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X. GENERAL CONCLUSION AND RECOMMENDATIONS

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Introduction

This chapter presents general conclusions and recommendations of the midterm Sustainable Wildlife Management (SWM) Programme in KaZa. These are based on the programme's theory of change developed in 2019 for each result area (R1 to R4). The chapter presents the main lessons learned during the programme's diagnostic stage and then proposes and justifies adjustments to the strategy for the remaining two and a half years of implementation.

A. General objective and initial theory of change of the SWM Programme in KaZa

The overall objective of the SWM Programme is to reconcile the challenges of wildlife conservation with those of food security in a set of key socioecosystems (forest, wetland and savannah), promoting sustainable and legal exploitation of resilient animal populations by Indigenous rural populations, while increasing/diversifying the protein supply for the benefit of rural and urban populations. The SWM Programme in KaZa, implemented in Zambia and Zimbabwe, has the model of community conservancy (CC) as a basis for a nested wild and domestic protein supply model being promoted for protein and income. This land use option is underpinned by a willingness of communities, their leaderships and partners including government to manage wildlife and other natural resources under each community's jurisdiction. In the long run, communities are expected to obtain extra and direct financial benefits from activities associated with consumptive and non-consumptive tourism.

The establishment and development of a CC is a dynamic process with feedback loops as it is displayed in the graph of the overall theory of change presented in Chapter II (Figure II.4). Development of a vision of the future of land use with respect to wildlife and other natural resources incorporates views of the community members on cohabitation with wildlife. This is proposed to be a step-by-step process of laying a basis for revising the strategy of the SWM Programme in KaZa, based on the diagnosis of the first three years.

Following is the stepwise process for a CC's adoption (Figure X.1):

- i) The first step looks at the foundation process of the CC, which is the cornerstone of such an innovative land use option (Section B). The bulk of activities are related to Result R1.
- ii) The next section will focus on the threats, which are negatively affecting wildlife conservation and human well-being. These threats need to be overcome to secure the buy-in of the concerned communities (Section C). Most of the activities are conducted under Result R2.

- iii) With respect to the management and sharing of benefits from locally available natural resources, attention will be given in a third step to encouraging a combined and sustainable use of natural and domestic resources (Section D). Activities related to Results R2 and R3 will contribute to such an outcome, while R4-based activities will measure the levels of dependence on wild meat.
- iv) For robustness of the model, the last section, related to Result R5, will scrutinize the monitoring system and capacity for adaptive management (Section E).

B. Conclusions and recommendations regarding the development of CCs' institutional framework (R1)

B.1. General objective and initial theory of change

Building a CC is a social process based on the expectations of communities for an improvement in their living conditions in a defined landscape. As expressed in Box II.1, three of the seven principles guiding the establishment of a CC focus on the institutional set-up and recognition of such governance systems:

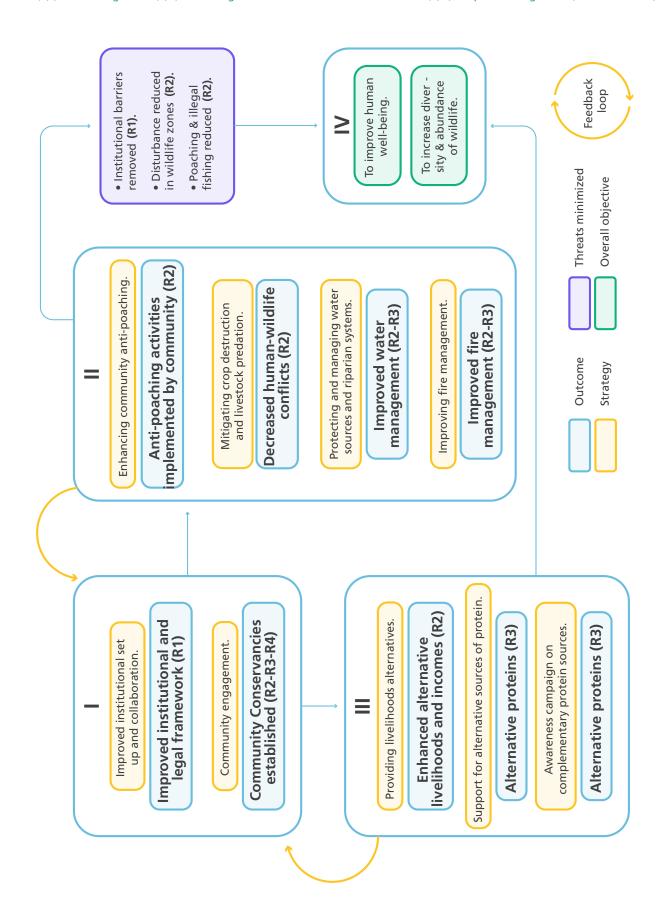
- a legally registered entity with clearly defined boundaries;
- an entity managed by a group elected to serve the interests of all its members; and
- a land zoned for multiple uses to minimize conflict and maximize the interests of all stakeholders.

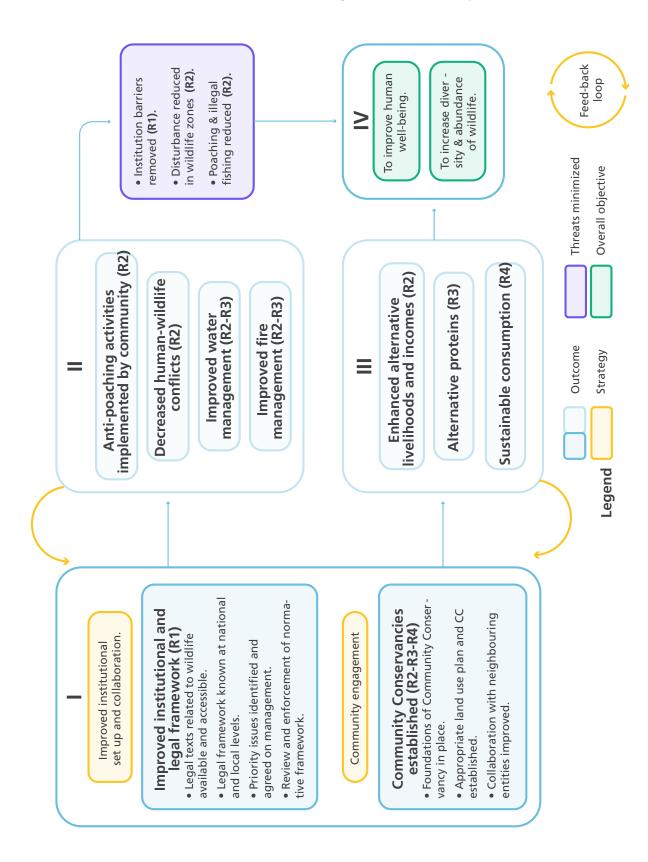
Two main outcomes were identified as key steps by the theory of change process (Figure X.2), that is, to create a strong base of an inclusive arrangement for each proposed CC:

- The first expected result is an improved institutional and legal framework enabling the establishment of a CC. Such an outcome includes that: (i) legal texts related to wildlife management are available and accessible to stakeholders; (ii) the legal frameworks as well as their strengths and weaknesses are known by stakeholders at national and local levels; (iii) all stakeholders are aware of wildlife management issues and of the associated community rights, identify priority issues and agree on management options; and (iv) participatory and inclusive processes to review normative frameworks and to improve their implementation and enforcement are carried out.
- The second associated result is that the CC is established as a formal, tangible and
 functional entity. Such an outcome requires the foundations of the CC, meaning preliminary
 establishment of the CC with an agreed land use plan proposed and adopted under a
 community ratified management body. This result implies that there are collaborative
 mechanisms between the CC and its neighbouring entities.

To achieve these specific results, three strategies are supposed to be implemented in a combined manner: (i) improvement of the institutional set-up and collaboration; (ii) search for community engagement in CCs; and (iii) implementation of good practices, development of management plan and fostering of collaboration with neighbouring parties.

Figure X.1: A proposed stepwise process to revise the site strategy of the SWM Programme in KaZa: (I) foundation process of the CC; (II) overcoming threats; (III) combining uses of natural and domestic resources; (IV) adaptive management (Source: Authors)





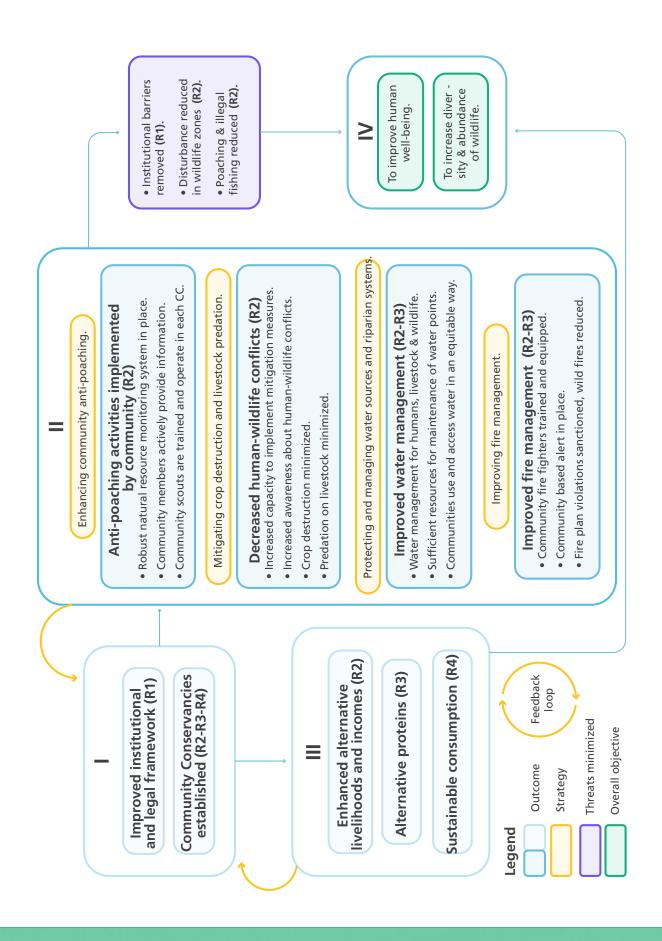
B.2. Main conclusions

The legal establishment of a CC implies a constituted management body run by the community for promoting local development and sustainable use of wildlife and tourism. There are many dynamics that come into play in trying to promote the CC concept. For instance, there are divergent views and opinions from traditional and political leaders, as well as from the communities, that need to be considered and reconciled. This situation has required significant allocation of time from project staff in community engagements with traditional chiefs and political leadership in Simalaha Community Conservancy (SCC)/Inyasemu Community Conservancy (ICC) in Zambia and Mucheni Community Conservancy (MCC) in Zimbabwe. This is intended to bring all stakeholders (including project staff) to a common understanding of how to move forward regarding implementation of the CC concept. All of this was done by employing tools contained in the project's Free, Prior and Informed Consent (FPIC) approach to community engagement, which advocates for respecting the rights of communities to make decisions concerning exploitation and use of their natural resources, as enshrined in the United Nations Charter on Human Rights. Moreover, in this regard, an SoS officer was hired whose main responsibility is to work closely with the project staff to ensure compliance with FPIC principles, with community rights-based approach (CRBA), and develop local-level Grievance Redress Mechanisms (GRMs). The results of these engagement processes have improved confidence in the project and have helped foster a better understanding of the CC concept by communities. This is evidenced by notable improvement in the participation of chiefs in both countries at meetings to resolve issues and the active involvement of communities in all activities of the project, including participatory land-use planning (LUP) and interventions related to provision of infrastructure.

In both countries, the law was analysed through a legal matrix, from which the gaps and impediments to the promotion of a CC model were identified. Due to the differences in legal frameworks operational in Zambia and Zimbabwe, the study was conducted by hiring one national legal consultant (NLC) for each country, following the steps defined in the workplan: (i) identification and collation of the relevant texts of laws and regulations (pertinent to each CC) and the policy documents; (ii) survey on law implementation at national and community level; and (iii) development of a legal consistency document and a legal gap analysis.

This work is still in process in Zambia, but has been completed in Zimbabwe. A workshop held on behalf of the Ministry of Environment at the Zimbabwean level allowed the NLC and the SWM Programme team to share results with the other ministries and the private sector in the country in order to consolidate the different outputs gathered during the first two years of the project. This led to the drafting of a legal country profile (LCP), which details the different normative systems governing the country (land and inland water; sustainable wildlife management; animal production; and the distribution of wildlife/agriculture/livestock products and their safety) and analyses the implementation of international and regional tools. This LCP reports that one common thread is that some of the Acts of Parliament, especially the ones related to wildlife, have not been aligned to the Zimbabwean Constitution, and the following are the major recommendations aligned to law reform on sustainable wildlife management:

- · Review the Wildlife Policy.
- Amend the Parks and Wildlife Management Act so that the principle of sustainable development is clearly articulated and strengthened.
- Enact regulations to support implementation of Communal Areas Management



Programme for Indigenous Resources (CAMPFIRE) and Community-Based Natural Resources Management (CBNRM) initiatives.

- Build capacity of communities so that they are able to negotiate contracts, establish and run community trusts and develop by-laws on natural resources.
- Strengthen the participatory nature of development of By-laws on Natural Resources as provided for in terms of the Environmental Management Act and Rural District Council (RDC) Act.
- Raise awareness of environmental rights and property rights of communities so that they are able to assert them.

For Zimbabwe, the main recommendation is reviewing the Parks and Wildlife Act, whereas in Zambia the main recommendation is to review the Zambia Wildlife Act No. 14 of 2015. Moreover, both countries should also review any other ancillary regulations that may cause hurdles in the process so that the establishment and regulation of CCs is provided for in both countries. Furthermore, the law should allow for the creation of a platform in each country for the community in relation to CBNRM policy at national and regional levels, as well as within the context of transfrontier conservation areas (TFCAs).

B.3. Revision of the strategy based on the diagnoses of the first three years

As shown in Chapter IV, there is no legal position which recognizes the establishment of a CC in either of the two countries.

In Zimbabwe, MCC is an extension of the CAMPFIRE concept, and the RDC remains the appropriate authority (AA) over the conservancy. There is no legal instrument for the communities to participate in the establishment of a CC, and the institutional model to constitute a community conservancy would involve the registration of the community as a Trust, an Association or a Cooperative company. Upon registration of the CC it can enter into contracts with safari operators and other private—community partnership agreements, giving them direct control over its resources.

In Zambia, there are three routes that can be taken for the establishment of a CC:

- The first route is creating a Community Rights Board (CRB) under the Zambia Wildlife Act of 2015 which makes provision for the establishment of various protected areas, including conservancies and community protected areas.
- The second route is through a public private partnership agreement (PPPA), in which case a conservancy can be established on traditional or customary land by signing an MoU with private investors.
- The third route is through the Zambia Forest Act of 2015, by which the community can
 designate an area as a community conservancy by applying to the Forestry Department.
 However, in the case of SCC, a Community Conservancy Trust was established to enable
 local communities as members of the Trust to develop and manage a range of activities,
 improving their livelihoods and fostering sustainable use of their natural resources.

Even though significant steps have been taken in the analysis of the legal aspects, a slight delay, more so in Zambia, means that the SWM Programme in KaZa must continue to follow the same strategies as those defined from the outset in the theory of change. However, the focus must be

on the theory of change strategy: "Improved institutional set-up and collaboration" by:

- using the LCPs in each of the two countries, which have been drawn up in close contact with the government focal points, to enable policymakers to align the above recommendations for law reform on sustainable wildlife management;
- deciding with decision makers, traditional leaders, private sector and communities the legal status to be given to the CC (association, trust, etc.). This status can be different in the two countries, but for each of the CCs a Management Body should be established to manage and report on the implementation of the activities within the CC.

C. Conclusions and recommendations regarding the process of overcoming CC threats (R2, R3)

C.1. General objective and initial theory of change

At the scale of a territory with defined boundaries and a management structure run by the community, CCs are the proper entity to "minimize conflict and maximize the interests of all stakeholders" (See Box II.1). To highlight the importance of this statement, four major constraints were identified during the consultation process leading to the production of the current theory of change: poaching, human–wildlife conflicts (HWCs), water scarcity and bush fires. In response to such challenges, which are key to increasing the buy-in of the concerned communities, the following four outcomes were identified during the theory of change workshops (Figure X.3):

- Anti-poaching activities implemented by community: Based on a robust natural resource monitoring system, community members will participate in the record of information related to illegal natural resource extraction, enabling trained community scouts to intervene within the CC.
- Decreased HWCs: The challenge is to increase the local capacity of communities to implement mitigation measures in order to minimize crop destruction and the predation of livestock.
- Improved water management: To reduce water scarcity, dedicated water points will be
 established to cover human, livestock and wildlife needs in an equitable way. Sufficient
 resources will be allocated by the CCs for maintenance of water points.
- Improved fire management: Community firefighters will be trained and equipped. Based on a community-based alert system in place, fire plan violations will be sanctioned and uncontrolled fires reduced.

To achieve these specific results, four strategies are implemented in a combined manner: (i) enhancing community anti-poaching; (ii) mitigating crop destruction and livestock predation; (iii) protecting and managing water sources and riparian systems; and (iv) improving fire management.

C.2. Main conclusions

Once the CCs are formally recognized by government authorities, the development of tools for

both communities and protected area managers to monitor and assess their effectiveness to manage and protect resources will be encouraged. This will also lead to a better understanding by communities of the impact of illegal activities on their well-being.

C.2.1. Anti-poaching

Anti-poaching activities are challenging as food security is expected to decrease in the area due to the increasingly poor macroeconomic conditions, consecutive droughts and continued COVID-19 impacts. The impact of the COVID-19 crisis is systemic: it is challenging for all sectors and activities including food supply and wildlife conservation, and has highlighted the vulnerability of the communities living in remote areas on the edge of conservation zones. It also shows the key role of wild resources in local resilience to crises and the limited number of alternatives beyond reliance on food aid. This crisis confirms the importance of combining wildlife protection and local development – a challenge that the SWM Programme in KaZa aims to meet. Another observed consequence is that it has become more common for younger people to go hunting. Envisaged ways of reducing poaching, as well as improving the viability of wildlife management enterprises, are the following: (i) restocking of game, as previously done in Simalaha CC; and (ii) training of a large number of community game guards who will promote harmonious patrols with the rangers in the Parks and Forest estate.

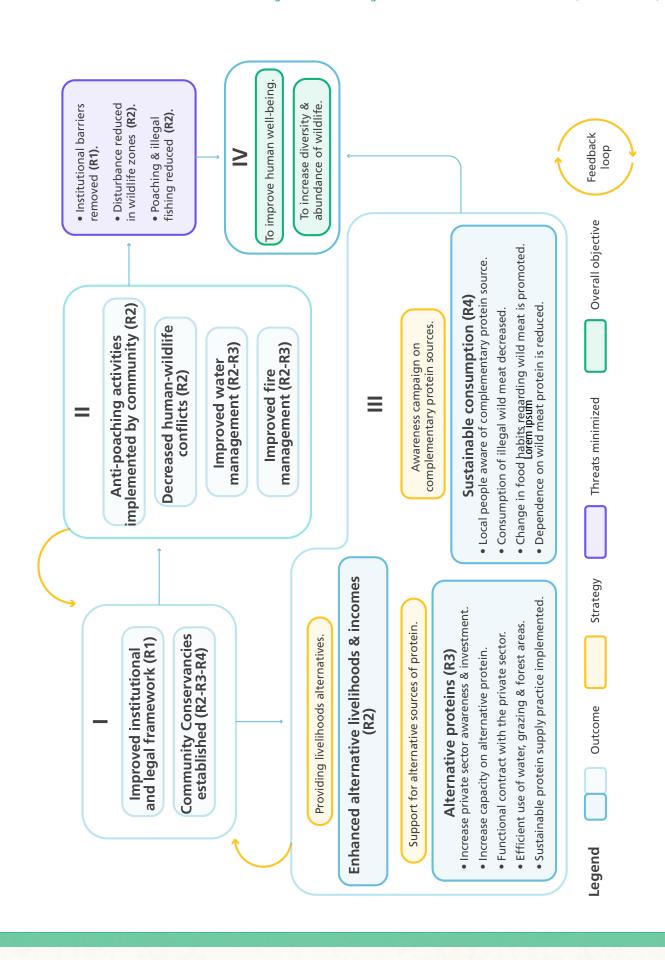
C.2.2. Human-wildlife conflict mitigation

Initiatives to reduce HWC are key to the success of the conservancy project, and therefore an HWC mitigation strategy is critical in the field of conservation and management of wildlife. As the objective is not to eliminate HWCs but to reduce them to a socially tolerable level, the recommended objective is to move from a logic of conflict management to a policy of coexistence, by taking the needs and expectations of the communities into consideration. The setting up of designed HWC platforms for each CC could allow a collaborative learning process for adaptive management with ad hoc training for capacity building. In this respect, several strategies could be promoted:

- to favour the movement of wildlife by creating corridors among national parks (NPs), safari areas (SAs), game management areas (GMAs) and other protected areas, as promoted by the KaZa-TFCA in its Master Integrated Development Plan;
- to install fences to limit the movement of wildlife into human settlements as well as of domestic animals into wildlife corridors;
- to protect livestock through appropriate livestock kraals and controlled access to conservancies/NPs during periods of grazing and water shortages; and
- to increase the number of water points, and consequently decrease the possibility for wildlife to encounter humans and their domestic herds.

C.2.3. Water management

This last point of increasing the number of water points to reduce HWC was taken in charge by the SWM Programme in KaZa through the rehabilitation/provision of boreholes in the CCs and training of borehole minders to carry out repairs and maintenance. Furthermore, the process of co-developing new fish farming systems could lead to the design of profitable farming systems, and the development of this kind of new water bodies would also reduce the risk of conflicts between humans and wildlife. In terms of mitigating water-related problems, some other



recommendations can be proposed to provide both humans and livestock with clean water and to enlighten the community on the principles of integrated water resource management as a basis for best practices in water resource management:

- drilling community wells for domestic water use and developing skills by providing training to some of the community members for well operation and maintenance;
- harnessing spring water in large reservoirs with a steady flow, and introducing communities to rainwater harvesting technologies (dam construction, etc.);
- instilling a sense of water stewardship within communities through the formation of river management committees and water user associations; and
- raising awareness about the causes of water resource (river) degradation.

C.2.4. Fire management

The management of fires that appear to have a major role in the theory of change has not been sufficiently studied in these first years of the SWM Programme in KaZa; nevertheless, the importance of fire lines is well known by the communities and the local authorities. They could be used for the delimitation of the CCs' boundaries and surrounding protected areas, safely maintained through a network of fire lines that should be marked, and kept clean of vegetation to facilitate patrolling.

C.3. Revision of the strategy based on the diagnoses of the first three years

Among the threats that can affect the CCs, a greater effort has been made towards resolving the threat of HWC. The creation of an HWC platform, which could be directly managed by the CCs' management committees, could help transfer a part of responsibility and monitoring from the team of the SWM Programme in KaZa to the local communities. This platform would indirectly also play a role in the enhancement of anti-poaching activities, as some tools are being implemented through training sessions and workshops on these topics (e.g. use of bomas to protect livestock, awareness-raising on Management Oriented Monitoring Systems (MOMS) to share HWC information, etc.).

D. Conclusions and recommendations regarding the opportunity of combining natural and domestic resources in CC (R2, R3, R4)

D.1. General objective and initial theory of change

The cornerstone of a good CC is one that allows its members to make a living from the sustainable use of natural resources (wildlife, fish and non-timber forest products – NTFPs) by complementing their agricultural activities. The bet is that direct financial benefits from activities associated with natural resources will increase the capacity of farmers to cope with environmental and economic hazards. This specific objective echoes the third guiding principle of CC establishment (See Box II.1) which states that a CC is "a place where residents can add income from natural resources management (wildlife, tourism) and from traditional farming activities". This important statement is completed by two other statements of Box II.1 that emphasize the value of the land, its natural resources and the services being provided.

In the 2019 theory of change, three expected outcomes were chosen to address this specific objective (Figure X.4):

- Enhanced alternative livelihoods and incomes (R2): Wildlife-based enterprises generate income
- Alternative proteins (R3): Based on functional contracts between producers and the private sector, the capacity of local people to produce sustainable protein from fish, livestock and NTFP increases.
- Sustainable consumption (R4): Local people are aware of complementary and alternative
 protein sources and reduce their consumption of illegally harvested wild meat. To achieve
 these specific results, three strategies are implemented in a combined manner: providing
 livelihood alternatives; supporting alternative sources of protein; and organizing awareness
 campaigns on complementary protein sources.

D.2. Main conclusions

D.2.1. Wildlife-based enterprise (R2)

Well-regulated and legal trophy hunting programmes can play an important role in delivering benefits for both wildlife conservation and for the livelihoods and well-being of Indigenous and local communities living with wildlife.

As previously noted, CCs' management plans are an important guide for resource use and protection that will benefit the local communities and their posterity. Developing of a sustainable wildlife cropping programme and improving the commercial value of a broader spectrum of wildlife species will help increase economic flows into the area and diminish the income generating burden placed on limited numbers of high-value trophy species. This will depend on successful restocking and the meat being sold (as recommended by the communities) instead of being given out for free. Restocking of game that will improve viability of the wildlife management enterprises is scheduled in the second semester of the third year of the project.

There is a need to increase advertisement of these CCs and associated products in the area to increase visibility and attract primarily investors and then clients, and to solve the main challenges of accommodation and food provision for tourists. Efforts should be made for this purpose to integrate the conservancy into already existing tourist routes.

D.2.2. Non-timber forest products (R2-R3)

As CCs are adjacent to protected game areas, sustainable forest management could be fostered through activities such as beekeeping and the harvesting of NTFP products. With the trade and sale of processed natural resources, support for nature-based tourism could easily be promoted.

D.2.3. Fishing and aquaculture (R2-R3)

Fish access is dependent on the availability of water (permanent in SCC; restricted in ICC and MCC). In SCC, one way of coping with the fishing ban during a period of year (1 December – 28 February) is to adapt fish capture practices to the abundance of species that are not subject to global conservation.

In SCC, where water is not lacking, aquaculture could be promoted through an integration with other types of production systems and the development of farmers' organizations. In ICC

and MCC, the large quantity of water at the end of the rainy season could help promote a new model of fish farming in seasonal ponds.

With the development of fish processing units, fish farmers will enhance their fish production capacity and support the creation of small-scale fisheries.

D.2.4. Livestock production (R3)

Livestock developmental needs of communities are complex, in terms of both size and scope. Therefore, huge amounts of financial investments and human resources are required as well as a longer period of implementation. Although the environment is suitable for livestock production, this sector suffers from frequent disease outbreaks, a lack of marketing with limited support from the private sector, and farming infrastructure that is inadequate or in disrepair.

To make an impact within the time frame of engagement, major recommendations are made:

- creation of local community-based livestock development associations to spearhead livestock development activities with sustained attention and the implementation of safeguards to avoid elite capture;
- reinforcement of the engagement of the private sector in support of commercialization of the smallholder livestock sector and market development including market linkages and funding models;
- genetic improvement of goats and poultry, with measures aimed at meeting the requirements of these demanding animals which require adapted feed and veterinary care;
- finalization of a participatory land use plan incorporating grazing management;
- education and training to take centre stage in capacity building of farmers, especially in the field of governance, market intelligence and financial management;
- decrease in occurrence of livestock diseases through the establishment of disease control
 infrastructure.

All these previously developed aspects aim at contributing to increasing the availability of meat and allowing the sustainability of consumption. The challenge for the SWM Programme in KaZa is to make it accessible for a population whose purchasing power and capacity for home production is highly limited.

D.2.5. Sustainable wild meat consumption (R4)

In many cases, there are traditional reasons behind consumption of wild meat which make it complex for the SWM Programme in KaZa to reduce consumption beyond a certain level. Therefore, the focus is not to overcome those reasons, as they are culturally embedded in the communities. However, consumption of wild meat from large mammals due to inaccessibility of alternative protein sources can be greatly reduced by accomplishing the aforementioned objectives and recommendations. Hence, the aim of the programme is to reduce the consumption of wild meat from large mammals to less than 10 percent of the total food consumption of households through successful implementation of the outlined programme objectives.

In order to achieve this target, it is essential for the local communities to be made aware of the alternative protein sources available to them. Simultaneously, this awareness campaign needs to focus on decreasing the consumption of illegal wild meat among communities while emphasizing changing their food habits regarding wild meat.

D.3. Revision of the strategy based on the diagnoses of the first three years

The SWM Programme in KaZa made significant progress regarding the opportunity to combine natural and domestic resources in the three CCs, and more importantly in clarifying the collaboration among stakeholders of different commodity chains. There is strong encouragement to promote the establishment of farmers' associations, an aspect not precisely mentioned in the initial theory of change. Support for the different sources of alternative protein (livestock production, fish farming, NTFPs) will have to be enhanced by specific and dedicated strategies.

E. Conclusions and recommendations regarding the establishment of an adaptive management of the CCs

E.1. General objective and initial theory of change

As mentioned in previous chapters, the governance structure of the CC indicates that this community entity is owned and managed by its people through dedicated structures. To create an iterative process of decision-making, the production of data, information and knowledge by and for the people is required. Based on this learning process, adaptive management will enable the long-run management of the CCs and help achieve the final objective set by the SWM Programme, which is to increase diversity and abundance of natural resources and improve human well-being. By the end of 2023 the programme's ambition states five goals to reach:

- 1. 80 percent of the area in the targeted CCs have functional ecosystems to sustain vital populations of key wildlife species;
- 2. The area under forest cover in the CCs is increased by 20%;
- 3. 80 percent of households in the targeted CCs are at least at 150% of the poverty index (30 percent is based on natural resources sustainable agriculture production systems);
- 4. At least 80 percent of targeted households in the CCs have a diversified diet; and
- 5. 90 percent of the targeted households in the CCs have access to clean and safe drinking water.

Requesting the development of a locally based information system will meet some CC principles by monitoring the increase of wildlife populations, the increase of natural resources, and the channelling and integration of goods and services provided by the CC (Box II.1).

E.2. Main conclusions

The two ultimate goals of the SWM Programme – improved human well-being and increased diversity and abundance of NR – will be reached once the threats presented in the theroy of change are minimized, and opportunities provided by integrated and sustainable uses of natural/domestic resources are utilized. That implies that all the aspects previously developed in the present report are not only implemented but also managed by CC members in a holistic and timely manner. A self-adaptive management scheme highlights the need for a robust information system based on the principle: "If you can measure it, you can manage it" (Kaplan and Norton, 1996).

Chapter IX, focusing on human–wildlife interactions, proposes the creation of a locally based information system involving users in the resolution of HWC, from the data collection process to the production of dedicated information services. This HWC platform addresses and articulates at the same time the needs of the managers in charge of conservation issues and the needs of

individuals or community-based organizations (CBOs) who carry the costs of living with wildlife. This sociotechnical tool could easily be adapted to other CC issues that need to be monitored for management purposes. Figure IX.10 gives an example of how natural resource monitors could contribute at the same time to the surveillance and mitigation of HWC, and to the control of disease outbreaks affecting livestock production.

The information services that can assist CCs' members and stakeholders as defined in the previous chapters are as followed:

- CC's institutional framework, advantages and opportunities that arise within CCs;
- flow of information related to legal establishment of CCs, which must be recognized as wildlife land use entities;
- any information services for overcoming threats to CCs;
- collection of data and feedback information for the purpose of CCs' management in the control of poaching, wildfires and water management; and
- various information to help farmers and producers' associations engaged in the production of goods or services from domestic/natural resources, including:
 - employment and market opportunities;
 - engagement of the private sector through public–private–community partnership arrangements;
 - pilot livestock, aquaculture and NTFP production systems as alternative sources of proteins to wild meat; and
 - ways of involving women and youth in production associations or cooperatives.

E.3. Revision of the overall project strategy based on the diagnosis of years 1 to 3

Based on these conclusions, minor modifications have been made to the theory of change (Figure X.5):

- The outcome box "Alternative proteins" was improved through a better distinction between the different sources of proteins, as the activities carried out for each of them no longer correspond to the same principles as in the first phase of the project.
- As the legal country profiles have now been almost finalized, the team added to the strategy "Improved institutional set-up and collaboration" the sentence "in accordance with the LCPs".
- The authors merged the two following strategies "Community engagement in CCs" and the box "Implementing good practices; Develop CC management plan; Enhancing collaboration" as they are all related;
- At least two new strategies were proposed to appear in the revised ToC:
 - "Improving the partnership with the private sector" at the interface between the outcome boxes;
 - "Enhance alternative livelihoods" and "Alternative proteins"; and
 - "Locally based information system for adaptive management purpose" linked with the two ultimate goals.

This amended theory of change has the advantage that the indicators that have been monitored since the beginning of the project remain the same.

