

# Benefit Sharing Mechanisms for the Bale Eco-Region Sustainable Management



Final Report

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## Acronyms & Abbreviations

AFE	Arsi Forest Enterprise
BER	Bale Eco-Region
BERSMP	Bale Eco-Region sustainable Management program
BFE	Bale Forest Enterprise
BMNP	Bale Mountains National Park
CBOs	Community Based Organizations
CF	Carbon Finance
CFUG	Community Forest User Groups
CWLC	Community Wild Life Conservancy
NDF	Nature Development Fund
NGO	Non-Governmental organization
NRs	Natural Resources
NRM	Natural Resources Management
NTFPs	Non-Timber Forest Products
NWFPs	Non-Wood Forest Products
OFESA	Oromia forest enterprises supervising agency
SFM	Sustainable Financing Mechanism

## Executive Summary

- This report presents results of a consultancy work done for BERSMP to (i) identify natural resources based revenue generating goods and services and quantify the amount of revenue that can annually be generated from the sources, (ii) provide a detailed framework for benefit sharing among relevant stakeholders, and (iii) suggest appropriate institutional framework necessary for the implementation of the benefit sharing mechanism.
- The report covers four districts that are the targets of the first phase of BERSMP. These are Goba, Delo Mena, Nansebo and Harana Bulq. Data for the report were acquired through field visit, reviews of relevant documents and interviews of key stakeholders.
- From the products side (i) Non-Timber Forest products (NTFPs) excluding firewood but including forest coffee, honey and bamboo, and (ii) wood based products comprising lumber and firewood are found to generate considerable revenue in the short term. From ecosystem service side Carbon Finance (CF), (ii) Trophy hunting, and (iii) sport fishing and associate ecotourism activities such as trekking and eco-lodging are found to have high potential to offer revenue in the short term.
- The gross annual revenue generable in USD\* from the identified products and services in the four districts are the following:
  - NTFPs (excluding firewood) = 1,665,681,210-2,086,826,655 Birr  
= (148,721,537-186,323,808 USD)
  - Wood products = 758,902,292.64 Birr (67,759,133 USD)
  - CF = 78,557,051 Birr (7,014,022.4 USD)
  - Trophy hunting = 6,660,000 Birr (594,642.86 USD)
  - Sport fishing & its associates = 493,500 Birr (44,062.5 USD)
- Different benefit sharing schemes and institutional set-ups are proposed as presented below:

### A) Institutional Arrangements:-

#### i) *For the NTFPs:*

- ❖ NTFPs such as forest coffee, honey and bamboo are produced today individually in BER and there are different customary arrangements used by the locals to access these resources. In most cases, these NTFPs traditionally privately owned and there exist customary institution governing access to them. Indeed, we suggest this individual (household) based production model that operates in accordance of the existing customary production system to be adopted. The production model requires granting exclusive use right to individuals that hold customary access right over the NTFPs, and formally recognize their customary institution. With this regard BFE will be a marketing, packaging, processing, sale and transporting centre for the region's NTFPs industry, while the farmers will be the suppliers of the raw materials.
- ❖ Based on demand, BFE and BERSMP may facilitate and assist the formation of NTFPs producer cooperatives, probably specific to each product. BFE can enter into formal contract for NTFPs supply with individual producers and/or their cooperatives.

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\* At the time of the work 1 USD = 11.20 Eth. Birr

- ❖ To improve the efficiency of the NTFPs based enterprise development both BFE and BERSMP need to work on setting up appropriate purchase stations and sub-stations and to form network of product delivery mechanisms within the eco-region.
- ❖ Additionally, BFE & BERSMP need to offer services such as training on production systems, post harvest product handling (storage, transporting, etc.), and regulatory requirements that will insure quality products delivery.
- ❖ To avoid the negative impacts of the NTFPs extraction industry on the ecosystem, BFE, BERSMP and the community need to workout guidelines that guarantee sustainable harvest, which should then be ratified by all parties.

ii) *For the wood based products:*

- ❖ The management of all the forests of the eco-region need to be arranged in joint forest management (JFM) scheme in which CBOs called herein Community Forest User Groups (CFUGs) and the BFE share joint responsibility of managing the forest area.

iii) *For the Carbon Finance:*

- ❖ With regard to the CF we suggest the same institutional set up as that of the wood based product above. In a previous study, three separate institutional arrangements were suggested for managing the CF, but we are of the strong opinion that only one:– joint CFUGs – BFE arrangement suffices and is also the most practical.

iv) *For the trophy hunting:*

- ❖ BFE and BERSMP need to intensify their push for transferring the concession areas presently operated by private firms to BFE. Then, let BFE manage these concessions jointly with local communities living around these concession areas. These communities can be organized as Community Wildlife Conservancies (CWLC). Finally, the trophy hunting operation can be arranged in joint CWLC-BFE scheme. If necessary they can lease the actual hunting operation to private firms.

v) *For the sport fishing and associated opportunities:*

- ❖ Communities that share lands around the facilities need to be organized as ‘river associations’, legalized and given exclusive rights. The associations can run the business themselves or can lease it hotels or other legal agents.

**B) Benefit Sharing**

- ❖ For the NTFPs, harvester individuals and/or their cooperatives having exclusive use right collects all the revenue accrued from sale of the NTFPs. But these individuals and their cooperatives need to pay 5-10% of their sale revenues as Forest Development Fund (NDF). This fund together with other similar funds will be reinvested and support forest and Wildlife management efforts by BFE & CFUGs,
- ❖ Benefit accrued from sale of wood products (lumber + firewood) and Carbon Finance (CF) is suggested to be shared at 40%:60% (of the net revenue) between CFUGs and BFE. This proportion is set based on (i) suggestion made by the community on the amount of share they reckon as strong incentive to be motivated for involvement, and (ii) which also matched with the calculation made based on opportunity loss incurred when community revert to conservation by forsaking conversion of forest area into croplands. Of the revenue share from wood sale and CF 5% from each party, which means 10% altogether, should be reserved as FDF to be reinvested in forest management,

- ❖ For the trophy hunting, if the transfer process is successful and BFE and community jointly manage it, revenue accrued from hunting operation will be shared as above 40%:60% (net revenue) among the community and BFE respectively. Here again 5% from each party can be recalled as WLDF to be used for post program sustainable funding of the wildlife conservancy,
- ❖ Income from sport fishing, eco-lodge and accompanying ecotourism operations will go to the river association, who will be granted exclusive right. However, they should also assist the JFM scheme by paying tax of up to 5-10% of their net revenue for the FDF, and
- ❖ Tax will be paid to government body (to the appropriate local government) by all parties as per existing income tax legislation from their respective incomes. These taxes can be designated as income tax from natural resources extraction.

### C) Implementation Modality

- Establish the appropriate CBOs as suggested above, legalize these CBOs, BERSMP has to work hard in capacity building of these CBOs, their management in terms of financial administration, auditing and the like,
- Negotiations on the suggested benefit sharing schemes and incorporate the agreement reached on benefits sharing clearly in FMA to be signed.
- Establish FDF and WLDF collection and administration unit within BFE,
- Capacitate this unit with the necessary skill such as database management, accounting system and the required infrastructure,
- Put in place a transparently functioning external and internal financial auditing system, and
- We suggest a board of governance that oversees the NDF and WLDF to insure high transparency and grant community confidence.

### D) Policy environments and legal issues

In general there are conducive policy and legislative environments both at Federal and Regional State levels within which it is possible to implement community based natural resources managements, revenue generation and retention. Specifically, the Oromiya Regional State's forest policy and the legislations of OFESA & BFE form strong basis for local participation in forest management, benefit sharing, revenue retention and contribution to their wellbeing and community development. Experiences from the previous PFM practices such as the case of Chilimo and Dodolla set good examples. Although Ethiopia has no shortage of policies, there are severe constraints with respect to legal issues, particularly in the area of law enforcement. Furthermore, the incompatibility of cooperative legislation with CBOs for natural resources management is a major bottleneck on legal grounds.

## 1. Background

The Bale Eco-Region Sustainable Management Programme (BERSMP) is a program designed by FARM Africa/SOS Sahel in partnership with Oromia Regional Government, Oromia State Forest Enterprises Supervising Agency (OFESA), and Oromia Food Security and Disaster Prevention and Preparedness Commission to contribute to the sustainable management of natural resources and their ecosystem in the Bale Eco-Region. The program began in 2006 and will run until 2011. The programme is implemented in two phases, each phase lasting three years. Phase I run between 2006 – 2008, and phase II will cover the periods between 2009 – 2011. The programme covers thirteen districts namely Agarfa, Dinsho, Adaba, Dodola, Goba, Sinana, Gololcha, Gasera, Delo Mena, Harena Buluk, Kokosa, Berbere, and Nansebo (Fig. 1). In the first phase of the programme implementation, it operates in four districts namely Goba, Harena Buluk, Delo Mana and Nansebo. Experiences gained from these pilot districts will be extended over to the remaining districts during the second phase.

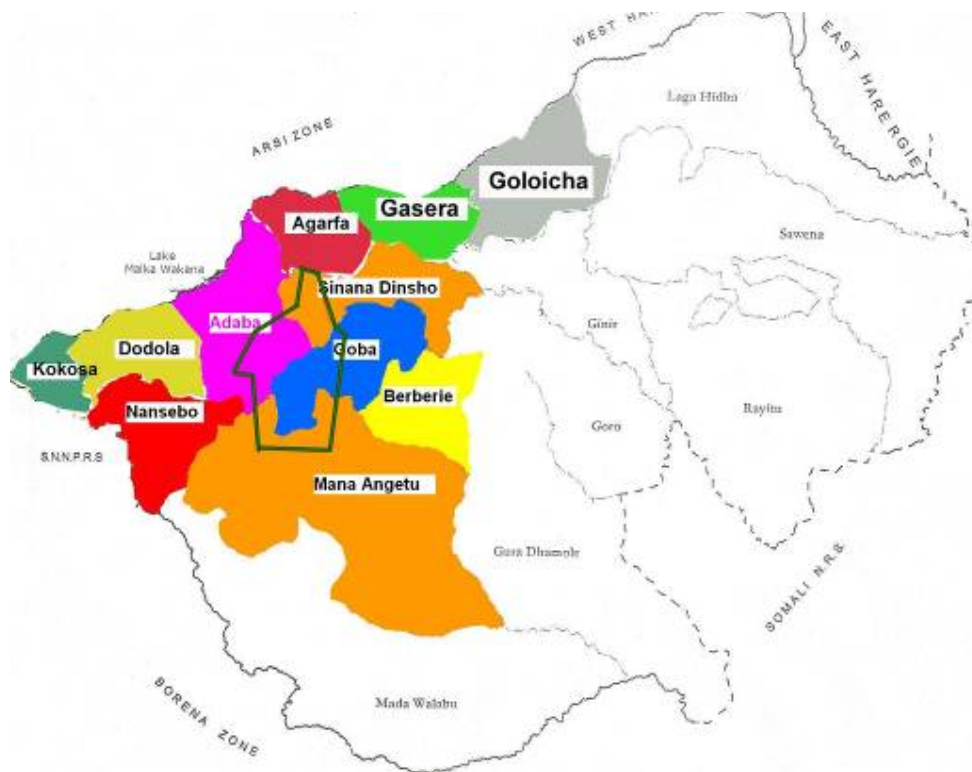


Fig. 1. Map of Bale Zone showing impact districts

The BER is a uniquely biodiversity rich ecosystem with the largest Afromontane forest and large number of endemic flora and fauna species in Ethiopia. However, pressure is mounting on this important and unique ecosystem from a growing population, pervasive poverty and increasing need to meet local livelihoods. Given the prevailing poor natural resources management system in the eco-region, sustaining the ecosystem services and flow of its benefits in the future is hardly possible. This is what BERSMP has identified as the core problem of the eco-region.

The program goal is to enhance the mutual benefits between the sustainable management of the unique biodiversity and vital ecological processes and the socio-economic well-being of

natural resource dependent community in the Eco-Region. The programme has specified six non-exclusive outputs, which are:

- Eco-region plan developed and used
- Stronger Government and Community institutional capacity for sustainable NRM,
- Functional and sustainable NRM and conservation systems in place, incorporating different environment and community needs,
- Community natural resource based livelihoods diversified,
- Sustainable financing mechanisms in place for the Bale Eco-Region which benefit government and communities, and
- Improved / appropriate legal, policy and regulatory frameworks for Eco-Region planning, CBNRM and Protected Areas.

This consultancy work aims in achieving the fourth bullet: putting in place Sustainable Financing Mechanism (SFM) that benefits government and communities and that ensures post program sustainability of natural resources management in the Eco-region. The ToRs given for the work are listed in the following bullets:

- To assess natural resource based revenue generating goods and services the benefits of which can be shared between concerned stakeholders in the context of the BERSM programme
- To provide the BERSMP with a detailed framework for benefit sharing among relevant stakeholders
- To assess and recommend appropriate institutional framework necessary for the implementation of a relevant benefit sharing mechanism, and
- Based on examples of Bale and West Arsi forest enterprises, to workout an implementation modality for the “community development fund” that is ear marked by OSFESA for community development undertakings.

## 2. Scope of the Report

BERSMP is designed to cover a large spatial area equivalent of 2.2 million ha. The program area comprises about thirteen districts mentioned above. However the program attempt to cover the areas phase by phase and in its first phase (2007-2009) the project is working mainly in four priority districts namely Goba, Harena Buluk, Delo Mena and Nansebo. Consequently, in most cases data and information collection and compilation through the program are limited to these four districts so far. Even then and unfortunately some of the information and data available are of limited spatial coverage, e.g. forest coffee and honey is assessed in three of the first phase four districts. These limitations do not allow a comprehensive assessment of goods and services deliverable by the eco-region and consequently the revenue generable across the entire 13 districts of the program districts.

Moreover, the revenue information collected and presented in this document is based on current local market prices. As there are uncertainties in market prices, the revenue figures should always be counter checked in terms of available market prices at the time of use of the information. All financial information presented is also gross revenues and cost-benefit analysis has not been made. As there might be a lot of cost involving in realizing these revenues, we suggest that the figures should be carefully interpreted.

### 3. Description of the Area

#### 3.1. Geographic location

The study covered four districts, which are the focal districts during the first phase of the programme. These are Goba, Harena Buluk, Delo Mena and Nansebo. The first three districts are located in Bale zone while the last is in West Arsi zone of the Oromia Regional State, Ethiopia. The geographical location of the four districts can be extracted from fig. 2.

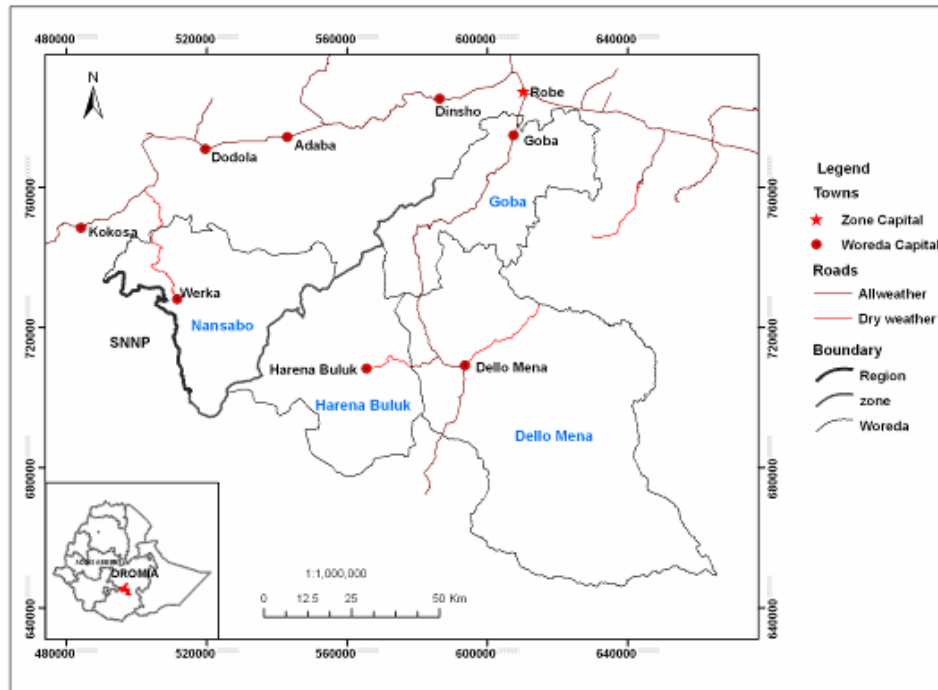


Fig. 2. Location of the four districts covered in this report

Land area and population statistics of these four districts are summarized in table 1 below. Current population density as shown in table 1 seems small compared to most of the Ethiopian highlands, however, local sources prompt that population in the area is on the rise. Both natural birth and immigration from other parts of the country are contributing to the raising population of the eco-region. The polygamous marriage system in the area is the major contributor to the high natural growth rate of population in the area. The raising population is a real threat to the natural resource base of the region, and if allowed to continue will threaten the possibility for sustainable management of the resources and the promotion of rural livelihoods on the basis of the natural resources in the eco-region.

Table 1. Population statistics of the four study districts of BER

District	Area (ha)	Total population	Rural Pop.	Urban Pop.	Density (rural) (No./km <sup>2</sup> )
Goba	163,700	73,653	40,737	32,916	45
Delo Mena	483,500	93,655	80,593	13,062	19
Harena Buluk	193,100	81,482	76,590	4,892	42
Nansebo	169,900	114,524	108,462	6,062	67
<b>Total</b>	<b>1,010,200</b>	<b>363,314</b>	<b>306,382</b>	<b>56,932</b>	

Source: CSA (2007)

### 3.2. Livelihoods and natural resources dependency in BER

People living in BER are inextricably dependent on the local natural resources for livelihoods. Farming (crop and livestock) is dependent on the ecosystem services (ES) obtained from the forests and wooded vegetation of the region. The forests and natural areas provide both fertile cropland when converted and other wise used as natural rangeland for livestock grazing. Furthermore, the rich biodiversity of BER is providing diverse goods particularly NTFPs that have been collected and traded by locals to augment their cash and subsistence income needs. For thousands of households inhabiting the BER harvest and trade of NTFPs is an economic necessity. Studies carried out in some of the districts (Neima, 2008; Arsema, 2008) confirm this fact. Most households extract and trade a number of NTFPs principally honey, bamboo, coffee and firewood. For instance, Arsema (2008) showed that on average 47% of annual income of households Shedem PA of Goba district is derived from bamboo sale. Similarly, Neima (2008) reported that NTFPs contribute on average to 54% of household total annual income, which was greater than the income from agriculture that contributed to 38% of the total annual households' income for households living in and around Harena forest. The study by Neima (2008) also showed that over 90% of forest coffee, honey and bamboo and significant quantity of firewood collected form the forest are taken to market for cash income generation and this means that the NTFPs industry is the pillar of cash income source for the households in the eco-region.

As agro-pastoral community, keeping many heads of livestock is considered as indicator of wealth. Forests and natural grasslands in the BER are the major sources of fodder that sustain the animal production of the community for millennia. Indeed, the natural resources in general and the forests in particular are the basis of local livelihoods. In general, to the community in the BER forests are everything and when expressing the inter-link between the forest and their livelihoods they use the proverb of *'fish & water:-as much fish can not live without water so do we without forest'*.

Yet, forests and their ecosystems are fast degrading in the BER. At the expenses of forest lands croplands are expanding, particularly over the last few decades (Table 2). The conversion and degradation of forest in the region has its root in the property right related arrangements of land and forest resources. While farmers do not have legal claim over the forested landscape, they can readily and easily achieve the title of use right over cropland once they clear and cultivate it. Thus, clearance is a means towards realizing private ownership of land, which is an incentive for the local people to continuous clearance. Nonetheless, whether perceived or not, forest disappearance or any action that limit access to the forest would have greater impact on the livelihoods of the people. To sustain the role of forests in the livelihoods and conserve the resources for other ecosystem services introducing improved management systems such as those launched by BERSMP are crucial.

Table.2. Cropland expansion in four districts in the BER.

District	Cropland			
	1986 (km <sup>2</sup> )	2006 (km <sup>2</sup> )	Change	
			km <sup>2</sup>	%
Dallo Mena	143	495	+ 352	246.2
Harana Buluk	166	388	+ 222	133.7
Goba	303	396	+ 93	30.7
Nansabo	151	404	+ 253	167.5

Source: anonymous (2007)

## 4. Benefit Sharing Mechanisms in Collaborative NRM

Collaborative (participatory) forest management is gradually deep rooting and gaining wider recognition in Ethiopia. However, despite the relatively good experiences gained in the approach, the matter of how to establish clear, transparent, fair, motivating and simple benefit sharing mechanism is an issue to be solved with concern. The term benefit sharing involves a balance between access to natural resources and the gaining of equitable dividend from revenues generated from utilization of the resources. The notion of benefit sharing goes beyond one time compensation payment. It requires treating the communities that host the natural resources as legitimate partners and co-owners.

Benefit sharing is a prominent theme in thinking about ways to sustainably develop and manage natural resources based projects, and equally important, to improve equity when allocating the benefits and costs within society. This reduces the risks for all concerned, while creating significant long-term development opportunities for those households and communities most adversely affected by natural resources management project interventions. Experiences from around the world show that benefit sharing is positive from all stakeholders' perspectives and in all forms of projects. It allows project affected people and traditional resource users to become partners in the natural resource related project that they effectively "host" in their local community, or in their wider watershed community. From the government perspective, benefit sharing is a practical policy tool to achieve greater social inclusiveness and to balance social, economic and environmental factors in the planning, design, implementation and operation of natural resources management projects. From the project worker perspective, benefit sharing increases capacity to work effectively with local communities. Good community relations are important for a number of reasons, ranging from cooperation in land preparation and management measures that improve the out of the target project, to cooperation with implementing any activity related to the target project. From the perspective of potential investors, either from the public or private sectors, the presence of an explicit policy framework and practical provisions for benefit sharing is an indicator that locally affected communities are likely to support the project. As a consequence, the investor's risk exposure is reduced and investors are more inclined to become financing partners.

Collaborative (participatory) NRM has usually dual objectives: one is to guarantee sustainable NRM through shared roles and responsibility between the State and local community; and the second is to contribute to sustainable livelihoods and community development by optimizing resource use and generating income through legal and sustainable exploitation of natural resources. The generated benefits are usually shared fairly and equitably between participating parties or stakeholders. Benefit-sharing is a potential remedy for a wide range of conflicts of interest between groups claiming ownership over resources or sharing responsibility and roles for co-management.

Under open access situation, local communities extract unlimited volume of products that may fetch them considerable revenue. Given such a situation, shift towards collaborative NRM does not necessarily guarantee better revenue. However, open access has also a number of drawbacks some of which include: (i) degradation of ecosystem and loss of their biodiversity from unrestricted harvest, (ii) declining income (cash and subsistence) over time as the result of decline in stock, and due to low bargaining power of the people due to designation of such actions as 'illegal' by the State, and (iii) above all unfair distribution of income since elites and most influential groups snatch most the benefit from the trade.

Introduction of collaborative NRM is expected to reverse these trends and introduce a system of management that is good both to the resource and the people. In this context, collaborative NRM has several advantages. First legalization of trade for the products extracted from the sustainable NRM can fetch better rewards because the products will be sold often at higher prices on legal and proper markets, and if necessary also after value added processing. When properly linked to market the higher prices paid can justify collaboration even when shared over the open access revenue generated under illegal trade. Second the utilization of natural resources is regulated and thus makes the income sustainable. Third, collaborative NRM will result in fair and equitable income distribution, and thus make the benefit to reach more community members as opposing to the elite snatch from illegal exploitation. Most importantly, it can provide many households, particularly the poor and women, access to cash and other benefits that they never have had before.

Nonetheless, collaborative NRM has to carefully weigh the balance between its dual objectives of (a) sustaining the natural resource base, and (a) improving livelihoods through revenue generation. Too much of the first will conserve the resource but will not provide sufficient economic benefits to the local community who will eventually deplete the resource to make a living. Likewise, too much of the second will entice earning more profit than what the ecosystem can sustain, thereby causing degradation of the ecosystem and the demise/disappearance of valuable species.

#### *4.1. The nature of Benefits in Collaborative NRM*

Benefits accrued from collaborative NRM can take different forms. The options include financial and/or social.

##### **4.1.1. Financial benefits**

In collaborative NRM it is important to address the economic well-being of local communities living within or adjacent to the natural areas, since those people often pay disproportionate costs for nature conservation. Deriving and sharing financial benefits from CNRM with local people is clearly a powerful incentive for improved participation and motivation of locals in NRM on the one hand and to contribute to improved livelihoods of individual and families from NRM based revenues on the other. This economic contribution is one of the essential components of ensuring community viability.

In fact, economic activity should be the entry point in collaborative NRM as this wins the trust and respect of community members to the introduced management scheme and get them interested in resource management issues faster. The assumption that communities will take on new NRM roles without sufficient economic (financial) incentive from their involvement is incorrect. Consequently, collaborative NRM must make cash generation and appropriately sharing it one of its principal aims and purposes. This is because, time and energy spent on NRM has opportunity losses, and communities need to be compensated with return on the time and energy invests in NRM. Communities will resolve to collaborative NRM if they expect and realize that gain they make from collaboration in some way (either in cash, sustainability cash plus other benefits added together) is greater than gains they used to make from open accessing the resources or from alternative land uses. Therefore, to realize successful collaboration and sustainable NRM in the long term revenues generated and shared to the community should at least be as profitable as the most common alternative in the surroundings such as farming or herding for the case of BER.

Various options exist to financially benefit participants: employment opportunities such as employment as scouts, guides, horse renting and enterprise related offers. These opportunities can be increased as diversification of NRM and utilization develops such as promotion of enterprise like eco-tourism. Particularly in the cases where eco-tourism is a potential enterprise, financial benefits can be derived from a number of complementary activities such as sales of crafts, basketry and the like from products obtained from forests woodlands and/or from enterprises initiated by the communities such as guided bushwalks, cultural village, cultural show, community campsites, grinding mill, petrol station, hardware store, etc. Others source of financial benefit comes from sustainable/regulated and legal harvest of goods and products or PES from the resources being managed. Example is the harvesting and selling of lumber, firewood and various NTFPs or trading services such as watershed protection, carbon financing.

#### 4.1.2. Social benefits

Natural resources, particularly forest resources have multiple functions in a society. They are not only means of cash income and or sources of subsistence but are also resources on which myriads of socio-culture facets of a society clutch. Deprivation of ownership of and access to forests have forced many communities to loss their (i) cultural identifies, (ii) social and environmental values; (iii) natural resources based physiological and physiological wellbeing, and iv) their indigenous practices and knowledge, which they may value as much as the financial benefits. Restoring access to and right over natural resources would mean, therefore, restoring local beliefs, customs and value. Spiritual reasons and social aspirations can be important incentives for attracting participation in collaborative NRM, and in such cases the economic incentives alone might be ineffective, because they fail to satisfy the socio-cultural needs. For instance, the study by Goodland (1991) suggests that rights to land increase people's sense of security and may also benefit conservation. Therefore, whether people feel peaceful, safe and secure within their communities having legal access to and ownership over resources is as significant matter at securing them subsistence and cash income from participating in NRM. These qualitative aspects have to also be considered and emphasized when talking of benefits of and from collaborative or participatory NRM.

There are also a number of other social benefits from collaborative NRM. If some of the financial benefits are invested on social development such as infrastructures (school, potable water, etc.), it supports societal development. Usually and for a number of reasons social developments are often provided in areas with collaborative NRM than in areas without. Another area of social benefit of collaborative NRM is the fair distribution of benefit to community members particular to the poor and women, which has the potential to significantly reduce the skewed income distribution or the large gaps in income flow between rich and poor households. Rich households often exploit more of environmental resources in absolute and relative term compared to the poor households because they have usually larger families that provide more labour to extract. For instance, the study by Neima (2008) in BER show that income from NTFP represents 59% of the total household income of the wealthy as compared to 53% for poor households. However, in collaborative NRM the income gap between the rich and poor from the environmental resources shrinks (Vedeld et al., 2004). By providing an income source to those without other assets and creating employment from natural resource uses, collaborative NRM diversifies the income stream and increases economic equity among rural households. Another social benefit is in the area of awareness raising, empowering locals in decision making, democratization or minority rights and gender sensitivity and equality. Collaborative NRM usually addresses cross-cutting issues such as gender and HIV/AIDS issues. Similarly, it facilitates equality in decision making as well as election of administrators of

CBOs in a fair and democratic style. It also encourages and empowers minorities in the process, and thus contributes significantly to social equality. In fact minority and women are probably the most beneficiaries in collaborative NRM.

#### *4.2. Principle for setting benefit sharing mechanism in collaborative NRM*

Appropriate benefit (revenue) sharing is very important for the success of collaborative NRM. Benefit sharing schemes in collaborative NRM covers the range from exclusive right offered to the community where they collect, either individually or collectively based on the arrangements, all the revenues generated and keep for themselves except for tax levies and associated minor payments to the appropriate State bodies through the arrangement where generated revenue is shared equitably among CBO, State body and/or other stakeholders. Whatever arrangement is put in place, improperly and unfairly decided benefit sharing scheme could be one of major causes of conflict that can jeopardize successful collaborative NRM. In the cases where revenue/benefit are shared between partners (e.g. communities and the State), the question to be answered is what justifies the setting of the share proportion?

Theoretically various approaches can be employed in rationalizing the share of benefits between participating stakeholders in collaborative NRM. Among the various arguments that can be employed are:

1. Government is more committed to conservation and improved livelihoods than generating income for itself, thus offers exclusive right,
2. Revenue generated is shared to the community to compensate lost opportunities by reverting to collaborative NRM,
3. Share corresponding to defined roles and responsibilities (compensation for time, energy and cost inputs),
4. Maintaining living standard at national/regional level (regional or national equity),
5. Revenue that maintain equity with nearby similar cases, or
6. Grossly defined share relative to generable income (e.g. 25: 75%, 50:50%, etc.)

##### **1) Exclusive right with conservation focus**

In principle governments should be concerned in conservation of unique heritages, biodiversity and other resources of national and intergenerational importance. Conservation implies saving for the future and for the sake of future generations. Conservation is savings of environmental capital for future generations. That is why governments are designating and paying for protected (conservation) areas protection. When local communities take over the responsibility and the role of conservation, while also generating goods and services that complement their livelihoods but without affecting the ecosystem and their bio-resources, in theory governments should be happy because they are also benefiting indirectly. These benefits to the government emanate from savings of the costs that otherwise should have been paid for to manage the conservation area by hiring or employing experts and guards. If conservation is the priority of a government and community is taking over the responsibility by producing ecosystem friendly revenues, government's claim, if any, on the revenue should be marginal. I.e. governments should be satisfied that the ecosystem is conserved (managed) on sustainable basis with conservation priority and without incurring costs for its protection and maintenance from government treasury. In this case, community may be given the exclusive right of access and retention of the revenue generated from the system. Some minor form of payments such as natural resources extraction tax and other levies might be paid by the community to the State.

## 2) Compensating for lost opportunities

Collaborative NRM is an alternative to open access and unrestricted use of forests. Under an open access system locals exploit as much resource they want and generate revenue from as much they can sell. Communities also take advantage of the weak law enforcement to convert natural forest areas into other forms of land use such as croplands. On the other hand, by turning to collaborative NRM, communities and households will be restricted in terms of volume of natural resources harvested or from conversion to other forms of land uses. This restriction may result in foregone values (opportunity costs) to the community, and collaborative NRM projects should think these opportunity losses in considering benefit sharing. Communities will be motivated to collaborate if the benefit stream from the new form of management is at least able to compensate for the foregone opportunity. This approach of benefit sharing is appropriate essentially in a situation where the level of revenue generated from the new form of management might be low, and may affect communities' well-being. In such a situation the share of the community should be set high to as much proportion as the one able to compensate the opportunity losses, and this is because to be successful the collaborative NRM should not degrade standard of living rather uplift it.

Some assume that sustainable and collaborative NRM may result in low return than open access system of resource exploitation. However, this may not be always true as the outcome depends on many factors such as product prices, market chains, and market access. Product prices are usually higher in legal trade than 'illegal' trade common to open access. Prices in legal market are high because of possibilities like bargain, short market chain, and transporting and selling in better market that offer higher prices. Another advantage of benefits from collaborative NRM are (i) their sustainable flow, and (ii) fairly and equitably distribution.

Opportunity costs are usually calculating using economic criteria such as NPV from alternative land uses (Rojahn, 2006). Such calculations provide evidence of the minimum NPV to be achieved by introducing collaborative forest management systems.

## 3) Based on defined roles and responsibilities

In most joint NRM schemes the usual method for setting benefit sharing scheme is on the basis of roles and responsibilities (i.e. duty- performance based) between participating parties. In fact, these can partly work in a management system that involve clearly definable and quantifiable (in terms of time or what ever measure) activities. Often mistaken in collaborative forest management such as PFM is on the division of roles and responsibilities between parties; community and the State body. Who decides which roles and responsibilities are that of community and the others are other's party, and on what ground? What about when revenues received such as PES are contracted on the basis of untargeted "flat rate" rather than performance based? How can the share be set? Local communities put forward two claims that are mutually inseparable in collaborative NRM. One is the right of inheritance- often called customary right (indigenous people's right) and the second is the right to benefit from time and energy spent from participating in the management of the resources. This means that in the cases where management activities are to be shared among stakeholders (e.g. State and community) the community demands more than a mere x% share defined solely based on roles and responsibilities just like any ordinary business partnership. The share needs to also consider the inheritance-claim of the community- their indigenous right on the resources.

### *4.3. Disbursement of benefits*

What happens to the income earned by communities? More specifically, how is the income used, who benefits and how much reaches every member individual? And what proportion is

reinvested on managing the resource? Who is eligible and not to the benefits? Community's share of benefits from collaborative NRM is disbursed to the community through their legally established and recognized CBOs either in cash or deposited to their accounts. The revenue (benefits) received by the respective CBOs are partly disbursed as wages if there are hired workers to perform certain duties permanently or contracted, partly used for managing the resources (this part of the revenue is referred to here in as Forest Development Fund (FDF) or Wildlife Development Fund (WIDF)), and portion disbursed as benefit to members and/or invested on community development (CDF). Discussion with the planning committee for the formulation of CFUGs in BER, for instance, showed that the community desires to investment almost all of their revenue shares directly on key infrastructure needs in the area such as construction of schools and clinics, development of drinking water and electric power supply. While investing the received revenue on community development is essential and benefits all inhabitants including those afar away or those who are not necessarily members of the CBOs, but it is also essential that part of the benefit should directly be disbursed to registered members. This is because it is difficult to (i) think that participants of collaborative NRM equally value the aforementioned two benefit disbursement lines (i.e. CDF and disbursement to individuals), or (ii) to judge whether these two revenue disbursements equally motivate participants to collaborate in NRM. This is a very important issue requiring thorough investigation to run a successful collaborative NRM.

It is clear that collaborative management costs individuals both their time and energy, which has an opportunity loss. Being denied individual benefits it is less likely to create strong and sustainable motivation that can energize individuals to constantly strive for better management of NRs. This is also true as in the open access conditions they are individuals who benefit privately from the resources and not collectively as a community. Experiences from other PFM exercises in Ethiopia shows a good example where both are balanced. For example, the experience from Chilimo PFM indicates that part of the community share of the revenue from plantation wood sale was disbursed to members based on their involvement, while part was saved to be used by needy members in the form of credits. What ever the case, absence of direct individual benefit could be a serious bottleneck for success in collaborative NRM in BER and it should be considered very seriously.

## 5. Data Collection Techniques & Procedure

### *5.1. Data collection*

Different approaches and methods were employed to collating the basic data and information needed for this work. Brief discussions in Addis Ababa were made with BERSMP coordinator and the director of OFESA. In the discussions clarification were sought on what exactly the work is about and the expected outputs. Their views with regard to SFM, benefit sharing schemes and associated issues were also obtained. This was followed by intensive document reviews. A number of documents:-studies, consultancy reports and program documents were acquired for the program; and these and other study documents from BER were collected and thoroughly reviewed. Information and data obtained from these sources were further refined, justified and confirmed through one week field survey. During the field visit discussion was first held with programme field staff and BFE management, and detailed discussions were held on various matters related to the consultancy assignment. Documents that were not obtained from the head office were also collected, reviewed and clarifications were also sought when necessary through discussions. We also visited Delo Mena and Goba districts where we discussed with community delegates (members of planning committee). In the discussion

several individuals (men and women, young and elderly) participated and thorough discussion was held. Moreover, we also visited site for sport fishing on Shaya River and discussed with some candidate households in the business.

Market assessments in Goba, Robe and Delo Mena towns were also carried out. We approached sellers and buyers, shop owners and requested prices for the major NTFPs collected from the eco-region's forests and traded on these markets. Quite large number of traders were asked and for a range of quality and quantity as well as also price fluctuation over seasons. We further cross checked prices given by traders with prices paid by buyers' in the market. For products and services not traded on local market we based our revenue assessment and estimation on information obtained from other studies and sources.

### *5.2. Revenue accounting method used*

Estimate on gross revenue for all of the products and services identified as marketable was provided based on the information obtained on prices and resources base. The computation was limited to gross revenue due to the lack of information on production costs (variable costs) to compute net revenues. In fact for most of the NTFPs, which are the main income generating products from the eco-region, the costs of production are very marginal as they involve family labour and transported using own horses. However, large transaction costs will be involved in some of the revenue streams such as the CF, and from the community side this has been agreed to be covered by the BERSMP, which is difficult to include in cost-benefit analysis as well. To estimate the gross annual revenue, we first compiled annually harvestable quantity of each product (service) at district level and then multiplied this with the respective unit price as obtained from local markets.

## **6. Revenue Generating Goods & Sharing Revenues**

Bale Eco-Region is an area endowed with diverse and rich natural resources. Diverse products and services can be commercialized to generate quite considerable revenue. Such richness and diversity of resources means that through appropriate intervention and management scheme (i) diverse and flexible range of livelihood options for the locals, and (ii) considerable revenue to government or BFE can be generated and made available. The diversity of resources means also a possibility for flexible and diverse business engagement for BFE as well as possibility for the community to switch between different livelihood options during different seasons and needs. In the following sections we present list of products and services that are currently or in the short-term generate revenues and quantify the gross annual revenues generated from each. Benefit sharing schemes between the involving parties and the required institutional arrangements for the same has also been suggested.

### *6.1. Revenue generating products & their gross revenues*

In terms of revenue generating goods, BER can be proclaimed as a zone of NTFPs. BFE has already identified this potential and is established from the outset to emphasize operating in that line. The main NTFPs collected from BER are: honey, forest coffee, bamboo, firewood, spices and various herbs that either yield essential oil or have medicinal potential. The first three are treated here and firewood is covered under a separate sub-section (section 6.1.2). The last two are of limited potential for revenue generation in the short term, although they have very high potential probably in the medium and long terms, and thus are not considered here in this document.

### 6.1.1. NTFPs

#### I) Bamboo

One of the major NTFPs in BER is its highland bamboo (*Yushania alpina*) forest. The bamboo of BER is the second largest known highland bamboo forests in the country. Bamboo culms are traded widely in the major towns of the eco-region where the sale provides considerable cash income to local communities living nearby its forest (Fig.3). Remotely sensed image analysis revealed that there is about 119,580 ha of *Yushania alpina* forest in the four districts covered in the first phase of the BERSMP. The spatial distribution of the resource in each district is shown in table 3 & Fig. 4.



Fig. 3. Bamboo culms sale on local market in Goba town, Ethiopia

Bamboo is a uniquely fast growing perennial grass achieving maximum height and attaining the required strength for utilization within 3 - 4 years, while reproducing aggressively through abundant shoots that emerge every rainy season. According to Kassahun (2003) mature to new shoot ratio in bamboo culms is 80%: 20%. On average there are 6000 culms/ha, and 80% of these (4,800 culms/ha) can be considered mature culms ready for harvest at any given time. Considering these bamboo attributes and the area coverage in the four districts, an estimated 573,985,440 mature bamboo culms are expected in the four districts. Furthermore, considering four years as optimum rotation age for bamboo, about 143,496,360 mature bamboo culms can be sustainably harvested each year. On local markets (Goba and Robe), each culm is sold at 6 - 8 birr. Taking these prices, the gross annual revenue generable from bamboo range from 860,978,160 - 1,147,970,880 Birr depending on the market, and the average gross revenue will be 1,004,474,520 Birr using the average price of 7 Birr/culm. The revenue by district is summarized in table 3. In case BFE provides a preferential price of 25%\* over the local market, the gross annual revenue generable to the local community can reach as high as 1,255,593,150 Birr (109,182,013 USD).

#### II) Forest coffee

Another richness of the natural forests in BER is forest coffee. The region is one of the few areas in Ethiopia where coffee is found in its wilderness. Three of the four districts planned to be covered in the first phase of the programme have been assessed for forest coffee resource base, where 112,500 ha of forest was reported to host or able to host good stock of wild coffee. This forest area is further categorized as potential (ca. 42, 609 ha), dense (ca. 34,439 ha) and

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\* BFR has proposed to pay locals delivering NTFPs a preferential price of 25% over local prices.

semi-forest (35,453 ha) coffee areas. The average stocking (density) of coffee stem in the forest is 1,200 stems/ha that yields coffee beans of 300 kg/ha/yr (Gole and Senbeta, 2008). Given these background information, the expected annual coffee yield from the three districts reaches 24,000 tons.

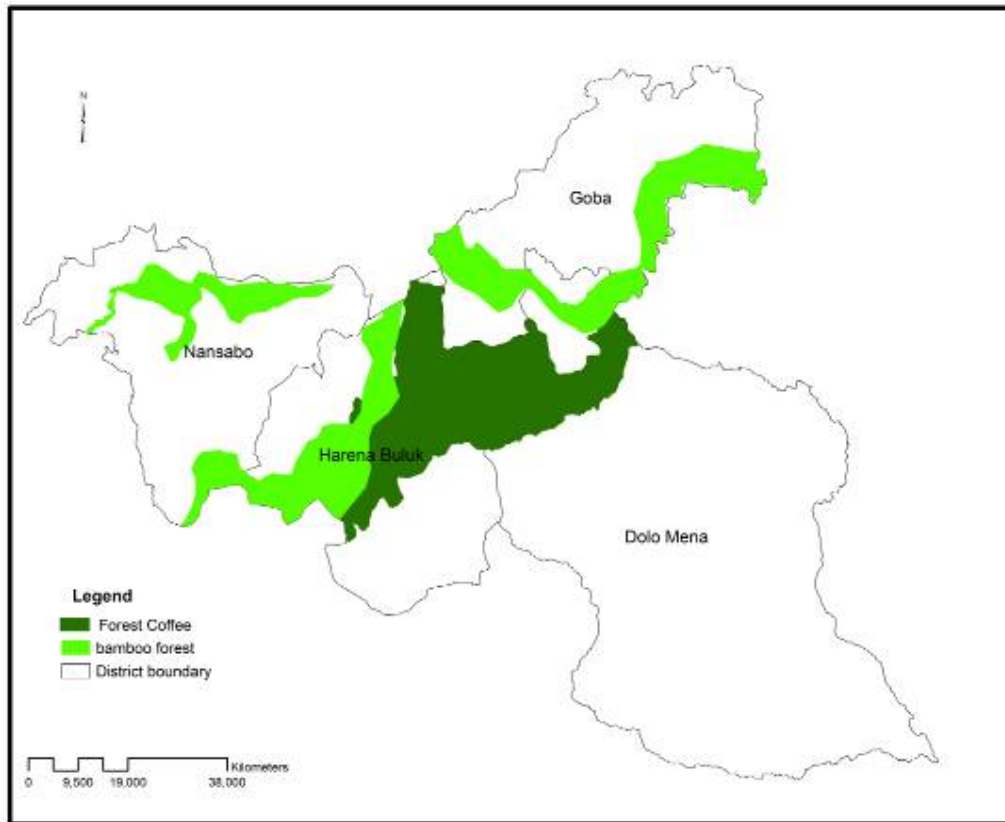


Fig.4. Bamboo and forest coffee resource base in the four districts of the BER, south eastern Ethiopia (Note: some area of forest coffee and bamboo overlap in the figure) ((Sources: BESMP GIS office).

Prices of coffee on local markets (Robe and Goba) range between 18 - 22 birr/kg. Accordingly, expected annual gross revenue from the wild coffee will be 607,500,000 - 742,500,000 Birr, depending on the price & market, and the average being 675,000,000 Birr. If BFE is willing to pay a premium price of 25% over the local price, which becomes 22 - 27 Birr/kg, the annual gross revenue generable to the local community from wild coffee will reach in the range of 675,000,000 – 911,250,000 Birr. Excluding the potential areas and considering only those forest areas where there is good stock of forest coffee at the present, which is 69892 ha, the gross annual revenue will be in the range of 377,416,800 – 461,287,200 Birr, and the average being 419,352,000 Birr when sold on local markets. If purchased by BFE with the premium price of 22-27 Birr/kg (25% over the local price), the gross annual revenue will be in the range of 461,287,200 – 566,125,200 Birr (Table 3).

### III) Honey

BER has long tradition of honey production. Large number of traditional hives is found in the forests of the region and correspondingly large quantity of honey and wax is produced each year. There are also on-going efforts to transform the production system from the low yielding traditional hive to a more productive transitional hive type. If successful, which experts in the

area are very optimistic about the productivity can change from the average of 8 kg/yr/hive using the traditional hives to the average of 22.5 kg/yr/hive using the transitional type of hives. This transformation, if successful, can significantly increase the honey and wax production from the eco-region. The experts are of the opinion that in the coming five years at least 50% of the traditional hives are likely to be replaced with transitional type.

Based on the current production level from the traditional hives, 801.2 tons of crude honey is expected each year in the four districts. Using local prices the annual gross revenue expected of this production is in the range of 8,011,920 – 24,035,760 Birr depending on the market and price (Delo Mena to Goba/Robe). If 50% of the hives are transformed to the better yielding transitional hive type, the annual production of honey will be elevated to 1527.3 tons. In this regard the annual gross revenue generable will be in the range of 15,272,723 – 45,818,168 Birr depending on the market where the honey is sold (Delo Mena or Goba/Robe), nearly double revenue and production compared to the 100% traditional hive. The difference in revenue indicates that it is worth pursuing the introduction and wider adoption of the new hive technology. Furthermore, if the BFE achieves its objective of creating market opportunity to the locals at the premium price of 25% over the local market, the gross revenue generable will equate to the average of 52,538,165 Birr/annum to the farmers in the four districts (Table 3).

#### *IV) Institutional frameworks for the NTFPs industry*

The harvesting of NTFPs is far from being a new activity in BER. There exists a long tradition of harvesting and using NTFPs both for household consumption and market sale. There already exist two forms of traditional tenure arrangements governing households' access to some of the commercially important NTFPs such as forest coffee and trees for hanging hives. The two arrangements are private and communal. While all households living in and nearby the forests have unlimited access to most of the NTFPs such as forest grazing, liana collection and firewood extraction, access to economically important NTFPs such as coffee, honey and bamboo are restricted and only households (individuals) having customary right access and utilize them.

With respect to NTFPs utilization from the eco-region in the new JFM scheme, locals strong suggest that the already existing private (individual household) based NTFPs production model together with its customary institution to be recognized and legitimized. This claim is equivalent to granting the community (households having customary right) an exclusive right over the NTFPs, which we also strongly support. This is because, respecting and building on local values, existing traditions and customary institutions is fundamental to successful collaborative NRM in general, and if properly utilized the same can be a means for success in the case of BERSMP. The suggested arrangement envisages that BFE evolve as a marketing, packaging, processing, transporting, value adding and sale centre for the region's NTFPs industry, while the farmers will be suppliers of the raw materials. Based on demand from the community BFE and BERSMP may facilitate and assist the formation of NTFPs producer cooperatives, probably specific to each product. Most important, however, is that BFE should strive to evolve as a reliable business partner to the farmers to offer them a sustainable market and preferential price, while targeting for itself to benefit from (i) the different products' value chain, and (ii) through various degrees of value added processing such as assembly, sorting, processing (grading plus others), packaging, labelling (certifying), transporting and then selling the products in national and international markets that will pay better prices. For example, by purchasing bamboo culms from the farmers, BFE can either partially process to reduce transport volume and sale it to Bamboo furniture industries in Addis or else can process finished new stylish bamboo furniture to sale them on both domestic and foreign markets. It is

obvious that in conventional value chains, value often rises higher up the chain (rather than at the production end), so it would make good sense for BFE to act as intermediary until it builds capacity to process and add value on most or all of the NTFPs of the eco-region.

Table 3. Revenue generable from the three important NTFPs in the four priority districts of BERSMP

Product type	District	Yield (qt/yr or No. harvestable culms/yr)	Revenue based on local market average prices (Birr)		
			Robe	Goba	BFE (25% over local price at Goba)
Forest Coffee	Harena Buluk	196,923	433,230,600	393,846,000	531,692,100
	Delo mana	140,580	309,276,000	281,160,000	379,566,000
	Nansebo	ND	ND	ND	ND
	Goba	21	46,200	42,000	56,700
Honey*	Harena Buluk	1,713.8	4,713,060	4,713,060	5,891,325
	Delo mana	3,000	8,250,000	8,250,000	10,312,500
	Nansebo **	1,713.8	4,713,060	4,713,060	5,891,325
	Goba	1,584.2	4,356,660	4,356,660	5,445,825
Bamboo***	Harena Buluk	48,629,760	364,723,200	328,250,880	389,038,080
	Delo mana	10,843,080	81,323,100	73,190,790	86,744,640
	Nansebo	34,693,800	260,203,500	234,183,150	277,550,400
	Goba	49,329,720	369,972,900	332,975,610	394,637,760

\*yield of honey is 8 kg/yr/hive for the traditional hives while it is 22.5 kg/yr/hive for the transitional hives;

\*\*due to lack of information on honey resource in Nansebo, it is estimated to at least equal to that of Harena Buluk, which has more or less similar forest resources;

\*\*\* the yield of bamboo is in number of mature culms/ha/yr; ND denotes no data.

The experience among the community in NTFPs production and trade is a good opportunity for BFE to engage itself in NTFPs business right away. However, there are no good case examples of well developed natural NTFPs-based processing, packaging & trading enterprises in Ethiopia for sharing experience. This will present a challenge to BFE, and the enterprise has to work out carefully its own strategy to evolve as a viable enterprise. Obviously at the beginning of its engagement BFE will not profit much from the NTFPs industry or if any only provisionally. However, through appropriate market promotion works, delivery of quality products and relentless efforts to connect itself to markets, BFE can gradually transform the NTFPs industry into a considerable economic opportunity. Having an experienced marketer will be a key to ensuring the viability and growth of the enterprise. Therefore, BFE need to stand itself on a long term vision. Important also in the product promotion process is that BFE need to pursue and work with relevant institutions to develop organic certification process and product traceability process (chain of custody) for the NTFPs. The need for certification, product traceability, and the like are not only perceived as the 'right thing to do' but are also a response to the growing interest of customers for products that are of high quality, safe, and responsible harvested.

Legitimization and recognition of the customary institutions should be formalized by entering into signed agreements between BFE and representatives of the community (PA, elders, etc.). However, the procedure of legitimization and granting of exclusive right to the community according to the traditional institution must also encompass a system for ensuring the union between biodiversity conservation (sustainable forest management) and product extraction for economic development. Individuals with NTFPs access right must be liable in insuring biological and ecosystem sustainability. If unregulated the NTFPs industry can and will compromise sustainable biodiversity management as the economic incentive generated may allure overharvest. Furthermore, the forests are having other stakeholders, CBOs taking responsibility to manage it in the form of JFM with BFE. Therefore, individuals having customary right over NTFPs within the concession areas of a given CBO should share the responsibility and accountability of ensuring sustainable forest management. Clear guidelines that reconcile the needs of both institutions: the CBO for forest management and the one for NTFPs should be developed, negotiated and ratified by all parties. The rights and responsibilities of the NTFPs producers should be incorporated into the FMA. Furthermore, BFE and BERSMP by working with communities should develop sustainable extraction limits for the various NTFPs, and guidelines and plans for monitoring forest health and biodiversity. The guideline should also indicate explicitly the procedures and stakeholders' participation in the surveillance during monitoring and evaluation. In the sustainable extraction system consider various options, for instance, possibilities for rotational harvesting.

Structuring effective collection and marketing system will be a core element for the success of the envisaged NTFPs based enterprise development. BFE with the assistance from BERSMP need to establish purchase and storage stations and sub-stations conveniently distributed throughout the eco-region (Fig.5). Establishing the stations will reduce transport cost to the community while assisting BFE in sustained and timely delivery of quality and quantity products.

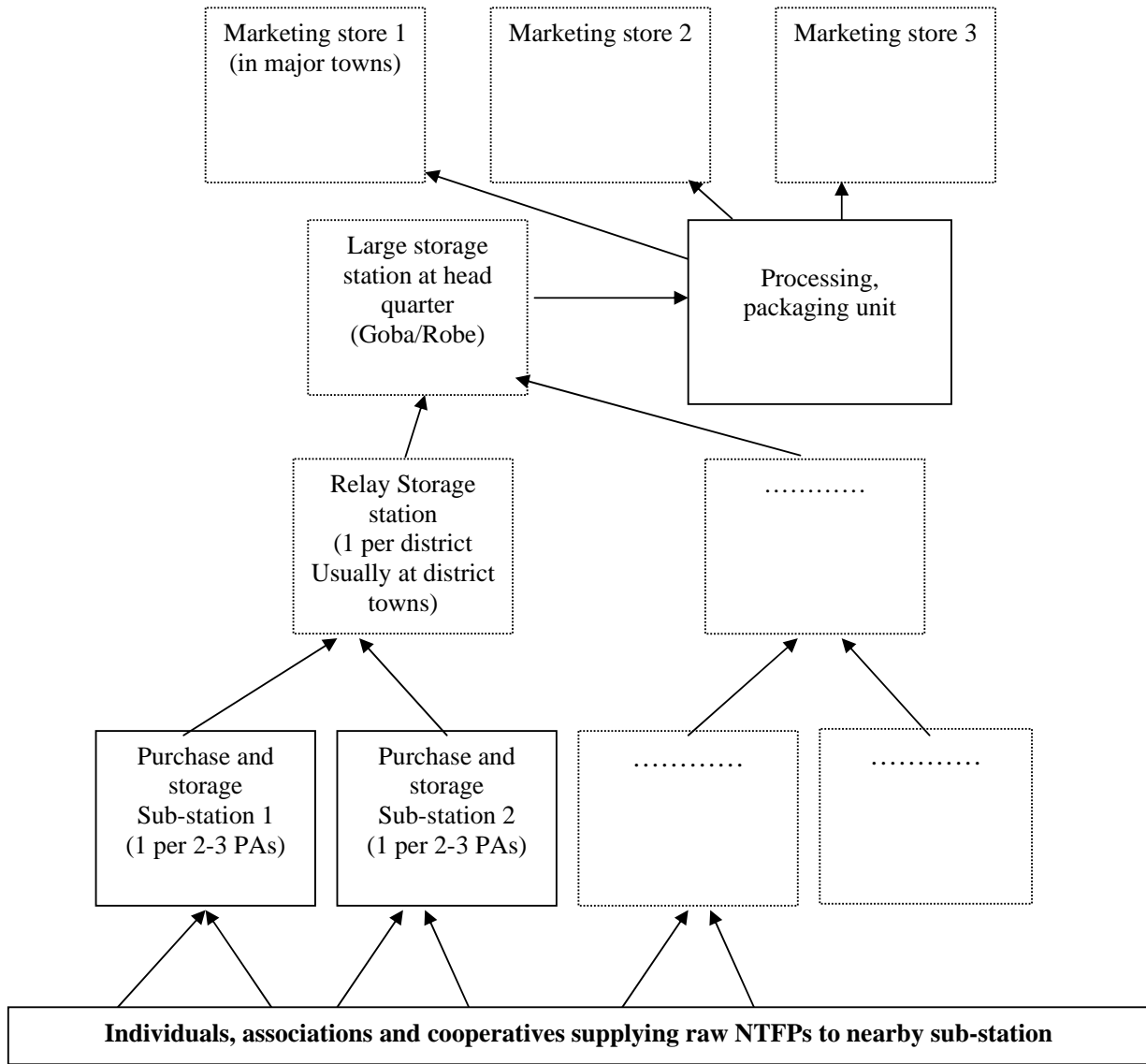


Fig. 5. Suggested organo-gram for collecting and delivering raw and processed NTFPs from BER.

BFE and BERSMP also need to contribute in terms of training, mentoring and offering continuous support to develop skills of the local harvesters to ensure delivery of high quality produces. Several studies in the Eco-Region (E.g. Neima, 2008; Muzyen, 2009) reflect that farmers are encountering a number of constraints hindering sustainable extraction of NTFPs some of which include: lack of knowledge on managing NTFPs for optimum productivity, lack of technical assistance on production process, post harvest handling, poor market and low prices. These and similar constraints are where BFE and BERSMP have to intervene. The following is a short list of areas where both parties could play a useful role.

*a) Skill development*

For BFE to emerge and remain profitable in trading NTFPs from the eco-region it is crucial to guarantee delivery of high quality products from the community. Irregular supply and variable quality are major bottlenecks that can hinder the viability of BFE business engagement. High

quality and regular supplies can only be met for most of the NTFPs if improved production and harvesting techniques as well as post harvest handling, storage and processing methods are employed, which in turn requires improved skill and knowledge. In fact, the harvesters have good traditional knowledge but these knowledge and skills need constant support, improvement and blending with improved technologies and up to date techniques. Therefore, if quality products that satisfy the enterprises' customer, particularly for those of international consumers, has to be delivered a lot need to be done on skill and knowledge development of the harvesters in terms of production process, post harvest handling, packaging and transporting. These are often lacking in key skills that would enable them to successfully harvest and deliver best quality NTFPs produces. These skills could be provided by BFE and BERSMP in a number of ways such as by providing practical trainings, sponsoring skill-based workshops, etc.

***b) Information provision***

One of the major needs of NTFPs-based businesses is for information. This includes information on opportunities, markets, compliance with regulations, and a broad range of other topics. Producers should be empowered to negotiate on prices and to do this they need to be constantly updated with market information at all levels (locals to nationals). In case alternative market opportunities avail, they should not be obliged to sale to the enterprise, rather the enterprise should constantly strive to evolve as the best offering customer to the community.

***c) Providing NRM and Conservation education***

Natural resources management and conservation education should be continuously provided and if possible mainstreamed into curriculum of schools in the areas. Effect of fires, over grazing, unsustainable harvest, land degradation, loss of biodiversity at local, regional and international levels need to be taught. Various trainings and field schools and exchange visits need to be arranged to create in depth awareness. Training on and establishing demonstration plots for rotational harvesting and restoration of degraded areas might be also interesting. Domestication education, organic (natural) farming of NTFPs and related issues need also to be offered.

***d) Continuing Institutional Support***

BERSMP have to take an active role in supporting and bridging the enterprise and the CBO, developing biodiversity monitoring systems, establishment of CFUG and building capacities of both CFUGs and BFE. There are some excellent experiences on NTFPs based enterprise development from other countries both developed (e.g. Canada) and developing country (e.g. Nepal). One case example from Nepal is attached as annex 3 for further insight. If possible allow BFE and few selected community members to visit at least the case in Nepal.

***v) Benefit sharing from NTFPs revenue***

Although the NTFPs extractors will be granted exclusive right, they should also pay some part of their revenue as levies to CFUG & BFE to be used in the forest development and management activities. This levy, together with similar money from other product and service lines, will form Forest Development Fund (FDF). The amount of this payment can be negotiated but up to 10-15% of the sale income can be considered. Furthermore, part of the revenue generated by individuals can be paid to the respective district tax collecting body (District Bureau of finance), and this payment can be designated as natural resource extraction tax.

### *VI) NTFPs boon and bane*

The presence of NTFPs together with the private (individual household) model of production as suggested will be a boon for the success of the intended collaborative forest management in BER. This is because the revenue accrued from extraction will be received at individual household level, which will form a strong incentive to motivate recipients to collaborate in the forest management practice. This is a special benefit to the recipients since most of the financial benefits accrued from other product and service lines are likely to be disbursed as Community Development Fund (CDF), which may not usually create an equivalent strong incentive to motivate households/individuals to participate in forest management. However, it is also clear that every household has no equal access to the NTFPs. The customary institution obviously allows a disproportionate distribution of the forest to households, and probably there are some households who do not have forest land from which they can harvest NTFPs (see also Muzyen, 2009). This is a bane for the intended collaborative forest management as it creates inequity. A second disadvantage of adopting the traditional NTFPs extraction institution arises when forest lands owned by a customary right holder crosses several PAs, and thus several CFUGs. It is expected that the offer from the customary right does not follow the formal PA boundary, which, however, the JFM attempt to fit to. This will complicate forest management operation by the respective CFUGs as one person with customary right over the NTFPs has to present him- or herself in several of the CFUGs. This problem needs to be assessed, and if necessary and possible the customary holdings should be consolidated.

#### **6.1.2. Wood based revenue generation**

BER is one of the biodiversity hotspot. Consequently, the priority for the eco-region is obviously conservation and not wood production at commercial scale. Moreover, most of the natural forests of the Eco-Region fall within National Forest Priority Area (NFPA), which are designated for conservation. Indeed, despite the considerable forest resources available in the eco-region exploiting them for industrial wood is the least priority. Yet as a juvenile and self financing enterprise BFE must extract limited industrial woods, principally lumber, to diversify its income sources and thus grow to a viable enterprise. Since the eco-region owns very little plantation forest developments in the past, there are little other options or alternative income opportunities for the enterprise to rely on in the short term. Selective logging and processing of dying and over matured trees can considerably contribute to the financial capacity of the enterprise.

Furthermore, production of firewood, which provides the largest household energy on the one hand and considerable income to forest dependent community on the other, particularly to women, could not easily be reversed. Very large quantity of firewood is harvested and marketed each week in BER (Fig. 6), and interestingly, women are the most engaged in the firewood business as opposed to men who are more engaged in the other NTFPs business. Women (of all age) are the largest beneficiaries from firewood business and any attempt to reverse the business imply significant benefit (income) loss to them. Assessment made in Goda town, for instance, indicates that women supply 72% of firewood flow to Goba town. This is the same for the other towns in the eco-region as well. Major settlement centres of the eco-region such as Goba and Robe are also heavily dependent on firewood for energy purpose. There is huge firewood market in these towns with rewarding prices. Consumption in Goba town alone is 22,795.4 m<sup>3</sup>/yr and is much higher in Robe. A horse load is sold in Robe town at the price range from 40-50 birr depending on the wood type and load size. As 6 horse loads make approximately 1m<sup>3</sup>, the price that corresponds to this volume thus is equal to 240-330 Birr, which is very expensive compared to say the sale price of Arsi Forest Enterprise (AFE), which is 115 Birr/m<sup>3</sup> for eucalyptus firewood. In Goba town alone annual firewood business turnover equals 8,434,002 Birr, which is quite considerable. These facts prompt that attempts

to reverse wood based extraction of the forest incur considerable socio-economic costs to the eco-region's inhabitants, and could be a cause for conflict between the community and BFE.

However, continuation of the unsustainable and open access harvest and marketing of firewood is a real threat to the forests and woodlands of the eco-region and the environmental services obtained thereof. Firewood harvest needs to be regulated and should be within the sustainable yield limits of the forests. The experience from Adaba Dodola reveals that incremental yield for the dry montane forest is  $1\text{ m}^3/\text{ha}/\text{yr}$ . If we assume 75% of this as allowable harvest,  $0.75\text{ m}^3/\text{ha}/\text{yr}$  of wood can be removed from the dry montane forests of the BER. Because of the relatively high productivity of the moist forests, we suggest  $1.5\text{ m}^3/\text{ha}/\text{yr}$  as an allowable (sustainable) wood harvest from these. The harvested wood can further be assorted into lumber and firewood using the ratio 36% lumber to 64% firewood. Using these statistics the amount of wood harvestable by district and the corresponding revenue generable is summarized in table 4. Fig.7 also shows the geographic distribution of the different forest types by district. The local prices of 270 Birr/ $\text{m}^3$  for firewood and 3500 Birr/ $\text{m}^3$  for lumber where used in the calculation. The gross annual revenue generable from wood based product from the four districts is, therefore, about 91,525,904.64 and 667,376,388 Birr for firewood and lumber respectively (Table 4).

Unfortunately, the total firewood yield ( $338,984.8\text{ m}^3$ ) from the suggested allowable harvest will not satisfy the subsistence need of households even at  $1\text{ m}^3$  annual consumption per capita for the population of 363,314 found in the four districts. More firewood need to be produced other than the allowable sustainable production suggested above, first to satisfy the subsistence consumption of locals and second to supply to towns in the eco-region that heavily depends on firewood harvest from the forests for energy. To fulfil this demand, BFE and BERSMP should play a significant new role. The enterprise and the program can mobilize the community to launch community fuelwood plantation, and/or grow trees in various forms of agroforestry practices. This is probably the only way to help offset forest degradation likely to be caused by the heavy firewood harvest.



Fig. 6. Horses and donkeys transporting firewood to Goba/Robe town on markets days

*a) Institutional Framework for benefit sharing*

As already indicated in various documents, the forest management arrangement in the eco-region should be a joint one between BFE and the community. From the community side CFUG need to be established, legalized, capacitated and strengthened. Then BFE and CFUG sign an agreement of JFM that will be approved by the regional Agricultural Bureau or other concerned

offices. BFE & BERSMP should assist the CFUG with all the necessary formality of legalization, registration and in facilitating the signing of the agreement.

*b) Benefit Sharing from Wood Based Revenue*

Based on our discussion with community members, the net revenue generated from wood sale is suggested to be shared 40:60% ratio to the community and BFE respectively. The share will be made after all recurring costs are deducted. For the benefit of the community we also suggest to BFE to assist the community in taking the responsibility of processing, transporting and selling the lumber so that what is shared will be the revenue generated not the wood. The cost incurred in the process will be shared between the two parties, and deducted from the gross revenue generated on sale. For the sake of transparency, the community shall delegate some one to follow up the whole process including the sale.

The revenue from wood sale will be shared with the respective CFUG biannually based on the amount of wood harvested from their respective concession areas. It is important to ensure transparency in harvesting and processing of lumber. Records of number of trees harvested, volume harvested and volume of lumber processed including the sale and associate expenses should be transparent. It is suggested that when markings are made it should involve the management of the CFUGs and is always good if management plans prepared are strictly followed. In case of any deviation, it should be discussed thoroughly and agreed upon.

The sharing of revenue from wood based products should form part of the JFM agreement. The share of community will be channelled to the account of the respective CFUG. The use of the revenue by members either for communal development or disbursed to individual members should be closely monitored by both internal and certified external auditors. There must be a system that guarantees the fair use of the fund for the benefit of all. Pro-poor benefit disbursement policy such as credit schemes must be made available in the system. Furthermore, 10% of the revenue with 5% contribution from each party needs to be preserved as FDF. This makes the actual share to be 35%:55%. Furthermore, part of the revenue generated by both parties, as necessary, should be paid to the respective tax collecting body (District or Zonal Bureau of finance) as per the existing government taxation policy, and this tax can be designated as natural resource extraction tax.

Table 4. Forest resources in BER by type and suggested sustainable harvest of firewood and lumber

District	FORESTTYPE	Forest cover (ha)	Suggest annual harvest (m3/ha/yr)	Lumber yield (m3/yr)	Firewood Yield (m3/yr)	Gross revenue from Lumber (Birr/yr)	Gross revenue from firewood (Birr/yr)*
Dolo Mena	Moist forest(slightly degraded)	59,211.3	1.5	31,974.1	56842.8	111,909,357	15,347,569.0
	Woodland(slightly degraded)	407,974.7	0.25	36,717.7	65275.9	128,512,030.5	17,624,507.0
Goba	Helichrysum(very degraded)**	63.5	-	-	-	-	-
	Moist forest(very degraded)	14,718.0	1.5	7947.7	14129.3	27,817,020	3,814,905.6
	Mountain dry forest(heavily degraded)	13,431.6	0.75	3626.5	6447.2	12,692,862	1,740,735.4
Harena Buluk	Moist forest(very degraded)	87,845.4	1.5	47436.5	84331.6	166,027,806	22,769,527.7
	Woodland(heavily degraded)	65,019.4	0.25	5851.7	10403.1	20,481,111	2,808,838.1
Nansabo	Moist forest(very degraded)	95,559.5	1.5	51602.1	91737.1	180,607,455	24,769,022.4
	Mountain dry forest(heavily degraded)	14,896.2	0.75	4022.0	7150.2	14,076,909	1,930,547.5
	Woodland(heavily degraded)	16,672.5	0.25	1500.5	2667.6	5,251,837.5	720,252
		775,392.1	Total	190,679.0	338,984.8	667,376,388	91,525,904.64

\* Average price of 270 Birr/m3 was used for the calculation of firewood revenue as indicated above;

\*\* harvest from the Helichrysum forest was not considered assuming that it has little harvestable wood products overall.

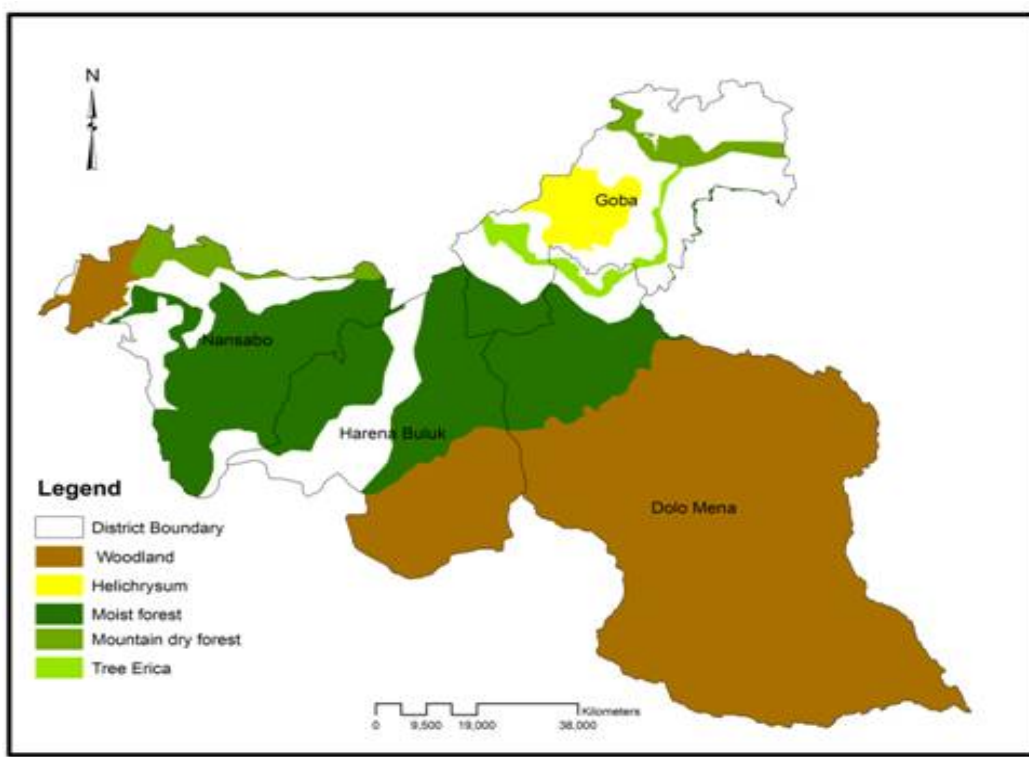


Fig. 7 Forest types and their distributions in BER (Sources: BESMP GIS office).

## 6.2. Ecosystem services (ES)

The main ES provided by the forest and vegetation in the BER are biodiversity conservation, watershed protection and carbon sequestration. Households in the eco-region as well as those far away benefit from these ES. Main outside beneficiaries of the ES are tourist agencies, hunting agencies (concessionaires), Ethiopian Electrical Power Corporation, large scale agriculture managers, global community from the carbon sequestered in the vegetation and communities in the semiarid lowlands both inland and outside the country particularly in Somalia and Kenya. Among the services provided carbon and biodiversity in the form of ecotourism (trophy hunting and sport fishing) are promising for revenue generation in the short term. These are analyzed and presented below.

### 6.2.1. Carbon Financing (CF)

The carbon finance project in the BER will cover mostly the dry and moist mountain forests and the woodlands, while other forest areas are considered as leakage compensators. The distribution of the dry and moist forests in the four districts to be covered in the first phase of the program and the corresponding gross revenue generable from the CF is presented in table 5.

#### a) Institutional arrangement for CF

In the report of Statz et al. (2008) the CF (REDD project) was proposed to be managed by three separate institutional arrangements: (i) Community Based Organisation (CBOs) with exclusive user rights; (ii) Joint Forest Management (JFM) scheme whereby CBOs and BFE jointly manage forest areas, and (iii) BFE managing forest core areas exclusively. However, we suggest the merger of the three different arrangements shown above into a single JFM form of institutional arrangement as far as the CF project is concerned. The merger offers several

advantages. For instance, it will reduce the overall transaction costs of effecting the CF down to the grassroots level. Otherwise, if the three institutional arrangements will be adopted, demarcating the different parts of the forests to be managed by the three separate institutional arrangements itself will be a daunting task and will only add to the overall implementation costs than a real benefit to any party. From our field assessment, it was evident that there is no forest area that community has never reached, for instance, through livestock grazing and NTFPs collection. Indeed there seems no part of the forest that can be claimed as core and unreachable by the community and to be exclusively controlled by BFE. Furthermore, the division of the natural forests between three institutions will increase the risk of leakage, particularly to the part that would be exclusively managed by BFE, and this will threaten the compliance with REDD project.

Similarly, the underlying principle of REDD is to provide alternative sources of income to resource poor households that degrade natural forests for survival. By offering financial compensation to poor forest dependent households, it intends to help them reduce pressure on and forest extraction for survival such that its carbon stock will be preserved. However, as the carbon payment per ha is usually small and significant part of it will also be used to cover the transaction costs, motivating incentives can only be gained from the CF if and only if forest areas considered per person will be relatively large. Therefore, to achieve success with the CF, first the entire forest must be put under JFM scheme, and second relatively good proportion of the CF need to be channelled down to the community.

#### **b) Benefit sharing**

Regarding benefit sharing from CF the best method to set the propositional share between the community and BFE is probably based on compensation for lost opportunity of the net payment. This means if households will be restrained from converting forest to alternative land uses, the foregone benefit should be compensated from the CF. To calculate the opportunity cost, current and historical land use change analysis was made using temporal satellite image analyses, which provided the rate of cropland expansion in the area. It was found that in the eco-region deforestation rates for crop land expansion is in the range of 3 and 5%. This translated to hectare base is presented in table 5. Forests are converted mainly into agriculture and grazing land use systems, and farmers in the area practise low-input, rain fed subsistence farming involving crops such as maize and teff. We used the study of Rojahn (2006) to calculate the opportunity lost from crop farming (maize). According, to the study by Rojahn (2006), the net income per hectare from traditional and improved maize crop cultivation at 5% discount rate are \$US 1460 and 5217 respectively over 20 years. From this income we deducted the financial return considered by Rojahn from firewood and lumber salvaging because in reality community do not well salvage the forests during conversion. They often set fire and burns them down. Thus, the income assumed from firewood and lumber in the study of Rojahn (2006) is correct from academic point of view but less applicable from practical point of view. Based on these assumptions, the share of CF between the community and the BFE will be 65.5%:34.5% or 15.2%: 84.8% considering traditional and improved crop cultivation, respectively (Table 6). For practical purpose we took middle point, which is about 40%:60% share among the CFUGs and BFE. Of the share that each party receives, 5% (together 10%) should be recalled and saved as FDF to be reinvested back into the forest management and maintenances.

Table 5. Forest areas identified for REDD based CF by district and gross revenue generable from the mechanism.

District	FOREST TYPE	Forest cover (ha)	Payment (US\$/ha/yr)	Gross revenue	
				(\$US/yr)	(Eth. Birr*)
Dolo Mena	Moist forest(slightly degraded)	59,211.3	25	1,480,283	16,283,108
	Moist forest(slightly degraded)	14,718	25	367,950	4,047,450
Goba	Mountain dry forest(heavily degraded)	13,431.6	25	335,790	3,693,690
Harena Buluk	Moist forest(slightly degraded)	87,845.4	25	2,196,135	24,157,485
	Moist forest(slightly degraded)	95,559.5	25	2,388,988	26,278,863
Nansabo	Mountain dry forest(heavily degraded)	14,896.2	25	372,405	4,096,455
Total					78,557,051

\* Exchange rate of 1\$US = 11.0 Birr was used in the conversion

Table 6. Calculating % share of CF between CBOs and BFE based on lost opportunity from crop farming.

District	Forest area (ha)	Deforestation rate (ha)*	Crop related benefit to be foregone (NPV in \$US)**		Carbon Fund minus lost crop revenue (\$US)		% share of BFE after compensation	
			Traditional	Improved	Traditional	Improved	Traditional	Improved
Delo Mena	467,186	18,687.44	1,364,183	3,361,806	116,099.9	-1,881,523	7.8%	-127.1%
Goba	28,213.1	1,128.524	82,382.25	203,017.6	621,357.7	500,722.4	88.3%	71.2%
Harena Buluk	152,864.8	6,114.592	446,365.2	1,099,994	1,749,770	1,096,141	79.7%	49.9%
Nansebo	127,128.2	5,085.128	371,214.3	914,797	2,390,179	1,846,596	86.6%	66.9%

\* is calculated on the basis of 3 - 5% of deforestation rate assumed for the area as indicated in the report of Statz et al., 2008; for CF see table 5 above; \*\* in this calculation we considered only the NPV of the maize by ignoring the firewood and lumber component as this is theoretical and mostly the forest is burned down than practically converted to money as usually considered in financial calculation;

## 6.2.2. Trophy hunting and Sport fishing

Tourism, including ecotourism, is now generally recognized to be one of the largest industries—if not *the* largest—in the world. It has grown rapidly and almost continuously over the past twenty years, and is now one of the world's most significant sources of employment and of Gross Domestic Product (GDP) for many nations. There are many advantages of ecotourism. It provides opportunities for diversifying local economies and promoting formation of micro and small enterprises, many of them community-owned. Well-planned and -implemented (eco)tourism projects can improve local governance, natural resources management, biodiversity conservation and other important development goals. Ecotourism is a form of tourism that is based on nature. It has significant role to contribute to the protection of natural resources and to generate sources of alternative income for local population in the target area, thus making natural resources more valuable to local community. It is a fast growing industry at global scale, had it not been for the economic crises besieging the world. Particularly, community-based ecotourism allows communities to derive economic benefits while ensuring wildlife conservation. The role of the industry in achieving both objectives has been successfully demonstrated in many African countries. Therefore, it will be a viable option to cure the ever declining wildlife population of Ethiopia.

Ecotourism has a relatively long history in BER because of BMNP. Besides animal watching and photographing trophy hunting is also growing in recent years. Evidences show that the trophy hunting business is promising provided that effective and appropriate management scheme is put in place. Ecotourism is identified as one of the potential revenue generating stream in the BER. The Eco-region has a huge ecotourism potential and two of the most promising among these are trophy hunting and sport fishing. The sport fishing can be merged with several other complementary ecotourism activities such as mountain (horse) trekking, tour guiding, horse rent, lodging, hotel services, cultural show events, souvenir sales, exhibition (museum) and the like.

### 6.2.2.1 Trophy hunting

Trophy sport hunting can be a successful conservation tool in BER as it has the potential to generate substantial amounts of revenue that can be used both for conservation as well as improve livelihoods. In this regard, the practice can be a cure to cope with the growing decline of precious animals such as Mountain Nyala, which is one of the principal animals in the BER. This is because appropriately implemented trophy hunting, such as community based hunting concessions as demonstrated in many African countries, could fetch sufficient economic incentives to promote conservation. Mountain Nyala has been an important trophy species for sport hunting even at the present in Ethiopia such as in AFE concession areas as well as in the BER.

Currently five private hunting entrepreneurs are operating in the BER by leasing land from the state of Oromia. In these five concession areas, on average five to six visitors are received per year. This number seems small but is limited by the trophy quota allocated per year to the concessionaires. If higher number of major trophies (e.g. Nyala) had been allowed for hunting, correspondingly higher number of tourisms could have been received. Most tourists usually hunt on average three to four animals, one from each species, per visit. The maximum fee paid is for Nyala which amounts 5000 \$US/head. Information obtained from AFE, for instance, shows that a trophy hunting tourist usually pays between 60,000 – 70,000 (at least 3-4 animals)

for hunting alone. Besides, each tourist pays 21,000 \$US ( $\approx$  23,1000 Birr<sup>1</sup>), which is 1000 \$US/day for 21 days of hunting permission. Based on this information the gross annual revenue generable from trophy hunting in Bale Eco Region for the five concession areas is calculated and presented in table 7. While the trophy fees goes to Oromia Bureau of Agriculture, the rest is collected by the concessionaires, which only pays revenue tax of 60,000 birr/yr plus 5% of trophy hunting fee from each hunter.

Based on the information in table 8 it can be said that if the number of concession areas increase like from five to eight, then the revenue will proportional increase. This increase in concession area can be achieved in different ways and one is to sensitize the communities and organize them into wildlife conservancy cooperatives.

Unfortunately the current trophy hunting operation excludes local community and is a solid business operation conducted by private entrepreneurs. Benefit to the community from the private entrepreneurs is extremely minimal and if any depends on the wilful contribution of the business individuals to community development. Furthermore, there is minimal direct reinvestment of government from the trophy hunting fees in community development. This exclusion of communities from the ecotourism business is leading to stiff conflict between the hunting operators and the locals with devastating consequence on the ecosystem, the wildlife resources and thus the sustainability of the sector. To reverse this negative trend we recommend a new form of concession management and hunting operation.

As the condition in AFE demonstrates, first BFE can handle the business by transferring the concession areas to its concession mandate areas. Then, the BFE, like the management of natural forests, can jointly manage the areas with local communities and also share the benefit accordingly. In this new arrangement both BFE and the locals can either lease the land for operation to tour operators or professional hunting business enterprises. Moreover, if locals are mobilized, organized and demonstrated, they can either expand the concession areas by incorporating part of their own farm and grazing lands or even start pure community based WL conservancies, which has been successfully demonstrated in other African countries. Several Eastern and southern African countries have benefited both their people and wildlife biodiversity through community based ecotourism operation. Examples of community-based natural resource management programmes of these countries include the programs like Communal Area Management Programme for Indigenous Resources (CAMPFIRE) in Zimbabwe, Luangwa Integrated Resource Development Project (LIRD) and Administrative Design for Game Management Areas (ADMAGE) in Zambia, the living in a Finite Environment (LIFE) programme in Namibia, the Tchuma Tchato “our wealth” in Mozambique, the Conservation of Biodiversity Resource Areas Programme (COBRA) in Kenya and the Ujirani Mwana “good neighbourliness” in Tanzania. In Botswana it is simply called CBNRM programme.

#### **Institutional framework and Benefit sharing**

To sustain the trophy hunting based ecotourism service in the BER a new institutional arrangement for its management is recommended as presented above. Like the case of AFE, the BFE can take the delegation of managing the Bale hunting concession areas. If this is successful the BFE can take a leading role in running the business successfully by establishing a good partnership with local communities in different arrangement. Likewise that of forest management the sustainability of trophy hunting operation is to jointly handle with the

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<sup>1</sup> Exchange rate of 1 \$US = 11.0 Eth, Birr was used in the conversion

community. One possible arrangement will be to organize the communities near by each concession into Wildlife Conservancy Cooperatives (WLCC) and jointly manage the concessions. As experiences from other countries demonstrate (shown below), if given the chance and rewarding incentives communities can even expand wildlife conservation area frontiers by converting their farm and grazing lands.

The trophy hunting business (operation) at least in the short to medium term need to be handled according jointly between BFE, private hunting concessions and community working together and sharing benefits accrued thereof. In the long run, communities at the frontiers of the BMNP and these concession areas can be organized to form local community wildlife conservancies and together with private hunting/tour operators can also join the trophy hunting business.

The experience from AFE shows that BFE can effectively engage in the trophy hunting business but unlike the AFE in collaboration with local community who are already angry at their exclusion from the benefit from the business. Indeed,

Table 7. Revenue generable from trophy hunting service in the five concessions currently operating in the BER

No. of tourist visiting the five concession areas (4 - 5/concession)*	No. of animal hunted/tourist	Average charge/tourist for trophy (Birr)	Total annual gross revenue from trophy (Birr)	Fee /tourist/day (Birr)	No. days/visitor	Gross revenue to concessionaires	Overall gross revenue
22.5	3 – 4	65,000	1,462,500	11,000	21	5,197,500	6,660,000

\* Number of visitors is determined by the quota animal hunting. Experience shows that what ever cotta is allowed annual they are all receiving hunters. Indeed, proper protection and increasing animal population even by expanding into farmlands through organizing the community into conservancies will increase revenue

### 6.2.2.2 Sport Fishing and associated ecotourism initiatives

BER has a tremendous Sports fishing potential on its several rivers. Assessment made has revealed the existence of this potential on a number of rivers such as Web (Dinsho), Denka (Dinsho), Shaya (Sinana), Togona (Goba), Micha (Goba) and others. Although all of the potential in these rivers can be exploited, the one on the Shaya River appears a realizable potential in the short term. There also seems a good ground from the community level to easily realize it. The sport fishing on Shaya River can be accompanied by several other ecotourism, activities such as horse renting, trekking, guiding, bird watching and photographing, eco-lodging, cultural shows and the like.

The number of tourists likely to participate in this ecotourism activity is hard to estimate. However, the concept behind this sport fishing ecotourism is that at least some of the visitors to the Bale Mountains will eventually be able to participate in the sport fishing and associated practices. The effort we made to obtain data on annual tourist flow to Bale Mountains was not successful but for this revenue calculation we assumed that at least 350 visitors will be found to practice it. Therefore, given this assumption on tourist flow and the costs per the different activities as summarized in Table 8 below, the gross annual revenue generable from this practice is 493,500 Birr (Table 8).

Table 8. Sport fishing and accompanying ecotourism activities based gross revenue

	<b>No. visitors</b>	<b>Price/day</b>	<b>No. days likely used</b>	<b>Gross revenue</b>
Overall visitors	350			
Practicing sport fishing alone	100	500/day/visitor	2	100,000
Going on spot fishing and trekking (1 day for trekking and one day for fishing)	150	425	2	127,500
Trekking only	130	350	2	91,000
Lodging	270	350	2	175,000
		<b>sum</b>		<b>493,500</b>

#### Institutional framework and benefit sharing

Sport fishing and the accompanying ecotourism need to be managed by “river-associations” that comprises members from the communities that live and have land property in the vicinity of the rivers themselves. The association will be responsible for hiring fishing guides, protecting the resource and disbursing the revenue generated from the ecotourism to their members or to invest it on community development and also save it as CDF.

The association can also link up with private entrepreneurs for constructing the lodge. Then, booking for the fishing and other accompanied activities will be made from the eco-lodge. Eco-lodge management will assist to make contact with the relevant fishing guide(s) as well as permit issuing to visitors.

The river-association need to be granted exclusive rights to manage the fish resources and their ecosystem against payment of some annual rent/tax paid to BFE for their watershed protection service in the surrounding of the eco-lodge and the rivers.

## 7. Suggested Modality for Implementation

- Establish appropriate CBOs relevant to each of the product and service as suggested in the document, and legalize them;
- Negotiate on the suggested benefit sharing, monitoring systems and guidelines, and reach consensus;
- Enter into legal contracts;
- Act/engage accordingly both in the management and use of the resources;
- Set-up a unit within BFE responsible for collecting, managing and utilizing the FDF and WIDF;
- If contracts of agreement are signed between NTFPs harvesters and BFE, the enterprise can easily collect the FDF of 5% from every supplier at the time of purchase and channel it to the FDF managing unit. In practice it means BFE pays 20% rather than 25% over the local price and hold 5% as FDF during the time of purchase. For the Wood based, CF and trophy hunting, it is automatic for the unit to collect the FDF as the enterprise transfers the fund to the unit biannually at the time of benefit sharing with the respective CBOs.
- Establish board governing the FDF and WIDF composing, for instance:
  - Representative of NGOs working in the area
  - Representative of BFE,
  - Representative of local administration (Zonal),
  - Representative of community, and
  - etc.
- Reflect on progress and carryout evaluation regularly and if necessary negotiate and re-negotiate with CBOs for adjustment.

## 8. Policy Environments for Collaborative NRM in Ethiopia & Implications for BERSM

### 8.1. Policies and strategies

There is a greater policy support for forest development in Ethiopia today, probably, more than ever. A number of policies, proclamations and strategies have been issued during the last 18 years that directly and indirectly concern about the conservation and development of forest resources. Some of these include:

- The constitution (1995) - Article 44 of the Constitution states *all persons have the right to a clean and healthy environment.*
- Forest conservation and utilization policy and strategy (2007) and the Proclamation to provide for the development, conservation and utilization of forests (No. 524/2007),
- Ethiopian Forestry Action Program (EFAP, 1994) and regional forestry action programs
- Conservation Strategy of Ethiopia (1997)
- Environmental Policy of Ethiopia (1997)
- Wildlife Policy and Strategy (2007)
- Wildlife Legislation (2007).
- Rural Land Administration and Land Use Plan Policy & Strategy (2004),
- Rural Land Administration & Utilization Proclamation (RLAUP, 2003),
- Environmental Impact Assessment proclamation (2002), and
- Plan for Accelerated and Sustainable Development to End Poverty (ASDEP) (2006).

Most of these policies and strategies unanimously recognize and reiterate (i) the severe degradation of the natural resource base, particularly forest and soil resources, and the formidable challenges that such degradation presents on sustainable socio-economic development in Ethiopia, (ii) the need for sustainable management of the natural resource of the country as one pillar of economic development, and (iii) the emphasis on participating citizens, particularly the rural mass in the efforts to sustainably manage the natural resources.

The 'Forest Policy and Strategies of 2007' is the first comprehensive policy document at national level in Ethiopia. The main objective of this policy is 'to meet the forest product demands of the society and increase the contribution of forest resources to the national economy through appropriate management'. It also identified the following strategies to achieve the stated objective:

- promoting private forest development and conservation;
- promoting forest development technologies;
- strengthening forest product markets;
- administering and managing state forests;
- preventing deforestation; and
- establishing up-to-date information database.

| The proclamation number 542/2007 is also issued as an instrument to implement the policy, and replaces the Forest Conservation, Development Utilization Proclamation No. 94/1994. The 1994 forestry conservation, development utilization proclamation was a reflection of the new political ideology of the transitional government namely, the participation of the people and communities in affairs that concern them and the federation structuring of the country. It recognized three forms of forest ownership: state, regional and private. This is because following the federal structuring of political administration, the responsibility of NRM administration has also been decentralized and given to the regional states. At regional state regional agricultural development bureaus, which also are responsible for the preparation of plans and budgets for the forestry administration in their respective regions. The constitution in Art.52 (2) (d) authorizes the regional states to “....*administer land and other natural resources in accordance with federal laws.....*”. In line with this constitution, the regional states were authorized to issue their own policies and strategies, raise revenue, and plan and execute their own development activities within the framework of the policies at the federal (national) government level.

The new Forest Development, Conservation and Utilization Policy of 2007, recognizes state and private ownership, where the state herein refers to mainly regional states. According to this policy, all natural forests in the country are state's (public's) property. There are divided opinions on the interpretation of the property rights indicated over the forest resources in the policy. While some legal interpreters argue that the term 'private' can also include community (organized community), others have reservation on such interpretation in connection with natural forest ownership. However, although not explicitly stated in the forest policy and proclamation, several articles and sub-articles of the policy and the proclamation encompass issues that articulate community participation in natural forest management. For instance, Part II article 4 of the proclamation (No. 542/2007), which states about the promotion of forest development in Ethiopia, has six sub-articles and two of them are community oriented:

1. Management plan shall be developed, with participation of the local community, for forests that have not been designated as protected or productive state forests, and such forests shall be given to the community, associations or investors so that they

- conserve and utilise them in accordance with directives to be issued by the appropriate body;
2. Any person who develops forest on his land holding or in state forest area given to him on concession shall be given assurance to his ownership of the forest.

Similarly, part III article 9: Conservation, Development, and Administration of State Forest suggest community participation:

1. Sub-article 3: Forest development, conservation and utilisation plans shall be formulated to allow the participation of local communities in the development and conservation and also in the sharing of benefits from the development of state forests
2. Sub-article 8: Conditions shall be facilitated whereby inhabitants within a state forest shall continue living in the development and conservation of the forest, in a manner that shall not obstruct forest development; or, based on a study and in consultation with the appropriate body, they shall evacuate the forest area and settle in other areas suitable for living

In particularly there are important provisions for NTFPs based use of state forest by the local community. Example Part III article 10: Utilization of State Forests provides many provisions such as:

1. Sub-article 2: The utilisation of a state forest in accordance with Sub-article (1) of this article shall be undertaken by government organisation or persons who are given concessions
2. Sub-article 3: Notwithstanding the provisions of Sub-Articles (1) and (2) of this article, the local community may reap grasses, collect fallen woods and utilize herbs from a state forest in conformity with the management plan developed for the forest by the appropriate regional body
3. Sub-article 4: Notwithstanding Sub-Article (3) of article 15 of this proclamation, the harvesting of forest products, grass and fruit as well as the keeping of beehives in state forests may be permitted based on the objective realities of the locality
4. Sub-article 5: State forests shall be used to generate income from tourism

Furthermore, the Environmental policy of Ethiopia issued in 1997 has a strong element of encouraging people participation in forest management. Under forest, woodland and tree resources sector, the policy addresses the complementary roles of communities, private entrepreneurs and the state in forest development; integration of forest development with land, water resources, energy resources, ecosystem and genetic resources development in addition to crop and livestock production. Selection of appropriate species for afforestation/reforestation with particular emphasis to indigenous tree species is one important statement included in this policy. The policy emphasizes that utilization of forests should be based on only regenerative capacity of the forest, hence suggest application of the 'Sustainable Forest Management' principle. The policy states that such sustainability is attained by formulating and implementing socially suitable, environmentally sound and economically acceptable management plan. Since free grazing affects natural regeneration of valuable indigenous trees, the policy restricts free grazing in protected forest areas.

Rural Development Policies, Strategies and Methods and Rural Land Administration and Land Use Proclamation issued in 2002, also clearly stated the need for proper land use in order to maximize the economic return of the land. In line with this policy, proclamation no.456/2005 "Federal Democratic Republic of Ethiopia Rural Land Administration and Land Use proclamation" was issued. In this proclamation, rural lands, the slope of which is more than

60%, shall not be used for farming and free grazing; they shall be used for development of trees, perennial plants and forage production.”

In general, policies and strategies in the country all emphasize the need to involve local communities in the sustainable management of natural resources, particularly forests. However, these policies and strategies lack detail implementation guidelines. The most unclear elements of them all is what do they meant by participating local community, and whether the participants have legal ground to claim benefits from their invested time, energy and money in the process of participating. However, experiences from the PFM projects in Adaba Dodolla (GTZ), Chilimo, Bonga and Borana (FARM Africa/SOS Sahel) prompt that local community can be organized to share responsibility in forest management, can forms various forms of CBOs that can attain legal status, legally enter into management agreement with the State, generate income and retain part of this income for reinvestment as well as household consumption. Even in these experiences, participating communities who bear roles and responsibilities to manage forest.

## 8.2. Forestry administration and governance related issues

A problem of the forestry sector in Ethiopia is not the lack of policy or strategy at least today, but the lack of stable and capacitated implementing body. The organization arrangement of the forestry sector in Ethiopia is described as the most instable, suffering from frequent restructuring. Such lack of stability in the sector’s organizational structure is often cited as one of the major bottle necks for the lack of coordinated, effective management and development successes in Ethiopian forestry. Since 1991 forestry sector administration has also been decentralized, and today, forestry administration and management responsibility has been handed over to the regional states. However, there are some institutions that still deal with forestry related issues at the federal level and these include: Federal MoARD (the main actor in forest development, conservation and utilization), EPA, IBC and Forest, Land use and Soils Cons. and Dev. Department.

At regional level, forest administering institutions are variously organized although in most regional states the Regional Bureau of Agriculture and Rural Development takes the largest share of responsibility in managing and administering the resource. The regional states are also free to frame their own organizational structures that they found best fitting to their forest resources management. Important example with this regard is the Oromia Regional State that established an independent and new regional body called Oromia Forest Enterprises Supervising Agency (OFESA). OFESA is administering 11 independent enterprises established in the Region strategically located following distribution of forest resources in the region. The establishment of OFESA and its branch enterprises is one big institutional reform as far as forestry sector is concerned in the country in general and in the region in particular. As explicitly indicated in the establishment legislation of these enterprises and that of OFESA, the forest enterprises are authorized to generate, retain and reinvest forest and other associated natural resources revenues from their concession areas. The objective of these enterprises is to ensure the sustainable development of forest resources through the generation of forest revenue and the correct use of this revenue to forest resources development and sustainable management. Furthermore, contribution to community development is one of the key elements in the regulations that establish both OFESA and its enterprises.

For the BER two of enterprises, AFE and BFE, are responsible. BFE is an infant enterprise established recently (regulation No. 88/2007) by the Oromia Regional State. The enterprise is required to promote ‘participation of local communities’ living around the forest in forest

protection and development activities and in sharing the benefits derived from the NRs. The enterprises entitled to retain revenue it generates except the 'forest fund' to be channelled to OFESA, which accounts only 10% of their annual revenue. The enterprise are also entitled to share the benefit, which means what ever arrangement is made, participant CBO or formal state bodies such as district and PA administrators can gain share and retain the funds shared from the enterprise. Supported with the BERSMP, the BFE is making a good progress in involving local community in its concession area through the formulation of relevant CBOs.

### 8.3. Legal issues

One of the major problems in collaborative NRM in Ethiopia is not lack of policies or regulations but lack of proper law enforcement. There has been always a problem in law enforcing and implementing rules and orders as they relate to forestry. The major problem with this regard is the loose inter-institutional linkage between law enforcing agents (police and courts) and those organizations responsible for forest administration. The former are mostly reluctant to properly enforce existing rules or else are corrupt. Furthermore, the incompatibility of cooperative legislation with CBOs for natural resources management is a major bottleneck on legal grounds.

## 9. Summary and Recommendation

There is huge revenue generable from the natural resources of BER that can benefit the local community and the State of Oromia. Realization of this benefit requires a carefully crafted institutional framework representing the need of the local community. However, the process of linking the community to work with a business enterprise (BFE) will be a painstaking undertaking than the traditional FUG approach. There are no experiences to learn from in the country and thus the entire process should be an iterative and learning by doing process. However, the presence of BFE would mean exceptional opportunity for the community to realize the real value of biodiversity resources. At the same time the enterprise together with OFESA need to act as a liaison unit PES such as ecotourism. However, utmost care needs to be exercised to create a mutual business environment which is based on transparency, trust and fair benefit distribution. Capacity building both for the CBOs and BFE staff is very crucial where the role of BERSMP should concentrate. Unfortunately staff of BFE appears to have low competence in collaborative NRM. They all lack the trust on the community for their ability to successfully and sustainably manage resources. This has to be shaped and reshaped through appropriate and intensive training. The type of institutions suggested and their roles and responsibilities including that of BFE and BERSMP are summarized in table 9 below.

Table 9. Summary of suggested institutional framework and the roles/responsibilities of each party in managing natural resources in BER

No.	Particulars	CBOs and their roles/responsibilities	BFE & its roles/responsibilities	Role of BERSMP	Remark
1	NTFPs	Community is producer either individually or as cooperatives  Should be given exclusive use right as per the existing customary institute	Business partner: purchaser, processor and trader = NTFPs processing enterprise	Capacity building of the community, Supporting BFE on industry building, market link, and  Support formation of NTFPs producer cooperative  Support development of guidelines for sustainable production and monitoring procedures	Traditional institution governing access should remain viable
2	Lumber & Firewood	Organized as CFUG to participate in JFM with BFE  Major responsibility in protection of the forest against fire, unlicensed grazing, illegal timbering,  Gather and sale firewood	Partner in the JFM engagement with the CFUG  Process, sale and share revenue from lumber	Facilitating formations and legalizations of CFUG  Contribute to capacity building of CFUG  Assist CFUG & BFE in preparing JFMP	
3	Carbon Finance	same as 2	Same as 2	Same as 2	
4	Trophy Hunting	Organized as CWLC that jointly own the concession areas with BFE  Play role in protection of Wildlife and their habitats  Field guide of hunters	Joint owner with CWLC,  WL inventory, monitoring and other technical works,	Assist in formation, legalization and capacity building of CWLC,  Promotion of the industry	Both BFE and CWLC can jointly lease operation to tour companies

5	Sport fishing	<p>community organized as 'River associations'</p> <p>Given exclusive right and administer the operation themselves</p> <p>Participate in protecting the resource and disbursing the revenue generated by the fishing</p> <p>Pay levies for the watershed protection service to the JFM groups (BFE &amp; CBOs)</p>	<p>Contribute to capacity building together with BERSMP</p> <p>Play role in watershed protection</p> <p>Allocate an expert for overseeing the practice</p>	<p>Assists the formation, legitimization and implement of river associations as well as in promotion</p>	<p>The river association can lease the operation to hotels such as Bekele Molla or to any other strong operator</p>
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### Recommendations

- The process of linking the community to work with a business enterprise (BFE) will be a painstaking undertaking than the traditional FUG approach. There are no experiences to learn from in the country and thus the entire process should be an iterative and learning by doing process;
- BFE, particularly OFESA need to act as a liaison in realizing CF project and in also assisting the transfer of the trophy hunting concession area into the hands of BFE and the community;
- BERSMP need to work on capacity building of the CBOs and BFE staff, which is very crucial in the success of the intended sustainable NRM outcomes, and
- BFE staff seems to have little experience with CNRM and the role of community. Training of the staff with principles and practices of JFM is very essential.

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## Annexes

### Annex 1. Terms of reference for assessment and development of benefit sharing and local financing guide for the Bale Mountains

#### *I. Background*

The BERSMP is a six year programme being implemented by FARM-Africa/ SOS Sahel in collaboration with the Oromia region Forest Enterprises Supervisory Agency. The programme is funded by the governments of Ireland, Norway and The Netherlands. The aim of the programme is to conserve the natural resources of the Bale eco-region by the communities dependent on the resources in partnership with relevant government agencies at regional, zonal and district levels.

As part of exploring sustainable finance options and payment systems for environmental services, a consultancy service is to be sought to assess for opportunities to increase and retain public revenues within new management of local resources in the context of the Bale Eco-region.

#### *II. Objectives of the consultancy*

- To assess natural resource based revenue generating goods and services the benefits of which can be shared between concerned stakeholders in the context of the BERSM programme
- To provide the BERSMP with a detailed framework for benefit sharing among relevant stakeholders.
- To assess and recommend appropriate institutional framework necessary for the implementation of a relevant benefit sharing mechanism.
- Based on examples of Bale and West Arsi enterprises, to workout an implementation modality for the “community development fund” that is ear marked by OSFESA for community development undertakings.

#### *III. Specific duties*

##### *1. Review of existing regional / national policies and practical applications with regards to natural resources based revenue collection and sharing:*

- The FUG and WAJIB experiences in Chilimo and Adaba-Dodola respectively
- Revenue generating systems and regulations at regional level
- Relevant experiences from other countries

##### *2. Assess the existing and potential natural resource based revenues*

- Assess the current revenue collection opportunities considering the existing government regulations
- Possibilities of community charges within tourism enterprises (eco-tourism, sport fishing, etc), trophy hunting, etc
- Determine the possible amount of revenue that can annually be generated and from which sources

##### *3. Develop a system of revenue sharing and retention focussing on:*

- retention of revenues from natural resources into local government services and communities,

- improvements on efficiency of revenue collection and allocation to the stakeholders
- engagement of forest communities and park bordering communities in forest management and park related duties respectively
- introducing new charges (as necessary) related to provision and improvement of existing services with practical justifications
- ensuring transparency and community decision making
- REDD applications
- assess possible obstacles in implementation that need to be brought to the attention of regional policy makers

*4. Develop an implementation guide for revenue sharing arrangement that currently exists in OSFESA. The guide should include, among others,*

- the fit between recurrent woreda level operations
- Procedures for eligibility
- Areas of support
- Transaction of resources
- Monitoring

#### *IV. Expected outputs*

- A proposed benefit sharing framework indicating the existing sources, possible options, mode of sharing and retention, etc.
- Outline of proposed implementation modalities

#### *V. Time requirements*

The requested service is expected to be provided within six weeks starting beginning of December 2008.

#### *VI. Competences required*

- A track record in developing natural resource based revenue sharing mechanisms.
- Know how on finance issues and wide experiences in Ethiopian forestry
- Good reputations and long time working relations with key natural resources related institutions in Ethiopia.

## *Annex 2. Case example of community based NTFPs Management*

### Community Based Natural Resource Management in Nepal Non-timber Forest Products and Biodiversity Conservation

#### Identification of the Case

Humla District is located in the far northwest corner of Nepal. This remote area of Nepal with its unusual confluence of geologic, climatic, and biological factors has exceptional ecosystem diversity and biogeographic isolation, which creates a region of high floral diversity. Its renewable resources include the Karnali watershed, subtropical, temperate and alpine forests, and alpine pastures. Humla and other areas like it in Nepal are rich in medicinal and aromatic plants - nontimber forest products (NTFPs) that have been traditionally harvested by the local Tibetan and Hindu communities for subsistence and trade uses. For poor isolated communities in Nepal the trade of NTFPs is an economic necessity, but at the same time an environmental downfall, as increased pressure to overharvest the NTFPs is placed on the communities by outside traders. Appropriate Technology International (ATI) and the Asia Network for Small-Scale Agricultural Bioresources (ANSAB) began assisting Humla with value-adding NTFP processing and biodiversity conservation in 1994 in an attempt to provide incentives for sustainable harvesting of NTFPs.

This program is closely linked to His Majesty's Government's effort to promote community forestry. The Humla project has adopted an integrated conservation and development approach. The key feature of this approach is that it does not attempt to divide biodiversity-rich landscapes into areas formally reserved for biodiversity conservation versus areas for human populations. Rather, the program treats the landscape as an integrated whole, attempting to develop direct links between biodiversity and the surrounding communities. The experiment, which includes institutional innovations at the local and national levels, is beginning to show results and the experience is now being spread to other districts in Nepal.

#### Contextual Factors

Nepal and specifically Humla have progressive community forestry laws and a rich variety of high value NTFPs, yet the Community Forestry User Groups (CFUG) management plans were not including NTFPs. ANSAB and ATI played a catalytic role in changing this and Humla became the first district where approved CFUG agreements included NTFPs. Demographic and socio-economic pressures in Humla were making sustainable management of NTFPs difficult if the people continued to only trade lower value raw materials. Tenure alone was not going to change this dynamic so ATI and ANSAB helped Humla become one of the few areas doing value adding processing. The first community owned essential oil processing company in Nepal, Humla Oils, Pvt. Ltd. was established. Threats to biodiversity include overharvesting of NTFPs, fodder and fuelwood collection, and grazing practices. Mr. Bishma Subedi, Biodiversity Program Manager for ANSAB, and Ms. Ann Koontz, Program Director for ATI's NTFP Program have been involved with the Humla project for the last four years. Ms. Koontz took part in the original planning mission as the enterprise expert and has overseen ATI's implementation activities since 1994. Mr. Subedi has been providing direct assistance on biodiversity monitoring and CFUG formation to the Humla community groups since 1995.

The government of Nepal has pioneered an approach to community forestry through legislation that provides communities with secure tenure rights and the authority to manage and utilize common property resources. Following the Forest Act of 1993 and the associated Community Forestry Directives of 1995, communities have gained the right to constitute Community Forestry User Groups (CFUGs) which function democratically, and which in turn are able to

claim government-owned forest and pastures as Community Forests. CFUGs can harvest and trade forest products as well as collect the royalties levied on forest products that previously were paid to the government.

NTFPs are a significant source of revenue for Nepal. In 1996 ANSAB conducted the first NTFP trade survey for Nepal and found that approximately 42 thousand tons, consisting of more than 125 different NTFPs were handled by about 100 traders in 1995. This trade amounted to more than \$26 million in 1995, yet most left Nepal in raw form with no value adding processing and none had been incorporated into CFUGs.

### The Initial Situation

The community of Humla had been harvesting several NTFPs and trading them in raw form to traders who then smuggled them over the border to India where the plant materials were processed into essential oils and incense. As high value NTFPs such as Jatamansi (*Nardostachys grandiflora*) and Sugandhwal (*Valeriana jatamansi*) were being depleted in India, traders stepped up buying programs in remote areas such as Humla where levels of the prized plants were still in good supply. In a short period of time traditional conservation and management practices were overwhelmed by the outside pressure. Since the lands were considered government property and not under the control of the communities there was the incentive to harvest all one could before someone else got to it. There was little or no awareness for biodiversity issues and no alternatives being offered to the communities that would change the unsustainable practices. Government bans on the exportation of the raw herbs had little or no impact on the destructive trade.

### The Change Process

In 1994 ATI and ANSAB initiated a planning process with the communities of Humla for a Biodiversity Conservation Network Project (BCN). The BCN program has the hypotheses that "if communities are given control over their resources and access to technical and managerial assistance, then they will act to conserve their natural resources." The participatory planning process verified the NTFP trade dynamics that were effecting the people and proposed a multi-activity approach to conserve the area's biodiversity while increasing the incomes of the villagers. The key activities included institutional innovations at the local level (formation of Humla Oils Pvt. Ltd. and the Humla Conservation and Development Association) and the national level (close collaboration with the Forests Department and District Forest Offices and increased awareness for NTFP issues through a newly created Nepal NTFP Network). Specifically the project:

- Established a value-adding enterprise, Humla Oils, Pvt. Ltd. which processes aromatic plants into essential oils. The enterprise provides more income to the community and reduces the need to overharvest. ATI adapted distillation technology to the high altitude remote site and trained the local people to operate the equipment and run the business. ATI and ANSAB also assisted with product marketing and were able to broker a deal with a leading New York essential oils distributor for the promotion and sale of Humla oils in the United States.
- Conducted Biological surveys and developed biodiversity monitoring plans with the communities. Outside botanical experts trained local people to conduct species inventories and do test harvesting plots to determine optimal harvesting levels for each herb. Rotational harvesting plans were initiated.

- Assisted villages in forming CFUGs and obtaining management control and use rights from the government. ANSAB worked closely with the district forestry officials to get NTFPs included in the CFUG agreements.
- Integrated conservation education into post literary classes run by an education NGO.
- Established a community NGO to oversee the continuation of these activities after the BCN project was over and ANSAB and ATI exited from the area. The Humla Conservation and Development Association (HCDA) was established with key representation from village development committees and women's groups. ANSAB provided institutional development and management training for HCDA staff.
- Established a nationwide Nepal NTFP Network to bring NTFP issues into the forefront of forest conservation efforts and facilitate cross learning between government officials, community members, NGOs, private sector companies, and researchers.

### The Outcome

**Value Adding Processing as a Strategy for Increasing Incomes from Sustainable Harvesting of NTFPs:** The first distillation unit processed the targeted number of kilos (250,000) in the first year and sold its entire stock of oil generating over \$25,000 in revenue. This success prompted a second unit to be established and the neighboring district of Jumla has also replicated the distillation enterprise. A third district, Dolpa is now making plans to launch their own community based distillation enterprise.

**Biodiversity Conservation and Sustainable Harvesting:** Biodiversity monitoring plans have been put in place and the communities are taking an active role in the data collection and test plots. While it is still too early to determine the long term effects on biodiversity conservation, collectors are eager to learn the outcomes from the test plots and until this information is known, have adopted a rotational harvesting plan. Estimated sustainable harvest rates are closely integrated into enterprise expansion plans. Since actual sustainable harvest rates were not known before the enterprise started operating, maximum capacity levels were based on harvesting no more than 50% of the harvest levels prior to the project's start.

**Government Handover of Forest Lands to Communities:** Twenty-four community forest user groups (CFUGs) covering 13,329 hectares and 2,128 families have been organized of which 9 CFUGs have had land handed over to them from the government; 9 are in the process of being handed over, and 6 are planned to be handed over in 1998. The resource management plans all incorporate NTFPs including 17 commonly traded NTFPs.

**Promising Conservation Practices by Communities:** Conservation education is starting to show some preliminary outcomes. Several villages stopped burning the upper pastures in order to conserve NTFPs; rotational harvesting has been adopted; and villagers are interested in enrichment planting. Villages have also instituted group collecting where everybody will go together so harvesting levels can be more easily enforced.

**Continuing Institutional Support at the Community Level:** HCDA has taken an active role in the enterprise's development, biodiversity monitoring, and CFUG formation. This past year they were able to generate their own funding from outside sources so that when BCN support ends in 1998 they will continue operations and expand conservation activities.

**Greater National Level Institutional Cooperation for Community Forestry Issues:** The Nepal NTFP Network has an active coordination committee with representation from the Ministry of Forests & Soil Conservation; Department of Forests; Department of Plant

Resources; Department of National Parks & Wildlife Conservation; Department of Soil & Watershed Conservation; Forest Research & Survey Centre; Community Forest Division; Institute of Forestry; Nepal Foresters Association; Herbs Production & Processing Co. Ltd.; Humla Conservation and Development Association; and ANSAB. The network has elevated the importance of NTFPs in community resource management and provided the various government agencies with a neutral venue for discussing conservation and development issues. Communities have been able to quickly provide feedback to policy implementers on what is going well and not well with CFUG handovers. The Humla experience has been ground breaking as it has provided a model for including NTFPs in resource management plans and the trade studies conducted by ANSAB have helped policy makers understand the economic and environmental importance NTFPs hold for Nepal.

### Lessons Learned

This case has provided us with several key lessons, most of which we feel are applicable to the majority of groups interested in community based resource management.

- An area cannot be too far degraded or too pristine for a combined enterprise/conservation project to be effective. If an area is too pristine, it is difficult to get people to realize the importance of conservation; too degraded and restoration work must be done before enterprise activities can be initiated.
- The economic activity should be the entry point with the communities. While biological monitoring and conservation education must also be initiated from the start, economic benefits win the trust and respect of community members and get them interested in resource management issues faster.
- International NGOs such as ANSAB and ATI have a catalytic role to play in community based resource management, but local and national level institutions need to be integrated into the process from the start for long-term sustainability of the activities and replication.
- Forums that bring together the government, NGOs, private sector, community groups, and research institutions are essential to open dialogue and effective feedback on policy implementation strategies.
- Last but not least, communities must have economic control of the resources. Tenure alone is not sufficient. Communities must also have access to technical, management, and marketing expertise to effectively manage their natural resources.

### *Annex 3. Community based eco-tourism experience: the case of CAMPFIRE*

#### COMMUNITY-BASED ECOTOURISM VENTURE: THE CASE OF SUNUNGUKAI CAMP, ZIMBABWE

##### IDENTIFICATION OF THE CASE

This is the case of Sunungukai Camp, an ecotourism project managed by a small community of some 250 households in five rural villages (Kapandoro, Hodzi, Munando, Chidiramumba and Mapini). Situated 120km north-east of Harare, Sunungukai Camp lies on the banks of Mazowe River overlooking the Umfurudzi Safari Area—a National Parks Protected Area—in the Uzumba-Maramba-Pfungwe (UMP) District. The camp is set up as part of the Communal Areas Management Program for Indigenous Resources (CAMPFIRE). The following natural resources are found in the Sunungukai area:

- Lush green mountains covered with trees and grass
- Serene and picturesque Mazowe River
- Variety of fish species
- Small and large game
- Beautiful bird species in the riparian habitat

While the above natural resources are key to the development of ecotourism in the area, the local community has access to firewood, broom and thatch grass, construction poles, basket and hat weaving reeds and fish. Access to natural resources by local communities is paramount due to land pressure.

As an umbrella organization, CAMPFIRE Association facilitates the formation of CBOs for the purpose of natural resource management. Through the CAMPFIRE principles of decentralization and devolution, CBOs are formed and structures developed linking them to local authorities, i.e. the Rural District Councils (RDCs). This institutional arrangement ensures CBOs of logistical support, natural resource policy interpretation and representation at national fora. CAMPFIRE Association has been the lead institution promoting the Sunungukai ecotourism project.

Sunungukai Camp is a community managed CAMPFIRE ecotourism project which aims to provide income to the surrounding communities and to promote the conservation of natural resources. The camp was officially opened on March 29, 1993. Prior to the start of the project, access to and use of natural resources in the Communal Lands of the Mazowe River Basin was unrestricted. This led to a serious degradation of the natural environment. For example, demand for fuelwood led to the destruction of forests; poor agricultural practices led to serious soil erosion; and gold panning activities exacerbated the problem of river siltation. Simply, there was no incentive for sustainable consumptive utilization of resources. Access to resources in Protected Areas was however restricted and the benefits deriving from authorized use of forest or game was expropriated by the state. This created tension between local needs, on the one hand, and national policy on the other.

Given that local communities were not compensated for non-use of natural resources and/or the fact that the state had limited capacity to enforce its own rules based on the principle of 'exclusion' expressly designed to control use of natural resources, the environment was compromised. At the micro-level, inadequate farming practices, deforestation and overgrazing resulted in land degradation. These 'causal' factors, driven by social, economic and political forces, manifested themselves at the macro-level in market, policy and institutional failures, inappropriate technologies and practices. The problem of environmental degradation was by no

means confined to the Mazowe River Basin. On the contrary, it is a national problem in Zimbabwe where over 70% of the population is rural and depends on land resources for its livelihood.

If the clearing of woodland for agricultural production and harvesting of these forests for fuelwood and poles had continued unabated, the forest resources would have been depleted and the river would have silted. With the silting of the river, the fish population would have declined. This could have triggered game poaching as a source of protein. In general, mounting environmental degradation had a direct and negative impact on economic development in the Sunungukai area. In the long-term, the community stood to suffer as the ecosystem's capacity to provide essential environmental services that support the socio-economic subsystem was endangered (Munasinghe, 1995). In the perspective of the community, "it is now true to say that the majority of our people have an increasing realization of what the environment means to them and the future generations".

### THE REFORM PROCESS

The reform came through a redefinition of ownership of the resources in the Sunungukai area and how they were to be managed. There were four institutions involved in this process: the Local Community, CAMPFIRE Association, Zimbabwe Trust and the Uzumba-Maramba-Pfungwe Rural District Council (UMPRDC). CAMPFIRE Association served as the lead institution promoting the project; Zimbabwe Trust provided funding and management training; and UMRDC served as the link organization.

In Sunungukai, community-based management of natural resources through ecotourism venture was introduced by the CAMPFIRE Association. The principle behind ecotourism is that providing compensation and substitution can lead to change of attitude and practice of resource management by local communities. As a consequence, a number of awareness raising workshops were organized prior to 1993 to sensitize the community on the benefits of ecotourism. Findings from studies carried out in Kenya, Thailand, Mexico and Nepal showed that least results in terms of conserving resources can be achieved if the benefits of ecotourism go to the state.

To solve the threat of unsustainable exploitation of natural resources, local people should reap economic benefits of non-consumptive tourism. This was the philosophical underpinning of the ecotourism ventures initiated by the CAMPFIRE Association in partnership with the Sunungukai community and the Uzumba-Maramba-Pfungwe RDC. In the words of the Sunungukai Camp Management Committee, "we developed this camp as we wanted to promote our natural resources in an environmentally sensitive way so that we could all benefit from them".

### THE OUTCOME

At the behest of the CAMPFIRE Association, state devolved to the Sunungukai community through the Uzumba-Maramba-Pfungwe Rural District Council (UMPRDC) the right to manage and use their natural resources. Now empowered, the community formed the Sunungukai Management Committee—a community-based natural resource management committee which enforces locally developed rules and regulations. It also manages the ecotourism camp project.

Having set up the Sunungukai Management Committee, the community constituted rules and regulations for conserving their environment through sustainable use of resources. These rules include: forbidding any form of fishing other than using a single hook fishing line and the restriction of fishing to local people and camp visitors. Outsiders have to pay a levy to

community funds if they want to fish in their stretch of the river; restriction on gold panning on the river front, this had been causing severe damage to the river banks; and the forbidding of wanton destruction of forests and cultivation of crops on hillslopes and the river banks. The management committee was mandated to enforce these rule and regulations. Other activities undertaken by the community are proactive. The management committee encourages villagers to plant trees in deforested areas while farmers are motivated to construct ridges to guard against soil erosion. In a participatory gesture, the community also pledged to monitor and implement the regulations they had drawn. Sanctions against offences and offenders were specified in the "peoples' constitution".

Determined to bring change to their community, the villagers decided to establish an income-generating project. They agreed to build a camp. A suitable site was identified in Kapandaro Village. The construction and management of the camp was vested on an elected committee. All employees of the camp are members of the local community. Sunungukai Camp is built on a hectare of land. The owner of the land is entitled to 10% of the camp proceeds. The UMPRDC which on the one hand serves as the link between the project and the central government and provides technical support on project implementation, on the other, gets 5-10% in levy. Decisions on how to use the rest of the funds is made by the management committee.

The camp consists of four roundavel lodges (each with its own braai site), a reception/information building, communal kitchen, and a caretakers' room. The layout of the camp reminiscences traditional Shona architecture. The camp was constructed using locally-sourced materials. Labor was also provided by the community. All the bricks were made by local people and they provided thatching grass and poles for roofing. Cement, window and door frames were bought with cash provided by Zimbabwe Trust. Material for perimeter fencing of the camp site was bought with funds donated by the New Zealand High Commission in Zimbabwe.

It is almost six years since these reform processes started. The most remarkable change has been the involvement of the community in monitoring natural resource use. This has led to controlled gold panning and better use of other resources. Members of the community have received training from the CAMPFIRE Association and other community conservation groups on natural resource management. However, the ecotourism camp project faces a number of problems. Lack of management experience is one of the key problems confronting Sunungukai Camp. This is reflected, for example, in the low profits made by the camp over the years. Most of the money generated goes to paying staff and carrying out renovations. As a result the community is not deriving as much benefit from the camp as was anticipated.

The impact of the institutional reforms has also been limited because links between the community and the outside world remains undeveloped. Institutions that are supposed to support the Sunungukai community-based resource management project, i.e. the CAMPFIRE Association, the UMPRDC, Zimbabwe Trust, among others, have been ad hoc at best in their approach. As one visitor observed, "the camp is an excellent idea and has enormous potential as an ecotourism facility. Unfortunately, it appears as though the project is lacking in initiative and requires an approach that will lead to a more profitable operation". As a result, the beautiful Sunungukai Camp is not well marketed and remains underutilized. Data on visitors for the period July 1996 to February 1997 shows a very low occupancy rate with the highest being 31% (July 1996). The average occupancy rate for August 1996-February 1997 is below 10%.

## THE LESSONS LEARNED

A number of lessons emerge from the case presented here. The principal ones are:

- The people who depend directly on a given set of resources for their livelihood are the ones with the greatest interest in conserving those resources or using them as sustainably as possible. To create conditions that will permit this to happen, strong social and economic incentives must be created for those people to make decisions that will maintain and improve the quality of natural resources.
- Self-governing community-based institutions, through which members have a voice in natural resource management decision-making are perhaps the most viable vehicles for sustainable development. The success of such community-based natural resource management institutions requires enabling local populations to take informed initiatives in managing these resources for which a full and active exchange of information at the local, regional, national and international levels is critical. This involves gathering information at the local level regarding the state of the resources and factors affecting the capacity of the local people and institutions to manage it. It also requires effective dissemination and sharing of information among stakeholders.
- Community-based management of natural resources presupposes that local capacity will be mobilized to effectively assume management responsibility. Serious human resource constraints, inadequate financing arrangements, inefficient management structures and weak management systems variously contribute to CBOs inability to effectively and sustainably manage natural resources. Accordingly, the decentralization and devolution process would be incomplete without investment in human capital, institutions and practices.
- The above lessons are applicable in other situations so long as state is committed to a policy of decentralization and devolution of natural resources management to the local level. Also critical is the local history of a particular area or region. Even with the best of intentions, a community-based natural resource management program is not likely to succeed without appropriate incentives and/or guarantees among the national and regional polices and institutions addressing land ownership, tenure, and use rights. In Zimbabwe, the government has been pursuing the policy of decentralization and devolution for some time now. This has been instrumental in facilitating the establishment of independent CBOs. The existence of strong non-governmental organizations such as the CAMPFIRE Association with a proven track record in promoting community-based natural resource management is also part of the enabling environment which could guarantee success if replicated in other situations.

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