme/projects to meet basic needs of its growing population. This has made the country heavily dependant on external loan and grants to finance its development programmer/projects. Although the share of external loan and grant in the annual capital budget of Ethiopia was considerable, its performance was very low in the past because of both donor or government oriented problems.

Besides the problems common to all projects, externally financed projects encounter special problems. Among these problems the following are the major ones:

(a) Government policy
(b) Low absorptive capacity of the economy
(c) Donors conditionalities
(d) Lengthy approval and disbursement procedure

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REFERENCES

An assessment of selected externally supported projects/programmer that are facing implementation problems MOPED, Sep. 1992, A.A.

Some reflections on the evaluation of externally financed development projects/programs. MOPED, October 1993, A.A.

Second round public investment Review. MOPED, 1992

The notorious nine critical problems in project implementation. Davaid D.Gov and Elliott R.. MORLS world development report. Vol. 16 No. 12 December 1977.

Goal directed project management earning S. Anderson, Kirstofer V.Gruders Kogan fare Norway 1984.

Economic analysis of agricultural projects , I. price Goffting Ger, Washington, D.C., June 1982.

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AN OVERVIEW OF NGOs EXPERIENCE IN ENHANCING HOUSEHOLD FOOD SECURITY

BY
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I. BRIEF REVIEW OF THE NGO SECTOR IN ETHIOPIA

1.1. Historical Evolution of NGOs in Ethiopia: An Overview

In Ethiopia helping the poor, the disabled and other needy groups have been practiced since time immemorial in the form of alms giving and other forms of charity services. Traditionally these services have been related to religious and cultural values and practices. Community based organizations such as *idirs* and other forms of social and religious foundations have been playing important role in the day-to-day life of Ethiopians by serving as social security and problem sharing mechanism. This implies that voluntarism has been practiced for long time.

The development, appearance and operations of Non-Governmental Organizations (NGOs) is relatively a recent phenomenon. This branch of voluntarism emerged in the mid 1960's, primarily by NGOs of European origin. Red Cross and Swedish Save the Children were the first formal voluntary organizations registered to operate in the country.

The larger appearance and operation of NGOs is directly related with occurrence of drought and subsequent famine. Many of the NGOs operating in Ethiopia commenced their interventions in relief and subsequent rehabilitation works in response to the famines of 1970s and 1980s. In 1997 a total of 220 NGOs were operating in the country. According to recent information from DPPC nearly 400 NGOs (over 284 indigenous and over 113 international) were operating in 1999. And the number is growing fast specially in relation to indigenous NGOs.

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1.2. Phases of NGOs Interventions

Initially the majority of the NGOs had feeding centers and had been distributing food (wet food and dry rations) and clothing to people affected by famine. It has to be noted that vulnerable households and their family members have been critically affected by famine. And the repeated food crisis observed in recent Ethiopian history could have cost more in terms of human life and material cost, had it not been for the assistance and support from donors, notably NGOs.

In view of total loss of assets and resource base, almost all NGOs continued in supporting those communities and households by providing rehabilitation services. These services were mainly in the form of provision of material support (such as farm tools and implements, farm oxen, food and cash support in the form of food-for-work/cash for work, distribution of clothings and the like). However, some NGOs have been providing counseling and confidence rebuilding/reinstating services, following the aftermath of famine which had a devastating effect in terms of human, material and confidence loss.

Even more importantly, as recent development in their intervention, NGOs are working on long-term development and they are developing and implementing diversified development programmes and projects. The interventions ranged from food security related projects to infrastructure and human resource development, capacity building to advocacy and lobbying. All in all some NGOs have sector focused and specialized interventions and the majority of them focus on multi-sectoral (integrated/holistic) interventions. Regarding their targets, almost all NGOs aimed at addressing the needs of marginalized groups such as women, children, the elderly, landless, outcasted groups, the poor (poorest of the poor) and other disadvantaged groups.

In summary, it is agreed that NGOs in Ethiopia are passing through three major phases of intervention. They are: **emergency/relief phase, rehabilitation phase and development phase.** However, these phases do not have clearly demarcated period and at times they overlap each other, during periods of transition from phase to phase but also in response to needs and crisis in case of involvement in relief operation at rehabilitation and development phases. The current relief operation of most NGOs could be mentioned as important example to the case in point.

1.3. NGOs' Distribution by Region

Even though, most NGOs are concentrated in Addis and its vicinity, NGOs are distributed allover the country, including the remotest parts of the country.

Table 1:
Regional Distriibution of NGOs in Ethiopia

S.No.	Region	Category of NGOS					
		Indigenous	%	International	%	Total	%
1	Tigray	15	7	16	7	31	7
2	AFAR	10	5	10	5	20	5
3	Amhara	22	10	32	15	54	12
4	Oromiya	37	17	36	16	73	17
5	Somali	17	8	17	8	34	8
6	Benshangul	6	3	7	3	13	3
7	Southern Coalition	25	12	30	14	55	13
12	Gambela	7	3	8	4	15	3
13	Harar	7	3	13	6	20	5
14	Addis Ababa	70	32	49	22	119	27
Total			100		100		100

Total number of indigenous NGOs = 145
Total number of international NGOs = 105

Source: Yosef (Unpublished). An Overview of NGO Projects in Ethiopia: With Particular Reference to Procedures, Limitations and Challenges in Planning Projects.

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A report of DPPC compiled in 1995 (see Table 1 Below) showed that 32 % of indigenous and 22% of international NGOs are working in Addis. This is followed by, 17% and 12% of indigenous NGOs, which are operating in Oromiya and Southern Regions. On the other hand, 16% and 15% international NGOs are working in Oromiya and Amahara Regions, respectively.

1.4. Basic Features of Target Areas and Communities

The existing operations of most international NGOs in Ethiopia are directly related with their emergency interventions in relief operations of the 1970s and 1980s. Most of these areas are characterized (see Table 2 below) by recurrence of drought, severe condition of land degradation, poor level of agricultural production, high population growth, limited livelihood option to their population, low level of overall income and saving, poor level of social infrastructure services (health, education, etc.), poor endowment of productive assets etc.

With regard to the target households, they are characterized by poor living condition, limited source of income, large family size with higher dependency rate, female-headed households, children of poor families and orphans, limited asset base and overall vulnerability.

Table 2:

Characteristics of NGOs Intervention Areas and Their Targets Groups

Characteristics of NGO Intervention Areas	Characteristics of People Supported by NGOs
☞ Recurrence of drought	☞ Poor/poorest of the poor
☞ Severe land degradation	☞ Landless
☞ Poor socio-economic infrastructure	☞ The displaced and demobilized
☞ Falling agriculture production	☞ Have single and small source of income
☞ Poor soils fertility due to erosion and soil degradation	☞ Poor resource base
☞ High population pressure	☞ Limited access to assets, including most crucial productive assets (farm implements, oxen, etc)
☞ Poorly monetized and fragmented local economy	☞ Women headed households
☞ Mono-Economy (smallscale agriculture based economies)	☞ Large families with higher number of dependents
☞ Limited Livelihood options	☞ The aged
☞ Low level of income and saving	☞ Children at weaning age
☞ Deterioration of productive resources	☞ The outcasted and marginalized groups
☞ Poor level of human resource development	☞ Orphans
☞ Poor level of overall socio-economic development	☞ HIV/AIDS victims and their families
☞ Etc.	☞ Returnees
	☞ Etc.

Adapted and developed from Yosef (unpublished).

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In their areas of operations, NGOs interventions encompass diversified forms of projects and programmes with very wide range of activities. NGOs focus at child welfare and family support, agriculture and integrated rural development, community development and rehabilitation of returnees and demobilized people including ex-soldiers. Interventions in women support, water development, relief operations, human rights (advocacy and lobbying), health activities, education and training, environmental and natural resource conservation/protection, employment and income generation activities, support to disabled and funding of activities in one or more of the above activities are also other areas of interventions.

II. THE RATIONALE FOR NGOs INTEREST ON FOOD SECURITY

In Ethiopia the history of NGOs and their intervention is related to food crisis of 1970s and 1980s caused by chronic problems of drought. However, the problem has been occurred periodically and famine has caused for loss of resource base and accumulated wealth of households. In this country about 12 years of droughts were recorded in only four and a half decades since the 1950s, and the situation is worsening and 3 out of 10 years are expected to be drought years (Ethiopia Food Security Strategy, 1996). The country has a record of large structural food deficit varying from two million to five million tons of food items (Debebe, 2000), and in year 2000 nearly 8 million Ethiopians are in need of food aid, the highest in recent years (Masefield, 2000).

In spite of a lot of effort and resource used in relief and rehabilitation operations, millions of Ethiopians are vulnerable to diversified disasters and they face the threat of food crisis and subsequent famine. In addition to this, diversified forms of long-term development interventions could not address the problem of food insecurity on sustainable basis.

In view of this, the concept of food security and the need to address the problem of food insecurity by directly designing development projects and programmes on food security has been favoured by activists, development practitioners, the academia as well as multilateral and bilateral donors.

The NGO sector has interest to address the problems of short-term food crisis (transitory food insecurity) as well as the long-term structural food deficit (chronic food deficit). The community, the Government and other partners also expect NGOs, to play a pivotal role in addressing the problem of food insecurity both in short-term and long-term. The NGO sector has been responding to the problem of food crisis through relief operation and rehabilitation supports. However, the problem of food crisis is deep-rooted and the NGO sector and other activists agree on the need to address the problem by focusing on the very cause of vulnerability and enhancing the capacity of vulnerable households and individuals to cope up in time of food crisis. The role of the NGO sector and its contribution towards food security is briefly overviewed in the forthcoming section.

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III. NGOs CONTRIBUTION TO FOOD SECURITY

3.1. In Understanding and Development of the Concept in the Ethiopian Context

The NGO sector is contributing a lot in terms of defining, understanding and internalization of the concept of food security, the focus being on household level food security. The NGO staff attends diversified trainings, and takes part in workshops and symposiums on food security. NGOs also make arrangements and sponsors staff members of relevant government organizations to attend various workshops, seminars and other related occasions organized on food security and related courses. For instance, CRDA give chance to government partners to participate on training programmes organized primarily to members' staff, and its' members also sponsor their local partners.

Some NGOs organize in-house trainings and workshop to understand and internalize the concept of food security on which they invite their development partners. For instance, World Vision International-Ethiopia organized various programmes redesigning workshops in 1997 on which food security was defined as the overall goal for its area development programmes. And stakeholders, mainly government staff were familiarized to the concept and capacitated to work as redesigning team members. Moreover, WVI/E organized training programmes on food security for all Weredas in its operation Zones in different parts of the country. Similar ventures are commonly exercised by other NGOs.

NGOs and the donor community initially promoted the concept of food security and latter brought up by government, notably through its food security strategy of 1996.

The NGO community also plays important role by taking part in various meetings, workshops, seminars and symposiums, organized by the Government bodies, research and development organizations, donors etc.

However, still it is difficult to say that the concept of food security is well understood by all involved in the venture, including the NGO staff. Some differences are also observed in understanding the concept of food security, specially with regard to components of food security. These differences, although not significant, have serious implication with regard to interventions of NGOs. Moreover, there is strong need to follow latest developments and issues in relation to the concept of food security.

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3.2. Participate in Reliable and Timely Data Collection, Recording, Analysis and Use

3.2.1. NGO as Member of Wereda DPP Committee

In their respective operation areas NGOs or their programmes/projects are members of the Wereda Disaster Prevention and Preparedness Committee. In most areas, the Government for the purpose of early warning earmarks no sufficient budget, and NGOs or their projects and programmes usually cover most of the cost for data collection exercises of the Wereda DPP Committees and also support logistic and administrative services. Such interventions actually help to facilitate local early warning data collection, recording and analysis. The exercise specifically helps to identify specific places of the crisis as well as the number, socio-economic status and magnitude of those affected by the crisis.

In this regard, representatives of NGOs (subject matter specialists) contribute a lot in data analysis and interpretation and actively involve in preparation of off-shelf documents with clear categorizations of interventions into emergency/relief, employment generation schemes (EGS), food-for-work (FFW) and other activities. As members of the Woreda DPP Committee NGO representatives also take part in decisions making on resources in their stock and other sources in the Woreda.

3.2.2. Nutrition Surveys, Crop Assessments and Other Early Warning Data Collection of NGOs

Many big international NGOs have a long practice of periodic reliable early warning data collection, interpretation and timely reporting to all interested groups including their donors and the Government. The nutrition and crop assessment surveys of big NGOs like World Vision International/Ethiopia, Save the Children and others could be mentioned. These studies and surveys are found to be important to identify the causes for vulnerability and to locate vulnerable households and groups for short-term interventions as well as to plan long-term interventions. Since this NGOs use their staff and their government counterparts for data collection and recording, the capacity building component to government institutions is important, and in fact, some of these NGOs are handing over the task to Government organizations.

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3.2.3. Partners Capacity Building in Early Warning Data Collection

Some NGOs mainly, those with substantial experience and capacity in areas of early warning system development are extending their support in local early warning system development. They support establishment of meteorological stations, organize appropriate trainings on systematic early warning data collection and recording.

International NGOs like World Vision International/Ethiopia are directly involved in purchase of early warning equipment and in training of local government staff. Save the Children UK is directly involved in capacity building of DPPC at various level. The NGO is providing institutional support, internalization of concepts in relation to food security and disaster prevention and management.

3.3. Emergency and Rehabilitation Operations

3.3.1. Emergency Intervention

As noted above the interventions of NGOs in Ethiopia dates back to the 1970s and 1980s. The NGO community has continued responding to emergency interventions, in spite of the shift of most NGOs to long-term development interventions since recently. In the period 1987 to 1993 total food aid deliveries in Ethiopia averaged 750,000MT(WFP: 1993) and 60% of the food aid to Ethiopia was coming through NGOs in 1994 and there are not observed any indicators of altering the share. The problem of food crisis has been a repeated phenomenon in Ethiopia and the NGO community has been responding accordingly.

Most NGOs developed remarkable capacity in emergency resource mobilization and management with timely delivery and distribution of resources. Moreover, most NGOs have developed disaster forecasting and preparedness capacities in their operation areas.

3.3.2. Rehabilitation Programmes

Most disasters in Ethiopia are not only causing temporary food shortage and subsequent stress but also they are causing in continuous loss of assets and resource base. In time of crisis, most vulnerable households respond to cope the problem by selling their few resources, tools and household utensils. Moreover, by their nature most disasters cause for loss of some of the assets. For instance, in drought-affected areas of Northern, Southern and Southeastern Ethiopia caused for loss of livestock including

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farm oxen. Loss of these resources including agricultural farm tools causes serious problem to resume production.

In view of this, almost all of those NGOs, which had been involved in relief operations, were also actively involved in rehabilitation programmes. These rehabilitation programmes has been enabling disaster-affected households to resume production operation and lead decent and stable life.

3.4. Food Security Related Long-Term Interventions

Although the food security condition and nutrition status of many Ethiopians has been exacerbated by occurrence of disasters mainly natural caused but also manmade reasons, the socio-economic problems of the country are deep rooted, and chronic problem of food insecurity exists in the country. Ethiopia covers significant proportion of its food deficit from food aid. In fact, the main reason for the famine experience following occurrence of drought or other forms of disaster is due to lack of sufficient asset for coping disaster condition.

NGOs are involved in diversified economic activities. Some NGOs specially indigenous focus sectorally and geographically while many others mainly international ones, are involved in multi-sectoral interventions in various regions of the country.

In the development phase of food security, the most important role of NGOs interventions is the attempt being made to identify actual problems of households through participatory rural appraisal and other participatory methodologies. The resource potential, natural and social endowments as well as individual resources and capacities are critically assessed. In doing so the attempt is to know whether food insecurity problems of households are related to one or more component of food security are also critically assessed and analyzed.

Many NGOs are conducting diversified economic activities mainly focused at household level. NGOs, particularly big and international ones', attempts to know the types of food insecurity problems (transitory and/or chronic) and the components of food security. The response to transitory food insecurity problem is emergency/relief and rehabilitation as discussed in the forgoing sub-section.

With regard to chronic food insecurity interventions of NGOs, they are in most cases designed to address one or more components of food security. They are: availability (own production), access (enhancing purchasing power) and utilization, but also according to some NGOs (for instance WVI/E) asset creation is treated as a separate component. Experts in the

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field argue that food security interventions should clearly know in which component(s) of the food security gaps are observed and potentials are there to bring the intended change. Major activities under each category are discussed briefly in this sub-section.

3.4.1. Intervention in Availability Component

NGOs interventions in the availability component of food security aims at enhancing own production of households in the agriculture sector. The effort here is to encourage and support households to utilize effectively and efficiently to use their potential in the agriculture sector. Some people, in fact, consider agricultural production as synonymous to food security. And in most cases agriculture gets over attention and budget, and food security interventions focus only on the agriculture sector.

Interventions in this component cover a wide range of projects, programmes and activities. Among others the following could be cited as example:

- Supply of various agricultural inputs such as fertilizers, seeds, pesticides etc.
- Create access to capital in the form of grant or credit basis;
- Extension services on crop production and livestock management,
- Introduction of new and improved farming practices
- Crop diversification,
- Introduction of improved breeds and varieties of crop and livestock,
- Proper land use planning and management,
- Soil and water conservation,
- Crop and livestock pest and disease control,
- etc.

3.4.2. Intervention in Access Creation

The NGO sector also gives important emphasis to off-farm activities both by encouraging traditional activities and introducing new ones through skill training, credit service, marketing and information support. These types of interventions focus on resource poor, landless, unemployed, women/women headed households, the youth and other similar groups. Such interventions aim at creating alternatives/additional source of income to fill gaps of their production, and create opportunity of sustaining the life of poor land less farmers and urban poor.

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Under this component the following activities are being implemented by NGOs:

- Vocational and skill upgrading trainings;
- Support to micro-enterprise development, through training, advisory support, credit, etc;
- Advisory service on marketing and material supply;
- Support on delivery of machineries, equipment, inputs, outputs, etc;
- Food-for-work (FFW) and employment generation schemes (EGS) and other projects to fill short-term food security gap. These schemes are also playing important role in linking relief, rehabilitation and development activities;
- Attempts to enhance physical access of target areas through small infrastructural development activities are also considered as part of access creation
- Etc.

3.4.3. Interventions on Utilization

In most of the cases, the problem of food insecurity is not only related to low level of food items production and/or low economic and physical access to food. The problem has strong causes in the area of utilization as well. The problem in this area includes: improper harvesting and harvest related loss specially during threshing, poor crop storage condition specially at household level, poor handling of livestock products, poor food preparation including cooking, inadequate nutritional mix and content of food; poor environmental health and sanitation service, poor safe drinking water supply, poor primary health care service, various children diseases, etc.

The interventions under this component includes:

- Training on pre- and post-harvest crop handling and management;
- Supports in introduction, development and use of appropriate technologies on pre- and post harvest handling and food preparation;
- Training on livestock product handling and utilization;
- Training on optimal nutrition mix and healthy diet preparation and use for various age groups in households;
- Training on environmental health and sanitation;
- Support to infrastructural service such as health facilities and water supply;
- Support to health care service;
- Support mother and child health;
- Etc.

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3.4.4. Asset Creation

Some professionals, activists and practitioners argue that asset creation should not be considered as a separate component of food security. They say asset creation is only a product of food production and income generation.

However, others consider asset creation as a separate component of food security. The people who argue in this line say that sustainability of food security could be ensured only through improving and protecting the asset base. Although the argument for and against goes on, the rationale for the consideration of asset creation, as a separate component is that asset creation, protection and proper management should be made to ensure food security on sustainable basis.

The following activities could be mentioned under this component:

- Training on saving and credit services;
- Training on saving and storing;
- Training and advisory service on owning optimal asset mix;
- Asset protection and saving mechanism in time of disaster and crisis;
- Etc.

IV. ISSUES CHALLLENGES

However, a lot has been done and appreciable results are recorded, and the experience gained is also remarkable, the NGO sector operation in the area of food security is full of challenges and issues. The major observed issues and challenges are pointed out in the following sub-sections.

4.1. Internal Problems of NGOs

- Lack of sufficient awareness about existing government policies and procedures. Some NGOs and their staff do not have sufficient manpower and capacity to follow up developments and changes in the policy environment;
- Many NGOs experience budgetary constraints and fail to fulfill their commitments leave alone scaling up their interventions;
- Some NGOs lack focusedness and operate beyond their area of focus and excellence;
- Many NGOs concentrate in and around Addis Ababa, and in Oromiya and Southern Ethiopia; this is said to be causing for duplication of effort and wastage of resources;
- Problem of proper use of participatory methodologies and poor need assessment and prioritization;
- Limited knowledge about local potential and technological capacity;

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- Poor area and beneficiary targeting criteria, poor targeting as a result;
- Lack of sufficient attention to the issues of gender and environment, and limited conceptual clarity;
- Lack of clear phase-in and phase-out strategy;
- Lack of sufficient preparation to respond to emergency situations;
- Lack of experienced and qualified staff and high staff turnover;
- Limited level of conceptual understanding of food security and absence of proper activity mix identification, prioritization, designing and implementation;
- Limited evaluated or capacity assessed projects to draw lessons and convince donors, government, the public at large and other development partners;
- Most NGOs commenced operation in relief interventions and have only limited practice and knowledge in the area of long-term development;
- Overall limited capacity in needs identification and prioritization, project designing, implementation and monitoring and evaluation;
- Etc.

4.2. Government Policy and Practice by Executing Bodies

- Lengthy procedure for registration and licensing,
- Restrictive policies and practice in the area of agricultural extension service, and saving and credit operations,
- Lengthy project appraisal and approval procedure by responsible authorities,
- Restriction on income generation to the voluntary sector and absence of budgetary support from the Government to NGOs and absence of any form of incentive by the government to the business community for supporting the voluntary sector,
- Absence of adequate awareness and recognition by Government authorities in considering of NGOs as development partners,
- Etc.

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