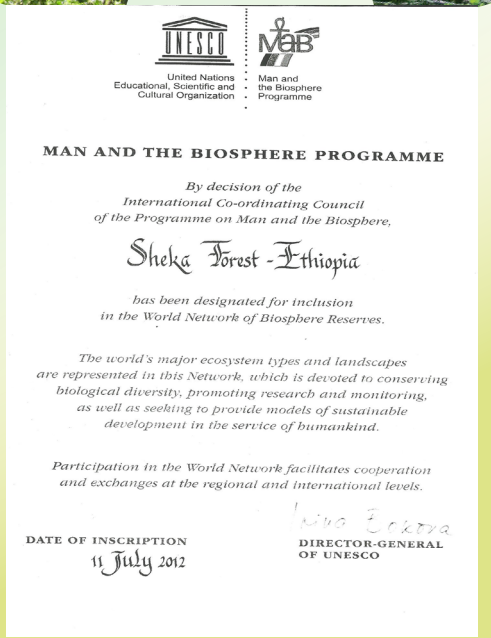
Sheka Forest Biosphere Reserve Management Plan







UNESCO
United Nations Educational, Scientific and Cultural Organization

MAB
Man and the Biosphere Programme

MAN AND THE BIOSPHERE PROGRAMME

By decision of the International Co-ordinating Council of the Programme on Man and the Biosphere,

Sheka Forest - Ethiopia

has been designated for inclusion in the World Network of Biosphere Reserves.

The world's major ecosystem types and landscapes are represented in this Network, which is devoted to conserving biological diversity, promoting research and monitoring, as well as seeking to provide models of sustainable development in the service of humankind.

Participation in the World Network facilitates cooperation and exchanges at the regional and international levels.

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DIRECTOR-GENERAL OF UNESCO

Sheka zone Administration

January 2015

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(2015-2019)

Sheka zone Administration

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Sheka Forest Biosphere Reserve

Management Plan

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Produced By Sheka zone Administration with support from MELCA-Ethiopia

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FOREWORD

Since 2010, when the status of biosphere reserve was raised as a possible approach for the sustainable management of Sheka, intensive and constructive discussions and cooperation between all stakeholders related to the Sheka zone have contributed to its successful registration as a UNESCO biosphere reserve in July 2012.

Surveys, meetings, forums and technical discussions have paved the way for the successful management of the biosphere reserve through recommendations, innovative ideas and integrative management processes. All together, stakeholders envisioned a coherent framework and consistent guiding approach for the biosphere reserve and its three types of zones, - core areas, buffer zones, transition area-, notably through the management guidelines, presented in the Nomination Form of the biosphere reserve.

As stated in Article 4.7.(b) of the Statutory Framework of the World Network of biosphere reserves, and further defined in Objective IV.1 of the Seville Strategy for biosphere reserves, each biosphere reserve must “prepare, implement and monitor an overall management plan or policy that includes all of the zones of biosphere reserves”. In compliance with these official documents of the Man and the Biosphere Programme and the Sheka biosphere reserve’s management guidelines, the present management plan intends to frame the overall strategy of the biosphere reserve, its objectives and its action plans for the coming decade (2014-2024).

The review and approval of the plan will be conducted in time to ensure its acknowledgement by all relevant stakeholders, eventually allowing the Sheka biosphere reserve to be fully functional. The official declaration by the zonal administration is intended to further strengthen its effectiveness and impact, by promulgating it as a legal and subsequently mandatory document, for which all stakeholders shall act in compliance with.

Michel Batisse, one of the founders of the Man and Biosphere Programme once wrote: “the key success for a biosphere reserve is, however, found elsewhere, namely in the formulation and the implementation of an overall management plan, which assumes that it has been defined through concertation among all the stakeholders within the framework of an appropriate mechanism. It is not always easy to follow such a procedure. Yet it is the only way to succeed in a democratic and feasible way within any undertaking that aims to foster sustainable development”.

We hope that this management plan will fulfill this ambition and be a key to the success of Sheka biosphere reserve.

AKNOWLEDGEMENT

The team who prepared this Management Plan wishes to express its gratitude and thanks to the many people who have helped to produce this Management Plan, and particularly to all the organizations and individuals who participated in the consultation and discussion meetings and who commented at various stages in the development of the Plan.

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ACRONYMS and INTERPRETATION

AfriMAB:- African Biosphere Reserve Network - This Network gathers all biosphere reserves that are in Africa, and is aimed at fostering cooperation and sharing information between biosphere reserves.

BCP Bio-cultural Community Protocol - A statement by a community to communicate its intentions and controlling role of an ecosystem and its biodiversity as well as its traditional knowledge and practices in connection with this ecosystem. It is intended to establish the significance of the community's way of life and the value of its traditional practices for the conservation of the ecosystem and entire biodiversity. As such the protocol clarifies, for outsiders, the terms and conditions the community requires to permit them to undertake activities relating to the ecosystem and its traditional knowledge and practices on its land.

BR Biosphere Reserve

BZ Buffer Zone - a zone surrounding or contiguous to the core areas, where only activities compatible with the conservation objectives can take place.

CZ Core Zone - the central area in the biosphere reserve devoted to long-term conservation, according to the conservation objectives of the biosphere reserve.

CSO Civil Society Organization

EIA Environmental Impact Assessment - a method and approach for identifying and analyzing the impact — be it positive or negative — that results from the implementation of a proposed private investment or public instrument on the environment, with the view of ensuring environmentally sustainable development.

Environmental Governance **Environmental Governance** covers the formal and informal institutions, rules, mechanisms and processes of collective decision-making that enable stakeholders to influence and coordinate their interdependent needs and interests and their interactions with the environment at the relevant scales to achieve sustainability.

Fast growing and multi-purpose trees These are trees that are either interesting for timber, fuelwood or other objects, given their growth and natural proprieties, or which can be used for more than one purpose (timber for tools, fruits for food consumption, bark for medicine, etc.). In Sheka, in order to restore the already degraded environment, indigenous trees shall be prioritized.

Food horticultural Crops cultivating plants for food (fruits, vegetables, mushrooms, crops culinary herbs, etc.)

GPS Global Positioning System

HH Household - a person or a group of people living in the same house, seen as one unit

ICC International Coordination Council - The MAB governing body, consisting of 34 Member States elected by UNESCO's General Conference.

Integrated agro-industries Agro-industry refers to the subset of manufacturing that processes raw materials and intermediate products derived from the agricultural sector. Integrated agro-industries are these private initiatives that do not give rise to undesirable environmental side-effects and take into consideration the social and environmental context of the area where they are located.

IUCN International Union for Conservation of Nature.

Livelihood One's livelihood comprises its capabilities, assets and activities required for a means of living. A livelihood is sustainable when it can cope with and recover from stress and shocks and maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base. Assets can be further defined by the state of one's capitals: human, social, natural, physical, financial, and political capitals.

MAB Man and the Biosphere (program)

MMG Minorities and Marginalized Groups - groups and individuals excluded by social, cultural or economic norms in such a way that their access to certain resources and opportunities that are normally available to members of society and which are key to social integration are blocked or undermined (e.g. housing, employment, healthcare, education, participation). This include in Sheka the Manja community, women and women-headed households, illiterates, isolated households and individuals from local communities with no land.

MP Management Plan

MB Management Board - as defined below, the group of stakeholders responsible for managing the biosphere reserve.

NGO Non-Governmental Organization

NTFP Non-Timber Forest Products - biological materials other than timber/wood that are extracted from forests for human use (honey, coffee beans, bamboo, medicinal plants, spices, etc.)

PES Payments for Ecosystem Services - mechanisms where individuals (people or private actor(s)) benefiting from a given positive ecosystem service (clean water, carbon sinking, biodiversity …) voluntarily pay other individuals to protect or sustainably manage this ecosystem (e.g. a forest) over a certain period of time to ensure that this service is sustainably produced.

PMM Participatory Management Mechanisms - mechanisms were a group of local stakeholders is engaged in managing a given area or ecosystem (forest, grazing land, wetland, irrigation system) in a collective and participatory effort in order to ensure its perennial and non-destructive use.

Private sector the private sector refers to the part of the economy that is not state controlled, and is run by individuals and companies for profit.

REDD Reducing Emissions from Deforestation and Forest Degradation

SEGNI Social Empowerment through Group Nature Interaction

SNNP(RS) Southern Nations, Nationalities and Peoples (Regional State)

TZ Transition Zone - outer area of the biosphere reserve, where sustainable resources management practices are promoted and developed.

TEK Traditional Ecological Knowledge - a cumulative body of traditional knowledge, practice, and belief, evolving by adaptive processes and normally handed down through generations by cultural transmission, which concerns the relationship of living beings (including human) with one another and with their environment. In a general manner, it includes the traditional knowledge of natural resources' features and its sustainable management.

UNESCO United Nations Educational, Scientific and Cultural Organization

URI Universities and Research Institutes

WNBR World Network of biosphere reserves - network of all the existing biosphere reserves, under MAB program, aimed at fostering cooperation and sharing information between biosphere reserves

ZAC Zonal Administrative Council

ZDA Zonal Department of Agriculture

ZDCT Zonal Department of Culture and Tourism

ZDFED Zonal Department for Finance and Economic Development

ZDJ Zonal Department of Justice

ZDP Zonal Department of Police

ZDRD Zonal Department of Rural Development

ZDTI Zonal Department of Trade and Industry

EXECUTIVE SUMMARY

In July 2012, Sheka forest successfully became a biosphere reserve under the patronage of UNESCO's Man and the Biosphere Programme (MAB), and is part of the World Network of Biosphere Reserves (WNBR). As such, Sheka has adopted a specific zonation (Core areas, Buffer zones, Transition Area).

The biosphere reserve will also have to fulfill three essential functions, presented in its Nomination Document: a Conservation function (contribute to the conservation of landscapes, ecosystems, species and genetic variation), a Development function (foster economic and human development which is socio-culturally and ecologically sustainable) and a Logistic support function (support for demonstration projects, environmental education and training, research and monitoring related to local, regional national and global issues of conservation and sustainable development).

Furthermore, following the Statutory Framework for biosphere reserves, Sheka shall now adopt a management plan. The management plan provides information about Sheka biosphere reserve strategic orientations for the future and clear direction and details for the development and implementation of programs that advance Sheka biosphere reserve as a living and learning place for bio-cultural diversity and sustainable development. The draft was produced after thoroughly reviewing expert reports, consultation meetings outcomes, the biosphere reserves' documents and other valuable examples and guidelines from biosphere reserve's management experts.

The central goal of this Plan is to guide and co-ordinate the work of all stakeholders with an interest in the biosphere reserve and in delivering the biosphere reserve functions. It applies to the entire Sheka zone, and shall be followed by all relevant stakeholders related to Sheka, at all levels. The Management Plan is intended to cover the 10 coming years (2014-2024) and will come into effect when adopted/ endorsed by the Zonal administration after consultation.

The two first parts of this document explain the history of biosphere reserves and Sheka biosphere reserve's creation, the methodology used for designing the management plan, specific details on the context of the biosphere reserve. It also gives more detailed information on its zonation, the issues and opportunities of Sheka as a biosphere reserve, and its Vision, Mission, and Values for the future.

The Management Plan itself is made of five general objectives with their expected impacts. The general objectives are the backbone of the biosphere reserve's strategy.

These are:

- To conserve Sheka's bio-cultural diversity
- To support the development of local communities
- To promote environmentally friendly investments in the transition area
- To enhance knowledge and capacity in the biosphere reserve
- To strengthen environmental & participatory governance

Each general objective is made of a set of specific objectives, with their associated actions to be performed, expected results (used for evaluating), indicators (used for monitoring and evaluating), and actors (responsible for implementing the action(s)). These actions are the most detailed guidelines of the main document, while suggested activities are presented for each action in the Appendixes. Each action has a specific zonation, i.e. it can and shall only be performed in specific zones of the biosphere reserves.
Goals to be reached at the end of the Management Plan's period that should be set during the consultation are finally listed, as targets for the biosphere reserve.

The last part of the Management Plan described a possible management structure for the biosphere reserve, made of a Zonal Management Unit with a central, implementation and executive role, focal persons at each sublevels (Woreda and Kebele) with an implementation, informational and monitoring role, and a consultative assembly with an informational and consultative role. For the monitoring and evaluation of the management plan by the Zonal Management Unit, indications are given regarding results and indicators.

Finally, Appendixes provide additional or summary information on each objective and each action, actors' responsibilities, maps, guidelines from the nomination document and sanctions.

INTRODUCTION

ABOUT UNESCO BIOSPHERE RESERVES

Since its creation in 1945, the United Nations Educational, Scientific and Cultural Organization (UNESCO) has had the mandate from the United Nations to promote Education, Science and Culture throughout the world, with a particular emphasis on improving the way people live and interact in their environment.

Established and launched in 1976 by UNESCO's Man and the Biosphere Programme (MAB), the World Network of Biosphere Reserves (WNBR) has been the spearhead of the MAB programme and a key component to achieve its objectives: to reach a sustainable balance between conserving biological diversity, promoting economic development, and maintaining associated values and cultures.

Biosphere reserves are **internationally recognized areas** where conservation and sustainable development objectives are reconciled, and where environmental education and awareness raising, training, research and innovation are critical elements contributing to the success of such an approach.

At regional scale, a biosphere reserve is also an open and dynamic tool, fostering dialogue and cooperation in the area, offering an opportunity for all relevant stakeholders to take part in planning and decision-making and allowing managing authorities to rely on a coherent and flexible framework for coordination in a long term perspective.

Finally, biosphere reserves are learning places, where pilot and demonstration projects and activities are encouraged, where lessons and successful experiences are to be shared in the WNBR, and where the management and dialogue framework is intended to be integrative, adaptative and conflict-solving.

The WNBR is governed by a Statutory Framework adopted by the UNESCO General Conference in Seville in 1995 which presents the definition, objectives, criteria and the designation procedure for biosphere reserves. The actions recommended for the development of biosphere reserves are set out in the "Seville Strategy". In this framework, at the request of the country concerned, biosphere reserves are designated by the International Coordinating Council (ICC) of the MAB Programme, after the assessment and approval of their application (nomination form).

Each country comprises a national MAB Committee, which assesses potential sites for biosphere reserves and links biosphere reserves to the MAB secretariat. Individual biosphere reserves remain under the sovereign jurisdiction of the countries

where they are situated, and are asked to provide a report of the activities and projects achieved every ten years (periodic review), this report being assessed by the ICC to determine if the biosphere reserve is functional and its management satisfactory.

As defined by the Statutory Framework of the WNBR, to be fully operational, biosphere reserves shall fulfill three inter-related functions:

- **Conservation:** contribute to the conservation of landscapes, ecosystems, species and genetic variation;
- **Development:** foster economic and human development which is socio-culturally and ecologically sustainable;
- **Logistic support:** support for demonstration projects, environmental education and training, research and monitoring related to local, regional national and global issues of conservation and sustainable development.

To fulfill these functions, biosphere reserves shall have an appropriate zonation, which includes:

- Legally constituted **core zone(s)**, which are securely protected sites for conserving biological diversity, monitoring ecosystems and habitats and undertaking non-destructive research and other low impact uses (such as environmental education);

- **Buffer zone(s)**, which surrounds or adjoins the core areas, and is used for cooperative activities compatible with sound ecological practices, including environmental education, recreation, ecotourism, and applied and basic research; and

- **Transition zone(s)**, which may contain a variety of agricultural activities, settlements and other uses and in which stakeholders work together to promote and develop sustainable resources' management practices.

SHEKA BIOSPHERE RESERVE PROJECT HISTORY

In 2010, Sheka zone administration and MELCA Ethiopia developed a general land use management plan for Masha Woreda as a pilot case. During the consultations with the local government authorities and community representatives, the biosphere reserve was raised as a possible sustainable land management approach for Sheka, based on the experiences of Kafa and Yayu forests in nearby areas.

Community members and local authorities took the initiative to nominate the whole Sheka zone as a biosphere reserve and formed a taskforce in June 2010. The initiators requested the support of MELCA-Ethiopia and Dr. Tadesse Woldemariam Gole (Yayu Coffee Forest Biosphere Reserve) to support them in the nomination process.

By the end of 2010, a Management Unit (MU) to lead the nomination process for establishment of Sheka Forest biosphere reserve was formed. The members of the MU included representatives of Sheka Zone Administration, the Zonal Department of Trade, Industry and Urban Development, thee Zonal Department of Agriculture, the Zonal Department of Finance and Economic Development, the Zonal Department of Justice, Sheka Zone Development Association, and MELCA-Ethiopia. The MU is chaired by the Sheka Zone administration. Following the formation of this MU, extensive consultation was carried out and the final Nomination Form was sent in September 2011 (see below for further details).

Finally, on July 11th, 2012 in Paris, UNESCO has added the Sheka forest to its global list of 610 Biosphere Reserves in 117 countries, with the following recommendations by the ICC:

- *"The committee commended the Ethiopian Authorities for a well prepared nomination. The forest in Sheka which is also part of the Southwest Highlands Forests of Ethiopia is important for the conservation of the Afromontane forest vegetation types especially the Afromontane Rainforest and Alpine Bamboo thickets. The area is rich in plant and animal species with over 38 threatened species both flora and fauna on the IUCN list.*

- *The committee acknowledged the cultural and spiritual significance of the proposed area to the people and their commitment to maintain the integrity of the ecosystem through the practice of ecologically sustainable agriculture.*

• *The Advisory Committee recommended that this site be approved and encouraged the authorities to develop the potential of the area for use as a demonstration site for environmental education and also to show the link between culture and biological diversity."*

RESEARCH AND CONSULTATION METHODOLOGY

In order to design Sheka biosphere reserve management plan, the working group collected primary and secondary data. Prior to stakeholders' consultation, reports of previous works, publications, consultations reports and maps were thoroughly analyzed and compiled.

publications included the multi-disciplinary research on forest cover changes, biodiversity, culture, institutional and legal frameworks conducted by MELCA-Ethiopia (Forests of Sheka, Tadesse and Masresha 2007), the general land use management plan for Masha Woreda (Woldermariam, Seyoun and Asefa, 2010) and the final document of Sheka biosphere reserve nomination form (2011).

Furthermore, the outcomes of previous consultation processes were also analyzed to compile the objectives, priorities and actions for the biosphere reserve.

First of all, meetings with major stakeholders of the zone had been initially conducted at different levels. Indeed, consultation meetings, trainings and focus group discussions were conducted with community members and community representatives, particularly with Kebele officials, cultural leaders, women, elders, youth, model farmers, and development agents. During these discussions, issues and opportunities, management strategies and objectives, management policies, and desired management activities/actions were identified by the participants. There was active participation by all representatives of the community. The current management practices, their livelihood strategies and desired livelihood in the future were also discussed. Problems constraining the current practices were identified, and suggestions of solution were raised by all stakeholders to cope with these problems.

Extensive consultations and dialogue with administrative offices were also hold to discuss these issues; consulted offices included the Zone and Woreda Administration offices, offices of Agriculture and Rural Development, Finance and Economic Development, Trade, Investment and Industry, Culture and Tourism, and SNNP regional state government officials.

In particular, during the process, a training workshop on biosphere reserve concepts and preliminary zoning of Sheka Forest Biosphere was conducted, as well as a participatory biosphere reserve zoning workshop, including field visits for ground reference (GPS) points recording.

During one of these meetings, the Declaration for Sheka Forest Biosphere Reserve

initiative was developed, agreed upon and signed by key stakeholders. In virtue of the Declaration, the signatories committed themselves to carry out key actions:

- awareness raising, information and education for conservation and sustainable development,
- clarifying land demarcation, use rights, use rules and sanction for the biosphere reserve,
- developing activities and capacity building in the biosphere reserve, and
- strengthening institutional structure for collaboration between government and non-governmental agencies, and local communities.

Moreover, in writing the nomination form and Masha land-use management plan, expert opinions and validation meetings were hold, during which the major features and elements were presented to and discussed with experts from partner organizations, including national agencies, NGOs and funders of current projects in Sheka.

Finally, the final draft nomination form incorporated comments from all stakeholders, and workshops, final consultation meetings on Sheka forest biosphere reserve nomination document occurred in august 2011. During these meetings, the different uses allowed and restricted in the different management zones of the biosphere reserve were finalized. The draft zonation map of the biosphere reserve management zones was also presented and thoroughly discussed and revised, with final inputs from community representatives and experts. Thereafter, final documents were presented and approved by the SNNP regional state government, members of the biosphere reserve Management Unit, local authorities and community representatives.

These precious information and documents allowed the management plan working group to write a primary draft with legitimate information, and which includes the vision, values, priorities and objectives of the biosphere reserve, as well as actions, organizational elements, action plans and indicators for the biosphere reserve final management plan.

The second part of the process consists in a new round of consultations with community representatives, local authorities, local stakeholders and experts to assess this draft management plan in details, and to discuss the functioning of the MUs. Following these consultations, comments made and registered will we assessed and integrated as much as possible, and a report to explain the rational for this work of assessing comments will be provided to all stakeholders who participated in the workshops. A final version will be handed out to the Zonal Council and Zonal Administration. If appropriate and after final corrections, the Zonal Council will endorse the biosphere reserve management plan, and the former will come into effect.

MANAGEMENT PLAN SPECIFICATION

GOAL AND SCOPE OF THE MANAGEMENT PLAN

According to Part 1, article 2(24) of SNNPR's Forest Development, Conservation and Utilization Proclamation No 147/2012, forest management plan is a plan for development, conservation and utilization of a natural or man made forest.

The management plan provides information about Sheka biosphere reserve strategic orientations for the future and clear direction and details for the development and implementation of programs that advance Sheka biosphere reserve as a living and learning place for bio-cultural diversity and sustainable development.

The central goal of the Plan is to guide and co-ordinate the work of all stakeholders with an interest in the biosphere reserve and in delivering the biosphere reserve functions. It applies to the entire Sheka zone, and shall be followed by all relevant stakeholders related to Sheka, at all levels.

The management plan does not seek to replace any of the other strategies and plans relating to different aspects of Sheka zone and published by official administrations. For example, the National Biodiversity Strategy and Action Plan, the Agricultural and Rural Development Policies and Strategies or Development and conservation strategies of various Woreda Administrations covering the area remain key documents for Sheka biosphere reserve. Rather, the Management Plan seeks to complement these documents and build on the ideas they contain. The Plan aims to be in line with the national interest as well as current global directions of conservation and sustainable use of natural resources (see legal framework section for more details). At the same time it provides a strategic direction and priority actions that focus clearly on local sustainable development of the area and the conservation of its bio-cultural diversity, in the specific framework of the biosphere reserve.

The Management Plan is intended to cover the coming five years (2015-2019) and will come into operation following approval and endorsement by the zonal council, and will cease to have effect ten years after commencement, unless revoked sooner or replaced with a new plan. If appropriate, the management plan may be amended periodically in the future, by incorporating lessons learned from practices and research. This adaptative approach shall be conducted by the biosphere reserve's management units, and strengthened by community and stakeholders' consultation and approval.

BACKGROUND AND GENERAL INFORMATION

Sheka Forest Biosphere Reserve comprises an extraordinary natural and cultural landscape mosaic of dense natural forest, sacred/cultural forest, managed forests for coffee and beekeeping, bamboo thicket, wetlands, agricultural land, historical sites, natural landmarks like waterfalls, caves, interspersed with settlements. The culture is an omnipresent part of the biosphere reserve, shaping the landscape and the sustainable development of the area.

Environmental significance of Sheka forest

The Sheka forest constitutes one of the few remaining pristine afromontane forest in Ethiopia. As such it is highly regarded as important for conservation of the afromontane forest vegetation types, especially the afromontane rainforest and alpine bamboo thickets. It is also among the few remnant representative areas with original habitat types.

In addition to its remarkable water and wetlands features, the forest of Sheka is also important for the role it plays in protection of watersheds that have local and international significance in the Nile and Omo-Ghibe/ Lake Turkana basins. It is the source of major rivers like Baro and Akobo Rivers, the main tributaries of the White Nile, and Gojeb, the main tributary of Omo from the southwestern highlands of Ethiopia. Besides, it is highly regarded for flood and erosion control.

Sheka forest, together with the surrounding primary and secondary forests, are of national and international importance for carbon storage and sequestration to mitigate the effects of climate change.

Moreover, Sheka biosphere reserve is of high significance for conservation of biodiversity in the eco-region at national, regional and continental level; the forest is rich in both plant and animal species, and is part of the eastern afromontane biodiversity hotspot. There are over 300 higher plants, 50 mammals, 200 birds (The area is part of the Metu-Gore-Teppi Forest Important Bird Area), and 20 amphibian species, occurring in all habitats. Out of these, at least 55 plants, and 10 birds are endemic to Ethiopia, of which some are range-restricted to the southwestern highlands. There are also over 38 threatened species (IUCN Red list) in the area, which include 5 bird, 3 mammals and 30 plant species.

The area is the center of origin and diversity for Ensete (Ensete ventricosum, often called false banana), a staple food crop growing in most parts of southern and southwestern Ethiopia. Ensete is perennial and drought tolerant, playing an important role in food security. It is also the secondary center of diversity for many food

crops, forest species and spices. In particular, although without being its center of origin, Sheka is an important genetic pool for Arabica coffee (Coffee Arabica).

Demography and socio-economy

A record obtained from Sheka zone Finance and Economic Development Department shows that, according to the population projection made in 2013, the population of Sheka zone is estimated to be 247,815. Out of this 125,719 are male and 122,096 are female.

Although many ethnic groups live in Sheka, the dominant native ethnic groups in the zone are the Shekacho, Sheko and Mejenger.

Traditionally among the Shekacho ethnic group, there had been four casts. This included the Shekacho proper, black smiths, potters and the Menjas. The Shekachos used to be the highest cast and the rest were found at descending rank with the Menjas at the bottom of the ladder. The low cast groups acquired their status due to their work habit. The Menjas used to be hunter-gatherers and most marginalized casts in terms of social, economic and cultural aspects and depended on selling forest products, mainly charcoal and firewood. Over the past few decades, efforts of social, political and economic integration are being made.

The forest's development/economic function is vital for the biosphere reserve. People locally earn most of their cash income from honey (125,000 traditional beehives are found in the biosphere reserve) and spices produced in dense forest.

Outside the forest, crop production and livestock grazing are the main activities. The traditional agricultural practices are generally ecologically sustainable, while fulfilling the social and economic needs of the local population. However, settlements in forested areas are increasing, putting a high pressure on Sheka forest. Besides, there is also a growing trend of coffee production by the highlanders, by planting coffee in degraded forest areas.

Concerning the private investments, according to 2003-04 Sheka Investments Desk Annual Report, 6,646 Ha of rural land are delineated for investment (coffee, spices, tea, fish farming).

Finally, also not developed at the time, the area has a good potential for eco-tourism, with its diverse natural and cultural landscape, tropical forest, crater lakes, waterfalls and cultural festivals.

The intertwining of culture and forest conservation

Forests and trees have special places in Shekacho culture, and recognized for ecosystem services. cultural leaders (gepitatos) had an important role in resource management and traditional forest tenure is found in Sheka, which divides the forest into cultural forests (gudo) and large forests (kobo) that are administered through customary right.

Gepitatonoshi

In the traditional kingdom's social organization, there were a king (Shekitato), councilors (mikiracho) under him, "cultural leaders" (gepitato) and individuals appointed under them.

Being gepitatonoshi is the most influential traditional position that an individual acquires through inheritance. Unlike the other positions, the position of gepitatos and their functions partly survived up to now. Originally, gepitatos assumed a wide range of responsibilities that have serious concern with socio-cultural, religious and economic affairs. They are both ritual leaders and administrators responsible for the arbitration of dispute among clan members. Until the end of the imperial period, gepitatos controlled the whole aspect of people living in their territory, usually land equivalent to the size of the present Kebele administration. Nowadays, gepitatos are still important communitarian leaders, performing different social, cultural (religious) and economic activities that are substantially related with resource management and the livelihood of the community.

Large forests and cultural forests

The management of large forests (kobo), usually found relatively far from people's settlements, is based on the rights and obligations of the individual who inherited the forestland from his ancestors. The holder of the forest who is allotted or has inherited a block is responsible for its management through traditionally known use and conservation rights. Other people are not allowed to use resources in kobo for hanging beehive and extraction of other NTFPs unless it is beyond the knowledge of the owner of a particular kobo. Cultural leaders have enforced the customary rules of forest management, though to a less extent nowadays.

Traditionally, cultural leaders used to control the holder of kobo who is responsible for illegal timber extraction and other damages brought within his boundary. Formerly cultural leaders had the right to impose different forms of punishments on the illegal use of forest resources. But currently, the government control forest and NTFPs in accordance with relevant national and regional laws. Nowadays, cultural leaders

still provide informal advices for promoting conservation of resources in kobo area.

Cultural forests (gudonoshi)

Found around villages and on hilly or steep slopes mountain areas, are sustainably managed on the basis of taboos related to religious beliefs and societal values that coincide with Shekachos' ecological knowledge, varying from place to place (209 cultural forest areas are found in Sheka).

Worship places (also called gudos, or natural/sacred sites) in the middle of the cultural forests are central to the resource and habitat taboos enhancing cultural forest conservation. Gudos are places were religious ceremonies, sacraments and prayers are conducted. The sites are unknown to most people, except for the cultural leaders who provide sacraments and conduct prayers. Gudos are specifically situated in areas relatively elevated, around big stones and trees at the middle of cultural forests. According to taboos, it is prohibited to clear such cultural forest areas or to cut trees for house construction and house furniture. Though few people have recently started to violate the rule, hanging beehive, hunting and cutting climber is a taboo that every member of the community in general observes.

There is also a conception among the community that as protection of the cultural forests ensures normal rainfall distribution; gudo should not be exposed to deforestation. The protection of cultural forest also protects wild animals as hunting in such forest is forbidden.

Resource and habitat taboos imposed on areas of cultural forest have significant ecological importance, particularly for watershed protection, erosion and landslide control and conservation biodiversity and provision of various ecosystem services. The cultural sites are also habitats for many wild relatives of crop plants and hence prevent genetic erosion. These cultural practices are all the more important that they are in agreement with sound scientific recommendation for sustainability.

Wetlands, rivers and waterfalls

In many of the areas, forests surround wetlands. The wetlands (Ceconoshi) are believed to be the source for many of major rivers and their tributaries. A taboo forbids cultivating the wetlands and the forest in its surrounding. Wetlands were under the management of cultural leaders until the coming of the Derg Regime. Cultural leaders used to organize and conduct worship ceremonies and provide sacrament in the area. Prayer and sacrifice was conducted through the guide of cultural leaders. The traditional culture of protecting wetlands has important ecological value in watershed protection, continuous flow of water, sustainable production of wetland

grasses for economic use, regulation of pollution and water flow and conservation of biodiversity.

Traditional beliefs also protect forests along river banks and waterfalls. If a person cuts such trees, there is a belief that he may die, for he is against the rule of the guardian spirit for which sacrament is provided by cultural leaders in wetland areas and waterfall points.

Taboos on the forests along rivers are based on the assumption that rivers need cover (acheiedo), as people require cloth in the views of the Shekachos. The forest is also important for continuous flow of the rivers and for the supply of cold and clear waters for drinking and other purposes. The local community members understand the strong relation between the wetlands, rivers and forests in the area. Wetland is a source of rivers; and forests keep wetlands from drying. Research findings also confirm their traditional ecological knowledge that wetlands are important contributors to groundwater and hence to the maintenance of water supply.

These forest management and cultural practices have proven to be crucial to effectively conserve the forest. Indeed, because of the importance of forests for the local people's livelihood and their cultural practices, the area still maintains an extensive forest cover with high bio-cultural diversity.

Institutional framework

Sheka Administrative Zone is one among the 14 Zones and 4 Special woredas of Southern Nations Nationalities and Peoples Regional State (SNNPRS). It borders in North and Northwest with Oromiya; in East with Kafa Zone; in Southwest with Gambella Regional State; and in South with Bench-Maji Zone. There are 5 urban kebeles (among them Masha, Gesha, Teppi) and 57 rural kebeles.

In accordance with articles 8, 9 and 10 of part two of the revised regional constitution of SNNPR, independent legislative, executive and judiciary organs of government have been established and are operational from zonal to woreda levels.
In addition, the structure of government institutions set as per proclamation No. 133/2011 is functional.

Accordingly, government structures at zonal, woreda and kebele levels have the responsibility of coordinating, directing and managing Sheka Forest Biosphere Reserve as well as executing this management plan.

Legal framework

ZONATION

The Sheka Forest Biosphere reserve has a total area of 238,750 hectares. To fulfill its three functions and as required by the Statutory Framework of the WNBR, the biosphere reserve is made of core zones, buffer zones and transitional zones which are respectively 55, 255 hectares (23.14%), 76,395 hectares (30%) and 107,100 hectares (44.86%). (See Appendix for a map)

•The core zone(s) (CZ)

These are areas devoted to long-term protection of the natural forest. It is composed of intact natural high forest, cultural forests (Kobo), sacred forests, wetlands and bamboo tickets. Hence these are areas to be protected from human interference except for traditional non-timber uses such as traditional beekeeping, wild spices and medicinal plants collection, ritual ceremonies as well as controlled eco-tourism using some routes, research, monitoring, and trainings.

The list of activities forbidden includes: agricultural activities, settlements livestock grazing, reforestation using exotic trees or any silvicultural management, timber and dead trees harvesting, wild honey harvesting, hunting of wild animals (with exceptions), use of agrochemicals and other chemicals, movement of heavy machinery and cars, quarry extraction, road construction and any other investment.

•The buffer zone(s) (BZ)

On the other hand are area(s) devoted to both conservation and use functions. These uses shall respect the natural environment, without putting additional pressure on the forest and ecosystems. Environmental research and education is promoted, as well as eco-tourism and traditional sustainable practices (coffee production on disturbed forests with enough density and diversity of shade trees; traditional honey production; sustainable extraction of NTFPs; reforestation).

Some activities are forbidden in the buffer zone(s); these include: new settlements, farming wetlands and deforesting riverside forests or river banks, burning crop residues and forests during land preparation, polluting rivers, timber harvesting, over-exploitation of endangered species, hunting of wild animals (with exceptions for cynegetic control purposes), planting exotic trees, using agrochemicals and other chemicals, movement of heavy machinery and cars, quarry extraction and any other investment that changes the land use system.

•The transitional zone (TZ)

This is a development zone where all activities for livelihood of the local community take place. Here, all kinds of traditional and modern agriculture based sustainable land management can be undertaken and should be promoted as long as it respects the local socio-economic, cultural and natural environment.

The following activities are forbidden: Farming and/or deforesting riverine forests or river banks and wetlands, burning crop residues and forest fragments during land preparation, expansion of large-scale forest plantation using exotic species, expansion of large scale tea or coffee plantation, introduction of improved coffee varieties into exiting farming system, over exploitation of endangered tree species, polluting rivers through wet coffee processing or other means, misuse of or change of historical landscapes or places, removal of vegetation that may cause damage to the historic place, establishing factories that damage the existing landscape and also encourage immigration of people, quarry extraction and any other investment that changes the existing land use system, mining, uncontrolled waste disposal.

ISSUES AND OPPORTUNITIES

Major challenges and trends are likely to affect the biosphere reserve and its unique features fundamentally over the next 10 years. These challenges and trends can nevertheless be turned instead into key opportunities over the long term to ensure the sustainable development of the area.

One of the main purposes of this Plan is to set out policies for coordinated and collective actions that can address these issues and make the most of these opportunities.

Most of the pressures on the Forest will be driven by complex interactions between environmental, social and economic factors at local and broader levels. Although many of these trends are by their nature difficult to predict accurately, we can assume than the following will be key aspects of the issues and opportunities of Sheka that the biosphere reserve must address:

Erosion of local bio-cultural diversity

Over the past decades, a growing erosion of the local diversity, both ecological and cultural was observed by researchers and community members. The forest has been losing its biodiversity at a critical rate due to constant and growing pressure on its natural resources, putting at threat its ecological capacity and ecosystem services. Local communities are also progressively losing their cultural distinctiveness: a growing number of individuals are less concerned and interested by the culture,

values and traditional practices (traditional land use management, farming practices, conserving the forest) that are part of Sheka's identity. These trends are likely to continue unless support is given to communities in conserving and promoting their bio-cultural diversity and unless other stakeholders are encouraged to take forward clear actions to conserve it. There are multiple opportunities for local level community-based projects to enhance the local culture and traditional knowledge, and the biosphere reserve shall support and promote these initiatives.

Economic activities and local livelihood

Economic activities bring both pressures and opportunities for Sheka biosphere reserve. The multiplication of middle and large scale investments in the zone has led to the destruction and degradation of numerous pristine forest patches, and brought new issues for the local communities. Similarly, the increase of smallholder agriculture has resulted in the continuous erosion of forest land around settlements areas and even further. Together with the consequences of the growing demand for energy and timber, these activities are leading to an alarming rate of forest degradation and deforestation.

Nonetheless, it does not mean that all economic activities are forbidden in Sheka. On the contrary, local communities can improve their livelihood through income generating activities and the biosphere reserve must think and work in this sense. Sustainable investments in Sheka must be promoted and must benefit to a large number of people.

However, only an economic development of Sheka that respects the environment and local communities, and improves people's standards of living must be promoted and fostered. Much can be done in this sense through the development and promotion of local initiatives as well as by encouraging companies to develop sustainable investments in the biosphere reserve.

Societal expectations and needs

Not withstanding the interests of communities in Sheka zone as provided under article 26 of section 7 of SNNPR proclamation No. 147/2012 for forest conservation, developmentIn and conservation, in order to achieve sustainable development in Sheka biosphere reserve, local communities' need for better infrastructure and services must be addressed. A better access to education and health, networks (electricity, water, phone, roads) and transport, as well as other services is necessary, not only to improve people's standards of living but also to ensure that those who conserve and depend on the forest are not forgotten and can find sustainable paths for living.

Local policies and administrations can help to influence the provision of local services, infrastructures and energy sources, which will all help to create more sustainable communities. Communities can also be supported in making local decisions for their area, and in taking forward local initiatives.

As a collective framework for action, the biosphere reserve has the mission and capacity to address the needs of its communities. Innovative approaches and finding new additional means of funding will be necessary on the long term to improve infrastructures and services as well as to provide viable sustainable energy options.

Cooperation and development

By supporting and contributing to the national development of the Democratic Republic of Ethiopia, current international partners have a major influence on many aspects of programs and initiatives developed currently in the country. Whether donors or research institutes, international NGOs or private companies, they take part in Ethiopia's growth and its future.
Sheka biosphere reserve can and should fully benefit from this cooperation. Establishing partnerships (research, public-private, local-global), securing perennial funds from donors and financial mechanisms, promoting exchanges between stakeholders (training, experience sharing)... all these approaches should be explored by and in the biosphere reserve. Cooperation shall be a corner stone for all those who are devoted to pursue sustainable development in Sheka.

Climate change

Climate variability is already imposing a significant challenge to Ethiopia by affecting food security, water and energy supply, poverty reduction and sustainable development efforts, as well as by causing natural resource degradation and natural disasters.

According to current models, climate change will result in northern SNNPRS by a significant increase in temperature and decrease in rainfall. These trends are likely to alter the character of large parts of the biosphere reserve over the next 10 years and beyond, eventually modifying landscapes, habitats and biodiversity as well as affecting local communities and their activities.

Over the long term, local based solutions for adaptation will have to be developed, by strengthening the capacity and resilience of those who depend the most on potentially affected resources (among which farmers are in the front row) and increase the knowledge and capacity of those who will follow and tackle these issues (researchers, local administrations).

Fostering participation and environmental governance

Multiple examples have shown the importance of all communities' members (including women) participation and sound environmental governance to foster local sustainable development. In practice, when room is available for local decision making, collective initiatives and community planning, ecosystems and the environment is preserved and livelihoods improved. Sheka biosphere reserve will be a unique and ideal framework for fostering local and women participation, dialogue, cooperation and environmental governance in the area.

VISION, MISSION AND VALUES OF SHEKA FOREST BIOSPHERE RESERVE

The VISION of Sheka biosphere reserve is:-

TO ACHIEVE SUSTAINABLE DEVELOPMENT IN SHEKA BY IMPROVING THE LIVELIHOOD OF THE PEOPLE WHILE PROTECTING AND PROMOTING THE BIODIVERSITY AND CULTURAL HERITAGE.

The MISSION of the biosphere reserve is:-

To bring about sustainable development in Sheka and improve the living standard of the community through conservation of the culture and biodiversity of the community.

Its CORE VALUES are:-

- ***Respect & Participation*** Respecting the culture, the people and the work being achieved in Sheka is essential. Respecting the local community also means that all groups of the community should have a mean and arena to participate in planning and decision making.

- ***Accountability & Objectivity*** Since the biosphere reserve was conceived for the improvement of community livelihood, the biosphere reserve shall be accountable to all its members, shall not favor a group and shall have a neutral approach to ensure an equal consideration of people's issues.

- ***Awareness & Capability*** Achieving sustainable development is a complex task, and it is only by ensuring people's awareness and capacity that the biosphere reserve will fulfill such objective.

- ***Commitment & Continuity*** A long term commitment of those involved in the biosphere reserve will be the key to successfully achieve its goals and objectives, ensuring that activities are carried out from the beginning to the end for the Management Plan.

- ***Innovation & Adaptability*** As a learning place for sustainable development, the biosphere reserve shall be innovative in its approach, and its stakeholders shall be ready to adapt the strategies or actions in order to better achieve its objectives.

MANAGEMENT PLAN

GENERAL OBJECTIVES

Sheka Forest biosphere reserve's management plan is based on FIVE GENERAL OBJECTIVES which are necessary to fulfill its functions and mission.

OBJECTIVE I: TO CONSERVE SHEKA'S BIO-CULTURAL DIVERSITY

The bio-cultural diversity of Sheka is an inestimable treasure for the local community and a unique heritage for the generations to come that one shall preserve and promote. The biosphere reserve shall be responsible for fulfilling this objective, since the conservation function is one of its three pillars. If successful, the biosphere reserve will achieve the following impact:

IMPACT I: THE FOREST IS PRESERVED & THE BIO-CULTURAL DIVERSITY IS CONSERVED & PROMOTED THROUGH THE AWARENESS & INVOLVEMENT OF PEOPLE.

OBJECTIVE II: TO SUPPORT THE DEVELOPMENT OF LOCAL COMMUNITIES

Without supporting the development of local communities, there cannot be an effective conservation and promotion of Sheka's bio-cultural diversity. The biosphere reserve shall reconcile environmental protection with human development, and it is one of its three main functions. Fulfilling this objective will lead to the following impact:

IMPACT II: LOCAL LIVELIHOOD IMPROVES SUSTAINABLY FOR ALL MEMBERS OF SHEKA'S COMMUNITY

OBJECTIVE III: TO PROMOTE ENVIRONNEMENTALLY FRIENDLY INVESTEMENTS IN THE TRANSITION AREA

The sustainable development of Sheka cannot be achieved without promoting investments in the transition area. These investments of all forms (eco-tourism, agriculture, payments for ecosystem services, etc) can bring economic wealth while

being respectful of the environment and the people. Achieving this objective will to the following impact:

IMPACT III: INVESTMENTS RESPECT THE ENVIRONMENT WHILE GIVING OPPORTUNITIES FOR EMPLOYMENT & BENEFITS FOR THE LOCAL COMMUNITY

OBJECTIVE IV: TO ENHANCE KNOWLEDGE & CAPACITY IN THE BIOSPHERE RESERVE

Understanding the complexity and richness of Sheka's features is necessary for the biosphere reserve, in order to achieve sound decision making and land-use planning. Hence, increasing our knowledge of the area and improving the capacity of stakeholders to protect the ecosystems while ensuring human and economic development is crucial. This shall lead to the following impact:

IMPACT IV: STAKEHOLDERS UNDERSTAND, PROTECT & PROMOTE SHEKA'S BIO-CULTURAL DIVERSITY WHILE IMPROVING LOCAL LIVELIHOOD

OBJECTIVE V: TO STRENGTHEN ENVIRONMENTAL & PARTICIPATORY GOVERNANCE

The management of Sheka will be a key challenge for the biosphere reserve. The participation of all stakeholders shall be effective and an integrated approach shall be used to take into consideration all aspects of an issue, i.e. its environmental, social, economic and cultural impact, and achieving environmental governance. This shall have on the long-term the following impact:

IMPACT V: THE GOVERNANCE ENSURES CONSTRUCTIVE DIALOGUE BETWEEN STAKEHOLDERS, PROTECTION OF THE FOREST & SUSTAINABLE DEVELOPMENT OF THE BIOSPHERE RESERVE

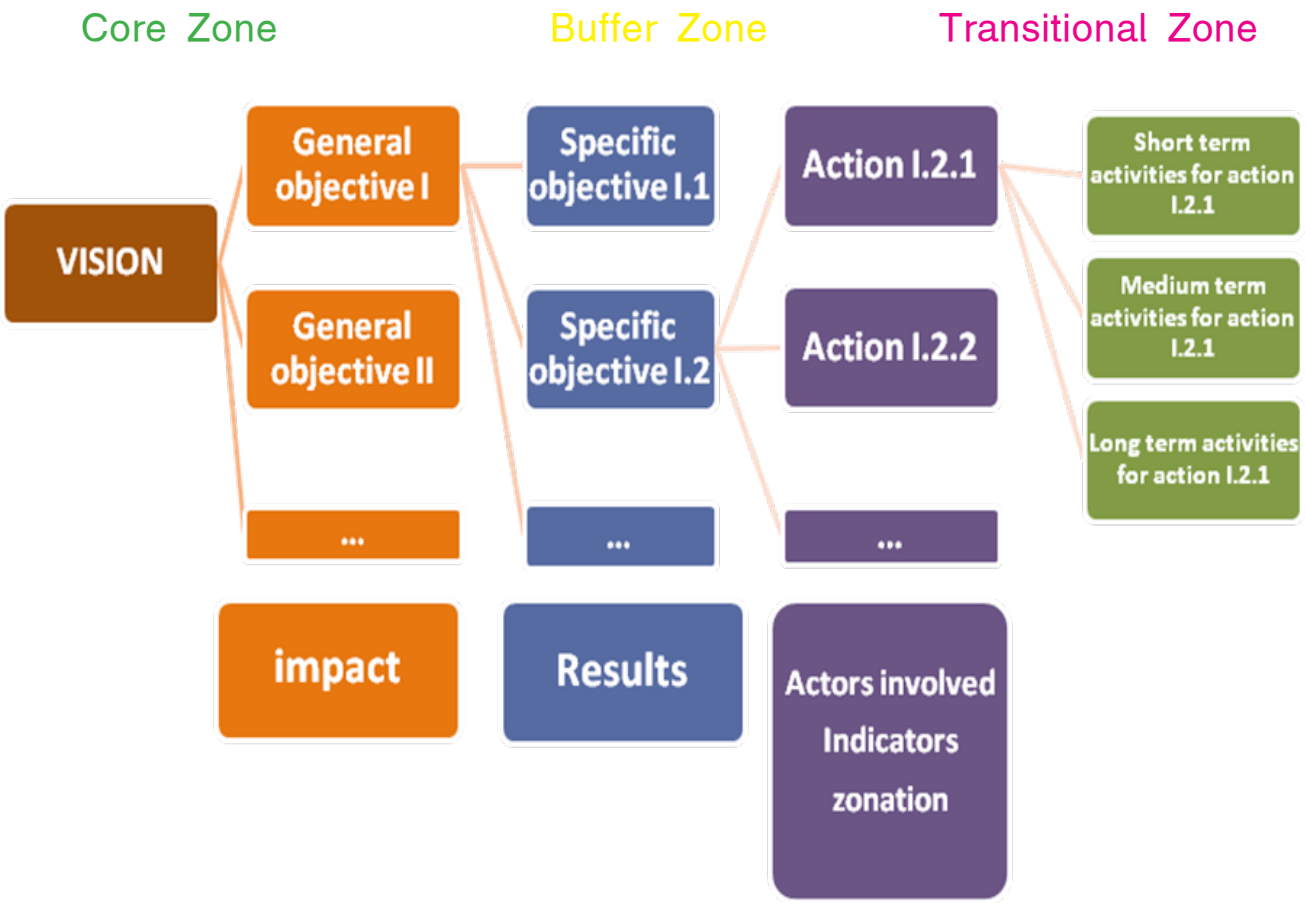
MANAGEMENT PLAN APPROACH & STRUCTURE

The present management plan structure arises from the application of the logical framework approach formally used for development project design and management plans of protected areas. This can ensure a clear, rigorous and systematic approach for its implementation, monitoring and evaluation. 3 levels of details are therefore presented:

- Each **general objective** described above is unfolded as a set of specific objectives and their associated results.

• Each **specific objective** is itself unfolded as a set of actions and their associated zonation*, as well as actors that should be involved to fulfill this objective, and possible indicators for monitoring and evaluating the effective implementation. In some cases, a more precise description of actors that should be involved is given. One given action might appear in more than one section since it can achieve more than one objective.

• Each **action** has an indicative and non-exhaustive list of specific activities that can be undertaken to achieve the action on the short-term, medium-term and long term. For clarity purposes, this last extensive list has been put in the Appendixes of the present Management Plan.



SPECIFIC OBJECTIVES AND ACTION PLANS

I. CONSERVING SHEKA'S BIO-CULTURAL DIVERSITY

This first ambitious general objective can only be achieved through the commitment of Sheka's community, its administration and related stakeholders. To that end, the biosphere reserve will have 5 **specific objectives(SO).**

SO1: Ensure the effective conservation of core areas

Core areas are the heart of the biosphere reserves, where biological diversity is the highest and most important for the environmental aspects. For this reason, core areas shall be protected and monitored. This can be achieving by ensuring that laws and rules apply to them, that their implementation is monitored to inform the management structure of the biosphere reserve of any illegal activities (as listed above), and that a formal intervention force (e.g. militia) can intervene in case of illegal activities occurring.

The actors that should be involved are those that are part of the management unit (and in particular, Zonal department of agriculture), as well as the Zonal Department of Justice and Zonal and local departments of police/security administration. Community members and NGOs should also be included to monitor these core areas.

Actions	Description of actions	Implementing zones		
		Core zone (CZ)	Buffer Zone (BZ)	Transitional zone (TZ)
Action 1.1	Awareness raising for communities living around core areas and delineate, map and signalize the core areas	CZ		
Action 1.2	Enact and implement rules to ensure full conservation of the core areas	CZ		
Action 1.3	Set up an information system between trained individuals and the Management Unit to monitor the core areas	CZ		
Action 1.4	Set up an intervention unit that will stop and prosecute illegal activities occurring in core areas	CZ		

Indicators that can be used for monitoring and evaluating the implementation are:

- Number of CZs are delineated, mapped and signalized
- An information system is set and fully functioning
- Number of trained individuals monitoring the CZs/Hectare
- Rate of deforestation in CZs
- Number of illegal activities occurring in CZs

If properly implemented, the outcome of this objective at the end of the MP will be:

Outcome 1

The well-identified core areas are protected, with no or few deforestation and illegal activities

SO2: Conserve sacred/cultural sites & promote their protection

As keystones of the local culture for the Shekacho community, sacred/cultural sites (gudos) shall be well protected. However, many of them are endangered by human activities and degradation of the local ecosystems. Even though of them are already identified and mapped, a large part of them are not. A first step will therefore consist in identifying, mapping and recognizing these sites. A specific legislation shall be found for their protection, their ecological state shall be monitored over time and programs shall be designed, depending on the context of the area, to inform the local community to protect them.

Cultural leaders' associations, the Zonal Department of Culture Tourism and Government Communications, the Zonal Department of Agriculture as well as the Zonal administration shall work together with other community members (e.g. youth, farmers) and NGOs to implement these actions.

Actions	Description of actions	Implementing zones		
		Core Zone (CZ)	Buffer Zone (BZ)	Transitional Zone (TZ)
Action 2.1	identify, map and officially recognize all sacred/cultural sites	CZ	BZ	
Action 2.2	enact a specific legislation for the protection of cultural sites	CZ	BZ	

Action 2.3	monitor the ecological state of sacred/cultural sites	CZ	BZ	
Action 2.4	create programs to inform and involve people on the protection of sacred sites		BZ	TZ

Indicators that can be used for monitoring and evaluating the implementation are:

- Percentage of sacred sites mapped, signalized & protected by special legal status
- Number of degraded sacred sites
- Community members and other relevant stakeholders are aware of the value of cultural/sacred sites

If properly implemented, the outcome of this objective at the end of the MP will be:

Outcome 2
Cultural/sacred sites are well-identified, protected, and are respected by all stakeholders

SO3: Conserve & revive the traditional knowledge, cultures and values

The traditional ecological knowledge, culture and values of the local community compose a unique and inestimable heritage for the generations to come and for sustainably managing the area. For this reason and given its importance for the Shekacho people, it shall be conserve and revived. This can be achieved through intergenerational learning, recording and sharing of the knowledge, respecting the rights of the local people, defined in their Bio-Cultural Community Protocol (BCP). Cultural leaders associations shall also be revitalized and strengthened, in order to ensure the passing this traditional knowledge, and community events shall allow the community at large to learn about and promote this knowledge.

The Zonal department of Culture and Tourism, cultural leaders associations, NGOs and the community at large shall participate in this process. The Zonal Department of Agriculture and Zonal Department of Trade and Industry shall also ensure that no investments are in conflict with the BCP when finalized.

Actions	Description of actions	Implementing zones		
		Core Zone (CZ)	Buffer Zone (BZ)	Transitional Zone (TZ)

Action 3.1	design and implement programs for intergenerational learning of Traditional Ecological Knowledge (TEK)		BZ	TZ
Action 3.2	record the traditional and ecological knowledge		BZ	TZ
Action 3.3	Finalize and ensure implementation of the Sheka bio-cultural community protocol (BCP)			TZ
Action 3.4	revitalize/strengthen cultural leaders associations			TZ
Action 3.5	create/strengthen and document community events to share the knowledge and culture			TZ
Action 3.6	design materials to share the knowledge and culture			TZ

Indicators that can be used for monitoring and evaluating the implementation are:

- Number of TEK education programs running in schools
- Number of community events occurring (celebration, cultural leaders meetings) and documented
- the traditional knowledge is recorded, protected and shared in the community
- Number and type of materials available for the community and outsiders to learn about the local knowledge and culture
- Number of community projects based to some extend on the TEK and values

If properly implemented, the outcome of this objective at the end of the MP will be:

Outcome 3

The traditional knowledge and values are shared and celebrated among the community, contributing to the sustainable management of the BR.

SO4: Reforest or rehabilitate disturbed ecosystems and habitats in buffer zones

Buffer zones are crucial areas for the protection of the core of the biosphere reserves. Certain activities are allowed, while others are not in line with the definition given by the Statutory Framework of biosphere reserves (as listed above). As indicated by their name, they shall act as a buffer, i.e. that prevents incompatible or antagonistic activities from harming the core areas' ecosystems. For this reason,

their ecological state shall be well understood and managed properly.

This means that all degraded ecosystems of significance (e.g. bamboo forest, wetlands and their buffer zones, over-grazed areas, forests) shall be identified and rehabilitated/restored.

In this process, the community at large, NGOs, cultural leaders' associations as well as the Zonal Department of Agriculture, with the support of universities and research centers or researchers, shall perform the mentioned actions.

Actions	Description of actions	Implementing zones		
		Core Zone (CZ)	Buffer Zone (BZ)	Transitional Zone (TZ)
Action 4.1	identify and delineate disturbed/degraded ecosystems and habitats		BZ	
Action 4.2	rehabilitate degraded bamboo forest with varieties not currently flowering		BZ	
Action 4.3	rehabilitate buffer zones around wetlands and water bodies with indigenous species		BZ	
Action 4.4	rehabilitate over-grazed areas with indigenous species		BZ	
Action 4.5	reforest degraded forests with indigenous species		BZ	

Indicators that can be used for monitoring and evaluating the implementation are:

- Number and size of degraded ecosystems and habitats identified and/or delineated
- number of hectares of rehabilitated lands (grazing lands, forests, bamboo forest)
- size and quality of buffer zone around water bodies and wetlands

If properly implemented, the outcome of this objective at the end of the MP will be:

Outcome 4

Disturbed ecosystems in the buffer zones are identified, rehabilitated and sustainably managed by the community and other relevant stakeholders

SO5: Manage the Buffer Zone in a sustainable way, particularly through community participation

As mentioned before, buffer zones have a crucial role to play in the biosphere reserves. Existing allowed human activities shall be highly sustainable. To achieve this purpose, participatory mechanisms are essential. Participatory Management Mechanisms are these mechanisms were local people are engaged in managing a given area or ecosystem (forest, grazing land, wetland, water shades) in a collective and participatory effort in order to ensure its perennial and non-destructive use.

Furthermore, existing allowed activities (coffee production, spice extraction, bee-keeping, etc.) shall be respectful of the ecosystems and ensure that their production is not harming their supporting ecosystems. In particular, coffee plantations shall implement good practices for preserving the diversity and density of trees.
When activities are not in line with the requirements of the buffer zones, these activities shall be stopped and prosecuted.

The communities living in the BZ, the Zonal Department of Agriculture, the Zonal Department of Trade and Industry, the Zonal Department of Finance and Economic Development (and equivalent administrations at Woreda level) as well as operating NGOs shall implement the actions.

Actions	Description of actions	Implementing zones		
		Core Zone (CZ)	Buffer Zone (BZ)	Transitional Zone (TZ)
Action 5.1	set up participatory forest management mechanisms (PMM) in the buffer zone		BZ	
Action 5.2	ensure sustainable coffee, honey and spices production in the buffer zone, especially in degraded areas		BZ	
Action 5.3	audit/monitor coffee plantations to ensure that they have a number of shade trees equal or superior to 1250 trees/Hectare, with not less than 150 different species/Hectare		BZ	

Action 5.4	set up a mobile checking unit that will stop and prosecute any new activities that are not in line with requirements of the buffer zone		BZ	

Indicators that can be used for monitoring and evaluating the implementation are:

- number, type and coverage of PMM in the buffer zones
- NTFP producers and coffee plantations have sustainable practices
- number of recorded illegal activities in the buffer zones
- number of species and concentration of shade trees in coffee plantations

If properly implemented, the outcome of this objective at the end of the MP will be:

Outcome 5

BZs are sustainably managed by community members & other relevant stakeholders, without witnessing any further development of harmful activities.

II - SUPPORTING THE DEVELOPMENT OF LOCAL COMMUNITIES

Protecting the bio-cultural diversity of Sheka cannot go without ensuring the development of local communities, as described in the second general objective. In achieving this purpose, the biosphere reserve will have 5 specific objectives.

SO1: Develop & strengthen sustainable agriculture

One of the challenges facing Sheka area is the expansion of subsistence agriculture settlements. Yet, agriculture is the main economic sector in Sheka and is a major source of income for the local people. Only agro-ecological or sustainable practices that increase the production and productivity of the local agriculture and its related activities can be an answer to the current trends. This also means that the value-chains should be improved, through better management of (soil) resources and access to services (veterinary, quality seeds) for up-stream improvement, as well as better storage of production and better access to markets (through cooperatives for instance) for downstream improvement.

The Zonal Department of Agriculture shall support, together with relevant Woreda administrations, the community and farmers cooperatives, the private sector, NGOs as well as universities and research centers the implementation of these activities.

Actions	Description of actions	Implementing zones		
		Core Zone (CZ)	Buffer Zone (BZ)	Transitional Zone (TZ)
Action 1.1	develop livestock fattening programs and integrate them into other agricultural activities			TZ
Action 1.2	strengthen effective and sustainable veterinary services, notably for timely vaccination			TZ
Action 1.3	train local community members on sustainable farming practices, agro-ecology and agro-forestry on the surrounding farmlands			TZ
Action 1.4	develop horticultural crops production in home gardens and in small-scale plantations			TZ
Action 1.5	increase the number of multi-purpose trees on farmlands			TZ
Action 1.6	promote and develop the making and use of compost			TZ
Action 1.7	increase the use of efficient organic fertilizers, and use liming to reduce soil acidity if organic fertilizers are not available			TZ
Action 1.8	increase productivity and production on existing areas under agriculture through better and sustainable management practices			TZ
Action 1.9	increase quality of and access to seeds for local farmers			TZ
Action 1.10	introduce and sustainably develop high value crops production for income generation			TZ
Action 1.11	Establish, train and promote farmers cooperatives, linked to bigger regional markets			TZ

Indicators that can be used for monitoring and evaluating the implementation are:

- change in income of households
- number of trained community members or trainings given to farmers
- production of home gardens' multipurpose trees and other crops

- number of livestock vaccinated/year
- number of farmlands using agro-ecological or sustainable management practices
- number of farmers cooperatives
- number of farmers using sustainable fertilizing techniques
- cattle's productivity with sustainable practices
- crops' productivity and production with sustainable practices
- number of high value and horticultural crops with sustainable practices
- access to market

If properly implemented, the outcome of this objective at the end of the MP will be:

Outcome 1
Agriculture and livestock raising has improved through an efficient and sustainable use of the lands and sustainable management practices, increasing households' livelihood.

SO2: Promote an integrated development of non timber forest products
As a matter of fact, Non-Timber Forest Products (NTFPs), such as honey, spices, medicinal plants, bamboo or coffee beans and other related berries and products are almost as important as agriculture for the local community. The tradition of beekeeping and spice harvesting such as Korerima are important in Sheka. Such NTFPs shall however be produced in an integrated manner, i.e. taking into consideration the effects of extraction on the ecosystems to ensure a sustainable development. As mentioned for SO1, improving the value-chain is also essential, i.e. improving the processing, storage, packaging and marketing of these products, notably through certification/labeling. Some of the NTFPs that are not fully used yet could be also an additional source of income, such as bamboo, Vanilla or some medicinal plants, while respecting the bio-cultural protocol.

The Zonal Department of Agriculture, the community representatives and cooperatives, as well as the private sector and NGOs working on these sectors, with the support of the Universities and Research centers, shall implement these actions.

Actions	Description of actions	Implementing zones		
		Core Zone (CZ)	Buffer Zone (BZ)	Transitional Zone (TZ)

Action 2.1	increase honey sustainable production with improved and modern processing, packaging and marketing		BZ	TZ
Action 2.2	increase sustainable forest coffee production (in particular in degraded lands), sustainable processing, storage and marketing		BZ	TZ
Action 2.3	improve and increase sustainable spices production, processing and marketing		BZ	TZ
Action 2.4	explore the potential of and, if appropriate, sustainably exploit the bamboo forest for high-value bamboo products		BZ	TZ
Action 2.5	improve and increase medicinal plants production and marketing, respecting the current bio-cultural protocol		BZ	TZ
Action 2.6	certify NTFPs as organic and label them as products of the Sheka biosphere reserve		BZ	TZ

Indicators that can be used for monitoring and evaluating the implementation are:

- change in income of households producing NTFPs
- number of NTFP cooperatives and NTFPs companies
- value of annual sales in each NTFP sector
- NTFP are labeled and certified when appropriate
- production processes are eco-friendly
- values of sales outside of Sheka

Outcome 2

Households' livelihood has improved through the sustainable development of NTFP sectors.

SO3: Develop & strengthen local infrastructures & social services

Ensuring the development of local communities and improving their livelihood also implies that local infrastructures and social services shall be strengthened when already existing, and developed when needed. They are the backbone of Sheka for services and are a key responsibility of the Kebele, Woreda, Zonal and Regional administrations. These services shall improve the life standard of local people, while not entering in conflict with the conservation function/purposes of the biosphere reserve (e.g. water pollution, roads in important ecological areas, waste dumping).

The administrations responsible for these services, i.e., water access, education, schools, electricity, transports, telephone services, financial services, shall be responsible to implement the actions.

Actions	Description of actions	Implementing zones		
		Core Zone (CZ)	Buffer Zone (BZ)	Transitional Zone (TZ)
Action 3.1	increase the access to water and water sewage			TZ
Action 3.2	increase the number & capacity of primary and secondary schools			TZ
Action 3.3	increase the number & capacity of primary health centers			TZ
Action 3.4	increase the access to electricity			TZ
Action 3.5	increase the quality and density of roads, in particular all weather roads			TZ
Action 3.6	strengthen integrated solid waste management plans in urban areas			TZ
Action 3.7	increase the access to telephone services			TZ
Action 3.8	increase the access to basic financial services for professional investments (e.g. micro-lending)			TZ

Indicators that can be used for monitoring and evaluating the implementation are:

- coverage of services
- number of households benefiting from the services
- length and quality of roads and bridges
- solid waste management plans are set up and fully functioning in urban areas
- percentage of kids going to school
- average time to go to a big market place
- average time spent to get water and potable water
- number of staff/service

If properly implemented, the outcome of this objective at the end of the MP will be:

Outcome 3
local communities have access to more and better infrastructures services, improving their standard of living.

SO4: Develop sustainably-managed energy sources & energy saving practices
Deforestation and forest degradation find one of their root causes in the growing need for fuelwood. Many daily tasks need energy to be performed, yet their influence on the local environment is high and increasing, since extraction rates are unsustainable and un-managed. One way to reduce the need and use of fuelwood from the forest is to offer alternative sources of energy, such as biogas, biomass briquettes, crop residues or fuelwood from managed plantations in the transition area. Another way is to put in place energy saving practices, such as producing and distributing efficient fuelwood saving stoves in Sheka zone.

The NGOs operating in the area, the Zonal Department of Agriculture, together with the community and community representatives, the private sector initiatives and will the support of Universities and Research Centers, shall implement these actions.

Actions	Description of actions	Implementing zones		
		Core Zone (CZ)	Buffer Zone (BZ)	Transitional Zone (TZ)
Action 4.1	explore the potential of and, if appropriate, develop biogas			TZ
Action 4.2	explore the potential of and, if appropriate, develop biomass briquettes (especially from coffee husk)			TZ
Action 4.3	reforest areas with fast growing trees and sustainably manage them for fuelwood			TZ
Action 4.4	develop and support the use of crop residues as fuel products		BZ	TZ
Action 4.5	support the production and distribution of efficient fuelwood saving stoves		BZ	TZ

Indicators that can be used for monitoring and evaluating the implementation are:

- number of people benefiting from biogas installations
- number of briquettes produced and sold/year
- quantity of wood sold from plantations
- number of fuelwood saving stoves distributed to households
- rate of deforestation
- income generated from these activities for households and private initiatives

If properly implemented, the outcome of this objective at the end of the MP will be:

Outcome 4

Local communities sustainably manage and use their energy and deforestation decreases.

SO5: Improve the socioeconomic condition & resource access of minorities & marginalized groups

When considering the development of Sheka's community and the improvement of its livelihood, one shall also consider the condition of Minorities and Marginalized Groups (MMGs). Are considered part of the MMGs the Manja community, women and women-headed households, illiterates, isolated households, individuals from local communities with no land. These people shall receive a specific attention, and their socioeconomic condition as well as their resources access shall be improved.

The Zonal Department of Agriculture, Departments providing basic services (water, electricity, education, etc.), NGOs operating in the area shall support, together with the community representatives and cooperatives, the implementation of the actions.

Actions	Description of actions	Implementing zones		
		Core Zone (CZ)	Buffer Zone (BZ)	Transitional Zone (TZ)
Action 5.1	Promote the creation of farmers groups or associations amongst minorities and marginalized groups for collective action		BZ	TZ

Action 5.2	Promote income diversification through trainings and support for other activities (e.g. beekeeping, spice domestication)		BZ	TZ
Action 5.3	Develop and ensure access to agricultural information, trainings, agricultural resources (seeds, tools and land) and structures (co-operatives)		BZ	TZ
Action 5.4	Ensure MMGs' access to basic services and financial services (e.g. micro-finance/credit and saving schemes)		BZ	TZ

Indicators that can be used for monitoring and evaluating the implementation are:

- income of households from MMG
- number of MMGs' cooperatives and associations
- number of people trained
- number of people using new techniques and better resources
- number of MMG in regular cooperatives

If properly implemented, the outcome of this objective at the end of the MP will be:

Outcome 5

The condition and resource access of minorities and marginalized groups have increased, improving their livelihood.

III. PROMOTING ENVIRONNEMENTALLY FRIENDLY INVESTEMENTS IN THE TRANSITION AREA

The transition area is an area of development as well, where activities are promoted when ensuring sustainable management of local resources and respecting the community. Promoting environmental friendly investments in this area is therefore essential, and is the third general objective of the Management Plan, with 5 specific objectives.

SO1: Promote integrated agro-industry & sustainable agriculture investments

The transition area is an area of economic and social development. For this reason, investments that are respectful of the environment and the local people are more that encouraged. These investments are important for Sheka's economic growth and shall be promoted when they have sustainable practices.

The Zonal Department of Trade and Industry, the Zonal Department of Finance and Economic Development as well as the SNNP Regional Bureau of Trade and Industry should implement this action.

Actions	Description of actions	Implementing zones		
		Core Zone (CZ)	Buffer Zone (BZ)	Transitional Zone (TZ)
Action 1.1	Approach private companies to put in place integrated agro-industries and sustainable agricultural investments (e.g. fruit processing, coffee, processing, spice processing, animal products and bee keeping…etc.)			TZ

Indicators that can be used for monitoring and evaluating the implementation are:

- number and type of (new) private investments
- number of jobs created
- ratio investment/EIA conducted

If properly implemented, the outcome of this objective at the end of the MP will be:

Outcome 1

Private companies are investing in the area in sustainable agricultural and agro-industrial activities,
offering employment and benefits to local people.

SO2: Enhance the development of eco-tourism, in collaboration with other biosphere reserves and areas

As shown my numerous national and international successful examples, eco-tourism is an important initiative for areas and biosphere reserves endowed with a valuable natural and cultural heritage, as it reconciles economic development with the respect of the environment and can benefit to the local people. To install eco-tourism in Sheka, an eco-touristic itinerary with sites identified for their natural and cultural interests shall be put in place, and promoted to tour operators, together with the other biosphere reserves. Investments in eco-touristic infrastructures shall also be promoted, and monitored.

The Zonal Department of Culture and Tourism, the Zonal Department of Trade and Industry, the Zonal Department of Finance and Economic Development, the SNNP

Regional Bureau of Trade and Industry, together with NGOs operating in the biosphere reserve, the local community representatives and the private entrepreneurs interested in developing this initiative shall implement these actions.

Actions	Description of actions	Implementing zones		
		Core Zone (CZ)	Buffer Zone (BZ)	Transitional Zone (TZ)
Action 2.1	set up a working group on eco-tourism with other biosphere reserves			TZ
Action 2.2	establish a touristic itinerary allowing to visit natural and cultural sites as well as local communities		BZ	TZ
Action 2.3	promote (local) investments in eco-touristic infrastructures on the itinerary			TZ
Action 2.4	publicize/brand the itinerary to tour operators			TZ
Action 2.5	monitor the sustainability of touristic activities in the biosphere reserve		BZ	TZ

Indicators that can be used for monitoring and evaluating the implementation are:

- working group established between the BRs
- itinerary(ies) established
- number and type(s) of eco-touristic infrastructures
- number of tourists
- number of households benefiting from eco-touristic activities
- income generated by households in charge of eco-touristic activities

If properly implemented, the outcome of this objective at the end of the MP will be:

Outcome 2

The eco-tourism sector is developed for the benefit of local communities and its activities respect and promote the local natural environment.

SO3: Promote & improve the production of multi-purpose trees

One of the main pressures on Sheka forest is the harvesting of fuelwood and timber for local and external consumption, leading to deforestation and forest deg-

radation. To tackle this issue and to improve the access to affordable alternatives, tree plantations shall be developed in Sheka biosphere reserve, particularly with valuable indigenous tree species instead of exotic species, and if possible with multiple species. Degraded areas of the transition area are a priority target for these plantations. The multi-purpose trees planted shall be used for fuelwood and charcoal production, for construction and other home purposes, as well as for coffins' production given that these activities are the main uses of wood locally.

The Zonal and Woreda Departments of Agriculture, the Zonal and Woreda Departments of Trade and Industry, NGOs operating in the area, community members and private entrepreneurs will be responsible for implementing these actions.

Actions	Description of actions	Implementing zones		
		Core Zone (CZ)	Buffer Zone (BZ)	Transitional Zone (TZ)
Action 3.1	develop tree plantations for fuelwood and charcoal, especially in degraded areas			TZ
Action 3.2	develop tree plantations for construction and other home purposes (fencing, utensils, etc.), especially in degraded areas			TZ
Action 3.3	develop tree plantations, timber-processing and storage activities for coffins' production			TZ

Indicators that can be used for monitoring and evaluating the implementation are:

- number of hectares of tree plantations
- number of hectares of former degraded lands replanted
- rate of deforestation
- variety of indigenous species on plantation

If properly implemented, the outcome of this objective at the end of the MP will be:

Outcome 3

the rate of deforestation has decreased and some former degraded lands are planted with sustainably managed multi-purpose tree plantations.

SO4: Set up mechanisms for payments for ecosystem services (PES)

Payments for ecosystem services (PES) are mechanisms where individuals (people

or private actor) benefiting from a given (positive) ecosystem service (clean water, carbon sinking, biodiversity …) voluntarily pay other individuals to protect or sustainably manage this ecosystem (e.g. a forest) over a certain period of time to ensure that this service is sustained. PES are important to provide an income to communities and localities highly dependent on a given ecosystem, and should be explored, and if appropriate implemented in Sheka. Indeed, Sheka forest can be protected by the local communities through these mechanisms.

Furthermore, although Sheka administration and Sheka community is responsible for protecting the Sheka forest, the state/governmental budget allocation dedicated to environmental protection in the area is not enough this responsibility. Additional resources shall be allocated to Sheka in order to exclusively protect the environment and improve sustainably the life of the local people.

The Zonal administration, together with NGOs operating in the area, private actors and community representatives shall implement these actions, and shall be supported by universities and research centers to explore the potential of these PES.

Actions	Description of actions	Implementing zones		
		Core Zone (CZ)	Buffer Zone (BZ)	Transitional Zone (TZ)
Action 4.1	explore the potential for and develop if appropriate carbon trading mechanisms and projects(e.g. Forest Management Certification, REDD+ mechanisms)	CZ	BZ	TZ
Action 4.2	explore the potential for and develop if appropriate payment mechanisms for watershed services	CZ	BZ	TZ
Action 4.3	explore the potential for and develop if appropriate payment mechanisms for biodiversity conservation	CZ	BZ	TZ
Action 4.4	demand special budget allocation from the federal and regional States to conserve the natural resources	CZ	BZ	TZ

Indicators that can be used for monitoring and evaluating the implementation are:

- number of researches and projects related to PES
- number and financial weight of PES mechanisms
- number and income of households impacted by PES mechanisms
- change in administration's budget allocation for environmental protection in Sheka zone

If properly implemented, the outcome of this objective at the end of the MP will be:

Outcome 4

PES mechanisms have allowed to protect local ecosystems by supporting community initiatives and have improved local livelihood.

SO5: Monitor the sustainability of investments & economic activities

An Environmental Impact Assessment (EIA) is a method and approach for identifying and analyzing the impact — be it positive or negative — that results from the implementation of a proposed private investment or public instrument on the environment, with the view of ensuring environmentally sustainable development. As defined in the Environmental Impact Assessment Proclamation No299/2002, all investments should comply with this law. Consequently, new investments in Sheka area should be screened by an EIA before having their license issued. Furthermore, Environmental Auditing (i.e. analyzing practices, identifying their impact on the environment and giving recommendations for improvement) shall be conducted to support investments in being more environmentally-friendly. For this purpose, updated guidelines and manuals shall be produced in order to allow the relevant administrations to conduct such EIAs and environmental auditing. Following EIAs or Environmental Auditing, investments can be screened once again through environmental evaluations, in order to identify improvements and prosecute investments performing illegal activities if appropriate.

The Zonal and Woreda Departments of Trade and Industry, the Zonal and Woreda Departments of Finance and Economic Development, the Zonal and Woreda Departments of Agriculture, the SNNP Regional Bureau of Trade and Industry and SNNPR Regional Bureau of Agriculture, with the support of operating NGOs if necessary, will be responsible for implementing these actions.

Actions	Description of actions	Implementing zones		
		Core Zone (CZ)	Buffer Zone (BZ)	Transitional Zone (TZ)
Action 5.1	Produce updated guidelines/manual to conduct EIA and/or Environmental auditing	CZ	BZ	TZ
Action 5.2	assess and approve reports from Environmental Impact Assessments before issuing investment licenses	CZ	BZ	TZ
Action 5.3	conduct environmental auditing in investments to improve managing practices	CZ	BZ	TZ
Action 5.4	conduct critical environmental evaluations of investments	CZ	BZ	TZ

Indicators that can be used for monitoring and evaluating the implementation are:

- guidelines/manual produced
- ratio of number of EIA conducted by number of investments
- ratio of number of auditing conducted by number of investments
- ratio of number of evaluations conducted by number of investments
- number of investments not respecting existing laws and contracts

If properly implemented, the outcome of this objective at the end of the MP will be:

Outcome 5

Private investments in the biosphere reserve are sustainable; those that are not are assisted, audited, or prosecuted as
appropriate.

IV. ENHANCING KNOWLEDGE & CAPACITY IN THE BIOSPHERE RESERVE

Knowledge and capacity are crucial in a biosphere reserve. They fulfill the logistic support function, and allow stakeholders to understand the context and trends as well as to manage effectively and successfully the biosphere reserve. In achieving this general objective, the biosphere reserve will have 6 specific objectives.

SO1: Strengthen environmental education & public awareness raising at a large scale

Environmental education, be it for students or for the community at large, is es-

sential in Sheka. The International Coordination Council of the MAB encouraged the authorities and stakeholders of Sheka to make it a demonstration site for environmental education, given the importance of this aspect. Environmental education per se refers here to organized efforts to teach about how natural environments function and, particularly, how human beings can manage their behavior and ecosystems in order to live sustainably. Although environmental education activities are already running in the biosphere reserve, these programs can be scaled-up and increase their impact. An ideal mean to achieve this purpose will be to establish an education and research center for the biosphere reserve. Moreover, as school and university students are primary targets for environmental education, educational modules (i.e. classes, courses), training plots, demonstrations sites and exchange visits should be set up in the biosphere reserve.

Last but not least, environmental awareness raising activities are also critical for the local communities at large, with a special focus on religious and community based organizations such as 'idirs'. This can include film projection, cultural celebrations, wandering exhibitions, participatory workshops, etc.

The Zonal and Woreda Departments of Education, the Departments of Culture Tourism and government communications as well as other relevant Departments, together with the NGOs operating in the area, the Universities and Research Centers, cultural leaders associations and community representatives shall implement these actions.

Actions	Description of actions	Implementing zones		
		Core Zone (CZ)	Buffer Zone (BZ)	Transitional Zone (TZ)
Action 1.1	Increase the impact of environmental education programs, including programs linking population, health & environment issues.			TZ
Action 1.2	establish and run an environmental education and research center for the biosphere reserve			TZ
Action 1.3	set up educational modules taking place in the biosphere reserve for students of nearby universities		BZ	TZ

Action 1.4	set up exchange visits for students and community members with other areas of the country where good conservation practices are promoted		BZ	TZ
Action 1.5	set up training plots and demonstration sites for university students and local schools		BZ	TZ
Action 1.6	set up environmental awareness raising activities for local communities		BZ	TZ

Indicators that can be used for monitoring and evaluating the implementation are:

- number of schools and other structures with environmental programs
- number of universities with environmental courses related to the Sheka local issues
- number of awareness raising activities for the local communities
- number of exchange visits for students
- establishment of an education and research center for the biosphere reserve
- number of visitors of the education and research center
- number of student-run environmental activities in the BR
- number of community-run environmental activities
- number of plots established and studied

If properly implemented, the outcome of this objective at the end of the MP will be:-

Outcome 1

Knowledge of the local environment and its issues has increased among the community and among students; they are taking an active part in the sustainable development of Sheka.

SO2: Promote & support stakeholders' capacity building for sustainable management and development of the biosphere reserve

Capacity building through training and training materials is also an important aspect of the logistic support function of the biosphere reserve. Stakeholders trained improve the way they understand and manage the biosphere reserve, with an increased knowledge and know-how on sustainable practices. Both community members and local administrations shall be concerned by these capacity building activities, which will cover legal, technical, and monitoring aspects, as well as NTFP, sustainable agriculture & energy-related aspects.

NGOs operating in the area, Community representatives, Universities and Research Centers, shall work together with relevant administrations (ZDA, ZDCT, ZDFED, ZDJ, ZDP, ZDRD, ZDTI and their equivalence at Woreda level; in addition, development agents will be essential in this work) to implement these actions.

Actions	Description of actions	Implementing zones		
		Core Zone (CZ)	Buffer Zone (BZ)	Transitional Zone (TZ)
Action 2.1	train local officers on existing environmental and community-related laws and the way to implement them (EIA, Forest law,…)			TZ
Action 2.2	train local officers and experts on GPS mapping, watershed management, ecosystem monitoring, participatory mapping	CZ	BZ	TZ
Action 2.3	train para-rangers and community members to ensure the monitoring of forests and other habitats/ecosystems	CZ	BZ	TZ
Action 2.4	train local community members on NTFP sustainable use and production, in particular Honey, bamboo, spices and forest coffee		BZ	TZ
Action 2.5	train local community members on sustainable farming practices, agro-ecology and agro-forestry		BZ	TZ
Action 2.6	train local community members on the use of alternative sustainable energy sources and energy saving techniques		BZ	TZ

Indicators that can be used for monitoring and evaluating the implementation are:

- number of trained local officers and community members on legal, conservation and monitoring aspects
- number of trained community members on NTFP sustainable use and production
- number of trainees on the different themes
- number of trained community members on energy
- reduction of deforestation and fuelwood collection

If properly implemented, the outcome of this objective at the end of the MP will be:

Outcome 2

Relevant local stakeholders have the capacity to sustainably manage aspects of the biosphere reserve; their practices are sustainable and they contribute to the effective conservation of Sheka forest.

SO3: Conduct environmental & socio-economic research activities with Ethiopian & international universities & research institutes

Research is a powerful approach in a biosphere reserve to generate scientific knowledge and understanding of an area's features. It can also create a chance to bring the traditional knowledge of the environment, and bring related issues to the attention of the public and local decision makers. To this end, partnerships with universities and research centers, as well as with international research organizations should be created and strengthened. Researches shall then be conducted on different aspects of Sheka: ecosystems and species dynamics, socio-economic dynamics, potential energy sources, PES, climate change, NTFPs and their value-chain, agro-ecology, etc. These information shall be shared between research structures and other relevant stakeholders.

NGOs working in the area, Universities and Research Centers as well as private entrepreneurs when relevant (e.g. energy development) shall be responsible for the implementation of these actions.

Actions	Description of actions	Implementing zones		
		Core Zone (CZ)	Buffer Zone (BZ)	Transitional Zone (TZ)
Action 3.1	set up partnerships & cooperative researches with nearby universities, research centers, international organizations and other research projects			TZ
Action 3.2	set up research plots on ecosystems, vegetation and species dynamics	CZ	BZ	TZ
Action 3.3	conduct researches on socio-economic, cultural & landuse dynamics		BZ	TZ

Action 3.4	conduct researches on NTFPs and their value chain, as well as on alternative energy sources		BZ	TZ
Action 3.5	conduct researches on the effects of, and adaptation to climate change	CZ	BZ	TZ
Action 3.6	conduct researches on the feasibility of payments for ecosystem services	CZ	BZ	TZ
Action 3.7	conduct researches on agro-ecology and sustainable agro-management (e.g. demonstration and research sites on farm)			TZ
Action 3.8	conduct researches on grazing lands (e.g. determining their carrying capacity)			TZ
Action 3.9	create and manage a database to share knowledge on the biosphere reserve(s) accessible for all relevant stakeholders			TZ

Indicators that can be used for monitoring and evaluating the implementation are:

- number of demonstration and research sites established
- number and variety of research plots established
- number and types of researches conducted in the BR
- number and types of partnerships & collaboration activities between URI & actors
- number and importance of projects using information from BR researches
- a database is created and managed to share knowledge
- number and type of members to the database
- number of documents on the database

If properly implemented, the outcome of this objective at the end of the MP will be:

Outcome 3

The biosphere reserve socio-economic, cultural and environmental aspects are well studied and understood; valuable scientific information are extracted, shared and used for operational projects and for better management of the BR.

SO4: Ensure long term monitoring of forests & other habitats/ecosystems

Following the definition and logistic function of Sheka forest biosphere reserve, the core areas and other valuable ecosystems shall be monitored. Such monitoring approach allows assessing the evolution of the ecosystems, and their reaction to human (illegal) activities.

To this end, monitoring plots and indicators shall be established to assess the evolution of targeted ecosystems and core areas. Trained individuals shall also be responsible for collecting information to monitor these ecosystems and human activities occurring inside them or in their vicinity.

The Zonal and Woreda Departments of Agriculture, Community members, NGOs operating in the area as well as University and Research Centers shall be responsible for implementing these actions.

Actions	Description of actions	Implementing zones		
		Core Zone (CZ)	Buffer Zone (BZ)	Transitional Zone (TZ)
Action 4.1	set up monitoring plots to monitor vegetation dynamics and ecological evolution of forest species	CZ	BZ	TZ
Action 4.2	Establish indicators of viability for targeted ecosystems (streams and rivers, grasslands, grazing lands, etc.)	CZ	BZ	TZ
Action 4.3	train para-rangers and community members to ensure the monitoring of forests and other habitats/ecosystems	CZ	BZ	TZ

The Indicators that can be used for monitoring and evaluating the implementation are:

- number and variety of monitoring plots established
- number and variety of indicators established and monitored
- number of trained community members
- number of illegal activities occurring in the core zone

If properly implemented, the outcome of this objective at the end of the MP will be:

Outcome 4

the state of the Sheka forest and its surrounding environment is monitored and there are no of few illegal activities thanks to community and administration participation.

SO5: Communicate on activities, achievements & successes of the biosphere reserve

As a biosphere reserve and for the purpose of clarity and transparency, Sheka shall ensure that the activities and projects carried out in the biosphere reserved are illustrated through appropriate media and communication means. This will not only give periodic updates for the local communities and local stakeholders, showing the progresses made and building their sense of ownership, but also be essential outside of Sheka to let the public and specific groups (e.g. donors, other NGOs, experts, national administrations, media) know about the work achieved in the biosphere reserve.

Sheka will therefore need a website to communicate regularly about the achievements and progresses. Stakeholders shall also publish newsletters and reports of their activities, collect and broadcast success stories, and produce and broadcast materials to share the culture of Sheka inside and outside of the biosphere reserves. Media shall finally be aware of these progresses periodically.

Each administration in its sector, NGOs operating in the area, community representatives and associations as well as other relevant actors shall implement these actions, and share communication materials with the Management Unit.

Actions	Description of actions	Implementing zones		
		Core Zone (CZ)	Buffer Zone (BZ)	Transitional Zone (TZ)
Action 5.1	set up and manage a website for the biosphere reserve			TZ
Action 5.2	publish periodic news about the activities launched and carried out in the biosphere reserve			TZ
Action 5.3	collect and broadcast success stories			TZ
Action 5.4	design materials to share the culture inside and outside the biosphere reserve			TZ
Action 5.5	contact and meet periodically local and national media for updates			TZ

Indicators that can be used for monitoring and evaluating the implementation are:

- a website for the BR is running and updated
- number of success stories collected
- quantity and number of information and success stories published and broadcasted in the media (e.g. articles)
- number/percentage of community members and stakeholders knowing about the activities going on in the BR, or at least know where to learn about them

If properly implemented, the outcome of this objective at the end of the MP will be:

Outcome 5

Community members and all other interested actors are well aware of the progress and success of activities occurring in the BR and of the BR itself.

SO6: Share knowledge, lessons & innovative experiences in communities of practice

Finally, as a learning place for sustainable development, the biosphere reserve shall share its experience and knowledge with other relevant stakeholders, in order to benefit from their expertise and suggest innovative experiences conducted in Sheka. This all the more important that the biosphere reserve is part of networks, among which the WNBR and AfriMAB are very important for experience sharing.

Each administration in its sector, NGOs operating in the area, Universities and research centers, community representatives and associations as well as other relevant actors shall implement these actions, and share communication materials with the Management Unit in order to implement the actions as well.

Actions	Description of actions	Implementing zones		
		Core Zone (CZ)	Buffer Zone (BZ)	Transitional Zone (TZ)
Action 6.1	publish research works on experiences, case studies and good practices in the biosphere reserve			TZ
Action 6.2	collaborate with the other Ethiopian biosphere reserves			TZ
Action 6.3	participate in AfriMAB and the World Network of biosphere reserves (WNBR)			TZ

Action 6.4	participate and share experiences in local, national and international networks			TZ

Indicators that can be used for monitoring and evaluating the implementation are:

- number of researches, case studies & good practices published on the BR
- degree of participation of the BR in AfriMAB and the WNBR
- degree of participation of the BR in other networks
- number of collaborative projects with other (Ethiopian) BRs.

If properly implemented, the outcome of this objective at the end of the MP will be:

Outcome 6

scientific researches, lessons and innovative practices are shared between all relevant stakeholders, allowing the BR, its actors and community of practices to benefit from each other knowledge.

V. STRENGTHENING ENVIRONMENTAL AND PARTICIPATORY GOVERNANCE

Environmental Governance covers the formal and informal institutions, rules, mechanisms and processes of collective decision-making that enable stakeholders to influence and coordinate their interdependent needs and interests and their interactions with the environment at the relevant scales to achieve sustainability. Participatory governance in turn focuses on deepening the engagement/involvement through the participation of community members and stakeholders in the processes of management with the authorities.

Strengthening environmental and participatory governance in Sheka biosphere reserve therefore means strengthening the formal and traditional institutions, rules, mechanisms and processes to achieve a sustainable development and management of the area, especially through the participation of Sheka Forest biosphere reserve's stakeholders.

This last objective is ambitious and transversal, since it covers different aspects of the biosphere reserve. For this reason, the objectives and actions are gathered and relatively interconnected.

The specific objectives are:

SO1: to ensure the representativeness of all relevant stakeholders & effectiveness of the management process

The management structure shall indeed to the extent possible include in the decisions and recommendations all the relevant stakeholders of the biosphere reserves, i.e. administrations, community representatives and cultural leaders' associations, NGOs, universities and research centers related to Sheka, the private sector. The management structure can benefit from the feedbacks and points of views of these different actors.

SO2: to develop & strengthen coordination mechanisms &partnerships between stakeholders of the biosphere reserve

Through the biosphere reserve's management structure and directly through bilateral agreements, coordination and cooperation mechanisms shall be established in Sheka in order to create and implement projects, implement the actions and achieve the objectives.

SO3: to enhance the implementation of existing environmental & community-related laws

Numerous laws are currently applying to Sheka forest. As described earlier, these laws shall be implemented in order to ensure the protection of the ecosystems and the sustainable management of the natural resources. To this end, relevant stakeholders shall gain in capacity to use and implement these laws, and develop a specific legislation for core areas.

All administrations in their sector at each level, cultural leaders associations, NGOs operating in the area and community representatives shall work to achieve this objective.

SO4: to support the recognition of customary & indigenous community practices

Historically, the Shekacho traditional sustainable land use system allowed the local community to conserve the forest and the resources. These practices are essential for Sheka forest since they contribute to its conservation and sustainable development. For this reason, customary and indigenous community practices shall be supported and recognized when contributing to these environmental objectives.
Cultural leaders' associations, the Departments of Culture and Tourism, the Departments of Agriculture, NGOs operating in the area as well as relevant community representatives shall work together to achieve this objective.

SO5: to promote community empowerment & commitment to the biosphere reserve & its objectives

In order to achieve environmental and participatory governance and to build ownership for the biosphere reserve, community members shall be aware of Sheka's features, its uniqueness, issues and opportunities. They shall also be able to be represented and to get effectively involved in the biosphere reserve to contribute to its management. To this end, awareness raising and capacity building activities shall be set up. The Zonal and Woreda Departments of Education, the Departments of Culture and Tourism as well as other relevant Departments, together with the NGOs operating in the area, the Universities and Research Centers, cultural leaders associations and community representatives shall work to achieve this objective.

SO6: to ensure the sustainability of the management structure and Sheka forest biosphere reserve

In order to carry out its functions and to implement the management plan, Sheka Forest biosphere reserve and its management structure shall ensure that sufficient funding are allocated to the area (through external donors and government allocation). Indeed, without financial support, the biosphere reserve will not be able to achieve its objectives. Administrations, NGOs and Universities and Research Centers shall participate in the funding of the biosphere reserve.

The related actions are described here-after*:

Actions	Description of actions	Implementing zones		
		Core Zone (CZ)	Buffer Zone (BZ)	Transitional Zone (TZ)
Action 1.1	establish an extended and fully functioning management structure, with participation of all relevant stakeholders			TZ
Action 1.2	conduct capacity building workshops for local officers (Kebeles, woredas, Sheka zone) on existing environmental and community-related laws and the way to implement them			TZ
Action 1.3	enact/implement rules to ensure full conservation of the core areas	CZ	BZ	TZ
Action 1.4	set up an information system between trained para-rangers and MUs to monitor the core areas	CZ	BZ	TZ

Action 1.5	set up participatory management mechanisms (PMM) in the buffer zone		BZ	TZ
Action 1.6	train and equip community members to ensure the monitoring of forests and other habitats/ecosystems	CZ	BZ	TZ
Action 1.7	revitalize/strengthen cultural leaders associations			TZ
Action 1.8	set up environmental awareness raising activities for local communities		BZ	TZ
Action 1.9	monitor and evaluate the impact of capacity building and training workshops on the environmental and local livelihood			TZ
Action 1.10	identify and secure funding mechanisms for actions and projects			TZ
Action 1.11	Ensure regular updates and exchanges from different stakeholders (investments, university and research center, women representatives, traditional leaders, etc.)			TZ

*some of these actions are (purposely) similar to actions already mentioned earlier in the document, since these actions can contribute to more than one objective.

Indicators that can be used for monitoring and evaluating the implementation are:

- a coherent management structure is set up and fully running
- number and type of participants in the management structure
- existing laws are implemented and respected
- number and coverage of fully running PMMs
- number, age and gender of people involved in PMM
- number of cultural leaders associations and members fully running
- number of environmental and community-based initiatives
- income of local households
- rate of deforestation and habitats degradation
- funds allocated annually to the biosphere reserve and its projects

If properly implemented, the outcome of this objective at the end of the MP will be:

Outcome 1

The governance framework of the biosphere reserve and the involvement of all relevant stakeholders allow constructive dialogue, cooperation and coordination as well

as effective implementation of policies and projects for the sustainable development of Sheka zone.

SPECIFIC TARGETS/GOALS

In addition to the above-mentioned objectives, results and actions, the biosphere reserve stakeholders can set specific targets/goals to be reached at the end of the Management Plan's period.

They can be related to the rehabilitation of certain lands, the diffusion of materials, the communication of the biosphere reserves, the different stakeholders' associations, etc. They shall be decided by the relevant stakeholders during the consultation process.

Here are some examples of specific targets:

- (At least) X hectares (X seedlings) of fuelwood plantation trees have been set up in targeted/degraded areas.
- (At least) X% of sacred/cultural sites has been completely rehabilitated.
- (At least) X hectares of grazing lands have been set up under Participatory Management Mechanisms.
- (At least) X% of a given minority group (e.g. Menjas) has access to primary school and primary health care.
- (At least) X hectares of dense forest have been fully protected.
- (At least) X community members are monitoring the core areas of the biosphere reserves.
- (At least) X fuel-saving stoves have been introduced in selected communities to reduce their reliance on forest resources.
- (At least) X% of Sheka's population is aware of the biosphere reserve and its features
- (At least) X% of Sheka's (new) investments have performed a EIA or environmental audit
- (At least) X school students have followed a environmental education program
- (At least) X bio-cultural celebrations have been organized in Sheka
- (At least) X NTFP cooperatives have been created and are running
- (At least) X researches have been conducted in Sheka

MANAGEMENT STRUCTURE

The management structure for the biosphere reserve is currently made of Management Units (MUs) at zonal, Woreda and Kebele levels. The MUs are responsible for the implementation of the management plan and management of the biosphere reserve.

A suggested management structure is presented below.

Suggested Management structure

1 - A zonal Management Board

The biosphere reserve overall (zonal) MB would comprise:

- Sheka Zone Administrator..... Chair person
- Sheka Zone Agriculture Department.....Vice chair person
- Sheka Zone natural resource Office..... Secretary
- Sheka Zone culture and tourism and Gov. communication affairs Dept. .....Member
- Sheka Zone Justice Department..... Member
- Sheka Zone Finance and Economy Department..... Member
- Sheka zone Trade and Industry Dept..... Member
- Sheka zone Marketing and Cooperatives Dept..... Member
- Sheka zone Women, youth and children affairs Dept.....Member
- Sheka zone security and administration Dept..... Member
- Sheka zone water, mines and energy Dept..... Member
- Sheka zone roads and transport Dept..... Member
- Sheka zone education Dept. .....Member
- Administrators and biosphere focal persons of each Woreda (total of 6 persons)..... Members
- Clan leaders association representatives of Masha and Anderacha Woredas..... Members
- Representatives of Universities in the zone..... Members
- Representatives of research institutions in the zone..... Members
- Representative of NGO working on Biosphere reserve in the zone..Member
- Representative of investors working in the zone..... Member

The Zonal MB plays the leading role, with final decisions. It shall establish its own founding charter, in which the goals, duties, responsibilities and organizational details are clearly defined.

According to the consensus reached between stakeholders, other representatives can also integrate the Management Unit with an informational and observatory role, such as: cultural leaders associations' representatives, Mizan-Teppi University and Teppi research center representatives, companies' representatives, etc. They can also be part of the consultative assembly if more desirable.

The zonal MB monitor and implement the Management Plan through:

- Inform all stakeholders about the progress made continuously;
- Ensuring that activities carried out in the biosphere reserve are conforming with the zonation requirements, and in case of illegal activities, prosecuting them;
- Coordinate and supervise overall planned activities of the biosphere reserve
- Find solutions for problems and conflicts that might occur between stakeholders

Woreda and Kebele focal persons

At Kebele and Woreda level, one person should be officially appointed as focal person for the biosphere reserve.

The focal person shall be responsible to collect information and updates from Kebele cabinet, Kebele/Community Representatives (including women), cultural leaders, Kebele Manager, Youth Representative and Development Agents.

At Woreda level, the focal person shall collect information from all Kebele focal persons in their Woreda and from Woreda administrations.

The Woreda and Kebele focal persons are responsible for:

- Ensuring that the local communities are aware of the plan;
- Ensuring that their administration is aware of the plan and implement the relevant actions;
- Ensuring that the uses are in accordance with the management plan;
- Inform local communities about the penalty in case of any rule breaking;
- Gathering data on achievements and eventual issues to inform the Woreda focal person and zonal MU for the Kebele and Woreda focal person respectively;
- Implementing the Management Plan's actions in collaboration with the Woreda focal person and zonal MU for the Kebele and Woreda focal person respectively;
- Coordinate and supervise overall planned activities in their area.

Towards a consultative assembly for Sheka biosphere reserve

Following the approval and endorsement of the Management Plan, the zonal Management Board should explore the possibility of setting up a Sheka biosphere reserve consultative assembly.

The consultative assembly and eventual sub-committees would be formed on the principle of achieving greater community and stakeholders' involvement in decision-making for the community and by the community. Their work would be based on promoting tangible projects consistent with the management plan and with UNESCO's objectives for biospheres reserves as well as offering expertise and recommendations to the zonal MB.

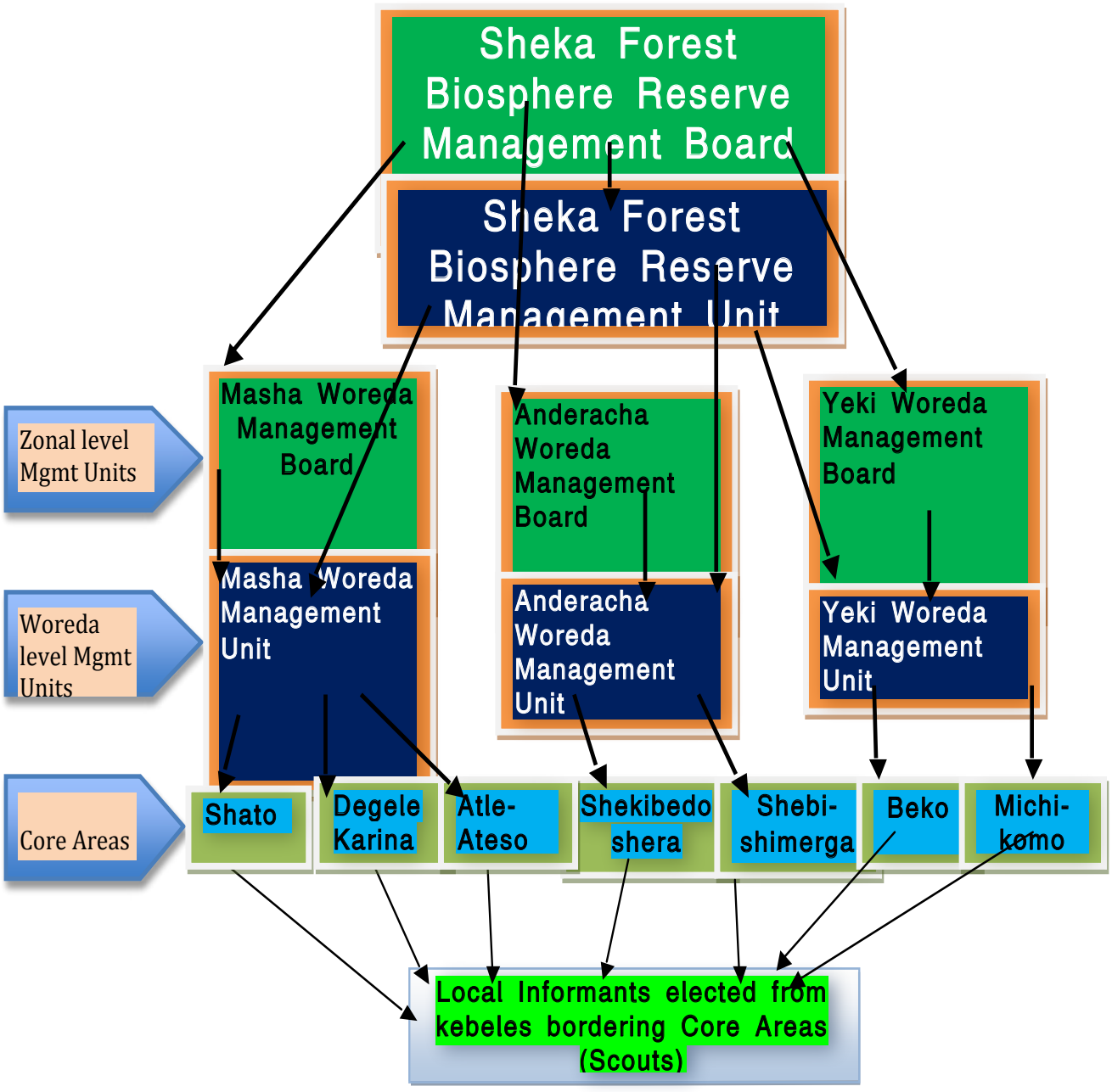
The consultative assembly would hold no formal legal status. As such its "authority" would be limited to the roles and responsibilities defined by the zonal MB. However, projects could be recommended to the zonal MB for endorsement.

The major responsibilities of the consultative assembly could be:

- Promote projects/actions from the Management Plan or that support the functions and objectives of Sheka biosphere reserve;
- Provide advice/recommendations to the zonal MB on (such) projects, plans, actions and other matters (they may follow a specific request from the zonal MU);
- Monitor progress on the contribution of relevant projects to achieving the overall vision for the Sheka biosphere reserve, including development and use of key performance indicators;
- Share experiences and lessons learned regarding current and past projects as well as other activities;
- Encourage and foster dialogue, cooperation and partnerships between members of the consultative assembly;
- Offer a collaborative and comprehensive arena for discussing recurrent issues and for conflict-solving.

Such consultative assembly would make of Sheka biosphere reserve a best practice for participatory management, and ensure the representativeness of all relevant stakeholders and effectiveness of the overall management process and will help to develop and strengthen coordination mechanisms and partnerships between stakeholders of the biosphere reserve.

DIAGRAMME OF SHEKA FOREST BIOSPHERE RESERVE MANAGEMENT STRUCTURE



INDICATORS, MONITORING AND REVIEW

Indicators and monitoring

Indicators and results related to the specific objectives are provided in the Management Plan. Gathering baseline information in a comprehensive way and regularly monitoring the indicators will be a necessary work that shall be conducted by all the relevant organizations and structures of the biosphere reserve (administrations, research centers...)

These indicators will give a broad picture of changes in the condition of Sheka forest and the local context, and show if the objectives and actions are being effective. After five years of implementation, a mid-term report shall be produced to assess the achievements of the biosphere reserve, compiling figures from indicators, actions undertaken in the biosphere reserve and their results/impact. A wide public consultation shall be conducted to determine to what extend the Management Plan is addressing local issues and creating opportunities, if there are new issues and aspects of people's life that should be addressed.

This mid-term report will help to inform the MUs by showing progress made and therefore identifying/indicating any changes needed to the objectives and actions. Beside this monitoring process, activities in the core areas and buffer zones shall regularly be monitored and corrective measures shall be taken as necessary by the biosphere reserve MU, according to the rules applying to these areas.

Review and evaluation

As specified by article 9 of the Statutory Framework of the WNBR, "the status of each biosphere reserve should be subject to a periodic review every ten years". To fulfill this requirement and to pave the way for the next management plan, an extensive review and evaluation of the actions undertaken in the biosphere reserve will be conducted starting one year prior to the end of the management plan (2023). This review and evaluation will include a clear assessment of the results obtained, based on information provided by the indicators. An extensive consultation with the local communities and relevant stakeholders shall be conducted.

Based on their feedbacks, the information gathered as well as lessons learnt, a new management plan shall be designed after completion of the periodic review and evaluation of this Management Plan.

APPENDIXES

SUMMARY OF OBJECTIVES, ACTIONS AND RESULTS

OBJECTIVE I: TO CONSERVE SHEKA'S BIO-CULTURAL DIVERSITY

1.1	Ensure effective conservation of core areas
OUTCOME	The well-identified core areas are protected, with no or few deforestation and illegal activities
1.2	Conserve and promote the protection of sacred/cultural sites
OUTCOME	Community cultural/sacred sites are well-identified, protected, and are respected by all stakeholders
1.3	Conserve and revive the traditional knowledge, cultures and values
OUTCOME	The TEK and values are shared and celebrated among the community, contributing to the sustainable management of the BR
1.4	Reforest or/and rehabilitate disturbed ecosystems and habitats in the BZ
OUTCOME	Disturbed ecosystems in the buffer zones are identified, rehabilitated and sustainably managed by the community and other relevant stakeholders
1.5	Manage the BZ in a sustainable way, particularly through community participation
OUTCOME	BZ are sustainably managed by community members & other relevant stakeholders, without witnessing any further development of harmful activities

OBJECTIVE II: TO SUPPORT THE DEVELOPMENT OF LOCAL COMMUNITIES

2.1	Develop and strengthen sustainable agriculture
OUTCOME	Agriculture and livestock raising has improved through an efficient and sustainable use of the lands and sustainable management practices, increasing households' livelihood
2.2	Promote an integrated development of non timber forest products

OUTCOME	Households' livelihood has improved through the sustainable development of NTFP sectors
2.3	Develop and strengthen local infrastructures & social services
OUTCOME	Local communities have access to more and better infrastructures services, improving their standard of living
2.4	Develop sustainably-managed energy sources and energy saving practices
OUTCOME	Local communities sustainably manage and use their energy; deforestation decreases
2.5	Improve the socioeconomic condition & resource access of minorities and marginalized groups
OUTCOME	The condition and resource access of minorities and marginalized groups have increased, improving their livelihood

OBJECTIVE III: TO PROMOTE ENVIRONNEMENTALLY FRIENDLY INVESTEMENTS IN THE TRANSITION AREA

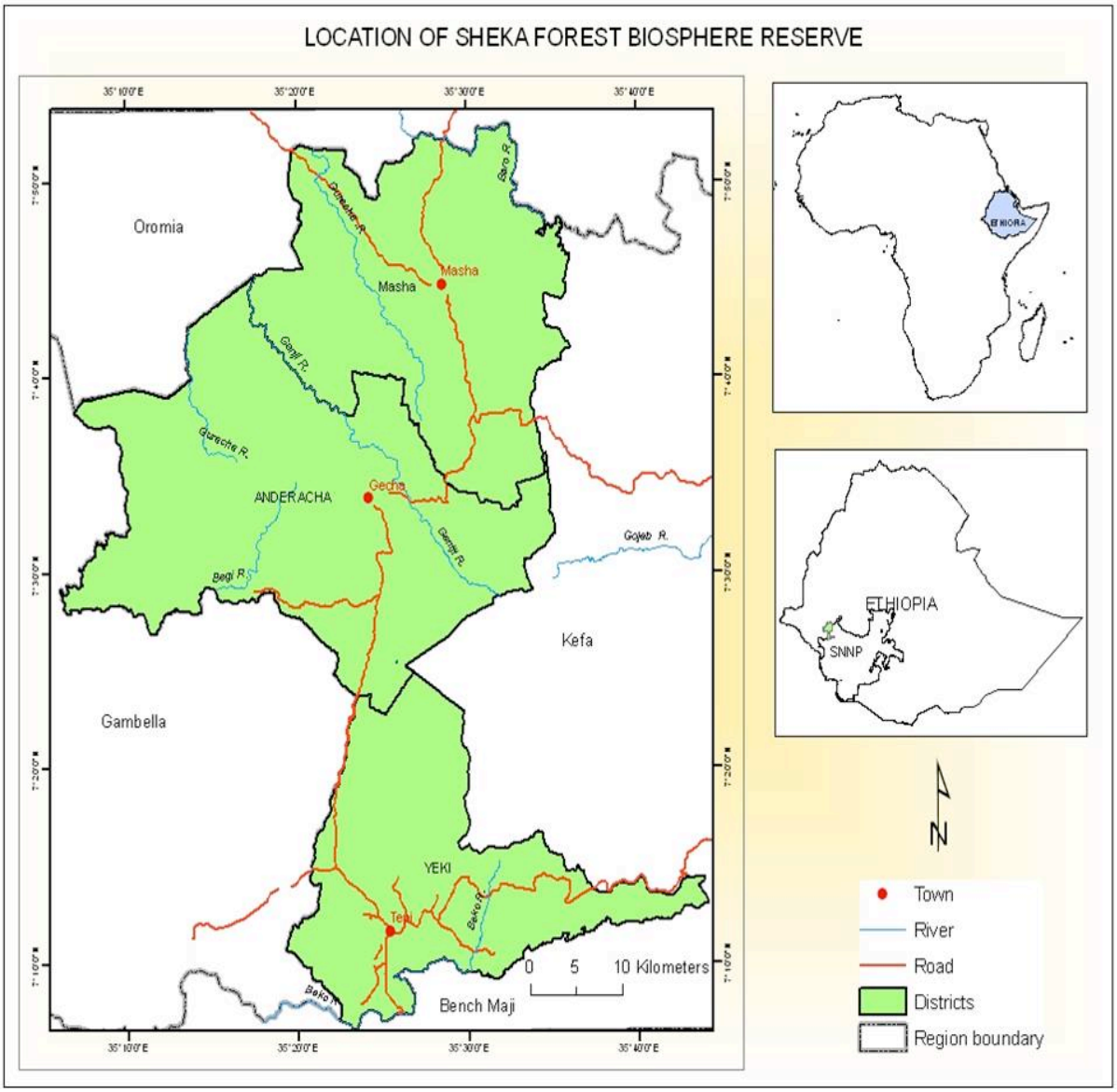
3.1	Promote integrated agro-industry & sustainable agriculture investments
OUTCOME	Aprivate companies are investing in the area in sustainable agricultural and agro-industrial activities, offering employment and benefits to local people.
3.2	Enhance the development of eco-tourism, in collaboration with other biosphere reserves and areas
OUTCOME	The eco-tourism sector is developed for the benefit of local communities and its activities respect and promote the local natural environment.
3.3	Promote & improve the production of multi-purpose trees
OUTCOME	the rate of deforestation has decreased and some former degraded lands are planted with sustainably managed multi-purpose tree plantations.

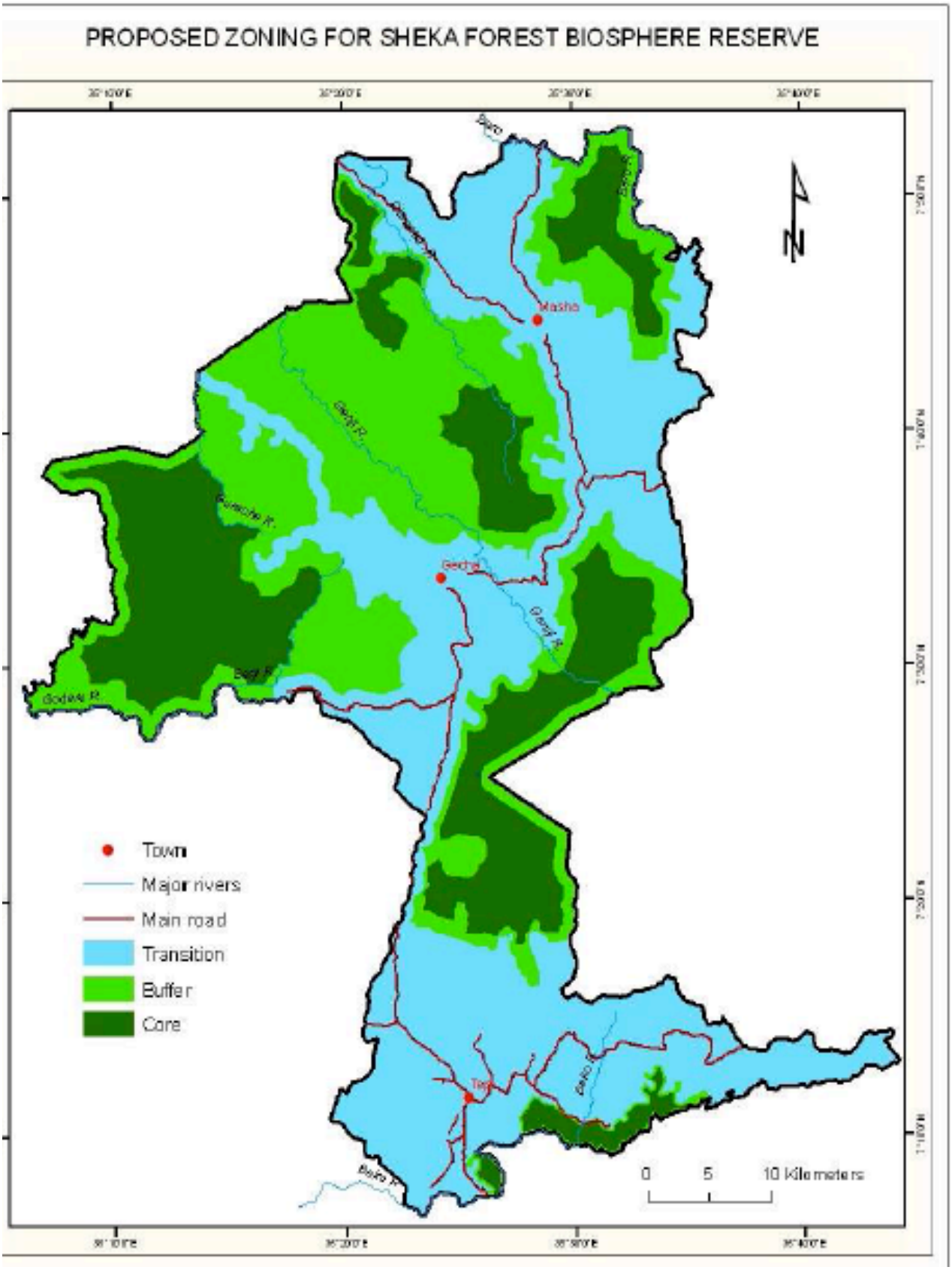
3.4	Set up mechanisms for payments for ecosystem services (PES)
OUTCOME	PES mechanisms have allowed to protect local ecosystems by supporting community initiatives and have improved local livelihood
3.5	Monitor the sustainability of investments & economic activities
OUTCOME	private investments in the biosphere reserve are sustainable; those that are not are assisted, audited, or prosecuted as appropriate

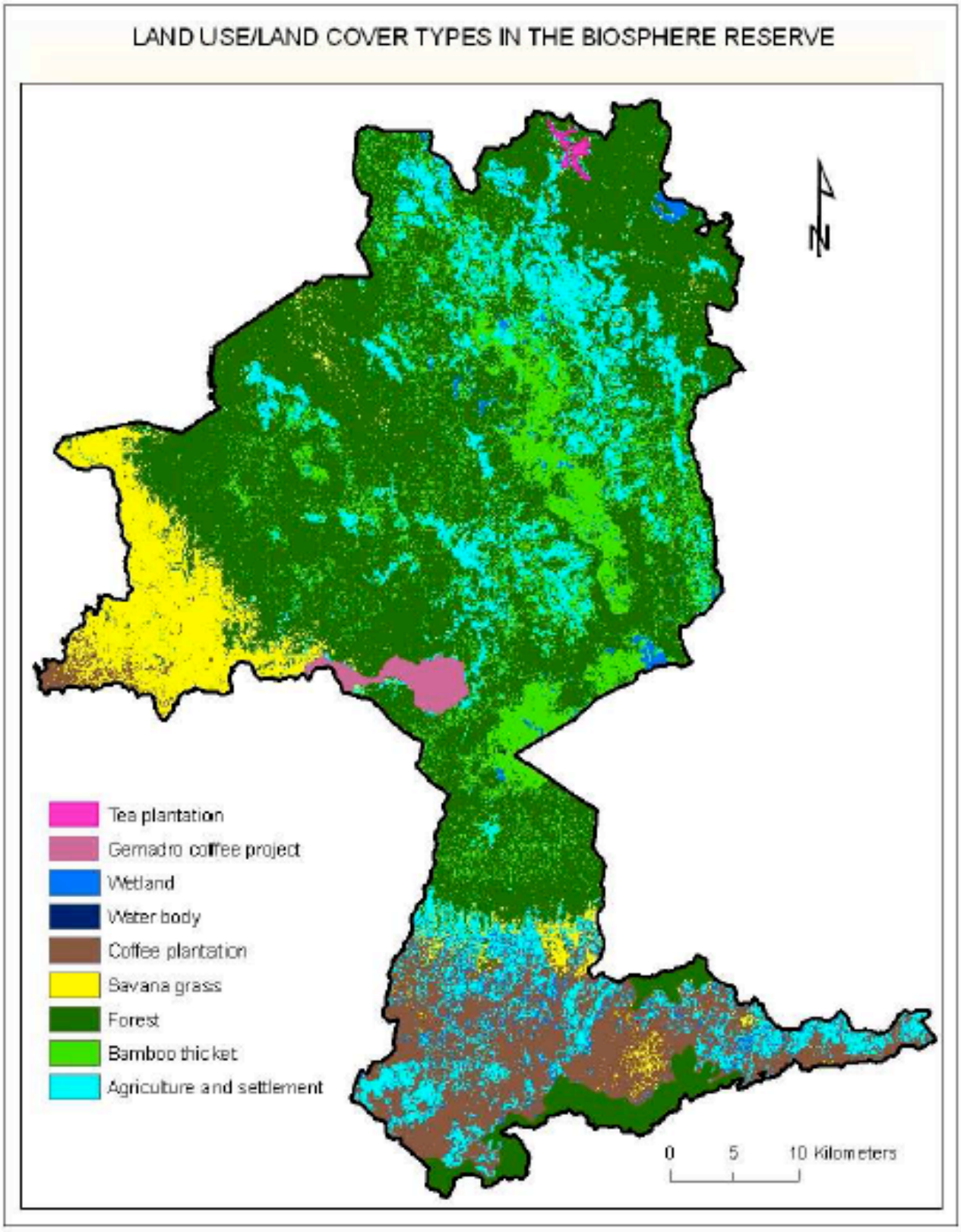
OBJECTIVE IV: TO ENHANCE KNOWLEDGE & CAPACITY IN THE BIOSPHERE RESERVE

4.1	Ensure the representativeness of all relevant stakeholders & effectiveness of the management process
4.2	Develop & strengthen coordination mechanisms &partnerships between stakeholders of the biosphere reserve
4.3	Enhance the implementation of existing environmental & community-related laws
4.4	Support the recognition of customary & indigenous community practices
4.5	Promote community empowerment & commitment to the biosphere reserve & its objectives
4.6	To ensure the sustainability of the management structure and Sheka forest biosphere reserve
OUTCOME	The governance framework of the biosphere reserve and the involvement of all relevant stakeholders allow constructive dialogue, cooperation and coordination as well as effective implementation of policies and projects for the sustainable development of Sheka zone.

MAPS


LOCATION OF SHEKA FOREST BIOSPHERE RESERVE
Oromia
Masha
Masha
Gecha
ANDERACHA
Kefa
Gambella
YEKI
Teni
Bench Maji
Gojeb R.
Begi R.
Gurecha R.
Gelgil R.
Beko R.
0 5 10 Kilometers
ETHIOPIA
SNNP
N
Town
River
Road
Districts
Region boundary


PROPOSED ZONING FOR SHEKA FOREST BIOSPHERE RESERVE
Masha
Gecha
Town
Major rivers
Main road
Transition
Buffer
Core
0 5 10 Kilometers


LAND USE/LAND COVER TYPES IN THE BIOSPHERE RESERVE
N
Tea plantation
Gemadro coffee project
Wetland
Water body
Coffee plantation
Savana grass
Forest
Bamboo thicket
Agriculture and settlement
0
5
10 Kilometers

GUIDELINES FROM NOMINATION FORM

The Management Plan is partly drawn from the guidelines given originally in the Nomination Form of the biosphere reserve. However, for the sake of clarity, these guidelines are reproduced here below.

CORE ZONE

The core areas are securely protected sites for conserving biological and cultural diversity with minimal human activities - aimed at protecting the landscape, ecosystems, species, genetic resources and cultural values. The core areas are about 23.14% of the total Sheka Forest Biosphere Reserve.

These core areas must be safeguarded in perpetuity as strict protection areas, and uses should be limited to cultural practices of the local community that sustained the forest to date. The restrictions on human use must be controlled and accompanied by suitable measures.

Management guidelines in CZ

Activities not recommended

- **Agricultural activities:** Expansion of agriculture into the core areas can easily accelerate deforestation; and evidently enhances loss of plant and animal diversity or biodiversity. In order to maintain a mosaic of forest landscapes with its immense biological diversity this activity need to be avoided from the core area.

- **Settlement in the area:** Expansion of settlement into core areas will have a significant impact on forest and its biodiversity through forest clearance. It can also encourage new settlers once such practices started somewhere. Hence settlement is strictly forbidden in the core areas.

- **Livestock grazing:** Livestock grazing in the core areas can affect young plants and seedlings through browsing and trampling and apparently damage the diversity and structure of the forest. Because of these reasons, livestock grazing should be restricted.

- **Reforestation using exotic trees:** The use of exotic tree species to develop/enrich forest gaps or degraded forest areas will have ecological impacts. It can affect soil and soil microorganism, plant and animal diversity. Because of these foreseen effects, planting exotic tree species in and around the core areas is completely forbidden.

- **Any silvicultural management:** Silvicultural systems usually focus on improving some economically important tree species and ignore/neglect some less required species. Ultimately, it can affect plant species composition and structure and promote monoculture forest types. Thus silvicultural management is not permitted in core areas.

- **Timber harvesting and collection of dead trees:** timber harvesting affects the compositional, structural, and functional patterns of the forest and its biodiversity. Additionally, standing dead and fallen woody material provides habitat for many species and is necessary to sustain elements of biological diversity. Hence these uses are prohibited.

- **Wild honey harvesting:** Beekeeping and wild honey collection a very old cultural practices in the area. The whole forest in the area is divided in two blocks owned by different families and the community. Such practice has played an important role in conservation of the forest. Traditional beekeeping and wild honey collection is allowed, but with pre-cautions. Wild honey harvesting is mostly a source of wild fire in the forest. Hence, the use of fire in honey harvesting is strictly prohibited.

- **Hunting of wild animals:** Hunting wild animals for food and other purposes, can affect the diversity of the animals. It is also not compatible with the objectives of biodiversity conservation in the core areas and hence need restriction.

- **Uses of agrochemicals and other chemicals:** Use of any chemicals in and around the core areas is strictly forbidden because of the impacts they have on the environment, e.g., on plants, soil etc.

- **Movement of heavy machinery and cars:** The movement of heavy machineries (e.g., bull dozer) and cars can have damaging effect on the soil and associated biodiversity. Movement of these machineries in the core areas will be not allowed.

- **Quarry extraction, road construction and any other investment:** These activities affect biodiversity by changing habitat, fragmenting contiguous forest, and increasing access to a site and change the existing land use system. Hence restricted.

Management activities recommended

- **Collection of non-timber forest products:-** such as spices, wild edible fruits and traditional beekeeping without use fire during harvesting. However, any activities that gears towards improving the productivity of these forest products through management are not allowed. Collection of these forest products are only allowed without any management practices such as slashing, burning, making path and the like.

- **Enrichment planting using indigenous species:** under certain circumstances and when believed necessary enrichment planting can be possible using only native plant species from the area.

- **Establishing research plots and demonstration sites:** This is to understand and monitor vegetation dynamics and ecological evolution of different forest species. The area can serve as training center(s) for biodiversity, ecology, botany etc. students/ researchers but with care- so that it will not affect the ecosystem.

BUFFER ZONE

The BZ surrounds or is contiguous to the core area. This area acts as a buffer for the core areas and accommodates more human activities such as research, environmental education and training as well as tourism and recreation. Most sacred sites like Gudo, Dedo, Checho and Kobo forest blocks are found within the buffer zone (BZ). Besides, forests in the BZ, are important for the traditional beekeeping and other NTFPs production, which is the major sources of cash income. Within the BZ, the forests and cultural landscapes that are of high value also need protection to be safeguarded. A management plan must be drawn up in close cooperation with the people who use the areas and a system of subsidies developed that reimburses the efforts necessary for the maintenance of the area.

Management guidelines in BZ

Management activities recommended

- **Agricultural activities**: If there are already existing farmlands in the buffer zone these can be allowed for further use or cultivation but without any expansion. However, site preparation using fire is not allowed in order to avoid fire risks in the buffer zone or core areas.

- **Coffee production:** In some disturbed forests in the buffer zone around

Masha and Anderacha, the local community started coffee plantations under the shades of the remnant trees. On the other hand, coffee production is a well established practice in the proposed buffer zones around Yeki. It is recommended that the users maintain enough density and diversity of shade trees in the system.

- **Traditional honey production:** As honey is the second most important income sources for the local communities in the area, traditional or modern honey production is allowed. However, in order to reduce risk of fire and related impacts during beehive hanging or honey harvesting the practices should be highly controlled. Gradual transformation of the production system to modern and transitional beehives is also recommended for improved quality and quantity.

- **Extraction of non-timber forest products:** Extraction of spices, wild edible fruits and climbers are allowed in the buffer zone. Domestication of spices mainly Aframomum corrorima and Piper capense is also possible.

- **Fuel wood collection:** dead wood collection for fuel wood is possible but it should be with care -as it can affect biodiversity.

- **Reforestation:** Restoration, rehabilitation or enrichment of degraded forest land can be possible in the buffer zone using native plants only.

- **Establishing research plots and demonstration sites:** to understand vegetation dynamics and land use changes or related issues establishing research plots or demonstration sites is possible in the buffer zone.

- **Tourism and education centers:** tourists and students are allowed to visit or making a research. Education trips or trainings can also be possible within buffer zone with limited number participants at a time in order to reduce human impacts in the zone.

Activities not recommended

- **Settlement:** Expansion of settlements into buffer zone is not allowed as it has impact on the biodiversity. It can also encourage new settlers once such practices started somewhere. Hence settlement expansion is strictly forbidden in the buffer zone.

- **Farming wetlands** and deforesting riverine forests or river banks are also

not allowed.

- **Burning of crop** residues and forests during land preparation- affect soil and microorganisms

- **Polluting rivers** using wet coffee processing or through other means

- **Timber harvesting:** Timber harvesting is not allowed in the buffer zone as it has damaging effect on the ecosystem during harvesting. But harvesting man-made plantation around home garden is possible.

- **Over exploitation of endangered tree species** is not allowed, e.g., Prunus africana

- **Hunting of wild animals:** Hunting of wild animals is not allowed except only when it is believed necessary to reduce the population of vermin animals.

- **Number of shade trees** should not be lower than 200 trees/ha for dbh > 10 cm which is equivalent to 1 tree per 50 m2.

- **Number of seedlings/saplings** should not be lower than 200 individuals per ha which equivalent to 1 seedlings 50 m2.

- **Number of shade tree species** should not be lower than 20 species per ha which is equivalent to 1 species per 500 m2.

- **Planting exotic trees:** The use of exotic tree species to develop/enrich forest gaps or degraded forest areas will have an ecological impacts in the long run. Planting exotic tree species in and around the buffer zone is forbidden.

- **Uses of pesticides and other chemicals:** use of any agrochemicals in and around the buffer zone is strictly forbidden because of the impacts they have on the environment, e.g., on plants, soil etc.

- **Movement of heavy machinery and cars**: the movement of heavy machineries (e.g., bull dozer) and cars can have damaging effect on the soil and associated resources including plants. Hence, movement of these machineries in the buffer zone should be minimized.

- **Quarry extraction** and any other investment that changes the land use

system need restriction.

TRANSITION ZONE

This area will contain a variety of agricultural activities, human settlements and other land uses; and has great economic and social significance for regional development. Local communities and other stakeholders must work together to manage and sustainably develop the area's resources for the benefit of the people who live there. By employing innovative sustainable economic and human use practices, the transitional area should set paradigmatic standards for the entire region with regard to agriculture and forestry, crafts, trade and industry, as well as culture and education.

Management guidelines in TZ

Management activities recommended

- Intensive agricultural activities
- Livestock development and grazing
- Coffee management
- Collection of firewood or fuel wood
- Settlements and schools
- Establishing coffee washing machine, preferably eco-friendly types in order to minimize pollution.
- Establishing all necessary infrastructure
- Traditional extractive uses of spices, wild edible fruits and medicinal plants
- Domestication of spices and traditional medicinal plants
- Establishing forest plantation using native species
- Planting native and exotic multipurpose plant species
- Establishing tourism and education centers
- Wild honey harvesting and modern apiculture management
- Hunting of wild animals if necessary
- Maintenance of at least 10 to 20 trees on farms

Activities not recommended

- Farming and/or deforesting riverside forests or river banks and wetlands
- Burning of crop residues and forest fragments during land preparation
- Expansion of large-scale forest plantation using exotic species
- Expansion of large scale tea or coffee plantation
- Introduction of improved coffee varieties into exiting farming system
- Over exploitation of endangered tree species, e.g., Prunus africana

- Polluting rivers through wet coffee processing or other means
- Misuse of or change of historical landscapes or places, e.g., Abba Gada place
- Removal of vegetation that may cause damage to the historic place
- Establishing factories that damage the existing landscape and also encourage immigration of people
- Quarry extraction & any other investment that changes the existing land use system
- Restricting mining, and other investment in the area
- Uncontrolled waste disposal

SANCTIONS APPLICABLE (from Nomination Form)

In case of any diminution of the guidelines indicated for each zone or areas, a sanction will be imposed. The sanction will be defined according to the Ethiopian Proclamation No. 542/2007; a proclamation that provide for the development, conservation and utilization of forests. According to PART FOUR no20 of this proclamation, a person can be punishable with greater penalty in case of any mis-use in any state forests. Accordingly, the following the criminal law is applicable:

- Except pursuant to this proclamation and directives issued herein under, cuts trees or removes, processes or uses in any way forest products from a state forest shall be punishable with not less than 1 year and not exceeding 5 years imprisonment and with fine Birr 10,000;

- Destroy, damages and falsify forest boundary marks shall be punishable with not less than 1 year and not exceeding 5 years rigorous imprisonment;

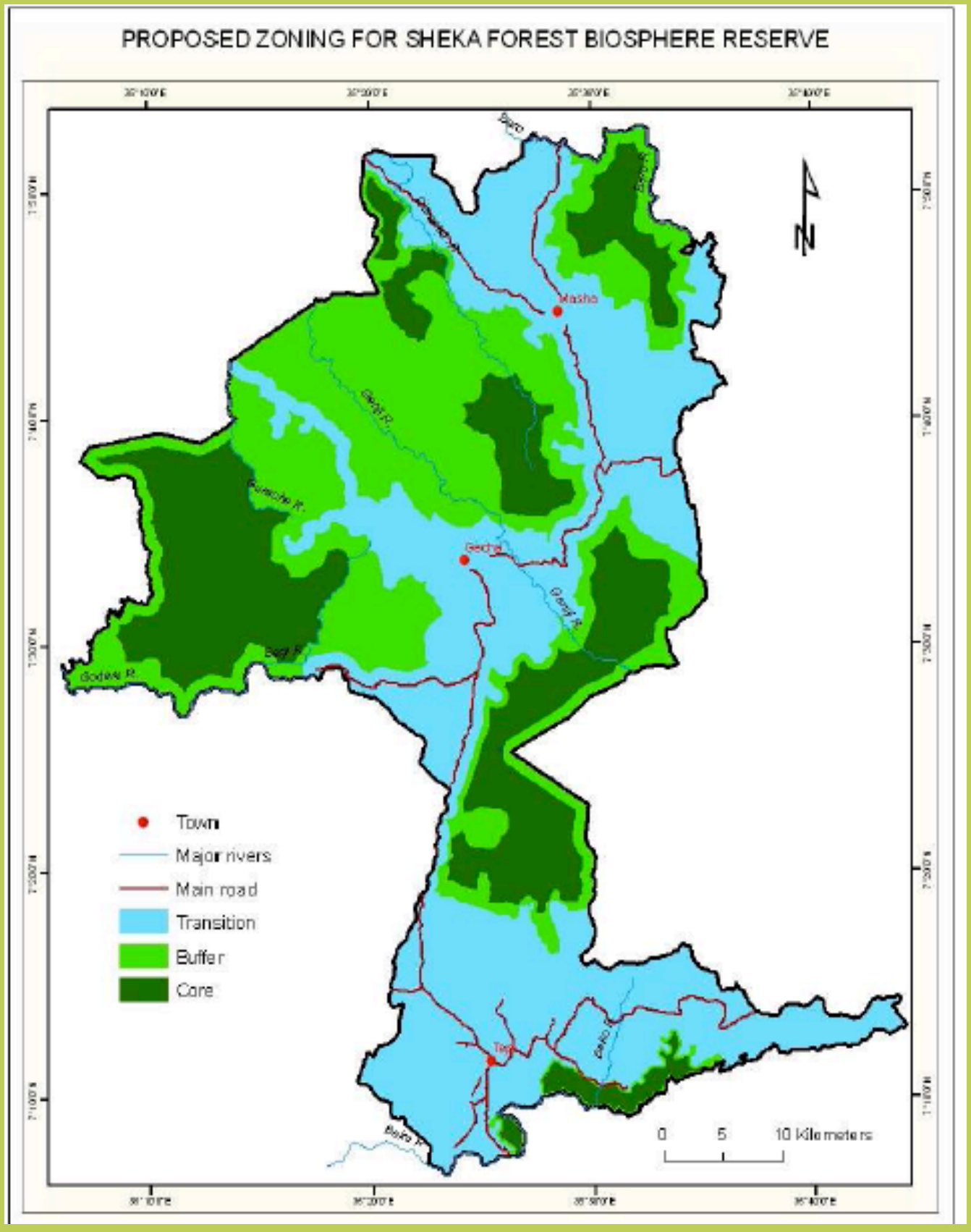
- Causes damage to a forest by setting fire or in any other manner shall be punishable with not less than 10 years and not exceeding 15 years rigorous imprisonment;

- Settles or expands farmland in a forest area without permit or undertakes the construction of any infrastructure in a forestland without having the necessary permit shall be punishable with not less than 2 years imprisonment and with fine Birr 20,000;

- Provides assistance in any form to those who illegally cut forest trees or transport forest products to hide or take away the forest products shall be punishable with 5 years imprisonment.

Sheka Forest Biosphere Reserve
Management Plan

January 2015



MELCA-Ethiopia

CRITICAL ECOSYSTEM PARTNERSHIP FUND

Norwegian People's Aid