

# Assessment of Community based Project on Natural Resource Management and Its Impact on Economic Sustainability: A case study of Western Wollega, Ethiopia

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**Abstract:** This paper finds the impact of UNDP sponsored projects, basically the community based projects on natural resource management. Africa continent is full of natural resource but most of them are unutilized or under-utilized. To make the people self-sufficient & to make them economic sustainable, natural resource should be utilized & should be managed. The role of Sustainable land management & UNDP small grant programs should be evaluated and should be considered as vital. The research findings also revealed that project beneficiaries had the inclination to produce and sell cash crops provided that enabling environments such as natural assets, financial and technical capacity are present. It can be concluded that such business-mindedness of local communities is a more likely potential that could be transformed and scaled-up into the formation of community-driven ecosystem-based micro-enterprises. At the heart of ecosystem-based micro-enterprises lies the emphasis to market-oriented approaches to resource use and management in order to help grassroots communities generate sustainable socio-economies benefits.

**Keywords:** Natural Resource Management, Sustainability, Rural area, Project.

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## 1. INTRODUCTION

Natural resources are everywhere – in our bush, around our coast, along our rivers, on our farms and in our cities and towns. In essence, natural resources are our land, soil, water, plants, animals, minerals and air. Natural Resource Management (NRM) is about managing our natural resources to ensure environmental, social and economic sustainability for both present and future generations in accordance with the principles of Ecologically Sustainable Development (ESD). NRM provides a range of benefits that contribute to achieving the goals of Ecologically Sustainable Development (ESD) and ensuring that the four key principles of Ecologically Sustainable Development are met.

The principles include:

- Valuing Biodiversity

Which means decision makers and the community in general place an appropriate value on the variety of plants and animals in an area

- Precautionary principle

Which requires decision makers and the community to err on the side of caution when assessing the potential environmental impact of any development

- Intergenerational equity

Which requires decision makers and the community to consider the needs of future generations in relation to maintaining their quality of life?

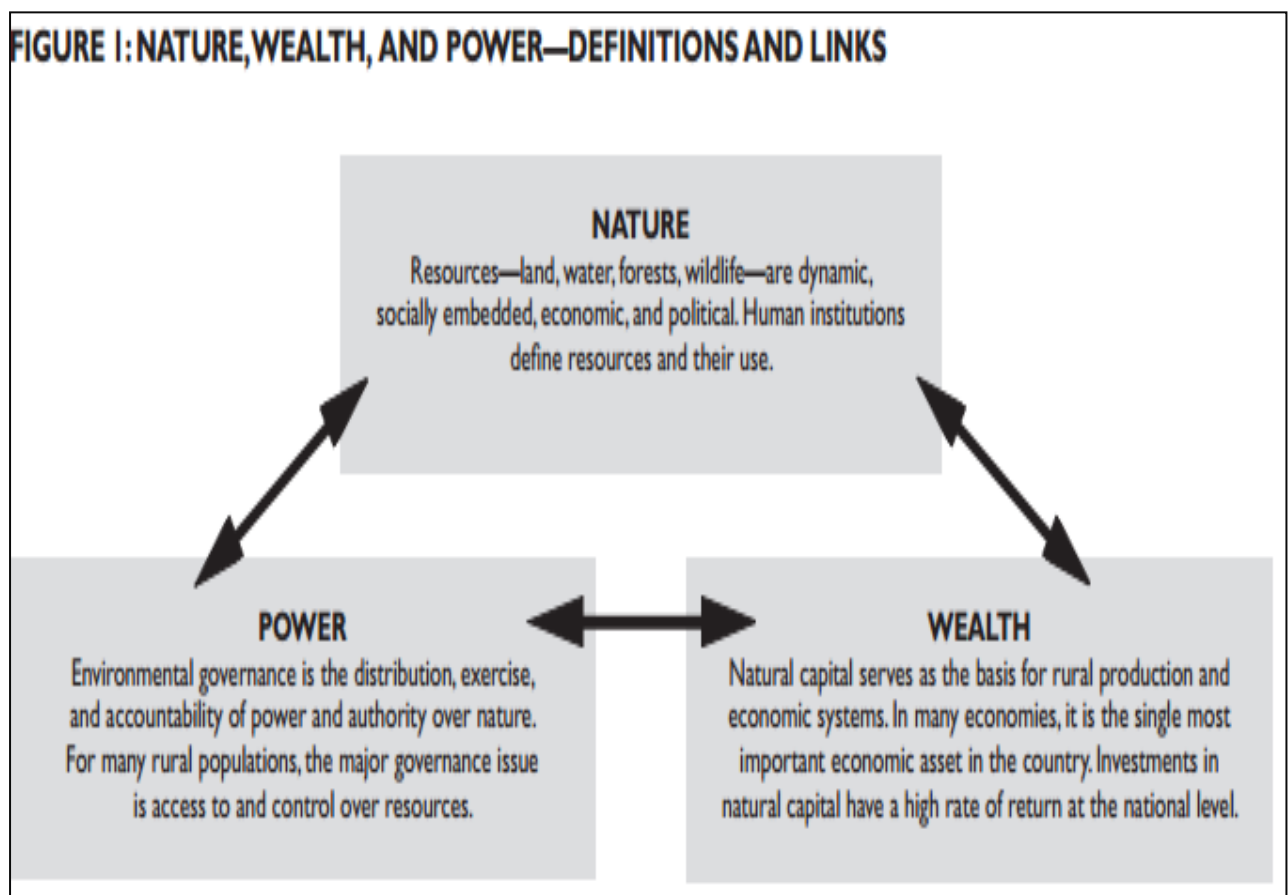
- User pays

Which requires decision makers and the community to make sure the users of particular resources pay an appropriate price for those resources.

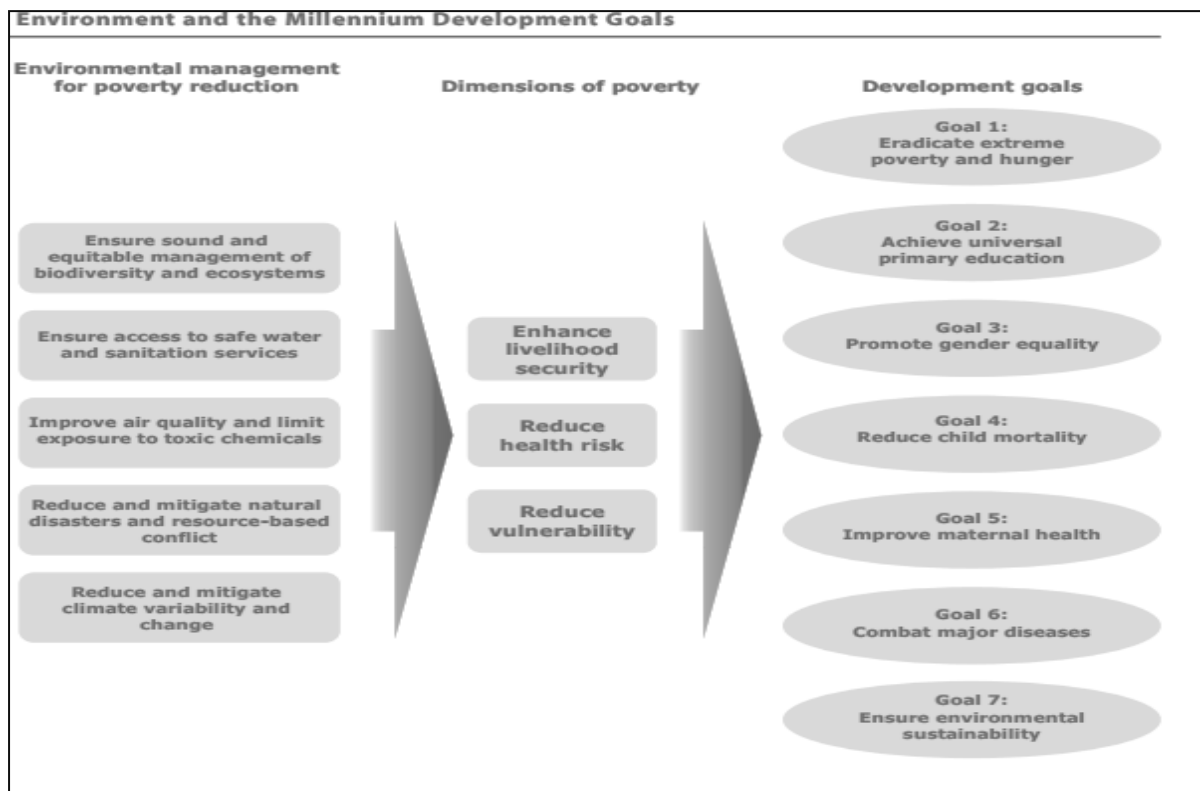
Poor people rely on related harvests as a primary source of income and fall back on natural resources when other sources of income fail.. This helps in the identification of factors and processes contributing to resource degradation. There is widespread evidence, for instance, that in many areas currently facing severe environmental resource degradation, resource users in the past were poorer than they are today, and yet the natural resource degradation was consciously prevented (Bromley and Chapagain 1984; Sanwal 1989; Pant 1935). Furthermore, in many areas the contribution of richer groups towards resource degradation is currently greater than that of the poor (Jodha 1992; Prakash 1997).Consequently, poor communities have an undiminished stake in the health and productivity of their environmental resources, and they have institutional norms and practices at their command to safeguard this stake.

Dilution or disintegration of this community stake, and the erosion of grassroots-level mechanisms to protect and enhance it, constitute the fundamental reason behind natural resource degradation, irrespective of the poverty or richness of communities (Bromley and Chapagain 1984)

**FIGURE I: NATURE, WEALTH, AND POWER—DEFINITIONS AND LINKS**



Indeed, poor people’s perceptions of well-being are strongly related to the environment in terms of their livelihoods, health, vulnerability, and empowerment to control their own lives. Below mentioned figure provides a simplified framework for understanding how environmental management relates to poverty reduction, and why these poverty-environment linkages must be at the core of action to achieve the Millennium Development Goals and related national poverty eradication and sustainable development objectives.



**Statements of the Problem**

There are several views of the interaction between poverty and natural resources management. Some view growing populations as adversely affecting finite natural resources, with technology mitigating the type and degree of impact. In this context, poverty is sometimes seen as a source or “driver” of biodiversity loss and environmental degradation. Conservationists and government officials often see the poor as part of the natural resources problem and as the cause of deforestation, degraded landscapes, and dwindling wildlife populations. A poor person’s inability to accumulate wealth from these resources may lead to overexploitation and environmental degradation. This “downward spiral thesis” relates population growth and economic marginalization to worsening environmental quality and declining resources, resulting in long-term declines in food consumption, human health, and food security. This view assumes that poverty leads to cycles of further environmental degradation and ever-increasing poverty. Others view population growth as a source of economic expansion and innovation that leads to greater wealth and better resources management. Research findings describe a great deal of variability in the causes of environmental degradation, ranging from adverse or catastrophic natural events to corrupt local institutions. Evidence from the field also reports a wide range of environmental and social outcomes where the poor exercise management control. Variability in poverty-environment interactions contributed to the development of the asset-based approach to poverty reduction. This approach defines poverty as a multidimensional phenomenon in time and space and proposes strategies to reduce the risks and vulnerability facing poor households, and to enhance their ability to participate in and benefit from new economic opportunities by focusing on their assets. The achievement of the original objectives is highly dependent with natural resource management and its implication in poverty reduction because of the fact that the growing concerns for the depletion of environmental resources, recurring global climatic variations, and deteriorating rural livelihoods signify the need for financial resources to implement sustainable Natural resource management and rural development. Natural Resource management has significant implication in poverty reductions; the effect may be dangerous for the country’s economy and the District economy as well.

This paper focuses mainly on assessments of natural resource management and its implication in poverty reduction by Guto Gida District specifically three kebeles. This research paper examines whether Guto Gida District kebeles use natural resource management systems to reduce poverty. The agricultural sector of the economy has various problems. Among others, miss-management of the Natural Resource, inappropriate policies and institution, inadequate technical

and material back-up to the sector and are the major ones. When we consider the specific condition of the study area the institute of Biodiversity conservation of Ethiopia indicated that the Rural in general and Guto Gida District in particular have been degraded due to Lack of sustainable and efficient utilization and Management of Natural resource. (Guto Gida Agricultural office annual report, 2015). In other words, the District study showed the sign of over exploitation despite the usage of the regulatory tool in Guto Gida District. This could imply that the natural resource management methods that are implemented in either District enforcement are ineffective or inappropriate. Based on these problems this study is initiated to analyze the present situation of the District and come-up with updated information that would help policy makers to further investigate and manage the District Natural Resource.

### ***Objective of the Study***

#### **General Objective**

The general objective of the study is to asses' natural resource management and it's implication in poverty reduction at Guto Gida District Arjo,Gari and Lugo.

#### **Specific Objective**

1. To Assess The Current Situation Of Natural Resource Management In Practice At Guto Gida District In Three Selected Kebeles.
2. To Examine The Factors That Affects The Existing Natural Resource Management In The Study Area.
3. To Explore Constraints In Natural Resource Management In Guto Gida District At Three Selected Kebele's.
4. To Identify The Importance Of Natural Resource Management In Poverty Reduction.

### ***Significance of the Study***

Research is important in finding out a particular problem that are associated with a particular case, and in giving solution (remedial suggestion). The researcher believes that the outcomes of the study will shed light on the relevance of adopting a wider perspective to integrate conservation with development activities directed towards sustainable rural natural resource management poverty reduction, and food security. Since such kind of paper is not available in this area the paper may help for further studies as bare ferrous.

## **2. RESEARCH GAP**

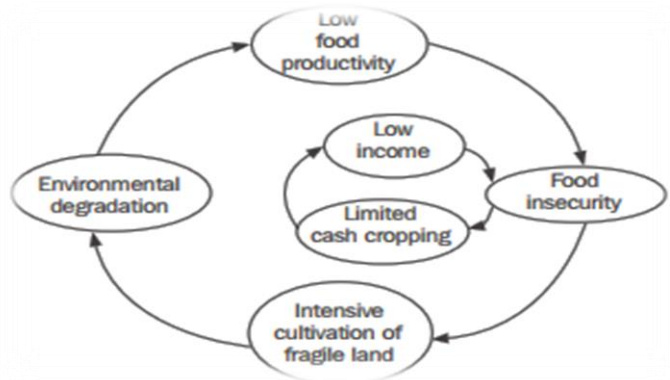
Natural resources management refers to the sustainable utilization of major natural resources such as land, water, air, minerals, forests, fisheries and wild flora and fauna. Together these resources provide the ecosystem services that underpin human life. This natural resources management should contribute to poverty alleviation, and (NRM) should be used in a sustainable manner to enhance human welfare. The links between NRM, rural poverty and environmental degradation using a "sustainable livelihood lens was examined" The sodic land reclamation program provided unique opportunities for alleviation of poverty, particularly among marginal and small farmers, who were delimited by the vicious circle of poverty i.e., low investment–low output–low savings as mentioned by the study of S.M. Haeefe and A.M. Ismail, 2009. NR governance improvements can lead to positive impacts for livelihoods and conservation of biodiversity stated by Jordi Surkin in his research

### ***Natural Resources Management***

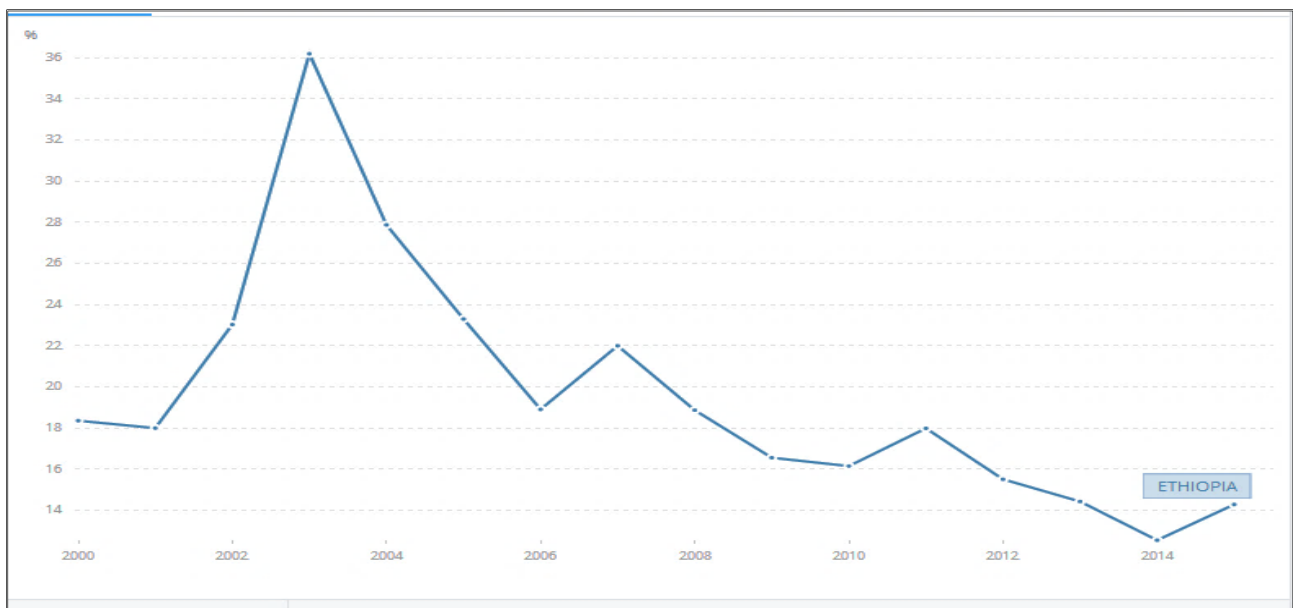
Natural resources management deals with managing the way in which people and natural endowments interact. It brings together land use planning, water management, biodiversity, conservation, and the future sustainability of activities like industries, agriculture, tourism, fisheries and forestry.

The natural-resources are coming under increasing pressure from both increasing population and higher levels of per-capita consumption and divers living economic activity. During the period 1990 to 2030, the world's population is likely to grow by 3.7 billion. Ninety percent of this increase will occur in developing countries. Over the next four decades, Sub-Saharan Africa's population is expected to rise from 500 million to 1.5 billion, Asia's from 3.1 billion to 5.1 billion, and Latin America's from 450 million to 750 million. The distribution of people between rural and urban areas has important implications for the types of stress placed on the environment. In 1990, most of the people lived in rural areas, but by

2030, the urban population will be twice the size of the rural population. Cities of developing countries as a whole are expected to grow by 160 percent over this period, whereas rural populations will grow by only 10 percent. While it is very difficult to forecast how per capita income will change in the next 30 years, it is quite clear that the growing population aspires to a higher standard of living entailing increased consumption of resources. This will often entail an accelerated use of natural resources, both as inputs to the economy, and as accumulation of waste. However, the relationship between economic growth and environmental stress is not a linear one, as growth also generates resources for better management of natural resources.



Total natural resources rents are the sum of oil rents, natural gas rents, coal rents (hard and soft), mineral rents, and forest rents. Accounting for the contribution of natural resources to economic output is important in building an analytical framework for sustainable development. In some countries earnings from natural resources, especially from fossil fuels and minerals, account for a sizable share of GDP, and much of these earnings come in the form of economic rents - revenues above the cost of extracting the resources. Natural resources give rise to economic rents because they are not produced. For produced goods and services competitive forces expand supply until economic profits are driven to zero, but natural resources in fixed supply often command returns well in excess of their cost of production. Rents from nonrenewable resources - fossil fuels and minerals - as well as rents from overharvesting of forests indicate the liquidation of a country's capital stock. When countries use such rents to support current consumption rather than to invest in new capital to replace what is being used up, they are, in effect, borrowing against their future. This definition of economic rent differs from that used in the System of National Accounts, where rents are a form of property income, consisting of payments to landowners by a tenant for the use of the land or payments to the owners of subsoil assets by institutional units permitting them to extract subsoil deposits. ( World Bank, 2014 ).



Year	% of GDP
2007	21.9944548
2008	18.8642361
2009	16.552643
2010	16.1464363
2011	17.9830959
2012	15.5053577
2013	14.4238946
2014	12.5439985
2015	14.2809584

This Table shows the total natural resource rents in Ethiopia (% of GDP)

### ***The Persistent Concerns of Natural Resource Management***

Three persistent concerns are consistently raised regarding NRM, particularly in developing countries:

1. Renewable resources utilized beyond their regenerative capacity, which is especially making the poor highly vulnerable, and these forces those to shift making them suffer further.
2. Nonrenewable resources are depleted without salvaging much in term of man-made, human, or social capital, and with minor benefits directed specifically to the poor.
3. The “sink” capacity of the environment is overburdened by pollution, which, in turn, damages human health and ecosystem functions. The poorest frequently pay the human price for this development. While pursuit of poverty alleviation and sustainable NRM objectives is usually compatible, it should not be denied that there are difficult tradeoffs. For example, in some countries short-term poverty alleviation (“shoot the wild animals, cut down the forest, and plant maize”) is in opposition to long term poverty alleviation (“conserve the ecosystem, and develop ecotourism”). Poverty alleviation must be pursued in the most cost-efficient manner possible so that even external expenditures are cost-effective. For example, riverbed mining that uses hazardous chemicals may be income-generating for some but for people living downstream, resource degradation may prove to be far too costly. A situation-specific cost-benefit analysis is helpful in determining how such tradeoffs should be allowed.

Forecasting population growth, though difficult, pales into insignificance in comparison with any attempt to forecast income growth per capita in the next 30 years. However, it is quite clear that the growing population aspires to a higher standard of living. This will often entail an accelerated use of natural resources, both as inputs to the economy, and as locale for waste. How this affects the environment is very much dependent on the structure of economic growth, the input-output efficiency in production processes, and the unit rates of pollutants emitted from these activities. Higher income also means more resources as well as need to combat environmental damage. New technology enhances efficiency and reduces the amount of NR needed for a given output, as well as the pollution intensity per unit of output.

### ***Managing Natural Resources***

We need to be very aware of how we use the natural resources in our environment. We should use resources in a way that does not dangerously reduce their supply and we should preserve the balance between the different resources and organism in the environment.

- **Maintaining healthy ecosystems.** All living and non-living things interact with each other and co-exist in a balance. Disturbing this balance by overexploiting natural resources usually has broad effects on everything in the entire ecosystem. We are not immune to these effects. To live long and healthy lives we must work hard to maintain this balance.
- **Building sustainable livelihoods.** Farmers rely on the entire ecosystem (water, soil, nutrients, plants, animals and everything else in it) for their livelihood. How successful they are in providing for their families largely depends on how well they manage these resources. Sustainable livelihoods are good management practices that help farmers safeguard the environments while securing sufficient food and income for the entire family.



### 3. METHODOLOGY

#### *Description of the study area*

For the purpose of this study, the research had drawn the participatory and advocacy research worldview/paradigm, a qualitative research approach, and a case study strategy of inquiry. Both primary and secondary data sources are used, which included semi-structured interviews, focus group discussions, and direct observation.

#### *Qualitative Research Approach*

The technique of conducting most scientific studies is influenced by the subjective or objective nature of the data-gathering process and the subsequent analysis of the data. Since the informants in this research study are community members benefiting from Natural Resource Management, the gathering of data and the analysis process were shifted through the researcher’s subjective measures, a fundamental attribute of a qualitative research approach.

#### *Data Collection Techniques*

As the research is a case study strategy of inquiry, the researcher utilized semi-structured interviews, focus group discussions, on-site or direct observation, and secondary data sources to gather data significant to the research topic. The contents and structure of these data collection procedures was designed in relation to the objectives of the research.

#### *Primary Data Sources*

The interview session comprised informants from rural communities, both male and female, whose major source of livelihoods are based on agriculture. The semi-structured interview guide was used to gather data from 35 grant beneficiary individual community members from three sites as mentioned below.

**Table 1 Interview Site and Participant**

Ser. No.	Date	Data Collection Site	Total Number of Participants (n=35)		
			Male	Female	Total
1	July 5-9, 2016	Zone- East Wollegs Woreda- Guto Gida woreda Kebele- Arjo	2	10	12
2	July 11–16, 2016	SLM Project: Zone- East Wollegs Woreda - Guto Gida woreda	9	3	12

		Kebele - Gari			
3	July 28-August 1, 2016	Zone- East Wollegs Woreda - Guto Gida woreda Kebele - Lugo	5	6	11
Total			16	19	35

**B. Focus Group Discussions**

Two focus group discussions were conducted. The first was with the Sustainable Land Management members of the UNDP—Global Environment Finance Small Grants Program, who are instrumental and voluntarily work in groups to make decisions regarding funding for prospective projects designed to achieve environmental benefits. The second focus group discussion was with one of the project beneficiary groups where women comprised the majority of the members.

**Table .2. Focus Group Discussion Participant**

Name of Organization/Institution	Responsibilities	Institutional Representation
SGP Ethiopia	National Coordinator	UNDP—GEF SGP
Private Sector	NSC Member	Private Sector
The World Bank (WB)	Land Management Specialist	International NGO
Environmental Protection Authority	Advisor to the Director General	Government
Environmental Protection Authority	Director of Finance Support Programme Directorate	Government
Environmental Protection Authority	Director of Monitoring and Evaluation	Government

**C. Direct Observation**

The researcher used direct observation as a tool to emphasize particular questions of the interview that were strongly linked to the observed phenomenon, which as a result made probing the respondents much easier. Direct observation to the circumstances of the project site involved the local physical landscape, social interactions, livelihood activities, market places, living conditions, and infrastructure such as schools and service giving centers.

**Secondary Data Sources**

The researcher utilized the SLM’s program office and Guto Gida District Agricultural office data base, documents, and materials to strengthen the reliability and validity of the data gathered through semi-structured interviews and focus group discussions. These included investigation of:

- Program operating manual/procedures and policies documents;
- Project selection criteria, procedures;
- Grant memorandum of agreements;
- GEF SGP Ethiopia Country Programmed Strategy and
- Projects documents (concept notes, project proposals, reports [progress, financial, and terminal

**4. FINDINGS & CONCLUSIONS**

The specific findings of this research are summed up into five major points. First, the UNDP grant eligibility criteria were indeed fundamental tools for the project selection process, but the existing and potentially emerging complex socio-economic trends call for extra effort to meticulously address the fragile livelihood and environmental states of the project areas. Secondly, sustainable livelihoods are achievable when entry points follow market-oriented approaches that provide communities with realistic opportunities to self-develop and advance their local economy and conservation efforts. Third, effective collaboration towards development goals require stakeholders unwavering responsiveness to pressing empowerment, livelihood development, and resource management needs of the project beneficiary communities. Fourth,



due heed must be given not only to the level of environmental and livelihood changes being observed or aspired in the short- and long-run but also to the implementation strategies and the attitudinal transformations observed in the target communities;. Last but not least, SGP's intervention can positively influence the existing environmental protection and poverty reduction policies only when there are favorable economic development approaches and environmental policy statements for which the policy makers primarily demonstrate impartial, consistent, and practical commitment.

Detailed elaborations for the concluding remarks are identified below:

#### The Links between Grant Approval Criteria and Local Environments and Livelihoods

The research has identified that the grant approval conditions focus on establishing grounds for community-initiated and problem-driven projects proposals, which integrate developmental needs that match local contexts. Hence, SGP-supported environmental conservation and restoration project activities are indeed inclusive of livelihood conditions, thus priority concern for environmental health was the indisputable prerequisite for attaining local economic growth and social well-being. It seemed evident that poverty was not necessarily ascribed to food insecurity and the insufficiency of financial income only. Most critically, the lack of alternatives to livelihood means, the absence of good governance, conflict of interests in political outlooks, continuous dependence on external aids, capacity constraints to access natural resources (especially land and water), and the lack of education markedly comprised what the community perceived and experienced as poverty..

#### *Economic Sustainability & Recommendations*

The research findings also revealed that project beneficiaries had the inclination to produce and sell cash crops provided that enabling environments such as natural assets, financial and technical capacity are present. It can be concluded that such business-mindedness of local communities is a more likely potential that could be transformed and scaled-up into the formation of community-driven ecosystem-based micro-enterprises. At the heart of ecosystem-based micro-enterprises lies the emphasis to market-oriented approaches to resource use and management in order to help grassroots communities generate sustainable socio-economies benefits.

The following recommendations stem from the research findings and subsequent conclusions made in the preceding sections and chapters:

1. Significant resource constraints have been exacerbated by longer dry and shorter rainy seasons as well as the scarcity of land in most of the project sites, hence threatening conservation efforts and agricultural productivity. Indeed, SGP's small financial support cannot cover all conservation costs. Therefore, the Government can make a great contribution if priority to local level development is given—allow local people to tap unused arable lands and water resources so that the degraded natural environments can be restored and protected, more food is produced by locals, livelihoods are diversified and, ultimately, vulnerable communities can lift themselves out from the bondage of poverty. Establishing equitable distribution and legal access rights regimes over natural resources can offer opportunities for the less disadvantaged rural people to lessen present and future pressure on ecosystems goods and services. Grant recipients who initially have been actively involved in the restoration and conservation could benefit while making conditions that others (prospective project proponent communities) may follow through on conditions of equal contribution towards a common goal of sustainable development. In addition, the Government must show strong commitment to the practical implementation of the well-articulated policies in environmental protection and poverty reduction.
2. The poor people in rural Ethiopia did not willingly sign up for disparity and as such they should not be expected to tolerate the weight of environmental resource degradation, poverty, and unproductiveness through recurring productive social safety-net programs. In the effort to alleviate poverty, wealth creation through large-scale agribusiness expansion does not necessarily guarantee economic growth without first protecting natural resources and ensuring equitable allocation of resources to the most needy, marginalized, and poverty-stricken groups of society. Commitment of natural resources towards large-scale and capital intensive agri-business ventures potentially result in rapid degradation of ecosystem services especially when extremely water-intensive crops (i.e., rice and sugarcane) are the commercial crops of production interest. In this regard, GEF's future grant supports may consider attaching stringent requirements that SGP's commitment to support rural communities is conditional on the grounds that deterioration of ecosystem services, confiscation of arable lands, and eviction or relocation of local people (such as in

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the case of the land grab) are not likely to be the potential threats that an economic growth process creates. While local people are being supported with such small financial aids to protect the environment, continuous empowerment with the necessary access rights to resources, basic education, and capacity-building training are all essential in offering realistic opportunities to self-develop and control their own future.

3. There is a need for awareness-raising programs to give considerable attention to minimizing farmers' spending on expensive fertilizers that drains their household income, pollutes water resources, and destroys the natural components of soil. Emphasis must be given to enhance the capacity of innovative farmers and demonstration sites where the use of natural fertilizers (i.e., composting) and organic farming can be carried out as major components of project intervention. Such initiatives offer greater opportunity to maintain the health of the local ecosystem and generate incomes in a more sustainable way.

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