Situation analysis of rural livelihoods and socioeconomic dynamics for sustainable rural development: The case of Legehida Woreda (District), South Wollo of Ethiopia

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Rural communities rely on a number of social, cultural, technological and natural/environmental resources to acquire their livelihoods. In the Ethiopian context, rural livelihoods tend to be limited and often inadequate to meet the needs of the rapidly expanding population. This paper presents a detailed analysis of rural livelihoods in Legehida Woreda, one of the least developed and increasingly food insecure Woredas (districts) of South Wollo, Ethiopia. Using quantitative and qualitative data from both primary and secondary sources, the study identified a number of key challenges facing rural communities: depletion or degradation of natural resources, increasing family size, declining farm size, low productivity, inadequate supply of food from own produce and limited non- and off-farm employment opportunities, gender inequality, and poor health, as well as water and sanitation services. The study also documented the felt- and spelt-needs of the community as expressed by household heads and Woreda administration officials during the field work. Based on a thorough analysis the socioeconomic dynamics in the Woreda, the Paper concluded that government agencies and other stakeholders should make concerted efforts to respond to the needs expressed by the community in order to achieve sustainable livelihoods and rural development in the woreda and in the country at large.

Key words: Legehida, livelihoods, community, participation, sustainability.

INTRODUCTION

In recent years, a growing number of studies have examined the different aspects of rural livelihoods which “...comprise the capabilities, assets (including both material and social resources) and activities required for a means of living” (DFID, 1999, cited by Murray (2001). As Cameron (2005) observed “... livelihoods framework emerged in the mid-1990s as an integrated, people-centred approach to research and policy formulation. It has had a significant influence on rural development policies. The framework can be used as a tool for understanding rural lives in their totality, including varied lived experiences of continuity and change”. This Paper revolves around two interrelated themes. The first refers to the need for a carefully collected, analyzed and interpreted data on the different aspects of livelihoods in rural communities as key inputs to the elaboration, adoption and implementation of sustainable rural development and poverty alleviation strategies. The rationale for doing this
is that without accurate and timely data about resources, ways of using these resources, and the extent to which these resources can meet the needs of families and households, it is difficult, if not impossible to accomplish meaningful changes in people's lives. The second theme reiterates the long-held argument that sustainable development can best be accomplished with the active participation of beneficiaries and stakeholders in the identification of gaps, planning and implementation of interventions, and assessing impacts throughout and at the end of development intervention. In the words of Martinez (1998) "Community-based participation, with its goal of local appropriation of the means for sustainable development and the political, environmental, social — and above all local— approach that goes with it is the central pillar around which it becomes possible to build autonomy, through bodies involved in planning and management ..." The study confirms that when given the opportunity to participate and identify their own priorities, communities can own initiatives and will be willing to contribute to their realization.

In undertaking this assessment and to support, in a small way though, the prevailing consensus among researchers and practitioners that sustainable development is influenced by a blend of individual, social, cultural, resource and environmental factors which should be taken into account, all along the development process, from the inception to the implementation of projects (Morse and McNamara, 2013). Its firmly believe that it is imperative to first understand the socioeconomic dynamics of rural communities in order to make informed decisions towards building community capacities and capabilities for sustainable rural livelihoods and development.

Some of the specific objectives of this analysis included: (a) to generate useful socioeconomic data essential for food security and sustainable rural development planning and implementation; (b) to identify most vulnerable population groups and actual as well as potential causes of their vulnerability; and (c) to encourage local, regional and national policy/decision-makers to design appropriate development interventions with the participation of the target communities.

METHODOLOGY

Location and background of the study area

Legehida woreda is located in South Wollo of the Amhara National Regional State of Ethiopia, about 85 kilometer south-west of Dessie, the Capital of South Wollo. The Woreda is bordered by Woreilu woreda from the east and north east, by Legambo Woreda from the north, Kelala from the West and Jama Woreda from the South. Until the early 1990s, Legehida used to be a separate Woreda itself, consisting of Shikif, Siba and Abalo sub-woredas. Since then, however, it was re-organized and some of its villages or components were given up to neighboring woredas whereas a larger part of Legehida was incorporated into Woreilu Woreda in the new spatial structuring of local administration in the Zone. Legehida has two agro-climatic zones: Woina-Dega (72%) and Dega (28%), representing moderate and cool climatic zones, respectively. In terms of altitude, places range from approximately 1500 m.a.s.l. to 3180 m.a.s.l. (Legehida Woreda Bureau of Agriculture, 2005).

Methods of data collection

The data were collected from primary and secondary sources. Primary data was generated through Rapid Rural and Participatory Appraisal techniques, involving individuals, household heads, group/community and principal informants as sources of information and units of analysis. For this reason, field visits were made to selected villages in woina dega or intermediate and highland areas of the Woreda. Moreover, interviews were conducted with randomly selected respondents who came to the weekly market of the Woreda town and they represented people from the different agro-climatic zones of the 10 Kebeles1.

Secondary data were obtained from the Woreda Administration, health, education and agricultural development offices. They include population statistics, development activities in the area and challenges encountered by the Woreda Administration in their efforts to promote livelihoods.

Sampling procedure

Respondents were selected using both purposive and stratified sampling techniques. Purposive sampling was employed to select localities of different agro climatic settings using topographic maps, whereas stratification was used to disaggregate target groups by gender, age, and socio-economic status. Representative samples from each category were drawn and interviews were administered with a sizable proportion of the sample.

Sample size

The study was conducted in 10 out of the 12 Kebeles of the Woreda from the different agro climatic zones which were selected using the purposive sampling technique. This included 7 kebeles from the Woina-Dega (1500-

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1 Kebele is the lower unit of local administration which composed of a number of rural households.
Discussions with Woreda officials and some of the elderly interviewees suggested that given the necessary investment and mobilization of the community, the available water resources could be used for irrigation and could play important role in promoting food security and sustainable livelihoods in the area. In fact, one of the authors recalls his personal observation and experiences in the early 1960s and 1970s that farmers in the region used to employ traditional irrigation methods to supplement grain produces from rain-fed agriculture or to irrigate small fields for pasture and animal feeds. At the time of the study, however, irrigated farming was reported to account for a fraction of the cultivated land in the Woreda.

Data analysis

The data was analyzed using simple descriptive and content analysis methods. Information obtained from the interviews were computed and interpreted; and secondary data were tabulated or qualitatively interpreted.

Socioeconomic characteristics of the study area

Land and related resources

The total area of the Sub-woreda is estimated to be 35,000 ha of which nearly 52.1% is brought under cultivation, 14.2% wasteland (heavily eroded hills or cliffs, marshes, gorges, etc); 9.7% covered with scattered shrubs and trees; 9% for grazing; 7.6% covered with planted trees; 5.4% is used for social purposes (settlement, burial ground and homesteads, etc); and the remaining 2% of the land is covered by water bodies. Of the total arable land, 88.4% of the farmland is used for Meher (main-harvest season) crops from June/July to December whereas about 11.6% of the crops are produced during the Belg (small-rains) season from February/March to June (Worellu Woreda Bureau of Agriculture, 2004). Almost all the areas, particularly those areas dependent on Belg rains, are often prone to drought and famine, and almost all the Kebeles have a portion of land with a sizable proportion of farm households subsisting wholly or in part on produces of the Belg rains which are often unpredictable and erratic. There is a growing trend of relying on both Meher and Belg rains owing to decrease in farm size, decline in productivity, and increasing household consumption needs. Moreover, the Belg-dependent farmers reside in the higher altitudes which are commonly referred to as Dega and often cultivate mountains and hillsides which expose the area to excessive erosion and render the soil infertile.

The Woreda has three small to medium river systems: Mechela, forming a natural boundary between Legehida and Kabe Sub-woredas of Were Ilu, and Yedo, about ten km east of Weyin Amba, the capital of Legehida Woreda; and Walenta also downstream called Katchilet lying between Legehida Kelala Woredas. Besides these, there are a number of small permanent and intermittent streams which feed water to the three main rivers systems.

Demographic characteristics

At the time of this study, in December 2004, Legehida was reported to have a total population of 52,070 persons. About 50,978 persons or 96% of the population resides in rural villages whereas about 2,022 persons or 4% dwells in towns, the majority of whom reside in the Woreda town, Woyinamba. Of the total population of the Woreda, about 15.7% consists of children less than 4 years of age, with the population below the age of 24 years accounting for 56%.

The Woreda had a total of 12,328 households of which 28% are female-headed households. In seven out of eleven Kebeles, female-headed households account for more than 30% of the total households in each Kebele. The study revealed that women not only constitute over 50% of the population, but are also sole breadwinners and planners as well as managers of daily affairs for a growing number of households in the study area. Under such circumstances, women shoulder multiple responsibilities: rearing children, running domestic affairs, assuming leadership in outdoor activities, and struggling to cope with a wide-range of individual, family and community challenges. The analysis reveals that, women are not simply subservient to male-dominated socioeconomic and cultural realities; they also compete with their male-counterparts for such resources as labor, land and other utilities since their survival and that of their family members depend on these and other resources.

One very important value of such a gender-disaggregated analysis is that it will help policy/decision-makers, development actors and women themselves to make-development initiatives and activities responsive to the special needs of women and women-headed households because of the feminization of poverty and inequality both here and elsewhere in the country.

Livestock resources

Like most of the north-central highlands of Ethiopia, the
study area is characterized by a mixed farming system which involves both crop production and animal husbandry. According to the Woreda Bureau of Agriculture (2004), the Woreda has 25,559 heads of cattle, 11,488 equines, 21,932 poultry, 34,372 sheep and goat (shoat); and 1572 bee hives. The research found out that animal resources are not adequately developed owing to population pressure, competition of animals with crop production, and decline in grazing lands due to constant conversion into cropland due high demand for food grains. Accordingly, per capita share of livestock ownership stands at 0.5 heads of cattle, 0.2 heads of equines, 0.4 heads of sheep/goat, 0.7 heads of poultry, and 0.03 bee hives. Moreover, over 99% of animals in the area are reported to be low-yielding local breeds in terms of meat and dairy products though they are adapted to the ecosystem through centuries of natural selection (Woreda Bureau of Agriculture, 2004).

Household’s status of food security

“Agriculture is constrained by poor soil fertility and soil degradation. This is a chronically food insecure area because of erratic belg rainfall, [though] in a good year the better off and middle households are able to support their basic food requirements fully from their own production, and even Poor households get nearly 60% from their fields” (Amhara Livelihood Zone Reports, 2007).

Though not up to the scope and magnitude of the challenge, the Woreda Bureau of Agriculture and Rural Development is engaged in alleviating food security problems and has made a rough assessment of the number of households which are faced with problem of access to food and other necessities of life. According to the Bureau, about 51% of the total households with some amount of land and 17.8% of households with no possession of land, respectively, are considered chronically food insecure. Together, they constitute 69.1% of the total households of the Woreda; and the majority of them happen to be women-headed households.

About 21% of the households can cover their food consumption needs between 9 and 12 months; whereas about 30% of them cover their food requirements for the whole year. The study confirmed that households with possession of some plots of land who are unable to fulfill their annual food requirements was explained in terms of falling productivity of land, declining farm size and fragmented landholding, shortage of labor, especially in the case of female-headed households, lack of access to improved farm inputs, high cost of farm inputs, problem of access to markets, and lack of knowledge about post-harvest conservation, processing and efficient use of available food resources. These are very critical issues to be addressed through appropriate policies and programs on sustainable development and improvement of livelihoods among the population.

However, gender disaggregated data is missing from the food-insecurity assessment of the Woreda by the Woreda Bureau of Agriculture and Rural Development. Nevertheless, the absence of disaggregated data is not a deliberate omission but rather an oversight and limited awareness about the importance of gender-disaggregated data collection and reporting. Therefore, it is essential to build the capacity of Woreda administration to be able to collect, analyze and utilize data on the different demographic variables of the community so that the needs of each population category could be addressed adequately. Especially given the fact that women-headed households constitute close to 30% of the total households in the area, solid, comprehensive, and disaggregated data is required to facilitate gender-mainstreaming and empowerment of women in the region.

RESULTS

The results of the interview with 42 household heads, principal informants, and data obtained through focused observation were discussed. The findings presented here, coupled with the secondary data discussed in the preceding sections, provide useful insights which could serve as building-blocks for designing and implementing a comprehensive roadmap for sustainable development in the study area.

Age and marital status of the respondents

The age-structure of a population gives valuable insights about dependency ratio, the size of the economically active population and other related features. The majority of the respondents are within the age group 24-44 years of age, of which 76% are male and 24% are female respondents, respectively. In terms of marital status, the majority of the respondents (83%) are married; 9.5% divorced, widowed or separated; and 4.5% of them are single and divorced. About 3% of the respondents did not indicate their marital status.

The high percentage of marriage observed in the study area is attributed to the prevailing early marriage and the relative stability of marriages, as well as the possibility of remarriage among rural communities. However, this high percentage of marriage refers to the households interviewed; and should be treated with caution since there is a considerable proportion of female-headed households as mentioned in the preceding sections which suggests the existence of a large number of single, divorced or widowed women in the locality.
Household size

Family or household size is a function of age and marital status of household heads. In turn, family size influences labor supply, domestic consumption and overall situation of the household activities. In this regard, family or household size serves as one of the most important criteria for a family-centered livelihood improvement intervention. In the study area, the majority of households (71%) have between 4 and 6 household members. Households with small family size are very rare whereas those with family size of 7 to 9 members constitute close 22% of the total households. It is interesting to note, but should be confirmed by further studies, that extremely large size households seem to be on the decline. Only one household (2.2 %) has more than 10 family members.

Sources and adequacy of level of livelihoods

“Land is at the heart of the political, social and economic organization of most African states (99 states), which rely heavily on agriculture and natural resource use for a significant percentage of their national gross domestic product” (Mokgope, 2000). Land is one of the major sources of income in the study Woreda; and access to land is one of the determining factors in ensuring rural livelihoods though land ownership alone may not necessarily ensure adequate food supply.

The study revealed that land has become one of the scarcest commodities in the Woreda. The majority of households (55.5 %) own between 0.2 and 0.5 hectares of land; 11.1 % own between 0.1 and 0.2 hectares, 13.3 % own between 0.5 and 1.0 hectare; and 17.7 own over 1.0 hectare of land. As a whole, it is observed both from the literature and the field survey that farm size is shrinking owing to population growth, the increase in branching-out families, and absence of alternative employment opportunities in the rural areas as well as in the nearby towns or cities.

Apart from the decrease in farm size, land productivity, too, has declined; and this has greatly affected households’ food security. About 13% of the respondents reported that they produce less than 5 quintals per year, whereas 11% produce 5 to 10 quintals. The majority of the cases (60%) say they produce between 11 and 15 quintals, with another 13% of the interviewees producing between 16 and 20 quintal a year. Only one respondent reported to have produced more than 20 quintals a year.

With regard to the length of time covered by own produce from own farm, the field data revealed that about 7% of the cases cover less than three months of their food requirement; 22% cover between 3 and 6 months; 20% say they could provide food for their family for a period of 6 to 9 months; 42% can afford for 9 to 12 months, whereas about 9% said they finish the whole year without experiencing food shortage.

Households which report to have covered their food consumption needs for 9-12 months and beyond are those that are generating additional income from the sale of live animals, poultry, dairy products, honey and/or rent of animals. Per household earnings from such sources range between Birr 100 and 300 per annum and supplement farm incomes. However, the proportion of households engaged in such enterprises is considerably low, about 12% of the total households. Moreover, the relatively encouraging level of self-sufficiency over a relatively long period of time should be viewed with more caution since household heads do not often declare their food security status for cultural and social reasons.

Gender disparities

Despite the fact that women constitute more than half of the population; and that more than 30% of households are headed by women, gender disparity in access to resources, decision-making and leadership positions is extremely low in the study area. For example, over 73% of the respondents agree that the “husband makes most of the decisions for most of the time”; and this refers not only to attitudes towards the past but also to the future as well. Concerning education and other opportunities, a similar percentage of respondents (75%) stated that more chances or support be given to the education of boys since girls go to marriage before completing studies. About 60% of the interviewees indicated that the greatest part of women’s role should be managing household or domestic affairs; whereas, about 35% of the respondents wish women to involve in other aspects of life in the community. The remaining 5% said they would not say anything about it.

Access to and use of improved farm inputs

Access to improved farm inputs such as fertilizers, high-yielding seeds, herbicides, pesticides and other technologies, is vital for increasing the productivity of available farm size. Almost all respondents reported that they have used one or more improved farm inputs during the preceding three years. They also rate the availability of these inputs, especially fertilizers, as adequate. However, they pointed out that the price of fertilizers and other inputs has become prohibitively high. One informant said he stopped using farm inputs because he could not afford to pay for it because of the high price. Apart from the high cost of inputs, farmers complained about the timing of repayment of input dues, which, they said, takes place between the months of December and February. During this time, they reasoned, farm produces (both grains and
animals) are sold at cheaper prices; and farmers have to sell large quantities of grains or a number of live animals to pay back input-related credits. For example, one woman respondent bitterly resented saying “We sell our grains or animals at lower prices during the harvest season but we buy them at higher prices during the slack season”. Generally, access to information and market outlets is one of the limiting factors for food security and sustainable livelihood in the rural areas in general and in Woreda in particular. Inadequate access to market is attributed to poor road infrastructure, lack of transport services, and the scattered nature of rural settlement coupled with inadequate supply of marketable surplus.

Health related problems

It is universally recognized that health is a foundation for sustainable development. However, until recently, health has been the most neglected aspect of social development in Ethiopia in general and in the rural areas in particular. Respondents were asked to name some of the major health problems affecting them and their family members. The study revealed that people suffer from a wide-range of preventable diseases such as diarrhea, headache/stomachache, skin itching (or locally known as ikek, which means scratching the skin due to irritation), eye-sickness (usually trachoma caused by lack of cleanliness and poor personal hygiene) and pneumonia. At the same time, respondents are either reluctant to mention HIV/AIDS as one of the major health problems, maybe for socio-cultural reasons, or are greatly unaware of the existence of this pandemic due to low level of information and communication. However, development agents and officials of the Woreda administration indicated that the impact of HIV/AIDS is significant since a large number of deaths among young people, especially those in the Woreda town and even in the rural villages, are reportedly high though the causes of these deaths are given different names other than HIV/AIDS.

The majority of the respondents (89%) indicated that they have been to the small clinic in the Woreda town at least once during the last three years. However, 53.3% and 15.6% of the respondents rated the services of the clinic as unsatisfactory and very unsatisfactory, respectively. The reasons of being unsatisfactory and very unsatisfactory, they pointed out, are due to shortage of medicine and well-qualified health personnel to treat patients and provide preventive as well as curative services. Some of the interviewees indicated that they were being exploited by private drug dealers and unqualified health practitioners which inject patients with unclean syringes and dispense often expired drugs by unqualified and unauthorized village practitioners.

With regard to maternal health, the survey revealed that over 97% of deliveries in the study area take place at home assisted only by traditional birth attendants or elderly persons even with no experience in the job at all. Asked whether or not they knew of any woman who died during or after delivery over the past three years, more than 30% of them said they knew that one or more women have died of childbirth or related complications over the stated period.

Concerning health and sanitation education 75% of the respondents reported that they or at least one member of their family has received training or heard of the need for keeping personal cleanliness at least during Kebele level gatherings. However, only 35% mentioned that they have ever received/heard of improved food preparation methods and the nutritional values of certain food items. In this regard, 65% respondents said they would have liked to get training in food and food-related skills but have had no such opportunities in their vicinity.

Community responsibilities in improving living conditions

It may be possible to bring external assistance to a community but unless the community makes concerted efforts to ensure its own development, not much is achieved in improving the quality of life in that community. In this regard, it is important to identify and streamline the willingness of people to contribute to development efforts in their locality. In response to questions about the possible contributions of the community, 96% of the respondents expressed commitment in terms of providing labor services if and whenever required to participate in development initiatives in the area. Apart from labor, 78% of them stated they could also provide available local materials for the same purpose. When it comes to financial assistance, however, only 11% said they would contribute financially. The reason for the small percentage of respondents willing to help financially suggests the scarce nature of money in rural households.

Environmental situation analysis

As earlier mentioned in the in methodology, part of the data was collected using a high-precision digital camera which helped in recording landscape and physical resources in the area. The topography of the Woreda is characterized by rugged surfaces, steep slopes, undulating hills, deep gorges and flatlands. Centuries of human settlement, intensive exploitation and excessive erosion have made most of the highlands largely unproductive and unable to support human lives. The major causes of resource depletion and environmental degradations are attributed to irresponsible human action and inaction.
The inevitable consequences of environmental degradation and resource depletion are poverty, vulnerability, powerlessness and destitution. The poor manage to survive by postponing consumption, going hungry for hours and days even under 'normal' circumstances. And when drought and famine occur, they are the first to collapse easily unless external assistance comes in quickly. Although poverty affects all sections of society, women carry the brunt of its impact since they give priority to their children, the aged and the sick by compromising their own safety and security. They struggle to survive and help generations to continue though their own future proves bleak. Saving the environment and relieving poverty therefore is helping women and society to restore lost hopes, empowering them and proving the whole family a reliable care-taker.

Felt-and-spelt needs of the community

Respondents were very open in identifying the most important areas of intervention to improve their living conditions. These include:

1. Health Services
   i. Upgrade the existing clinic into a health center;
   ii. Construct health posts in several places;
   iii. Improve access to drugs and other health supplies;
   iv. Make price of drugs/medical supplies fair and affordable;
   v. Improve roads and make vehicles (ambulances) available;

2. Food supply
   i. Increase supply of fertilizers;
   ii. Improve access to quality seeds;
   iii. Ensure market access/information;

3. Clean water and sanitary services
   i. Spring water development;
   ii. Construction of pit latrines;
   iii. Training on personal and environmental hygiene;
   iv. Training on nutrition and food preparation;

4. Education
   i. Expand schools;
   ii. Upgrade the level the Junior Secondary School into a High School;
   iii. Provide training in some skills;

5. Other priority areas
   a. Service Cooperatives
      i. to make manufactured goods available
   b. Livestock improvement
      i. Animal health/clinic;
      ii. Improved animal breeds (bring American Cows!);
   c. Fruit and vegetables production
      i. Need for improved seeds of fruits and vegetables;
      ii. Improved variety of trees and plants;

Conclusions

In the light of the data generated from the fieldwork and also from focused observations as well as secondary sources of information obtained from the Wore-Ilu Woreda Bureau of Agriculture and Rural Development, the following conclusions were made.

i. Agriculture is characterized by traditional farming practices using primitive tools, usually the metal plough driven by a pair of oxen. There has not been a parallel technology developed to enhance farm productivity and improve the livelihoods of people in the Woreda. Due to centuries of intensive human activities, most of the highlands are degraded and have lost their soil fertility; farm size has dwindled due to growing population pressure. Nor has there been any modification in the age-old method of animal husbandry. This has resulted in the decline of both crop and animal productivity with the corollary effect that population growth is not matched with adequate supply of livelihoods.

ii. The problem of population pressure, dwindling farm size and declining farm productivity is aggravated by the virtual absence of non-farm or off-farm employment opportunities in the area and in the surrounding regions. In other words, there is no alternative outlet for the unemployed or underemployed rural work force to relieve the continuing pressure on land and sub-subsistence farming.

iii. Women still continue to occupy marginal positions while they bear the greater burden of domestic as well as outdoor responsibilities. They account for over 50% of the population and about 30% of household headship, yet they are the poorest of the poor, the weakest of the weak, and the most vulnerable group of the community constantly being affected by ill-health, malnutrition, maternal morbidity and mortality.

iv. The provision of health and sanitary services is at its infancy. At the same time, the study revealed that people have developed health-seeking behavior, though there is still a need for raising their awareness on the promotion of personal and environmental health.

v. Farmers indicated that they use fertilizers but that the price of fertilizers and other inputs is getting unaffordable. They stressed the need to ensure adequate supply at fair
prices. They also pointed out that they need improved animal species, vegetable and fruit seeds as well as animal health services.

vi. Respondents have clearly spelt out the critical areas they wanted to be addressed. They also identified their own roles and indicated their expectations from both the government and other actors towards improving their livelihoods. In this case, it would be useful to build upon these needs and continue to engage the community in promoting sustainable development.

vii. Using the lessons learnt from Legehida Woreda, the research emphasizes that improving rural livelihoods requires empirically-based comprehensive analysis of the social, economic, cultural and resource factors in rural areas. The study also underlined the need for promoting community participation in the analysis of livelihood conditions as well as in planning and executing sustainable development programs in rural communities.

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