



Evaluating Cross-Border Natural Resource Management Projects

CBFiM: An Integrated Transfrontier Fire Management Strategy for Luiana PR (Angola) and Bwabwata NP (Namibia)

SLE



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1 Fire management in Kavango Zambezi TFCA

Within the frame of the evaluation the pilot project “Community-Based Fire Management” was visited: “An integrated Trans-frontier Fire Management Strategy for Luiana National Park in Angola and Bwabwata National Park in Namibia” in August 2014. The project area lies in the Kavango Zambezi Transfrontier Conservation Area (KAZA TFCA) and comprises Bwabwata National Park in North-East Namibia as well as two adjacent reserves in South-East Angola, namely Luiana National Park and Mucusso Protected Public Reserve (MPPR) in South-East Angola¹ (see Figure 1).

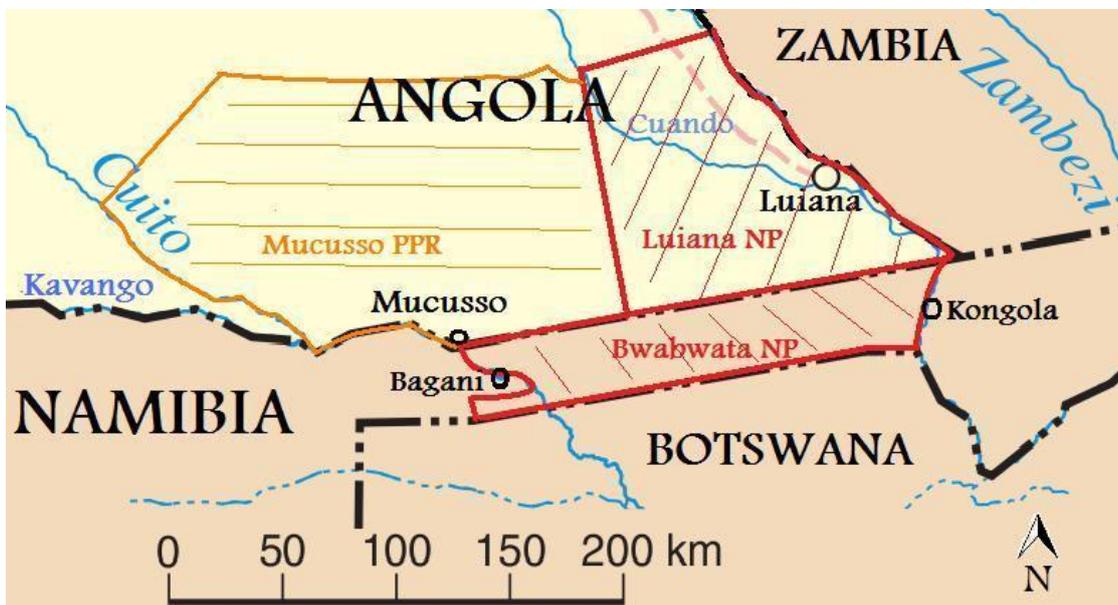


Figure 1: Overview of the project region

For this evaluation, relevant stakeholders of the pilot project and other organisations working in KAZA TFCA were interviewed. This included both Angolan and Namibian KAZA TFCA coordinators, representatives of the Ministry for Hotel and Tourism (MINHOTUR) and the Ministry of Environment (MINAMB) in Angola, the Ministry of Agriculture, Water and Forestry (MAWF) and the Ministry of Environment and Tourism (MET) in Namibia, the German Development Bank (KfW), the World Wide Fund For Nature (WWF) Namibia, the chief warden of Bwabwata, both project implementers, seven communities (three in Angola, four in Namibia), as well as relevant community-based organisations (CBO) in each country.

¹ Throughout this report Bwabwata National Park is referred to as Bwabwata, whereas Luiana National Park and Mucusso Protected Public Reserve are denominated Luiana and Mucusso, respectively.

This evaluation was constrained by administrative obstacles in Angola, so that the evaluation team could not get access to Luiana. In addition, no secondary data on Luiana National Park was accessible. Therefore, no information and evaluation on the project area Luiana can be given in this report. The very same political constraints as well as the poor infrastructure in Luiana made ACADIR extend the pilot project area to Mucusso without prior consultation of GIZ. The collaboration of the Angolan implementing NGO with the SLE evaluation team was hesitant. This entailed cancellations and delays for the site visits to Angola. Also, the park managers of both Bwabwata and Luiana did not attend the agreed appointments with the evaluation team.

1.1 Context and baseline

1.1.1 Kavango Zambezi Transfrontier Conservation Area

KAZA TFCA is the world's largest transboundary protection area, which was established as conservation and development initiative by the governments of Angola, Botswana, Namibia, Zambia and Zimbabwe on 18 August 2011 (MET, 2012, p. 1). Spanning an area of approximately 440,000km², KAZA TFCA includes 36 formally proclaimed forest reserves, game reserves, national parks and wildlife management areas (MET, 2012 p. 2, Government of Angola, 2011, p. 4). Its objective is the ecological, socio-economic and organisational strengthening of these areas in order to establish an interconnected mosaic of protection areas and join fragmented transboundary wildlife corridors (Government of Angola, 2011, p. 3). Additionally, it will promote trans-national collaboration in the implementation of protected ecosystems as well as in cultural and natural resource management through the involvement of communities native to the TFCA (MET, 2012, p. i).

The MET is responsible for the management of the Namibian part of KAZA TFCA. Via its Integrated Development Plan, MET provides strategic objectives and approaches for wildlife conservation and communities inside Namibian Protected Areas (MET, 2012, p. xi). The responsibility for the implementation of KAZA TFCA in Angola lies with the Ministry of Hotel and Tourism whereas the responsibility for all other national parks is with the Ministry of Forestry. All other TFCA in Angola fall under the National Directorate of Biodiversity in the Ministry of Environment. Apart from an Integrated Development Plan no management plans for the individual reserves or for the whole Angolan part of KAZA were available.

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1.1.2 Ecological situation

Bwabwata covers an area of 6,274km² and is bordered by Kavango River to the east, Kwando River to the west, Angola to the north and Botswana to the south. The park features rare bird species and a high number of large mammals, such as buffalo, elephant, kudu, lion, leopard, roan antelope, wildebeest and zebra. Elephant populations have risen over the past decade and increasingly impact structure of vegetation as well as human settlements causing major livelihood conflicts (MET, 2013, p. 7). Luiana and Mucusso span an area of approximately 10,069km² and 20,934km², respectively, and are also located in the Kavango Zambezi river basin (Government of Angola, 2011, p. 7). Mucusso is bordered by the Quito River to the west, the Lumuna River to the north, Luiana to the east and Bwabwata to the south and characterised by low numbers of mammal species and low biodiversity on a sub-continental scale (Government of Angola, 2011, p. 26, 27).

Bwabwata, Mucusso and Luiana are characterised by a semi-arid tropical climate, which is described as variable with highly seasonal annual rainfall of around 645mm between October and April and a dry season between May and September (MET Namibia, p. 6). Maximum temperatures range between 27 and 35°C with the hottest months being October and November (MET Namibia, p. 6, Beatty, 2014, p. 5). Vegetation in Bwabwata and Mucusso is characterized by broadleaved Zambezi Baikiaea woodlands; some of the economically important species comprise *Baikiaea plurijuga* (Zambezi Teak), *Hyparrhenia hirta* (Common Thatching Grass), *Guibourtia coleosperma* (False Mopane tree), *Harpagophyllum procumbens* (Devil's Claw), *Hyphaene ventricosa* (Makalani tree), *Ricinodendron rautanenii* (Mangetti tree), and *Combretum imberbe* (Leadwood) (MET, 2013, p. 6; Government of Angola, 2011, p. 27, 30; interviews with villages in August 2014). Generally, the area is dominated by sandy soils (70%), which has a strong influence on vegetation structure (MET, 2013, p. 7).

1.1.3 Bwabwata National Park

Bwabwata is located in the East Kavango and West-Zambezi² regions in North-East Namibia. Conservation in Kavango and Zambezi started as early as 1963 with the proclamation of Bwabwata as a protected area. In October 2007, the **Bwabwata National Park** was gazetted. Under MET authority, Bwabwata is one of the few National Parks worldwide, which allows local people to live inside its borders

² Formerly known as the Caprivi region, it was renamed by the Namibian government to Zambezi region in August 2013.

(Dieckmann et. al., 2014, p. 366; Dain-Owens et. al., 2010, p. 1). Its concept follows the paradigm shift towards the inclusion of people into conservation measures in a way that MET acknowledges the rights of its residents in terms of livelihood needs, movement, settlement and social services (Dain-Owens et. al., 2010, p. 6).

The park is zoned into three core protection areas, namely Buffalo, Kwando and Mahango, and in a multiple use area to be used for agriculture, human settlement, community-based tourism, and trophy hunting (MET, 2013, p. 5). Life inside the park also entails restrictions: it is not allowed to keep cattle in the central part of the multiple use area. In the core areas, gathering of natural resources is only permitted under exceptional circumstance, while traditional hunting is not allowed at all (Dain-Owens et. al., 2010, p. 6).

Based inside the park, 40-50 MET staff manage fire, natural resources, tourism and wildlife in close cooperation with representatives of the local CBO, Kyaramacan Association (cf. Ch. 1.1.5 Communities).

1.1.4 Luiana National Park / Mucusso Protected Public Reserve

Luiana National Park is situated in the Cuando Cubango Province in the South-east of Angola. Conservation status for Luiana has recently been changed from Luiana Partial Reserve to Luengue Luiana National Park and Mavinga National Park, but official data about this transformation and key facts e.g. size, date of establishment, administration, etc. are not available.

The Mucusso Protected Public Reserve is situated west of Luiana and includes the commune of the same name. Unlike Luiana National Park, Mucusso has a resident administrator, who is in charge of the reserve (Government of Angola, 2011, p. 54). This person was important to enable the evaluation team access to the reserve; its absence in Luiana complicated entry to the National Park.

1.1.5 Communities in Bwabwata National Park

The entire Bwabwata community consists of twelve villages situated along the Trans Zambezi Highway (B8) which traverses the Park from east to west. The park is home to about 6,000 to 6,500 people of various ethnic groups, of which the Khwe³ is the most dominant group, making up 82% (Boden, 2014, p. 3) of the total population in Bwabwata. To a lesser extent (16%) the park is inhabited by Bantu-speaking Mbukushu (Dain-Owens et. al., 2010, p. 3).

³ The ethnic group of Khwe belongs to the larger group of San.

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Representation

All park residents are represented by the community-based organisation (CBO) **Kyaramacan Association (KA)**, which is recognised by MET as their legitimate body since 2006. From each village, one person is elected to be village representative of the KA committee. Through KA, the residents are awarded with rights to benefit from the collection of natural resources as well as tourism and trophy hunting concessions. In Bwabwata, a total revenue of 12.5 million Namibian Dollar (NAD, equivalent to 921,656 Euro) is generated through trophy hunting, from which KA receives 50%. Both this money and the meat (worth approx. 5.7 million NAD; 420,275 EUR) are shared equally among the community. Additionally, the collection and marketing of certified organic Devil's Claw, a high-value root crop, is being organised and supervised by KA in order to assure a sustainable use of the plant.

Textbox: Devil's Claw

Devil's Claw (*Harpagophytum procumbens*) is a tuber native to Southern Africa, which has been used to fight pain, kidney and liver problems as well as fever and malaria in the past. Today, it is used to relieve pain in arthritis, back pain and headache as well as in treating inflammations. It is mostly used in France and



Germany (UMMC, 2014). This leafy perennial plant produces tubers, which are secondary roots that can be harvested without killing the plant, if the main root is left in the ground. The tuber will then be sliced and dried in the sun resting on nets before being collected by the buyer for further proceeding.

Image 2: Dry Devil's Claw tubers before selling in Chetto, Namibia.

100% of the revenue goes to the harvester, who are allowed and encouraged to collect the tuber during its growing season from April to October. This amounted to 716,841 NAD (52,854 EUR) in 2012. KA employs 16 female community resource managers who organise the harvest and transportation of Devil's Claw and, additionally, monitor other veld and forest resources, such as fruit and nut trees. KA also employs 24 Community Game Guards (CGG), who monitor wild life populations and poaching via joint patrols with MET. Also, the MET fire management is conducted jointly with CGG staff, who contribute to the decision-making on the early burning regime and the establishment of fire breaks.

History and recognition

Although Khwe people are believed to be the ancestral inhabitants of Bwabwata area, they are not legally recognised by the Namibian government according to the Traditional Authorities Act (Act 25 of 2000). They are not able to own titles over land or resources due to the traditional absence of a single tribal authority in the past. Although a common traditional authority was elected in 1989 and again in 2006, the Khwe still remain unrecognised officially (Dain-Owens et. al., 2010, p. 3). Conversely, Mbukushu people obtain recognition by the Namibian government through a traditional authority who lives outside Bwabwata. Originally, this ethnic group had migrated into Bwabwata and displaced Khwe people (Lead, 2006, quoted after Dain-Owens et. al., 2010, p. 2). Due to their recognition under the Traditional Authorities Act (Boden, 2014, p. 13) Mbukushu people enjoy more rights to land for agricultural purposes than Khwe.

Livelihood

Khwe communities were traditionally characterised by a hunter-gatherer lifestyle and territorial movement (Dain-Owens et. al., 2010, p. 2). In recent times they have been settled in Bwabwata. Since then they also practice small-scale agriculture cultivating finger millet, maize and other staple fruits and are allowed to keep goats. Khwe still collect veld fruits, i.a. Mangetti nuts and False Mopane seeds for food, as well as thatching grass and Makalani fan palm leaves for local craft production. A lot of people rely on governmental food aid, which contributes largely to food security, but also creates dependencies (Boden, 2014, p. 24). An important role as alternative livelihood source plays the collection of Devil's Claw. Traditionally, Khwe people have used veld fire management practices, such as prescribed burning for hunting and stimulation of grass growth as part of their culture contributing to their livelihood (Brown & Jones, 1994, quoted by Dain-Owens et. al., 2010, p. 2). This traditional knowledge is still present among the elder generation and passed on to the younger.

Mbukushu people are agricultural producers and cattle farmers by tradition. In Bwabwata they mostly crop finger millet and maize and also keep cattle. Mbukushu also rely on the collection of Devil's Claw during dry season. Traditionally, they are less affine to the use of veld fire as a land management tool though today, they use it in agriculture and the collection of Devil's Claw.

The inhabitants of Bwabwata describe their most severe problems being food insecurity and dependence on governmental food aid, human-wildlife conflicts mostly with elephants, a lack of health services, schools and transportation, water scarcity,

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and, to a lesser extent, fire. People in Namibia occasionally visit Angola because of relatives. There is no institutional cooperation on community level.

1.1.6 Communities in Mucusso Protected Partial Reserve

The community in Mucusso is dominated by Mbukushu people (80-90%) with a small portion being Gciriku and Khoisan. Another small portion of Ovimbundo and Chokwe people arrived during the civil war (Government of Angola, 2011, p. 32).

Representation

The people of the villages Katunda, Ngongo and Temwangué around Mucusso have formed the Chamue Association. The villages are represented by 30 members each. The members of the association elect a board of ten members. The objectives of the association include the monitoring of veld and forest fires, illegal hunting as well as the marketing of community resources, especially Devil's Claw. They receive a management fee from the Devil's Claw buyer ECOSO; yet, all staff work on a voluntary basis.

History and recognition

With the 2004 Land Law the rights of communities over land were recognised according to customary law (Roe et al., 2009, p. 162). The communities in Mucusso are formally headed by traditional chiefs, but do not wield power. They have to report to an administrator, whose role is the execution of government programmes in the communes and villages under his/her control (Government of Angola, 2011, p. 47). Before the Angolan civil war came to an end in 2002, the Mucusso community used to live scattered. Today, the law requires the people to aggregate in bigger villages along the main roads in order to receive more government attention.

Livelihood

People used to live from forest resources, livestock and small-scale farming in the past. The changed settlement pattern affects their traditional way of living as they now reside far from the forest and its resources. Dependence on agriculture has increased which caused an expansion of farmland by slash and burn-practices. The main crops are finger millet, maize, peanuts and sorghum. Timber collection and hunting of small animals are illegal, but still happening. The collection and selling of Devil's Claw and thatch grass along with veld fruits such as Mangetti are further sources of income. Just like in Namibia, Khwe people were also settled by the government (Government of Angola, 2011, p. 32).

Traditionally, the land use practices of the local population in Angola did not involve veld fire a lot. With the change in livelihood, however, people today increasingly use fire as wildlife protection, for preparation of agricultural fields (slash and burn), collection of wild honey and for hunting with dogs. This fire use does not follow any rules or management schemes; it is done individually without coordination.

The expansion of agricultural land, together with the growing number of wildlife (elephants and hippopotami) in KAZA led to an increasing number of human-wildlife conflicts. This is aggravated by the fact, that people are not able to defend their property effectively.

The people visited in the three villages stated to be visiting Namibia on a regular basis in order for their children to go to school and because of family ties.

1.1.7 Fire Situation and Management

Veld fires are a strong influencing factor on vegetation structure in both Bwabwata and Mucusso. They contribute to the natural ecological dynamics of the woodland vegetation and occur most commonly during the dry season (May-September). Frequent intense fires are detrimental while an absence of burning can cause bush encroachment (MET, 2013, p. 14). Beatty (2014, p. 6) points out, that late dry season fires negatively impact flora, fauna, soils, energy, carbon and water fluxes and thus, directly and indirectly harm also the livelihoods of the local population. Historically, the KAZA TFCA region has largely been regulated by prevention and suppression policies (Frost, 1998 and FAO, 2006, quoted after Beatty, 2014, p. 9). FAO (2011, p.44) points out that fire suppression policies since colonial administration and their consolidation through the Namibian-Finish Forestry Programme since 1996 caused serious fire problems due to a shift from early and less detrimental dry season fires to much more disastrous fires in the late dry season destroying human livelihoods, natural resources and wildlife.

With the Forest Act of 2001, fire management is regulated by the Directorate of Forestry (MAWF) and now focuses on a decentralised implementation process where communities acquire rights and responsibilities to practice fire management (FAO, 2011, p. 45). Thus, the NGO Integrated Rural Development and Nature Conservation (IRDNC) in collaboration with MET promoted an integrated fire management approach including community-based fire management. In cooperation with the Community Game Guards of the Kyaramacan Association, an early burning fire regime was introduced to Bwabwata in 2006, which includes the establishment of fire-break networks, prescribed burning practices as well as coordinated fire suppression. According to the Directorate of Forestry in Namibia, the occurrence of fires has re-

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duced over the last decade in Namibia, presumably due to increased early burning practices. However, run-away wildfires and, as can be observed in Figure 3, late dry season fires remain a problem in the western part of Bwabwata. The early dry season fires⁴ in East Bwabwata can be related to the fire management scheme, which is set up more effectively in the eastern part than in the west. The most frequent causes are the use of fire in connection with the collection of Devil's Claw, honey and veld fruits (cf. Chapter 1.1.5), as well as poachers, smokers and trespassers in the area. However, the community does not see a cross-border threat in fires.

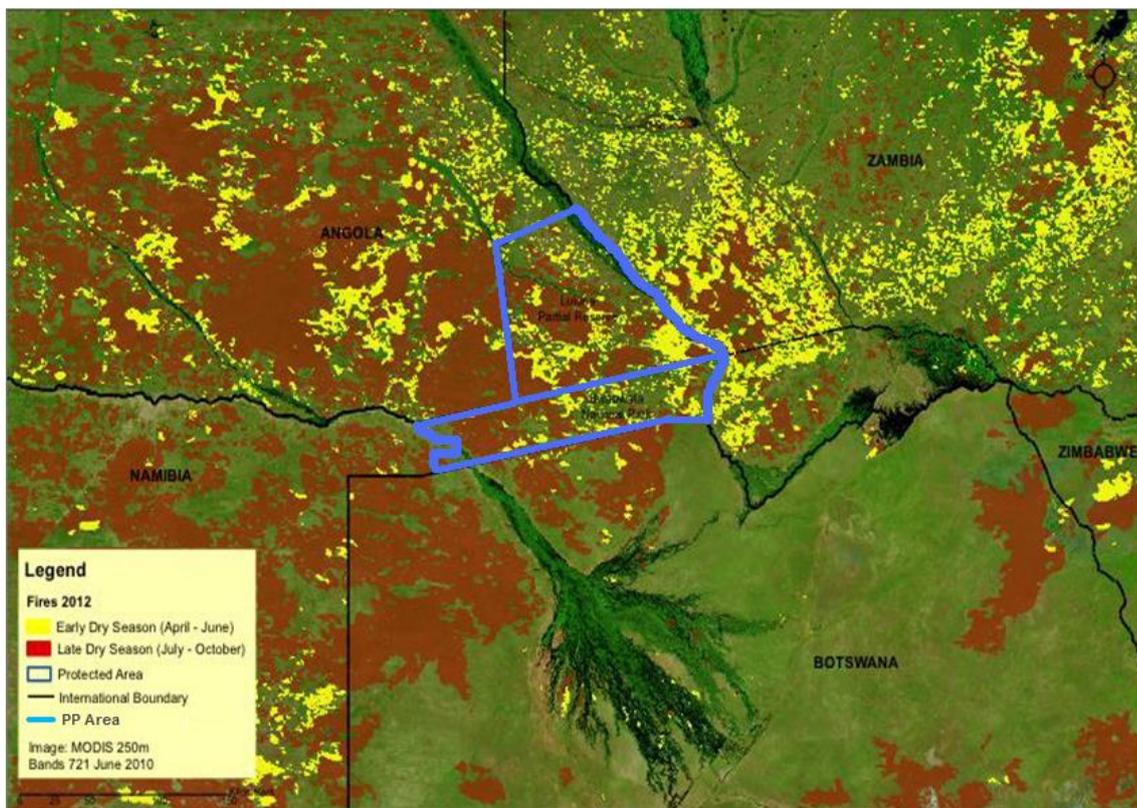


Figure 3: Burnt areas in KAZA TFCA in 2012 (Beatty, 2014, p. 7).

Currently, according to the Angolan project implementer, prevention and suppression policies are pursued by the Ministry of Urban Affairs and Environment in Angola; yet, they are poorly enforced while a regional fire management system is absent. The area is heavily affected by late dry season fires (Beatty, 2014, p. 8) with an increasing frequency of veld fires in recent times due to the change in livelihood, as described in Chapters 1.1.5 and 1.1.6.

⁴ Late dry season fires occur between August and October, they are high in intensity, patchiness is low, and they tend to disperse a lot due to large amounts of dry biomass and windy conditions.

1.2 Description of the pilot project

1.2.1 Implementing partners

The NGO Associação de Conservação do Ambiente e Desenvolvimento Integrado Rural (ACADIR, Association for Integrated Rural Development and Nature Conservation) in Angola and IRDNC in Namibia have jointly applied for the financing by SADC/GIZ in order to conduct the pilot project. With ACADIR and IRDNC as implementing partners, this pilot project is carried out solely by non-governmental organisations. IRDNC's work links biodiversity and wildlife conservation with economic development in a holistic conservancy-based natural resource management approach. The NGO is based in two regions in Namibia, one of them being Bwabwata and the Zambezi region, where it has established a close and long-term relationship with the local population. Karine Nuulimba, co-director of IRDNC since 2010, has taken initiative for this pilot project proposal and appointed Friedrich Alpers, who has been stationed in Bwabwata National Park for seven years, project coordinator for the implementation of the transboundary pilot activities on the ground.

The ACADIR approach is similar to IRDNC: the sustainable development of natural resource management to the benefit of rural communities. António Chipita, executive director of ACADIR, is Karine Nuulimba's counterpart for this pilot project on the Angolan side. On-the-ground implementation of the pilot activities was carried out and supervised by the extension officers Kawika Usona, based in Calai, and Gerald Maira, who lives and works in Mucusso.

Both NGO have many years of experience in the field of environment and development of communities; IRDNC is following a strong community-based approach and worked on community based fire management in Bwabwata before. First contact between ACADIR and IRDNC was established through the South African Regional Environmental Program (SAREP) on transboundary river base management in 2011. They signed a Memorandum of Understanding (MoU) in 2013.

1.2.2 Objectives

The proposal for a fire management project in KAZA was motivated by the fact that IRDNC has been running an integrated fire management programme including CBFiM in Bwabwata since 2006 (cf. Ch. 1.1.7 Fire Situation and Management), whereas similar interventions are still missing in Angola thus putting ecosystem health and livelihoods at risk. In their proposal, ACADIR and IRDNC did not define clear objectives of the pilot project and did not elaborate on how the activities will be able to achieve the stated objectives.

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The activities stated in the proposal included capacity building and exchange visits to Angola and Namibia, as well as the development of a Fire Management Strategy for the two countries. The latter could be delivered as an output at the end of the project. The proposed activities and the intended output were supposed to raise awareness of the target group (local communities, provincial/regional authorities, and traditional leaders) for the necessity of fire management and in order to strengthen their capacities in terms of CBFiM. Those objectives were supposed to positively impact the sustainable management of forests and woodlands and contribute to a reduction of veld fires. Not mentioned in the proposal was the fact, that a reduction of veld fires is likely to positively impact the livelihoods of the local population and the health of the ecosystem.

After approval of the pilot project proposal discussions with MET revealed that the Namibian government already had a National Fire Management Strategy underway. Hence, ACADIR and IRDNC changed the output from being a strategy to a “fire management approach” without prior consultation of GIZ. In addition, the project area was extended to Mucusso without GIZ being informed either.

During a planning meeting in Rundu in April 2014, the objectives of the pilot project were then changed towards building strong partnerships, especially with the Ministry of Tourism officials who oversee KAZA’s Angolan component. This became the core objective of the pilot project and replaced the original objective of “improved governance and sustainable utilisation of forests/woodlands”. Major driving factor for this change was stated to be the highly centralised nature of Angolan governance.

Due to that, the evaluation team needed to compile new objectives; otherwise a proper analysis would not have been possible. Consequently, this evaluation uses the revised objectives as following (on the basis of planning meeting minutes in Rundu from 23 April 2014; quotes are marked in italic):

- i) **Relationship building:** *“Establish contacts and relationships between rural communities, invested NGOs and as a stepping stone for KAZA – connecting resource management with social concerns”.*
- ii) **Fire Management Approach:** *“To establish an integrated cross-border fire management approach with local communities for Bwabwata National Park in Namibia and Luiana Partial Reserve in Angola [with the potential to contribute to the National Fire Management Strategy].*
- iii) **Capacity Building:** *“IFM Training opportunities and exchange visits to share fire management techniques and applications” [were implemented].*

- iv) **Awareness Raising:** Awareness on fire management is promoted on community level.

1.2.3 Activities and Implementation

ACADIR and IRDNC envisaged a total of six different activities for the implementation of this pilot project. Planned activities were taken from the pilot project proposal and were not affected by the changes during the planning meeting in Rundu. Activities are indicated in italic:

1. *"Carry out formal visits to local and provincial/regional authorities responsible for forestry in each country to formally introduce the project and obtain their support for implementation."*

During the planning and contact establishment meeting between ACADIR and IRDNC in Rundu, Namibia, in April 2014, consultation of Namibian government for institutional support and the process of planning the pilot activities took place. Participants: MET environmental officer, ACADIR and IRDNC staff as well as the chairperson of the Namibian-Zambian transboundary resource management forum. Provincial/regional authorities and KAZA TFCA representatives from both countries were absent.

2. *"Facilitate a series of reciprocal site visits for community leaders and traditional authorities in Luiana and Bwabwata to raise awareness about fire management approaches."*

A community-based fire management capacity building and exchange visit took place in Luiana, Angola, in June 2014. Activities included the visits to local villages and fire sites as well as the introduction of Angolan senior officials to the concept of community-based fire management. Participants were Dr. Amélia Cecília Cazalma (KAZA TFCA coordinator, MINHOTUR), Cristina Lisboa (regional political administrator), IRDNC and ACADIR staff, Angolan military, police and conservation staff, and the IRDNC transboundary coordinator.

Another exchange visit on community-based natural resource management took place in Namibia in August 2014. Activities included the creation of links with Luanda-based and regionally based Angolan officials (MINHOTUR and MINAMB). Discussions with Kyaramacan Association and site visits to the community-based camp site, craft center and community-driven lodge were carried out in order to foster mutual understanding of community-based natural resource management. Finally, the delegation visited KAZA secretariat in Kasane, Botswana, in order to exchange with KAZA junior officials on the transboundary work of KAZA secretariat.

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3. *"Develop institutional framework for community collaboration and communication between Luiana and Bwabwata."*

This framework could not be established due to strong centralised government structures in Angola.

4. *"Provide technical assistance to the Luiana-Bwabwata transboundary community forum to improve their advocacy skills, and equip them to address their local authorities and to obtain further buy-in for the project from their respective governments."*

This forum was not founded due to the high degree of control from authorities in Luanda who are not in favour of empowerment of local communities.

5. *"Carry out CBFiM training in Luiana and Bwabwata, and develop Integrated Trans-frontier Fire Management Strategy for Luiana and Bwabwata."* In Rundu (April, 2014), this was changed into the establishment of an *"integrated cross border fire management approach with local communities."*

Two fire management capacity building trainings focusing on early burning practice were carried out. The first workshop was conducted in May 2014 in Bwabwata by the specialist fire management company "321Fire", which also conducted the IRDNC-MET integrated fire management in Bwabwata since 2006. Burning practices were performed and explained in depth on-site. A second training was led by Friedrich Alpers addressing the same group of representatives in Luiana in June 2014. Participants included Mucusso government staff, chief warden of Bwabwata, ACA-DIR and IRDNC staff, KA representatives, Bwabwata village headmen, and Angolan and Namibian community members.

6. *"Engage with the KAZA-TFCA secretariat to share lessons learnt and to identify ways that this activity could be transferred into common practice and further institutionalised in the broader KAZA-TFCA."*

KAZA senior officials of the KAZA secretariat in Kasane showed interest in the topic after having been informed about the pilot project. Another visit of KAZA secretariat was scheduled for end of September 2014, where lessons learnt should be concluded.

1.3 Findings and Analysis

1.3.1 Project Logic

ACADIR and IRDNC formulated four objectives that were supposed to be achieved through six different activities. A thorough risk assessment in terms of obstacles with political hierarchy in Angola and limited access to the project areas was not carried out, which delayed implementation and compromised the outcome of the project.

Objective 1: Relationship building

In order to achieve Objective 1, Activity 1 (*Meetings with local and regional authorities in order to introduce and discuss the project and receive support*) is an important first step to make contact to the decision-makers on both sides of the border. Especially the hierarchical structures in Angola are a potential limiting factor, which is why it is important to inform relevant Angolan authorities early in order to avoid delays in implementation. Activities 3 and 4 (*Development of an institutional framework and provision of technical assistance for the establishment of a transboundary community forum*) are viable in order to create long-term cooperation and relationships between local communities. Activity 6 includes the involvement of KAZA secretariat in the pilot project process, which is useful to contribute to exchange between the two countries on KAZA level.

However, no activities are assigned towards relationship building on Park Management level. Also no higher decision-making, e.g. ministerial level, was intended to be involved. Especially with the rigid decision making structures in Angola, it is questionable whether these efforts are enough to reach the desired objective.

Objective 2: Fire Management Approach

Through the employment of a specialist fire management company, CBFiM capacity buildings (Activity 5) enable a transfer of knowledge and experience to the target group. The experience of IRDNC in fire management since 2006 and the capacity buildings of this pilot project were a logical way of developing an approach that supports the government of Namibia in establishing the National Fire Management Strategy.

Objective 3: Capacity building

The implementation of capacity buildings with support from a specialist CBFiM company is a useful measure to reach Objective 3. However, no specification about

the layout of the capacity buildings is provided in the proposal. It needs to be set up in a way, that a training of trainers can ensure further knowledge-sharing among the community members following the professional capacity training.

Objective 4: Awareness raising

Against the backdrop of very weak institutionalisation and awareness of fire management on ministerial, provincial/regional and local level in Angola, capacity building on CBFiM and exchange visits with community leaders and traditional authorities are very important to raise awareness on those levels. However, if higher political levels do not learn about these capacity buildings and its contents, it will be difficult to raise awareness on a broad scale. Multiplier effects are then not likely to occur because they might be hindered by remaining political obstacles. Lastly, the proposed activity does not allow for large-scale awareness raising on the local level, which is why the intended goals are not likely to be met.

1.3.2 Effectiveness

Relationship building

Relationship building on local level was established to a very limited extend through two CBFiM trainings with Mucusso and Bwabwata community under professional supervision. It is not clear how much interaction was possible for the people participating. The establishment of the transboundary community forum failed due to pressures from senior government officials from Luanda, who restrict community empowerment and decentralised governance.

Relationship building on regional/provincial level was implemented to a very limited extent, as well. Local and regional authorities were hardly involved; thus, the project received limited support and was not well communicated, especially between Angolan authorities. The site visits facilitated new links between ACADIR and local communities in Luiana, the park management of Luiana and the KAZA TFCA coordinator.

No cooperation between the park management of Bwabwata and Luiana was initiated. Apart from ad hoc patrols in search of poachers, which had already been in place before the project, no formal collaboration is in place yet. Luiana Park Management did not take part in the exchange visit to Namibia, whereas Bwabwata Park Management did not join the activities in Angola. Thus, no relationship was established through this pilot project.

Relationship building beyond regional level took place to a limited extend during the two site visits, which involved mostly senior officials. Yet, communication be-

tween Angolans and Namibians was largely inhibited by the language barrier, so that only few conversations took place during the exchange. The fact that the Angolan KAZA TFCA coordinator joined the visits but not her Namibian counterpart was a chance for cooperation that was missed out on.

Fire Management Approach

A specialist CBFiM company was seconded by IRDNC for this pilot project to carry out the capacity building. Due to its experience on fire management in Bwabwata since 2006, it was able to produce a concept note with very useful implementation recommendations. However, the Angolan context does not allow for many of the recommendations. In a next step, this concept note could translate into an integrated cross-border fire management approach for Luiana and Bwabwata.

Capacity building

The capacity of local communities to engage in fire management was strengthened only to a limited extent. Though the two practical CBFiM training of trainers capacity buildings with community representatives were carried out with men and women successfully, no further community trainings took place in Angola. The fire management trainings in Angola are likely to cease after the end of the pilot project because up-scaling on village-level was not fostered and no institutional framework was built up.

Awareness raising

The communities did not benefit from the pilot project activities adequately because the community representatives who took part in the CBFiM fire management training neither disseminated the information nor continued the planned trainings on village-level. It was not clear why this did not take place. No other means of awareness raising were employed on the village level, which is why it can be concluded that apart from some selected community representatives, no awareness raising took place on community-level. With a lack of interest in community empowerment and CBFiM on higher governmental levels in Angola, no awareness for the topic could be raised in Angola. Likewise, the awareness for transboundary cooperation was not lifted either due to a lack of willingness on higher political levels.

1.3.3 Impact

No contribution to reduction of poverty or increased livelihood of the local population can be anticipated due to the short timeframe and the poor implementation of objectives. Contribution to Millennium Development Goal 7 (Biodiversity Conservation) can also not be expected. The project has also not impacted the local popula-

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tion's perception and awareness of veld/forest fire management in Angola, mainly because CBFiM trainings had not been spread to the villages. In Namibia, this awareness had mostly been present already before the pilot project because a functioning fire management is already in place.

On a higher level, knowledge transfer and awareness raising about community-based fire and natural resource management among Angolan KAZA TFCA coordinator and provincial/regional officials was formally carried out through the efforts of IRDNC and KA during the exchange visits. However, it is not foreseeable whether the project activity impacted the perception of the Angolan officials. Thus, it remains unclear if a stronger empowerment of communities in natural resource management in conservation areas can be expected in the future.

One impact from the project is that ACADIR was able to get access to Luiana, which was not possible before project activities were implemented under supervision of the MINHOTUR responsables due to the political past of Luiana during the civil war. Additionally, via the KAZA secretariat, some contact has been established on park management level; however, it remains ad hoc and no regular exchange or joint management is in place.

No changes with respect to the incidences of veld/forest fires can be perceived yet, because the end of the fire season coincides with the finalisation of the pilot project. On TFCA level, the inclusion of fire management in the KAZA strategic action plan is not envisaged so far; hence no impact is visible yet.

1.3.4 Sustainability

Both NGO's perceive the establishment of contact on high political levels in Angola with communities and Bwabwata Park Management as tangible results from this pilot project with the potential to sustain after the end of the project and strengthen transboundary cooperation in the future. According to ACADIR, the Angolan Ministry of Hotel and Tourism is currently trying to get funding for activities on fire management and human-wildlife conflicts in Luiana Park; however, this will be without a transboundary component and it is not sure if Angolan officials are likely to promote any further cross-border cooperation in the future. A concept note for a fire management approach was established and can function as a source of information for future fire management strategies in Namibia, but needs much more specification and edition in order to be suitable for the Angolan context. Thus, it cannot be described as sustainable. Likewise, the capacity building measures therewith are not sustainable either, because the trainings were not up-scaled to the village level. There was no reasonable explanation by the people who received the training why

they did not call for meetings on the village level and conducted the multiplication as agreed upon. Likewise, little awareness was created from this project.

1.3.5 Relevance

Knowing that fire management practices had been successful in recent years in Bwabwata, IRDNC wanted to address the lack of fire management in Angola and use this opportunity to establish first contact with Angola on various levels.

Relevance of Fire Management

With the Namibian government receding from fire prevention and suppression policies since the mid 2000's (cf. Ch.1.1.7), fire management has become increasingly important, which is why MET has put a National Fire Management Strategy underway. According to a MET official fire management is a "[...] very urgent topic [and] fire needs to be managed [...]" (interview, 12/08/2014). IRDNC had the intention to develop a fire management strategy in this pilot project, which collided with the National Fire Management Strategy by the government. Nonetheless, the project objectives remain in line with efforts to promote fire management in the region and are likely to contribute on-the-ground experience. By contrast, the use of fire is prohibited in Angola and fire management is not mainstreamed in Angolan legislation; hence, the needed legal basis was not given. In addition, fire has not been an important topic in the KAZA TFCA so far. The KAZA Strategic Action Plan does not involve fire management practices. It is therefore not relevant to implement a fire management project in KAZA TFCA before higher levels consider this topic important.

Satellite data on the current fire regime in KAZA exposes frequent late dry season fires (cf. Ch. 1.1.7). In addition, both the Bwabwata and Mucusso community named uncontrolled and destructive fires as one of the day-to-day problems in the late dry season. However, transboundary fires are not a major issue. Especially poaching has become a transboundary issue because people poach in Namibia and cross the international border into Angola to hide from Namibian law enforcement (cf. Ch. 1.1.5 and 1.1.6). Generally, fire is only partly relevant for the target group: On the one hand, fire crosscuts into poverty, food security and poaching issues as an adequate fire management can impact the availability of food positively. On the other hand, fire only indirectly addresses hunger and poverty in the area, which is why the communities' interest in fire management is not very strong in both countries in comparison with other more pressing transboundary issues such as poaching or human-wildlife conflicts.

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Relevance of Transboundary Cooperation

Currently, cross-border cooperation between the two countries is scarce. Communities generally have contact across the border, but immigration procedures still hinder exchange. Hence, increased communication and cooperation on local level are relevant along the international border between Bwabwata and Mucusso.

Further cooperation between the parks is essential, because many transboundary issues, such as poaching and human-wildlife conflicts, can be handled more efficiently when both parks consolidate efforts.

On a political level, transboundary exchange between the line ministries for conservation and TFCA management in both countries is not established, which hinders the implementation of KAZA and slows conservation efforts. Hierarchical structure in Angola entails consultation and delays in decision-making on lower political levels and remains a limiting factor for transboundary cooperation. With the end of the civil war in 2002, disputes between government and population have not been settled entirely, especially in the South East of the country. Hence, governmental observation is still strong and community empowerment is done reluctantly. Consequently, exchange with Namibia, especially on the topics CBFiM or CBNRM is hindered by weak institutional framework on community empowerment and also on fire management. It is thus not the appropriate topic to foster transboundary cooperation.

Community involvement / CBNRM

At the end of the colonial administration, Namibia was left with a mosaic of land tenure arrangements (Roe, Nelson & Sandbrook, 2009, p. 162). With the Nature Conservation Amendment Act in 1996, communities were empowered to own and manage communal area conservancies in Namibia as well as community forests (Forest Act No. 12 of 2001). Nonetheless, Khwe people in Namibia receive no government recognition (cf. Ch. 1.1.5), which leaves them without a legal body to enforce rights over land and access to free education (Boden, 2014, p. 31). With the establishment of the Kyaramacan Association, this situation for the Khwe has not changed, so they remain among the poorest ethnic groups in Bwabwata (Dieckmann et. al., 2014, p. 380). Hence, community empowerment and community-based approaches remain very relevant, especially with the potential to transfer these experiences to other countries where community-based approaches are weak. In Angola, however, the government did not put any legal frameworks in place that consider or empower communities in natural resource management at all. Decision-making and empowerment follow a centralised approach with weak traditional structures and low community participation. Mainly as a result of the civil war, Angolan government

is reluctant to strengthen and empower local communities politically or economically. From this starting point community-based projects are not relevant even in a cross-border approach with a supportive counterpart.

1.3.6 Efficiency

The financial resources for the pilot project were not used very efficiently. The capacity buildings only targeted few people on the village level. Those trained people did not end up disseminating the acquired skills; thus, no multiplier effect could be achieved. Instead, a large share of the resources was invested in high-level exchange visits that did not end up delivering tangible results considering the amount of invested time and money.

Both implementers remarked that it was difficult to allocate human resources because the overhead costs were not covered by the contract. For bigger activities, cash advances were not possible so that both NGO's had to rely on their own resources, which caused delays in implementation. The mandatory documentation of expenses was time-consuming, especially because it was on top of IRDNC's own accounting system. Another factor that used up resources was the formalities with the financial agreement. Hence, there was a tendency of the administrative input outweighing tangible outputs.

It should be kept in mind that there was no direct communication between ACADIR and GIZ, and that administration and organisation of the pilot project was entirely carried out by IRDNC. Therefore, it was IRDNC's additional responsibility to establish information flow between the two parties. Communication between IRDNC and GIZ was generally good. Yet, IRDNC remarked that GIZ was too far from implementation on the ground and could not supervise the process properly.

1.3.7 Cooperation

Cooperation between implementing partners

ACADIR and IRDNC had already signed an MoU in 2013. This pilot project was the first collaboration with the Namibian NGO in the lead. ACADIR was only to a lesser extent involved in the proposal planning. In general, the transboundary cooperation was rated as 'very difficult' by IRDNC. Bureaucratic barriers between the two countries were quite high so that it became a very long and cost-intensive procedure to, e.g. do money transfers or receive invoices. Hence, IRDNC remained in the lead for the organisation of all activities.

With ACADIR officials based far from the project regions Mucusso and especially Luiana, the arrangement of meetings became a very time-consuming task because

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field officers had no vehicles and needed to be fetched. Additionally, infrastructure in the area is poor and therefore travelling is time-intensive. Another major limiting factor for a proper involvement of ACADIR was the counterpart implementer, who was very ambitious but with very limited time so that some meetings were cancelled on short notice.

Cooperation with other stakeholders

A major drawback in the implementation of the pilot project was the requirements of ACADIR to report to and involve the Ministry of Hotel and Tourism for most decision-making. This was time-consuming and caused delays in implementation. On the Namibian side, the MET TFCA coordinator was consulted once before the submission of the proposal by IRDNC. However, this was not endorsed and MET was not consulted again before approval of the project. Thus, there was a gap of information flow between the collaborating partners IRDNC and MET. When MET learned about the objectives of the pilot project to develop a fire management strategy, IRDNC was required to change the focus towards capacity building since MET had already been working on its own fire management strategy for Namibia.

Cooperation with KAZA TFCA secretariat was limited, because, up until August 2014, only information sharing had been practised and no further steps towards the implementation of CBFiM into KAZA TFCA management were taken.

Since its establishment KAZA TFCA has attracted a lot of donors such as KfW (German Development Bank), UNDP, World Bank and WWF. A variety of topics are being funded with KfW currently supporting community empowerment and land use rights, human-wildlife conflict compensation, infrastructure and housing, and advise on integrated park management. WWF works on tourism, wildlife conservation and anti-poaching. Due to the diversity of donors in KAZA TFCA harmonisation of activities is essential in order to foster synergies and avoid parallel structures. Yet, KfW and WWF were not informed by GIZ about this pilot project although they work in the same area on similar topics.

Community participation

For this pilot project, the initial planning and writing of the proposal was done without consultation of communities or community members. Whereas KA was not involved in the developing of the project, they participated in all activities later on. Hence, community participation in Namibia is classified as "participation by consultation".

On the Angolan side, political participation of the communities of Mucusso in the pilot project was very low. No consultation process with community representatives took place. Yet, they participated in the capacity building on CBFiM to serve as multipliers for the larger communities. However, no subsequent dissemination of the acquired information to the community members took place either. Thus, as of August 2014, Angolan community members in the project region do not know about the project activities. As a consequence, participation was very limited.

Communities residing in Luiana did not join the CBFiM trainings and their participation in the project could not be evaluated because site visits were not possible. Major reasons for their absence is presumed to be the surveillance of Luiana by the Angolan government because it was the stronghold of the rebels during the civil war. This makes it difficult for an NGO like ACADIR to work in the region effectively. Secondly, infrastructure in Luiana remains poor, which is why frequent site visits were not possible for ACADIR.

1.4 Conclusions and Recommendations

1.4.1 Recommendations for Implementing Partners

Due to the diversity of socio-economic problems in the communities, the management of veld/bush fires is only partly relevant in both Bwabwata and Luiana. Since it is not a cross-border topic it does not create enough energy to set up sustainable cooperation, structures and impacts. The value proposition of the project was chosen wrongly. It needs to be introduced holistically and should simultaneously address other major problems of the community, such a transboundary law enforcement, human-wildlife conflicts or income generation which may be more urgent and thus more successful in creating sustainable relationships across the border. Thus, a needs assessment of the community is an important task that should be carried out so that communal problems can be identified beforehand. It will help to choose the appropriate topic for a community-based project according to the priority of the local population.

Prior to this pilot project an assessment of the fire situation and current fire management practices in Bwabwata and Luiana was carried out by IRDNC. In a second step, the local population in Angola needs to be consulted on their perception of veld fires and which kind of traditional fire management they used to practice in the past. From this information CBFiM can be tailored to the needs of the population. Additionally, higher political levels need to be consulted in order to kick off an institutionalisation process for fire management in Angola. The concept note and its recom-

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recommendations for a fire management approach, which was delivered as a product of the pilot project, also still needs to be adapted to the Angolan context.

The major driver behind this pilot project was the establishment of contacts and links between Angola and Namibia on multiple levels. This mostly failed for a variety of reasons. Thus, a feasibility study should have been carried out in Angola, which examines decision-making procedures, government structures and political settings in parts of the country, especially Luiana. This could have identified obstacles, such as the hierarchical structures that made it almost impossible for ACADIR, being an NGO, to make any decisions on implementation of activities and site visits without prior consultation of the relevant ministry. The political access to Luiana for both nationals and internationals was another limiting factor that should have been assessed before the project. Another shortcoming was that ACADIR did not disclose important information, such as the existence of a CBO around Mucusso.

For this pilot project, especially stakeholders in Angola, such as TFCA coordinator, MINAMB and MINHOTUR were not involved in the planning and strategy of this fire management project. Although the TFCA coordinator in Namibia was consulted briefly beforehand, no follow-up on his feedback was given to him. Another necessity is a stakeholder assessment, so that all potential stakeholders can be informed about the project and consulted. This would guarantee early involvement of important stakeholders.

In order to enable up-scaling of the fire management training, the park management needs to be involved in the activities on the ground and, especially for a transboundary approach. However, in both countries involvement of the park management was entirely lacking. On top of that, KAZA TFCA secretariat representatives did not take part in the exchange visits. Hence, they did not create and strengthen links with their counterparts in the participating countries.

IRDNC had been in the lead for this pilot project, which made it difficult for ACADIR to gain experience in transboundary cooperation with foreign donors and possibly gear towards more donor funding in the future. Tasks and responsibilities have to be handed over to ACADIR

A monitoring of actions is also necessary, so that both implementers have an awareness of which activities have already been carried out. This step lacked on the Angolan side, which is why ACADIR had no awareness that the information and knowledge acquired in the CBFiM trainings had not yet been spread out to the communities at the end of the project. It is not quite clear what intentions ACADIR pursued with this pilot project

1.4.2 Recommendations for GIZ

During the evaluation of this project, it turned out that the local population does not see fire as a cross-border threat. The relevance of fire as a cross-border issue needs to be assessed before a project on transboundary management of fire can be established. Hence, the pilot projects should not focus on a specific topic such as fire management, but should only preset the principles of CBNRM and transboundary cooperation and let the implementing organisations and communities work around a suitable topic in order for the project to be more target-oriented.

For the KAZA TFCA pilot project a multi-level approach is necessary in order to align the objectives and activities much more with national policies and involve national ministries. Activities on community-level are important, but they don't reach their objectives stand-alone. A strong partnership with the ministry could be implemented via a technical advisor, so that successful approaches are immediately up-scaled and incorporated into national legislation. This advisor can be seconded by the NGO and needs a Namibian and Angolan counterpart under study, who will carry on this work after the end of the project. Particularly in Angola, CBNRM is weak; hence, legal preconditions need to be established hand-in-hand with the first experiences on the ground.

In KAZA TFCA, a lot of donors interact on a variety of topics. In order to work target-oriented and to benefit from synergies, relevant stakeholders need to be informed and consulted about new activities in order to harmonise them. A suitable first contact point is the project implementer IRDNC, which engages in CBFIM, CBNRM and transboundary cooperation and is based inside KAZA TFCA. Apart from donors, GIZ also has to make sure that other important stakeholders are addressed with the project; in this case the Park Management of Bwabwata and Luiana needed to be involved from the start.

Generally, more time needs to be allocated to a prior assessment of the project area in order to investigate, share and discuss the situation on the ground between both implementers, especially when multiple sites are part of the project.

Although pilot projects envisage the implementation of new ideas, administrative obstacles in the respective country must not be neglected before the start of project, so that immigration and visa requirements do not make it impossible to enter a project region for example. Likewise, both implementers should be addressed equally and should share responsibilities of the project. Both parties could, for example, receive part of the grant and account for some of their expenses individually, such as mileage or arranging meetings.

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Communication between GIZ Botswana and both implementers needs to be in good working order, so that it does not cause delays in implementation. The contractor should generally be much closer to the project. In this case, delegating the tasks to GIZ Namibia might be an option.