

**DILLA UNIVERSITY**  
**COLLEGE OF SOCIAL SCIENCE & HUMANITIES**  
**DEPARTMENT OF GEOGRAPHY & ENVIRONMENTAL STUDIES**  
**Course title: Food Security and Livelihoods**  
**Course code: GeES4095**

**I. CONCEPTS AND DEFINITIONS OF LIVELIHOOD & FOOD SECURITY / INSECURITY.**

**1.1. Livelihoods: origin, definition and concept:**

**KEY TERMS:**

- **Livelihood; Livelihood systems**
- **A Living; Livelihood Activities; Production systems**
- **Capabilities; Asset; Income; and Food**
- **Resources; Stores; Claims, and Access**
- ***Social, Economic and Ecological environment***

❖ **Livelihood systems** encompass:

- ✓ a ***“livelihood comprises people, their capabilities and their means of living, including food, income and asset”*** (Chambers and Conway, 1991).
- ✓ Similarly, Ellis (1999:2) defines livelihood as ***“the activities, the assets and the access that jointly determine the living gained by an individual or a Household”***.
- ✓ Degefa (2005) also explains that livelihood is ***‘a comprehensive concept tied up with individuals or a social group’s way of life and interrelationships involving their access to resources and activities that are undertaken in order to obtain or secure the means of living and the strategies which they pursue to satisfy their needs and improve their living standard’***.
- ✓ ***The ‘means, relations, and processes of production, as well as household management strategies’***.

➤ The **resources and values of specific physical and social environments** determine the character of the components of a livelihood system. ***Livelihood systems combine production systems,*** based on :

- the **nature, extent and quality of means of production** available to the household,
- the **resources** (land and labor, access to capital in the form of money) **that are available and the strategies for management and use of resources**, in order to construct an ongoing livelihood for the household.
- In addition to land and labor, access to capital in the form of money, **ownership of tools, access to credit, and levels and areas of knowledge and skills** affect conditions or options that households may have to construct a livelihood (**for example** - either farming or other forms of activities that are available to them).

❖ **Determinants of livelihoods:** There are numerous initial determinants of livelihood strategy.

- ***Many livelihoods are largely determined by accident of birth.*** Livelihoods of this kind may be attributed to children that may be born into a caste with assigned role as potters, shepherds, or washer people.
- ***Gender as socially defined*** is also a pervasive accretive determinant of livelihood activities.

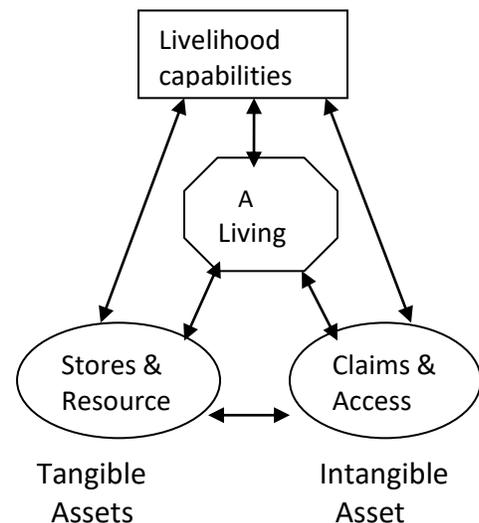
- Although not necessarily accretive (attributed), **a person may be born, socialized and apprenticed into an inherited livelihood** – as a cultivator with land and tools, a pastoralist with animals, a forest dweller with trees, a fisherperson with boat and tackle, or a shopkeeper with shop and stock; and each of these may intern create a new household or households in the same occupation.
- Some people improvise livelihoods with degree of desperation, what they do being largely determined **by the social, economic and ecological environment** in which they find themselves.
- A person or household may also choose a livelihood **especially through education or migration**.
  - ✚ Those who are better off usually have a wider choice than those who are worse off, and **a wider choice is usually generated by economic growth**. In a future of accelerating change, adoptable capabilities to exploit new opportunities may be both more needed and more prevalent.

❖ **The nature of livelihoods:** the simple definition of a livelihood as a means of securing a living may shadow in seeing its complex reality and its structure. **Livelihood can be found at different hierarchical levels.**

- The most commonly used descriptive level is **the household** – usually meaning the human group which shares the same hearth for securing a living. In adopting this level, it is important to recognize the difference b/n **individuals or intra-household level**, in which the wellbeing and access of some household members, and especially women and children, may be inferior to that of others, especially men.
- The broader levels include **the extended family, the social group, and the community**. These levels are widely significant; but for reasons of conciseness and clarity, most descriptions or explanations use **the household as unit of analysis of livelihoods**.

➤ Components and relationships of a Household livelihood (categories and parts)

- People ----- their livelihood capabilities
- Activities ----- what they do
- Assets ----- Tangible (resources and stores)  
And intangible (claims & access)  
Which provide material & social means.
- Gains or outputs ---- a living, what they gain from what  
They are doing



## 1.2. FOOD SECURITY: ORIGIN, DEFINITION, CONCEPT AND FORMS OF FOOD INSECURITY

### ➤ KEY TERMS

- Food Consumption / Utilization
- *Quantity and Quality of dietary intake*
- *Food Security VS Livelihood Security*
- *Insecurity/ Chronic Vs Transitory food insecurity*

#### 1.2.1. Food Acquisition and Its Determinants

- ❖ **Food consumption** refers to *a proper biological use of food to obtain an appropriate energy and nutritious diet, potable water, and adequate sanitation*. **Biological utilization** relates to individual level food security and is the ability of the human body to effectively convert food into energy. A household that has the capacity to *acquire* all the food it needs may not always have the ability to *utilize* that capacity to the fullest.
- **Food utilization, which is typically reflected in the nutritional status of an individual, is determined by:**
  - *the quantity and quality of dietary intake,*
  - *general childcare and feeding practices,*
  - *along with health status and its determinants.*
- Effective food utilization depends in large measure on knowledge within the household of food storage and processing techniques, basic principles of nutrition and proper mother child care and feeding practices, and illness management.
- **Poor infant care and feeding practices, inadequate access to, or the poor quality of, health services are also major determinants of poor health and nutrition.** While important for its own sake, as it directly influences human well-being, improved food utilization also has feedback effects, through its impact on the health and nutrition of a household members, and therefore, on labor productivity and household income-earning potential.

#### 1.2.2. Food Security

- ❖ The concepts and definitions of **food security and insecurity** have been discussed for a long period of time. Since its inception it is defined in different ways by international organizations and researchers. According to Hoddinot (1999) there are *close to 200 definitions and 450 indicators of food security* (Frehiwot, 2007).
  - In the early periods the question was whether a nation or a region could grasp enough food to meet the cumulative requirements of its people.
  - This means that special attention was given to **fluctuations in aggregate of food supply**.
  - Food security interventions were also primarily concerned with providing effective shock absorber mechanisms against such fluctuations.
  - Such conceptions could be clear from the definition of the World Food Conference of 1974 (Barrett 2002, Valdes 1981).
- ❖ Thus, **food security** was defined as:  
*'availability at all times of adequate world food supplies of basic foodstuffs...to sustain a steady expansion of food consumption...and to offset fluctuations in production and prices'* (United Nations 1974).

- However it was soon realized that this definition gave a very limited view of the food security problem. It is so because:
  - ✚ a large number of a population could be living in hunger even if the country had sufficient food in the aggregate during normal times.
  - ✚ It is also a paradox that global food security exists alongside individual food insecurity.
- It is known that the world produces enough food to feed every one.
- However, there are countries in the world, regions within countries, villages within regions, households within villages and individuals within household that are not able to meet their food needs.
- This means that ***adequacy at the national level does not necessarily ensure adequacy at the household or individual level.***
- As a result ***food security had advanced from emphasizing the supply side through the individual and household level for improved access to food (demand side)*** in the 1980s (FAO, 1983).
- In the 1990s, **improved access** was redefined by taking into account livelihood and subjective considerations. It emphasizes a **broader framework of individual behavior in the face of uncertainty, irreversibility, and binding constraints on choice.**
- ❖ The **most widely used definition of food security** is the one forwarded by World Food Summit in 1996 and broadly set as:
  - ✓ ***'Food security exists when all people at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life'*** (FAO, 1996).
- This definition:
  - **integrates stability,**
  - **access to food,**
  - **availability of nutritionally adequate food**
  - **and the biological utilization of food.**
- ❖ To sum up, it is known that food security concepts and definitions have developed over the past thirty years. Hence, the current concept emphasizes **the role of multiple factors that affect the household's or individual's ability to acquire enough food all the times.** Consistence with these definitions of food security can be defined with the main emphasis on:
  - ✚ **food availability,**
  - ✚ **access and utilization.**
- Thus, **"Food security,"** means:
  - ✓ ***"Access by all people at all times to enough food for an active healthy life".***
- ❖ This definition denotes to relations between and among four key concepts:
  - **(1)access and entitlements**--whether *households and individuals may acquire adequate food, when and where it is available;*
  - **(2) nutritional sufficiency**--not merely whether a pre-determined amount of food is available, but whether *particular kinds of food (notorious food) are accessible in sufficient quantity to allow people to live healthy & active lives;*
  - **(3) security**--which *embraces risks to a household's or individual's access to food, as well as actions designed to manage or overcome those risks;* and

- **(4) Timing**--the *seasonality of production* (hence cash income) versus *the steady rhythm of consumption*--as a critical factor **for assessing risk and vulnerability**, and for planning remedial action.
  - From the above definitions of food security, slight variations were observed. However, the overall basic principles and definitions of **food security, that is, “availability, access and utilization”** were stressed in the definitions cited above.
- ❖ Given the range of household objectives and assets, food security is thought as a dynamic output of livelihood systems.
  - Worth noting here is that food, though certainly important, is only one of the factors that drive households to make decisions that affect their livelihood systems, among competing (making choice among) interests and adopt risks in production systems.
  - Preservation of livelihood assets may often take precedence over fulfillment of food needs in the short run, and people will often go hungry for a period of time in order to save seeds for planting, purchase inputs for cultivating their fields or to avoid having to sell an animal. When land and livestock begin to be sold to fulfill the food needs of the family, it implies an acute exhaustion of options or an enhanced level of desperation in the situation.
    - **Livelihood security may be seen as a precondition of household food and nutrition security.** Households are food and nutritionally secure when their livelihoods are sustainable.
    - **Food security is a subset of livelihood security;** food needs are not necessarily more important than basic needs or aspects of subsistence or survival within households.
    - Food insecure households juggle among **a range of requirements, including immediate consumption and future capacity to produce.**
  - Finally the concept and definition of food security were developed and clearly explained based on the **growing hunger, food insecurity and malnutrition situations** in developing countries.

### 1.2.3. Food Insecurity

- ❖ The other concept that is worth mentioning is that the issue of **food insecurity**. It is believed that **people who frequently do not have enough to eat according to accepted cultural norms created a crisis**. For this reason, the phrase ‘**Food Insecurity**’
  - ✓ **was used to describe the instability of national or regional food supplies over time.**
  - ✓ It was then expanded to include **lack of secure provisions at the household and individual level.**
- Food insecurity concern (reasons) may be due to either:
  - **inadequate physical availability of food supplies** (shortage or lack of supply),
  - **poor access to food among the population** (inefficient distribution channel),
  - **Or inadequate utilization of food** (poor or low dietary-notorious food intake).
- ❖ **Forms of Food insecurity:** food insecurity may be classified as:
  - **Chronic** (i.e., a routine, cyclical pattern).
  - or **transitory** (i.e., a temporary and irregular occurrence)
- 1. **Chronic food insecurity** occurs when **a household is persistently unable to meet the food requirements of its members over a long period of time**. It, therefore, afflicts households that persistently lack the ability to either buy or produce their own enough food.
  - **The cyclical type of food insecurity is caused by seasonality.**
- ✚ **Structural factors** contributing to **chronic food insecurity** include:

- **poverty** (as both cause and consequence),
- a **fragile natural resource base**,
- **weak institutions**
- and **unhelpful or inconsistent government policies**.

✚ It is argued that **chronic food insecurity at the household level** is mainly a problem of poor households in most parts of the world (FAO 2002).

2. **Transitory food insecurity** refers to **a temporary decline in a household's access to enough food**. It results from a temporary decline in household access to food due to:

- crop failure,
- seasonal scarcities,
- temporary illness or unemployment,
- instability in food prices, production, household income or combination of these factors.

✚ **But, the main triggers of transitory food insecurity in Ethiopia are drought and war.**

- However, what is transitory may become chronic, and irregular occurrences sometimes evolve into cyclical patterns.
  - ✓ Theoretically, poverty, household vulnerability, and undernourishment may be distinct conditions.
  - ✓ Yet, in practice, these conditions intersect and overlap: poor households are usually most vulnerable to transitory and chronic food insecurity, hence they are often undernourished.
- ❖ In general, **a household can be said to be food secure only if it has protection against all kinds of insecurity**. The average access to food over the long term should be nutritionally adequate, and a household should be able to cope with short-term vicissitudes (changes) without sacrificing the nutritional needs of any of its members.

### 1.3. Sustainable Livelihood Approaches

#### ➤ KEY TERMS:

- **Sustainable Livelihood**
- **Enhancement**
- **Dynamic livelihood capabilities**
- **Environmental; Social Sustainability Vs Intergenerational Sustainability**
- **Asset or Capital (Natural, Human, Social, Physical & Financial capitals)**

- ❖ Any strategy for environment and development for the 21<sup>st</sup> century, **the sustainable livelihood approach** is concerned in providing a framework '*how vastly large number of people can gain at least basically decent livelihoods in a manner which can be sustained in environments which are fragile and marginal*'.
  - *A livelihood comprises the capabilities, assets (stores, resources, claims and access) and activities required for a means of living;*
  - **Livelihood** is defined as **adequate stocks and flows of food and cash to meet basic needs**. A livelihood comprises the capabilities, assets (stores, resources, claims, and access) and activities required for a means of living.
  - **Sustainable refers to the maintenance or enhancement of resource productivity on a long term basis.**

- A livelihood is sustainable:
  - *when it can cope with and recover from stress and shocks,*
  - *maintain or enhance its capabilities and assets*
  - *and provide sustainable livelihood opportunities for the next generation, and which contributes net benefits to other livelihoods at the local and global levels and in the short and long terms.*
- ❖ A household may be enabled to get sustainable livelihoods in many ways:–
  - through ownership of land, livestock or trees;
  - rights to graining/farming, fishing, hunting, or gathering;
  - through stable employment with adequate remuneration;
  - or through varied repertoires of activities.
- The sustainability of livelihoods raises many questions, that fall in two categories:
  - The first is *whether a livelihood is sustainable environmentally*, in its effect on local and global resources and assets.
  - The second category is, *whether a livelihood is sustainable socially*, that is, *able to cope with stress and shocks, and retain its ability to continue and improve.*
- **Environmental sustainability** concerns **the external impact of livelihoods** on other livelihoods;
- while social **sustainability** concerns **the internal capacity to withstand pressures.**
  - Sustainability is thus a function of how assets and capabilities are utilized, maintained and enhanced, so as to preserve livelihoods.
- 1. **Environmental sustainability:** Most conventional thinking equates sustainability with preservation or enhancement of the productive resource base, particularly for future generations, at two levels: *locally and globally.*
  - **At local level**, the question is whether livelihood activities maintain and enhance, or deplete and degrade the local natural resource base. This is the familiar focus on visible aspects of sustainability:
    - ✚ On the negative side, livelihood activities may contribute to desertification, deforestation, and soil erosion, declining water tables, Salinization and the like.
    - ✚ On the positive side, livelihood activities can improve productivity of renewable resources like air and river water, soil, organic soil fertility, and trees.
  - **At the global level**, the question is whether, environmentally, livelihood activities make a net positive or negative contribution to the long-term environmental sustainability of other livelihoods.
    - ✚ This focuses on issues of pollution, greenhouse gases and global warming, the ozone layer depletion, the irreversible use of the world's store of non-renewable resources, and the use of sinks (such as the sea for carbon dioxide) for pollution emissions.
- *Globally, the most environmentally sustainable are those of the rich, economically and technologically advanced* (the North) than those of the poor developing countries and people (the south), which are environmentally less sustainable.
- **Locally the main challenge is to enhance sustainable livelihood – intensity of resource use, especially in the rural areas of the south (of the poor people of the developing countries).**
- **Globally the main challenge is to reduce the unsustainability of livelihoods, especially in the urban areas of the North (the developed countries).**
- 2. **Social sustainability:** In terms of **equity**, environmental sustainability of livelihoods has to be complemented by the social sustainability of all livelihoods.

- **Social sustainability** refers to whether a human unit (individual, household or family) can not only gain but maintain an adequate and decent livelihood. This has two dimensions, a negative and positive sides:
  - ✚ The negative dimension is reactive, coping with stress and shocks;
  - ✚ The positive dimension is proactive, enhancing and exercising capabilities in adapting to, exploiting and creating change, and assuring continuity.
- ❖ **Dynamic livelihood capabilities: social sustainability of a livelihood also depends on positive and dynamic competence, the ability to perceive, predict, adapt to and exploit changes in the physical, social and economic environment.** It refers to:
  - the capacity to **assess, to organize, to manage and exploit links** with the wider economy.
  - **Awareness, experimental innovation, and adoptability contribute to dynamic capabilities**, particularly in agriculture, through this farming family's livelihood can become more sustainable in uncertain and changing conditions where markets and price fluctuate, and where old opportunities shrink and new ones appear and expand.
- ❖ **Intergenerational sustainability: the social sustainability of a livelihood also involves maintaining and enhancing capabilities for future generations.** This intergenerational sustainability can be direct or indirect.
  - In its direct form, it takes the form of the inheritance of assets and/or skills; land or the tools that are passed to the next generations. For example- skills and knowledge are transmitted from parents to children through family apprenticeship.
  - In its indirect form, intergenerational sustainability is achieved through children **moving to other places or to other occupations**. There they may find or create new livelihoods which may be the same or different from those of the earlier generation. To enhance this form of sustainability, **households often invest on their children education and acquisition of skills other than those available within the household**.
    - As rural populations rise, farm sizes diminish, and changes accelerate; so dynamic livelihood capability and intergenerational sustainability become more critical.
- ❖ The sustainable livelihoods approach is a holistic approach that tries to capture, and provide a means of understanding, the fundamental causes and dimensions of poverty without collapsing the focus onto just a few factors (e.g. economic issues, food security, etc.). In addition, it tries to sketch out the relationships between the different aspects (causes, manifestations) of poverty, allowing for more effective prioritization of action at an operational level.
- ❖ **The assets that are generally recognized within sustainable livelihoods approach are:**
  - **Natural (Environmental) Capital:** Natural resources (land, water, wildlife, biodiversity, environmental resources).
  - **Physical Capital:** Basic infrastructure (water, sanitation, energy, transport, communications), housing and the means and equipment of production.
  - **Human Capital:** Health, knowledge, skills, information, ability to labor.
  - **Social Capital:** Social resources (relationships of trust, membership of groups, networks, access to wider institutions).
  - **Financial Capital:** financial resources available (regular remittances or pensions, savings, supplies of credit).

## II. The Sustainable livelihoods framework and strategies

### ➤ KEY TERMS

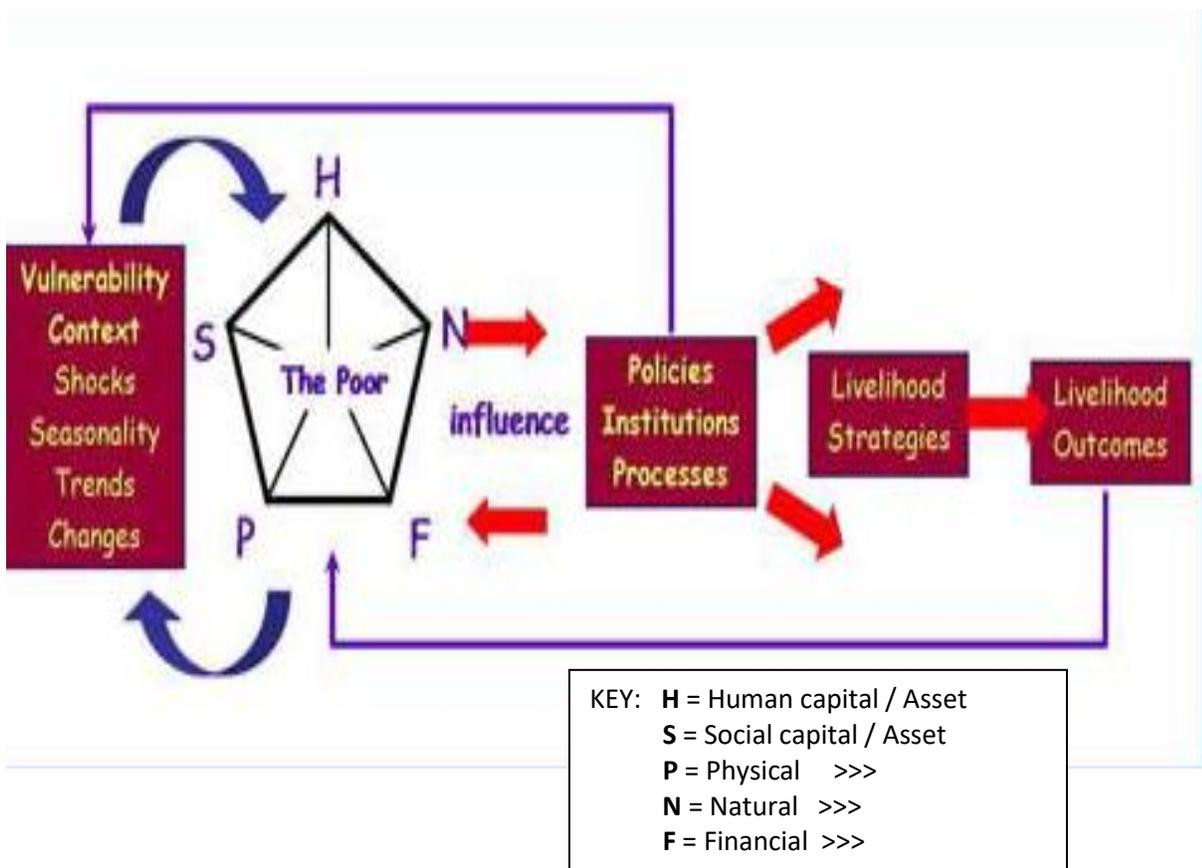
- The framework
- Poverty
- Livelihood Strategies
- Livelihood Outcomes

#### 2.1. Introduction: The Sustainable livelihoods framework

- ❖ The sustainable livelihoods framework is **a way to improve the understanding of the livelihoods of poor people**. It was developed over a period of several years by different organizations and researchers.
  - It draws ***on the main factors that affect poor people's livelihoods and the typical relationships between these factors.***
    - It can be ***used in planning new development activities,***
    - It ***helps in assessing the contribution that existing activities have made to sustaining livelihoods.***
    - It helps in ***understanding the complexities of poverty and a set of principles to guide action to address and overcome poverty.***
- ❖ The sustainable livelihoods framework **places people, particularly rural poor people, at the centre of a web of inter related influences that affect how these people create a livelihood for themselves and their households**. People are the main concern, rather than the resources they use or their governments.
  - Closest to the people at the centre of the framework are **the resources and livelihood assets that they have access to and use**. These **can include natural resources, technologies, their skills, knowledge and capacity, their health, access to education, sources of credit, or their networks of social support**.
  - **The extent of their access to these assets is strongly influenced:**
    - ✚ by ***their vulnerability context***, which takes account of trends (for example, economic, political, and technological),
    - ✚ ***shocks*** (for example, epidemics, natural disasters, civil strife / conflict)
    - ✚ ***and seasonality*** or fluctuations (for example, prices, production, and employment opportunities).
    - ✚ **Access** is also influenced by the prevailing social, institutional and political environment, which affects the ways in which people combine and use their assets to achieve their goals. These are their livelihood strategies.
- ❖ SLA is **used to identify the main constraints and opportunities faced by poor people**, as expressed by them. It builds on these definitions, **and then supports poor people as they address the constraints, or take advantage of opportunities**.
- ❖ The framework is neither a model that aims to incorporate all the key elements of people's livelihoods, nor a universal solution. Rather, ***it is a means of stimulating thought and analysis, and it needs to be adapted and elaborated depending on the situation.***
- ❖ Sustainable livelihoods framework **has seven guiding principles**. They do not prescribe solutions or dictate methods. Instead, they are flexible and adaptable to diverse local conditions.
  - The guiding principles are:

- **Be people-centered.** Sustainable livelihoods framework/approach (SLA) begins by analyzing **people's livelihoods and how they change over time**. The people themselves actively participate throughout the project cycle.
  - **Be holistic.** SLA acknowledges that **people adopt many strategies to secure their livelihoods**, and that many actors are involved; for example the private sector, ministries, community-based organizations and international organizations.
  - **Be dynamic.** SLA seeks to understand **the dynamic nature of livelihoods and what (the factors) influences them**.
  - **Build on strengths.** SLA builds on **people's perceived strengths and opportunities** rather than focusing on their problems and needs. It supports existing livelihood strategies.
  - **Promote micro-macro links.** SLA examines **the influence of policies and institutions on livelihood options** and highlights **the need for policies to be informed by insights from the local level and by the priorities of the poor**.
  - **Encourage broad partnerships.** SLA counts on **broad partnerships drawing on both the public and private sectors**.
  - **Aim for sustainability. Sustainability is important if poverty reduction is to be lasting.**
- The SLA framework is presented in schematic form below and shows the main components of SLA and how they are linked. It does not work in a linear manner and does not attempt to provide an exact representation of reality. Rather, it seeks to provide a way of thinking about the livelihoods of poor people that will stimulate debate and reflection about the many factors that affect livelihoods, the way they interact and their relative importance within a particular setting. This should help in identifying more effective ways to support livelihoods and reduce poverty.

 The picture given below represents one of the SLA approaches/frameworks.



- In particular, the framework:
  - provides a checklist of important issues and shows the way how these link to each other
  - draws attention to core influences and processes; and
  - emphasizes the multiple interactions between the various factors which affect livelihoods.
- The form of the framework is not intended to suggest that the starting point for all livelihoods (or livelihood analysis) is the *Vulnerability Context* which through a series of permutations (possible arrangement) yields *Livelihoods Outcomes*.
- ***Livelihoods are shaped by a multitude of different forces and factors that are themselves constantly shifting.*** People-centered analysis is most likely to begin with simultaneous investigation of people's assets, their objectives (the *Livelihood Outcomes* which they are seeking) and the *Livelihood Strategies* which they adopt to achieve these objectives.
- Important feedback is likely between:
  - a) Transforming Structures and Process and the Vulnerability Context; and
  - b) Livelihood Outcomes and Livelihood Assets.
- ❖ There are other feedback relationships that affect livelihoods which are not shown. For example,
  - it has been shown that if people feel less vulnerable (*Livelihood Outcome*) they frequently choose to have fewer children. This has implications for population trends which might be an important part of the *Vulnerability Context*.

The framework is intended to be a versatile tool for use in planning and management. Use of the framework is intended to make a distinct contribution to improving organizations' ability to eliminate

poverty. It is not simply a required step in project/program preparation, nor does it provide a magic solution to the problems of poverty elimination. In order to get the most from the framework:

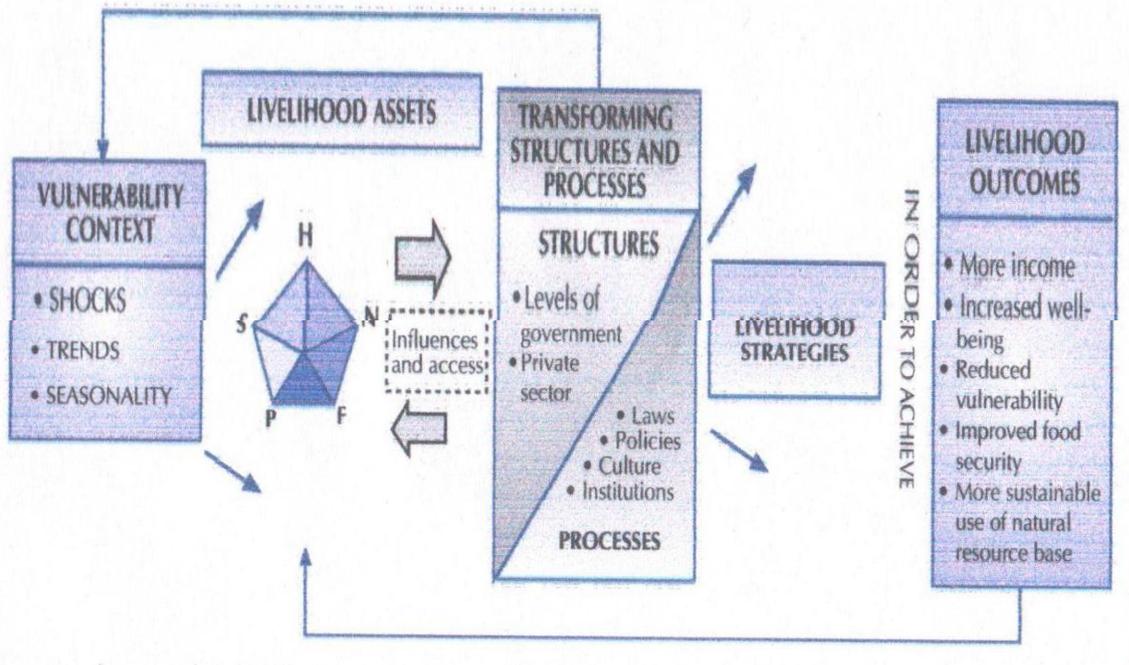
- a) The core ideas that underlie it should not be compromised during the process of adaptation. One of these core ideas is that (most) analysis should be conducted in a participatory manner.
  - b) Use of the framework should be underpinned by a serious commitment to poverty elimination. This should extend to developing a meaningful dialogue with partners about how to address the underlying political and economic factors that perpetuate poverty.
  - c) Those using the framework must have the ability to recognize deprivation in the field even when elites and others may want to disguise this and skew benefits towards themselves (this will require skill and rigor in social analysis).
- ❖ ***Despite differences in emphasis by different practitioners, the livelihoods framework helps us to:***
- ***identify (and value) what people are already doing to cope with risk and uncertainty***
  - ***make the connections between factors that constrain or enhance their livelihoods on the one hand, and policies and institutions in the wider environment on the other hand.***
  - ***identify measures that can strengthen assets, enhance capabilities and reduce vulnerability.***

## 2.2. Comparison of Livelihood frameworks

### A) The DFID livelihoods framework

- ❖ This is one of the most widely used frameworks. The **DFID (Department for International Development of UK)** framework sets out to conceptualize:
- how people operate within a vulnerability context that is shaped by different factors shifting seasonal constraints (and opportunities), economic shocks and longer-term trend,
  - how they draw on different types of livelihood assets or capital in different combinations which are influenced by the vulnerability context and a range of institutions and processes?
  - how they use their asset base to develop a range of livelihood strategies to achieve desired livelihood outcomes.
- ✚ The arrows in the framework (the figure below) try to show how the different elements (all of which are highly dynamic) interrelate and influence one another.
- The framework is formed or based on certain core concepts:
- it is **people-centered**,
  - it **advocates that development policy and practice should flow from an understanding of the poor and their livelihoods strategies**,
  - **the poor should directly contribute to determining development priorities and be able to influence the institutions and process that impact on their lives.**
- ❖ It is holistic in that the framework encourages analysis that cuts across different sectors and ***recognizes a range of actors and influences as well as multiple livelihood strategies and outcomes.*** Moreover it:
- **is dynamic** in that it tries to understand change over time and the complex interplay between different factors
  - **starts from an analysis of strengths rather than needs and problems.**
  - **looks for and makes the linkages between 'micro' and 'macro' levels.**
  - **is concerned with sustainability in all its dimensions: *social, economic, institutional and ecological.***

## The DFID livelihoods framework



H represents **human capital**: the skills, knowledge, ability to labour and good health important to the ability to pursue different livelihood strategies;

P represents **physical capital**: the basic infrastructure (transport, shelter, water, energy and communications) and the production equipment and means that enable people to pursue livelihoods;

S represents **social capital**: the social resources (networks, membership of groups, relationships of trust, access to wider institutions of society) upon which people draw in pursuit of livelihoods;

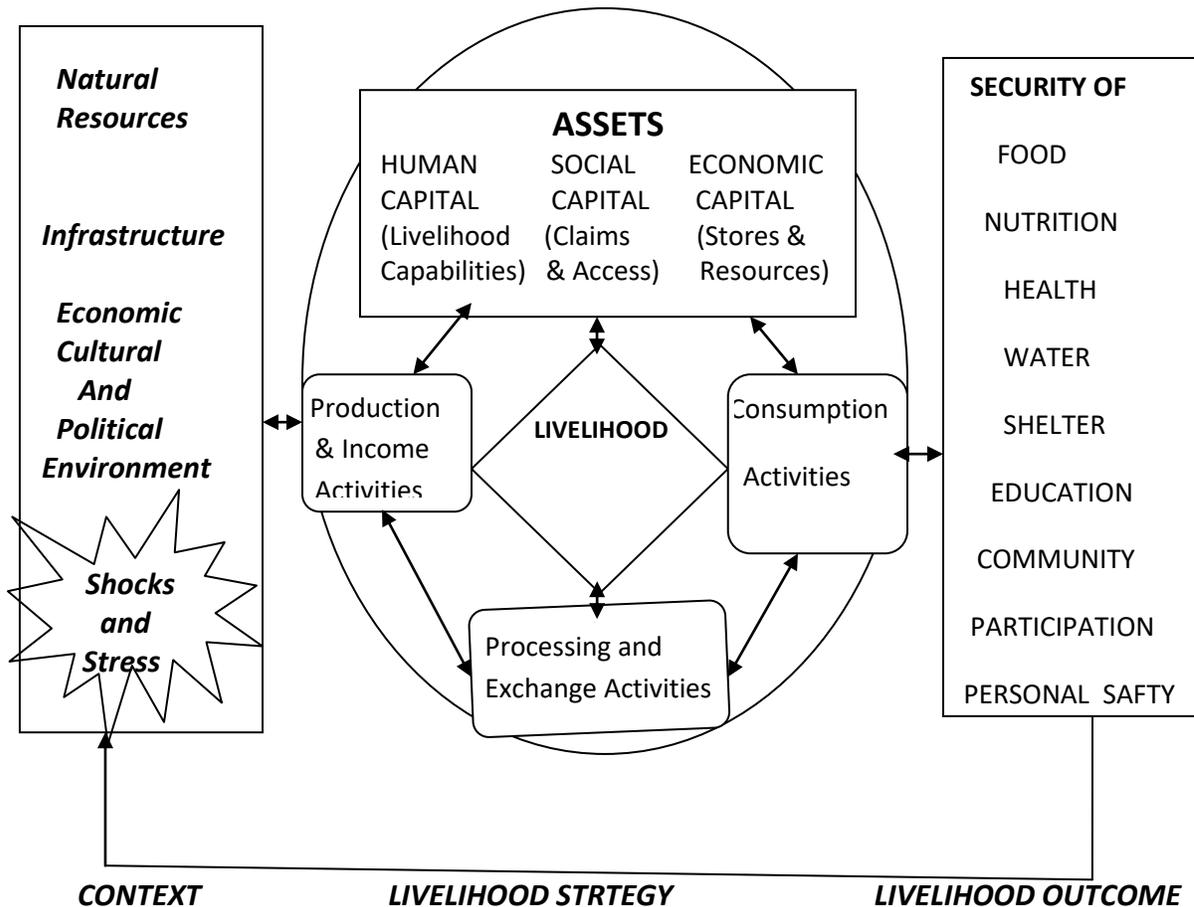
F represents **financial capital**: the financial resources which are available to people (whether savings, supplies of credit or regular remittances or pensions) and which provide them with different livelihood options; and

N represents **natural capital**: the natural resource stocks from which resource flows useful for livelihoods are derived (e.g. land, water, wildlife, biodiversity, environmental resources).

## B) The CARE livelihoods framework

- ❖ CARE is an international NGO that uses the livelihoods approach as its primary planning framework. CARE uses the Chambers and Conway livelihoods definition. It identifies three fundamental attributes of livelihoods:
  - the possession of human capabilities,
  - access to tangible and intangible assets,
  - and the existence of economic activities.
- CARE's approach is similar to DFID in that **it emphasizes the dynamic interrelationships between different aspects of the framework.**
- However, rather than looking at using the 'five capitals' approach to assets, **it distinguishes between assets, capabilities and activities.**

## THE CARE LIVELIHOOD MODEL

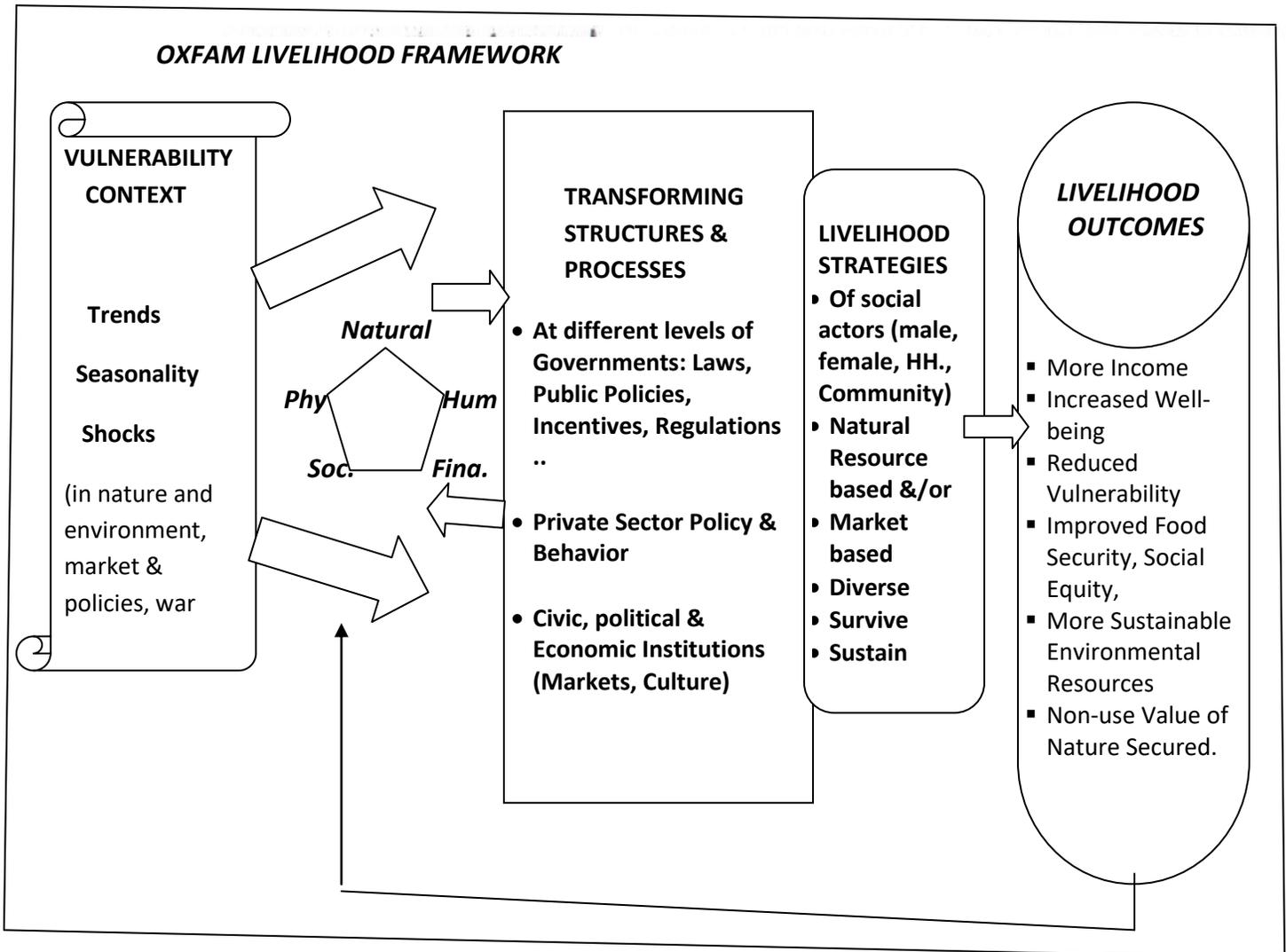


- The CARE framework *does not explicitly identify 'transforming structures and processes'* and *places less emphasis on macro-micro links within the framework*, although these are important in many aspects of its work.
- CARE **emphasizes using a 'light' conceptual framework and tries to include other approaches**. It also aims to allow any framework to be adapted as lessons are learnt so that multiple actors contribute to the evolution of the livelihoods framework.

### C) The OXFAM livelihoods framework

- ❖ Oxfam uses a livelihoods framework '**semi-officially**' that **has a lot in common with the DFID framework**. However,
  - **Oxfam emphasizes that there are no 'established rules'**.
  - **Oxfam says existing frameworks are still too abstract for field-level staff to understand, although they are valuable at programming and policy levels.**
- ❖ Oxfam also draws on Chambers and Conway for its definition of sustainable livelihoods and emphasizes that sustainability has different dimensions:
  - economic (for example, the functioning of markets and credit supply)
  - social (networks of reciprocity, gender equity)

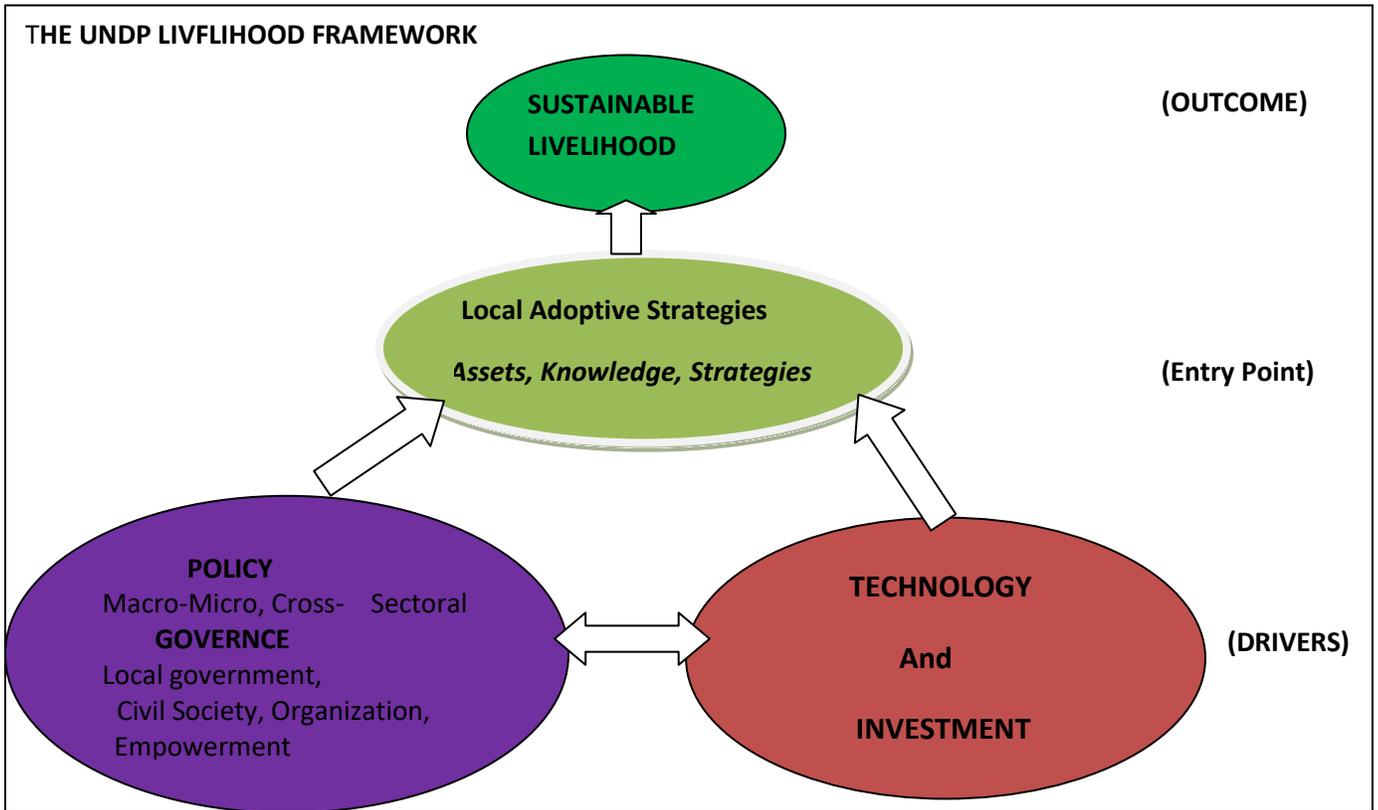
- institutional (capacity building, access to services and technology, political freedom)
  - ecological (quality and availability of environmental resources).
- ❖ This approach is rights-based and according to Oxfam, everyone has the right to a sustainable livelihood.



#### D) The UNDP livelihoods framework

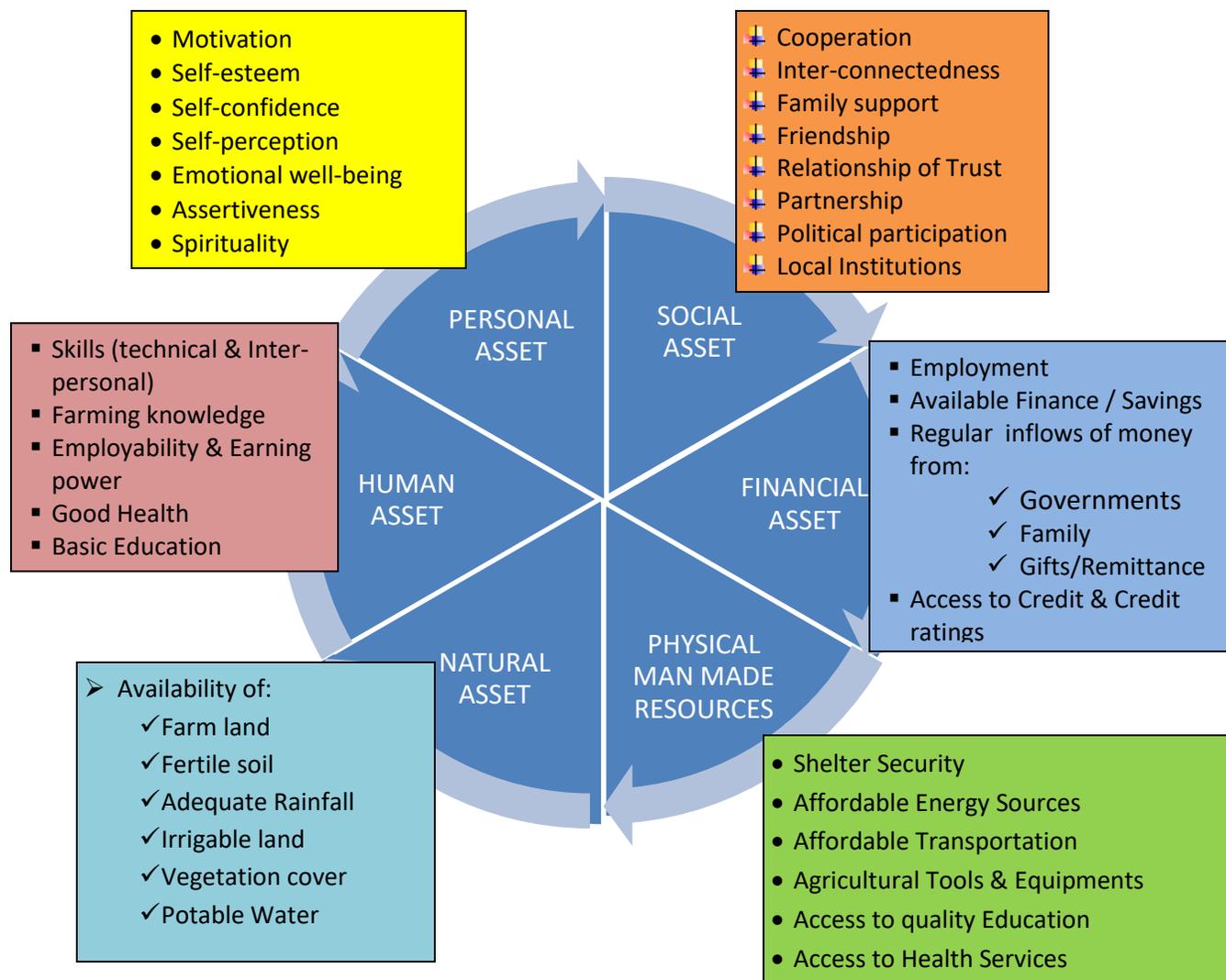
- ❖ The United Nations Development Programme (UNDP) understands livelihoods as the means, activities, entitlements and assets by which people make a living. Sustainable livelihoods are defined as those that are:
- able to cope with and recover from shocks and stresses such as drought, civil war and policy failure through coping and adaptive strategies
  - economically effective
  - ecologically sound
  - socially equitable.

Like DFID, UNDP livelihood framework focuses on people's strengths rather than their needs and emphasizes the importance of making micro-macro links.



### E) Some adapted livelihoods framework into Ethiopian context

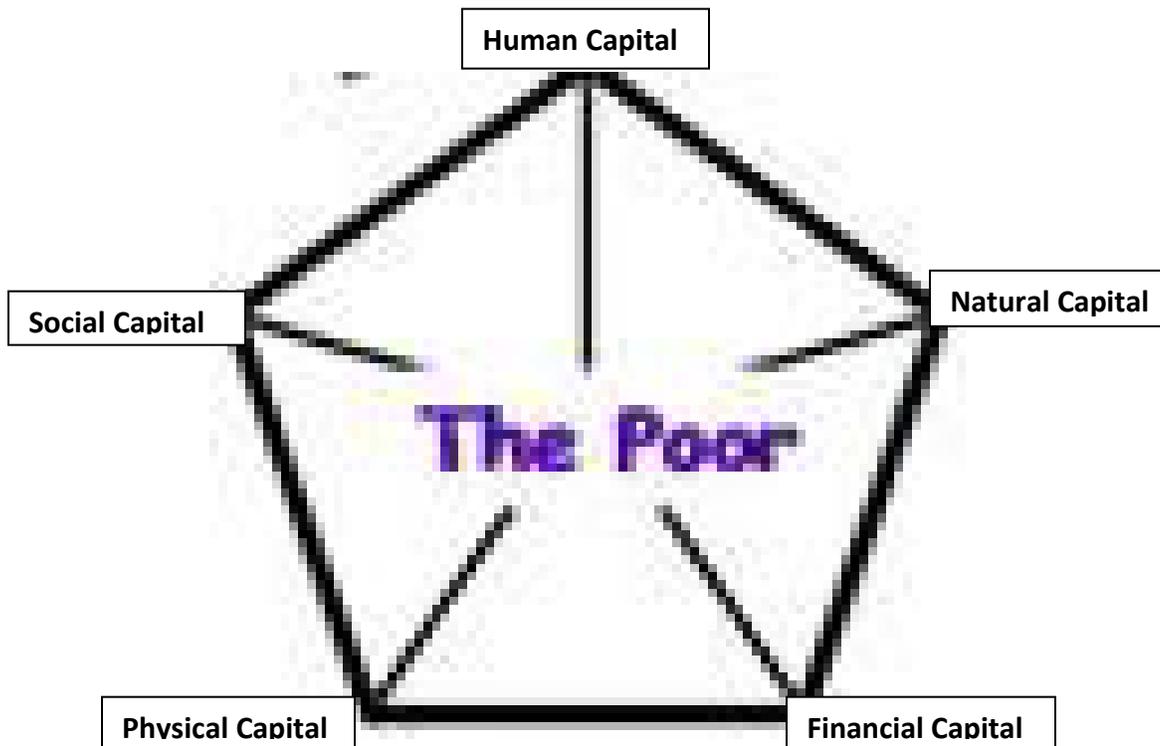
- ❖ Several researchers in Ethiopia have tried to adapt the livelihoods frameworks into Ethiopian situation. The livelihoods framework indicated below, for example, is adapted from Haidar (2009) by Messay (2011) into Ethiopian context. The asset building blocks are given in detail.



### 2.3. The asset building blocks of livelihood

- The livelihoods approach is concerned first and foremost with people. It seeks to gain an accurate and realistic understanding of people's strengths (assets or capital endowments) and how they endeavor to convert these into positive livelihood outcomes. The approach is founded on a belief that people require a range of assets to achieve positive livelihood outcomes; no single category of assets on its own is sufficient to yield all the many and varied livelihood outcomes that people seek. This is particularly true for poor people whose access to any given category of assets tends to be very limited. As a result they have to seek ways of nurturing and combining what assets they do have in innovative ways to ensure survival.

❖ the asset pentagon



- The asset pentagon lies at the core of the livelihoods framework, 'within' the vulnerability context. The pentagon was developed to enable information visually about people's assets, and thereby to present important inter-relationships between the various assets or capitals: **human, natural, financial, physical and social capitals**.
- The shape of the pentagon can be used to show schematically the variation in people's access to assets. The idea is that the centre point of the pentagon are poor people, where the lines meet represents zero access to assets, while the outer perimeter represents maximum access to assets.

❖ **Human capital**

- Human capital represents the skills, knowledge, ability to labor and good health that together enable people to pursue different livelihood strategies and achieve their livelihood objectives.
- At a household level human capital is a factor of the amount and quality of labor available; this varies according to:
  - household size,
  - skill levels,
  - leadership potential,
  - health status, etc.
- Human capital appears in the generic framework as a livelihood asset, that is, as a building block or means of achieving livelihood outcomes. Its accumulation can also be an end in itself. Many

people regard ill-health or lack of education as core dimensions of poverty and thus overcoming these conditions may be one of their primary livelihood objectives.

### ❖ **Social Capital**

There is much debate about what exactly is meant by the term 'social capital'. In the context of the sustainable livelihoods framework it is taken to mean the social resources upon which people draw in pursuit of their livelihood objectives. These are developed through:

- **networks and connectedness**, either vertical (patron/client) or horizontal (between individuals with shared interests) that increase people's trust and ability to work together and expand their access to wider institutions, such as political or civic bodies;
- **membership of more formalized groups** which often entails adherence to mutually-agreed or commonly accepted rules, norms and sanctions; and
- **relationships of trust, reciprocity and exchanges** that facilitate co-operation, reduce transaction costs and may provide the basis for informal safety nets amongst the poor.

The above are all inter-related. For example, membership of groups and associations can extend people's access to and influence over other institutions. Likewise trust is likely to develop between people who are connected through kinship relations or otherwise. Of all the five livelihood building blocks, social capital is the most intimately connected to *Transforming Structures and Processes*). In fact, it can be useful to think of social capital as a product of these structures and processes, though this over-simplifies the relationship. Structures and processes might themselves be products of social capital; the relationship goes two ways and can be self reinforcing.

For example:

- when people are already linked through common norms and sanctions they may be more likely to form new organizations to pursue their interests;
- and strong civil society groups help people to shape policies and ensure that their interests are reflected in legislation.

### ❖ **Natural capital**

Natural capital is the term used for the natural resource stocks from which resource flows and services (e.g. nutrient cycling, erosion protection) useful for livelihoods are derived. There is a wide variation in the resources that make up natural capital, from intangible public goods such as the atmosphere and biodiversity to divisible assets used directly for production (trees, land, etc.). Within the sustainable livelihoods framework, the relationship between natural capital and the Vulnerability Context is particularly close. Many of the shocks that devastate the livelihoods of the poor are themselves natural processes that destroy natural capital (e.g. fires that destroy forests, floods and earthquakes that destroy agricultural land) and seasonality is largely due to changes in the value or productivity of natural capital over a year or subsequent years.

### ❖ **Physical capital**

Physical capital comprises the basic infrastructure and producer goods needed to support livelihoods.

- Infrastructure consists of changes to the physical environment that help people to meet their basic needs and to be more productive.
  - Producer goods are the tools and equipment that people use to function more productively.
- The following components of infrastructure are usually essential for sustainable livelihoods:
- affordable transport;

- secure shelter and buildings;
- adequate water supply and sanitation;
- clean, affordable energy; and
- access to information (communications).

Infrastructure is commonly a public good that is used without direct payment. Exceptions include shelter, which is often privately owned, and some other infrastructure that is accessed for a fee related to usage (e.g. toll roads and energy supplies). Producer goods may be owned on an individual or group basis or accessed through rental or ‘fee for service’ markets, the latter being common with more sophisticated equipment.

#### ❖ **Financial capital**

Financial capital denotes the financial resources that people use to achieve their livelihood objectives. The definition used here is not economically robust in that it includes flows as well as stocks and it can contribute to consumption as well as production. However, it has been adopted to try to capture an important livelihood building block, namely the availability of cash or equivalent that enables people to adopt different livelihood strategies. There are two main sources of financial capital:

- **Available stocks:** Savings are the preferred type of financial capital because they do not have liabilities attached and usually do not entail reliance on others. They can be held in several forms: cash, bank deposits or liquid assets such as livestock and jewellery. Financial resources can also be obtained through credit-providing institutions.
- **Regular inflows of money:** Excluding earned income, the most common types of inflows are pensions, or other transfers from the state, and remittances. In order to make a positive contribution to financial capital these inflows must be reliable (while complete reliability can never be guaranteed there is a difference between a one-off payment and a regular transfer on the basis of which people can plan investments).

#### 2.4. An Alternate Classification of Assets:

The core of *Livelihood is confined within the objective of making a living* (may include “normal” living as well as survival in crisis). **Assets may include investments, stores, and claims.** In the division of assets into tangible and intangible: stores and resources are tangible, while claims and access are intangible assets. However, putting them together avoids overlapping – **for example**, stores are often regarded as resources and vice versa; and claims require access if they are to have any value.

- ❖ **STORES AND RESOURCES:** these are tangible assets commanded by a household.
  - **Stores** include food, stocks, stores of value such as gold, jeweler, and woven textiles, and cash savings in banks of thrift and credit schemes.
  - **Resources** include land, water, trees, and livestock; and farm equipment, tools, and domestic utensils. Assets are often both stores and resources, as with livestock, trees and savings.
- ❖ **CLAIMS AND ACCESS:** these are intangible assets of households.
  - **Claims** are demands and appeals which can be made for material, moral, or other practical support or access. The support may take many forms, such as food, implements, loans, gifts, or work. Claims are often made at times of stress or shock, or when other contingencies (uncertain future event) arise. Claims may be made on individuals, or agencies, on relatives, neighbors, chiefs, social groups or communities, or on NGOs, government or the international community, including programs for drought relief, or poverty alleviation. They are based on combinations of right, precedent (earlier / regular event), social convention, moral obligation and power.

- **Access:** is *the opportunity in practice to use a resource, store, or service, or to obtain information, material, technology, employment, food or income.* Services here include transport, education, health, shops and markets. Information includes extension services, radio, television and newspapers. Technology includes techniques of cultivation, new seeds, industrial machines, tools and skills. Employment and other income-earning activities include rights to common property resources (CPRs) such as fuel wood or grazing on state or communal lands.
- Out of these tangible and intangible assets people construct and contrive a living, using physical labor, skills, knowledge, and creativity. Skills and knowledge may be acquired within the household, passed on from generation to generation as indigenous technical knowledge, or through apprenticeship, or more formally through education or extension services, or through experiment and innovation.
- ❖ **Livelihoods comprise one, or at often times more than one activity** (for example rural livelihoods may comprise cultivation, herding, and/or hunting gathering, or wage labor, trading, and hawking, artisanal work such as weaving and carving, processing, providing services in transport, fetching and many other off-farm activities). They variously provide food, cash, and other goods to satisfy a wide variety of human needs. Some of these outputs are consumed immediately, and others go into short and long-term stores, to be consumed later or to be invested in other assets.
  - Such **short and long-term investments** occur when **production leads to a surplus beyond immediate consumption requirements.** Investments are made in enhancing or acquiring resources, in establishing claims, in gaining access, and in improving capabilities.
    - **Resources may be enhanced through investing labor** as in terracing work to improve the stock of soil, or **through investing money** in a cart to take produce to market.
    - **Claims** may be established by investing in a marriage or by giving presents.
    - Access to information may be obtained by investment in a radio or in education.
    - Capabilities may be enhanced again through investment in (useful) education and training, and in apprenticeship.
  - The results of successful investments are an added variety or quality of assets and/or capabilities which can be used for further production or in responding to future contingencies and threats to survival.
- ❖ In addition to direct and physical benefits, adequate and decent livelihoods can and often do have other good effects. *They can improve capabilities in the broader sense of the term by providing conditions and opportunities for widening choices, diminishing powerlessness, promoting self-respect, reinforcing cultural and moral values, and in other ways improving the quality of living and experience.*

## 2.5. Vulnerability context

- ❖ **The livelihoods and survival** of human individuals, households, groups and communities are **vulnerable to stresses and shocks.** **Vulnerability** have two aspects:
  - **External** – the stresses and shocks to which they are subject, and
  - **Internal** – the capacity to cope-up with the stresses and shocks.
- **Stresses** are pressures which are typically continuous and cumulative, predictable and distressing, such as **seasonal shortages, rising populations or declining resources;**

- **While Shocks** are impacts which are typically sudden, unpredictable, and traumatic – such as fires, floods and epidemics.
- ❖ **The root causes that give rise to vulnerability**, as well as reproducing it over time,
  - ✚ are economic, demographic, and political processes;
  - ✚ these causes by and large **affect the allocation and distribution of resources** between different groups of people.
- ‘Such root causes are normally a function of the economic structure, of legal definitions of rights, of gender relations, and other elements of ideological order
- ❖ **Dynamic pressures:** These are **processes and activities** that translate the effects of root causes into the **vulnerability of unsafe conditions**. ‘These include:
  - reduced access to resources as a result of the way regional or global pressures such as rapid population growth, epidemic diseases, rapid urbanization, war, foreign debt and structural adjustment, export promotion, mining & hydropower development, and deforestation processes, which work through localities’ to the wider macro-levels .
  - Rural-urban migration is also cited as an important dynamic pressure on root causes. Its main consequences are through erosion of local knowledge and institutions which are vital in disaster mitigation, as well as in terms of productive labour loss in rural communities.
- In the Ethiopian context, the major pressures on people’s livelihood emanates from rapid population growth, frequent change in rural policies, over utilization of resources (soil and vegetation), static technology, and crop and livestock yields decline.
- ❖ **Livelihood stresses** manifest either by **building gradually over time** or by **occurring regularly**:
  - Livelihood stresses which build up gradually comprise:
    - ✚ declining labor work available and/or declining real wages,
    - ✚ declining yields of soils due to degradation through Stalinization, acidity or erosion;
    - ✚ declining common property resources, and having to go further and spend longer for much less fuel, fodder, grazing and water;
    - ✚ declining water tables, declining rainfall, ;
    - ✚ population pressures on resources leading to declining farm-size and declining returns to labor;
    - ✚ ecological change leading to lower bio-economic productivity; indebtedness,;
    - ✚ physical disabilities like river blindness the effect which build up gradually affecting the whole household;
    - ✚ and the domestic cycle with its periods of high ratio’s of dependents to the active adults.
  - **Regularly occurring stresses arise from cycles which are either diurnal** (mid-day and afternoon heat, mosquitoes in the evening and at night, cold and difficulty seeing at night ---) **or seasonal. For the sustainability of livelihoods, seasonal stresses are more significant than diurnal.** They have physical, biological, and socio-economic dimensions which often interlock at bad times of the year.

- ***Certain kinds of shocks may affect the whole communities in a given area or region*** – these include wars, persecutions and civil violence, droughts, storms, floods, fires, famines, landslides, epidemics of crop pests or of animal or human illness, and the collapse of a market.
  - ✓ **Examples of shocks affecting individuals and households include** accidents and sudden sickness, the death of a family member or a valued animal; loss of assets through theft, fire or other disaster; and a loss of job.

❖ **Reducing vulnerability has two dimensions:**

- ***The first is external involving public action*** – to reduce external stress and shocks through flood prevention, disaster preparedness, off-season public works to provide employment, prophylaxis against diseases, and the like.
- ***The second is internal involving private action***, in which a household adds to its assets, so as it can respond more effectively and with less loss.

## 2.6. Livelihood strategies and Outcomes.

- ❖ ***Livelihood strategies*** refer to activities that constitute a regular cycle of the household's quest to meet basic needs,
- ❖ And ***coping or survival strategies*** refer to measures resorted to in situations of crisis or especial threat.
  - Cyclical activities through which households seek to meet their socioeconomic needs differ from activities they undertake to help weather crises.
  - Livelihood systems and strategies, in other words, must be distinguished from coping or survival strategies. As "normal" conditions become more erratic, however, strategic actions and systemic functions begin to merge.
    - ✚ The traditional means of production in agricultural communities, land and labor, are managed in increasingly complex ways as pressures on land intensify and livelihoods that rely primarily on land grow more vulnerable.
    - ✚ Diversification of the resource base and of management strategies now constitutes a central feature of livelihood systems in countries exposed to the problem.

For example, sale of livestock, once an emergency measure (livestock was traditionally regarded as a form of savings) is now an integral part of the livelihood system, regularly carried out to meet annual expenses such as those of children's schooling, and also, increasingly, to meet household food needs. This trend is doubly significant in a context where livestock is much scarcer than previously. When a household had several head of cattle, the sale of a cow did not constitute a serious de-capitalization, whereas it does today when very few families have cattle any more, and those who do have rarely more than one head each.

- ❖ Sustainable livelihoods are those that can avoid or resist such stresses and shocks, and/or resilient and able to bounce back. Households' portfolio of tangible (stores and resources) and intangible (claims and access) assets can be understood as a means that reduce vulnerability and that enable the household to survive stress and shocks with minimum risk of threat to the future

livelihood. Similarly, the repertoire of activities of household members can be interpreted partly as action that spread risk.

- ❖ **Livelihood Strategies:** is the overarching term used to denote the range and combination of activities and choices that people make/undertake in order to achieve their livelihood goals (including productive activities and investment strategies).

Recent studies show the enormous diversity of livelihood strategies at every level: within geographic areas, across sectors, within households and over time. This is not a question of people moving from one form of employment or 'own-account' activity to another.

Rather, it is a dynamic process in which they combine activities to meet their various needs at different times. A common manifestation of this at the household level is 'straddling' whereby different members of the household live and work in different places, temporarily (e.g. seasonal migration) or permanently. Social patterns such as this clearly complicate analysis and underline the importance of viewing households and communities within their wider context. Since goods, financial resources and people are all mobile, an accurate picture of livelihoods cannot be gained if artificial boundaries are drawn.

- ❖ Any definition or strategic action related to livelihood sustainability has to include the ability to avoid, or more usually to withstand and recover from such stresses and shocks. Human and household strategies for coping with stress and shocks consist of mixes of the following:
  - **Stint:** reduce current consumption, shift to lower quality foods; draw on energy stored in the body.
  - **Hoard:** accumulate and store food and other assets.
  - **Protect:** preserve and protect the asset base for recovery and re-establishment of the livelihood
  - **Deplete:** draw up on household store of food; pledge or sell assets
  - **Diversify:** seek new sources of food – wild foods, gleaning, wild animals, food stored by rats and other animals; diversify work activities and sources of income, especially in off-seasons
  - **Claim:** make claims on relatives, neighbors, patrons, the community, NGO's, the government, the international community, variously by calling in debts, appealing to reciprocity and good-will, begging, and political action.
  - **Move:** disperse family members, livestock and assets; and/or migrate.

- ❖ **Livelihood outcomes**, on the other hand, are the achievements or outputs of Livelihood Strategies. It helps to recognize the richness of potential livelihood goals, and in turn, to understand people's priorities, why they do what they do, and where the major constraints lie.

The livelihood outcomes that appear in livelihoods frameworks are effectively categories and may include:

- **More income:** Although income measures of poverty have been much criticized, people certainly continue to seek a simple increase in net returns to the activities they undertake and overall increases in the amount of money coming into the household (or their own pocket). Increased income also relates to the idea of the economic sustainability of livelihoods.

- **Increased well-being:** In addition to income and things that money can buy, people value nonmaterial goods. Their sense of well-being is affected by numerous factors, possibly including: their self-esteem, sense of control and inclusion, physical security of household members, their health status, access to services, political enfranchisement, maintenance of their cultural heritage, etc.
- **Reduced vulnerability:** Poor people are often forced to live very precariously, with no cushion against the adverse effects of the Vulnerability Context; their livelihoods are to all intents and purposes unsustainable. For such people, reducing their vulnerability to the downside and increasing the overall social sustainability of their livelihoods may well take precedence over seeking to maximize the upside
- **Improved food security:** Food insecurity is a core dimension of vulnerability. It appears as a separate category in the framework in order to emphasize its fundamental importance, and because this helps to locate the activities of those governments and donors that focus on food security. It is also worth noting that participatory poverty assessments have shown hunger and dietary inadequacy to be a distinct dimension of deprivation
- **More sustainable use of the natural resource base:** Environmental sustainability, or sustainability of the natural resource base should be carried with a careful, wise and sustained use of resources by maintaining the regenerative capacity of the environment.

### III. Livelihood / Food Security VS Development Approaches:

#### 3.1. Shift from 'food first' to 'livelihood perspective'

- ❖ The shift from 'food first' to 'livelihood perspective' was mainly in response to four important issues:
  - The fact that many empirical observations on food insecurity have shown that the **victimized people focus on long-term objectives (sustaining livelihood)** rather than attaining the short-term satisfaction of immediate food consumption.
  - **People respond to food shortage crisis by practicing a variety of coping and adapting strategies**, an understanding of which requires dealing with specific contexts. An Oromo proverb says: '*Bara hamma fi furguugge geddi jedhanitti jala darbani*', literally means one should be alert about how to cope with 'bad years' and being hit on the top of the head, which beautifully explains the importance of understanding specific copings.
  - The beginning of an application of an analogy of concepts of environmental management, i.e. 'sensitivity' and 'resilience' in explaining the situations before, during and after food crisis for households.
  - The relatively recent quest for the holistic understanding peoples' opportunities, constraints and the interrelations (interactions) between context, access to assets and institutions as resulting in either desirable or undesirable livelihood outcome.
- ❖ The conventional perception that put food at the top priority of a hierarchy for human needs is expressed thus:
  - 'Lower order needs are dominant until satisfied, whereupon the higher order needs come into operation ... if you are starving, your needs for esteem or status will be unimportant; only food matters' (Handy 1985, cited in Maxwell & Smith 1992: 28).
  - So, food security for citizens has been a major concern on the development agenda for some time. Hopkins, quoted by Maxwell (1996: 158), argues that: 'Access to necessary nutrients is fundamental, not only to life per se, but also to stable and enduring social order'.

- ❖ However, a number of authors challenge the idea of considering food as the top priority among basic human needs (Oshaug 1985, Chambers 1989, de Waal 1989, Maxwell & Smith 1992).
  - Rather, they believe that food security constitutes a subsystem of a broader livelihood security. An empirical observation shows that ‘ sometimes people chose to go hungry in order to preserve assets and future livelihood; people are quite prepared to put up with considerable degrees of hunger in order to preserve seed for planting, cultivate their own fields or avoid having to sell an animal’.
- ❖ Livelihood security, which has today become influential in development studies as well as intervention approach. **Security** is a basic dimension in livelihood sustainability.
  - **Security refers to secure ownership of, or access to, and income earning activities, including reserves and assets to off-set risk, ease shocks and meet contingencies.**

Table 3.1. Differences between a ‘food-first’ and a ‘sustainable-livelihood’ approach to Household food security.

|  | <b>‘Food - first’ approach</b>  | <b>Sustainable- livelihood approach</b>  |
|--|---|--|
| <b>Objective</b>   | <b>Access to food</b>   | <b>Secure and sustainable livelihood</b>   |
| Point of departure   | Failure to subsist  | Success in feeding, living   |
| Priorities   | Food at the top of hierarchy of need  | Food one part of a jigsaw of livelihood needs  |
| Time preferences   | Food needs met before and in preference to all others   | Food needs meet to the extent possible given immediate and future livelihood needs   |
| Entitlements   | Narrow entitlements base (current and past consumption; household defined)                                | Broad entitlement base (include future claims, access to Common Property Resources (CPRs), etc.); defined at household and community level |
| Vulnerability  | Lack or want of food  | Defenselessness, insecurity, exposure to risks, shocks and stress  |
| Security   | Opposite of vulnerability is enough food, irrespective of the terms or conditions on which it is acquired | Opposite of vulnerability is security  |
| Vulnerable groups  | Based on social, medical criteria   | Also based on economic and cultural criteria   |
| Coping strategies  | Designed to maximize immediate consumption  | Designed to preserve livelihoods   |
| Measuring and monitoring                                     | Present and past consumption  | Livelihood security and sustainability   |
| Relationship between food security and natural resource base | Degrade environment to meet immediate food needs  | Preserve environment to secure for future  |

Source: Based on Davies (1996).

- Two major issues stand out from the comparison between the two approaches:
  - First, food should not be seen as something unique and an independently defined object in relation to human beings.
  - Second, food security must be seen in relation to livelihood strategies to be practiced in the context of short-term response to sudden crisis and long-term adaptation of people.

- Household livelihood security is now understood to mean well-being security and thus well accepted as an appropriate approach to poverty reduction. To this effect, the recent definition of household livelihood security is stated as '*A family's or community's ability to maintain and improve its income, assets and social well-being from year to year, the relief to rehabilitation to development continuum*'.

### **3.2. LIVELIHOOD STRATEGIES**

#### **3.2.1. Resilience and sensitivity.**

The issues of differentials of household livelihood situations in pre- and post famine periods, degree of vulnerability, and capacity to recover have brought in another way of analyzing food security at household level. Accordingly, land management concepts by Blaikie & Brookfield (1987), namely 'sensitivity' and 'resilience', were applied to differentiate whether a household livelihood system is sustainable or not. In the context of land resource management, 'sensitivity' refers to a degree to which a given land system undergoes changes due to natural forces, following human interference, while 'resilience' is meant the ability to stand up to or absorb the effects of interference'(ibid: 10). A household's livelihood strategies system and a resultant undesirable food insecurity situation may be characterized by either of the following:

- ✓ Household's livelihood system with low sensitivity/high resilience: food insecurity only occurs under conditions of poor management and persistent practices which erode entitlement.
- ✓ II. Household's livelihood system with high sensitivity/high resilience: suffers food insecurity easily but responds well to management designed to raise entitlements.
- ✓ III. Households livelihood system with low sensitivity/low resilience: initially resistant to food insecurity but once thresholds are passed it is very difficult for management to restore entitlements.
- ✓ IV. Household's livelihood system with high sensitivity/low resilience: suffers food insecurity easily, unable to maintain food security through management of any type (Davies 1996).

The framework outlined by Davies (1996) functions well for differentiating and understanding peasant and agro-pastoralist households' food security status. However, the data needed for this purpose become quite extensive because the issues of sensitivity and resilience can be better analyzed and understood by tracing back some historical characteristics and/or features.

#### **3.2.2. Coping and adaptation**

A number of researchers put emphasis on understanding how people, in both the short-term and long-term respond to the food crises facing them (Watts 1983, Longhurst 1986, Corbett 1988, Dessalegn 1991, Riely 1991, Davies 1996, Yared 1999). In this respect, Davies makes an important clear distinction between '**coping**' and '**adapting**' strategies, which were for a long time used interchangeably and even in confusing ways in certain cases:

- *Coping strategies are the bundle of producer responses to declining food availability and entitlements in abnormal seasons or years, while adapting strategies involve a permanent change in the mix of ways in which food is acquired, irrespective of the year in question (Davies 1996: 59).*

The cases of two households' livelihood situations from a recent study in south-central Ethiopia (Degefa 2003a) can serve to illustrate the difference between the two concepts. The first case is that of the peasant household that sells small stock (sheep or goats) to buy grain in years of serious transitory food shortage is coping with the problem. By contrast, the peasant without farm oxen but holding some land, who sharecrops or leases out to somebody else in the community and earns additional income by working in occasional wage labour, is adapting to the livelihood system. It is important to note that both household livelihood and the response mechanisms for coping with various shocks are dynamic in nature.

There is a debate regarding the types and timing for employing a diversity of coping mechanisms practiced by people facing food shortage. Some authors identify a sort of sequence that households are expected to practice during food crisis (Watts 1983, Corbett 1988, Dessalegn 1991), while others disagree with the notion of sequence (Yared 1999, Riely 1991, Davies 1996) mainly due to differential access to resources, as well as different contexts in pre-crisis periods. Those who argue that coping strategies are practiced in sequence agree on the following order (moving from less to severe food shortage, and from high to low reversibility): crop and livestock adjustment, diet change, famine food use, grain loan from kin, labour sales (migration), small animal sales, cash/cereal loan from merchants, productive asset sales, farmland pledging, farmland sale, and out-migration. Today, it has even become commonplace to judge the degree of food shortage (magnitude of food insecurity); depending on the type of coping strategies a household practices (Maxwell 1996, Maxwell & Wiebe 1999).

Nevertheless, regardless of a specific type of response, the options, possibilities and degree of food shortage a household is facing determine what should be disposed of first, in what types of social networks a household can be involved in, and a type of safety net to be claimed.

### 3.3. Development Thinking / Concepts

Most development thinking or concepts that were run up to the early 20<sup>th</sup> century had been focused on three modes of thinking: ***Production thinking, Employment thinking, and Poverty-line thinking.***

- ❖ ***Production thinking*** – Problems defined variously as “hunger”, under nutrition, malnutrition, and famine are in this mode seen as problems of production, of not producing enough food. But an overwhelming evidences show that these are much more problems of entitlements, of being able to command food supplies, than of production or supply.
- ❖ ***Employment thinking*** – the problems of the poor are seen as lack of employment, which implies to failing to generate large number of new “work places”. The ideal of full employment, in which everyone has a ‘job’, however, misfits much rural reality; because in most rural areas people strive to put together a living through multifarious activities.

- ❖ **Poverty-line thinking** – Deprivation is defined in terms of a single continuum, the poverty line, which is measured in terms of income (especially wages or salaries) or consumption. As a result most governments aim or strive to enable more people to rise above the line, and fewer to sink below it. But deprivation and well being are perceived to have many dimensions which do not correspond with this measure.
  - These three modes of thinking used in most analysis share two major defects:
    - ✚ Are industrialized countries imprints and amenable /confined to measurement along single scales – amount produced, numbers employed in jobs, and earnings or wages in a weekly or annual basis.
    - ✚ They have narrow conceptual bases designed and applied a top – down approach. These concepts and measures are generated in urban conditions and convenient for general (holistic) regional or national analysis.
    - ✚ These concepts do not fit or capture the complex and diverse realities of most rural life, particularly in the developing countries.
- ❖ As a result (after several and longer influx and debate, three other concepts which are variously found in or evolved in the social and biological sciences, and which have increasingly commanded consensus for the 21<sup>st</sup> century were generated. These three concepts are: **Capability, Equity, and sustainability**.
  - **Capability** (by Amartya Sen, 1984 & 1987) has been used to refer to being able to perform certain basic functions, to what a perso is capable of doing and being doing. It includes, for example, to be adequately nourished, to be comfortably clothed, to avoid escapable morbidity and preventable mortality, to lead a life without shame, to be able to entertain, to keep track of what is going on and what others are talking about.
    - ✚ Quality of life is seen in terms of valued activities and the ability to choose and perform those activities.
    - ✚ Capability has, thus, a wide span; being democratically defined has diverse specific meanings for different people in different places, including the well-being of poor people.
    - ✚ Livelihood capability implies, to being able to cope with stresses and shocks; and being able to find and make use of livelihood opportunities. Such capabilities are not just reactive – being able to respond to adverse changes in conditions, they are also proactive and dynamically adoptable.
    - ✚ They include gaining access to and using services and information’s, exercising foresight, experimenting and innovating, competing and collaborating with others, and exploiting new conditions and resources.
  - **Equity**: in conventional terms, equity can be measured in terms of relative income distribution.

- ✚ But the term more broadly imply a less equal distribution of assets, capabilities, and opportunities, and especially enhancement of those of the most deprived.
- ✚ It includes an end to discrimination against women, against minorities, and against all who are weak, and an end to urban and rural poverty and deprivation.
- **Sustainability:** In common parlance, sustainability connotes self-sufficiency and an implicit ideology of long-term self-restraint and self-reliance
  - ✚ It is used to refer to life styles which touch the earth lightly; to organic agriculture with low organic inputs, to institutions which can raise their own revenue; to processes which are self-supporting without subsidy.
  - ✚ Socially, with a livelihood context and in a more focused manner sustainability implies to the ability to maintain and improve livelihoods, while maintaining or enhancing the local and global assets and capabilities on which livelihoods depend.
- ❖ These three concepts of capability, equity, and sustainability are linked, in that each is seen as both an end and a means to good end. Capabilities, equity, and sustainability combine in the concept of sustainable livelihoods. A livelihood in its simplest sense is a means of gaining a living.
  - Capabilities are both an end and a means of livelihood: a livelihood provides the support for the enhancement and exercise of capabilities (an end); and capabilities (a means) enable a livelihood to be gained.
  - Equity is both an end and a means: any minimum definition of equity must include adequate and decent livelihoods for all (an end); and equity in assets and access are preconditions (means) for gaining adequate and decent livelihoods.
  - Sustainability, too, is both an end and means: sustainable stewardship of resources is a value (or end) in itself; and it provides conditions to be sustained for future generations.
- ❖ so on.

### 3.4. Sustainable Development: Valuing Future Livelihoods.

Planning for future livelihoods implies the placing of value on the future. It involves the sustainable development concept, which implies to meet the needs of the present without compromising the ability of future generations to meet their own needs, and thereby raising the issue of equity for future generations.

In practice, the livelihoods of future generations are undervalued in decision making for four reasons:

- **Innumeracy** – it refers to the failure to recognize the numbers involved how vastly the present generation could be outnumbered by future generation.
- **Undemocratic democracy** – the lack of democratic representation of future people. Their interests can only be represented through the exercise of our imagination, altruism, restraint, and responsible stewardship.
- **Discounting** – devaluating the future. Economists discount the future in order to maximize net present value, politicians discount the future in order to win votes at elections, and businessmen discount the future in order to make profits now, and to repay interest on loans. In all these actions, future benefits are given low values.
- **Uncertainty** – inability to predict the future. Futurologists have often been wrong in their past predictions. Faced with accelerating ecological, technological and social change, we

have few grounds for supposing that many current predictions will be better, like for example- the potentials and impacts of biotechnological, of nuclear fusion, and of the social impacts of the new mass communications.

- The political and professional challenge here is to offset the temptations of short term advantage and to forego short-term benefits, for the sake of those future people which outnumber us so astronomically.
- Intergenerational equity requires setting a higher value on future sustainable livelihoods than the present ones, by considering the extent of livelihood pressure on resources which could be more intense in the future.
- ❖ Thus, sustainability must be seen as a
  - ✚ “requirement that the use of resources today should not reduce real income in the future... , sustainability ought to mean that a given stock of resources – trees, soil quality, water, and so on – should not decline.
  - ✚ The sustainability criterion suggests that, at a minimum, future generations should be left no worse off than current generations.

#### **3.4.1. RIGHT- BASED APPROACH**

Rights-based approach to development is an approach to development promoted by many International Development Agencies and non-governmental organizations (NGOs) that aim to achieve a positive transformation of power relations among the various development actors. This practice blurs the distinction between human rights and development. There are two stake holder groups in rights-based development, the rights holders (the community or the group who does not experience full rights) and the duty bearers (usually government organs or the institutions who are obligated to fulfill the rights of the rights holders). Rights-based approach aims at strengthening the capacity of duty bearers and empowers the rights holders.

After the 1948 the United Nations Universal Declaration of Human Rights, in 1976 the UN signed the United Nations Covenant on Civil and Political Rights, officially endorsing democracy. Although it had little to do with the UN's stance on development, then after the issue Human rights became one of the major debates in development discourse. Human rights organizations such as Human Rights Watch and Amnesty International, used to focus primarily on documenting human rights violations on the civil and political level. No longer do these organizations focus solely on human rights violations, but also have led to the development of the rights-based approach that focus on:

- ❖ **social, economic, and cultural rights.**
- ❖ **asserted through responsibilities, duties, transparency, trust, and accountability.**

In 2003, various organizations and agencies met to develop a

- ❖ "Common Understanding" of a human rights-based approach. Giving six main principles::
- ❖ ☑ Universality and inalienability
- ❖ ☑ Indivisibility
- ❖ ☑ Inter-dependence and inter-Relatedness
- ❖ ☑ Equality and non-discrimination

- ❖ ② Participation and inclusion
- ❖ ② Accountability and rule of law

This new developmental theory of rights-based approach has been met with positive feedback as well as criticism. There are thoughts that incorporating the language of human rights with development is just a change of terminology and doesn't change the programs being implemented. The ability for a state to implement public policy has been hindered due to the need to comply with economic and social rights. There has been a natural linkage between development and rights and there has frequently been pressure on states and governments to be involved with issues of human rights as well as development. Therefore, in many cases, changing the terminology will not increase the effectiveness of the state.

### 3.4.2. Participatory development approach

Participatory Development seeks to engage local populations in development projects. Participatory development (PD) has taken a variety of forms since it emerged in the 1970s, when it was introduced as an important part of the **basic needs approach** to development. Most manifestations of PD seek to give the poor a part in initiatives designed for their benefit in the hopes that development projects will be more sustainable and successful if local populations are engaged in the development process. PD has become an increasingly accepted method of development practice and is employed by a variety of organizations. It is often presented as an alternative to mainstream top-down development. There is some question about the proper definition of PD as it varies depending on the perspective applied. Two perspectives that can define PD are the *Social Movement Perspective* and the *Institutional Perspective*:

The *Social Movement Perspective* defines participation as the mobilization of people to eliminate unjust hierarchies of knowledge, power, and economic distribution. This perspective identifies the goal of participation as an empowering process for people to handle challenges and influence the direction of their own lives. The *Institutional Perspective* defines participation as the reach and inclusion of inputs by relevant groups in the design and implementation of a development project. The *Institutional Perspective* uses the inputs and opinions of relevant groups, or stakeholders in a community, as a tool to achieve a pre-established goal defined by someone external to the community involved. From an institutional perspective, there are four key stages of a development project: Research Stage, Design Stage, Implementation Stage, Evaluation Stage. The institutional perspective can also be referred to as a Project-Based Perspective.

**Research stage** is where the development problem is accurately defined. All relevant stakeholders can be involved in this process. The research around the development problem can include studying previous experiences, individual and community knowledge and attitudes, existing policies and other relevant contextual information related to socio-economic conditions, culture, spirituality, gender, etc.

**Design stage** defines the actual activities. A participatory approach helps to secure the ownership and commitment of the communities involved. Active participation by local citizens and other stakeholders aims to enhance both the quality and relevance of the suggested interventions.

**Implementation stage** is when the planned intervention is implemented. Participation at this stage increases commitment, relevance and sustainability.

**Evaluation stage** participation ensures that the most significant changes are voiced, brought to common attention and assessed. For a meaningful evaluation, indicators and measurements should be defined in a participatory process at the very beginning of the initiative involving all relevant stakeholders.

There are various forms of Participatory approaches:

- 1. Participation by consultation** is an extractive process, whereby stakeholders provide answers to questions posed by outside researchers or experts. However, this consultative process keeps all the decision-making power in the hands of external professionals who are under no obligation to incorporate stakeholders' input.
- 2. Participation by collaboration** forms groups of primary stakeholders to participate in the discussion and analysis of predetermined objectives set by the project. This level of participation does not usually result in dramatic changes in what should be accomplished, which is often already determined. It does, however, require an active involvement in the decision-making process about how to achieve it. This incorporates a component of horizontal communication and capacity building among all stakeholders—a joint collaborative effort. Even if initially dependent on outside facilitators and experts, with time collaborative participation has the potential to evolve into an independent form of participation.
- 3. Empowerment participation** is where primary stakeholders are capable and willing to initiate the process and take part in the analysis. This leads to joint decision making about what should be achieved and how. While outsiders are equal partners in the development effort, the primary stakeholders are *primus inter pares*, i.e., they are equal partners with a significant say in decisions concerning their lives. Dialogue identifies and analyzes critical issues and an exchange of knowledge and experiences leads to solutions. Ownership and control of the process rest in the hands of the primary stakeholders.

### **3.4.3. Sector-wide approaches**

Sector-Wide Development Approaches have emerged in response to changes in the aid environment over the last decade. Increased emphasis has been placed on **poverty reduction** through the establishment of the Millennium Development Goals (MDGs). New mechanisms have been established, such as *the Heavily Indebted Poor Countries (HIPC) initiative and Poverty Reduction Strategies*. There has been intense debate on the failure of projects to address poverty in a systematic way, and around aid effectiveness generally. In addition, the importance of government ownership and government leadership has been increasingly recognized.

A SWAp is:

- an approach which involves a different type of relationship between government and development partners;

- a mechanism through which support to public expenditure programs can be better coordinated;
- a means of improving aid effectiveness-by improving the efficiency and effectiveness with which all resources are used, and accounted for, in the sector.

It is important to remember that a SWAp is an approach, not a blueprint. The approach is based on key principles and attempts to progressively apply them, but it is the national conditions and preferences that guide the development of the process. A SWAp is a form of Programme Based Approach (PBA) applied at the sector level.

The key components of an effective SWAp are:

- A clear nationally-owned sector policy and strategy;
- A medium term expenditure framework that reflects the sector strategy;
- Systematic arrangements for programming resources that support the sector;
- A performance monitoring system that measures progress and strengthens accountability.

#### **3.4.4. Integrated rural development**

Many earlier development approaches assumed that rural society was homogenous (in other words, that there was no differentiation between households in rural areas) and that households had single-purpose economies (in other words, that they only had one way of making a living). As a result, development agencies tended to focus on narrow, sectoral, production- orientated strategies that often bypassed those most at risk and failed to recognize that poor households have multiple economic strategies. One of the key findings that flowed from participatory research and appraisal was a much more subtle understanding of livelihoods and the different elements that they combine. The Integrated Rural Development Programme (IRDP) is a rural development program firstly launched by the Government of India (in 1978) and extended throughout India by 1980. It is a self-employment program intended to raise the income-generation capacity of target groups among the poor. The target group consists largely of small and marginal farmers, agricultural laborers and rural artisans living below the poverty line.

RDP is a major self-employment program for Poverty Alleviation. The objective of IRDP is to provide suitable income generating assets through a mix of subsidy and credit to the poor with a view to bring them above the Poverty Line. The objective of IRDP is to enable identified rural poor families to cross the poverty line by providing productive assets and inputs to the target groups.

#### **3.4.5. Developmental state model**

Developmental state, or hard state, is a term used by international political economy scholars to refer to the phenomenon of state-led macroeconomic planning in East Asia in the late twentieth century. In this model of capitalism (sometimes referred to as state development capitalism), the state has more independent, or autonomous, political power, as well as more control over the economy. A developmental state is characterized by having strong state intervention, as well as

extensive regulation and planning. The term has subsequently been used to describe countries outside East Asia which satisfy the criteria of a developmental state. Botswana, for example, has warranted the label since the early 1970s.

The argument from this perspective is that a government ministry can have the freedom to plan the economy and look to long-term national interests without having their economic policies disrupted by either corporate-class or workingclass short-term or narrow interests.

Characteristics of the Developmental state

- Emphasis on market share over profit
- Economic nationalism
- Protection of fledging domestic industries
- Focus on foreign technology transfer
- Large government bureaucracy
- Alliance between the state, labor and industry called corporatism
- Skepticism of neoliberalism and the Washington Consensus
- Prioritization of economic growth over political reform
- Legitimacy and Performance
- Emphasis on technical education.

Some of the best prospects for economic growth in the last few decades have been found in East and Southeast Asia. Japan, China, Singapore, India, Thailand, Taiwan, Vietnam, Malaysia, South Korea, Philippines, and Indonesia are developing at high to moderate levels. Several East and Southeast Asian countries today have been doubling their economies every 10 years. It is important to note that in most of these Asian countries, it is not just that the rich are getting richer, but the poor are becoming less poor. For example, poverty has dropped dramatically in Thailand. Research in the 1960s showed that 60 percent of the people in Thailand lived below a poverty level estimated with cost of basic necessities. By 2004, however, similar estimates showed that poverty there was around 13 to 15 percent. Thailand has been shown by some World Bank figures to have had the best record for reducing poverty per increase in GNP of any nation in the world.

These 'development states' have the will and authority to create and maintain policies that lead to long-term development that helps all their citizens, not just the wealthy. Multinational corporations are regulated so that they may follow domestically mandated standards for pay and labor conditions, pay reasonable taxes, and by extension leave some profits within the country.

Specifically, what is meant by a developmental state is a government with sufficient organization and power to achieve its development goals. There must be a state with the ability to provide consistent economic guidance and rational and efficient organization, and the power to back up its long-range economic policies. All of this is important because the state must be able to resist external demands from outside multinational corporations to do things for their short-term gain, overcome internal resistance from strong groups trying to protect short-term narrow interests, and control infighting within the nation pertaining to who will most benefit from development projects.

### **3.4.6. Trickle-down theory**

Trickle-down economics and the trickle-down theory are terms to refer to the idea that tax breaks nor other economic benefits provided by government to businesses and the wealthy will benefit poorer members of society by improving the economy as a whole. The term is used to refer to the fact that 'money was all appropriated for the top in hopes that it would trickle down to the needy.'

### **3.4.7. Rostow's stages of economic growth**

Walt Rostow compared historical economic data of 15 countries mainly in West Europe in 1960 and suggested that all the people in the world had the potential to break the cycle of poverty and develop through five linear stages of economic growth.

#### **Stage 1: Traditional society**

Is characterized by a subsistence economy where most workers are engaged in agriculture with very limited technology, have limited savings, use age-old production methods and have limited technology or capital to process raw materials or develop industries and services. Example: Ethiopia, Somalia

#### **Stage 2: Precondition for take off**

For a country to move into this stage, it may be initiated internally by the desire of the people for a higher standard of living or externally by forces that intrude into the region or an injection of external help (aid). Extractive industries develop, agriculture tends to be more mechanized and there are some technological improvements and a growth of infrastructure. Development of transport system encourages trade. A single industry (usually textiles) begins to dominate. Investment is about 5 percent of the GDP. Generally, there is production increase to cause changes in attitudes bringing a change in individual and national goals. Example: Kenya, Nigeria

#### **Stage 3: Take off**

Occurs when new technologies and capital are applied and production is greatly increased. Manufacturing and tertiary activities become increasingly important. There is widespread migration from rural areas to bustling urban agglomerations and numbers in agriculture decline. Infrastructure facilities such as transport networks are expanded and political power is transferred from the landed aristocracy to an urban-based structure. Growth may be limited to one or two parts of a country (Growth poles) and to one or two industries (magnets) Investment increases to 10-15 percent of GDP. Example: Mexico, Argentina, Brazil, S. Korea.

#### **Stage 4: The drive to maturity**

This is a continuation of the processes of stage three. Urbanization progresses and manufacturing and services become widespread and increasingly important. The rural sector loses much of its population but those who remain use mechanized equipment and modern technology to produce large quantities. Economic growth becomes self-sustaining and spreads to all parts of the country

and leads to an increase in the number and type of industries and more complex transport systems.  
Example: Russia, Most of Europe

#### **Stage 5: High mass Consumption**

There is rapid expansion of tertiary industries and welfare facilities. Employment in service industries grows but declines in manufacturing; and industry shifts to the production of durable consumer goods. Personal incomes are high and abundant goods and services are readily available. Individuals no longer worry about securing the basic necessities of life and can devote more of their energies to non-economic pursuits. Example: USA, Japan, Canada, Australia and Germany.

#### **Criticisms of Rostow's Model**

- Although Rostow suggested that capital was needed to advance a country from its traditional society, the injected aid didn't help much the African and Asian countries and even led to huge national debts.
- No time frame can logically be specified for passage through any of the stages of the model and the short time predicted between when growth begins and when it becomes self sustaining.
- Economists point out that growth is more complex than the model indicates and historical evidence suggests that the sequence is not universal.
- The model is Euro centric
- It is difficult to place a specific country among Rostow's stages and in large countries different regions may exhibit different levels of economic growth.

### **IV. Shocks/vulnerability to livelihoods/food insecurity**

#### **4.1. Vulnerability**

Vulnerability refers to the extent an individual or a community or a country is exposed to certain risks like food insecurity, famine, or any natural or manmade hazards. Resilience, on the other hand, refers to the rate at which an individual, community or a country recovers from such setbacks. Both vulnerability and resilience are the function of varied interconnected factors like asset position, access to information, level of development, social capital and the level of the risks faced.

More specifically, vulnerability refers to the inability to withstand the effects of a hostile environment. In relation to hazards and disasters, vulnerability is a concept that links the relationship that people have with their environment to social forces and institutions and the cultural values that sustain and contest them. The concept of vulnerability expresses the multidimensionality of disasters by focusing attention on the totality of relationships in a given social situation which constitute a condition that, in combination with environmental forces, produces a disaster. It's also the extent to which changes could harm a system, or to which the community can be affected by the impact of a hazard.

The Vulnerability Context frames the external environment in which people exist. People’s livelihoods and the wider availability of assets are fundamentally affected by critical trends as well as by shocks and seasonality-over which they have limited or no control. The box below provides examples (this is not a complete list):

| <b>Trends</b>                             | <b>Shocks</b>                | <b>Seasonality</b> |
|---|------------------------------|--------------------|
| Population trends                         | Human health shocks          | of prices          |
| Resource trends (including conflict)      | Natural shocks               | of production      |
| National/international economic trends    | Economic shocks              | of health          |
| Trends in governance (including politics) | Conflict                     | of employment      |
| Technological trends                      | Crop/livestock health shocks | opportunities      |

The factors that make up the Vulnerability Context are important because they have a direct impact upon people’s asset status and the options that are open to them in pursuit of beneficial livelihood outcomes.

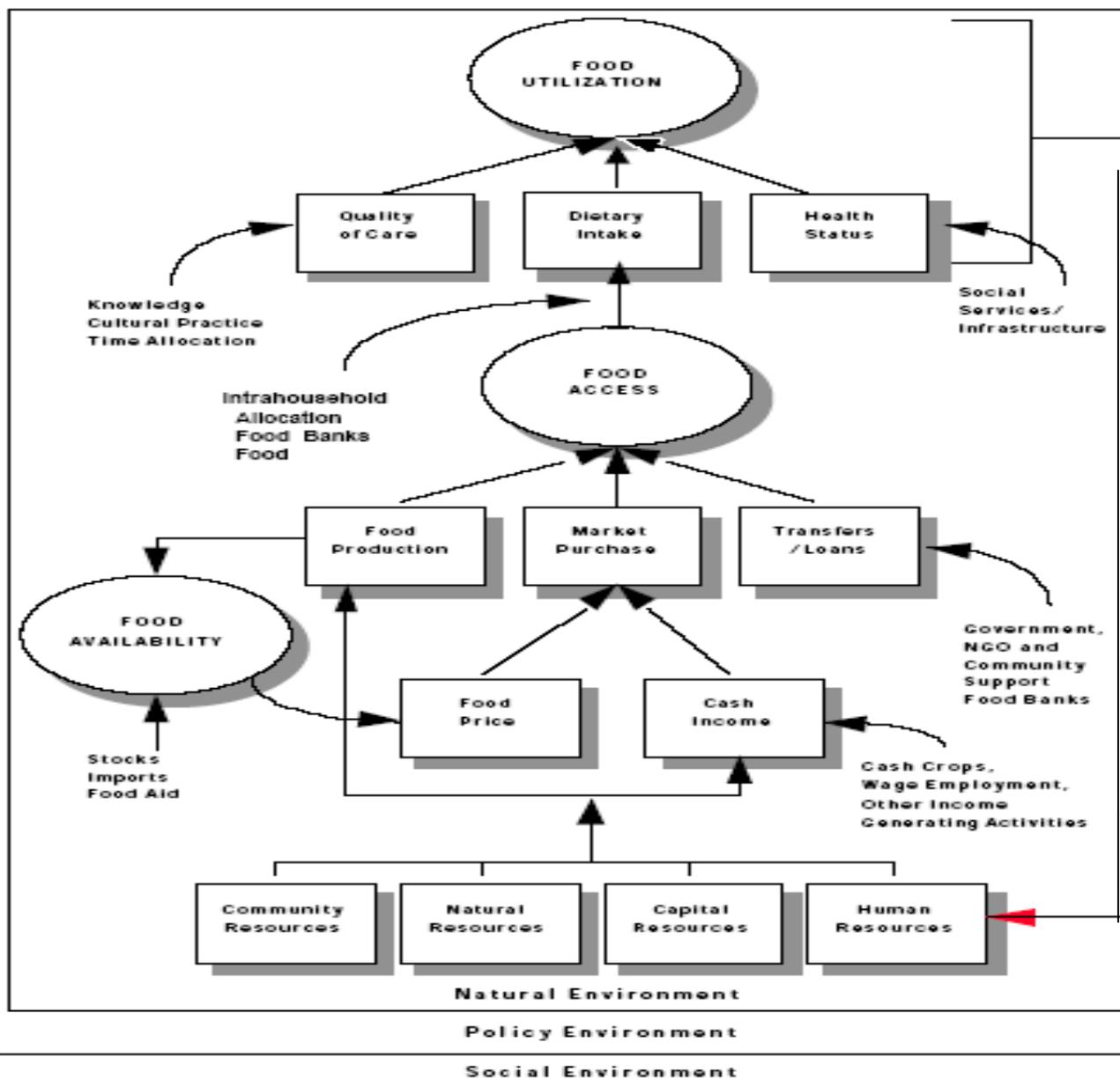
- **Shocks** can destroy assets directly (in the case of floods, storms, civil conflict, etc.). They can also force people to abandon their home areas and dispose of assets (such as land) prematurely as part of coping strategies. Recent events have highlighted the impact that international economic shocks, including rapid changes in exchange rates and terms of trade, can have on the very poor.
- **Trends** may (or may not) be more benign, though they are more predictable. They have a particularly important influence on rates of return (economic or otherwise) to chosen livelihood strategies.
- **Seasonal shifts** in prices, employment opportunities and food availability are one of the greatest and most enduring sources of hardship for poor people in developing countries. The Vulnerability Context is the part of the framework that lies furthest outside people’s control. In the short to medium term and on an individual or small group basis there is little that can be done to alter it directly (though there are exceptions: for example, direct intervention to diffuse conflict). Most externally-driven change in the Vulnerability Context is a product of activity at the level of Transforming Structures and Processes (e.g. changes in policy). Another way of managing the Vulnerability Context is to help people to become more resilient and better able to capitalize on its positive aspects. This is a core aim of the sustainable livelihoods approach. It can be achieved through supporting poor people to build up their assets. For example, increasing people’s access to appropriate financial services-including insurance-is one way of reducing vulnerability. Another approach is to help ensure that critical institutions and organizations are responsive to the needs of the poor.

#### **4.1. Determinants of Food Security / Insecurity.**

Thus, according to many researchers the **determinants of food insecurity** are also classified in to three groups within the framework of the general definition of food security, that is, **food availability, access, and utilization**; while some other researchers gave more attention only on access and

utilization of food and the determinant of food security can be seen as a combination of two distinct problems.

- ❖ **Food availability** refers to the physical presence of food at various levels from household to national level; such food can be supplied through household production, other domestic output, commercial imports, or food assistance. It will be achieved when sufficient quantities of food are consistently available at the regional or national/country level as well as it determined by each of these factors at the regional or national level. The domestic food production and food import contribute to national food availability, whereas increasing domestic food production reduces dependence on food import.
- ❖ In general, ***food availability may be constrained by inappropriate agricultural knowledge, technology, policies, inadequate agricultural inputs, family size, etc.***



**Food access** refers to the ability of a household and its members to acquire enough food through production, exchange or transfer. Access ensured when households and all individuals within them have adequate resources that used to meet the households access to food. The complex interaction of *agro-physical and socioeconomic processes are one of the major conditions that limit a household's ability to obtain sufficient quantities of food from each of the different sources.*

It is clear that the sources of food for a household are different, households typically whether:

- (a) grow and consume from once own stocks;
- (b) purchase it in the marketplace;

- (c) receive it as a transfer from relatives, members of the community, the government, or foreign donors; or
  - (d) gather it in the wild.
- ❖ Understanding these basic patterns and how they vary across locations, population groups, and over time will provide a particularly important starting point for understanding the general nature of the food security problem.
- ❖ Sen first developed **the entitlements approach** in 1981, replacing earlier theories that stressed shortages in food availability as causes of food insecurity. In contrast, Sen's approach focuses on **household access to food, or 'entitlements'**.
  - The entitlement of a person stands for the set of different alternatives that the person can acquire through the use of various legal channels. According to Sen, **people are usually starved mainly because of lack of the ability to access food rather than because of its availability.**
    - In a sense, *income or purchasing power is the most limiting factor for food security*. He recommended *food security should aim at increasing people's ability to acquire food through the 'legal means available in the society'* i.e., production, trade or exchange, inheritance and transfer. Analysis has also changed from macro (national) to micro (household and individual) levels (Maxwell 1994, Reutlinger 1987).
  - The majority of the poor people in developing country are engaged in subsistence farming. They also depend on agriculture both for their incomes and food entitlements. So **agriculture production** is the main determinant of food security of the household and that the role of agriculture is crucial to the eradication of poverty and food insecurity in the rural households. The leading determinant of food insecurity in the Horn of Africa is **low levels of per capita food production**. Insecurity can be tackled most effectively through policies that promote agricultural productivity, rural incomes and food production (FAO 2001).
  - The crucial assets for farming households are the productive ones such as land, labor, and traction-power (animal power). Farm resource and household asset is important indicator of poverty in the farming system. Farmland, labor and livestock and fertility of soil have important implication on households' food security status and poverty level.
- ❖ **Production based entitlements** will also be affected by household access to agricultural inputs such as fertilizers and seeds. This will be influenced by price and availability of these inputs that, in turn, may be affected by liberalization. **Government policies** may also have an impact on the price of inputs through subsidies and price controls, and on availability through the actions of prostates (Devereux 2000, Maxwell and Frankenberger 1992, and Sen 1986).
- ❖ **Technology, institutions, and availability of knowledge and infrastructure** will have impact upon the level of production and thus production-based entitlements. Again, overall budgetary considerations, for example structural adjustment policies, may influence the provision of research and extension.
- ❖ **Food access is also a function of the physical environment, social environment and policy environment** that determine how effectively households are able to utilize their resources to

meet their food security objectives (USAID 1999). In rural economy men and women are face different constraints in accessing to different resources and adopting new technologies. It is so because they work within different sets of time constraints, work burden, responsibility and roles. Thus, the female-headed can find it more difficult than their men counterparts to gain access to valuable resources. Land, credit, agricultural inputs, technology, extension services, education, training, participate in off-farm activities and other services could be mentioned in this regard. These and other female problems have negative influence on food security (Aredo 1994).

- ❖ On the other hand, Except for households that are entirely self-sufficient in all their food needs access to food through **the market is an** important component of household food security. The main factor affecting **trade-based entitlements is** the level and variability of the price of food relative to whatever individuals are able to exchange for it. Retail food prices at a point in time and their variability over time will in turn depend on by the total supply and demand of food, market integration and transport cost. Moreover, some of the basic sources that determine the possibility of increasing entitlement to food are cash, labor, markets and public services, and other income gain from remittance and aid (Dercon 2001, Osmanis 2000, and Steven et al 2000).
- ❖ Both **the level and the location of employment opportunities** will also influence **labor based entitlements**. In addition it is affected by the labor power, technical knowledge and skills embodied in different individuals and households, which will be affected by the provision of health and education, and by nutrition and food security. All will be influenced by the rate of population growth.
- ❖ When we came to **transfer entitlement**, it differs from other entitlement categories because they are not produced or earned directly by the individual but are donated by others. **Formal transfers** come from the state, aid donors or NGOs, while **informal transfers** come from relatives and friends. Formal transfers will clearly depend on government policies: the existence and extent of transfers of cash or food will affect **transfer-based entitlements**. The existence and strength of social networks, including kinship networks, is an important determinant of informal transfers, as is the extent to which risks are correlated across kinship networks (Steven et al 2000).

In general access indicators measure that food access become apparent when governments and development agencies realize existence of household food insecurity and famine conditions are occurring despite the availability of food. In recent years, access indicators have been as relatively more valuable in development planning, implementation and monitoring of food security interventions. Likewise, food access indicators are relatively effective because they show various strategies used by the household to get food from diversified sources, i.e., from own farm production, non-farm income, remittance etc.

#### **4.2. Measurements of food security**

Measuring the required food for an active and healthy life and the degree of food security attained is a question to be addressed in a food security study. However there is no single indicator for

measuring it. For this purpose different indicators are needed to acquire the various dimensions at the country, household and individual levels. **At the national or regional level, food security** can be measured in terms of **food demand (requirements) and supply indicators**. The supply of food may be from current production and stocks and from previous production where as the need has to be determined on the basis of biological or nutritional requirement of a given society for a certain period of time usually a year or a day (Hoddinot 1999).

The **most commonly used indicators which used to measure household food securities are availability, food access and utilization indicators**. These indicators embrace meteorological data, information on natural resources, agricultural production data, marketing information, food balance sheet, sales of productive assets, diversification of income sources and household budget expenditure security. Thus, it is possible to say that there are no single and one best food security measure that is universally accepted.

The thinking on food security has evolved from the time when food shortage was seen as a problem of food scarcity at national and international levels (i.e. in the early 1970s) to when food insecurity came to be understood as an outcome of vulnerable livelihoods at household and individual levels today.

### **4.3. Food insecurity V.S. Famine, Malnutrition and Under-nourishment.**

Food insecurity and famine have spatial and temporal dimensions. They affect socio-economic groups in a definite space over a certain period of time. Sen (1999), in his famous work, *Development as Freedom*, indicates that the scarcity of food is one of the worst incidences to the modern world.

It is important to note that food insecurity, famine, malnutrition and undernourishment are different concepts though interchangeably used in different literature. As indicated hereinbefore, food insecurity is a complex concept mainly referring to lack of access to enough food for all people at all times for an active and healthy life.

On the other hand, famine is the worst form of transitory food insecurity often affecting huge number people for longer period of time. Some scholars explain famine as the case '...when large number of people suffer from a complete collapse in...[food] entitlements'. According to Mesfin (1986: 6), 'Famine is not a mere deficiency of food, but an absolute lack of food. In a famine situation, there is no choice [for quality and type of food]. The need is for anything that is edible'. Dissimilar to famine, malnutrition is a deficiency in quality of food, while undernourishment is a deficiency in quantity of food. In Ethiopian context, famine is conceived as the situation when a household or an individual has nothing to scrounge from its neighbors all being impecunious and indigent.

Malnutrition may not be considered only as deficiencies in food and its nutrients, but may also be caused by excess intakes or imbalances in the consumption of macro- and/or micronutrients. It may '...relate also to nonfood factors, such as inadequate care practices for children, insufficient health services and an unhealthy environment'. Malnutrition and undernourishment have direct association with poverty which deprives the community the access to adequate quantity and quality of food and socio-economic services.

At this juncture, one should carefully note that 'All cases of malnutrition and undernourishment are not necessarily associated with famine; but all famine is necessarily [associated] with malnutrition and undernourishment'. Moreover, all famine-frazzled people are food insecure, but not all food insecure people are famine-frazzled. Hence, any attempt to ensure food security is linked to avoidance of famine. In other words, famine, malnutrition and undernourishment are considered as an outcome of food insecurity. Pertaining to another perplexing term, hunger, is 'a state in an organism in which food would be ingested, if available, either because body nutrients and certain chemicals are depleted or because certain hormones and chemicals are present'.

Similarly, hunger is defined as 'the uneasy painful sensation caused by lack of food. It is the recurrent and involuntary lack of access to food...[that] may produce malnutrition overtime'. The term hunger should be understood as the biological craving or appetite for food, and should not be confounded with other concepts that refer, more or less, to lack of access to adequate quantity and quality of food. The prime concern of this research is, therefore, to look into the role of resettlement scheme in food security attainment based on abovementioned four core components: availability, access, utilization and stability.

#### **4.4 Economic theories**

There are two economic approaches to explaining food insecurity: Food Entitlement Decline (FED) and 'market failure'. The FED model is pioneered by Amartya Sen (1981) as an alternative method to FAD. His theory has brought about a shift in famine analysis, from seeking explanations for the short supply to the identification of symptoms of the failure in demand. It suggests that food availability in the economy or in the market does not entitle a person to consume, and famine can occur without aggregate availability decline. Sen presents a range of evidence for his argument: the Bengal famine of 1943, the Ethiopian famines of 1973 and 1984 (see Chapter 4 in this thesis) and the Bangladesh famine of 1974. He believes that it is access to food that plays a crucial role in securing command over food, which in turn is determined by source of entitlement to food. The four possible sources of entitlements are production-based, trade-based (exchange), own-labour, and inheritance and transfer. An issue relating to access at individual level resulted in the formulation of new definition for food security: 'Access by all people at all times to enough food for an active, healthy life' (World Bank 1986: 1).

One of the strong points of the FED approach, which distinguishes it from FAD counterpart, is the potential capacity to identify which group of people will be affected by various threats of availability or access to food, differentiation depending on the degree of vulnerability (Maxwell & Smith 1992). However, the model has certain weaknesses to be addressed before directly applying it as a framework to a study of food security. The main limitations of the FED model include: failure to take into consideration intra-household distribution of food; exclusion of relief entitlement (aid food), a source that can be mobilized when conventional sources fail; concentration on proximate causes of famine, such as market prices, rather than addressing underlying causes; heavy focus on food

deprivation, and presumption that famine mortality is induced by starvation; omits all non-legal transfers of resources, hence the role of violence and social disorder leading to entitlement collapse; failure to give attention to the significance of cultural preferences and tastes in determining voluntary under-consumption when entitlement is adequate; and no temporal dimension and the analysis is a historical and cannot account for changing vulnerability to entitlement failure (Maxwell & Smith 1992, Devereux 1993).

Devereux (1993) has introduced another possible economic explanation for food insecurity. This is specifically related to market failure, which can happen in two ways: demand (pull failure) and supply (response failure). Pull failure refers to people's lack of purchasing power which is caused by poverty and can therefore be explained in terms of lack or collapse of exchange entitlements to food. In contrast, response failure can happen when markets fail effectively to meet people's demand (Devereux 1993). This is a very important input because, to some extent, the idea reconciles one of the many conflicts between the proponents of FAD and FED.

#### **4.5. Political economy explanations**

The concept of political economy<sup>21</sup> in its current uses in development studies refers to interrelations between society and government actors. Policies as government actions and economic processes as determinants of people livelihood are interrelated, and they act as the link between government and public. In the light of this, there are certain hypotheses which have not yet been recognized to the status of fully-fledged theories of famine, and are regarded by some authors as general explanations to food shortage. These include ecological degradation, inappropriate development strategy, government policy, and war and civil strife. Although this notion has been highly questioned recently, there is an argument that relates the recurrence of famine in Western Sudan to ecological degradation, in particular the expansion of the Sahara Desert into the arable land, exposing vulnerable people to famine (Devereux 1993). As already discussed, dependency theorists also argue that poverty and famine have exacerbated colonial and post-colonial relationships between poor countries in Africa, Latin America and Asia on the one hand, and the rich capitalist countries of Europe and North America on the other. This is a good example of how inappropriate development strategy marginalizes the poor (Ghosh 2001). Famine in India during late 19th century and 1940s would rightly illustrate this issue. Lack of good governance also contributes to the occurrence of famine. Dreze & Sen (1989: 6) argue that 'many famines in the world have actually arisen from and been sustained by inflexible government policies undermining the power of particular sections of the population to command food'.

Governments contribute to the occurrence of famine through four ways: inappropriate policies (Sahelian famines); failure to intervene (the Chinese famine of 1958–1961, the Bangladesh famine of 1974, and the Ethiopian famine of 1974 and 1984); by-products such as civil war (Mozambique and Chad in 1980, Ethiopia in 1985 and Somalia in 1990); and malign intent or deliberate government creation of famine (Soviet Famine of 1933 and Dutch famine of 1944) (Alamgir 1980, Devereux 1993, de Waal 1997).

Marginalization' and 'social differentiation' are the central concepts for the political economy analysis of competition over resources by different land users. According to Horowitz & Little (1987: 61), marginalization of pastoralists refers to 'the compaction of the ruminant herding in areas of low biological productivity, usually areas not yet experiencing agriculture'. Pastoralism retreats to areas of low biological productivity in the face of the appropriation of rangelands by other users, notably agriculturists and ranch farmers. The same holds true for the subsistence food crop producers whereby their land is being encroached upon by plantation agriculture mainly producing cash crops, as well as by the establishment of national parks on arable lands.

By social differentiation we mean growing inequality between pastoralists and other groups of regional and national economies, and among pastoralists themselves (Horowitz & Little 1987). Understanding this is important because who has access to production resources and who has not, is largely determined either by social structure or by state bias in favoring a dominant and powerful group at the expense of the others: 'The allocation of state-controlled resources in rural development usually disfavors the physical and social margins' (Blaikie & Brookfield 1987: 18).

A response from marginalized groups may be silence or resistance. A government system would be what enforces people's silence, whereas, in the context of rural settings, resistance puts a marginalized group in conflict with other groups whose activities are favored by government. Land use conflicts between peasants and herders in many parts of Africa have been the direct manifestation of the government's bias against the latter.

#### **4.6. Climatic theory – drought and flood**

Drought or flood causes crop failure and can lead to famine in rain-fed agricultural areas. Both scarcity and excessive water have adverse effect upon crops and livestock, the assets which form the main source of livelihood for subsistence peasants. This is witnessed by many famine disasters that had caused the deaths of millions of people in sub-Saharan Africa and South Asian countries over several decades. For instance, the Ethiopian famines in 1958, 1973, 1984, and 2002-2003 are partly explained by drought and resultant crop failures and massive deaths of livestock. Harrison (1988) indicates that 21 countries in Africa experienced severe drought during 1984-85 and, as much as any other factor, this was responsible for the widespread famine over the continent at that time. Drought manifests itself not only in reducing production, but also through the adverse effect it brings about in terms of reducing rural employment and drastic increases of food prices on market. Although many socio-political factors accounted for part of the explanation, the Bangladesh famine in 1974 was triggered by flood that disrupted rice production (Devereux 1993).

#### **Empowerment as a new approach to poverty reduction and famine eradication**

Empowerment is a relatively new development discourse, which argues that poverty is not only a matter of economic and social deprivation but also poor people's lack of participation in matters that directly affect their own lives (Friedmann 1992, Lund 1993). Its central concern is how to improve the living conditions of the poor through social, political and psychological empowerment. This

development approach, which is designed for poverty alleviation was initiated at ‘invisible colleges’ in the 1980s and has been well accepted recently by many mainstream institutions, such as the World Bank, UNDP, OECD, FAO, and IFAD. The range of issues that the empowerment approach covers has expanded considerably over time. Likewise, many international and local NGOs are operating in the poor regions of the world within the framework of empowerment. Some have brought about visible changes to the lives of the poor, while the others have not. Unlike other structural development theories, which were mainly economist in their approach, empowerment is human-centered and participatory. The bottom-up approach is central to empowerment. The International Fund for Agricultural Development (IFAD) 18 is now attempting to enhance better understanding of poverty that can help considerably in its reduction. In its rural poverty report, IFAD (2001) focuses on five issues having significance for understanding the challenges of rural poverty reductions:

- I. Smallholder production and production of food staples play a critical role in the livelihoods of the rural poor.
- II. Reducing rural poverty requires better allocation and distribution of water to increase the output of staples.
- III. Achieving the poverty target requires redistribution in favor of the rural poor. The poor must acquire higher shares, access and control of appropriate assets (land and water), institutions, technologies, and markets.
- IV. Particular groups, especially women, merit special attention. Redressing disadvantaged women, ethnic minorities, and people living in the hills and semi-arid areas is helped by the efficient use of anti-poverty resources, such as schools, land and water.
- V. Participatory and decentralized methods are especially effective. Participatory and decentralized management sometimes secure democratic control, develop human potential and often improve the cost effectiveness of a range of actions (IFAD 2001: 4–5).

## **V. TECHNIQUES OF FOOD IN/SECURITY ANALYSIS**

### **5.1. Introduction**

Investigating food security status of a community and/or individual household can be a very complex analysis that needs to be treated with a combination of different cross-sectional and longitudinal techniques. This is mainly because, issues related to food security is characterized by multifaceted and intertwined socioeconomic and environmental circumstances. In light of this, this chapter attempts to highlight detailed accounts of techniques of food security analysis. Some of the techniques to be addressed in this chapter are Household Food Balance Model (HFBM), Household Food Insecurity Access Scale (HFIAS), Household Hunger Scale (HHS), Coping Strategy Index (CSI), Food Consumption Score (FCS) and Household Dietary Diversity Score (HDDS).

### **5.2. Household Food Balance Model (HFBM)**

This is a simple equation originally adapted by Degefa (1996) from FAO Regional Food Balance

Model and thenceforth used by different researchers in Ethiopia. HFBM is employed to compute the net quantity of per capita food. The net available food per household, as reported from household recall, is converted into dietary energy equivalent using EHNRI/FAO (1998)'s Food Composition Table for Use in case of Ethiopia. Then, the medically recommended level of calorie per adult equivalent (2100kcal/day/person for Ethiopia) is used as a cut-off point for food insecure and food secure households or individuals. The following simple equation of HFBM is modified and used by Messay (2011) for household food security analysis is:

$$\text{NGA} = (\text{GP} + \text{GB} + \text{FA} + \text{GG} + \text{CC} + \text{MP} + \text{DP}) - (\text{HL} + \text{GU} + \text{GS} + \text{GV})$$

Where,

NGA = Net grain available (quintal/household/year)

GP = Total grain production (quintal/household/year)

GB = Total grain bought (quintal/household/year)

FA = Quantity of food aid obtained (quintal/household/year)

GG = Total grain obtained through gift or remittance (quintal/household/year)

MP = Meat, meat based products and poultry (kilogram/household/year)

DP = Dairy and dairy based products ((kilogram/household/year)

HL = Post harvest losses due to grain pests, disasters, thievery, etc,  
(quintal/household/year).

GU = Quantity of grain reserved for seed (quintal/household/year)

GS = Amount of grain sold (quintal/household/year)

GV = Grain given to others within a year(quintal/household/year)

### **5.3. Household Food Insecurity Access Scale (HFIAS)**

The Food and Nutrition Technical Assistance Project (FANTA) developed the HFIAS in 2006 with an aim to provide a valid tool for use in a developing country context that would be capable of measuring food insecurity in a comparable way, i.e., with cross-cultural equivalency. The tool consists of nine occurrence questions and nine frequency-of-occurrence questions. The HFIAS occurrence questions ask whether or not a specific condition associated with the experience of food insecurity ever occurred during the previous 4 weeks (30 days).

HFIAS Generic Questions

| No. | Question  |
|-----|---|
|     | <b>For each of the following questions, consider what has happened in the past 30 days. Please answer whether this happened never, rarely (once or twice), sometimes (3-10 times), or often (more than 10 times) in the past 30 days?</b> |
| 1.  | Did you worry that your household would not have enough food?   |
| 2.  | Were you or any household member not able to eat the kinds of foods you preferred because of a lack of resources?   |
| 3.  | Did you or any household member eat just a few kinds of food day after day due to a lack of resources?  |
| 4.  | Did you or any household member eat food that you preferred not to eat because a lack of resources to obtain other types of food?   |
| 5.  | Did you or any household member eat a smaller meal than you felt you needed because there was not enough food?  |
| 6.  | Did you or any other household member eat fewer meals in a day because there was not enough food?   |
| 7.  | Was there ever no food at all in your household because there were not resources to get more?   |
| 8.  | Did you or any household member go to sleep at night hungry because there was not enough food?  |
| 9.  | Did you or any household member go a whole day without eating anything because there was not enough food?   |

### HFIAS measurement tool

For each of the following questions, consider what has happened in the past 30 days. Please answer whether this happened never, rarely (once or twice), sometimes (3-10 times), or often (more than 10 times) in the past 30 days?

| No | QUESTION   | RESPONSE OPTIONS  | CODE                          |
|----|--|---|-------------------------------|
| 1. | Did you worry that your household would not have enough food?  | 0 = Never<br>1 = Rarely (once or twice in the past 30 days)<br>2 = Sometimes (three to ten times in the past 30 days)<br>3 = Often (more than 10 times in the past 30 days) | .... <input type="checkbox"/> |
| 2. | Were you or any household member not able to eat the kinds of foods you preferred because of a lack of resources?                    | 0 = Never<br>1 = Rarely (once or twice in the past 30 days)<br>2 = Sometimes (three to ten times in the past 30 days)<br>3 = Often (more than 10 times in the past 30 days) | .... <input type="checkbox"/> |
| 3. | Did you or any household member eat just a few kinds of food day after day due to a lack of resources?                               | 0 = Never<br>1 = Rarely (once or twice in the past 30 days)<br>2 = Sometimes (three to ten times in the past 30 days)<br>3 = Often (more than 10 times in the past 30 days) | .... <input type="checkbox"/> |
| 4. | Did you or any household member eat food that you preferred not to eat because of a lack of resources to obtain other types of food? | 0 = Never<br>1 = Rarely (once or twice in the past 30 days)<br>2 = Sometimes (three to ten times in the past 30 days)<br>3 = Often (more than 10 times in the past 30 days) | .... <input type="checkbox"/> |

The HFIAP indicator categorizes households into **four levels of household food insecurity (access):**

- (1) food secure, and**
- (2) mild,**
- (3) moderately and**
- (4) severely food insecure.**

Households are categorized as increasingly food insecure as they respond affirmatively to more severe conditions and/or experience those conditions more frequently.

**A food secure** household experiences none of the food insecurity (access) conditions, or just experiences worry, but rarely.

**A mildly food insecure** (access) household worries about not having enough food sometimes or often, and/or is unable to eat preferred foods, and/or eats a monotonous diet or less-preferred foods, but only rarely. But it does not cut back on quantity nor experience any of three most severe conditions (going a whole day without eating, going to bed hungry, or running out of food).

**A moderately food insecure** household sacrifices quality more frequently, by eating a monotonous diet or less-preferred foods sometimes or often, and/or has started to cut back on quantity by reducing size of meals or number of meals, rarely or sometimes. But it does not experience any of the three most severe conditions.

**A severely food insecure household** has graduated to cutting back on meal size or number of meals often, and/or experiences any of the three most severe conditions (going a whole day without eating, going to bed hungry, or running out of food), even as infrequently as rarely. In other words, any household that experiences one of these three conditions even once in the last 30 days is considered severely food insecure.

#### **5.4. Household Hunger Scale (HHS)**

Household Hunger Scale (HHS) is a new and simple indicator to measure household hunger in food-insecure areas. The HHS is different from other household food insecurity indicators in that it has been specifically developed and validated for cross-cultural use. This means that the HHS produces valid and comparable results across cultures and settings so that the status of different population groups can be described in a meaningful and comparable way to assess where resources and programmatic interventions are needed and to design, implement, monitor, and evaluate policy and programmatic interventions.

The HHS is a household food deprivation scale, derived from research to adapt the United States (U.S.) household food security survey module for use in a developing country context and from research to assess the validity of the Household Food Insecurity Access Scale (HFIAS) for cross cultural use. The approach used by the HHS is based on the idea that the experience of household food deprivation causes predictable reactions that can be captured through a survey and summarized in a scale. This approach, sometimes referred to as an 'experiential' or 'perception based' method of collecting data, was first popularized in the mid-1990s, when the United States Department of Agriculture (USDA) adopted the approach for routine measurement of household food insecurity in the United States. Since then, the approach has been more widely adopted by other food insecurity measurement tools, including the HFIAS.

It is important to note that the HHS focuses on the food quantity dimension of food access and does not measure dietary quality. Additionally, because the HHS is a household level indicator, it does not capture data on food availability or food utilization, which are other components of food security typically measured at the national level (availability) and individual level (consumption/utilization).

The HHS is intended to be used as a small module within a larger, more comprehensive food security and nutrition questionnaire administered to a representative population-based sample of households. Ideally, the HHS should not be used as a unique, stand-alone measure of food insecurity but instead as one of a suite of tools to measure complementary aspects of food insecurity. Other components of a household food insecurity assessment toolkit might include anthropometric data on women and children; measures of household income, expenditure, and food production and consumption; and information on coping strategies and household and individual dietary diversity. The most appropriate time of year to administer the HHS should be determined by the intended use of the scale. If the HHS is used to assess the change in the household food insecurity situation between years, or to measure the impact of an intervention, it is important to administer the HHS at the same time of the year. When using the scale to measure the prevalence of food deprivation or for establishing a baseline prevalence estimate, it is advisable to administer the HHS during or directly after the worst of the lean season, as this is when the greatest number of households is likely to be affected by food insecurity. However, if the aim is to use the HHS for geographic targeting, the height of the lean season may not be the optimal time to administer the HHS, as the results will not distinguish those who are chronically food insecure from those who are only episodically food insecure, such as during the lean season.

#### **Tabulation of the Categorical HHS Indicator**

To tabulate the categorical HHS indicator, two different cutoff values ( $> 1$  and  $> 3$ ) are applied to the HHS scores that were generated in Step 3 above. The three household hunger categories are shown below.

#### **HHS Categorical Indicator**

##### **Household Hunger Score Household Hunger Category**

- 0-1** → Little or no hunger in the household
- 2-3** → Moderate hunger in the household
- 4-6** → Severe hunger in the household

The median value is the value that falls at the 50th percentile of the score distribution for the sample. This value can be identified by most data analysis software programs by producing summary statistics for the variable of interest. An alternative method of finding the median HHS value is to order all HHS values in the sample in ascending or descending order and find the HHS value that falls in the middle of all ordered values.

### **5.5. Coping Strategy Index (CSI)**

Coping Strategy Index (CSI) is very important to appraise the food security situation of a community over multiple periods, among locations and across specific population groups provided that the examinees are from the same community, location, or culture for which the CSI tool can be adapted. To cope with shocks of food deficit and minimize potential declines in food access, households typically adjust their consumption patterns and reallocate their resources to activities which are more insulated from the influence of those risks. In sowing/rainy periods, for example, households

may sell-out small assets to ensure continued food supply for their family. They may also shift their labor resources from crop production to non-farm petty-income activities such as firewood and charcoal production, and labor rental.

Sometimes destitute households may send-off some of their family members to well-off relatives. Others may request social support from the community. They may also adjust their consumption patterns by reducing their dietary intake to conserve food relying more on less preferred foods to meet their immediate food needs. If the crises of food shortfalls continued unabated, household responses usually become increasingly costly leading to the loss of productive assets (such as livestock, land and farm equipments) which can ultimately threaten the households' future livelihoods and food security status.

### Consumption Coping Strategy Response

| Behaviors:<br>In the past 7 days, if there have been times when you did not have enough food or money to buy food, how many days has your household had to: | Frequency:<br>Number of days out of the past seven:<br>(Use numbers 0 – 7 to answer number of days; Use NA for not applicable) |
|---|--|
| a. Rely on less preferred and less expensive foods?   |  |
| b. Borrow food, or rely on help from a friend or relative?  |  |
| c. Purchase food on credit?   |  |
| d. Gather wild food, hunt, or harvest immature crops?   |  |
| e. Consume seed stock held for next season?   |  |
| f. Send household members to eat elsewhere?   |  |
| g. Send household members to beg?   |  |
| h. Limit portion size at mealtimes?   |  |
| i. Restrict consumption by adults in order for small children to eat?   |  |
| j. Feed working members of HH at the expense of non-working members?  |  |
| k. Reduce number of meals eaten in a day?   |  |
| l. Skip entire days without eating?   |  |

The analysis of Coping Strategy Index (CSI) depends on many possible responses (0 to 7) to a single question: ***'What did you do when you did not have adequate food and did not have the money to buy it in the last 7 days?'*** This helps measure what the households' do when they cannot access enough food timely. The basic idea is to measure the frequency of the coping behaviors (how often is the coping strategy used?) and the severity of the strategies (what degree of food insecurity do they suggest?). Information on the frequency and severity is then combined in a single score, the CSI, which indicates the household's food security status over space and time.

Based on the average perception values, the households/individuals can be grouped into four severity categories: (1) very severe, (2) severe, (3) moderately severe and (4) least severe. Although there was no complete agreement on each strategy, there was fairly good consensus on the severity of most of the strategies. For instance, relying on less preferred and less expensive foods, limiting portion size, skipping the entire day without food and begging were reported to be the most severe coping strategies among the re-settlers.

### 5.6. Food Consumption Score (FCS)

The FCS is a composite score based on dietary diversity, food frequency, and relative nutritional importance of different food groups. Food items are grouped into 8 standard food groups with a maximum value of 7 days/week.

#### Food groups & weights

| FOODITEMS   | FOOD GROUPS      | WEIGHT |
|---|------------------|--------|
| Maize , maize porridge, rice, sorghum, millet<br>pasta, bread and other cereals | Cereals & tubers | 2      |
| Cassava, potatoes and sweet potatoes  |                  |        |
| Beans. Peas, groundnuts and cashew nuts   | Pulses           | 3      |
| Vegetables and leaves   | Vegetables       | 1      |
| Fruits  | Fruits           | 1      |
| Beef, goat, poultry, pork, eggs and fish  | Meat & fish      | 4      |
| Milk yogurt and other diary   | Milk             | 4      |
| Sugar and sugar products  | Sugar            | 0.5    |
| Oils, fats and butter   | Oils             | 0.5    |
| Condiments  | Condiments       | 0      |

The consumption frequency of each food group is multiplied by an assigned weight that is based on its nutrient content. Those values are then summed obtaining the Food Consumption Score (FCS).

The typical thresholds are:

| Threshold | Profiles                    | Threshold with oil & sugar eaten on a daily basis ( $\cong$ 7 days/week) |
|-----------|-----------------------------|--|
| 0 – 21    | Poor food consumption       | 0 – 28   |
| 21.5 – 35 | Borderline food consumption | 28.5 – 42  |
| > 35      | Acceptable food consumption | > 42   |

### 5.7. Household Dietary Diversity Score (HDDS)

Household dietary diversity score (HDDS) is a simple, rigorous and straightforward technique of analyzing the access component of food security. HHDS was tested in various countries and found to be rigorous as a means of measuring the status of food security at household and individual level. It depends on the number of different food groups consumed by a household or an individual over a given reference period. Household dietary diversity, the number of different food groups consumed over a given reference period is an attractive proxy indicator for the following reasons:

- A more diversified diet is an important outcome in and of itself.
- A more diversified diet is associated with a number of improved outcomes in areas such as birth weight, child anthropometric status, and improved hemoglobin concentrations.
- A more diversified diet is highly correlated with such factors as caloric and protein adequacy, percentage of protein from animal sources (high quality protein), and household income. Even in very poor households, increased food expenditure resulting from additional income is associated with increased quantity and quality of the diet.
- Questions on dietary diversity can be asked at the **household or individual level**, making it possible to examine food security at the household and intra- household levels.
- Obtaining these data is relatively straightforward. Field experience indicates that training field staff to obtain information on dietary diversity is not complicated, and that respondents find such questions relatively straightforward to answer, not especially intrusive nor especially burdensome. Asking these questions typically takes less than 10 minutes per respondent.

To better reflect a quality diet, the number of different *food groups* consumed is calculated, rather than the number of different *foods* consumed. Knowing that households consume, for example, an average of four different food groups implies that their diets offer some diversity in both macro- and micronutrients. This is a more meaningful indicator than knowing that households consume four different foods, which might all be cereals. The following set of 12 food groups is used to calculate the HDDS:

1. Cereals
2. Fish and seafood
3. Root and tubers
4. Pulses/legumes/nuts
5. Vegetables
6. Milk and milk products
7. Fruits
8. Oil/fats

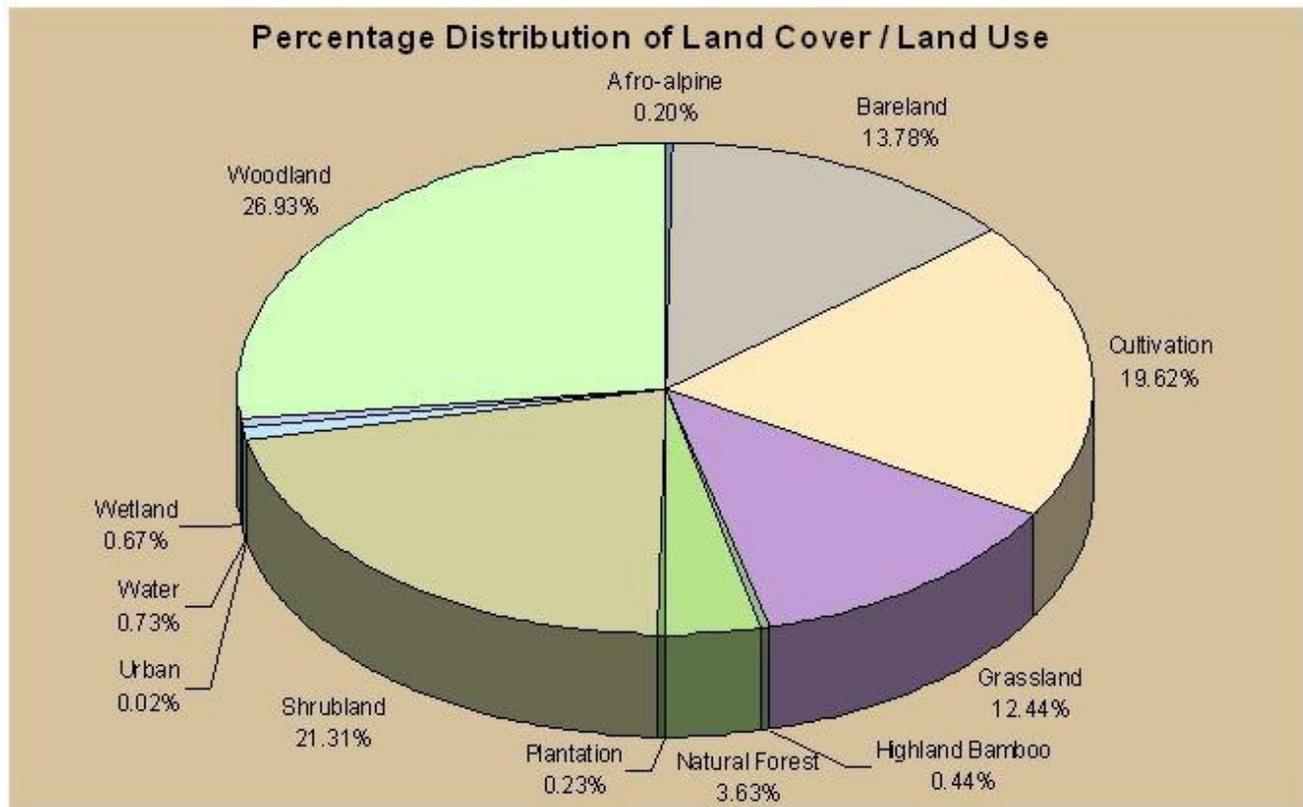
9. Meat, poultry, offal
10. Sugar/honey
11. Eggs
12. Miscellaneous

**Calculation of the HDDS** Tabulation of the HDDS is a relatively simple matter that can be done by hand or with the aid of computer software such as a database or spreadsheet. First, the HDDS variable is calculated for each household. The value of this variable will range from 0 to 12. Second, the average HDDS indicator is calculated for the sample population by dividing sum of HDDS by total number of households. An increase in the average number of different food groups consumed provides a quantifiable measure of improved household food access. In general, any increase in household dietary diversity reflects an improvement in the household's diet. In order to use this indicator to assess improvements in food security in a performance reporting context, the changes in HDDS must be compared to some meaningful target level of diversity. Unfortunately, normative data on 'ideal' or 'target' levels of diversity are usually not available.

## VI. Vulnerability to livelihoods and food insecurity in Ethiopia: a glimpse

### 6.1. Resource base of Ethiopia

Ethiopia is suitable for a wide variety of crops such as cereals, pulses oil seeds and vegetable. On average, cereals account for about 88% of the total food grain production in the country with pulses (8.5%) and oilseeds (2.9%) accounting for the remainder. Other major land-use types in the country are indicated in the figure below.



Ethiopia is characterized by abundant but shrinking diversity in biological resources: forest, woody and grassy lands, shrubs and varied wildlife. It is also renowned for its massive mountain ranges, high flat plateaus, deep gorges, river valleys, lowland plains, extensive wetlands and deserts. About 70,000,000 hectares (about 60 percent of the total area) of the country's land is agriculturally productive so long as appropriate input is available. About 45 percent of the country, where about 88% of the population live, is highland with altitudes of greater than 1500m. The geographical setting of the country is generally distinguished by the highlands in the central part circumscribed by the flat lowlands. Overpopulation, extensive croplands, and frequent incision by ravines and gullies characterize the highlands. The Great East African Rift System bisects the central highlands into northwestern and southeastern sections. The altitude of the country ranges from the highest peak of 4620m above mean sea level (amsl) at *Ras Dashen*, also *Ras Dejen*, in the northwest down to about 120m below mean seas level (bmsl) at Danakil/Afar Depression (in the northeast), one of the lowest and driest areas on earth.

Another conspicuous feature of Ethiopia is that it is the country where over 80 million people /50.46 percent male/ are grappling with a range of natural and manmade problems including environmental degradation, erratic rainfalls, prevalence of malaria and HIV/AIDS, poor but improving governance, and widespread poverty. It is a country where about 84 percent of the people live in rural areas

driving their livelihoods from plow-based peasant agriculture, a sector suffering from lack of essential inputs and erratic weather conditions. These, coupled with the existing rapid population growth rate (2.6 percent per annum) and low per capita GNI /280 USD/, has left the country one of the most precarious countries in the world Ethiopia is also characterized by severe environmental degradation of which the most notable ones are soil erosion, water depletion (such as the disappearance of *Haramaya* Lake, near the town of Harar), and shrinking of vegetated lands. Historical documents show that forest and woodlands covered over 40 percent of the total area of the country at the beginning of the 20<sup>th</sup> century. This figure is estimated to be only about 10 percent at present. FAO (1986/1999) estimates the country's annual deforestation rate at about 62,000 hectares attributed primarily to the increased demand for farmland, fuelwood and settlement sites. At any rate this has resulted in severe soil degradation (about 2 billion tons per year), alteration of hydrologic regimes, disturbance of local and/or regional climates, loss of biodiversity, and expansion of desert ecological conditions. Recurrent droughts and erratic rainfall are also common in the *Horn* of Africa in general and Ethiopia in particular. This area has a prolonged and frequent history of drought climatic conditions and drought-related enormously distressing famines. Surprisingly, 'one every three or four years is a drought year' in Ethiopia, a country also affected by high climatic vulnerability.

These relentless agro-climatic and environmental disasters have been multifaceted in many ways. Millions of Ethiopians have died of series of hunger or hunger-caused diseases or physical weaknesses besides other food shortfall induced biological miseries like stunting, wasting and underweight. Others have been forced to abandon their original residences and resettle somewhere either in urban areas or other rural parts of the country where they hoped to be better-off in landholdings, soil fertility, rainfall distribution forest cover and water supply. Such people, on the whole, abandon their home-villages and resettle on other areas in group (large or small), individual or household bases.

Consequently, domestic food production has failed to meet national requirements, and the number of food insecure people has been on the increase particularly since mid-1970s. For the last three and half decades (1974-2009), for instance, the livelihoods of some 4.71 million people had been affected per annum mainly by drought-induced food shortage calamities. As a result, Ethiopia has become increasingly dependent on international food aid with an average food scarcity of over 637, 000 metric tons per annum from 1974 to 2009. In general, as discussed in this section, the causes of long lasting livelihoods crises in Ethiopia have been a complex interaction between multiple adverse factors. Agricultural production failure due to bad bioclimatic and ecological factors, prolonged civil wars, policy mismanagement, low purchasing power, inappropriate market linkage, unfair distribution of food to the disadvantaged group of people, political nepotism and lack of good governance have been critical factors for the lengthy and severe food crises in Ethiopian history

## **6.2. Trends of Food Insecurity in Ethiopia.**

Ethiopia is one of the poorest (but fastest growing at present) and most food insecure counties in the world. Among Sub-Saharan African countries, it is the second most severely affected country

in terms of the prevalence of chronic dietary energy deficiency. Some 33.6 percent (37.4 percent in rural and 27.9 percent in urban areas) of the country's population are the food poor who had access to and consumed below the minimum requirement of 2100 Kcal in 2010/2011. A sizable proportion of Ethiopian children (under five years) are stunted (51 percent), underweight (35 percent) and wasted (12 percent) as of 2008. The levels of malnutrition are more prevalent in rural areas of Ethiopia than in urban areas. In some rural parts of the country, over 90 percent of the inhabitants have no adequate access to the nationally set minimum dietary requirement of 2100 kcal/person/day.

Domestic food production has failed to meet national requirements, and the number of food insecure people has been increasing in the country particularly since 1970s (See Figure 1). For the last three and half decades (1974-2012), averagely about 4.72 million people have been suffering from food shortage crises per annum. As a result, with an average food scarcity gap of over 637,000 metric tons per annum since 1974, Ethiopia has become increasingly dependent on international food aid. The cumulative effect of all these adverse scenarios put the country at the bottom rank of the United Nations Human Development Index. For instance, with the HDI value of 0.363, Ethiopia is much lower than the Sub-Saharan average of 0.463 in 2011. Recorded instances of famine and food insecurity in the country indicate that persistent famine incidents affected millions of people making Ethiopia by far the most severely affected country in Africa. Over 25 major famine cases have been recorded from 1800 to 2012 and about 12 such cases have been documented to have occurred since 1950 alone in the country (See the table & figure below). The humanitarian famine-induced crises of 1958, 1973, 1984-86 and 2002, for instance, are among the most grievous recent cases, although Ethiopia has a long history of famine dating back to 240s BC. These were among the worst famine incidences in African history both in intensity and spatial coverage.

### ***Chronology of major climate-induced famine incidences in Ethiopia since 1950s***

| Year    | Major incidences  |
|---------|---|
| 1953    | Drought and famine in Wollo and Tigray  |
| 1957-58 | Devastative famines in Tigray, Wollo, and south-central Shewa. About 1,000,000 farmers in Tigray might have been affected of which about 100,000 peasants migrated and 100,000 of them are said to die. |
| 1962-66 | Many parts of the northeastern Ethiopia suffered from droughts and famine. Tigray and Wollo were severely hit.  |
| 1973-74 | This was one of the most widespread famine in which many parts of Eastern Hararge, Southern Region and Bale lowlands were severely hit. About 100,000 to 200,000 peoples died of this extensive famine. |
| 1977-78 | Most parts of the Wollo were severely hit by famine owing to shortage/excess  |

|           |   |
|-----------|---|
|           | famine, pest damage, and frost actions. About 500,000 peasants were said to be affected.  |
| 1984-85   | Most parts of Ethiopia including famine-free areas like Walaita, Kambata and Hadiya were hit by famine. The causes were drought and crop diseases. It is estimated that about 1,000,000 people died though some estimate the death to be about 500,000. |
| 1987-88   | Tigray, Wollo and Gonder were severely affected by famine owing to drought incidence and civil wars.  |
| 1990-92   | Rain failure and regional conflicts, estimated 4,000,000 people suffering food shortages  |
| 1993-94   | Very severe and widespread famine occurred. But no or little deaths and displacement were reported because of the responses by the government and international aids  |
| 2002-2003 | One of the major drought occurred in Ethiopia. This resulted in widespread famine. No death was occurred because of quick responses by the government and international aids  |
| 2010-2011 | One of the major drought occurred in Ethiopia leaving the country home to 2.8 million people in need of emergency food aid. No death was reported. Severe famine occurred in southeastern lowlands of the country.                                      |

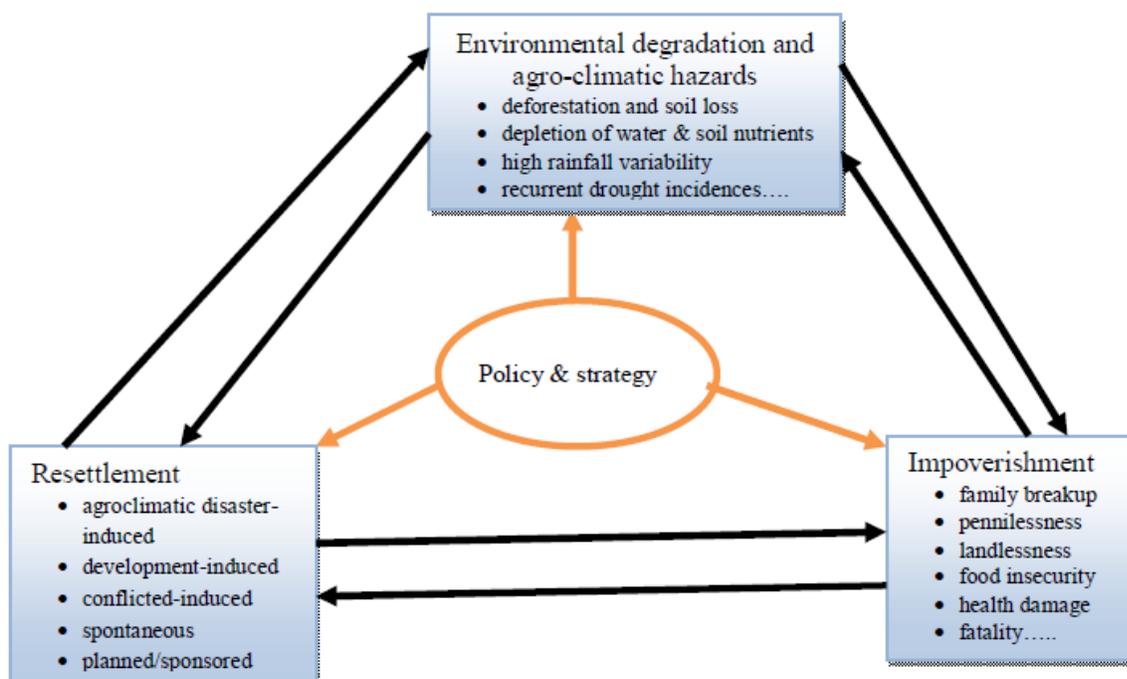
Generally, food insecurity and malnutrition have remained the greatest threat to the people in Ethiopia thus far despite the government's earnest effort to develop the agricultural sector.

### 6.3. Causes of food insecurity in Ethiopia

The causes of poor livelihoods and food insecurity in Ethiopia have always been controversial. Some groups of the academia argue that famines in Ethiopia are basically attributed to ecological degradation and adverse bioclimatic incidences. This is associated with views of Malthusian school of thought which strictly argues the natural resources depletion play critical roles in determining the food security status of a community. On the other side, there are people who argue that unfair distribution of food is the critical cause of famine in the country. The causes of poor livelihoods and food insecurity in Ethiopia is the combination of the adverse impacts of ecological degradation and bioclimatic factors (population pressure, soil loss, deforestation, erratic rainfall, and pest and disease infestation, etc) as well as human-induced attributes (poor policy framework, nepotism,

inappropriate land tenure, rights to means of production, etc). The proponents of the second category argue that poor livelihoods and food insecurity are preventable. On the other hand, the general environmental and socio-economic picture of Ethiopia portrays the challenges and opportunities related to the viewpoints of the two groups.

Many believe that a range of natural and man-made hazards like environmental degradation, erratic rainfalls, epidemics, poor but improving governance, rapid population growth rate (2.6 percent per annum) and social conflicts plunged the country into a widespread poverty precarious livelihoods situation over years. Especially, the livelihoods situation of most of rural residents (about 84 percent of the 80 million people of Ethiopia is precarious. These groups of people derive their livelihoods from subsistence agriculture which is highly susceptible to change in climate such as rainfall variability. This gives the impression that the basic cause of food insecurity in Ethiopia is partly attributed to climatic risks, natural resource depletion of which the most notable ones are exhaustion of soil fertility, water depletion, shrinking of vegetated lands, expansion of desert ecological conditions, disturbance of local and/or regional climates, loss of biodiversity and erratic rainfalls, the overall impact of which is thought to be food insecurity prevalence and related humanitarian crises.



Source: Based on a Module for FS produced by AAU; (The arrows indicate the Inter-connection between each event).

This schematic chart portrays most of factors and hazards that account for the causes food insecurity and famine in Ethiopia.

Resettlement program, Forestry development, Food Aid, etc; have been tried to off-set the problem food insecurity and famine, along agricultural development schemes and endeavors. But still the country face food supply shortages and many households are food unsecured either temporarily for long duration of time in various parts of the country.

**NB. Dear student try to read and do all the exercise questions on “The module produced by AAU for this course as Supplement material”. For this purpose, the module have been attached along this note.**

**Geremew Seyoum (Lecturer)  
Department of Geography  
Dilla University**