

Chapter I

Prologue

In recent times, Agricultural Extension has assumed newer dimensions and can be defined as a branch of agricultural science that deals with the methods which provide favourable environment to the better livelihood security. Modern crop production technology has considerably raised the output and has created problem of land degradation, pesticide residues in farm produce, erosion of natural resources, atmospheric and water pollution. The natural resource base is degraded and diminished and the quality of the environment sustainable livelihood is adversely affected. Agricultural production has sustained man and great civilizations flourished along irrigation sources and mismanagement of these resources saw the extinction of these civilizations with exploding population and rapid depletion and degradation of natural resource base, Sustainable agriculture has assumed very great significance. The task of meeting needs of the present generation without eroding the ecological assets of the future generation is receiving top priority by environmental planners.

World Wide Wild life Fund (WWF)-India has a large and growing conservation programme that includes field projects, campaigning and

policy work, education and outreach, research and networking. Given the ground realities in the country, where poverty, population pressures, an active civil society and strong democratic principles co exist, it is inevitable that all conservation initiatives must include elements of community empowerment and community mobilization. The role and involvement of local communities in conservation is diverse and depends on a range of social, economic, ecological and political factors.

It is critically important to establish approaches and models that demonstrate effective linkages between sustainable livelihoods and conservation management by local communities. It is also essential to adopt such approaches to minimize dangers of over-exploitation of forest resources, loss of some of the most high value conservation forests in the country and subsequent negative impacts on local livelihoods in the long term.

Most of WWF-India's field projects work with local community institutions and government agencies to develop and put in place forest-based or alternative sustainable livelihood models that can effectively demonstrate how conservation practices can be mainstreamed into livelihood enhancement.

Sustainable Livelihoods programme provides strategic inputs and capacity building to ongoing and new projects across all divisions of WWF-India. The programme is trying to ensure that the projects having components of community participation/sustainable livelihoods have a strong and consistence approach that can demonstrate impacts of poverty alleviation on conservation. In addition, the programme also contributes to national and

regional policy dialogue. A livelihood can include a number of activities, not all of which involve money. For example, a family may cultivate a home garden to produce food for family consumption, earn a small income by renting a piece of land, work as seasonal agricultural laborers, make bricks, sell eggs from their poultry, occasionally work on a construction or road repair site, and receive money each month from their daughter who works in a garment factory. All of these things together are their livelihood.

A sustainable livelihood

- Enables a family to cope with and recover from stresses or shocks
- Maintains or improves assets and capabilities
- Maintains or improves the natural resource base
- Does not undermine the livelihoods of others
- Provides for future generations

Rather than focusing on problems and 'needs,' we help people identify individual and community assets and find ways of using and increasing these assets to develop sustainable livelihoods. These might include social assets (*e.g. social networks, self-help groups, CBOs*), natural assets (*e.g. land, sea, rocks, trees*), human assets (*e.g. knowledge, skills, experience, mental and physical health*), physical assets (*e.g. roads, buildings, equipment, telecommunications*) and financial assets (*e.g. savings, pensions, remittances, credit*). We help households, producer groups and CBOs assess their resources, plan and achieve their livelihood goals and monitor change.

In terms of the livelihood framework described above, this may mean the way in which an institution affects the different livelihood assets or capitals that people use for their livelihoods - by controlling access to those assets,

or by influencing how, where, when and by whom they are used. For example, an environmentally protected area, such as a park or game reserve, represents a particular type of local institution that could link with the livelihoods of people living in the area in several different ways. A protected area would itself be the product of several other institutions - such as the Ministry of the Environment; the legal system that allows protected areas to be created; the constitution of the country that mandates the government to protect the environment; and local pressure groups that have persuaded the government to set up the protected area. The creation of a protected area might strongly influence people's access to natural assets within the area - households that went hunting for animals may no longer be able to do so; people who collected wild grasses, firewood or wild fruits may have their access to these regulated or stopped altogether; grazing of livestock may be prohibited inside the protected area. People's livelihood assets could be affected in other ways as well.

The SL Approach

There are three insights into poverty which underpin this new approach. The first is the realization that while economic growth may be essential for poverty reduction, there is not an automatic relationship between the two since it all depends on the capabilities of the poor to take advantage of expanding economic opportunities. Secondly, there is the realization that poverty — as conceived by the poor themselves — is not just a question of low income, but also includes other dimensions such as bad health, illiteracy, lack of social services, etc., as well as a state of vulnerability and

feelings of powerlessness in general. Finally, it is now recognized that the poor themselves often know their situation and needs best and must therefore be involved in the design of policies and project intended to better their lot.

Strengths and weaknesses of the SL approach

By drawing attention to the multiplicity of assets that people make use of when constructing their livelihoods, the SL Approach produces a more holistic view on what resources, or combination of resources, are important to the poor, including not only physical and natural resources, but also their social and human capital. The approach also facilitates an understanding of the underlying causes of poverty by focusing on the variety of factors, at different levels, that directly or indirectly determine or constrain poor people's access to resources/assets of different kinds, and thus their livelihoods. Finally, it provides a more realistic framework for assessing the direct and indirect effects on people's living conditions than, for example, one dimensional productivity or income criteria. There are also some weaknesses. None of the SL Approaches discussed here really deal with the issue of how to identify the poor that you are trying to assist. Also, the way resources and other livelihood opportunities are distributed locally is often influenced by informal structures of social dominance and power within the communities themselves. UNDP and CARE do not address this issue, but DFID includes power relations as one aspect of 'transforming processes' to be examined. Gender is an aspect of social relations and to the extent that relations between men and women are characterized by marked inequality

and social domination, they obviously form part of the problem. The basic idea of the SL approach is to start with a broad and open-ended analysis, but this requires a highly flexible planning situation which rarely exists. The best hope is to ensure that already identified/decided sector development initiatives fit with people's livelihood strategies and make them better at responding to the constraints and opportunities affecting the poor. The SL approach, or elements of it, could usefully be employed to that end. Finally, the SL approach, if applied consistently, might be beyond the practical realities of many local development administrations, with the risk that this approach remains an initiative of donors and their consultants. One measure to counteract this would be to ensure that counterpart staff is involved from the beginning when discussing how and if such a strategy

Background

The concept of Sustainable Livelihood (SL) is an attempt to go beyond the conventional definitions and approaches to poverty eradication. These had been found to be too narrow because they focused only on certain aspects or manifestations of poverty, such as low income, or did not consider other vital aspects of poverty such as vulnerability and social exclusion. It is now recognized that more attention must be paid to the various factors and processes which either constrain or enhance poor people's ability to make a living in an economically, ecologically, and socially sustainable manner. The SL concept offers the prospects of a more coherent and integrated approach to poverty. The purpose of this paper is to introduce the SL concept and approach to poverty reduction. It was commissioned by Sida to

facilitate a discussion of the applicability of the approach within Swedish development co-operation. The paper begins by outlining some of the conceptual issues of the SL concept, followed by a summary of how the concept has been put to practical use by some leading international development agencies. The final section is a critical discussion of the strengths and weaknesses of the SL approach which identifies some major issues for further discussion within Sida.

Sustainable Livelihoods

The sustainable livelihoods idea was first introduced by the Brundtland Commission on Environment and Development as a way of linking socioeconomic and ecological considerations in a cohesive, policy-relevant structure. The 1992 United Nations Conference on Environment and Development (UNCED) expanded the concept, especially in the context of Agenda 21, and advocated for the achievement of sustainable livelihoods as a broad goal for poverty eradication. It stated that sustainable livelihoods could serve as ‘an integrating factor that allows policies to address ‘development, sustainable resource management, and poverty eradication simultaneously’.¹ Most of the discussion on SL so far has focused on rural areas and situations where people are farmers or make a living from some kind of primary self-managed production. In a classic 1992 paper, *Sustainable Rural Livelihoods: Practical concepts for the 21st Century*, Robert Chambers and Gordon Conway proposed the following composite definition of a sustainable rural livelihood: *A livelihood comprises the capabilities, assets (stores, resources, claims and access) and activities*

required for a means of living: a livelihood is sustainable which 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 term.

Four types of capital are identified in the IDS (Institute for Development Studies) framework (which does not pretend to be an exhaustive list):

- Natural capital – the natural resource stocks (soil, water, air, genetic resources, etc.) and environmental services (hydrological cycle, pollution sinks, etc.) from which resource flows and services useful for livelihoods are derived.
- Economic or financial capital – the capital base (cash, credit/debt, savings, and other economic assets, including basic infrastructure and production equipment and technologies) which are essential for the pursuit of any livelihood strategy.
- Human capital – the skills, knowledge, ability to labour and good health and physical capability important for the successful pursuit of different livelihood strategies.
- Social capital – the social resources (networks, social claims, social relations, affiliations, associations) upon which people draw when pursuing different livelihood strategies requiring co-ordinated actions.

The Sustainable Livelihoods approach to poverty

Three factors shed light on why the SL approach has been applied to poverty reduction.

The first is the realization that while economic growth may be essential for poverty reduction, there is no automatic relationship between the two since it all depends on the capabilities of the poor to take advantage of expanding economic opportunities. Thus, it is important to find out what precisely it is that prevents or constrains the poor from improving their lot in a given situation, so that support activities could be designed accordingly.

Secondly, there is the realization that poverty — as conceived by the poor themselves — is not just a question of low income, but also includes other dimensions such as bad health, illiteracy, lack of social services, etc., as well as a state of vulnerability and feelings of powerlessness in general. Moreover, it is now realized that there are important links between different dimensions of poverty such that improvements in one have positive effects on another. Raising people's educational level may have positive effects on their health standards, which in turn may improve their production capacity. Reducing poor people's vulnerability in terms of exposure to risk may increase their propensity to engage in previously untested but more productive economic activities, and so on.

Finally, it is now recognized that the poor themselves often know their situation and needs best and must therefore be involved in the design of policies and projects intended to better their lot. Given a say in design, they

are usually more committed to implementation. Thus, participation by the poor improves project performance.

Poverty in India

Poverty is one of the main problems which have attracted attention of sociologists and economists. It indicates a condition in which a person fails to maintain a living standard adequate for his physical and mental efficiency. It is a situation people want to escape. It gives rise to a feeling of a discrepancy between what one has and what one should have. The term poverty is a relative concept. It is very difficult to draw a demarcation line between affluence and poverty. According to Adam Smith - Man is rich or poor according to the degree in which he can afford to enjoy the necessaries, the conveniences and the amusements of human life. Even after more than 50 years of Independence India still has the world's largest number of poor people in a single country. Of its nearly 1 billion inhabitants, an estimated 260.3 million are below the poverty line, of which 193.2 million are in the rural areas and 67.1 million are in urban areas. More than 75% of poor people reside in villages. Poverty level is not uniform across India. The poverty level is below 10% in states like Delhi, Goa, and Punjab etc whereas it is below 50% in Bihar (43) and Orissa (47). It is between 30-40% in Northeastern states of Assam, Tripura, and Meghalaya and in Southern states of Tamil Nadu and Uttar Pradesh.

Economy: Population below poverty line

Rank	country	Population below poverty line (%)
1	Bangladesh	45
2	Nepal	30.9

3	India	25
4	Pakistan	24
5	Srilanka	22
6	Maldives	21
7	China	8

MEETING FOOD AND NUTRITIONAL NEEDS

Food is still the single most important commodity in the urban consumer’s basket of goods and services, accounting for 55 percent of all expenditures. Urban consumers in Accra purchase a wide variety of foods away from home on a daily basis. The majority of these are “street foods”—foods purchased and often consumed away from the household. Almost 40 percent of the total food budget goes to purchasing street foods in the lowest expenditure quintile, 25 percent in high-income households. These figures indicate that the urban poor rely on street foods both as a coping strategy and as part of normal

consumption, with street foods contributing significantly to the intake of staple foods. They may purchase food daily because of income constraints, or they may wish to avoid the time and effort of preparing food at home.

In terms of current caloric intake, roughly 40 percent of households in Accra could be classified as food insecure. When current status is combined with a measure of vulnerability (proportion of total household budget devoted to food), 24 percent of households are classified as food-insecure, and an additional 40 percent are vulnerable.

Since 1993, the nutritional status of children in Accra has been deteriorating, with the prevalence of stunting (low height for age) at almost 18 percent and wasting (low weight for height) at 5.3 percent. Urban living

presents particular problems in caring for children because women, usually the primary caregivers, must generate income. Fifty-five percent of the primary caregivers worked full time and took care of their children full time. The study does not show adverse effects on children when mothers work, although many mothers in the study felt that they were making a trade-off between the need to earn income and the need to provide adequate care for small children.

The study finds that higher incomes lead to greater food availability, higher-quality diets, and better health for the child but not to significantly improved care practices. The only factor that is found to bring about important improvements in care is mother's education. Conversely, children who receive poor care are likely to be malnourished, regardless of household income

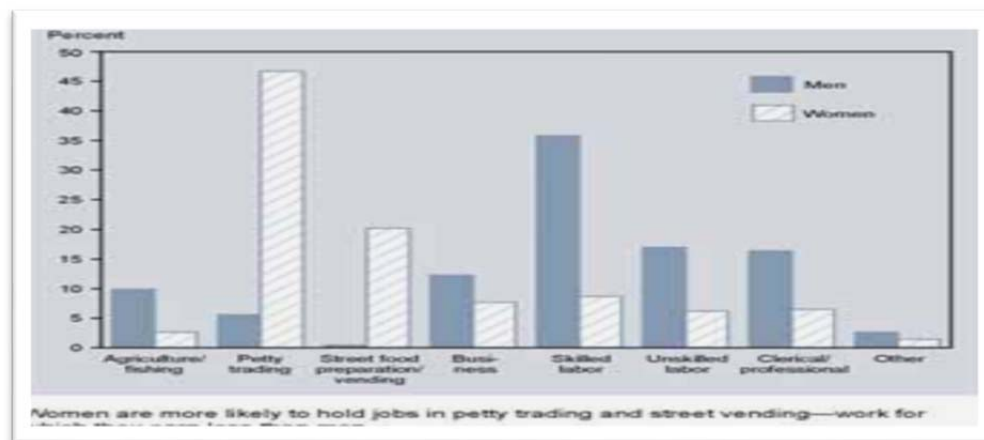


Figure 1: Jobs held by men and women

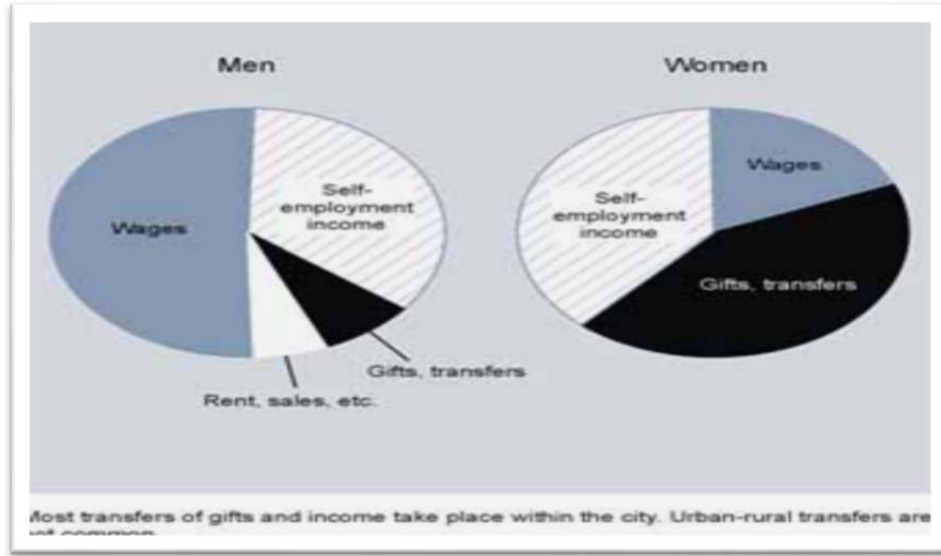


Figure 2: Sources of women's incomes compared with men's

In India, the people living below the poverty line are different from the group of poor people it seems. At least the data says this. According to the National Commission for Enterprises in the Unorganized Sector (NCEUS), headed by economist Arjun Sengupta, despite of the decreasing number of people living below the poverty, the situation of the poor people belong to different section of society is almost same with the situation of people living below poverty line.

The commission says that 79% of unorganized workers, 88% of SC/STs, 80% of the OBC population and 84% of Muslims are still living in the living condition that may be called as "poor and vulnerable group".

This is also the truth that at one hand India is achieving new milestone in the development of Indian economy and on the other hand, the gap between rich and poor people is being widened because of the globalization.

The commission report says that these poor people have remained poor without any social security. They are still working in the most depressed, unhealthy and unlivable conditions at a bare survival level.

According to the commission, all the people who are surviving on Rs 20.30 per capita per day belong to the category of “poor and vulnerable”. This capital level is in fact twice to the capita level of the people living below the poverty line.

If we believe on the report, it will be crystal clear that 77% of India’s population comes in the ‘poor and vulnerable’ group.

On Thursday, the NCEUS formally announced the findings and said that the 90 percent of the illiterate people have a very high possibility of being poor or helpless and they are engaged largely in unorganized sectors.

Changing Trends in Agriculture

Majority of the India farmers derive their livelihood from agriculture. During the Tenth Five Year Plan, gross domestic product (GDP) originating from agriculture and allied activities was 2.3percent compared to 8.0 percent in the industrial sector and 9.5 percent services sector. During this plan period, the growth in the agriculture and allied activities averaged 2.3 percent which is lower than that of 3.2 percent during the 1990s and 4.4 percent during the 1980s. Also, there is a shift from staples to cash crops which is the major reason for food insecurity. From 1960-61 to1998-99 the area under grain crops has gone down from 45 million hectares to 29.5 million hectares, area under cotton has increased from 7.6 to 9.3 million hectares and area under sugarcane has increased from 2.4 to 4.1 million

hectares. Since 1990-91, due to the new Economic policies, the area under food grains and coarse grains have declined by -2 and -18percent respectively while area under non-food cash crops such as cotton and sugar-cane have increased by 25 and 10 percent respectively. However, production of milk has increased from 84.4 m tonnes (2001-02) to 97.1 m tonnes (2005-06). Production of eggs has increased from 38729 million (2001-02) to 46231 million (2005) (Ghatak, 2007). Notwithstanding increased availability of milk, fruits, vegetables, fish and other produce, the agricultural sector is facing the new challenges of diminishing land resources, factor productivity decline, threatened loss of bio-diversity, natural resource degradation, widening economic inequality, etc that have serious implications on the livelihoods of the poor. Indian agriculture has also come under significant adjustment pressure from market liberalization and globalization.

The changing consumer preferences have added to the complexities of adjustment. The food consumption pattern in India is diversifying towards high value commodities. The decline in per capita consumption of cereals, in particular coarse cereals, has worsened the nutritional status of the rural poor. In the case of the poor, total consumption of high value cereals like rice has declined by 10 percent due to rise in prices of cereals in real terms during the 1990s and dietary diversification towards non-food grains. Similarly, average daily intake of protein by the Indian population decreased from 60.2 grams to 57 grams in the rural area between 1993-94 and 2004-05 (Praduman Kumar, et. al. 2007).Recent studies indicate that household level food security for the poor households is changing for the

worst. Household Level Food Security - Its Importance as P Sainath (2007), puts it: *“Seldom has policy been so forcefully implemented as in the 1990s. For ten years, governments have assaulted the livelihoods and food security of the poor. That security does not lie in mountains of grain but in millions of jobs and workdays for people”*. Food security at the national, state or district level does not automatically ensure food security at the house hold level. Today, commercial crops are being recommended by Agriculture Departments to improve the economic status of farmers without explicit consideration of their household level food security. What most small and marginal farmers often need is food crops such as short duration cereals, millets and fodder crops to meet their family’s food and fodder needs.

“The rebirth of jowar would have helped farmer, soil and Food security. Suicides are far higher among cash crop Farmers than among food crop growers here. It would also have seen the revival of livestock — jowar is where the fodder comes from”.

- P. Sainath, 2006

OBJECTIVE

1. To access the level of sustainability of livelihood of the respondent famers.
2. To predict the livelihood status from score of agro-economic and socio-personal variables.

3. To access the interrelationship between the set of predictor variables (agro-economic and socio-personal in nature) and the predictor variables (sustainable livelihood).
4. To derive strategic implication from this relationship to be applied for sustainable management.

Limitation of Study

The present study had the limitations of time and resources usually faced by a post graduate level student investigator. The study involved collection of primary data from the target respondent (farmers), related with decision making process and the correctness of responses, which were based on recall, might in spite of best efforts of investigator, leave margin for error to creep in.

It may, however, be declared that the observations and results of the present study should not be generalized beyond the limits of area under investigation and other areas having similar agro-climatic and socio-cultural conditions.

However, considerable care and thought were exercised in making the study as objective and systematic as possible.