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THE ADOPTION OF NGOs NATURAL RESOURCES MANAGEMENT ACTIVITES BY FARMERS IN ETHIOPIA: WITH EVIDENCE FROM A DISTRICT

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BY GINJO GIYA

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DRAFT

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INSTITUTIONAL AFFILATION

GINJO GIYA

PROSPECT IVE POST-GRADUATE STUDENT IN

REGIONAL AND LOCA LDEVELOPMENT STUDIES (RLDS)

ADDIS ABABA UNIVERSITY

P.O.BOX. 150154

TEL.12 -25-07

ADDID ABABA, ETHIOPIA

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EXECUTIVE SUMMARY

1. The current socio-economic situation in Ethiopia shows that the NGOs seem to continue to play an important role in NRM. They can bring grassroots perspective to government policy making, advocating policy and institutional reforms to support local efforts to establish sustainable patterns of NRM and there by to promote 'sustainable economic development'.

2. NGOs tendency to work in isolation from each other and from GOs sector offices during NRM design and implementation, results not only in wastage and duplication, but also in the failure to conceive of the effort as a movement. Hence a great attention should be paid to the co-ordination of NGOs NRM operations to avoid overlap and duplication. To this end 'NGOs co-ordinating Desks ' at both Federal and Regional levels should provide a means for regular contact with NGOs and would keep NGOs informed of government natural resources rehabilitation plans, priories, programmes and policies.

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3. From NRM strategic paint of view the NGOs /SOS-Sahel's/ successes of winning the trust of the beneficiaries/ communities with out FFW/CFW for managing their private land can be cited as a good local level experience for co-ordinating framers to manage their own land and can serve as new innovation to discourage the vicious circle of 'FFW/'CFW- NRM interrelated dilemma / interlock'. It is long a go that people start to think that 'if three is no FFW/ there will be no conservation activities'. The other positive element as compared to previous government based NRM interventions in the NGOs

intervention is, the NRM technologies of all NGOs covered in this study is in better position because they have integrated agronomic and fodder practices with physical protective measures. But the other two NGOs were providing FFW for the on-farm conservation. If not in the form of relief aid farmers should not be provided food aid for conserving their own private lands, as it would create a deep rooted aid mentality and farmers will destroy the structures in order to get additional food ration.

4. The current study's findings underscore that for successful adoption of NGOs initiated NRM requires a good 'package' of both technical and soccio-cultural aspects of the community targeted to conservation. In addition NGOs should also require incorporating proven indigenous practices and knowledge in to technical approaches and ensuring local participation in decision making. The analysis from farmers responses and institutional data has also shown that little beneficiaries participation has been taken in planning and design of various technologies except there has been participation at the implementation stage. The experience from many countries have shown that project intervention in NRM are most successful when the majority of local community is deeply involved on both planning and implementation and clearly perceive self-interest in success of the intervention.

5. The current study has come out with contradictory findings in relation to farmers attitude towards NGOs NRM intervention. For instance all farmers interviewed during field survey showed favourable attitude towards SOS-Sahel's intervention and its

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subsequent technology. Farmers rated the SOS-Sahal technology / soil bound with its grass structure the most important as compared to traditional conservation technologies (such as stone terrace and drainage ditches). At the same time all the informants agree that the traditional NRM measures some how should be refurbished. This also shows that there was real erosion problem as all respondents have indicated erosion was sever problem before the intervention of the project and there has been also declining trend. On the other hand WVE experience from Omo Sheleko ADP has shown that farmers attitude towards the NRM intervention was negative for many reasons which shows that little environmental awareness creation has been done by the project.

6. Whether NGOs have integrated training and technical advice in their NRM intervention and how far it has contributed as factor for facilitating /hindering NGOs induced NRM technology adoption, the finding of the present study confirm previous several findings of from other countries. For instance in case of SOS-Sahel, there is significant variation of adoption of NRM technologies among, the catchment work group leaders, and other ordinary farmers and those little educated farmers and illiterate farmers (SOS-Sahel). The workshop orientation, the inter-cross visit and presence of training manuals on their hands enabled the catchment leaders to be the best adopters of the technology. In addition farmers with little formal education have been also found in better position in terms of adopting technology. The other thing that can be mentioned as the unique finding of this study is the age of the farmers. The age of the farmers, gives rise to certain type of

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behaviour which often remain unidentified. During survey those who complain for the difficulty of technology were found to be old aged. However the other two NGOs covered in this study Action Aid Ethiopia and WVE only trained the WOA staff and not the beneficiaries.

7. The interwoven and complex nature of environment as shown on figure 2 of this paper has been less recognised by the intervention of all three NGOs. For instance, none of the NGOs covered in this study have clearly addressed water management in their intervention. Except small well improvement, done by SOS-Sahel such as micro-dam construction have not been done to conserve water. The low survival rate of agora-forestry/ fruit trees can be linked to this missing gap. In addition the individual households problem in relation to fuel wood shortage had not been addressed either by introducing agro-forestry trees or by other technological intervention such as improved fuel wood stove or bio-gas technology. All of the NGOs focused in communal afforestation. As individuals may not directly share benefits from communal afforestation initiated by the projects as such there is no clear user-fract right policy in the country. So introducing the above mentioned technologies and encouraging private farm forestry is highly appreciated.

8. The findings of current study shows the replicability and sustainability of NRM initiatives of the NGOs on both on-farm and off-farm can be ensured if there could be possibilities for provision of necessary technical and material back-up by concerned sector

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offices (WOA) and the following issue need due attention. For instance as the survey from SOS-Sahel experience has shown: First, almost all beneficiaries, except a few, did not develop self-reliance both from material and technical point of view to continue the on-farm conservation activities. Heavy reliance on external material and technical assistance means, the people have not developed both technical and material capacity or else they have become liable to aid mentality or developed dependency syndrome. Second, although the conservation work group has been formed on neighbourhood basis it started to weaken in the last two years with out finalising the supposed task. Third, the WOA and its DAs, supposed to provide some technical and material back-up service were not at promising position, for instance the WOA fail to run the nursery site and did not provide substitute tree seedlings and the DAs did not visit the farmers to assist technically. Fourth, the most important thing is the absence of clear institutional package for environmental NGOs since the needs identification up to handing over the NRM ether in regional/national environmental policy. Finally the ambiguity of ownership right or benefit (user-fract) rights from the efforts on the so-called communal land. The guards assumed to take the responsibility of protecting the structures complain that they would not continue in taking care of it. In case of WVE (Omo Sheleko ADP) for instance farmers were destroying conservation structures put on private land and afforestation plantation in order to get additional farm land.

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ACRONYMS

ADP	-	Area Development program
BoA	-	Bureau of Agriculture
BoPED	-	Regional Bureau of Planning and Economic Development
CBOs	-	Community Based Organisations
CSA	-	Central Statistical Authority
CSE	-	Conservation Strategy of Ethiopia
CFW	-	Cash for Work
CRDA	-	Christian Development Association
DPPC	-	Disaster Prevention and Preparedness commission
EHLRS	-	Ethiopian Highlands Reclamation Study
EBSNP	–	Employment Based Safety Net Program
EFAP	-	Ethiopian Forestry Action Program
EGS	-	Employment Generation Schemes
EPA	-	Environmental Protection Authority
FAO	-	Food and Agricultural Organisation
FFW	-	Food for Work
GOs	-	Government organisations
HHs	-	Households
IDR	-	Institute of Development Research
IWSM	-	Integrated Watershed management
LRM	-	Local Resources Management
KRDP	-	Koisha Rural Development Project

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MOJ	-	Ministry of Justice
NGOs	-	Non- Governmental Organisations
NRM	-	Natural Resources Management
PAs	-	Peasant Association
PLUP	-	Participatory Land Use Planning
RCS	-	Regional Conservation Strategy
RECC	-	Regional Environmental co-ordinating Committee
RRA	-	Rapid Rural Appraisal
RRC	-	Relief and Rehabilitation commission
SAP	-	Structural Adjustment Program
SCRP	-	Soil Conservation Research Project
SNNPR	-	Southern Nations, Nationalities and Peoples' Region
SOS	-	'Save Our Soils'
SSA	-	Sub-Sahara Africa
SWC	-	Soil and Water conservation
UNDP	-	United Nations Development program
WAD	-	Woliata Agricultural Development unit
WVE	-	World Vision Ethiopia
WOA	-	Wereda Office of Agriculture
ZDoPED	-	Zonal Department of Planning and Economic Development

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CHAPTER ONE

I. INTRODUCTION

This secular study was carried out from CRDA's auspices of strengethening the development research, dessiminating NGOs NRM interventions expriecne to each other and to government sector offices, and to create data base on the issue under disscution. The paper is devided in to five major parts. These are: part one deals with general introdction, part two gives highlight on currnt global literature, part three focuse on NRM and NGOs intervention in Ethiopia, part four deals with emprical results from field survey, and conclusion and policy implications were drawn in part five based on over all analysis of the paper.

1.1. BACKGROUND OF THE PROBLEM

Ethiopia is one of the present world's poorest socio-economies that has been undergoing a serious crisis of continuing environmental resource degradation and poverty. In recent decades, particularly after 1950s, there is found to be an increasing trend of degradation of local natural resources such as of farm land, soil and water resources, forest, forage etc. in the country. There is a high and direct linkage between the most basic needs of man such as food, shelter and natural resources in poorly developed developing countries (Mitchel 1991). Agriculture remains the chief *riason d'etre* for the sustenance of life for the vast majority of the people in Ethiopia. In fact the primary purpose of agriculture is to provide an adequate, sustained food and raw material supply for the population. It is therefore the foundation of the social system and the space economy. The basic setting for agricultural production is the natural resources base. That means, the two systems (natural

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and social -economic systems) are both interrelated together in a complex and dynamic way. The later evolved through time and space, essentially on the foundation base of natural resources with progressive contribution of human labour (mental and physical) process and its out-fit of knowledge, technology and institutional organisation. Although the physical world is parsimonious enough for directly fulfilling the needs and wants of man except at a very primitive and rudimentary physical survival (as resource gathering from the bush) level, and therefore it has to be punctured and used in several ways by human interference, for better and more productive sustenance support and progress. Thus human interference with the physical world and its process is rather essential. However this interference has increased over-time in both scale and magnitude and has largely affecting not only at the micro-scales of resource and process component, but also at the mega and macro scales of nature. This has been happening in that adequate adaptational measures in socio-econmically and knowledge and technology poor-developing countries. Ethiopioa is one of them, with multiple degradational processes creating a series of crises. As such the constancy and sustainability of natural resource base, the physical environment and ecology and processes need be managed to remain uninterefred at least on a macro-scale for the human ecology sustenance and progress. Despite recently introduced but poorly structured and committed multi-faceted government initiatives through afforestation, terracing, water harvesting and area closure for conservation of basic renewable natural resources in the country for more than two decades there has been as yet limited success (Wood, 1990). This is partly because of lack of effective participation of people who are in a way directly and indirectly, partly responsible for such degradation, and resource 'mining'. These people who have been suffering because of

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these, and also many externalities all in a way pressurising them to degrade natural resources. In some cases in order to make their physical survival possible local people in Ethiopia are also less aware of the impacts and consequences of their activities which lead to process involved in degrading natural resources. However, the severity of the problem now requires and rather demands very committed and aggressively active partnership of the state, other development actors like Non Governmental Organisations (NGOs), farmers and community at large. NGOs can particularly play a leading role at least at a limited local level by encouraging and assisting local initiatives (indigenous knowledge and technologies) in natural resources management. The term NGO hereafter used in the paper, is an ambiguous term that is widely used to refer a variety of non-profit voluntary organisations working among the people at different scales of operation.

In the Ethiopian context NGOs are classified on the basis of their core objective as to whether they are institutionalised basically and essentially as development agents or relief-oriented actors, or they instituted to combine both functions. Development oriented NGOs are involved in diverse areas of natural and human resources development, agriculture, health and infrastructures etc., while the others focus on relief-oriented activities (National Policy on Disaster Preparedness and Management, 1993). However, in this paper NGOs are defined as those organisations other than government bodies which undertake long-term development activities. In Ethiopia today there are a large number of NGOs. Out of these, some of the indigenous and international NGOs are involved in natural resource management/ rehabilitation activities under the existing socio-economic and political conditions.

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The present study's objective is to investigate the socio-cultural and political factors affecting the farmers' adoption ofNGOs initiated natural resource management (conservation / rehabilitation) activities (soil, water, and forest management), based on the case study from Kindo Koisha Wereda of Southern Ethiopia and other two international NGO's (Action Aid Ethiopia & WVE from institutional and documentary analysis. Here conservation is supposed to mean, according to Boohet (1983): " Improvement as well as developing natural resources rationally and thus enabling maximum benefits to be obtained, while production capacity is preserved indefinitely". As such conservation of an areas natural resources involves maintaining their constancy and / or optimising their productivity as far as the capacity and present technology allow. Whereas rehabilitation refers to the kind of intervention in case where and when the natural resource is totally, small or largely destroyed and this destruction is progressive and accelerating in scale and magnitude. In Ethiopia since the 1984/ 85 famine, a number of NGOs started working to rehabilitate / conserve natural resources in different parts of the country. In fact there has been a plethora of national and international NGOs of different denominations, resource orientations and outlooks and scale and magnitude. A full one and half decades have passed and there is not much secular evaluation and assessment of their performance and success in their NRM efforts. Thus one important and basic question which may be raised is: to what extent did the NGOs intervention in their respective localities help in curing the 'environmental ills' in Ethiopia? If not why not? What should be done then to make NGOs intervention successfully preventive as well as curative? It is this very crucial task which has prompted this researcher to undertake the present study within his

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humble intellectual and resource capacity. The research output is expected to come out with some relevant and important findings that will indicate some socio-cultural and political factors hindering successful intervention of NGOs in the local natural resource management/ rehabilitation in Ethiopia.

1.2. Statement of the Problem

In Ethiopia, though most of NGOs were relief- oriented and welfare based, recently as stated above there have appeared a number of NGOs that are undertaking natural resources management. There are at least some good reasons for NGOs intervention in Local Resources Management (LRM):

- NGOs are in a position with good ground, expertise, experience and overall resource to provide technical support and man power for LRM (Lee.F, 1994)
- Many governments in SSA like that of Ethiopia are under economic crisis brought about due to World Bank and IMF- initiated Structural Adjustment Policies (SAP) and hence need NGOs as partners in development activities (Van den Breemer, 1995).
- NGOs have special talent in integrating the environmental issues with other aspects of community life such as creating awarness, poverty reduction and emancipation of rural women from too heavy work load, which reduces the amount of women's time required for getting involved in environmental projects (Jasnaoff, 1997).
- Both multilateral and bilateral donors choose their donation through NGOs channels (Meyer, 1993). For instance, US AID has increasingly chosen to work with the NGOs sector in Latin America rather than public sector.

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Although, of several NGOs like Action aid Ethiopia, SOS-Sahel/UK and WVE are undertaking natural resources management in Ethiopia, no comprehensive study so far has been carried out to identify those socio- cultural and institutional factors affecting farmer's adoption of natural resource management activities initiated by NGOs and its subsequent sustainability issue. Apart from the impacts of external factors and forces, local socio-economic forces operating in a society are significant factors for consideration in land degradation (Chambers 1983, Blaikie 1982 cited in Alemneh *et.al.,* 1997). Land degradation problems as well as it's rehabilitation measures cannot be seen in isolation from such local cultural, socio-economic and political factors, such as farmers' attitude, education, motivation for self-improvement through self involvement and initiative and, NRM and related government policies etc., under which local people are sustaining and supporting their lives. It is largely because of these multiple forces that the implementation of NRM programs and projects to address land degradation has generally faced serious difficulties. One problem involving the measurement of adoption level of NRM intervention by farmers is: how is the adoption of NRM tecnologies to be most precisely determined? In this case, the sample NGOs are working with farmers who are affected by soil erosion and are willing to organise themselves to undertake conservation measures. As such, the field survey from Kndo Koisha area and institutional and documentary analysis in this study is supposed to provide an interesting and relevant insight to begin to understand some of those basic socio-cultural and institutional factors that seem to be affecting the level of adoption by farmers of NRM initiatives introduced by environmental NGOs in Ethiopia.. Hence the central thrust of this paper is to identify local socio-cultural and political forces determining the adoption of NGOs NRM intiative

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by farmers. This is because the main reason for the failure of government initiated conservation measures in the last two decades in Ethiopia has been the lack of consideration of the socio-cultural aspects of the people targeted toward conservation activities. Thus, the existence of such problems stimulated the author to raise questions like: Do the farmers adopt NGOs induced NRM technologies? If not, why? And if yes would that be sustained?. So the above questions will be the core of the paper. Any research attempt to seek answer for such questions needs in-depth factual data obtained from field work, participant observation, and close perception and its rigorous analysis and explanation. This would help to contribute some meaningful suggestions for policy formulations functionally useful and applicable to the current and future NRM planning. As such, this study entitled 'The Adoption of NGOs Natural Resources Management Activities By Farmers In Ethiopia :With Evidence From A District.' aims to investigate peretinent socio-cultural and institutional factors facilitating /hindering the adoption levels of NGOs intiated natural resources management activities among the farmers.

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1.3. The Objectives of the Study

Given the above background and problem, the major objective of the study is to look into NGOs introduced natural resources management strategies and subsequent adoption of technologies by farmers in Ethiopia. Hence the specific objectives of the study will be:

- To identify socio-economic and institutional factors that have facilitated or hindered the adoption of NGO's NRM interventions.
- To analyse whether any attention is given to the sustainability aspect of the natural resources management activities being undertaken by environmental NGOs.

- To recommend some policy implications based on the findings of the study as tentative solutions to the adoption and sustainability problems of the NGOs NRM interventions.

1.4.The Research Questions

In general the research questions of the study will focus on issues such as;

1. Do NGOs encourage local avialable NRM knowledge and practices in thier intervention?
2. Do NGOs participate local communites at various stages of NRM technologies design and implementation?
3. What is the attitude of local people towards NGOs initiated natural resources management activities in Ethiopia?
4. Do education and training affect the implementation of NGOs initiated NRM technologies?
5. Is there any prospect for the natural resource management activities undertaken by the NGOs to sustain? If not why is it not sustainable? What can be done then to make it sustainable?
6. Is NGOs MRM activities recognised on National /Regional Environmental Policies level in Ethiopia?

It is believed that the answers to the above questions will help in identifying the key socio-cultural and institutional factors hindering / facilitating the implementation of NGOs based land management activities by farmers in Ethiopia.

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1.5. The Design and Methodology of the Study

In order to attain the desired objective there has to be certain research methodology. As such, in this part the research methodologies applied in sampling, data collection, analysis and organisations of the paper have been discussed. Various approaches were used in sampling, data colletion, and nalysis of this paper. At the first stage, three international NGOs working in different local areas of Ethiopia were selected. These include; SOS-Sahel/UK, World Vision International Ethiopoa, and Action Aid Ethiopia. The main reason for sampling these NGOs for this study was the length of operation period, the divsrsity of the intervention, and the nature of NGOs (all were implenting in type). Local NGOs were not condsiderd in this study because, their short history of operation makes difficult in undertaking post- ex-facto-evaluation especaillay on sustainability issue. Following this discion has been reached to undertake field survey on at least one NGO NRM intervention expriecne and to analyse the remaing NGOs experience fron NRM strategic point of view based on institutional and documentry data sources. In this case SOS -Sahel/UK was selcted for field survey due to it's pure environmental and agricultural nature as compared to other NGOs.

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1.5.1 Data Sources

Both qualitative and quantitative data gathering techniques were used in carrying out this study. Understanding the social factors affecting the adoption of project based NRM dynamics by farmers requires a deep understanding of local socio-cultural realities. In general following the principle of methodological pluralism (triangulation) the study has used both quantitative and qualitative data sources to organise the paper.

1.5.1.1. Primary data Sources

Primary field level data sources include informations to be obtained from systematic household heads survey, interview with SOS-Sahel NRM expert, Kindo Koisha Wereda office of Agriculture conservation expert, in-depth informal group discussion with off-farm conservation site guards and informal interview with some selected key informants, Rapid Rural Appraisal (RRA) . In addition, on-farm observation was conducted by the research team i.e. by two enumerators and by the researcher himself, by using the pre designed observation format. Formal and informal interviews were also conducted at institutional level: North Omo Zone NGOs and Multilateral Projects team co-ordinator (ZDoPED), SNNPR BoA, NGOs and Investment desk expert, SNNPR NGOs and Multilateral Projects Co-ordinator (BoPED), SNNPR Conservation Strategy Secretariat Task Force Co-ordinator (BoPED), Federal DPPC NGOs desk Co-ordinator and Planning Division team heads and EPA experts. For the opther NGOs indicated above data was generated through the interiview with NRM experts and project base line and progresive documents of the sample NGOs.

1.5.1.2. Secondary sources

Secondary data was also collected from published and unpublished sources such as sample NGOs baseline survey documents, annual progress reports and technical reports, books, journals, policy documents (National Environmental Policy, Regional conservation strategy draft (SNNPRG), Federal DPPC Disaster prevention and preparedness policy and others), C.S.A publications and other relevant sources.

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1.5.2. Field work

The first field visit by the researcher was under-taken in between December 21- 25,1999. During this period the researcher got chance to make preliminary observation on five households' on-farm conservation activities in two different catchments (Kae Nare and Demba catchments). In addition to this, four-draft survey instruments were pre-tested which enabled to omit some of the un-necessary questions and to include other necessary questions. Furthermore, preliminary contact was established with SOS-Sahel field staffs and detail information was obtained on Project's NRM intervention during this reconnaissance period. The actual data was collected in between Mid-January to Mid-March, 2000 by the researcher and two other assistants. The field assistants were selected on basis of their familiarity with the study area as well as by their work experience and educational background. They were also familarized with general key research techniques.

1.5.3. Conceptual Framework and Analysis

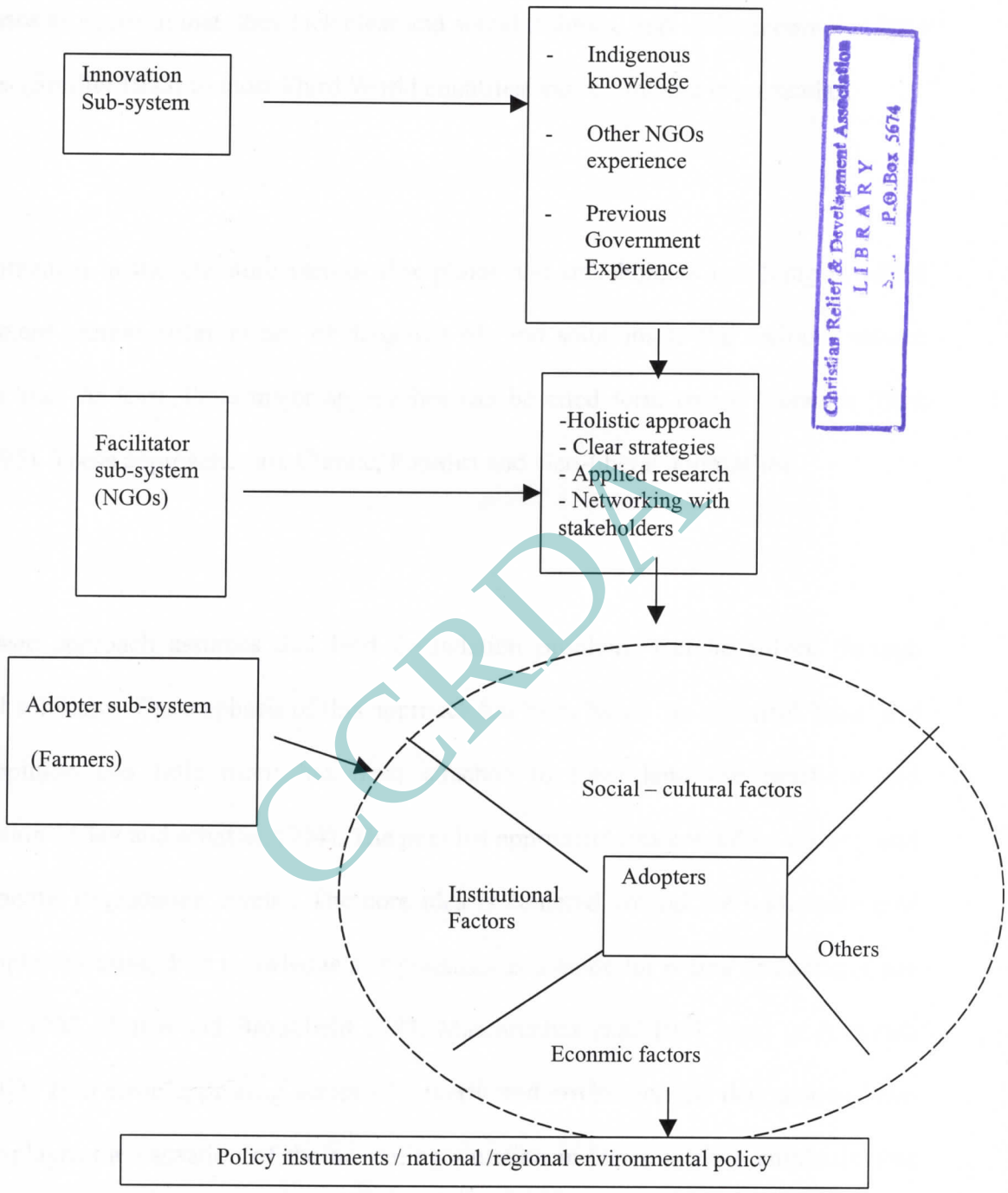
1.5.3.1. Analysis

First the raw data was post-coded and in some cases tallied by using the tally sheet. It was followed by emplying, descriptive analysis (frequency and percentage tables) and qualitative analysis to achieve the stated objectives and to test the research questions. Almost all the tables in the disscussion part are based on data from the general survey. The study heavily relied for qualitative analysis on the tools of personal observation, interview materials with NGOs NRM experts and informal group and key informant discussion and RRA with farmers at survey area. Institutional data from local, Regional and Federal officials has also served the same purpose. Maps and figures were also used to support the results of analysis.

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1.5.3.2. Theoretical Orientation and the Model

Fig1 : Adoption and 'Sustainable' Natural resources Management Model



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Source: Developed by the author based on Laban (1994: 199) & Mulugeta (1993:21)

At local level NRM projects are now specifically targeting rural communities in an attempt to rehabilitate local natural resources. However, such project approaches are regarded in some cases as vague in that they lack clear and sound technical and socio-economic NRM packages (Smillie 1993) in most Third World countries and in Ethiopia in particular.

As documented in the literature various disciplines and stakeholders involving in NRM management present different sets of diagnosis of and solutions to the various natural resource 'ills'. At least, three major approaches can be cited form recent literature (Biot *et,al*, 1995). These approaches are Classic, Populist and Neo-liberal approaches.

The classic approach assumes that land degradation problems can be solved through technical solutions. The emphasis of this approach has been based on technical 'fixes' and expert opinion and little merit has been attached to local land use practices and participation (Clay and schaffer,1994). The populist approach links previaling poverty and environmental degradation levels . The core idea is centered around the participation of local peoples by using their knowledge and practices as a guide for policy and action (see Chambers 1983, Blakie and Brookfield 1987, Mascarenhas *et,al* 1991 cited in Alemneh *et,al* 1997). Two basic appearing issues of poverty and environmental degradation have been iter-playas the causation of the prevailing situation in terms of time emphasis. For instance, the view that poverty leads to environmental degradation was initially promoted by the world commission and development , more recently this poor environment dyad has been seen as restrictive and evidence is said to have shown that the converse is true

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(Smillie,1993). A major reason among others, behind the paradigm shift is the understanding of the appropriatnes of local and indiginous conservation practies to the management of local environment.

However it is neo- liberal approach that has been employed as conceptual framework of this study. Its principles are drawn from both the classic and populist approaches. The idea that technology to control land degradation is available can be suitably adapted and adopted wherever and whenever required is taken from the classic approach. The populist view contributes the notion of empowerment of the people. The argument on major causes of natural resources degradation incorporated in this neo-liberal view is centered around the institutional failures and the lack of adequate incentives for the adoption of appropriate conservation technologies among land resource users (Brohman 1996, Alemenh *et,al* 1997).

Until recently many soil conservation and land reclamation projects were influenced by the classic approach, which has often resulted in conflict between technology and local farming and socio-economic conditions. There is a perception gap between official and local land users on land degradation problems and adopted curative measures. As many authors believe this aspect proves to a continuous serious impediment to successful land degradation control projects (Blaikie and Brookfield 1987). The idea that indigenous knowledge, traditional experience and adopted practices are often well and long founded and should be that they therefore seriously considered in the development of technologies and intervention measures to address land degradation is well supported by a great deal of literature (Chambers 1989, Fujisaka 1989, Toulman 1991, Sconnes cited in Alemneh

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*et,al.*1997, Brohman 1996). But official views are drawn from reference to little data available (often derived from science), whereas the farmers' view are based upon their close observation, values and experiences and well articulated and cultivated perceptions which help them to integrate changes on indicators of soil and land degradation, according as the situation demands and thus appropriate and to make decisions about specific actions. Hence sustainable conservation practices can be implemented satisfactorily if local knowledge and practices are seriously taken into account and integrated with modern technically operative and scientific knowledge. Therefore, the extending argument of this paper is based on this neo-liberal approach whivh could help in diagnosing some emerging and observable soco-economic constraints to the adoption of project based land management by local people.

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1.5.4.. Measurement

In this sub-section of the design and methodology the criterion used to measure the factors considered under discussion are explained

1.5.4.1. Adoption

Results from pre-designed observation checklist will be used, as there is lack of any benchmark, and farmers are seen to be unlikely to produce realistic data on the level of their adoption. 70 plots (76%) were selected for on-farm observation, out of the total sample size of the survey. Following it a simple three level quality scale (good, average and poor) pre-designed check list was employed by the resaerch team, detailing the status of different technologies introduced. Obtained observations were recorded immediately after household survey interview. The observations were tabulated and changed into

percentage for both catchmnet areras. Questions including expected benefits from conservation measures were incorporated in the survey, and farmers were asked to rate their opinion on the given three level scales on the benefits (Increasing, Decreasing, Remained the same). Farmers were also asked to compare their individual performance levels to those of thier neighbours in response to survey questions. Finally, farmers were also asked to rank the best implemented three measures with the corresponding reasons for each. All the above methods were used to measure the level of adoption of NRM technologies by farmers.

1.5.4.2. Participation

responses in regard to their active participation levels in the SOS-sahel induced NRM intervention/ program can be operationalized by asking farmers the yes/no questions included in HHs heads questionnaire. If higher percentage of farmers respond as 'yes' for questions concerned with the planning and implementation of SOS-Sahel NRM technologies it means ,there has been better participation and viceversa.

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1.5.4.3. Attitude

Th e attitudinal trend in regard to adoption of the envisaged measures can be measured by using Likert / Sumater /Agree, Disagree, I do not know?/ Scale. 12 statements describing about the expected benefits from SOS-Sahel introduced NRM technologies; 6 positive and the other 6 negative responses were included in HH heads survey questionnaire. If higher percentage of farmers show agreement for positive statements and disagreement for negative statements, then it is assumed that farmers attitude towards SOS-Sahel NRM technology is favourable/positive.

1.5.4.4. Education and Training

Each respondent was asked to indicate his/her educational level, and alsothe training provided by the Project, in the past years and contacts made with NRM experts. Ie was assumed that the better the formal education, longer the the period of training, and better the access to contact, the higher will be the awareness of farmers for the appropriated technology and its subsequent adoption.

1.5.4.5. Sustainability

Here the definition of Germen Technical Co-operation (GTZ) is adopted as stated by Stockman (1997:1771) : the project is as a sustained one "If the project-implementing organizations/target population continue the innovations achieved by the project without external assistance to a long period of time". Although the sustainability of a project can better be determined after a long of period of the end of external assistance, it can also be measured by evaluating/analyzing the existence of pre-conditions for sustainability and by comparing the existing situation with empirical findings from previous case study materials.

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The sustainability of a project depend upon a number of functions and condition-fulifliment ensurancy will be more ensured for instance:

I) If the community shows positive attitude towards the intervention (Shanner *et al* 1981 cited in Bahiru 1993, Belay 1992, Laban 1995),

II) If beneficiaries participation is ensured to have taken place in designing and implementation of the NRM technologies (Hazelwood 1987, Oliver 1992, Deerutins 1992).

III) If indigenous NRM practices were carefully integrated into the intervention (Bailey 1986, Van den Breemer 1994).

IV) If the technical and material capacity of the target community is up-graded (William & Anton, 1992)

V) If the packages and the roles of NGOs in NRM are clearly indicated in government policies (Laban 1995). Thus, if the above factors are clearly addressed in SOS-Sahel's intervention the sustainability is guaranteed, if not it is under question.

1.6. Significance of the Study

Although attempts to manage natural resources have been central features of NGOs for many years, the subject remained only sparsely documented and poorly understood. This may not have mattered when NGOs were only minor actors in development, but in recent years they have growingly assumed greater significance in the light of both their growing desire within the sector to scale up development activities and of increasing expectations among donors that NGOs do contribute to the emergence of sustainable development. A wide range of factors can affect the adoption of these intatives by farmers. However, no comprehensive study as found in the literature at hand has so far been done regarding local socio-economic and institutional factors contributing for success and/failure of NGOs initiated natural resources management activities in Ethiopia. So this study's results could hopefully contribute fruitfull findings by identifying these constraints affecting successful

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adoption of NGOs inducedd natural resources management by the farmers. The study could also enrich the existing literature for designing sound and sustainable natural resources management strategies for NGOs and GOs operation at regional/national level in Ethiopia.

1.7. The Scope and Limitation of the Study

The study is not widely based on a multiplicity of factors, process power and decision-making structures and policies and several internal and external environment aspects. But it is confined to certain key socio-cultural and institutional factors affecting the adotption and sustainability of NGOs based NRM intervention as operated in different parts of Ethiopia. Because of the narrow focus of the study due to time, research skill and financial resource constraint, the conclusions derived remain rather tentative. Moreover, as the study is based on a field survey, conducted only in one NGO (SOS-Sahel/Uk) experience in Kindo Koisha (SNNPR) and othe two NGOs NRM strategies and approaches, no claim of generalizations can be made on a larger perspective. Indeed, the strength of the study rests on the depth of the issues raised under discussion and diversity of information gathered from different prespective on the same issue, rather than in the area coverage.

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CHAPTER TWO

2.REVIEW OF THE RELATED LITERATURE

The topical research literature is very vast and muli-pronged, and it is difficult to mention and review them even briefly in this brief paper. However, certain literature reviews are in order. The environment is composed of living and nonliving things and the diverse interactions between them. These environmental components are subject to change, as a result of natural dynamism. There are intricate agencies of nature which keep them in constant flux and change. In several ways these changes involve distructional and constructional forces which induce agents which make the human-related and adjusted natural artifacts and processes unbalanced at different speed and magnitudes. For instance, land /slope avalanchs, slippage, volcanic movements and earth quacks, drainage arengements, floods, storms and other natural hazardus, natural fires, geological soil erosion, etc.and others are a host of natural forces which reduce, the carrying capacity of the environment which may be ascribed a human scale as environmental degradation (Teferi, 1999). One of the chief components of environmental resource is land, which is the basic physical resource base for the sustenance of life. Yet it is under serious depletion /degradation mainly caused by erosion, salinization, water logging and chemical degradation. However, as Dalkoh (1993) puts, land resources are highly linked with other renewabl forest and water resources. This section deals with the various accounts of natural resources degradation, NGOs roles in NRM, some socio-economic and institutional factors affecting the adoption of project initiated NRM technologies by the farmers, and overall natural resources management and sustainability issue.

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2.1. Inter activity and Interconnection Among Renewable Natural Resources

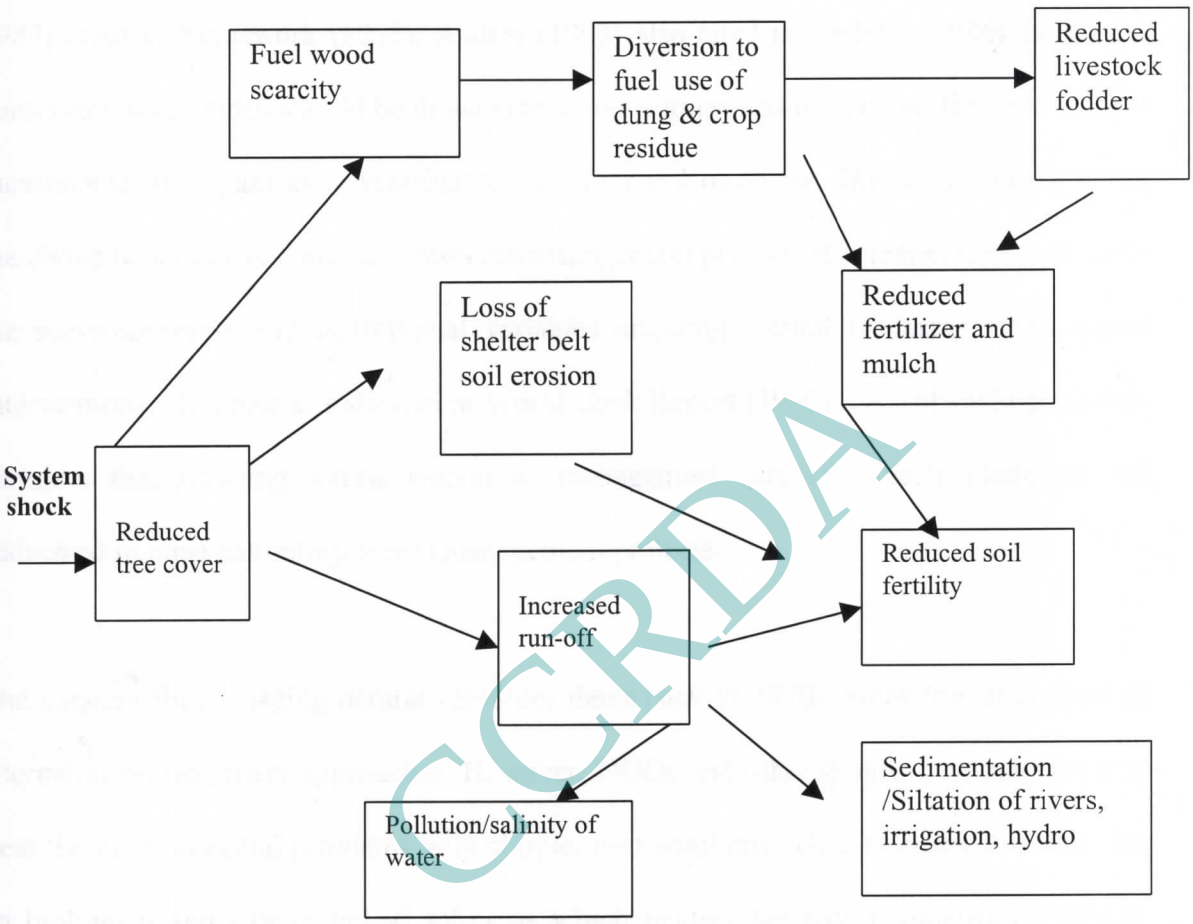
There is direct and closely interactive and reactive relationships among land natures, vegetation cover, soil fertility and water run-off rates and related natural aspects and functions. Currently, expansion of agricultural lands, timber production and fuel wood demand are some of the major factors for deforestation which further reduce the carrying capacity of land, and more particularly the soil. The ultimate consequence shows to progressive decline in agricultural productivity and livestock sustenance if remidial measures are nort adeqequate. At the demand of agriculture for land increase, given the high population growth and agricultural density, stagnant primitve technological production technology, more demand is placed on more mariginal for cultivation, grazing practicies (especially as human settelements and social/physical interfrances occupay the more fertile /productive land). This expansion leads to more deforestation, and soil erosion rate. Further in the lack of fuel wood scarcity comes the shorting of fallowing period and diversion of animal dung from its traditional role as soil nutrient to direct burning for fuel. Reducing dunging of the land further impairs soil fertility (Pearce & kerry, 1990, see fig.2 below).

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As soils decay and dry, the risks of flood and wind erosion increase. The water run-off takes soil from the land to cause exessive sediment actions of the rivers channels, irrigation channels, reservoirs, and natural lakes reducing the water resource input to agriculture reducing and polluting drinking water supply, reducing the capacity of hydro

power reservoirs, raising water levels and increasing the size of flood plains and damaging fishing resources etc. (see below also Fig 2 for detials)

Fig 2: Interdependence among renewable natural resources



Source : Fig22.1 Peary & Kerry (1990: 348) in Environment and the Developing Countries

Thus, soil fertility, water, irrigation and tree and vegetation as protective input to fertility and the source of fodder inputs to livestock are closely interrelated resources.

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2.2. Natural Resources Management and Socio-cultural Factors

Land management includes both short-term measures directed at the production of current crops and all the long- term measure for maintaining / enhancing of the productivity of the land and the creation of the assets that mature in the long run (Blaikie and Brookfield, 1987) cited in Yeraswork (1995). Andres (1993) also cited in Abdella (1996) states that conservation measures should be directed to achieve improved production through suitable measures so as to gain more sustainable use of natural resources. Hence in order to attain the above benefits from any land resource management projects it is mandatory to identify the socio-economic and institutional variables affecting natural resources management interventions. However as indicated in World Bank Report (1990) critical socio-economic variables that affecting natural resources management are not clearly identified and addressed in most natural resources management projects.

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The concern for managing natural resources dates back to 1970s, since the emergence of alternative development approaches. However, NGOs and other groups have attempted to treat the environmental problems with simple, neat solutions. Thus it focused commonly on biological and / or technical solutions which neglect the social dimensions (Vivan, 1993) cited in (Brohman 1996). As Warford (1989:7) states:

> *…if projects and policy measures are to be viable they should be based on a sound understanding of not only the physical linkages among events, but also of the equally complex economic social and institutional linkages parallel them.*

Though further research is needed in this direction various authors working in the field of land management have identified some socio-economic and institutional factors that have to be considered in the adoption of conservation oriented activities : the following are some of the major ones;

2.2.1. **Participation of the Beneficiaries**

The participation of local people and the incorporation of traditional conservation measures is found to be among the most important factors for the success of conservation measures. Hazlewood (1987) argues that successful implementation of natural resources management requires the involvement of farmers and local communities. Hams (1994) also notes that local use and management of natural resources should underline the application of the participatory development approach. That means decision making power and responsibilities should be entrusted to the local population as far as possible and feasible, the people should have an important share in the benefits of their efforts. Oliver (1992) also underlines three comparative advantage of community involvement in natural resource management; first, higher degree of sustainability will be ensured when the community identifies themselves with conservation and management strategies through direct involvement as opposed to top-down approaches. Second the community will observe and appreciate the desirable link between environment and development. Thirdly, the dependency on external resources will be minimised and local people will take their own initiatives in the management of and conservation of natural resources. Deerutins (1992) based on empirical study on land management projects from Sri Lanka concluded that the successful planning and implantation of conservation measures largely depend on

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the participation of target population in all field's right from the beginning. According to Van den Bremeer (1995:97) :

> *Environmental problems in Africa have become so widespread and severe, that any solution to them excluding consultation with and involvement of the rural population is unrealistic. Hence rural communities should be allowed and encouraged to become responsible for the sustainable management of natural resources on their own localities.*

The participation of affected community in the planning and design of NRM technologies also enables to incorporate indigenous NRM knowledge to the intervention. As Baily (1986) argues that maintaining local practices and values through isolation from development process may be neither possible nor necessary. The incorporation of community values relating to natural resources management, among others, might provide a basis for sound project design and a sustainable development process. In addition, Reilly (1992) also states that donors should not impose exogenous models, rather should relay on indigenous NRM practices and knowledge. Hudson (1992) also describes that the NRM technology introduecd or followed by projects should be the development or improvement of the existing practice rather than something which is new for more readily to be accepted. Hence indigenous social organisations and practices should be seen as development vehicles, without romanticising them as it is well synchronised with the environment at one time and accustomed to changing externalities. However, there must be awareness that

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indigenous technical knowledge and social organisations may no longer reflect a balance with the environment.

However, regarding local level participation by NGOs based natural resources management several contradicting ideas prvail. For instance Jasnaoof (1997) states that NGOs are active in facilitating the participation of local communities in natural resources management projects, because of their experience in integrating environmental concerns with the other aspects of rural development. But one recent empirical study from eastern Sudan by Hassen Abdel Ati (1996) has shown that the NGOs working in natural resource management failed to utilise traditional social organisations and were follow to be mostly engaged in centralised decision making which constitute as a major impediment to the adoption of conservation measures by local people.

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2.2.2. Attitude of Local Peoples Towards the Project Intervention

Farmers' conservation behaviour and willingness to apply alternative resources conservation techniques are largely determined by their perception (Belay, 1992). In the words of William, (1973) attitudes of individuals and groups towards environmental issues have been also matters of high concern.

On the other hand, Shxon (1989) cited in Bahiru (1993) states that there are contradicting views regarding farmers' decision making process. The conservationist school argues that small, poor farmers are irrational and ignorant, but on the other hand it is believed that they usually know much about their environment and make rational decisions, within their

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envelops of constraints. According to Shanner *et al* (1981) as cited in Bahiru (1993), perceptions, knowledge and attitudes are the main factors determining the individuals decision making behaviour. For instance as indicated by Wood (1990) during the colonial era in Zambia only a few of the indigenous African farmers viewed conservation measure as any thing attractive for sound farming system. Rather African farmers perceived conservation measures as another out side colonial intrusion to their life. The reason was partly due to the discrimination in the provision of incentives and financing between African and settler farmers. In addition the NRM strategy should consider the different roles of men and women in production or the attitude towards communal production system (R,C. Anton,1992). So before the intervention raising questions like: How is the neighbourhood tie of that particular community ? How is the social division of labour ? How is the gender division of labour? could facilitate the implantation process. It is often difficult to find homogenous groups whose members share the same interest and the same catchment area. As opposed to the past, now a days the tribal conflicts, the emergence of different religion groups, communal obligation for common tasks is further weakened. However in many areas of natural resources management, success contingent on the willingness of ordinary citizens to accept the validity of official policy framing is a less recognised subject. Hence the knowledge of the attitude of local peoples towards modern and NGOs based local natural resources management activities is critical for the success of rehabilitation activities being undertaken by environmental NGOs.

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2.2.3. Education and Training of the Beneficiaries

There are contradicting views regarding the role of environmental education in facilitating farmers' adoption of project-based land management activities. For instance Hudson (1992:138) states:

> *...In the last two decades it was commonly assumed that the most important thing in achieving soil conservation was to educate the farmer to tell him about erosion and erosion control and it's importance to him and his grand children and the country. Though that is well appreciated to the whole the peasant farmer is well aware of the cause, the process and the results of erosion, but he is not prepared to do much about it because there are more problems to attend to.*

Kesseler and Laban (1994) also support the above idea by noting that only sensitisation and information dissemination may not lead to successful conservation adoption, although it is one of the necessary condition. As opposed to the idea of Hudson (1992) above, Plup and Routely (1982) cited in Dalkoh (1993: 60) describes that ... the widespread environmental degradation in Africa has been largely attributed to the absence of environmental awareness or consciousness among the poor in Africa". Local level conservation efforts have no long term significance unless both the growth of human population and their unsustainable patterns of resource use eventually cease (Cincotta, 1994). Thus, the environmental NGOs should address the population component in their environmental projects. In general environmental problems can be better managed if the

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people affected can organise and educate themselves about attacking, if not solving the problems.

Regarding the contents and methods of training programmes for NRM (Hudson, 1992) argues, for widespread adoption there must be the multiplier effect of farmers teaching other farmers. For this matter the technology should be easy to teach and demonstrate. In general the author of this paper also believes that supplementing environmental education to farmers and to other concerned groups targeted for conservation activities is, though not the only condition for success but one of the necessary conditions for successful adoption of project based NRM activities.

The above discussed views are some of the few evidences from literature to support the idea that NRM /conservation measures are much more complex issues than just to be cured by the physical application of technical solutions. Therefore identifying socio-economic and institutional constraints of NRM is very important for the success of both government and non-governmental organisations involved in natural resources management. However, despite the existence of massive literature on natural resources, management relatively little attention has been given specifically to those points at which individual or institutional behaviour plays a key role and at which policy interventions might be feasible.

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2.3. NGOs and Natural Resources Management

Palmer (1995) states that NGOs are unique in influencing, encouraging and assisting societies throughout the world to conserve the integrity and diversity of nature as well as to

ensure that any use of natural resources is equitable and ecologically sustainable. Muchiru (1987) also argues that NGOs in most African countries are actively undertaking natural resources management; first by opposing to the misuse of natural resources and also by engaging themselves in restoration of law and enhancement of indigenous technologies or the development of alternative technologies which are less destructive to the environment. Thirdly, NGOs are active in advocacy to raise public consciousness on environmental problems and call for actions and change in the existing institutions, laws and attitudes. For instance, NGOs in Africa Asia and Latin America are found to be active in promoting community-based participatory forestry programs which contributed to environmental stability.

Authors opposing the above idea note that many NGOs working in the Third World were concentrating their efforts on income generation and provision of relief services (Backland, 1998). Whatever, currently more number of NGOs are shifting from their traditional role of being welfare and relief agencies to taking on a larger role in development work including local resources management. NGOs have also played a prominent role in the environmental movements from its earliest beginnings. NGOs and community groups pioneered in the creation of public awareness and political pressures that stimulated governments to act. In addition, NGOs have untapped potential to address the concern of local level environmental problems and have been identified as catalysts in successfully mobilising communities to gaining to essential access to environmental resources (Lee, 1994).

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In the words of Smillie and Helmich (1993) the official agencies have limited experience or discover tremendous operational difficulties and, as a result, the collaboration of NGOs is highly needed, as they have considerable experience of tackling environmental problems. The recognition of the role of NGOs on environmental issues, however dates back to 1987 report of the World Commission on Environment and Development 'Our Common Future'. The report as cited in Jasnaoff (1997) urged governments to recognise and extend NGOs' right: (1) to know and have access to information on the environment and natural resources (2) the NGOs right to be consulted and to participate in decision making on activities likely to have a significant effect on the environment and their right to legal remedies and redress when healthy environment may be seriously affected. In addition as indicated in Smillie (1993) the 1992 UN Convention on Environment recognised that NGOs' as essential contributors to environmental protection for well over a decade. The role and participation of NGOs in projects such as resource conservation in the era of Structural Adjustment Programs (SAP) is highly required as it resulted in economic crisis especially in Sub Sahara Africa. Thus NGOs role in mobilising local resources management initiatives should be encouraged in such cases. However, it is only recently that governments in the Third World started to recognise that they cannot create development on their own and understanding that their role is to create a conducive social economic and political environment with in which development may take place through a co-operation of stakeholders (Smillie and Helmich, 1993).

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2.4. Natural Resources Management and Sustainability

Sustainability is one of the latest concepts to have emerged in the literature and thinking of NRM. 'Sustainable development' was brought to the fore and in to the common usage of by the world Commission on Environment and Development (more popularly known as the Bruntland Commission) in 1987 report entitled **Our Common Future ; From one Earth to One world.** One of the positive aspects of sustainable development as Ronald (1995) puts is that it has application for both national and international policy frameworks for improving the wellbeing of the present and future generations. Here 'sustainability 'refers to the continuity of project intervention after the withdrawal of the project by local available resources both human and material.

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NGOs have been recognised as one of the development actors for future sustainable natural resources management under the Commission for Sustainable Development (CSD), which was established to carry out agenda 21 matters of the Rio conference (Hams, 1994). But practical experience of NGOs intervention in Third world countries show although, NGOs NRM activities were better in their implementation but lack the sustainability. The reasons are many: 1) mainly due to the failure of establishing indigenous networks and norms that will make activities under-taken by the project in the future sustainable (Backland, 1998). 2) Treating NRM activities only as technical and administrative issue, rather than a socio-economic and political one(Pretly & Shah, 1995 cited in Ahluwalea, 1997). 3) in other cases farmers accept the unsuitable measures because the conservation programmes offer a short term sources of income and access to subsides (Sanghi, 1987 cited in Ahluwalea, 1997).

But the question is how can the project induced NRM intervention be sustained? There are different views in the current literature. As Sanders (1992) sustainable soil conservation programmes can be designed and implemented: 1) If the causes of land degradation are clearly identified and protective measure are properly implemented. 2) If the right conservation technologies are selected. 3) If the farmers are effectively involved in the planning and selection of the conservation technology. The recommendations by William & Anton (1992) seems more comprehensive. Accordingly in order to sustain project based NRM interventions NGOs /projects should :

1). Produce training manuals and other literatures to target groups.

2). Continuously supply seeds and seedlings for planting in ditches.

3). Creating a link between research and users.

4). Informing and training primary and secondary school children so have long term impact.

5). Maintaining contacts to different organisations and local churches which have a considerable impact on rural population.

6). Strengthening collective approach – creating co-operation mechanism among selected individual farmers, as it will facilitate convincing work. Even if a very high number of farmers take part, un-protected gaps such as land under fallow, communal land, pastoral land and forestry land could have a devastating effect.

However above all the accountability of the local people targeted to conservation is the major factor for sustainability of NRM interventions. As the principal objective of rural

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development programmes is to improve the well being of the people concerned. But it should be stressed that accountability is also required at various levels, ranging from local government, NGOs back-up service up to regional /central government. Accountability on the part of the local/regional/ federal governments implies the enhancement of and application of policy instruments. These include the proper institutional setting, political commitment to promoting an appropriate and conducive policy environment and translation of political practices in to national budgets (Labann, 1995).

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CHAPTER THREE

3. ETHIOPIAN EXPERIENCE IN NATURAL RESOURCES MANAGEMENT

Based on published sources, policy documents and research reports in this section attention is given to discuss the state of natural resources in Ethiopia, socio-economic and institutional factors affecting NRM in Ethiopia, major actors in NRM in Ethiopia and policy environment for environmental NGOs.

3.1. Status of Renewable Natural Resources Degradation in Ethiopia

Various sources indicate that land degradation is one of the serious environmental problems facing Ethiopia today (Alemneh 1990, Wood 1990, Belay 1996, Belay 1992 b). According to the soil Conservation Research Project (SCRP) report, about 1.5 billion tonnes of soils are eroded every year in Ethiopia (Million, 1996). Hurni (1987) also indicates that most victim areas to soil loss /erosion in Ethiopia are arable lands, where the annual average loss is 42 tons/ha. This is six times the amount of soil formation and causes an annual loss/ reduction in soil depth of 4 mm.

Deforestation is also a major issue in Ethiopia since it is one of the main cause of prevailing land degradation (via –facilitating soil erosin). This has been facilitated by the cutting of trees for settlement, fuel wood collection, agriculture, construction raw material demand and neglect as well as waranton destruction (such as fire) (Teferi, 1999). For instance the country fuel consumption from forest resources was 89 % for the year 1990 (

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Pearce & Kerry,1990), but now the figure has been raised-up to 94.8% of total energy consumption (Teferi, 1999).

Table1 : Forest Resources of Ethiopia in 1980s (000ha)

Extent of wood land and forests	27,150
-Closed	4,350
Open	22,800
Average annual deforestation rate	80,000
-closed	8,000
Open	80,000
Average annual reforestation rate	13,000
Net Average annual loss	75, 000

Source: World Resource 1990-91 table 19.1 as cited in Teferi (1999: 359)

The deterioration of both man made and natural water flows and storage regions also represent another degradation of land resources. This increases the extent and frequency of drought in dry seasons and flooding in wet seasons. In this case again disruption occurs in domestic water supply, atmospheric systems, which results in disease which when coupled with malnutrition, famine, and flooding shorten life expectancy of both animals and humans (Teferi, 1999). Although, Ethiopia is called the 'water tower' of Africa it remained unutilised since today, being only small proportion of arable land is irrigated. Access to potable water is also exceedingly limited i.e. 9 and 69 per cent of the people in rural Ethiopia and urban areas respectively as (World Bank 1992, cited in Teferi 1999).

Soil erosion primarily due to human activities, particularly overgrazing, over-cultivation, and deforestation, are cited as the main causes of land resource degradation (Alemneh, 1990). Other socio-economic factors are also stated as a cause and accelerating land degradation.

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These are: intensive cultivation, lack of appropriate conservation and agronomic practices to maintain vegetative cover, decline in the traditional use of manure, declining of per capita land holding, shortening of the following period, shrinking of the grazing area etc. (Daniel 1988, Daniel 1990, Belay 1996).

The consequences of land degradation as discussed by Daniel (1990) are several such as the deterioration of fertility, moisture storage capacity and structure of the remaining soils which end up in decline of country's agricultural productivity. Belay (1996) also states that land degradation in general and the agricultural land degradation in particular severely reduces the productivity of land in Ethiopia, where agriculture is the basis of the economy. It has been indicated that between 1985 and 2010 the rate of land degradation will cost Ethiopia 15.3 billion Birr (EHLRS, 1986). As (Hurni 1988 cited in Million 1996) also states that in Ethiopia crop production might decline by more than 2 per cent per year due to land degradation in areas where environmental degradation is serious, if protective measures are not taken. Hence unless preventive measures are not taken by government, local community and other development actors like NGOs, the natural resources degradation will have irreversible consequences.

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3.2. Socio-economic Constraints to Land Management in Ethiopia

The Ethiopian government recognised the seriousness of land deterioration problem following the 1973-74 famine and responded actively by initiating huge projects at the different corners of the country through the foreign aid programs (Million,1996). However the achievements so far recorded are far below the expectations. Thus, Wood (1990) stated

that in addition to the current rehabilitation measures Ethiopia needs a two to four fold increase in the management of natural resources in order to increase the agricultural and livestock productivity and developing the protective land use forms and practices.

However both the strategies and approaches that formulated (FFW) and 'first come first served type approaches followed by the government were repeatedly cited as a hindrance in addition to local socio-economic and physical factors to the adoption of the project-initiated conservation activities. The dissected terrain, the cultivation of steeper slopes and erratic and erosive rainfall are mentioned from physical constraints. As the concern of this study is to identify socio-economic and institutional constraints, the detail discussion will focus on such issues:

3.2.3.The Top down Approach

Million (1996) indicated that various land management projects intervening to improve soil and water conservation in Ethiopia adopted top-down approach. That is farmers are minimally involved in the soil conservation activities and indigenous knowledge has been undermined with in identifying, planning, and implementation process of conservation projects. Regarding this the finding s of Bekallu (1994) from Agaw areas of Gojjam shows that the major reason for the failure of SCRP in that locality is overlooking to integrate traditional conservation practices with 'modern scientific' approaches. In addition a study done by Alemneh (1990) among the peasants of Wollo revealed that most peasants perceived area closure for rehabilitation of grazing land as another out side intrusion to their lives and were resentful of such programmes. Because, local people were not consulted during

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planning and implementation. Little attention was also given to the participation of women in government based conservation movements. But women as small farm decision-makers play great role in land management in Ethiopia. For instance as to the preliminary knowledge of the researcher carrying the manure to the plot is the sole responsibility of women in the study area. That is why the recent literature questions the success of NRM related policies with out the involvement of women. The degradation of local natural resources are critical for rural women in view of their roles as providers of basic household needs (such as water, fuel, fodder). Lack of recognition of women's role in natural resources management has negatively affected programmes attempting to promote environmental awareness and resource conservation. In particular their roles as fuel wood collectors, gardeners, and water collectors. The recognition of CBOs is another important point that should be worth mentioned here. CBOs as indicated by (Reilly, 1992) can serve as experimental sites for public programme initiatives and have a proven ability to efficiently disseminate successful experiences at low cost through their own networks. In many parts of the world CBOs have proven themselves as effective extension agents.

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3.2.4. Training and Technical Advice

Especially when targeted to conservation a high level education among peasants is crucial for success. In Ethiopia lack of the supplement of development education and awareness is also found to be another constraint for the limited adoption of project initiatives. Regarding this point Mulugeta (1992) notice that conservation movements in Ethiopia is still faced with a number of problems despite the endeavours made and the achievements recorded. Many of

which reflect the lack of effective soil conservation education among peasants who are mobilised to implement the conservation programmes.

3.3. NGOs and Natural Resources Management in Ethiopia

There is no clear and well-documented source on how NGOs emerged in Ethiopia. As Constantinos and Haddas (1997) state, the late 1940s and early 1950s witness as the beginning period of the appearing of NGOs in Ethiopia. Yet most of them were religion – based organisations concerned themselves with religious education and welfare activities. Some of them are still operational and include; such as Ethiopian Orthodox Church – affiliated Charity Organisations, Ethiopia Evangelical Churches, Catholic Relief Secretarial, Society of International Missionaries, Mennonite Mission and the Adventist Development and Relief Agency were instrumental in providing clothing , health care, education and food aid to the poor besides their religious teachings / beliefs in many parts of the country.

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However, until the advent of the 1973 / 74 food crisis NGOs were limited in number in Ethiopia. But after famine a number of International NGOs entered the country to provide humanitarian assistance to the people affected by the drought. Thus most of the NGOs left the country when the critical period was 'under control ' and some returned for the second time during the great Sahlian drought of 1984 /85 (Constantnios and Haddas, 1992).

Later most of the NGOs shifted from Relief to Rehabilitation and then to community based development programmes. Then such NGOs registered themselves with the only mandated

government organisation, (RRC at that time) and were assigned in different localities of the country. Currently the DPPC is responsible for technical supervision, while the mandate of registering and authorising in accordance with the countries legal processes is given to the Ministry of Justice (MOJ). But now the project agreements are signed at regional level. Nevertheless still there are NGOs operating in the country with out fulfilling the legal requirement especially (the local ones) as the requirement is highly regulated.

3.3.1. Major Environmental MGOs inEthiopia

For decades NGOs operation in Ethiopia was limited to relief and welfare activities. Though the 1984/5 drought gave NGOs to link the famine and drought in SSA in general and in Ethiopia in particular to natural resources degradation it took time to them to materialise the vision. The survey made in 1977 by the Institute of Development Research (IDR) of Addis Ababa University, about 32 NGOs were identified to have interest in natural resources conservation activities. Currently to the analysis of the author of this paper, based on Christian Relief and Development Associations (CRDA) and Federal, Disaster Prevention and Preparedness (DPPC) data base as to January 2000 the number of NGOs undertaking natural resources management (soil, water and forestry conservation) reached 69.

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Lately, since the begining of 1990s non-governmental organizations particularly focusing on environmental issue have started emerging. Thse NGOs have been participating in counter protective rehabiliatation measures in various environmental NRm activites in ethiopia. Some have been focusing on quite a number of of envirobnmental education, promotion of solutions on urban environmental problems, appproriate technolgies etc (Abay, 2000).

However in these paper attentioni is given to highligt the NRM interventions of those NGOs involving in Rural land rehabiltitation programes.

3.3.1.1. Action Aid Ethiopia

It is one of the NGOs incorporating NRM elements in its intervention. It is an international NGO by classification and both supporting and implementing type. It also provides technical and financial support to local NGOs. It is also classified as urban and rural integrated. The NRM interventions of Action Aid include; Forestry /nursery, and palntations, soil and water conservation. Currently it works in two different local area of Ethiopia, Marka Gena wereda (North Omo Zone) and Dalocha weread (Guragr zone). The project undertakes both on-farm and off-farm conservation activites. Both biological (afforestation) and structural measures are part of the intervention. The project provides 70% FFW incentive foe beneficary farmers and requires 30% voluntery labour contribution for implementation of conservation measures. In additon tree seedlings are provided to farmers on subsidized basis. The unique achievement of this project is intiating individual nurseries and the unique problem at the same time is in the some project areas the feedr road constructed further encoragingg gully erosion. Both the project's NRM expert and experts from WOA are working together during the implementation phase. The problem is that the project does not provide environmental education and training for beneficiaries directly, although the project has education sector in it's over all intervention.

3.3.1.2. SOS-Sahel/Uk International

SOS-Sahel / UK is a British based NGO specializing in agricultural and natural resources development. It focuses on activities designed to enhance food production and livelihood

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security for rural people. SOS Sahel UK works in the Sahel regions and neighbouring countries and has been established in Ethiopia since 1990 working two chronically food insecure areas i.e. Mekit (North Wollo Zone) and the Kindo Koisha (North Omo Zone) werdas. But lately it has expanded its project area to Borana zone in Oromiya region through its forestry intervention.

3.3.1.3. World Vision Ethiopia international Ethiopia

It is one of the gaint international NGOs operating in the country. By funtion it is both support giving and and implementing. It is rural and urban integrated and development oriented. It,s environmental activites include, community mangement of natural rewsources, environmental information, monitoring and evaluation, environmental planning and management, environmental pollution prevention and impact assessemt. It also undertakes environmental training, institutional building, forestry/nursery, plantations, and general conservation activities. The NRM tecnologies of the organization combines both structural and agronomic activiiers. The physical ones include, terracing, soil bund , ceeck dams, cut-off drains, fanyaajuu terraces,and microbasin. The bilogical one are individual and communal afforesation programmes. It was earilier working works both on off-farm site and on -farm sites as the project co-ordinator states. It uses FFW and tree seedlings as icentive for farmres. The problen in relation to NRm intervention as explained by project manager was farmers were destroying conservatio structures on privat lands in seeking additional food ration and communal land afforestation for getting additional farm land. The farmers were alaso not seen while replicating the activities rather that puts big qestion under the sustainabily of the intervention. In general farmers did not develop favourable attitude

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towrds ther project's NRM intervention. To the analysi of the author the absence of supplmenting envirnmrntal education and related triannigs to the community has lead to this gap. In addtion the direct linkage between private land and the so-called communal land conservation activies has not clearly recoginzed by the project. in Ethiopia context it rather the private land conservation that has to be encouraged as farmers get little lon-term reward from communal land conservation. However this does not mean that the off-farm conservation is irrelevant.

Table 2: Sammary of NRM Features of Sample NGOs in Ethiopia

Description	NGOs		
	Action Aid Ethiopia	SOS-Sahel/UK	WVE
Interventionn	Soil and forest conservation	Siol, forest & water mangement	Communal plantations
Approaches	On-farm & off-farm	On-farm & off-farm	Off-farm
NRM tecnoplogies	-afforestation structural measures	Agronmic ,Afforestation Structural measures, spring improvement	Afforestation & structurla
Incentives	FFW	Hand tools, FFW (only off-farm), grassstrips, fruit trees	FFW, tree seedlings
Local units used Planning & Implementation	PA,WOA,	Caechment conservation work groups, WOA,	PA, WOA
Unique problem	Fedder roads are encouraginfg gullies	Off-farm conservation on FFW basis has discouraged private land conservation	Farmers destroying conservation structures
Unique achivement	Encourag ingindividual nursery	-assigining gurds for communal land protection -providing hand tools training catchment leaders	-

Source Field ansd Istitutional survey, 2000

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3.3.2.4. Policy Environment for NGOs operation in NRM in Ethiopia

In the last 25 years concerns for environmental issues have been grown in Ethiopia. This is signified from the increase in number of government departments and authorities concerned with environmental issues. The number of NGOs integrating environmental issues in their intervention is also growing.

In 1988 decision has been reached that the country should under-take a National conservation strategy which latter renamed as Conservation Strategy of Ethiopia (CSE). The strategy was seen to create linkage of sectorial policies development to the sustainable use of the country's natural resources and to co-rdinate all natural resources related programmes by ensuring co-operation and the exchange of information. The CSE has under-taken remarkable achievements in preparing necessary documents for the out come National Environmental Policy in Ethiopia. Besides this CSE has been also strengthening the capacity of regional governments in order to develop their conservation strategy. In addition, the country's new constitution of 1994 also has included environmental issues both as fundamental right and policy directives. But according to Tegengne (1994) no body knows what exactly NGOs were working in the country until the general guide line on NGOs operation has been out lined by DPPC in 1993. It still lacks the specific strategies on how NGOs can contribute for sector development. In fact the EFAP that has recognised the roles of NGOs, Ethiopian Forestry Action Programme (1994 :29) stated:

> *NGOs in Ethiopia have played a major part in drought relief operations with a degree of success, including soil and water*

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conservation and afforestation . They have strong local contacts --- promoting community participation in local level land use planning, soil and water conservation and farm and community forestry will take time and NGOs could have a major facilitating role to play in helping with these changes.

Further more in response to environmental problems, the Ethiopian government has approved environmental policy as April, 1997 though its implementation process lags by far. However in National Environmental Policy there is absence of clear institutional role deserved as how and in what aspects NGOs should contribute in combating natural resources degradation in the country. But later thorough informal discussion with experts from EPA the author has realised that the document entitled 'Institutional Responsibly for the Implementation of Environmental Policy of Ethiopia' is on progress.

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As indicated above one of the objectives of CSE is to enable the regional states to have their own conservation strategy. In this case in the region (SNNPR) where this study has been conducted, a committee known as Regional Environmental Co-ordinating Committee (RECC) was organised. Other than this the RECC has delegated the tasks to the regional conservation Strategy task force. The task force has been also formulated from concerned bureaux. Currently the Regional Conservation Task Force has under-taken activities like defining terms of reference, collected baseline data from 9 zones and 5 special weredas of the region. In addition the necessary policy documents have been prepared. However as the Regional conservation Task Force Co-ordinator indicated the policy documents is ready for

the approval by regional council for implementation. It seems that the fourth coming SNNPR conservation strategy document learned from the failure of national conservation strategy document as NGOs role in NRM are better reflected in the later case. Hence as SNNPR conservation Strategy is not yet finalised better reflection of NGOs role in NRM is highly required. The other thing that needs due attention is What about the NGOs NRM 'package' from technical as well as socio-economic and institutional pinot of view? As informal interview with Federal DPPC NGOs desk co-ordinator, Regional NGOs desk co-ordinator and Regional Bureau of Agriculture NGOs and Investment Desk expert NGOs, the author has realized that NGOs NRM sector projects agreement are signed with expert opinion and comment on project documents. But there is no guideline that serves as reference. Indeed this may lead to subjectivity and lack of standardisation of project documents. At the same time then above informants indicated outlining clear roles and package of NGOs in environmental policy is necessary. In the opinion of the writer of this paper the absence of clear institutional responsibility is one of the major reason why most of NGOs introduced natural resources management initiatives in most cases do not sustain. As most NGOs NRM the projects lack 'full package'. Hence the arrangement of such institutional co-ordination and support has been strengthened. In general the overall debate of this research paper is to understand and explain why farmers in the study area fail to implement NGOs introduced natural resource management initiatives or if they have adopted them to what extent it would be sustainable

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CHAPTER FOURE

4. FIELD SURVEY OF KOISHA RURAL DEVELOPMENT PROJECT

4.1. Description about the Study Area and the Project

Kindo Koisha is one of the remotest weredas of North Omo Zone in SNNPR. It is one of the poorer areas of Ethiopia as revealed by general standard of living: in fact some of the informants anguishly state that in the past two decades the general standard of living has been deteriorating. The reason as described by farmers is the degradation of quality and related resources of land that further constrains socio-economic development. Increasing population pressures on resources coupled with various practices including over-cultivation (without giving land rest) and deforestation are causes behind the land resources degradation process. The survey area is located some 450 Kms south of addis Abaaba. It is located around 6^0 18' N to 37^0 54' E- 38^0 12'E. The altitude ranges from below 1000m to above 3000m. the mean annual tempreature range between 20c0 and 25 c0 for highlands and lowlands respectively(Eyasu,1998). Deforestation and land degradatyion process are widespread. The vegetation cover is predominantly savannah grass and thorn bushes. The dominant areable soils are eutric nitosols (Belay, 1992a). Agriculture is rain fed in nature.

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According to 1994 CSA census the popualtion of the intervention area is abourt 140, 687. The overall population densities of the wereda is 375persons per/km2 in high lands, 281 persons per/km2 in mid-latitudes and 110 person per/km2 in lowlands. But densities as high as 520 persons per/km2 are expected in some pockets of highlands. The averge family

size Livelihhods in the area are primarly agricultural, but in few cases additiobnal incomes are derived from other fof-farm sources such as petty trading. The tradtional agriculture of the rea is based on a mixed crop-livestock (mostly cattel system). The average land holding size is about 0.5 ha.

4.2. The NRM Strategies of the Project

Koisha Rural Development Project (KRDP) has worked with local communities to support 'sustainable' livelihoods in 21 out of 35 peasant associations (PAs) in Kindo Koisha woreda in North Omo Zone, Southern Ethiopia since 1992. KRDP's involvement in Natural Resources Management (NRM) begun in 1992, following the recognition of soil erosion by farmers as well as experts, as a major threat to agricultural production in the woreda.

4.2.1. Approaches

The NRM activities are focusing on soil, water and forest resources. In between 1992 and 1995 the project followed an individual farmer-based approach to NRM, working with individual farmers affected by soil erosion and were willing to undertake conservation measures. But since 1996 it has been replaced by community (catchment) approach where the communities living around the watershed are working together. The change from individual farmer to catchment approach has been necessitated as the project NRM expert explains is 'the poorly managed upper stream (watershed) are often the major sources of excessive flooding and sediment load, which result in heavy flood damage and silitation in down stream area'. Hence, it was found that the individual farmer based conservation efforts do not give adequate results, as they will be destroyed by the concentrated flood

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from the untreated upper plot areas. Communal efforts, therefore are more likely to bring lasting results for all land holdings. As shown in the discussion part of this paper farmers also found this approach as more convincing and promising, because it has solved labor shortages of many households.

4.2.2.NRM Technologies

The NRM program was designed to integrate structural (physical) and agronomic measures with other project activities such as forage development and agronomy. The structural measures include: soil bunds, fanyajuu terrace, bench terrace, cut-off drains, artificial waterways ,micro -basin, hillside terrace and chekdam, traditional stone terrace stabilization. The agronomic measures include: grass strips, composting. multi-purpose grasses and leguminous trees of conservation and fodder value, and fruit and shade trees (mango, avocados). In some parts of the catchemnt area closure has been made first and acacia Saligasna Spatodia Parcanisonia Aculata and some other tree species were planted on degraded and gully lands.

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4.2.3. Incentives

SOS Sahel used a loan based support for planting materials such as fruit tree seedlings for which payment are made during the harvesting season when farmers earn cash income. Multipurpose grasses that have both conservation and fodder value were provided free of charge. While farm tools (pick axes, flat hoes, three finger hoes and shovels) were provided on subsidized basis, given that nearly all households involved in the conservation work can- not afford the full price of these tools. FFW/CFW have been provided for under-taking off-farm conservation activities only.

4.2.4. Conservation Works Group Formation

In the study area it is common to see more than one local religion based 'idirs' in given water sheds. But there are also situations where people are members of 'idir' groups out side their watershed boundary. Then the agreement is to use the 'idir' in micro watersheds where all the inhabitants are members of a single 'idir' group. Where the micro watershed have more than one 'ider' group, new watershde management committees were formed.

In each catchment, there are conservation work group leaders, 2 to 3 in number according to the geographical coverage of the catchment, which are referred as ' catchment group leaders'. In this case until the end of 1998 the project has been working with farmers who have organized themselves in 8 catchments, mainly in highlands and in mid high lands with the total of 631 households.

4.3. RESULTS AND FINDINGS OF THE FIELD SURVEY

In this section an attempt has been made to discuss the state of adoption of NRM technologies and factors facilitate or impede the adoption and its sustainability issue. Field level data i.e. households survey, on-farm observation, interview with projects NRM expert, interview with Kindo Koissha WOA conservation expert, focus group discussion with off-farm conservation site guards and key informant discussion are mainly used for analysis. But data from other institutional sources was used. Such data sources include North Omo Zone NGOs and Multilateral Projects team co-ordinator (ZDoPED), SNNPR NGOs and Multilateral projects Division co-ordinator (BoPED), Regional Conservation

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Strategy Task Force Co-ordinator (BoPED), BoA NGOs and Investment Desk Expert, Federal DPPC Program and Project Division Head and experts from EPA and other saple NGOs NRM experts and project documents.

4.3.1. Indigenous NRM Strategies In Kindo Koisha

Farmers in Kindo Koisha have been practicing combinations of biological, mechanical and other traditional methods of NRM strategies to maintain the stability of their micro-environment and to improve soil fertility from which they obtain their livelihoods. More than 94 % of the respondents stated that their parents or they themselves have been putting different structures to preserve their environment even before the intervention of the project. The combinations of biological/agronomic, mechanical /physical and other NRM Strategies have been practising traditionally at Various scales in Kindo Koisha. As the informants also argue that either of the strategies are independent and the stability of the environment can be ensured if combinations of methods are applied.

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4.3.2. Some Socio-Cultural Factors Affecting The Adoption of NRM Technologies

4.3.2. ADOPTION

Although visible benefits from conservation need lengthy of period, but certain changes can be also observed in certain periods. Out of the 92 households covered by the survey, 70 households (76%) were selected for on-farm field observation by the research team. So the researcher applied the pre-designed checklist to observe the status of an-farm conservation activities, which are assumed to be observable and measurable, in comparative manner. Research assistants as well as the researcher himself did the observation. The research assistants were made to record or fill their accounts on the

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format attached at the back of the main survey questionnaire, immediately after observation. By using Similar checklist, the researcher was also observed the entire sample Plots. Finally, the mean results of the two observations are taken for interpretation.

Table3: The level of adoption as observed by the research team

Grade	Milke	Woisha	Total
None	-	-	-
poor	-	-	-
Average	72%	64 %	67%
Good	28 %	36%	33 %
Total	100	100	100
Mean Scores	2.16 (above average)	2.56 (nearly good)	2.31 (above average)

Source : Field Survey 2000

Thus, the results of observation as indicated in table3 shows that the performance in the Milke catchment (2.16) is nearly average and in the Woisha catchment is nearly good (2.56) respectively and the over all performance is above average(2.31). In addition about 8 questions that state the expected out-comes from conservation are provided to farmers, so that they should express/rate their opinion.

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Table 4: Farmers response on expected benefit from conservation to households

Indicators	Increasing %	Decreasing %	Remained the same %
The level erosion	-	100	-
The soil fertility	100	-	-
The crop yield	100	-	-
The income from on form sources	71.4	-	28.6
The vegetative cover	92.8	-	7.2
The forage supply	84.3	1.4	14.3
The energy Supply	40	4.3	55.7
Access to water supply	54.3	-	45.7

Source: Field Survey, 2000.

As shown in table 4 except for the energy supply and access to water supply more than 70 % of the of the respondents noticed that they have seen the increasing trend of out comes from the managed natural resources (soil, fodder and crop yield) the other things being remained the same. As (Belay 1992b: 117) state yield increase from conservation in the first five years is least expected. Although it can be ascribed for instance that the increase in yield may be due to the use of other agricultural inputs. However in this case 50% 0f the respondents covered by this survey did not use any of agricultural inputs in the year 1998/99. Besides, farmers were also asked to indicate the most implemented NRM technology with its corresponding reasons.

Table 5: The most frequent NRM technologies adopted by farmers

NRM technology	Reasons given	%
Soil bund	-Efficient in arresting erosion	93
Vetiber grass (*Dasho*)	Its multi-purpose use (increase protective cover, reach with in 15-20 days for cut and carry	58.1
Fruit and shade trees	It's multi-purpose (income, food, increases the vegetative cover)	50

Source: Field survey, 2000

So it can be seen from the table 5 soil bund (what farmers refered as soil bund was later recognised both level soil bund and fanyajuu terrace) is one of the most adopted technology (93 %) followed by d*ash (58.1%)*, fruit trees (50 %). However most respondents were remained sceptical to reason out because, only a few had seen benefit from fruit trees. To the field observation of the researcher the problems might arised due

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to biological problems. As the author has consulted (Ethino-Botanists) from Biology Department of Addis Ababa University and other Agronomists, if only one head remained or survived cross-pollination would may not take place.

Further more the informants were asked to rate his/her general performance in comparison to his /her / neighbour. Based on three scale questions (poor, average, good). Hence, 35% rated as good, and the rest 65 % rated as average. However no farmer indicated his/her performance is poorer as compared to his neighbour. More or less the results of the observation and farmers response show similar findings. In addition the North Omo Zone NGOs and Multilateral Projects team co-rdinator indicated the performance with in 65-75 % (average). The overall performance as revealed from different direction is above average. Thus, the results from the analysis and discussion above are going to be used as a benchmark for further discussion in the other part of the paper. Why not all farmers implemented equally?, as has been observed and as they themselves has been reported? The discussion in the following section will focus on such issues.

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4.3.2. Some Socio-Cultural Factors Affecting The Adoption of NRM Technologies

The analysis of why farmers do / do not adopt new NRM technologies is difficult subject, since such behaviour is affected by many interrelated factors. However the author looks in this section in to some socio-economic and institutional factors on the basis of the literature part of this paper and the model adapted and conceptual frame- work used.

4.3.2.1. Participation

Participation of the beneficiaries in the project intervention is one of the ambiguous and controversial issues in the current literature. However in this particular, analysis, participation is to mean the genuine co-operation of beneficiaries right from the identification of NRM technologies to the final stage i.e. selection, prioritising, designing, implementation and evaluation of the out- comes of the NRM technology. Indeed, at this juncture there are people saying community participation in Ethiopia in NRM come out by necessity rather than design (see Bekalu, 1994).

Thus the community participation is one of the factors assumed by the author as influencing the degree of adoption of NRM technologies by farmers. Hence, the responses of the informants to survey is summarised below in table 9.

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Table 6 - Farmers responses on participation

Roles	Participants	
	Frequency	%
Planning and Design	28	28.6
Implementation	92	100
Evaluation	-	-

Source, Field Survey 2000

As it is clear from table 6, less participation of the beneficiaries has been noticed, except at the implementation stage. The information also indicated they were given less chance to decide on the choice of SWC technologies i.e at design and planning stage. Probably this is due to the PRA technique adopted by the project in design and planning the NRM technology. But participation with the regard to group-work all households responded that

they are members of local conservation work group and participating two days per week although the work group started weakening since the 1998/99.

The response of SOS-Sahel NRM expert support / strengthen the above result. For the question regarding the participants who planned the land treatment plan, he indicated that the project and WOA staff planned it. He also further described conflicts were common between the technical interest of the project and the interest of farmers during the implementation of physical conservation structures. Conflicts arose usually on terrace spacing at the beginning of the project farmers being not happy with construction and closely spaced terraces due to labour shortage and holding scarcity. The problem was later resolved through training and awareness creation, using other agronomic conservation measurers and in some cases using bigger and widely spaced terraces to avoid too many terraces taking the land out of production. But such technical solution has both benefits and drawbacks i.e. the result is less effective in terms of reducing soil erosion, but can be highly accepted by the farmers. Contrary to the responses of the beneficiaries and projects NRM expert, the WOA conservation expert noticed that farmers were actively participated from design to implementation of SOS-Sahel based NRM technologies. Conflicts in response may be due to even lack of the participation of the respondents /stakeholders (in later case, WOA). In general it is clear that, from what has been stated above there was less involvement of beneficiaries in the design of SWC technology. To the authors opinion had the compromise been reached at the planning stage the project would have easily wined the trusts of the farmers and bunds and terraces would have been placed in the manner they can control erosion effectively form technical point of view. Lack of beneficiaries participation and following of top down approaches were also some of the major reasons

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for the failure of conservation movements in Ethiopia (See Belay, 1992, Bekallu 1994, Million 1996). Other authors also argue that community participation enhance the impact and sustainability of project intervention (Herbinger, *et al* 1999). In general the introduction of NRM technologies with full awareness of local people targeted will help in overcoming problems facing at adoption stage, and ensure sustainability, although beneficiary participation is not as a panacea for all the problems facing natural resource management intervention.

4.3.2.2. Attitude of Beneficiaries Towards SOS - Sahel NRM Intervention

In order to assess the attitude of target communities toward SOS-Sahel NRM technologies as indicated in 2.6.3.3 section of this paper twelve statements (six positive and the other six negative) based on Likert/ Sumater scale were designed by the author and informants were asked to express their attitude. Then their agreements and disagreements are summarised in table 7 a and table 7 b.

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Table 7a: Beneficiaries attitude towards Positive expectations from the project Intervention

Statements (**positive**)	AG		DAG		NR	
	F	%	F	%	F	%
I am interested in SOS-Sahel SWC tech.	92	100	-	-	-	
SOS-Sahel NRM technology in general is efficient	92	100	-	-	-	-
I am willing to continue SWC technology.	84	91	8	9	-	-
Maintaining Conservation structures is my responsibly	76	82.8	16	17	-	-
Grasses are as beneficiary a crop production	71	77.1	21	22.8	-	-
Conservation structure protect washing away of fertiliser	92	100	-	-	-	-
Mean	85	92	7	8	-	-

Source, Field Survey:2000

Table 7b:Beneficiaries attitude towards Positive expectations from the projectIntervention

Statements **(Negative)**	AG		DAG		NR	
	F	%	F	%	F	%
The structures are too technical to construct alone	32	34.8	60	65.2	-	-
Traditional NRM methods are better than SOS Sahel introduced	4	4.3	88	95.7	-	-
The structures take land out of production	-	-	92	100	-	-
The conservation measures did not bring tangible benefits to the household	1	1.4	91	98.6	-	-
I have accepted land treatment in expectation of some other extra benefits like FFW	12	13.1	80	86..9	-	-
Newly introduced tree varieties are with limit purposes	3	3.3	82	89.1	7	7.6
Mean	9	10	82	89	1	1

Source; Field Survey

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The mean results from table 7 a for positive expectations from the intervention show that more than about 85 % of the respondents show agreement for positive statements. At the same time for negative expectations from the intervention in table7 b bthe mean result show about 89 % of the respondents also have shown disagreement for negative statements. No wide variation was seen in responses. In other case 100 % of the respondents agree that traditional conservation practices in the survey area needs improvement / refurbishment somehow and 98 % of the respondents also argue that SOS-Sahel based NRM intervention as the most important compared to traditional measures. The reasons given for agreement include the traditional conservation measures were with limited purposes and inefficient in arresting erosion. In general the local people has seen positively the technologies introduced by the project especially soil bund, although it is exogenous to local people. The other evidence strengthening the above discussion is during the field visit, all of the households covered by observation were maintaining some of the

structures that have been destroyed. In addition the project's NRM expert and WOA conservation expert were asked to give their accounts of how the technologies were perceived by the community. According to SOS-Sahel NRM expert the communities attitude towards NRM is both positive and negative. Positive in that structures protect soil erosion, control flood and conserve moisture etc. and grasses put for conservation also serve for multi-purpose. On the other hand rational for negative attitudes are: 1. Terracing takes land out of production (farmers indicate the loss is insignificant) 2. Terracing is tedious job. 3) Erosion can take always between terraces and soil bunds. While, the WOA conservation expert states that the attitude of the community towards SOS – Sahel NRM intervention is positive, because they have seen certain benefits such as in some places bare land has been covered by grass due to the treatment in the upper part of catchments and root crops such as sweet potato has shown yield improvement as farmers report.

Previous researches done on the adoption of technologies by indigenous people identified positive co-orelation between positive attitude and successful adoption of technologies (see Mulugeta, 1992, Bahiru 1993 ,Belay 1992 b). At the same time if the attitude of community towards the intervention is positive, the sustainability will be high. Nonetheless previous studies from other local areas has shown the attitude of community towards 'modern' NRM interventions was negative (see Bekallu 1994 for Agaw areas of Gojjam and Alemenh 1990 for Wollo, Belay 1992b for Gununo areas of Woilata). However in this case although higher number of farmers shown positive attitude, farmers might have hidden their feelings or due to the efficiency of NRM technologies introduced by the project as farmers report.

CCRDA

4.3.2.3. Education /Training Household Heads

There are contradicting views regarding the significance of education / training in adoption of NRM technologies. The pessimistic argument in this regard is " how did the ecology of those traditional people remained stable until recently or since the consevistionist begun to preach their technical fix " (See Bekallu, 1994, Danial 1990, Hudson 1992). Others who stand on optimistic side of these groups state that the widespread environmental degradation and the subsequent failure of those projects to combat desertification and natural resources degradation ascribe the lack of awareness /absence of supplement of environmental education of the target community

Table 8: Education level of the Informants

Educational Level	F	%
Illiterate	26	28.6
Only Red & Write	24	25.7
1-6	25	27.1
7 and above	17	18.6
Total	92	100

Source: Field Survey, 2000

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As has been shown in table 8 more than 54 % of the beneficiaries are illiterate. Daring the survey for question 'whether SOS-Sahel based NRM technologies were simple to implement' the respondents split in to two categories. Those who are less in proportion (46 %), and with some level of formal educational back ground and even from previous illiterate groups the youngsters argue that they have faced no difficulties in implementing various NRM measures. Where as those illiterate and old aged noticed that handling of NRM technology and its associated implementation procedure needs 'modern' knowledge. In addition all of the informants agree that the supplement of environmental education and

technical training and advice on NRM technologies is necessary for successful implementation. In fact the project in this regard trained 3-5 people from each catchment for 5 days in different SWC technologies and NRM management concepts. In addition those who were participated in training had also given chance to take inter-cross visit to Konso. Konso area is the area where traditional soil conservation practice has shown success in Ethiopia. The catchment team leaders were also provided with the training manuals with the understanding of farmer to farmer dissemination of training impact.

Nevertheless there is significant difference between the plots of those who have participated in training and other ordinary farmers. For instance from authors field observation it has been made clear that in terms of both qualitative and quantitative scales, various NRM technologies were well implemented by the catchment team leaders in both catchments. The other evidence further strengthens the above observation is that physical structures like micro-basins, fanyajuu terraces were mostly seen in those catchment leaders plot. The reason for the absence of those structures on ordinary farmers plot is that such structures are too technical to construct. In addition those majority of illiterate groups which account more than half of the informants further ascribe, they can not by themselves reconstruct in case the structures / soil bounds collapse unless guided by team leaders. The reason given is that the construction of such structures need consideration of technical aspects such as measuring and maintaining slope (gradient, reading meters and other device) that need literary and numeric knowledge. In this regard William & Anton (1992) stated that the NRM technologies introduced to ordinary farmers should be easy for implementation. So the above discussion indicates that some kind of training arrangements

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for larger preparation of the beneficiaries is necessary. In this case the multiplier effect i.e. farmer to farmer dissemination of technical know has not worked, as all the structures has been constructed in guidance of the team leaders. The contention here is what would happen if those team leaders leave that area for particular reason? The findings of the present study confirm several previous studies in other areas (see, Belay 1992b, Mulugeta 1992). Despite, involving several members of the beneficiary in training will incur the project high cost, each of the beneficiaries should be able to handle NRM technologies by themselves. Thus, additional training is also requested by more than 50 % of the respondents during the survey. Training can be facilitated by other alternatives, such as arranging short term training with in catchments, by making those trained people to train others instead of 'spoon feeding'. The other possible means is targeting both primary and secondary school children and environmental education clubs, as the children can assists their parents during no-school days and after schools, providing work guide / manuals and other literatures not only to catchment team leaders but also other farmers who can read and write could also widen the impact.

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4.4. Sustainability of the Project's NRM Intervention

The concept of sustainability is very important concept in NRM interventions as the benefits from such projects / programs need long period of time. So based on field survey, other formal and informal discussion at field level and institutional level and review and analysis of policy documents the sustainability aspect of the project has been summarized as follows.

About 78.6 % of the beneficiaries covered in this survey express their commitment to continue the NRM intervention (to make it part of their production system) even if no incentive would be provided continuously / after the with drawl of the project. In addition all of those farmers interviewed through RRA in other twin catchments have also shown interest to continue the SOS-Sahel intervention. All the informants and project officials tell that the beneficiaries have been provided incentives in the form of hand tools on subsidized basis and seeds and tree strips etc. However, they were provided with CFW/FFW only for off-farm conservation activities. But significant variation comes to appear when they were asked about the means / how would they continue (see, table 19 below).

Table 9: Farmers Response on how to continue SOS Sahel Intervention

	F	%
- By using experience gained and own tools	39	42.8
- If technical and material assistance will be available	20	21.4
- If the conservation work group persists	10.4	11.4
- Only maintaining the existing structures	3	2.8

Field Survey, 2000

As can be seen from the above table 9 more than 78.6 % of the respondents expressed that they would like to continue the intervention. But there is variation on how the would continue. About 42.8 % of the respondents expressed that they would continue to undertake conservation measures by the experience gained and by their own tools. The

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other 35.7 % put different forms of pre-conditions like 'if tools, technical assistants, material assistants --- etc could continue'. The other, 21.4 % expressed that they would not continue at all unless the project continues in providing incentives. The reasons given by the later group is like lack of tools, training and weakening of the catchment conservation work group.

In addition farmers were also asked to suggest what would have been the best alternative to sustain the project interventions.

Tble 10 : Farmers best Suggestions to sustain NRM interventions

Suggestions	F	%
• Provision of hand tools and implements	30	32.6
• Technical advice and additional training	16	17.3
• Incentives in the form of FFW/CFW	14	15.2
• Strengthening the infrastructures and the veterinary services	10	10.8
• Strengthening catchment work group	5	5.4
• Co-operation between project and local government	4	4.3
• Continuous provision of trees, grass-stripes etc.	4	4.3
• Introduce local credit scheme / cash ,oxen/	4	4.3

Source : Field Survey, 2000

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As presented in table 10, provision of tools and implements (32.6%), technical advice and additional training (17.4%) and support in the form of FFW /CFW (15.2%) were the major responses in terms of priority order. These responses imply that lack of tools is the major resource limitation in the study sites, even if hand tools were provided by the project on subsidized basis. In addition the project had tried to initiate local supply of improved farm tools through blacksmith support program, however that was failed. All farmers complain that the tools that they have been provided now become non-functional and that shortages of tools hinder their efforts, but they frequently can not afford to purchase these items which are scarcely available in the local market. Finally some of the more interesting alternative suggestions given by farmers for the sustainability of SOS-Sahel NRM interventions (see table 20). Almost all the reasons are some how referring outside /external support in the form of handouts (aid mentality).

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In addition the evidences from informal discussions on both on-farm and off-farm conservation activities also support the results from general survey. During informal discussion issues related with sustainability of both on-farm and off-farm conservation activities were raised. Issues raised include such as the relation between on-farm conservation activities and off-farm conservation activities, whether the guards would continue to protect the conservation structures on the so-called communal land, whether the beneficiaries have both technical and material capability to under-take the same measures by self initiation after the project phase out etc. Guards posed various responses. Regarding the existence of the relation between on-farm and off-farm conservation activities the informants agree that in the catchments like Milke (their own) where the

lower and the middle parts are settled by farmers the un-treatment of upper and top hills would devastate the on-farm conservation activities at the middle and down stream. Hence the effectiveness of structures on the individual farm plots depend on the strength of off-farm conservation activities in such cases (see, annex 6 a). One of the key informant whose house is in the upper most stream of Milke catchment gave also the same analysis (see also, annex 6 b). When the catchment 'communal land' guards were asked about 'whether they would continue in protecting the 'communal land' some inconstancies have been observed among their responses. Those who were participated in inter-cross visits and attained training argue that they would continue in taking care of it. The justifications given include, in Konso one individual farmer's land is not less than the off-farm conservation site (Sudo Mt.), hence it is possible to take care of it. The other compliant group notice that they could not continue to protect, at least for two reasons: 1) the guards do not have the authority to punish those who are disbanding the mutual agreement, as 'the king is not trusted in his own land', although there is an agreement that if guards present the case of those who violate communal rule to the PA will punish them. 2) The culture of self-initiation and reliance for common concern, as ones own concern is becoming loose. 3) We/the guards/ must have been provided with some kind of incentives as the protection work is diverting us from the main agricultural activity. While they were assigned to take care of the off-farm conservation site they were promised to participate in FFW/CFW with out screening with other community members and to use grass and some tree products after its regeneration. But for the time being FFW/ CFW has become to an end and it will take time to see other expected benefits. So the question here is it justifiable that giving the responsibility to only 6 people? By definition if it is communal land (but to me it is no

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ones land), why other arrangement was not done in the manner that the whole community take responsibility and in the final instance share the benefits on equal basis,?. Although previous other authors and the experience from other countries prescribe tenure security as ensuring mechanism to sustain such activities on communal resource management, in addition the author also suggests ensuring the user-fract right can alleviate the problem and can sustain the activities. But the question might be raised is that: To what extent are these catchment leaders able to stimulate and guide the community? To what extent are the catchment leaders regarded as the representatives of the community interest?

The responses of officials from project, local and federal government widely vary on the issue of sustainability. The SOS Sahel NRM expert believe that the initiative of the project will sustain (i.e. farmers will institutionalize it) after the phas-out of the project as the necessary capacity raising work has been done both for the community and the WOA. Hence there would be horizontal (farmer to farmer) dissemination of technologies. The WOA conservation expert also supports the above idea, and notice that farmers would undertake the intervention further by using their own tools, the additional back-up service such as seed lings being provided by WOA. However the North Omo Zone NGOs & Multilateral projects co-ordinator team leader, SNNPR BOA NGOs & Investment desk expert and Federal DPPC NGOs co-ordination office disagree with the previous pessimistic arguments. It is common to see that while NGOs NRM management activities fail with the phase-out of the implementing project. The Zonal NGOs desk official cites the KRDP's intervention itself and farmers commitment one or two years back and now is completely different, as there are symptoms of weakness of activities and other earlier

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interventions with in North Omo. The justifications of the Zonal official is that short term benefits such as subsidized hand tools for private land treatment and CFW/FFW for communal land treatment played a grater role during implementation rather than the long term results from conservation. For instance the intervention by CONCERN Ethiopia, in Damot Gale Wereda the whole effort has been collapsed after its withdrawal (the problem too was also cited by BoA expert). CONCERN Ethiopia an NGO initiated NRM both on private and communal land following the 1984/85 drought. The disagreement of the Federal DPPC officials with the previous positive arguments on the sustainability of SOS-Sahel's NRM intervention is the last two decades NRM intervention by different NGOs in Northern Ethiopia, especially South Wollo and North Shoa which have been failed while the external assistance stopped. The Federal officials also add other comments from strategic point of view that are threatening sustainability: 1. Lack of needs identification / mismatch between local demand and project intervention. 2) Lack of stakeholders participation (genuine participation of community and sector offices) in design, implementation and evaluation of project initiatives. 3) Lack of safety and efficiency of technologies introduced i.e. when the technical measures are introduced without ensuring the suitability and appropriateness to local situations. 4) Absence of clear phase out strategy. Most NGOs in Ethiopia do not have clear phase out (how to hand over the interventions after the termination of the project (the same point was also raised by regional NGOs and Multilateral Projects co-ordinator).

So it is clear from above discussions and earlier discussions from other sections of this paper, it can be argued that local community do have concrete ideas about the long term

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benefits of conservation and adopted the measures at various scale. But still it needs time to make them to carryout the initiatives by themselves as they try to shift the burden to external bodies. The heavy and primary emphasis on external support means the majority of the beneficiaries has realized little that their initiation and involvement is the best solution for long term benefits from conservation. In general, the reconsideration's of the following will be instrumental for the sustainability of SOS-Sahel intervention in the study area:

1. Farmers did not develop confidence / self-reliance both technically and materially. Most farmers requested further material (tools) and technical (training) provision.

2. The conservation work group in both catchments started to weaken, as the majority of the farmers has reported in the last one year almost no group conservation work has been carried out after the project stopped the technical back-up. But there are as many as households /farmers who did not get chance for putting structures on their plots, indeed involved in group work while the construction was done in other farmers plot. In addition during the RRA those farmer who were targeted during the individual approach also stated that it is practically impossible to carry conservation unless there is co-operation among catchment members, individual effort could not result in success.

3. The multiplier effect, farmer to farmer replication of NRM technology has not been worked because, during the field observation the author has observed that farmers near to the treated catchment and even in some cases near to treated plot, although show positive interest in NRM technologies adopted by their neighbours, yet they never have

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been imitated the technology meant the adoption of technology is linked with some other additional benefit.

4. The WOA that is supposed to take the back-up service in the with-drawl of the project is not in promising position as to its current status to provide the necessary support for the farmers, for instance it fail to run the nursery site and no technical assistance has been provided in the last one year. Farmers do not have other alternative means to get tree seedlings and the technical assistance in case they need. In such case the development of tree seedlings by the individual farmers/ group nurseries could have been solved the problem.

5. Only few (stone bund) locally known technology was incorporated in intervention of the project. The dominance of externally induced technology means some time interruption may occur, while farmers observe certain defect instead of correcting it 'abortion' might be chosen.

6. Reflection of clear NGOs roles and responsibility in NRM policy / strategy designed by national /regional government as how the 'package' of NGOs intervention should look like. That would enable NGOs to design and implement sound NRM packages that may ensure sustainability.

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CHAPER FIVE

5. SUMMARY, AND CONCLUSION

Ethiopia is one of the places where deforestation, degradation of the soil and impoverishment of both ground and surface water largely impedes socio-economic development. So those development actors fighting poverty, should start from the scratch i.e. by addressing various environmental problems on which the livelihood of most rural people is based. In Ethiopian since the droughts of 1970s and 1980s, NGOS, as development agents seems to have recognised the relation between resource depletion and human hardship and suffering. As Harrison (1987) cited in Van den Breemer and Bernhard (1995) described sutstaianance of human life and development is practically impossible in degraded environment.

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Now in this section for the question raised at the beginning of this paper " Do farmers adopted NGOs NRM interventions? To what extent would it continue (sustain)?. In general from analysis of both field level and institutinal data of sample NGOs coverd in this study, participant observation and evaluation of related policy documents the author come up with the tentative conclusion that, the NRM technologies introduced by sample NGOs were well adopted by the farmers although there is variation in qualitative as well quantitative terms from framer to farmer. For instance in case of SOS-Sahel (soil bound) is implemented almost by all farmer covered under field survey. But when it comes to sustainability indeed the author is not confidential to give the 'yes or no' conclusion the increasing rhetoric is that the issue needs additional reconsideration.

Thus as discussed in detail in different parts of this paper the NGOs s NRM intervention is with some strengthens mentioned and also with shortcomings indicated elsewhere in this paper. In general the environmental rehabilitation activities of the NGOs played a catalytic role in changing the NRM trend in Ethiopia. The issue of sustaanibility is is to be resolved if benefits from NGOs NRM intervention is to be long lasting. Therefore NGOs should clearly identify those Soccio-cultural and institutional factors like perticipation of laocal people in design and implementation of NRM technologies, the attitude of local communities ~~of local people~~ towards prorject intervention, the technical capability of beneficiaries, local level community organizations and institutional capacity of local sector officices (WOA). If NGOs are carefully selecting and integrating locally proven NRM measures to 'modern' intervention that could ensure the sustainability of the projects as it is highly adapted to the changing condition of the past.There has to be also close networking with the NGOs co-ordinating desk at federal /regional and zonal levels so that to detrimine/ identify those renewable natural resources and areas that need immidiate counter action. The problem seen in relation to overlap and duplication of NRM activities by NGOs and GOs can also be minmized by strngethening such linkage. Above all EPA at federal level and concerned regional sectornr Bureaus (Regional Environmental Co-ordinating Committee /RECC/ or BoA) should clearly reflect the NGOs role in natural resources management, and how should the technical and socio-cultural as well as institional 'packages' of NGOs NRM intervention should look like. Finally recognizing NGOs as an important stakehlders in over all process of combating natural resources degradation could facilitate the process of bringing 'sustainable' natural resources use and management in Ethiopia.

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Annex-1

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Instrument -1

House Holds Head Survey Questionnaire

The objective of the Questionnaire: This instrument is designed for the purpose of gathering information regarding SOS Sahel based NRM programs in Kindo Koisha district, Southern Ethiopia. So you are kindly requested to provide accurate information as much as possible. The final paper that will be written based on the information you have provided is intended to serve for an academic purpose.

Instruction: Use 'X' mark for questions with various alternatives

PA _____ Catchment _____ Agro-ecological zone_____

Date of Interview _____Enumerator_____ Code No____Time Spent _____

Personal Data

1. Age _____ 2. Sex _____

3. Educational Level 3.1.Illiterate____ 3.2. If literate grade completed ___

4. Ethnic Background 4.1. Wolaita _____ 4.2 others _____

5. Religion affiliation

5.1 Protestant___ 5.2. Catholic____ 5.3 Orthodox____ 5.4 . others _____

6. Birth place 6.1. Kindo Koisha 6.2 Other places _____

I. **Major Issue – Local knowledge**

7. Did you or your parents put any soil conservation structure traditionally?

1/ Yes / / 2/ No / / 3/ I don't know / /

8. If your answer to Q.1 is yes, what were such measures?

_____ _____

9. Is your farm plot treated with SOS Sahel based conservation measures currently?

1/ Yes / / 2/ No / /

10. If yes to Q 3 when did SOS Sahel start it's operation on natural resources management in this area?

1/ 1-3 years / / 2/ 4-6 years / / 3/ 7 and above years / /

11. How was the level of soil erosion on this (sample) plot before the introduction of SOS Sahel based natural resources management activities?

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1/ Slight soil erosion / / 2/ Moderate soil erosion / / 3/ Severe soil erosion / /

12. With what type of conservation measures is it treated /state /

12.1. Physical 12..2. Biological

_____ _____

_____ _____

12..3.Others_____

13. Are such newly introduced conservation measures from among traditionally existing ones?

1/ Yes / / 2/ No / / 3/ I don't know / /

14. If your answer for Q.13 is No which are not? /state/

_____ _____ _____

_____ _____

II. Major Issue: Adoption

For Questions 15-22 below rate one out of three households socio-economic conditions for th 1998/99

NO.		Increasing	Decreasing	Remained the same
15	The level of erosion on your main plot			
16	The soil fertility in main treated plot			
17	The crop yield from the most treated plot			
18	The household income from farm sources			
19	The vegetative cover of the farm stead			
20	The forage supply of the household			
21	The household energy supply			
22	The households access to water supply			

23.How do you compare your performance to your neighbour?

1/ good 2/ average 3/ poor

III. Major Issue – Participation

24. Have you been given chance to take decision concerning on-farm soil conservation measures?

1/Yes / / 2/ No / /

CCRDA

If your answer for Q.24 is yes then on which of the following activities?

	Yes	NO
25. Identification of conservation technologies	_____	_____
26. Selection of conservation technologies	_____	_____
27. Prioritizing of conservation technologies	_____	_____
28. Implementation of conservation	_____	_____

29. others _____

IV .Major Issue- Attitude- for Q 30-41 below rate either 'agree' or 'disagree' (use 'X' mark)

No.	Indicators	Agree	Disagree
30	I am interested in SOS Sahel based conservation technologies		
31	SOS Sahel based conservation structures are efficient in arresting soil erosion		
32	I will continue the adoption of SOS sahel based conservation technologies		
33	Maintaining conservation structures is my own responsibility		
34	The newly introduced grasses are equally beneficiary to crop production		
35	The conservation structures control the washing away of fertilizer from crop land		
36	Technically I fill competent of maintaining the conservation structures		
37	Traditional way of managing the land resources is better than the new SOS Sahel based one		
38	The structure takes land out of production which is very important to satisfy the food production of the family		
39	The conservation measures do not brought significant benefits to the household		
40	I allowed the treatment of my crop land by the expectations of extra benefits (like food for work)		
41	SOS Sahel introduced tree species are with limited purpose		

42. Do you believe that the traditional conservation measures need improvement ?

1/ agree / / 2/ Disagree / /

CGRDA

43. If you agree to Q 42 then by what type of conservation technologies should they be replaced?

_____

_____

_____

44. If you disagree to Q 43 above, why?

_____

_____

45. In your opinion which one of the conservation measure/s have you implemented well /please state/

Conservation Measures	Reason
_____	_____
_____	_____
_____	_____

46. How do you rank SOS Sahel based conservation technologies in relation to traditional one?

1/ Most important / / 2/ second important / / 3/ Least important / /

V. **Major Issue - Training / Technical assistance**

47. Are SOS Sahel based conservation technologies simple to implement?

1/ Yes / / 2/ No / /

48. If No to Q 1 how?

_____

_____

_____

49. Have you received any kind of training on natural resources management practices?

1/Yes / / 2/ No / /

50. If your answer for Q. 3 is No then how do you implemented?

_____

_____

51. If your answer for Q 3 above is yes who provided such training?

Content	Organization	length of the period
_____	_____	_____
_____	_____	_____
_____	_____	_____

CCRDA

52. Has technical assistant visited your plot during the last 1 year /

1/ Yes / / 2/ No / /

53. If your answer is yes to Q 6 from where?

1/ SOS Sahel / / 2/ Woreda Office of Agriculture / / 3/ Others please specify ____

54. If your response to Q 7 is from SOS how many times has such a visit taken place in that period?

1/Every week / / 2/ Once in a month / /

3/Once in six month / / 4/ Others _____

55. Was the advice useful in implementing the conservation measure ?

1/ Yes / / 2/ No / /

56. If your answer to Q 9 is No why?

_____

_____

VI. **Major Issue- Sustainability**

a). Incentives

57. Did SOS sahel provide you any incentive for the implementation of conservation measures?

1/ Yes / / 2/ No / /

58.. If yes to Q 1 which of the following?

1/cash / / 2/ Food for work / / 3/ Subsidized implements / /

4/ tree seedlings / / 5/ others_____

59. In the event the project stops support would you continue on carrying out conservation measures?

1/Yes / / 2/ No / / 3/ I don't know / /

60. If yes to Q 59, how would you continue ?

_____

_____

61. If No to Q59 why not ?

_____

b). Local institutions

62. Is there any local conservation work group in your village of which you are a member?

1/ yes / / / No / /

CCRDA

63. How did that work group come in to being /

1/ From existing local organizations / / 2/ newly created / /

3/ other _____

64. What have this work group achieved up to now? _____

65. How is the work group mobilized for any particular collective labor day(s)?

_____

_____

66.Who usually participates in work groups

1/ only me / / 2/ casuals / /

3/ if other household members specify _____

67.Do participation in work groups has any obligation?

1/Yes / / 2/ No / /

68. If yes to Q 6 what are such obligations/ please state/ ?

_____, _____, _____

69. Do you have any idea that WOA and SOS Sahel co-operate in conservation activities? _____

70. Is there off-farm conservation activity in this village?

1/ Yes / / 2/ No / / 3/ I don't know / /

71 .If yes to Q 9 who initiated it?

1/ SOS Sahel 2/ PA / / 3/ Woreda agriculture office / / 4/ others _____

72..If there is any off-farm conservation activity which type of lands are treated with such measures / please state/?

_____ _____ _____ _____

Concluding remark

If any thing you would like to add in relation to our discussion?

Thank You

CCRDA

Annex-2

Thank You

ADDIS ABABA UNIVERSITY

MA PROGRAM IN REGIONAL AND

LOCAL DEVELOPMENT STUDIES

Instrument -2

Interview protocol for SOS -Sahel koisha Project - NRM Expert

The objective of the Questionnaire: This instrument is designed for the purpose of gathering information regarding SOS Sahel based NRM programs in Kindo Koisha district, Southern Ethiopia. So you are kindly requested to provide accurate information as much as possible. The final paper that will be written based on the information you have provided is intended to serve for an academic purpose.

Interviewer_____ Interviewed _____ Date of interview_____

Time spent _____

Personal Information

1. Name_____
2. Position _____
3. Educational background Qualification_____ Level_____
4. Working experience (in years)
   - I. In SOS Sahel_____
   - II. In other NGOs _____
   - III. In government organizations_____

5.For how long have you lived in this area (years)_____

I. Major Issue- about the Project

6. When did the project start operation in NRM in this area ? _____

7.Why?

_____

_____

_____

8. On What basis do you select the target groups ?

8. What are the land treatment activities introduced by SOS Sahel ?

4.1). Physical

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_____ _____

9.2). Biological

_____ _____

9.3). Other methods

_____ _____

II. Major Issue- Local Knowledge

10. How do rate farmers traditional natural resources management knowledge ?

_____

11. What were the most commonly used traditional conservation measures in this woreda

_____ _____

_____ _____

12. Please state from traditional natural resources management technologies that are incorporated in t intervention?

_____ _____

_____ _____

13..Do you agree that such local traditional natural resources management technologies need energizing?

14. If yes to Q 13 then by what type of new natural resources management technologies?

_____ _____

_____ _____

_____ _____

III -**Major Issue- Adoption**

15.What percentage of the target farmers adopted the conservation measures well?

_____

16. Indicate the criteria used for quantifying the farms as conserved?

_____

_____

_____

CCRDA

17. Which one of the above soil and water conservation technologies is well implemented by he farmers?/state at least three major ones/

Soil and Water conservation technology	Reason
_____	_____
_____	_____
_____	_____

18. Current status of the on- farm measures /please put / X /

18.1.Mentianance _____ 18. Upgrading_____

18.3.Stabilization _____ 18.4. protection _____

18.5.All of the above _____ 18.6. others _____

19.State the most important impacts of on-farm soil and water conservation measures in terms of :

19.1) land fertility

_____

_____

19..2). Agricultural productivity

_____

_____

_____

19..3). Income

_____

_____

19.4). Others

_____

_____

IV. Major Issue-participation

20.What is your major role in land treatment plans?

_____

_____

_____

_____

CCRDA

21. Who else are involved in the preparation of treatment plans and at what capacity ?

Participants	Roles
_____	_____
_____	_____
_____	_____

22. Do conflicts arise between what you consider technically sensible to do and what farmers are ready to accept ?

23. If no to Q22 why?

_____

_____

_____

24. If yes how is it resolved?

_____

_____

V. **Major Issue - Attitude**

25. In your opinion the attitude of the farmers towards the conservation measures?

25.1 Positive, in what ways please specify

_____

_____

_____

25.2 Negative , in what way please specify

_____

_____

_____

VI .Major Issue- Training and Technical Assistance

26. Did you provide any training on NRM for target farmers?

27. If yes to Q 26 please describe the contents of the program and duration?

Content	Duration
_____	_____
_____	_____
_____	_____

28. Whom else did you train other than farmers?

_____

CCRDA

29. State the major impacts of such training if any?

_____

_____

30. How many times do you make visit to your target groups? / Week/month /year/

_____

VII. **Major Issue- Sustainability**

31. Do you provide any incentives to the farmers targeted for conservation?

32. If yes to Q 53 indicate various provisions?

_____ _____

_____ _____

33. Do you think that farmers will continue to maintain and undertake land treatment after the withdrawal of the project?

34. If yes to Q 33 how ?

_____

_____

35. .If no to Q 34 why?

_____

_____

36. .Are you currently working with any of grass roots level local organizations?

37 . If yes to Q 36 please state the organizations and their roles in natural resources management ?

Organizations	NRM roles
_____	_____
_____	_____
_____	_____

38. Currently is there any local conservation workgroup?

39. If yes to Q 38 has it been organized from above local organizations?

40. If no to Q 38, why not from existing local organizations?

_____

41. In what aspects do you co-operate with wereda office of agriculture in natural resources management?

_____

_____

CCRDA

42. Is there any NRM policy /strategy outlined by local /regional government that you are following as a guideline?

43..If yes to Q 41 please state the main theme of the policy?

_____

44. If no to Q 42 , please comment on the necessity of such policy?

_____

_____

_____

Concluding Remarks -

If any thing you want to add in relation to our discussion ?

_____

_____

Thank You

CCRDA

Annex -3

ADDIS ABABA UNIVERSITY

MA PROGRAM IN REGIONAL AND

LOCAL DEVELOPMENT STUDIES

Instrument -3

Interview Format For Conservation Expert (Woreda Office of Agriculture)

The objective of the Questionnaire: This instrument is designed for the purpose of gathering information regarding SOS Sahel based NRM programs in Kindo Koisha district, Southern Ethiopia. So you are kindly requested to provide accurate information as much as possible. The final paper that will be written based on the information you have provided is intended to serve for an academic purpose.

CCRDA

Interviewer_____ Date_____ Time Spent_____

Personal Information

1.Name_____

2. Educational background _____Qualification_____

4.Working experience (in years) _____

5.For how long have you lived in this area_____

I. Local knowledge

6. How do you level the farmers' traditional natural resource management knowledge?

_____

7. Were they traditionally putting any kind of land resources conservation structures?

8. If yes what are these?

_____

_____

9. Was it effective?

_____

_____

10. .If yes/no to Q 9 please comment

10.1). If yes how ?

_____

10.2). If No why ?

_____

11. Do you believe that traditional NRM practices in this area need improvement ?

12. If yes to Q 11 why ?

II- Major Issue - Adoption

13. In your opinion are the target farmers adopted SOS Sahel based conservation measures?

14. If yes to Q 13 which of SOS Sahel based soil and water conservation technologies are well adopted by the majority farmers'?

Soil and water conservation technologies	Reasons

15. Indicate the criterion you have used to witness that the farms as well conserved?

III Major Issue - Participation

16. Do you have any responsibility in SOS based NRM activities?

17. When was the SOS based natural resources management activities begun in this district?

18. From your working experience in this woreda have you observed that ordinary farmers being involved in conservation plan ?

19. If no who else have planed the land treatment plan ?

20 . In your opinion why do you think farmers decided to carry out conservation measure on their farms ?

21. Are the land treatment plans of the project integrated with local NRM practices and knowledge ?

22..If yes to Q 21 please state those local NRM practices incorporated to he intervention of the project?

23..If your response to Q 22 is No then why do you think that has not been materialized?

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IV. Major Issue - Attitude

24. In general how do rate the opinion of the farmers towards SOS Sahel based conservation measures ?

24.1).Positive, in what way

_____

24. 1).Negative, in what way

_____

_____

V. **Major Issue - Training and Advice**

25. Do you believe that training and advice can facilitate /hinder the adoption of conservation measures ?
26. If yes how?

_____

_____

27. Have you seen that SOS-sahel is supplementing environmental education to target farmers ?
28. If yes how do you see the significance of such training and advice to the adoption conservation measure ?

_____

_____

VI. -Major Issue -Sustainability

29. Has SOS sahel provide any incentive to farmers targeted for conservation, if any state please?

_____ _____

_____ _____

30. In case of the withdrawal of the project do you think farmers would continue carrying out the conservation measures?
31. If yes how ?

_____

32. If no Why?

_____

33 . why do you think farmers decided to undertake on-farm conservation measures ?

_____

34 . Do you know that SOS Sahel is encouraging any local conservation workgroups?

35. If yes to Q 34 are such work groups formed from existing traditional organizations?

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36. Is there any policy / strategy outlined by local / regional government that how NGOs NRM intervention should proceed? _____

_____

37. If yes to Q 36 please state the main ingredients of that policy /strategy?

_____

_____

_____

38. If No to Q 36 please give your own comment on the necessity of such policy /strategy ?

_____

_____

Concluding remarks

If any thing you would like to add in relation to our discussion?

Thank You

CCRDA

Annex-4

ADDIS ABABA UNIVERSITY

MA PROGRAME IN REGIONAL AND

LOCAL DEVELOPMENT STYUDIES

Instrument –4 (Observation Format)

Instruction: Dear Observer; according to the data collection schedule you will have to visit the on-farm conservation activities at each sample households main plot. Then you are expected to observe the status of the on –farm conservation activities and fill in this format as soon as possible. Please record only what you have observed, but not what you have discussed with farmers.

Date of Observation_____ PA_____ Agro -ecological Zone_____

Catchement _____ Household code_____

For questions 1- use the following codes

0- For the activity that can not be observed due to its absence

1- For the activity that is made practical at low level

2- For the activity that is made practical on the average

3- For the activity that is made practical very well

_____ 1. The over all conditions of physical conservation structures

_____ 2. The over all condition of biological conservation structures

_____ 3 .The quality of physical conservation structures

_____ 4. The availability of newly introduced grass around the homestead

_____ 5. The coverage of physical conservation structures in relation to the total size of the holding

_____ 6. The present status of newly introduced trees

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_____ 7. Surplus grain (crop) stored around the home stead

_____ 8. Households initiation to protect the conservation structures (such as putting fences , mentainance etc.)

_____ 9. The presence of private pasture land around the plot

_____ 10. The classification of land for different purposes.

_____ 11. The presence of compost in the main plot

_____ 12. The spread of manure in the plot.

Thank You

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Annex-5

ADDIS ABABA UNIVERSITY
MA PROGRAM IN REGIONAL AND
LOCAL DEVELOPMENT STUDIES

Instrument - 5

Interview protocol for north Omo Zone NGOs Desk Representative

The objective of the Questionnaire: This instrument is designed for the purpose of gathering information regarding SOS Sahel based NRM programs in Kindo Koisha district, Southern Ethiopia. So you are kindly requested to provide accurate information as much as possible. The final paper that will be written based on the information you have provided is intended to serve for an academic purpose (MA Thesis).

Interviewer_____ Interviewed _____ Date of interview_____

1.Name_____

2. Position _____

3. Educational background Qualification_____ Level_____

Working experience (in years)

What roles do your organization play in NGOs operation in general?

How many NGOs (development oriented exist in north Omo Zone?

7. How many of the NGOs indicated under Q6 involve in natural resources management?

8. Have you got chance to visit SOS –Sahel koisha project (KARDP's) natural resources management intervention at farm level?

9. If yes to Q8, then how do you rate the level of adoption by majority farmers?

10. What are your rationales to justify your answer above Q 9 ?

11. Do you know that KRDP had clear phase out strategy?

12. Do you believe that farmers will continue to under-take the SOS Sahel's natural resources management initiatives after its withdrawal / phase out

13. If yes to Q12 how?

14. If no to Q 12 why not?

15. If any thing you would like to add in relation to our discussion?

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Annex-6- Informal Dissolution in survey area

6a- Group discussion With off- farm Guards

Committee Members

1. Ato Tekle Moja ,
2. Ato Faltasa Gebre
3. Asale Tantu
4. Ato Mogiso Moja,
5. Dagaga Dadino,
6. Abebe Aldaye

Q1. What is your role in off-farm conservation activities?

Answer - We were selected by the catchment members and our responsibility is to protect the trees planted and the conservation structures constructed , so that livestock's and people should not damage it. We were monitoring different conservation activities during the active work period whether the trees germinated, the structures were constructed properly and if any problem occur we report it to the project officials.

Q2. When did the off-farm conservation on this site started?

Answer - the off-farm conservation activities in this site (Sudo Mt.) started during the WADU time in 1970s, there was also intervention later during the dergue time. In previous two cases it was carried out by FFW. Again lack of the success of all those endeavours now in 1998 SOS Sahel initiated new intervention through hillside terracing and afforestation (around 150000 tree seedlings were planted) of which about 85000 survived while the rest died. As compared to the previous two interventions the SOS Sahel is intervention is comprehensive and the activity of protection and advocacy is better. It seems the community has become aware of the resource degradation, but the problem still is the off-farm conservation work has been carried out by CFW basis. Thus in the future if the terrace collapse reconstruction and replacing those trees died /destroyed by different factors may become a problem. Although, we are taking care to it for the time being for many reasons it is not guaranteed: 1) We do not have the authority to direct or punish those people who for instance graze their cattle or practice cut and carry or cut trees, though there is common understanding that the common land resources should be reserved. 2) Unless some solution is found or the PA it self take care of it taking the whole responsibility is beyond the capacity of these 6 peoples.

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Q3. Have you been provided with incentives for protecting the off-farm conservation activities?

Answer - when we start or take this responsibility, the promise was that we were to participate in FFW/CFW with out passing any screening process, while other community members did. In addition we were promised to use grasses and other tree benefits after its regeneration from communal land. It is the community who selected us and in that premises till now we are protecting the off-farm conservation activities like our own plot.

Q4. Do you believe that only you (guards) can mange in protecting this off-farm conservation site?

Answer – for the time being it is only we that are taking care of it. But that is not guaranteed. We hope other members of the catchment would help us. SOS-Sahel told us that tree seedlings and necessary back-up would be provided by the WOA. But that has not been materialised in the last one year for unknown reasons.

Q5. In your opinion is there any relation between the on-farm and off-farm activities?

Answer – in catchments like ours there is direct relation i.e. if the upper stream is not treated the seeds, fertilisers and upper fertile soils on farm plots will be easily washed away by concentrated flood from the upper stream. For the time being we can witness the difference before and after the treatment. How what ever sowed is not washed away as earlier times. For instance after the cut-off drain construction we have seen grass growing there in the open places. So we really encourage the work would have been continued and even we are greatly disappointed by the withdrawal of the project without finalising some already started activities.

Q6. What does the PA do in relation to the off-farm activity?

Answer– In most cases the kebele co-operates in that if any body from community violets the mutual agreement, the PA promised to punish those who violate the regulation. In addition there is community development day (two days per week), in that case we were allowed to work

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conservation related activities while the other non targeted people to conservation engage in other communal activities. Even it is by the request of the PA that the off-farm activity has been intiated initiated. First the community presented the request to the PA by informing the untreated open lands are affecting their on-farm conservation activities. Then the PA negotiated with the project to start the activity. Then the off-farm conservation work was started through FFW.

Q7.Do you think the community will continue participation after the discontinuity various incentives in case if the structures collapse?

Answer - there is significant variation in the response of the informants' .The first group notice that although for the time being the guards as well as the community is protecting the structures, but the problem is that for the future we are suspicious that people would continue with out incentives. During the construction we have been provided FFW. Even though the community believes the advantage of protecting the common land, the community has problems such as food shortage. So FFW/CFW served as an incentive. Still community believes that taking care is their responsibility. But unless the incentives would continue they are sceptical that the people would take care of it. The second group stated first and foremost we have organised and started the work by our initiation. The project has provided us tools and other necessary work materials. Even for the future we assure that the community will take care of it otherwise the life of the people is under danger. For instance after construction, four hill terraces were collapsed, then at that time the community mentained and constructed that by self initiation. The destruction of terraces in the hill means the destruction of life of people living around and below the hill, as they have observed during the inter –cross visits in Konso one farmer land is not less than the Sudo Mt. (off-farm conservation site).

Q8. What are the most prevalent problems and success of off-farm conservation activities in this site?

Answer - In its operation the project has passed both success and failure. The success is that before three years this Mt has been suffering from gully erosion due to deforestation and after afforestation threat to the down stream is declining. Now some how it has been covered by trees and several kilometres of structures such as cut-off drain, hillside terracing and chekdam wee constructed. Among the problem that can be mentioned include, for instance some of the trees were died after regeneration. There are also structures, which are destroyed after construction by gully

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erosion. We have reported the number of trees that have been regenerated and failed to the project officials at the right time. The project officials also promised to replace the trees that have failed and the structures that collapsed. Unless those trees and structures being replaced that open places may facilitate the destruction of remaining structures. So we strongly comment that has to be realised. In fact the tree planting had a problem from the begging. That is the trees were planted much apart leaving many open places. The other problem for instance the trees planted during dergue did not gave us benefit ('tid'). But now, although, SOS-Sahel asked us as what types of trees have to be planted and we commented such as eucalyptus, and other trees that pay-off us immediate benefits should be introduced. Still the problem is that there are some exotic trees most of which being died.

Q9. Then what are the best alternatives to sustain the activities in your opinion?

Answer - In Wolaita (they refer to their nationality) people believe some one advocating one thing .i.e there is a need of continues strengthening and follow up, there is lack of self- initiation. Hence unless there would be continuos technical and material assistance the common concern and unity will never come, the conservation work group will even come to cease now. So the external support is necessary for strengthening the activities. The second group depart from the above argument is in Konso one farmer's plot is more than this all communal land which private owners manage by themselves. However we want to stress the Biblical phrase ' the king is not trusted in his home land 'otherwise the project/some government body will take the back-up service the community may not strictly follow the rules and regulation and the guidance of catchment leaders already set so external assistance is necessary.

Comment: The guards seems not satisfied with their assignment about, although till now they have been protecting the conservation site it is because of FFW/CFW incentives. But I do not think that they would continue. For instance while I am taking fieldwork around that off-farm conservation site for about 15 days I usually see that cattle were grazing near and around it. So the continuation of the guards in protecting the structures is not guaranteed although thy have been promised that they could use grass and wood after its regeneration. How about the other members of the community who were involved in actual work? If the other community members raise the issue of benefit sharing how could it be managed? First and for most whose land is that? to my understanding it is no ones land in Ethiopian context. In such case getting immediate solution for tenure issue is complex and that is the would be persisting problem not only in Ethiopia, but also in

CCRDA

many parts of the Third World. Therfore ensuring the user- fract right will minimise the problem and seems to ensure the sustainability of the conservation

6b- Informal Discussion with Ato Aca Dakamo

He is a farmer in Doge Mashido PA in Milke catchment. His house is near to the Sudo Mt in the upper most stream. He has currently construed about 600 meters of stone terrace in 7 rows. I had in formal discussion with him and later inscribed from the tap-recorder.

Q1. How do you managed to build this structures?

Answer _ In most case I myself largely engaged in constructing the stone terrace, by working day and night. Constructing stone terrace is the most labor intensive task. But latter after the introduction of catchment /community approach the other members of the catchment has supported me.

Q2. Would you explain if nay difference on your farmland before and after the construction of this structures?

Answer – Yes there is great difference. As you can see my house is located near to Sudo Mt. For long period of time I had been suffering from concentrated gully erosion from this hillsides. Whatever I sow had been washed away. Let alone crops even grass did not grow on this plot for the long period of time. Now I have at least seen temporary benefit after the construction of structures. But it is the cut off- drain that was put at the top that highly reduced the erosion hazardous. So now fertilizers and seed at least remain on farm plot. Also in last two to three years there is yield increase.

Q2. Is there any relation between on –farm and off-farm activities near to your plot in your opinion?

Answer- yes there is direct relation, even what gave me relief is not the stone terraces in my own plot but, rather the cut-off-drains on top of the hills and additional hillside terraces constructed at the bottom of the hill. Unless the off-farm conservation activities are continuously stabilized my effort alone would not yield benefit.

CCRDA

Q3 Do you think that community would continue to participate in off-farm conservation activities after the withdrawal of the project by self initiation?

Answer – I don't think that, because it already was started by FFW and it seems people might expect that. So incentives would be necessary.

6-c Informal Discussion With Ato Asale Tantu

He is one of conservation work group /team leaders in Milke catchment. He is about 45 and grade 7. The author had informal interview with him on some issues related in land use and cropping calendar.

Q1 Would you tell me the traditional land use pattern here ?

Answer - yes, the traditional land use system is as follows:

A . Front yard (*kare*) – it is used for recreational and social purposes

B. *ketasa* – house yard where the house is situated

c. *Darkuwa* (homestead field) – this is the most important part of land in woliata , it is created through systemic enrichment by manure and refuse. Mostly used to grow enset and coffee.

D. Root fields – taro land in most cases the root crops such as taro and sweet potato are grown.

E. Shooqa- this is relatively wider part of the plot and used for cereal and grain production

F. *Otta gade* – is fallow land but ,currently due to population pressures it has been greatly minimized. In earlier times banana and other less harmful trees are planted to enrich its fertility through leaves.

G. *Matta gade* –grassland for cut and carry as there are no communal lands in Wolita.

H. *Mitta gade* –this is wood lots, in most case it is the reach household do have such lands.

Q2 would you tell me the most important crops grown in Kindo Koisha and the cropping seasons.

Answer - yes, there are two most important cropping seasons especially in highlands and Mid highlands. The first one is *gaba* ('belg' season) from March to May – the most important crops grown in this season include, *whoh*e, *Dono*, sweet potato, taro, wheat and maize. The other season

CCRDA

is *Silla* from July to December and crops like Teffee, maize, and different forms of beans are grown.

6 -d informal Discussion with W/ro Aykale

She is female household head in Bade Woyde PA in Milke catchment. Her age is about 55 and I asked her about both her participation on off-farm and on -farm conservation activities and the importance of additional income sources to under-take conservation activities.

Q 1. Participation – I participate in conservation work group representing my household. Otherwise the catchment groups are not volunteer to engage in my plots. In fact there is prejudice about female participation in physical work like consecration. The long rooted prejudice is that 'the land would not germinate and even if it germinates it will not satisfy'.

Q 2 How do you see the importance of off-farm income in relation to NRM activities.

Answer – it is very important to carry out the conservation activities. Otherwise, the households will become reluctant and go out for search of casual job. For instance I was the member of women SCs and got some amount of birr to engage in petty trading and cotton spinning. Hence, through that process, I bought one cow on share basis .Thus, as you can see now my *darkuwa* is getting its little refuse and my children get little milk for healthy labour. So additional income source is necessary to engage in NRM activities.

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Annex -7

Ato Mokonnen Demissie - SNNPR BoPED NGOs & Multilateral Projects Division Co-ordinator

Q1. What is the responsibility of the Bureau NMGOs operation?

Answer- The responsibility of BoPEd in NGOs operation include: co-ordinatiing overall NGOs activities, signing project agreements and monitoring and evaluating the out come of the projects.

Q2. How many environmental NGOs currently operate in SNNPR?

Answer- There is about 70 international and local NGOs currently working in 9 Zones and 5 special Weredas of the region. The main areas of intervention include education, Agriculture and NRM, infrastructure development, health care and social welfare activities. Out of this about 24 integrate natural resources management in their intervention.

Q3. On what basis do you determine the length of project period especially for NGOs integrating NRM in their intervention?

Answer- basically the region does not have it' own NGOs operation guideline. But on National Disaster Prevention and Management Policy the maximum project agreement period is 5 years. But in most cases it is the resources and the capacity of NGOs that is serving as a determinant factor. In some cases with the local NGOs with limited resources we sign projects for two years period also. We do not force NGOs, rather it is their resource capacity that is determining the project period in all sectors. The other trend is we conduct terminal evaluation after the first 5 years. If there are symptoms of un- sustainability and if the implanting project has resources we allow the operation for the next 5 years. In general an NGO can not operate in one project area for more than 10 years. The reason is to distribute the resource, allocation.

Q4.What are the most frequent problems you have observed in NGOs NRM

Answer - Although I am not sure of the sector specific NGOs problems there are general problems related with NGOs operation. This include; 1) Some NGOs do not have base-line survey document. NGOs activities are decentralized to regions before 4 years in 1996. Most of NGOs started the agreement with Federal DPPC do not have baselines survey documents. That means clear (precise) problem identification work might have not been carriedout, but some NGOs with better material

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human resource capacity did it. 2) The other problem is the phase-out strategy is also recently developing issue. But now we do not sign projects without fulfillment of baseline documents and phaseout strategy. 3) As NGOs are with limited resource capacity and working in limited localities then the project has to be handed over either to the community or the government or for joint ownership. The community or government has to become capable of handling the project both materially and technically. The sustainability issue may vary from project to project. In some projects training can ensure it in the other case income generation mechanisms / or both of the mentioned may be necessary. So currently we are critically following that NGOs should incorporate their phase out strategy as part of project agreement.

Q 5. How do you evaluate NGOs in NRM in this SNNPR?

Answer: in our region NGOs are really contributing by filling gaps in areas where government involvement is less. NGOs play great role in rehabilitating Natural Resource base, human resource capacity and infrastructure development etc..

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Annex-8

Ato Tefera Mekuria- Physical Planning Team Leader (BoPED) & Regional Conservation Strategy Task Force_Co-ordinator

Q1. How the task force was organized?

Answer- At regional level there is a committee known as Regional Environmental Co-ordinating Committee (RECC) which is accountable to the Regional Council that is initiated by CSE. This committee delegated further its responsibility to the regional conservation strategy task force. The task force has been organized from the concerned bureaus. These bureaus include: Bureau of Agriculture, Bureau of Health, Bureau of Education, Bureau of Water Mining and Energy, Bureau of Urban Development, and Bureau of Trade and Tourism.

Q2. What so far has the task force achieved?

Answer- In its progress the task force has

- defined terms of reference
- collected the necessary data from 9 zones and 5 special weredas of the region.

- Compiled the conservation strategy documents which include: 1) Volume 1-natural resource base of SNNPR 2). Volume 2 - Policy /strategy for sustainable natural resources management in the region, 3). Volume 3 - institutional framework and operational arrangement i.e. who/how the policy will be implemented. At federal level there is EPA but at the regional level it is the RECC through the task force that is co-ordintiong the activities. Other than there is no responsible body, but for the future there must be some organ that will be responsible for the overall activity. It has been to proposed to organize Regional Environmental Office (EPO).

Q3. How the role of NGOs has been reflected in draft Regional Conservation Strategy?

Answer- There is about 24 NGOs in the region integrating NRM issue in their intervention. Currently NGOs are highly contributing for rehabilitating the Natural resource base of the region. There fore under draft conservation strategy the contribution and roles as well as the would be responsibility of NGOs has been reflected. For instance 1) In volume 2 the strategy has been outlined how to utilize the potential of NGOs How they should be seen in the regional

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environmental policy? 2) In volume IV it has been also indicated, What & how the NGOs are going to rehabilitate the natural resources base in the region. The author has also cross-checked the documents

Q 4.when would the policy be implemented?

Answer- In fact different concerned bureau are undertaking their environmental management activities but what is undergone now is to bring activities under responsible regional environmental organ in the integrated manner. The necessary documentary work has been finalized. So what is left is organizing the responsible organ which can play the co-ordinating role and the approval of policy documents. In the nutshell it is the approval of regional council that is being excepted.

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Annex-9

Ato George Alambo- NGOs & Investment Desk Expert (SNNPR BoA)

Q1. The relation and responsibility of the Bureau on NGOs NRM operation?

Answer- The Bureau takes the over all responsibility of signing agreements with NGOs in NRM. We also monitor the projects while progress and conduct terminal evaluation before the phase out of the projects.

Q2. What are the main issues you give consideration during the project agreement with NGOs?

Answer - We look the project proposals of NGOs .Then we some time include expert/s opinion before signing agreement. Basically we do not force NGOs ,rather encourage them what ever they like to do.

Q3. Is there any package out-lined by the Bureau for environmental NGOs as how should the intervention look like?

Answer- we do not have as such clear outline. As indicated above the experts opinion that is used. Rather it is the interest of NGOs that is determining. We do not have specific guide line for that matter. But the author of this paper questions, that What the reference for the technical expertise to say the project document is right or wrong ? Partial / complete? How about the personal bias of experts and subjectivity? Can't it lead to lack of standardization of project documents?

Q4. What is the basic difference between the Bureaus and NGOs NRM intervention?

Answer- basically there no difference. But there are some differences 1) NGOs integrate agronomic practices with structural methods that are less frequent in GOs operation. 2). As NGOs are working in limited areas with better human and financial resources as compared to government intervention there is effective implantation. 3) The local participation is better as compared to GOs operation. For instance there are some NGOs which are positively influencing NRM activities in our region like SOS-Sahel working in Kindo Kiosha. Now it has started to replicate its watershed management experience to other 5 weredas in the region.

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Q5. What type of environmental NGOs are common in SNNPR?

Most of the environmental NGOs in our region are the implementing ones and it is such type of NGOs found to be effective. In fact there are some NGOs also involve in building the capacity of the community, advocacy(environmental education like LEM -Ethiopia and the Center for Human environment), Research based(such as FARMAFRICA).

Q6. Do you have any mechanism of ensuring the technical safety of NRM technologies introduced by NGOs?

Answer- We have shortage of skilled human resource. But sometimes during monitoring we crosscheck activities. Indeed until this day we did not carry such kind of activities. But for the further this question will give us good insight to reconsider such issue during project agreement.

Q7. Can you mention the most prevalent problems associated with NGOs NRM intervention?

Answer- although we do not have clear evidence but findings from terminal evaluation shows lack of the dissemination of like training impacts.

Q8. How do you see the sustainable of NGOs NRM interventions?

Answer - Many of the interventions do not sustain. This is due to as I have indicated above the community /the government sector offices do not develop the necessary capacity in many cases.This is not due to the failure of NGOs but the frequent change of government structures an officials and lack of awareness by the community. For instance an international NGO CONCERN Ethiopia initiated NRM both on communal and private lands following the 1984/85 drought in Damot Gale Wereda Of North OMO Zone yet the whole intervention has been collapsed after the with drawl of the project. So for this mater it is better if NGOs could develop.1) Indigenous NGOs before their phase out 2) .Closely work with church based NGOs during implementation so that widen the degree of replication and sustainability as the later do not phase oue in most cases..

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Annex-10

Informal Interviewee with Federal DPPC Officials

Ato Grima H/ Mikale- head, project Evaluation and Monitoring Team leader.

Q1. What is the role of Federal DPPC in relation to NGOs operation

Answer – The role of DPPC is overtaking general co-ordination. Creating the first link with sector Ministries. In addition we also monitor and evaluate the progress of projects. Further more we carry out registration and issue NGOs operational /technical license. Where as the mandate of issuing legal process is the mandate of Ministry of Justice (MOJ).

Q2. Is there any difference in between the NGOs and GOs based NRM operation in Ethiopia as far as you Know?

Answer – Basically there is no difference. But some of the NGOs are implementing by themselves, while others are strengthening the capacity of sector offices and community. Indeed the major difference is though it is in smaller scale NGOs integrate variety of methods for instance agronomic measures, were not common in GOs interventions.

Q3. How do you weight the contribution of NGOs based NRM interventions in Ethiopia.?

Answer - As compared to the amount of finance invested the achievement is far below the expectations. The reasons for this:

1. The approach of most NGOs is not community based. There is minimum sector offices and community participation. Projects are designed haphazardly, that really undermines the whole efforts of NGOs.
2. The NGOs are not following holistic /integrated approach even in sector interventions. This can be ensured by real participation of the stockholders and clear identification of problems to be addressed if projects would sustain.

Q 4 . Is there sector specific strategy for Environmental NGOs as how there NEM packages should look like?

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Answer – That is really the mandate and responsibility of sector offices. But as far a I know due to frequent change of sector Ministries concerned with NRM there is no clearly outlined policy as how the packages of NGOs programs should look like. The trend is that NGOs present their project proposals and hence based on the discussion and comments that become operational guideline. Yes, the necessity of sector specific strategy for environmental NGOs is unquestinable.

Q5. How do you see the sustainability of activities undertaken by environmental NGOs in Ethiopia.

Answer – Yes the issue of sustaining the NRM intervention undertaken by environmental NGOs is the concern of the day. In most cases however there is problems, the intervention usually did not sustain. The farmers themselves destroy the structures, after the withdrawal of the project. Number of reasons could be mentioned for this:

There is lack of needs assessment/identification on the interventions to be carried out. Areas of intervention are not clearly delineated.

Technical problems.- type of technical measures. They are not properly and concisely selected. Particular technology being introduced has to efficient as well as safe. The technology should be pre-tested with in the country context, by concerned bodies such as agricultural research institutes. The sector officials have to ensure the suitability and appropriateness of technology. Absence of genuine stakeholders participation right from the beginning. Absence of termination procedure /phase out strategy- problem at the onset of the project design – the phase out strategy has to be outlined clearly, as how will the project activities will sustain after the withdrawal of the project? Are the beneficiaries /local government/t both /would run that project? From technical as well as financial point of view. Raising such issues at the planning stage will minimize the risk of project sustainability (ownership).

Q6. Some people argue that the short project operation is one of the reasons for the failure of NGOs based NRM interventions /what is your opinion for this.

Answer – it is not convincing, that has been done purposefully for two reasons; one NGOs have limited financial commitments for sector tasks. The other is in order to avoid the dependency syndrome that would arias from extended external assistance both technically and materially. But the author based on the current literature and case study materials from other countries experience disagree with the above DPPC officials explanation. At least the environmental project phase out

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period should not be less than 10 years. Because it takes time to see results from NRM interventions . If the pioneered introduced technology or approach becomes less effective , there has to be time to change both the strategy and technology. For instance SOS Sahel 's case the first 1992 –95 individual farmer based approach gave good insight to the project to reconsider its approach and replace by community approach which is more or lees successful as compared to the previous one.

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Annex- 11

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LOCAL DEVELOPMENT STUDIES

Interview Format For WVE & Action Aid Ethiopia NRM Expert/section

The objective of the Questionnaire: This instrument is designed for the purpose of gathering information regarding SOS Sahel based NRM programs in Kindo Koisha district, Southern Ethiopia. So you are kindly requested to provide accurate information as much as possible. The final paper that will be written based on the information you have provided is intended to serve for an academic purpose.

Interviewer_____ Date_____ Time Spent_____

Personal Information

1.Name_____

2. Educational background _____Qualification_____

4.Working experience (in years) _____

5.For how long have you lived in the project area_____

Subject Matter

1. Does your organization carry out NRM-_____
2. If yes when did it start its operation? _____
3. What are the NRM technologies introduced?
4. In which local areas of Ethiopia are you working?
5. From above NRM technologies which are incorporated from local ones?
6. Who else involves in the planning of NRM technologies other than your organizatin?
7. What is the approach followed by the organization?
8. How do you see the attitude of local people towards ythe intervention and why?
9. Who have you trained in differrnt NRM technologies and con

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11. What are the most frequent problems of your beneficaries in relation to NRM and how is that addressed by yhe project/
12. What incentives do you provide for beneficaries to undertake conservartion measiures/
13. Do you think the intervention would sustin?
14. How can you justify that?
15. Any thing you would like to add in relation to our disc ussion?

Thank you

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