

Sustainable financing for biodiversity conservation – a review of experiences in German development cooperation

Berghöfer, Augustin; Emerton, Lucy; Moreno Diaz, Alonso; Rode, Julian;
Schröter-Schlaack, Christoph; Wittmer, Heidi; Zyl, Hugo van

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Sustainable financing for biodiversity conservation – a review of experiences in German development cooperation

*Augustin Berghöfer, Lucy Emerton, Alonso Moreno Diaz, Julian Rode,
Christoph Schröter-Schlaack, Heidi Wittmer, Hugo van Zyl*

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Disclaimer:

This discussion paper is intended as input for the on-going discussions on resource mobilisation for biodiversity. The authors' analysis, views and recommendations expressed in this report do not necessarily reflect those of BMZ/GIZ/KfW or any of the involved institutions and organisations.

Contact: augustin.berghoefer@ufz.de

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Dahlmannstrasse 4

53113 Bonn, Germany

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Augustin Berghöfer, Lucy Emerton, Alonso Moreno Diaz, Julian Rode, Christoph Schröter-Schlaack,
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Executive summary

The financial resources needed for globally implementing the Aichi Biodiversity Targets have been estimated at US\$ 150–440 billion per year (CBD COP11, 2012) – of which only a fraction is currently available. Significant efforts have been undertaken in many countries to increase funding for biodiversity conservation. Nonetheless, this funding shortage remains immense, acute and chronic.

However, we do not lose biodiversity and ecosystems primarily for lack of conservation funding but also due to poor governance, wrong policies, perverse incentives and other factors. This begs the question: How should limited conservation resources be used? For directly tackling biodiversity threats, for addressing the underlying drivers, or rather for strengthening the financial management and fundraising capacity of implementing organisations? As country contexts differ, so do the answers.

This report synthesizes experiences of German development cooperation working towards improved biodiversity finance in eight countries: Viet Nam, Namibia, Tanzania, Cameroon, Madagascar, Mauritania, Ecuador and Peru.

Our findings suggest a shift in perspective in the international biodiversity financing debate: We need to move from a focus on innovative financing mechanisms towards thinking ‘innovation’ more broadly.

Financial resource mobilisation needs to go hand in hand with efforts to slow the drivers of conservation costs and to improve effective spending capacity. For this, the constraints to financial sustainability of biodiversity conservation need to be better understood at country level.

Innovative financing mechanisms can be part of the solution and deliver multiple benefits only if their design is carefully fitted to context. Beyond that, landscape approaches to conservation make clear that investing in healthy ecosystems is critical for livelihoods and development.

Findings and recommendations:

On pursuing financial sustainability for biodiversity conservation:

- There is a chronic financial shortage for biodiversity conservation and the financing gap is likely to widen. Support for biodiversity conservation via German development cooperation should be increased. German contributions should be used to negotiate increases in domestic allocations for biodiversity conservation.
- Financial and technical cooperation are both needed to enhance the financial sustainability of conservation efforts. While funding shortages are critical, more money does not *per se* translate into better conservation. Approach financial sustainability systematically by examining the various constraints and then take a needs-based approach.
- In many case study countries, fundraising capacity is low. Offer partners training, learning exchange and technical assistance for fundraising. Support partners to engage with different public and private sectors, and with the Conservation Finance Alliance. Consider a fundraising support unit for partners.

On biodiversity conservation spending:

- A disconnect between conservation planning, budgeting & implementation limits more efficient use of conservation funds. Contribute to spending efficiency by further supporting the development of conservation management and business plans. Advise governments to allow for more flexible use of government allocations.
- Enhancing conservation management effectiveness is a pre-requisite for efficient spending and hence for financial sustainability. Focus on absorptive capacity at national and at site levels, by means of capacity building, consolidation of management structures, and incentives for staff performance.
- Past efforts on consolidating conservation structures can become obsolete, if sudden changes in the wider policy or economic context disrupt core funding flows. Consider a rapid response facility for sudden funding shortages so as to secure past consolidation efforts.

On moving towards a landscape approach in biodiversity finance:

- Landscape approaches to integrated conservation are well-suited to address drivers of biodiversity loss – yet they require enhanced collaboration. Connect conservation support with programmes in other policy areas. Promote private and community conservation areas to complement public PAs. Promote corridor development via integrated landscape planning.
- Close coordination between (and among) donors and partners is a pre-requisite for a landscape approach to conservation – and indispensable for efficient conservation spending. Invest more in effective donor coordination, using diversified formats with different scopes regarding participant group, thematic foci, policy level etc.

On establishing new financing mechanisms:

- Establishing new financial mechanisms in many instances will require new institutions, skills and new partnerships. Before looking at a new financing mechanism, focus analysis on options for improving existing instruments. Improve analytic capacity for examining constraints to financial sustainability when planning for a new financial mechanism, and strengthen inclusion of financial sustainability aspects in project/proposal evaluations.
- Conservation trust funds (CTFs) are a principal financing mechanism with multiple benefits for financial sustainability. Further innovative financial mechanisms for biodiversity conservation have variable potential for up-take within German development cooperation. The Project Finance for Permanence (PFP) approach and offsetting mechanisms have significant potential.

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1. Introduction

1.1. Starting point: Why look into biodiversity finance?

The current strategic plan of the Convention on Biological Diversity (CBD) is based on the vision that 'by 2050, biodiversity is valued, conserved, restored and wisely used, maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all people.' To achieve this vision, the Aichi Biodiversity Targets have been adopted. The financial resources needed for globally implementing these targets have been estimated at US\$ 150 - 440 billion per year (CBD COP11, 2012).

Significant efforts have been undertaken in many countries to increase funding for biodiversity conservation. **Enhancing the biodiversity conservation efforts in/around PAs is also an important objective in German development cooperation.** Nonetheless, at global scale, only a fraction of the required amount is currently available, and this funding shortage remains immense, acute and chronic, especially in developing countries and in countries with economies in transition.

Thus, in [Decision XII/3](#), the Conference of the Parties to the CBD (2014) reconfirms previous commitments to substantially increase biodiversity conservation spending. More concretely, the decision calls upon parties to

- double total biodiversity-related international financial resource flows to developing countries,
- increase domestic financial provisions and mobilise additional financial resources from all sources;
- report domestic biodiversity expenditures, as well as funding needs, gaps and priorities, and to prepare national financial plans for biodiversity.

To facilitate progress towards such international commitments, comparable numbers are indispensable. Countries therefore agreed on common financial reporting to the CBD so as to build a more solid baseline for resource mobilisation and future policy direction.

Beyond the challenge of coherent reporting, the situation may be more complex than numbers suggest. Arguably, we do not lose biodiversity and ecosystems primarily for lack of adequate conservation funding, but also due to poor governance, wrong policies, perverse incentives and other factors. So, efforts to fill the funding gap are critical – yet, by themselves may be insufficient as a response. We must also ask: How should the limited available resources be used? As country contexts differ, so do the likely answers.

Within its resource mobilisation strategy and related decisions, the CBD (2008) calls for both, enhancing public and private sector investments in biodiversity and associated ecosystem services, on the one hand, and capacity building for resource utilization and cooperation and coordination among funding parties on the other. More concretely, financial strategies need to build on National Biodiversity Strategies and Action Plans.

In 2015, the [Addis Ababa Action Agenda](#) emphasised the need to fully take into account the regulatory and other policy requirements for realising sustainable development in an integrated manner (United Nations, 2015). For financing biodiversity conservation this reconfirms that the debate needs to extend beyond PA financing and its associated buffer zones. One extension refers to connectivity of different areas, e.g. via ecological corridors, and how to ensure biodiversity is conserved in a

landscape approach. The second extension concerns the incentives influencing the drivers of biodiversity loss (and associated conservation costs) including e.g. subsidies or land-use planning.

Therefore, strategies to mobilise domestic and international resources for biodiversity conservation require developing a mix of regulatory, economic and financial instruments. These can include for example tax schemes, licenses, conservation trust funds, payments for ecosystem services, environmental fiscal reform, ways to leverage private-sector finance for the conservation and sustainable use of biodiversity, and access and benefit-sharing (ABS) mechanisms. (For instrument overviews: GCP 2012 and OECD 2013).

The CBD financial reporting framework

The [CBD’s Financial Reporting Framework Analyzer](#) (accessed December 1, 2016) indicates that 62 governments have reported on ‘annual financial support provided to domestic biodiversity-related activities’ (4.1). So far, only 29 governments reported on funding needs, available resources and resulting funding gaps (5.). 43 governments provided observations/comments to this section, many of them pointing to the difficulties encountered in providing aggregate quantitative estimates.

Thus, it appears surprising that for example Uruguay reports to spend more than 8,8 billion USD for domestic biodiversity-related activities in 2014 (4.1) – more than 4 times the amount reported by Japan or by Germany for their domestic biodiversity-related activities.

The ambivalence in determining *funding needs* for biodiversity conservation becomes clear when comparing for example Burkina Faso and the Democratic Republic of Congo. Reported data suggest that the former requires 15 times the amount of funding per km² of PA area compared to the latter ([CBD](#) and [WCMC-WDPA](#)). We cannot find any detailed reasoning about the calculations underlying reported data.

While the CBD financial reporting framework is an important step towards more transparent planning and negotiation, this indicates that the framework cannot as yet deliver data that allows for meaningful comparison or aggregation across countries.

Country	Total land area of country	Total land area of PAs	Total funding need reported for 2016	Resulting estimate of funding need per km ² PA	Resulting estimate of funding need per km ² country
Burkina Faso	276.000 km ²	42.000 km ²	239 mio. USD	5.690 USD	866 USD
Democratic Republic of Congo	2.344.000 km ²	298.000 km ²	111 mio. USD	373 USD	47 USD

1.2. Objectives of the study: Explore the practice side

While the overall direction has been laid out in the above mentioned policy documents, progress will strongly benefit from a better understanding...

- a) ... of approaches to strategically combine different policy instruments and financing mechanisms towards more comprehensive resource mobilisation for biodiversity conservation;
- b) ... of how ODA can, in practice, catalyse additional domestic and international resource mobilisation from public and private sources;
- c) ... of the preconditions and success factors for implementing biodiversity financing mechanisms and strategies 'on the ground';

The study aims to contribute to the biodiversity financing debate by exploring the practice side of efforts to improve the financial situation for biodiversity conservation both for protected areas (PAs) as well as in surrounding landscapes. For this purpose, case analyses were conducted in eight partner countries in Africa (Mauritania, Cameroon, Tanzania, Namibia, and Madagascar), Latin America (Ecuador, Peru) and Asia (Viet Nam), where German development cooperation has been engaged in supporting sustainable conservation financing.

Taking as a starting point a concrete setting – a PA or a region – and not a financial mechanism implies a shift in perspective: The emphasis is on the working contexts, enabling conditions, intervention planning and management processes that conservation planners and managers (as well as the development cooperation projects that support them) actually face as they attempt to enhance the sustainability of biodiversity financing.

Study Questions

During initial scoping with experts in case study countries, the following study questions have been identified and prioritised:

1. What is the current mix of funding flows and financing mechanisms?
2. What are the principal challenges to sustainable biodiversity financing?
3. What can be learned from the 'interplay' between different financing mechanisms?
4. What are the experiences with private sector involvement?
5. What are the overall impacts of different forms of biodiversity finance on the ground?
6. What is the potential of innovative financing approaches for German development cooperation?

The questions build upon each other: Understanding the current mix of funding flows and financial mechanisms, and the principal challenges of biodiversity financing in different contexts, sets the scene for examining the interplay (or interactions) between mechanisms and their impacts.

This synthesis report is based on the evaluation of findings from the case studies. Further insights have been included from German support to conservation financing in Côte d'Ivoire, and from the GIZ internal sector network (GADeR-ALC) on using economic instruments for conservation in Latin America.

Findings presented here are explicitly qualitative. They show a panorama of issues and do not aim to be representative of projects in German development cooperation. Nonetheless, conclusions and recommendations have been developed on the basis of case findings via an iterative dialogue with experts from GIZ/KfW/BMZ who are involved in a broader range of country contexts.

Who should read this report?

This study seeks to provide insights for:

- **development cooperation experts** planning future technical and financial cooperation programmes;
- **practitioners** implementing projects and programs on biodiversity conservation and financing in partner countries;
- **political decision-makers** shaping portfolios in development cooperation, in view of the CBD's Strategic Plan for Biodiversity 2011-2020;
- **policy advisors** supporting the national implementation of CBD commitments.

1.3. German development cooperation contributes to biodiversity in diverse ways

German development cooperation is coordinated by the Federal Ministry for Economic Development and Cooperation (BMZ) who also provides the budgetary funds for it. German development cooperation has –broadly speaking- two main pillars: financial cooperation implemented by KfW and technical cooperation implemented by GIZ. .

Assistance ranges from support for individual PAs to the strengthening of national conservation structures and systems. Increasingly, support includes projects that address biodiversity in the broader landscape approach to conservation (Sayer et al 2013). (See annex for overview of projects in case study countries).

A priority area of German cooperation is the financial consolidation of PAs. German cooperation focuses on securing funds for the management of PAs, for example through conservation trust funds, low-interest loans and debt-for-nature swaps. As of 2016, Germany has provided almost EUR 263 million to capitalise 14 trust funds in Latin America, Africa and the Caucasus. Significant efforts have also been invested in establishing well-functioning management structures for these trust funds. At the same time economic instruments are being promoted that incentivise conservation in and around protected areas. For example, the concept of 'ecosystem service opportunities' has been developed and applied in Thailand and in Mexico, which aims at identifying and realising co-benefits between conservation and the sustainable use of biodiversity (Rode et al 2015 and 2016).

Another priority area is enhancing conservation management capacity for the effective use of funds. Germany has for many years supported its partners not only in establishing new protected areas, but also in strengthening existing ones. At national level, Germany advises governments on developing their PA systems and associated legal and institutional frameworks. Sustainable financing strategies and instruments are an important component of this. At the level of individual PAs, support may involve investment in infrastructure and equipment or advice to administrative bodies on various aspects of management. Furthermore, training of technical staff and rangers, programmes for environmental education and outreach, support for sustainable livelihoods, and measures to improve PA management capacities are being implemented.

A further key concern of German support is promoting the participation of local communities, both through involvement in decision-making and co-management for conservation, and through benefit-sharing. This directly addresses the local opportunity costs of conservation which affect communities adjacent to PAs. Sustainable economic development in regions surrounding a PA has frequently been an entry point for German support. Where there is potential, Germany supports the development of income generating activities such as (eco)tourism, the harvesting and processing of non-timber forest products and the promotion of sustainable farming or fisheries. This also involves improving market access and establishing value chains for sustainably obtained or cultivated natural products.

In recent years, Germany has increased its support to anti-poaching efforts with targeted interventions along the illegal trade chain of wildlife products. The poaching crisis faced by many sub-Saharan countries in Africa drives biodiversity loss and increases conservation costs. Current poaching has reached a new dimension with transnational and –regional implications for the conservation of these endangered species and for the economic basis and security of the affected countries. High profit margins and weak governance provide a breeding ground for corruption along the entire illegal trade chain. Poaching also affects protected areas which have been supported by German development cooperation for many years. The response includes improving the enforcement of national wildlife protection legislation and strengthening local engagement and capacities against wildlife crime. Furthermore, Germany supports customs cooperation between Asian and African countries, as well as awareness campaigns for reducing demand in Asian countries.

Examples of German involvement in strengthening biodiversity finance in partner countries:

- In **Madagascar, Mauritania, Cameroon**, and other countries, Germany supports conservation trust funds with a range of adapted governance structures, funding portfolios, and disbursement procedures. Trust funds stabilise funding flows for protected areas and multi-party governing structures lay down the strategic directions for future conservation investments.
- In **Namibia**, Germany supports the NBSAP process and the application of the assessment methodology of BIOFIN – the [Biodiversity Finance Initiative](#). Also, strategic environmental planning efforts lay the ground for integrated conservation in a landscape approach. Furthermore, a new trust fund is being supported explicitly geared to building management and negotiation capacities for community conserved areas.
- In **Viet Nam**, Germany supports forest protection contracts and PES schemes that have been found to provide critical income to forest holders and communities in regions surrounding protected areas, thereby compensating for park-related local opportunity costs. These additional income streams to the inhabitants of surrounding landscapes critically complement government allocations to PAs core activities.
- In **Côte d'Ivoire**, Germany invests in the effective spending capacity and consolidation of several national parks, and supports sustainable livelihoods in their surrounding landscapes. Equipped with up-to-date management plans and an analysis of ecosystem service benefits from parks to the agricultural sector, national authorities now approach international companies for co-financing conservation.
- In **Tanzania**, Germany supports the establishment of Community Conservation Banks and of conservation-friendly micro-businesses. Also, assistance has been provided to regional authorities in managing the conservation related benefit sharing mechanisms.

- In **Mexico**, Germany supports the development of the ecological corridor Sierra Madre Oriental as a model for integrated landscape approaches.

Literature on financing biodiversity conservation

The literature on financing mechanisms and strategies for biodiversity conservation is vast and cannot be adequately summarised within the scope of this report.

It comprises broad instrument overviews (e.g. OECD, 2013), estimates of the conservation “funding gap” (CBD 2012, Bruner et al. 2004, McCarthy et al. 2012, Waldron et al. 2013, UNDP 2014) or evaluations of single mechanisms, such as PES (Wunder et al. 2008), debt-for-nature swaps (Sheikh 2010; WWF, 2003), conservation trust funds (Bladon et al. 2014; Spergel and Taïeb, 2008; Spergel and Mikitin, 2013) or “new instruments” (Cranford et al. 2011; Huwyler, 2014; WWF and Credit Suisse, 2014).

An important underlying assumption in this debate, also emphasized by the CBD resource mobilization strategy (CBD, 2008), is that biodiversity conservation and specifically PAs or PA systems require a certain level of funding in order to achieve an effective implementation of conservation objectives. Emerton et al. (2006) introduced the idea of ‘**financial sustainability of conservation**’, and thereby broadened the debate by looking also explicitly at different constraints to conservation effectiveness related to the scope, mix, administration and targeting of different financing sources and mechanisms.

There is still limited analysis of the interplay of different funding flows as well as financing mechanisms and of the broader impact of that mix on PAs, their buffer zones as well as at landscape level. In particular there are few analyses of real-world experiences and lessons from the field. Also, the state of knowledge on suitable combinations of (types of) policy instruments for biodiversity conservation is fragmented (for a review see: Ring & Schröter-Schlaack, 2012; Ring & Barton, 2015).

1.4. Methodology

For scoping the study, analysis of current literature and exploratory interviews with GIZ/KfW experts informed a framework to conceptualise the study questions.

A list of 70 projects focusing on support for protected areas in bilateral technical cooperation taken from the GIZ database containing information on ongoing or recently finalised projects formed the basis for the selection of case study countries, based on planning documents and in a few cases project evaluation reports as well as some expert interviews. Information from financial cooperation activities in terms of contributions to CTF provided by KfW and information on financial cooperation projects for the case study countries based on information contained in the draft version of “Committed to Biodiversity – 2016” was added.

Eight case study countries were selected from the financial / technical cooperation portfolio according to the following criteria:

- both technical and financial cooperation in the country
- length and current situation of German involvement in the country
- bio-geographic diversity across cases
- thematic and instrument-related diversity across cases.

An overview of recent German development cooperation projects in the case countries can be found in the Annex of this report.

The study team assessed pertinent project and country documents and conducted semi-structured interviews with staff from GIZ, KfW and implementing partners, PA authorities or other persons recommended by project managers in each country. Case studies were reviewed by interview partners and the study's steering group. All case studies document references and interview partners (see appendices).

Example of interview questions for case analysis

Understanding the current mix of financing mechanisms

1. Which major changes in conservation funding have occurred in the last ~5 years (amounts, mechanisms, actors, topics)?
2. Which 'new' financing mechanisms/instruments have been established, or piloted over the past 5 years? What were the results?
3. What are the main challenges regarding conservation financing?
4. How do you view the absorptive capacity in the country? What are obstacles to more effective/efficient spending?

The interplay of financing mechanisms

1. What are the operational requirements of different financing mechanisms in practice?
2. Does the combination of different mechanisms reduce operating costs?
3. Do new mechanisms imply disincentives for existing funders?
4. What efforts are made to engage the private sector?

Impacts of financing mechanisms on the overall situation in/around PAs

1. Do costs of establishing/operating financing mechanisms exceed expectations, and, if yes, why?
2. Do new funding streams promote shifts in conservation priorities?
3. Do the (combined) mechanisms strengthen or weaken management capacity – and in which ways?

Case study results were jointly analysed by the study group at a workshop in August 2016. Findings were discussed in light of literature and practitioner experience in order to identify cross-case insights and develop draft recommendations.

Conclusions and recommendations were discussed in depth with experts from GIZ/KfW/BMZ involved in a broad range of projects and countries.

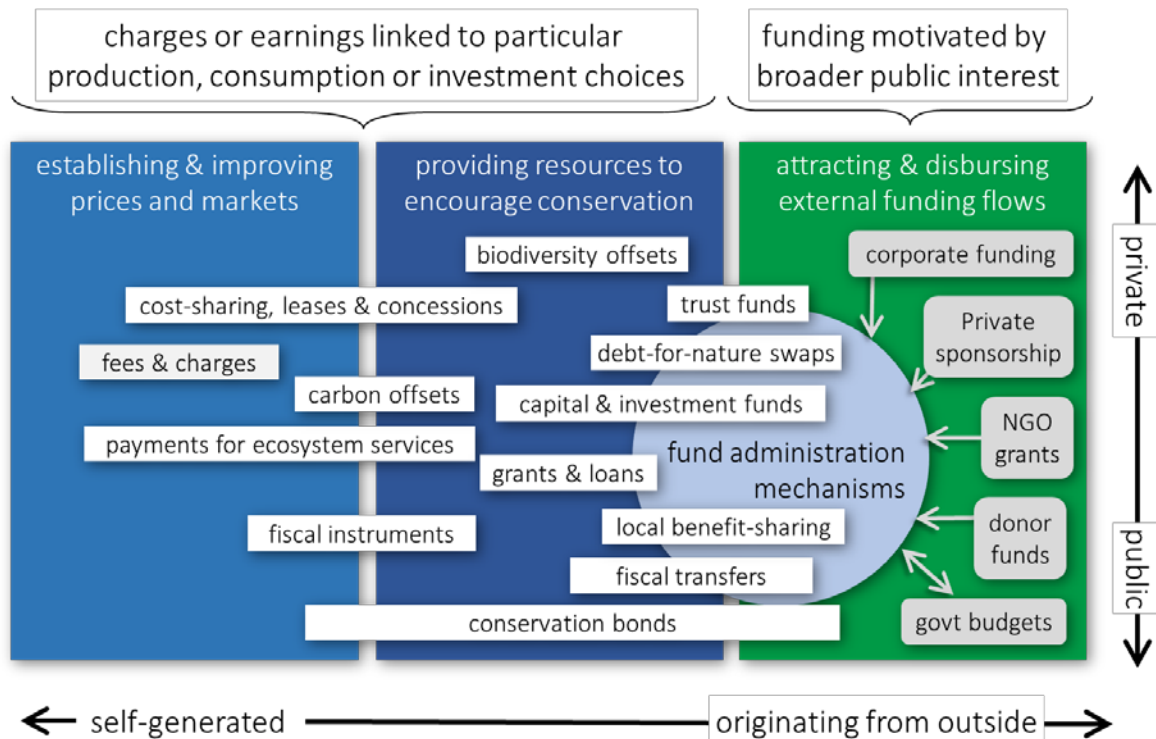
2. The current mix of financing mechanisms in case countries

Background and conceptualisation

Financing mechanisms for biodiversity conservation have been grouped in different ways in the relevant literature. For protected area (PA) financing contexts, one can compare different types of

funding according to the funding source (e.g. public vs. private, domestic vs. foreign/international), or according to the connectivity/causality between PA-related benefits (in terms of ecosystem services) and PA funding flows (self-generated funds vs. external funds). Furthermore, critical distinctions can be drawn regarding the disbursement/access mode to different funding sources (e.g. fundraising-based, contract-based, or as part of regular government budget allocation procedures).

Emerton proposes the following characterisation of financing mechanisms (updated from Emerton et al. 2006):



What becomes clear from the graphic above: The diversity of financing mechanisms can be both an opportunity and a challenge. An opportunity because different mechanisms can complement each other, in terms of their respective risks, conditions, disbursement modes and total amounts. A challenge because achieving such complementarity (i.e. finding a suitable bundle of mechanisms) is an exceedingly situation-specific task. There is limited documented experience with respect to the actual outcomes of any combinations of mechanisms. In any event, it is not clear that such experiences would be easily replicable or transferable between different contexts. For the present study, it is important to keep in mind that also conservation related financing mechanisms beyond PA financing are considered. The classification of financing mechanisms also applies to such a broader scope of conservation financing.

Findings from case analysis

For all eight cases analysed in this study, we found a mix of different financial mechanisms for PA management and for interventions in their surrounding landscapes.

Funding motivated by broader public interest in conservation:

- **Regular government budget allocations** form the core of biodiversity finance in most case countries. They pay the “core” costs of staffing and running PAs, and maintaining the institutional basis for PA management at national and site levels. However, this mechanism is in some cases uncertain, unreliable and prone to fluctuations depending on the overall economic and fiscal situation. Except for Madagascar, where there is no government funding for most PAs, public budgets constitute 40-80% of total PA funding. At the other extreme is Tanzania where roles are reversed and National Parks and game reserves are a significant source of income for government.
- **Official Development Assistance (ODA) funds** are typically invested in PA infrastructure, equipment, buffer zone activities, monitoring and enforcement. ODA plays a crucial role in supplementing the often rigid budgets provided by national governments. German technical cooperation typically focuses on consolidating PA management institutions, capacity building, and sustainable value chains in PA buffer zones. German financial contributions are predominantly directed towards PA infrastructure investments and capitalisation of **conservation trust funds (CTFs)**. In many cases, CTFs are an important financing mechanism or conduit for both domestic and international funds. Most of them are constituted as endowment funds and fewer as sinking/revolving funds.
- **International funding from philanthropy and corporate sponsorships** is often channelled via NGO grants or project-based funding. They typically support diverse activities, i.e. ranging from integrated management approaches to financing very specific activities only, such as anti-poaching efforts. In some cases, non-governmental organisations have *de facto* or *de jure* taken over the responsibility for managing and funding particular PAs. As international NGOs also draw on bi-lateral and multi-lateral government funding a clear-cut distinction of categories is difficult.

Self-generated resources:

- **Self-generated resources** entail income from entrance fees as well as a wide array of licensing and concessions. Case countries face very different situations in this respect. For example, in Peru 22% of total PA budget (average 2009-2016) is coming from such sources with an upward trend from US\$ 3.4 million (2009) to US\$ 4.9 million (2016). In Tanzania and Namibia, the tourism industry is a principal financial contributor to conservation, whereas Madagascar and Cameroon do not capture their PAs’ touristic potential. PES schemes effectively co-finance conservation only in Viet Nam and Peru.

3. Principal challenges to sustainable biodiversity financing

Background and conceptualisation

There are many ways in which financial issues act as a constraint on effective biodiversity conservation, which extend beyond a simple lack of funds. The amount of budget available is an

important and necessary financial condition for PAs to be managed effectively, but it is rarely sufficient.

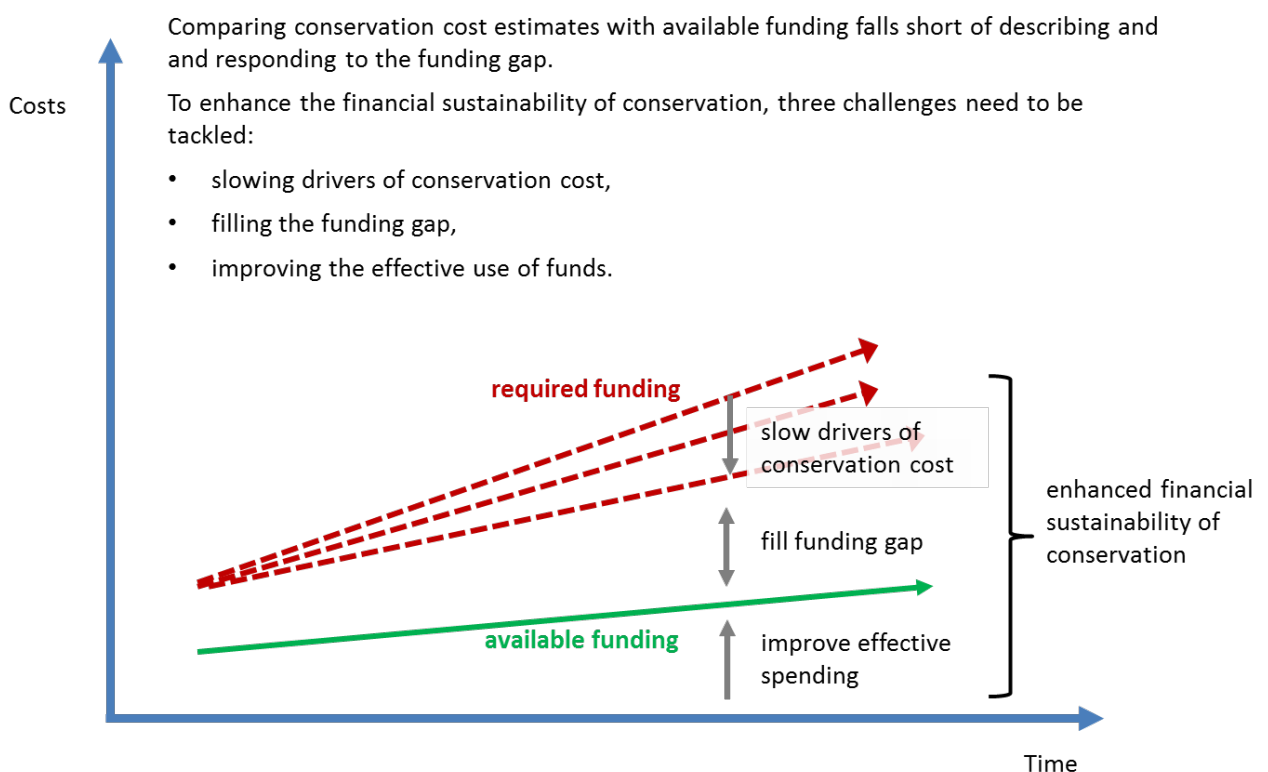
It is the capacity for overcoming various constraints which shapes the degree to which funds meet needs and deliver conservation outcomes. These constraints refer e.g. to an enabling governance environment, the stability of funding flows, the flexibility allowed in using them, the quality and reliability of financial planning and the capacity and motivation to effectively conduct conservation tasks on the ground. A focus on filling the 'funding gap' does not capture these more complex requirements for sustaining conservation.

Furthermore, this gap is not fixed per se: It is significantly increased by drivers of biodiversity loss that increase conservation costs, including local, national and international demands for natural resources. Here, the market and policy incentives which stimulate the unsustainable use of these resources need to be addressed.

On the other hand, the gap can be narrowed by improving effectiveness on the spending side. It is unrealistic to assume that in many countries there are management instruments and implementing structures in place that only need additional funding to turn conservation commitments into a reality on the ground. In fact, where big funding meets difficult contexts, conservation becomes expensive, first of all. It can stimulate conflict, corruption and investments in over-ambitious technology or infrastructure.

For enhancing the financial sustainability of conservation, three fields of action need to be pursued in a strategic and coordinated manner: slowing drivers of conservation costs, filling the funding gap, and improving the effective use of funds.

Rethinking the funding gap in biodiversity conservation



These three fields of action can be broken down into more specific requirements (see box).

Requirements for the financial sustainability of PAs (based on Emerton et al. 2006, 2015):

Filling the funding gap

1. **Adequate amount of funding:** Unless a PA has access to sufficient financial resources, it will be impossible to manage it effectively and achieve the objective of conserving biodiversity and livelihoods support.
2. **Diverse funding flows:** A broad funding portfolio spreads risk. Building a portfolio that draws on several different sources means that if one source diminishes or fails, there is other funding available to plug this gap temporarily.
3. **Security of funding in the long term:** Funding needs to be ensured over a longer time frame than the annual government budget cycle or the typical project period of three to five years. It is difficult to plan for long-term biodiversity conservation without knowing how many funds will be available in the future, and what strings are attached to them.

Improving the effective use of funds

4. **Linking funding to conservation objectives:** Funding is unlikely to be fit to purpose if is not directed towards the goals and activities which are of the highest priority for biodiversity conservation, and which have – ideally – been articulated in a conservation strategy or a PA management plan.
5. **Efficient administration and spending:** Funds are not always managed well and spent effectively in line with up-to-date conservation management planning. Reducing costs, improving cost-effectiveness and targeting expenditures wisely are key components of sustainable financing.
6. **Strategic financial planning:** Taking a strategic approach to long-term funding needs and options implies that management authorities go beyond traditional budgeting and cost accounting. Strategic plans how funding will be sourced, administered and used, are needs-based rather than instrument-driven.

Slowing down drivers of conservation costs

7. **Meeting the full costs of conservation:** Beyond covering the direct costs of conservation management (such as equipment, staffing, infrastructure, patrolling/surveillance, maintenance, scientific research and surveys), the local opportunity costs of conservation need to be understood and met, if local communities are to be economically able and willing to conserve biodiversity.
8. **Enabling context:** The underlying challenge of strengthening the broader economic and legal context. A wide range of external financial, economic and legal factors have the potential to influence conservation costs, funding flows and conservation management effectiveness. These include subsidies and price distortions in other parts of the economy which prejudice against biodiversity. Also, weak laws may not support more sustainable financing or do not ensure restrictions or at least adequate compensation of biodiversity impacts from economic development.

Findings from case analysis

In the following, we describe some of the findings with regard to the above summarised requirements for achieving financial sustainability in biodiversity conservation.

3.1. Filling the funding gap: Adequacy, diversity and security of funding

To date, none of the selected case countries has so far reported within the [CBD financial reporting framework](#). However, the national reporting on Aichi targets provides a first approximation, as Aichi Target 20 calls for a substantial increase of financial resources. A [summary](#) from the Secretariat to the CBD (dated November 2016) provides the following update on Target 20 from case countries. As yet, the topic appears not to have generated sufficient momentum:

Country	National target	Reporting on national target (Aichi Target 20)
Cameroon, Viet Nam	National target is similar to the Aichi Target but at a lower level	No significant change
Côte d'Ivoire	No corresponding national target	Progress towards the target but at an insufficient rate
Ecuador	No revised or updated NBSAP received	Progress towards the target but at an insufficient rate
Mexico, Madagascar	National target is similar to the Aichi Target but at a lower level	Progress towards the target but at an insufficient rate
Mauritania	The national target has little relevance to the Aichi Target	No significant change
Namibia, Peru	National target is significantly lower than the Aichi Target	Progress towards the target but at an insufficient rate
Tanzania	National target is commensurate with the Aichi Target	Progress towards the target but at an insufficient rate

From the case studies two principal conclusions can be drawn: (i) There are huge differences in funding levels per km² for PAs and conservation action in surrounding landscapes. Nonetheless, (ii) PAs in all case countries face financing gaps for particular activities.

- In **Viet Nam**, total public funding over 2001-06 period averaged above US\$ 1,000/km² (Emerton et al. 2011), making it well off compared with other countries at comparable levels of development. Yet, while overall spending is relatively high, there is significant variation in funding between different PAs (Emerton et al. 2011).
- Since the creation of the Ministry of Environment of **Peru** in 2008, the total budget for biodiversity conservation more than tripled, with a substantial increase of national government budget allocations.
- Funding to PAs and conservation in surrounding landscapes in **Ecuador** reached its peak in 2012 with an increase of close to 25% compared to 2011. Since the oil price dropped in 2014, government budget allocations are on a substantial downward trend.

- Funding for conservation in **Cameroon** is very low compared to other countries in sub-Saharan Africa. Galindo (2010) estimates the funding required for effective conservation management in and around PAs is between 9 and 14 times current funding levels.
- In **Madagascar**, conservation is struggling with the consequences of the political/economic crisis of 2009 that also drove out many external donors on which almost all conservation efforts depend.
- In **Namibia**, government expenditures on conservation are expected to stagnate after being a quarter up from 2007/08 to 2015/16. Donor funding is on a downward trend due to global economic slowdown and because the country is becoming more developed and therefore less of a priority for international donors.
- In **Mauritania**, there are only two protected areas, with the bigger one being an internationally well-known park attracting international donor funding. Government spending on basic operations is regular, stable, but insufficient.
- In **Tanzania**, in years before 2015, the National Parks Authority was gradually required to generate all of its own income with some funding from donors. In 2015 the government introduced measures essentially doing away with income retention and instead taking a portion of own income away from the National Parks Authority whilst also restricting their spending flexibility.

Whether reliance on 1-2 sources constitutes a major risk, depends on the political and macro-economic stability. The funding landscape has considerably changed over the last decades in many case countries, either due to (1) political changes like in Madagascar, (2) institutional reforms, such as in Peru, (3) decentralisation of PA management and financing responsibilities, such as in Viet Nam, or due to (4) (potential) retreat of international donors related to the general economic development, as in Namibia.

We found several examples of sometimes rapid changes, e.g. major changes in public conservation policies (e.g. Ecuador), a surge in anti-poaching efforts in sub-Saharan Africa, or changes in market and security conditions (e.g. for tourism in Tanzania). Under such circumstances, funding flows have changed radically and the spending efficiency as well as the feasibility of new approaches/instruments for mobilising funds were likely affected.

- In **Ecuador**, the government decided in 2012 to abolish entrance fees in all PAs (except Galapagos). In turn, self-generated resources of PAs fell to about 1% of total PA income (2012). Free park entry also increased operative costs in some PAs due to a sharp visitor increase (from about 250,000 in 2003 to close to 1,000,000 in 2012 for all PAs except Galapagos). Furthermore, as oil prices fell in 2014, so did government revenues from exports and from the ensuing economic crisis, resulting in severe cuts in government budget allocations, the then dominant source of PA funding. German development cooperation has supported and capitalised the National Environmental Fund (FAN), which over two decades has provided - as an independent mechanism - complementary funding for essential operating costs. To date, the government has stopped the operation of the fund.
- Over the period 2009-2012, PA financing in **Madagascar** was confronted with the withdrawal of nearly all of the traditional financial partners from the environment sector due to the political

crisis. The crisis severely affected the economy and all branches of public administration, leaving PAs particularly vulnerable to a noticeable increase in corruption and illegal activities, such as rosewood harvesting. The conservation trust fund FAPBM buffered some of the impacts by providing funding for basic operations for a large group of PAs.

- Across Africa, wildlife crimes are believed to cause significant losses in international tourism revenues, which are closely linked to natural attractions (Naidoo et al 2016, UNWTO 2014).

To some extent, future changes in the funding flow from single financing mechanisms can be anticipated by developing (and regularly monitoring) risk profiles for them.

3.2. Improving the effective use of funds

In the examined cases, not only the absolute level of funding or a narrow range of funding mechanisms constitute constraints to sustainable financing of PAs, but rather the sometimes significant disconnect between conservation priorities and spending decisions. This disconnect can be due to rigid budgeting procedures and an unsuitable division of tasks within the public administration (as e.g. in Viet Nam), or due to limited administrative capacity of entities implementing conservation. The latter is often associated with a lack of updated management plans (e.g. Peru), lacking autonomy to use self-generated revenues, lack of ownership of PA authorities and high staff-turnover (e.g. Tanzania).

- In **Ecuador**, 23% of PAs do not have an approved management plan either because it is not yet fully elaborated or delayed due to regulations and unclear financial needs. Moreover, 21 out of 34 areas with a management plan have out of date documents, as according to the regulations a revision is needed every 5 years.
- Staff volatility, lacking management capacities and lack of ownership in conservation activities are deemed challenges to sustainable PA financing in **Tanzania**. Limited administrative capacity, especially on commercial management, is evident particularly in non-flagship parks. Wardens often, understandably, have a background in wildlife management and limited business management skills while low salaries do not assist in attracting more commercially skilled staff.
- In **Viet Nam**, there remains a fundamental disconnect between the expenditure categories that are used to prepare and submit PA's annual public budget requests to the Ministries of Planning/Investment and Finance, and the more activity-based or results-based frameworks that are typically applied in PA conservation planning at the site level. It is also worth noting that there is often little communication between the staff and units that are responsible for planning and delivering conservation activities, and those that are responsible for preparing and administering PA budgets.

One of the key activities in German development cooperation is the institutional consolidation of conservation management structures and the (participatory) development of PA management plans (often extending their focus far into the surrounding landscapes). The possibilities to influence public budgeting procedures to allow for more flexible use of funds and for results-based budgeting vary strongly from country to country.

3.3. Slowing down drivers of conservation costs

In many of the examined cases, effectiveness of PA management and associated financial sustainability is hampered by poor governance contexts. Such conditions include corruption, rise of illegal activities (including organized crime), conflicting broader policy, high political interference in PA management, or the lack of a need for efficient planning/ spending due to high donor spending pressure.

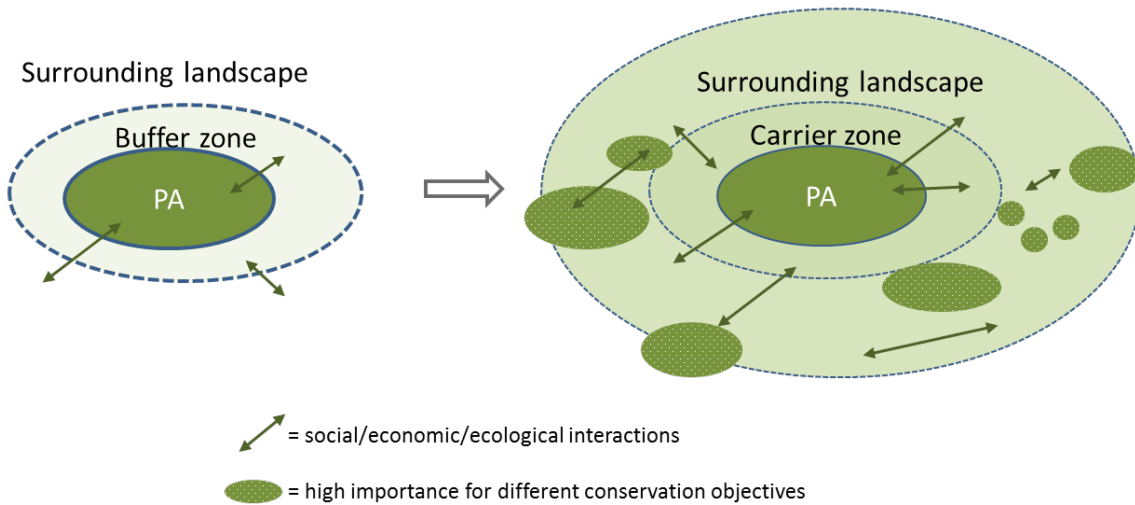
- In **Namibia**, poaching has increased in intensity particularly in the northeast and northwest of the country. In some of the PAs in these areas there are reports of wardens spending 70% to 80% of their time and resources on anti-poaching measures. The situation has escalated to the point where a national anti-poaching unit has been established under the Ministry for the Environment and Tourism (MET) totalling 300 to 500 in personnel. It stands to reason that this will lead to less overall funding for the other conservation and PA management functions though it is too early to measure such effects.
- In **Cameroon**, broader policy disincentives are identified as a threat to biodiversity conservation. Particularly habitat conversion and clearance (such as for agriculture, roads or mining) and the exploitation of natural resources (such as from logging, hunting or the extraction of NTFP) are allowed – or even encouraged – to take place in ways and at levels which harm biodiversity. Furthermore, the exchange rate policy is considered to have increased rural poverty, increasing pressure on ecosystems, and thus financial needs for biodiversity conservation. Even though a wide variety of more innovative financing mechanisms have been piloted in Cameroon, as a means of supplementing government budgets and external grants, only very few have taken root or have been sustained. One reason is that PA financing systems and funding flows remain highly vulnerable to leakages and diversions. For example, in 2006 the CAMCOF conservation trust fund experienced severe financial mismanagement problems which led to a state of bankruptcy and suspension of activities.

3.4. Towards a landscape approach to conservation

German development cooperation responds to these constraints in various ways. One approach is to adopt a wider landscape approach to conservation: Recognizant of the connectivity between ecosystems and also between conservation and development aspirations, a landscape perspective acknowledges, that effective and equitable biodiversity conservation cannot be ensured by focus on consolidating PAs alone. Several principles characterize a landscape approach, such as adaptive management, stakeholder involvement, process-related transparency, concern for rights and equal validity of multiple objectives (Sayer et al 2013). , concepts are well-established, such as sustainable value chains, biosphere reserves, or ecological corridors, which pursue conservation with sustainable development within and beyond PAs.

Rather than ‘buffer zones’ (buffering the impacts of two incompatible worlds within and outside of a PA), the areas adjacent to PAs are conceived as ‘carrier zones’ or ‘support zones’: particular rules may apply here to protect or promote specific ecosystem attributes/conditions and their benefits to the wider landscape.

Shifting from protected areas (PAs) to a more integrated landscape approach in conservation better reflects multiple social, economic and ecological interactions in a region. It aims to compatibilize co-existing (and partly rival) conservation objectives, livelihood needs and development aspirations



- In **Côte d’Ivoire**, GIZ supports [various activities](#) for expanding the value chains for timber, cacao, palm oil, cashew nuts, maize, onions and pig farming. Working jointly with local stakeholders and with companies in the Tai region, the programme has introduced social and eco-standards for cacao production. The incomes of the 1,500 producers, who have been certified so far, are now significantly (i.e. up to 60 per cent) higher than the national average, and this benefits a total of 20,000 people in smallholders’ households. In addition, 70 per cent of the promoted enterprises have supported afforestation by integrating over 130,000 shade trees into their production systems.

From a financing point of view, managing biodiversity conservation as part of a wider landscape approach does require higher coordination costs. But it also has substantial advantages: If conservation action is fine-tuned and implemented with reference to other policy objectives, costs can be lowered (from preventing counter-productive parallel programmes in different policy areas), and costs can be shared (among two or more sectors in joint programmes).

- In **Mexico**, German development cooperation supports the implementation of the ecological corridor of Sierra Madre Oriental by promoting integrated landscape planning. For this a multi-tiered approach is pursued: Political consensus between different sector ministries, sub-national government and landholder groups is complemented by institutional anchoring of the integrated landscape planning concept, and by concrete efforts to adapt policy instruments and decision processes in line with this concept. While set-up costs are considerable, they are likely to be outweighed by the significant long-term benefits in terms of effectiveness and efficiency gains for integrated conservation.

At site level, there is often a lack of financial and economic incentives for the communities that live around PAs to support conservation, and a lack of compensation for those who bear the local (opportunity) costs that often come along with it. Such local costs can often be attributed to a loose link between conservation planning and spending in PA “core” zones, and development planning and spending in surrounding landscapes.

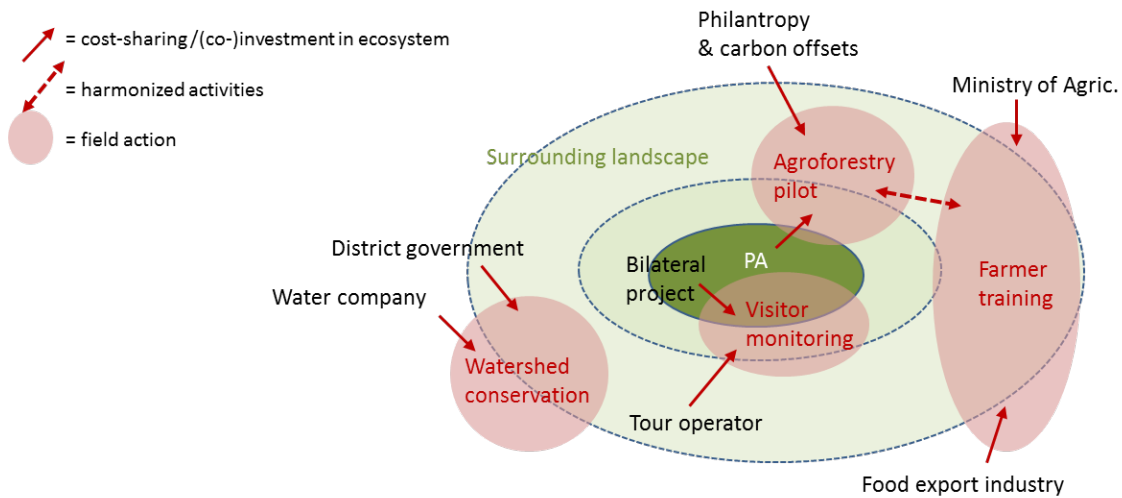
- For example, while **Viet Nam** is a highly-planned economy in which the state plays a strong role and PA funding is relatively well coordinated, lack of coordination between “core zone” (within PAs) and “buffer zone” (around PAs) funding remains a major issue. Both planning processes and goals of different institutional jurisdictions remain relatively distinct and separate. This means that there is little emphasis on local development and adjacent communities in the spending of PAs, while spending within adjacent communes and districts tends to pay little attention to biodiversity conservation. There is currently no mechanism for coordinating and integrating conservation funding in landscapes surrounding PAs.
- In **Cameroon**, insufficient biodiversity conservation funding results in a failure to provide economic and financial incentives to the local communities that live in and around PAs. Forest products continue to play a major role in income and livelihoods. For the rural poor, the lack of alternative or affordable, more sustainable, sources of income and subsistence, coupled with a high opportunity cost to reducing unsustainable land and resource uses in and around PAs, acts as a major disincentive to PA biodiversity conservation. The opportunity costs of maintaining PAs that contain commercially valuable tree species has for example been estimated at up to US\$ 1,500/km²/year (Wilkie et al. 2001). In the absence of a mechanism of revenue-sharing, few people in the vicinity of PAs are likely to be willing to support conservation when it imposes a net cost on them – and many will simply be economically unable to do so.

More fundamentally, such linking up with other policy objectives can help to show that investing in biodiversity and in the maintenance of healthy ecosystems is not a luxury: It directly contributes to securing livelihoods and to increasing sustainable development options. A focus on ecosystem services can deliver the evidence and arguments of why and where in the landscape this makes particular sense.

- In **Côte d’Ivoire**, Germany funded an assessment of ecosystem services generated by the Tai National Park to the wider region. Results indicate a high importance of the regional climate regulation benefits, provided by the park’s forest cover, for the surrounding plantations of cocoa and other cash crops.

As a result, different (public and private) ecosystem service beneficiaries and government structures with different sector-related mandates can decide to share programme costs, to co-invest in the maintenance/restoration of ecosystems, or to align their respective field action. The following graphic illustrates the diverse overlaps of interest and potential collaborations, that such a perspective on ecosystem services can reveal and promote.

Cost-sharing, co-investment and harmonised field action among multiple actors



4. The 'interplay' between different funding flows and financing mechanisms

'Interplay' refers to examining the interactions between different mechanisms in order to better understand their combined outcomes (Ring and Schröter-Schlaack, 2011). New financing mechanisms can imply disincentives for existing funders, or, alternatively, leverage additional political backing and resources. Considering their differences, some financing mechanisms may be more suitable to add to a given portfolio of income streams than others.

An abstract comparison of financing instruments – i.e. comparing their assumed typical capacity needs or financial management tasks – is unlikely to capture how they play out in the 'real world'. This section summarises evidence from the cases regarding synergies and frictions arising from combinations of financing mechanisms

4.1. Synergies between financing mechanisms

We found evidence of direct and indirect effects of ODA financing for biodiversity **to leverage additional funds** at PA system level. German ODA is typically based on bilateral agreements with national governments in recipient countries. If ODA funds for conservation are linked to co-finance commitments from national governments, national financial resources are mobilised, or a decrease in national expenditures for conservation is slowed down. More indirectly, international funding for protected areas in some countries is assumed to contribute to shifting conservation higher up on the national political agenda.

- In **Cameroon**, interviewees indicated that German and other foreign support, for example to conserve the Sangha tri-national area, has been instrumental to stimulate government attention to improving biodiversity conservation in the country.

Did new financing mechanisms build on existing capacity and structures to realize operational cost savings? Regular government contributions imply basic financial administration capacity. This capacity is necessary but insufficient for attracting other funding sources. Project-based funding, for example

from international NGOs, requires mastering their respective concepts, application criteria and procedures, sometimes linked to benchmarks for management performance, to social safeguards or to specific conservation outcomes. This typically also applies to (annual) applications for funding from conservation trust funds (CTFs). Self-generated income streams imply rather specific set-up investments and follow-up efforts related to e.g. fee collection (for entrance fees) or to contract management (for concessions and PES).

While we found no robust evidence of operational cost-savings from certain combinations of financing mechanisms, the experience gained over time with *one* type of financing mechanism seems critical for its successful use, stabilisation or expansion as source of income.

- In **Mauritania**, Banc D'Arguin National Park has for decades attracted significant NGO funding. Apart from its outstanding significance for conservation – making it attractive for international NGO support – the experience with managing multiple projects is an advantage for attracting new project-based funding.

Furthermore, the presence of a PA business plan, building on a PA management plan, is a critical component to attract additional funding. Among other benefits, the existence of such plans can provide a transparent framework for the co-ordination of spending funds from multiple sources.

- In **Côte d'Ivoire**, Germany co-financed the business plan for Tai National Park which is used as a key reference for applying to different sources, such as the national CTF or to companies in the cocoa sector. The business plan clearly specifies which actions have been prioritised in a participatory process and how much they cost.

Furthermore, in Côte d'Ivoire, Mauritania, Namibia and Madagascar, CTFs disburse funding via a (partly) competitive application process, which includes consideration of a PA's financial and administrative management performance. Thereby, incentives and learning opportunities are provided for enhancing PA capacity to attract new funds.

Another interesting insight is that careful **planning between external projects and initiatives** can create considerable synergies and value-added – both in terms of the financial success of PA financing mechanisms, and in aid effectiveness and impact.

- In **Viet Nam**, German technical and financial support to two different PA financing mechanisms (PES and community-based savings book payments) show positive synergies and complementarity, and appear to have reinforced each other very well. There were considerable lessons learned to be shared and transferred between the two approaches. Today, forest protection activities are being incorporated into savings book payment schemes, while the use of savings books and associated monitoring systems are being investigated as tools to improve PES performance.

Concerning the **complementarity of financing mechanisms**: We found evidence that some financing mechanisms very effectively fill gaps as they allow financing activities which are not being covered by other main income sources:

- In **Ecuador**, the CTF Fondo Ambiental National (stocked by German ODA) filled a critical gap (until being frozen by presidential decree in 2016) by financing critical operating costs (including e.g. petrol) not (sufficiently) covered by the government's regular budget for PAs.

- In **Namibia**, Germany supports the establishment of the Community Conservation Fund of Namibia (CCFN). The fund will be explicitly geared to supporting and building the capacity of communal conservancies with tasks such as negotiating agreements with private sector hunting and tourism operators, managing budgets and wildlife management. This is in anticipation of a future decrease in ODA to the country which will make it more difficult (for communities and national NGOs that focus on providing support to communal conservancies,) to access funding from abroad.
- In **Viet Nam**: Forest protection contracts and PES schemes have been found to provide critical income to forest holders and communities in PA buffer zones, thereby compensating for park-related local opportunity costs. These additional income streams to the inhabitants of surrounding landscapes critically complement government allocations to PAs' core activities. An additional interesting lesson is that this gap (between core and buffer zone funding) had long proved a difficult situation to remedy via conventional public budget channels, given the rigidities and separations between different government agencies' territorial and policy mandates. However, as both forest protection contracts and PES schemes operate outside the core public budget system, they have been able to complement existing PA and buffer zone budget financing and fill the gaps that exist between them.

4.2. Frictions between financing mechanisms

Financing mechanisms can also undermine instead of complement each other. For instance, when new funding becomes available, governments may decide to withdraw budget for conservation and to use it for responding to other commitments. India accumulated a huge budget of about US\$ 5.7 billion from impact compensation payments originally meant for biodiversity offsetting, but may now use it to finance unrelated reforestation commitments made within the "Green India" programme (Narain and Maron, 2016).

The evidence from case studies is mixed:

- In **Madagascar**, significant German resources were made available to the country's principal conservation trust fund at a moment where national government withdrew from funding the majority of its PAs. Today, CTF staff considers German financial support to conservation to be insufficiently made conditional upon funding commitments by the national government.
- In **Mauritania**, government contributions to PAs have remained stable, independently of large-scale German and French contributions both to the national CTF and directly to the country's PAs.

It could not be determined whether international NGOs – e.g. in Cameroon and Mauritania - change their financial commitments once German bilateral support to conservation increases. It is plausible to assume that such changes are being considered in their strategic planning.

Need for donor coordination: Where multiple financing mechanisms and/or donors support conservation, the effective coordination between them becomes a demanding task. Yet, it is urgently required to prevent poor use of funds. There are various difficulties though.

Different ministries (for environment, agriculture, forestry, tourism, regional development, etc.) do not sufficiently coordinate among themselves. This leaves room for pursuing similar programmes in parallel without checking their compatibility. Furthermore, the coordinating (environmental) ministry may lack the political weight to ensure that donors fit their activities within national priorities. Also, (non-governmental) donors may lack the incentives and/or resources to coordinate.

- Anti-poaching efforts in **Tanzania** and sub-Saharan Africa are in many cases still donor driven. With illegal ivory and rhino trade potentially financing terrorism, foreign paramilitary assistance has become a new funding flow in conservation. Furthermore, some foreign NGOs focus explicitly on anti-poaching objectives and only fund certain activities, irrespective of more integrated conservation approaches. At best, this creates a significant co-ordination burden for affected governments. It also has the potential to side-line PA management authorities and governments to a degree. Interviewees also mentioned experiences where coordination among too many parties, aside from being cumbersome, was viewed with scepticism by some donors who thought it diluted their brands (i.e. too many parties with whom credit needs to be shared). Recently, governmental donors have stepped up their coordinating activities (WB 2016).

At times, inter-agency and cross-sector coordination are considerably hampered by practical barriers. Different sector programmes (e.g. for rural economic development, water security, climate adaptation) build on concepts and terminology which are not always mutually used, and have to respond to progress benchmarks which may not be compatible. One response to this challenge is to recur to existing inter-agency structures, such as for example the NBSAP steering committee in Namibia.

Overall, donor coordination is needed not only for reducing operational frictions and for enhancing spending efficiency: Donors differ in their respective priorities, therefore donor coordination also needs to be strengthened to clarify how different conservation objectives can (or cannot) be accommodated. (High quality) PA management plans are instrumental here.

4.3. Towards selecting suitable combinations of financing mechanisms

The interplay between different mechanisms, and their practical feasibility, is shaped by the context within which mechanisms operate. The question therefore arises whether certain contexts are more conducive for a given mechanism than others. The evidence from cases is mixed.

Some financing instruments typically require a different governance context for implementation and operation than others. For example, project-based conservation funding by international NGOs has not the same legal, capacity-related and institutional requirements, than a REDD+ or PES scheme. However, even the small set of selected cases illustrates well that the same financial mechanism can be organised and institutionalised in different ways. This means instruments can and should be adapted to context and circumstances. CTFs illustrate this point:

In almost all analysed case countries there are CTFs operating, however they differ considerably regarding: where funding comes from, what is financed, the application and granting procedures, the governance structure of the fund itself (including the role of national government and authorities as well as international donor institutions), and the support provided to PA institutions regarding management and capacity building.

What follows from this for the selection of a new financing mechanism? Rather than instrument choice it is instrument design that needs to be adapted to the specific context. Therefore, it makes sense to first assess the financing needs and opportunities for more effective conservation in a given country, and then design a mechanism/instrument accordingly. There is guidance available for such assessment:

- The guidelines “Acting on Ecosystem service opportunities” (Rode and Wittmer, 2015, see also Rode et al. 2016), were developed jointly with GIZ to facilitate the context-specific identification and implementation of economic instruments for conservation and livelihood support at the local and regional level.
- The BIOFIN workbook offers a comprehensive approach to examine (i) policy drivers of biodiversity change and (ii) the distribution of costs and benefits within and across sectors; to assess (iii) current biodiversity expenditures and (iv) the costs of additional conservation interventions; to determine (v) the feasibility of different financing mechanisms for a specific context; and to develop (vi) a comprehensive financing strategy. Not all components and tools of the approach are equally applicable in different contexts, but the workbook provides a very good starting point for devising a country-specific and purpose-oriented assessment of the constraints (and opportunities) regarding more sustainable biodiversity financing.

Beyond that, cases indicate that innovation for effective conservation financing may not necessarily require new mechanisms. There seems plenty of room for improving and spreading financing mechanisms that have proven successful in the past.

5. Experience with private sector involvement

Funding from government/ODA/philanthropy, on the one hand, and funding from the private sector on the other hand follow substantially different rationalities. While the former group is primarily motivated by political commitments, legal obligations and expected conservation outcomes, the latter group more explicitly decides on the basis of expected private sector returns on investment. Such returns can refer to direct business benefits (e.g. income from PA tourism concessions, securing favourable environmental conditions for sourcing or production) or to more indirect benefits in terms of reputation and corporate social responsibility. Consequently, private sector involvement requires the capacity to clearly convey a business case and to interact with the sector understanding its language and work mode.

The private sector is often a beneficiary of ecosystem services provided by PAs. However, there is a critical debate about the risks/benefits of using ecosystem services for mobilising additional biodiversity finance. PAs provide a bundle of public and (potentially) private benefits, for which there are public (and potentially private) funding sources. Risks include e.g. the shifting of management objectives (to maximise economically interesting ecosystem services), or the contractual obligations arising from a PES scheme. Benefits include the potentially long-term financial commitment of a company benefitting from a PA’s ecosystem service(s), and associated with that a broadening of a PA’s societal support.

Findings from case analysis

Overall, interviewees indicated a strong interest in further engaging the private sector in co-financing biodiversity conservation. In this section, we look at (i) tourism-related PA finance, and at efforts to engage (ii) private sector beneficiaries of other ecosystem services. We also briefly refer to options for (iii) delegating PA authority and financial responsibility to non-state actors.

5.1. Involving the tourism sector

In countries such as Namibia and Tanzania, nature and particularly wildlife tourism constitutes a principal sector in the national economies. German development cooperation focuses on improving the conditions for the tourism sector to advance on the sustainability agenda. In other countries, such as Mauritania and Cameroon, Germany supports the building of basic capacities and of infrastructure for tourism.

Building on tourism for enhanced financial sustainability of conservation requires meeting particular conditions, such as investment security, a well-developed tourism market and high convergence of touristic use and conservation objectives.

- In **Tanzania**, tourism based biodiversity finance is well established for more than two decades. Aside from the flagship game reserves (for hunting) and national parks (for safari tourism), there are wildlife management areas (WMAs) often bordering on parks where private entrepreneurs develop tourism businesses based on contracts with local communities. These communities retain a portion of resultant income which contrasts with the Namibian communal conservancies' model where all income is retained by communities thereby enhancing conservation incentives.
- There are also a few fully privately financed PAs in **Tanzania**, based on delegated management agreements with government. For example, Chumbe Island Coral Park Ltd., established in 1991, consists of a lodge with exclusive rights to Chumbe (a small island near Zanzibar) and with responsibility for the management of a small Marine Protected Area (MPA) adjacent to the island. Project objectives are not dominated by commercial principles. However, operations are along commercial lines and target enough profit from the lodge and day trips to the island to sustain operations. Since 2000, MPA management costs have been covered by tourism income, after an initial investment of about € 1.2 million over nine years which included financial support German technical cooperation through GIZ. Despite exclusive rights to the island and the ideal conditions arising from Chumbe's close proximity to the well-established tourism destination of Zanzibar, initial access to the tourism segment and market volatility posed challenges. ([Riedmiller, 2003](#)).

Trophy hunting and (financially) sustainable land use in Africa

Wildlife management for trophy hunting has become an important alternative to agricultural land uses in arid regions, especially in Central Eastern and Southern Africa (Lindsey et al 2007).

Nonetheless, the economic importance of trophy hunting compared to non-hunting safari tourism is comparatively small. For example, in Namibia, Turpie et al (2010) estimate that overall expenditure by wildlife viewing protected area tourists is in the order of N\$2.35 billion, whereas only N\$96 million is spent by tourists attracted by hunting concessions in protected areas.

Nonetheless, at subnational and local scale, revenues from trophy hunting are central to the economic viability of game reserves run by companies or community cooperatives, particularly in Tanzania and countries in Southern Africa. Most trophy hunting takes place outside of national parks. Trophy hunting is considered an important complement to mainstream wildlife watching tourism, as it can generate income also in regions which are too remote to attract photo-tourism (Di Minin et al 2016). Furthermore, photo-tourism potential is considered limited to areas that combine good infrastructure with abundant wildlife and/or spectacular scenery (Lindsey et al. 2012).

Gross income from trophy hunting in African countries has been estimated at US \$138-1.091/km² in 2015 figures (Lindsay et al 2016). However, the share of funds flowing back into conservation is unclear. Generally, managing arid areas for trophy hunting has been considered more biodiversity friendly than former (increasingly intensifying) livestock raising patterns.

Overall, the economic prospects for trophy hunting in Africa are limited: Public pressure in response to killings of charismatic lion, rhino and other big game, will likely translate into further restrictions regarding the import of trophies to Europe or the US where most hunters come from. Already today several US-bound airlines refuse to transport game trophies (De Minin et al 2016, Lindsay et al 2016).

In other countries with nature tourism potential, the dependence of the tourism industry on well-functioning PAs has not yet resulted in significant co-finance for conservation.

- In **Madagascar**, travel & tourism directly contribute about 8% to the national GDP with some 340.000 arrivals in 2014 (WTTC 2015). A large share of tourism is directly related to the country's outstanding forest and coastal biodiversity and high endemism. However, an interviewee representing the principal CTF (FABPM) finds that apart from several project-funded community-based tourism initiatives, national service providers in the sector are not aware of their dependence on well-conserved landscapes to engage in co-financing PAs.

German development cooperation has invested in tourism infrastructure in/around PAs, however, this can only contribute to PA financial sustainability where the industry is well established and private sector can make effective use of them. Building local tourism infrastructure and service capacity needs to go at the pace of the private sector developing demand for it. This process seems often slower than hoped for.

- In the region of Mount **Cameroon** National Park, German technical cooperation has supported the development of local eco-tourism services since 2000. With financial cooperation through KfW Germany co-finances tourism infrastructure worth €1.5 million and World Bank also supported eco-tourism infrastructure with over €1 million. According to the park's current management plan, the 1,000-1,300 annual visitors are mostly resident expatriates and Cameroonians. Recently introduced park entrance fees have not exceeded €16,000 in the first two years, from which fee collection costs have to be subtracted. Furthermore, these fees have to be transferred to government and are not available for park operations. The international travel & tourism competitiveness index placed Cameroon on rank 121 (out of 140) ([WEForum 2013](#)) due to its comparatively weak regulatory framework, business environment and infrastructure, and despite its recognised natural attractions (rank 32 out of 140). This indicates that difficult macro-conditions limit the development of tourism-related income streams for conservation, even if revenue sharing agreements were modified, and irrespective of the substantial ODA support for developing eco-tourism infrastructure and capacity.

Promoting diversified options for collaboration between PA (system) authorities/management entities and the tourism sector holds considerable potential to stimulate private sector involvement. These can include joint efforts for communication, a diversified concession system, capacity building for nature tourism and collaboration in a PA's buffer zone.

Poaching affects wildlife tourism in Africa

A comparison of historical data with a recent continent-wide aerial survey indicates that the elephant population in Africa is rapidly decreasing (Chase et al 2016), with for example Tanzania or Cameroon losing more than 50% of their national elephant population over the past decade. Estimates of current annual declines of 8% in the all-African elephant population are mainly attributed to poaching. The economic impact of elephant losses on tourism in Africa has been estimated at USD 25million annually (Naidoo et al 2016).

Poaching affects tourism in various ways. A survey of 145 tourism service providers operating in African countries (UNWTO 2014), finds: 70% of all tour operators consider poaching to negatively affect wildlife tourism in general, 26% of them report direct impacts on their own operations (e.g. additional costs for extra security measures).

Reasons include:

- Poaching decreases wildlife populations, and animals become harder to find;
- Bad sightings affect the tourism experience (carcasses, rhinos without horns, marked animals, slaughtered animals on sale);
- Poaching threatens security. No-go areas, warning signs, encounters with poachers or with armed anti-poaching patrols make tourists feel (or actually be) unsafe.

Tourism service providers have begun to respond: 49% of survey participants indicate that they co-finance anti-poaching (p. 31, UNWTO 2014). Others directly engage in anti-poaching measures themselves. One example is the tour operator 'TAPAC – [Tanzania Anti-Poaching and Conservation](#)' .

5.2. Involving corporate ecosystem service beneficiaries and degraders

In the case countries, we found no evidence of corporate ecosystem service beneficiaries to currently contribute to biodiversity conservation in significant ways, except for Viet Nam.

- The 2005-14 Vietnamese-German Forestry Programme made a substantial contribution to PA financing in **Viet Nam** through supporting the development of PFES (payments for forest ecosystem services). PFES were piloted for the very first time in Viet Nam starting in 2005, in Son La Province (with German financial and technical support) and Lam Dong Province (under a USAID-funded project). The two provincial pilots established a model whereby key commercial ecosystem service beneficiaries (most notably downstream hydropower plants, water supply utilities and tourism companies) make cash payments (calculated per unit of electricity generated, water consumed or as a percentage of earnings) which are paid on a per hectare basis to “forest owners” (including individuals, households, communities, enterprises and PA management boards). By the end of 2010, a national law had been set in place, scaling up PFES across the whole country (Thuy et al. 2013).

In some countries, German development cooperation explicitly focuses on enabling conditions for establishing new financing instruments based on ecosystem services.

- In **Peru**, Germany supported the multi-stakeholder process which developed one of the first municipal water-PES schemes in the country, in the city of Moyobamba. Following this experience, Germany provided technical assistance for national legislation on PES schemes in Peru. The [law](#) was adopted in June 2014 and establishes operational standards and legal clarity so as to ensure PES deliver socio-environmental benefits..

One challenging pre-requisite is the limited presence (in case countries) of companies who are potentially willing and able to financially contribute.

- In **Mauritania**, Banc d'Arguin National Park is recognised as a spawning ground substantially contributing to the region's fish harvest. The fisheries partnership agreement between Mauritania and the European Union recognises this connection: Part of the payment is earmarked for marine conservation and directly transferred to the conservation trust fund BACoMaB. On the other hand, national beneficiaries such as - Mauritania's domestic fisheries sector - are considered too small-scale, disperse and artisanal for e.g. a PES scheme to be economically feasible and socially acceptable.

Nonetheless, there are promising initiatives underway. One option is to approach companies further down in the value chain.

- In **Côte d'Ivoire**, Tai National Park provides regional climate regulation services for an area that hosts about 40% of national annual cocoa production which is about 16% of world annual production. Instead of approaching cocoa farmer associations, GIZ and the national CTF use this argument for engaging international companies from the chocolate industry who source in Côte d'Ivoire.

Apart from clear messages (sustained by evidence) about a sector's dependence on an ecosystem service, approaching national and especially international companies requires fundraising capacity. However, capacity for raising funds from the private sector is largely missing in PA management entities, and arguably poorly developed in many national NGOs.

- In **Madagascar**, the principal CTF recently applied for fundraising training and coaching in pursuit of ideas to approach companies and NGOs in the US and Scandinavia.

A key requirement for winning corporate funding is to ensure transparent financial administration and well-targeted spending. In this regard, CTFs that typically have audits by international standards and multi-stakeholder governance structures for disbursement decisions are well-positioned to do fundraising with the private sector. This is the case for all CTFs supported by German development cooperation in the case countries.

In addition to ecosystem service beneficiaries, **corporate ecosystem service degraders** can financially contribute to conservation. In many countries, regulations for minimising, mitigating and compensating environmental damage are either weak or weakly implemented. Nonetheless, many international companies are becoming sensitive to the issue, catalysed by evolving international lender requirements to offset biodiversity impacts (IFC 2012). Conservation NGOs have played a role in brokering deals for voluntary biodiversity offsetting. Biodiversity offsets are attracting a great deal of interest in many countries as a way of generating funding for conservation inside and outside PAs (ten Kate et al. 2004), for example:

- In **Viet Nam**, Holcim Ltd., an international company specialising in the manufacture and distribution of cement and aggregates, is working to develop a biodiversity offset programme, aiming to compensate for the unavoidable impacts of limestone quarrying and clay extraction by supporting the establishment of two new nature reserves.
- In **Cameroon**, La Fondation pour L'Environnement et le Development au Cameroun (FEDEC) was established in 2001 as a 28-year sinking fund to absorb offset payments made by the Chad/Cameroon oil pipeline project. The main spending focus is on National Park Mbam-Djerem and Campo-Ma'an National Parks and associated community-based activities (Bisseck, 2003). Start-up capital was provided by the consortium of international oil companies involved in the project (ExxonMobil, Chevron and Petronas), supplemented by contributions from the two international NGOs that lead in disbursing the funding in the two PAs: Wildlife Conservation Society (WCS) and Worldwide Fund for Nature (WWF).

The potential and pitfalls of sourcing biodiversity finance from environmental compensation payments are further explored in the section on innovative financing mechanisms.

5.3. Delegating PA authority and financial responsibility to non-state actors

In a wider sense, 'private sector involvement' can also encompass the delegation of conservation management authority to private corporations, to NGOs or to community cooperatives.

A more diversified range of PA governance types and delegated management arrangements can make a PA system as a whole more financially sustainable. Variants of public, (semi-)private and community conserved areas likely differ in the financially relevant aspects of management autonomy, spending efficiency, and in their access to different funding sources. Their comparative performance is context-dependent.

We found no systematic comparisons of conservation performance – and also about their long-term financial viability – of different PA governance types. Also, our case studies did not generate insights on this question. Based on literature, the following observation seem relevant:

Private protected areas (PPAs) in Namibia, for example, play a key role in tourism. Being under commercial pressure to generate profits they have incentives to innovate and to use resources efficiently and are less prone to changing political priorities and corruption. Hunting and safari tourism are at the core of most business models for PPAs.

- The African Parks Network has a strategy of taking over the management of state owned protected areas in Africa, which they consider to be failing, and operating them as de facto PPAs, funded through high end ecotourism. This is a lucrative but competitive market and this business approach is only suitable for a handful of protected areas which have the species or natural features to be attractive to this market (Holmes, 2013).

However, PPAs act in a (semi-)private sector environment, where business models continuously evolve. They can turn out to be contradictory or complementary to – rather than compliant with – a country's principal biodiversity conservation objectives. In Southern Africa, the [breeding of lions in captivity](#) for trophy hunting is a case in point.

Social impacts of PPAs are unclear – while some contribute to local cash income, others may e.g. restrict traditional use rights and violate human rights. In theory, PPAs may be less democratically or

locally accountable than protected areas under other governance regimes, and therefore rightfully stir concerns (Holmes, 2013). However, conservation-related conflicts have been witnessed under all kinds of PA governance arrangements (Dowie 2009), and responsiveness to local authorities makes conservation efforts more accountable – irrespective of where funding comes from.

Community conservation areas (CCAs) are a means to place PA management autonomy and income potential in local hands. Typically associated with extensive land use, CCAs (in theory) strengthen local sovereignty, while offering a cost-effective opportunity to pursue large scale conservation objectives (e.g. connecting national parks through corridors). They can thus be an important complement to state-run PAs.

- In **Ecuador**, German cooperation provides technical assistance to CCAs for the preparation and execution of co-management contracts, and for organisational strengthening.

While management costs per ha may be comparatively lower than in state-run PAs in keeping with the lower intensity of management in these areas, the distribution of locally borne conservation costs needs to be fully understood. These costs not only entail management but also opportunity costs such as losses of harvesting or access rights. There is evidence that such costs are unevenly distributed with poor members of local communities bearing a disproportionately high share (e.g. Franks, 2008).

Success depends not only on the ability to generate enough income and use it wisely but also on the share of income which the state allows communities to retain in the first instance which can vary substantially (e.g. Namibia which allows full retention while the Tanzanian system does not and has been criticised as unfair to local communities).

6. Impacts of biodiversity finance on the ground

Do financing mechanisms show impacts on the overall situation in/around a PA, in addition to their (hopefully positive) effect on the conservation budget? More and less direct impacts can be conceptualised in four areas:

- **Financial Impact:** What is the financial contribution of (new) financing mechanisms to a conservation programme or to a PA?
- **Impacts on conservation management:** Do financing mechanisms strengthen or weaken management capacity?
- **Impacts on biodiversity:** How do activities that are linked to specific financing mechanisms affect biodiversity?
- **Impacts on the local population:** Do conservation-related funding flows and financing mechanisms influence land use incentives, livelihoods or socio-cultural context?

Findings from case analysis

6.1. Financial impacts

We hypothesized: Financing mechanisms imply different set-up and operating costs – only those mechanisms thrive for which there is a considerable net pay-off.

From the cases we can conclude that costs differ not only for different types of mechanisms, but also for the same mechanism, implemented in different contexts. While there are important successes, new mechanisms have in some places either failed or not taken off, even if funding was made available for their initial set-up. The main reason: New mechanisms tend to require new skills, institutions, partnerships, markets, and regulations – this takes years to decades to develop. Therefore, careful adaptation of the design of a mechanism to its operating environment is required. The far-reaching pre-requisites are rarely fully anticipated.

Furthermore, net-financial pay-off is not the only criterion – and perhaps not even the principal one – for maintaining a mechanism. CTFs can illustrate this. CTF benefits go far beyond generating additional funds. Their role is also to bundle separate funding flows for more coherent spending, to stabilise funding volatility and to provide incentives for improving PA management performance. Nonetheless, set-up costs of CTFs are often high and ideas on pooling management tasks across various CTFs have been proposed (see Winter, 2015).

- Over the last decade, the **Mauritanian** CTF BACoMaB has incurred set-up costs of € 750.000, plus years of technical support from German development cooperation. CTF disbursements began in 2015 and will likely only serve two PAs. In 2016, disbursements to the principal national park (PNBA) reached 225,000€, which corresponds to ~15% of regular government budget allocations and to ~5% of total funding for the PA. While this contribution is seen as critical (as it ensures cost coverage of the PA's environmental monitoring system), it comes at considerable CTF set-up and operational costs.

On the other hand, trust funds might fail if they are embedded in weak institutions and do not achieve key stakeholder buy-in.

- In **Cameroon**, the Sangha Tri-National (TNS) trust fund has an explicit focus on good governance from the design stage onwards, including setting in place transparent and effective financial and institutional management systems as well as engaging different interest groups and stakeholders. Conversely, the fact that governance was not adequately considered when Cameroon Mountains Conservation Foundation (CAMCOF) trust fund was set up seems to have been a major cause of its failure. Civil society involvement was limited as four out of five 'civil society' board members were in fact retired or acting government employees, no international NGO members were included, and the selection of the chairman of the board was a political decision rather than based on skills and experience (Kupper, 2014).

6.2. Impacts on conservation management

We hypothesised: Financing mechanisms provide incentives to management capacity only in line with disbursement procedures. Two observations can be made in this regard:

Firstly, government budget allocations are rarely made in response to cost estimates of conservation action; but funding from bilateral donors or CTFs require a written application including justification and costing of measures. This promotes improvements in management and/or business plans. It thus seems beneficial to advance conditionality in financing mechanisms, provided that support is given to applicants to be able to satisfy the demands.

- Spending efficiency of **Madagascar** National Parks (MNP), a national NGO managing 42 PAs, is below its potential due to ambitious planning and limited implementation capacity. In

consequence, funds approved by the national FAPBM trust fund cannot be spent but remain blocked despite sometimes being urgently needed elsewhere. In consequence, the trust fund invests operational resources in advising MNP and PA staff on PA management performance. Bi-annual audits of conservation activities in PAs track implementation progress on the ground. On top of regular financial audits this covers environmental indicators and measurements of management effectiveness. If audit results are poor, options for improvement are discussed with Madagascar National Parks (MNP) and PA managers. Thus, audits promote learning and concrete improvements in PA management.

Secondly, efforts in improved coordination are critically important to ensure that new funding flows enhance rather than complicate conservation management.

- For example, in **Tanzania** poaching has become a major threat to PAs and co-ordinating incoming funds for anti-poaching measures has become a serious challenge. Anti-poaching efforts received significant attention from a number of donor countries, large and small NGOs as well as from the private sector that sees potential business opportunities. Purely from a co-ordination perspective, this imposes costs and takes time from government/PA authorities who need to engage with multiple parties. They also have to try to co-ordinate resource allocation and efforts among donors all of whom tend to have very specific rules about the kind of support that they can provide. Specific, often inflexible, rules and procedures around monitoring, financial management and reporting that do not match those of government cause additional difficulties.

6.3. Impacts on biodiversity

We hypothesised: The funding provided by different financing mechanisms is more or less conditional, i.e. earmarked for specific conservation action or objectives. Irrespective of such conditionality, only stable (i.e. sufficiently financed) structures can ensure conservation in the long run.

Our analysis revealed manifold (economic) incentives that enhance pressures on biodiversity, such as broader policy disincentives (see Cameroon as an example), increasing illegal activities (e.g. in some regions in Namibia and in Madagascar), uncoordinated development goals for PAs and their buffer-zones (Viet Nam).

However, biodiversity impacts of specific financing mechanisms are difficult to determine, due to limited monitoring and uncertain links between: a financing mechanism -> a conservation management structure -> an activity that is being funded -> and an actual biodiversity outcome. This problem makes it difficult to evaluate instruments and mechanisms (Bladon et al. 2014). One exception: When PA entrance fees were abolished in Ecuador visitor numbers rose sharply. Here, reduced PA income combined with rising costs, which - remaining unmet - negatively affected biodiversity.

Furthermore, the biodiversity impact of spending tends to be higher in (large) PAs that are less exposed to external pressures than in (smaller) ones located in densely used/populated regions.

- Following Diaz and Miranda (2012), PAs in **Peru** had a positive impact on forest protection, as deforestation rates have dropped in almost 40% of the zones classified PAs. A study by Fajardo et al. (2014) revealed that conservation performance in the Andes and the Coast is poor, whereas the larger and more consolidated PAs in the Amazon Region have a better impact.

We conclude from the cases that concern for unintended side effects from financing mechanisms, are mostly negligible: It is plausible to assume that – say – income from tourism will in the long run shape a PA's biodiversity differently than e.g. income from carbon offsets. However, other issues appear more influential on conservation outcomes, namely the capacity to spend funds effectively and to integrate flows from different sources or mechanisms into a coherent (and strategic) portfolio of actions and investments.

Case studies indicate considerable problems with effective spending, also within stable conservation structures. This suggests that support for institutional consolidation needs to be complemented with country-specific measures to enhance operational effectiveness.

6.4. Impacts on the local population

We hypothesised that the impact of conservation on the local population depends more on spending decisions than on the mechanism by which funding is generated/provided.

German development cooperation places strong emphasis on local involvement in conservation and in sustainable buffer zone development. This is in line with the idea that conservation should be done 'with the people and for the people'. It is also partly motivated by the assumption that local acceptance and improved socio-economic conditions in regions surrounding PAs directly contribute to lowering threats to PAs (such as encroachment) and associated conservation costs.

Case studies do not indicate that particular mechanisms have clearly stronger impacts on the local population than others. One exception: Some conservation funding (e.g. in Ecuador via the SocioBosque program, and in Viet Nam via the forest PES scheme) is explicitly used to provide financial and non-financial incentives to landholders and local communities for engaging in pro-biodiversity activities.

We found that local participation in conservation is critical across cases. Active and/or substantial (rather than symbolic) local involvement improved communication between parties, enhanced mutual understanding of the benefits of conservation and helped to harmonise project planning and development goals in and around PAs.

- In **Peru**, the empowerment of local communities and producers' organisations to become small-sized entrepreneurs generated a conservation culture and sustainable value chains, such as in agriculture or tourism. In 2014, new contract modalities enabled 41 PAs (more than half of all PAs) to generate economic benefits from allowing the use of renewable natural resources for business purposes or for livelihoods (MINAM, 2013). SERNANP (the conservation authority) promotes participatory management in several PAs, for example by means of the Voluntary Forest Wardens and Community Oversight programmes.
- In **Ecuador**, the positive impacts of PA funding on the population living within or adjacent to PAs have generally been low. According to an audit performed by the Controller's Office (Contraloría General, 2015), 37.5% of the country's PAs have no participation at all. However, in the zones supported by German development cooperation, investment projects and local development plans are being co-developed with communities.
- Even though local communities in **Cameroon** have benefitted directly from alternative livelihood activities, from funding and also from participation in PA management and planning activities in

Loboké National Park, data is missing whether this has actually led either to an improvement in their socio-economic status or a reduction in biodiversity-damaging activities.

- The FAPBM trust fund in **Madagascar** is also funding PA buffer-zone activities, including building of schools and sustainable livelihoods programmes. Improving coordination among concerned ministries and promoting joint planning such as buffer-zone-management is expected to reduce PA operating costs in the mid-term by reducing external pressures. However, there is no long-term data or baseline available to analyse this effect.
- The CBNRM programme in **Namibia** centred on Communal Conservancies, which retain all revenue from tourism and hunting. In cases where revenue potential is low, this may not be as strong an incentive for conservation; however, the principle of revenue retention is at least applied to its full potential which is not the case in many other countries.

7. The relevance of ‘innovative financing instruments and approaches’ for German development cooperation

For this section, the study evaluated four biodiversity financing instruments and approaches which are currently debated and tested in the context of developing countries, but have so far not been applied or not yet yielded sufficient experiences in German development cooperation. The four approaches were selected based on an initial scoping of the most recent literature on conservation financing approaches and taking into account the specific interests raised by GIZ and KfW. The evaluation of the four financing mechanisms and the findings in this section are based on expert interviews and the review of relevant documents and online sources. Interviews and consultations were conducted with two GIZ experts, three KfW experts, and nine external experts on biodiversity financing. The complete report on the four mechanisms is available from GIZ.

7.1. Biodiversity offsetting

It is useful to distinguish between *regulatory offsetting systems* under which developers (e.g., of infrastructure or mining projects) are legally obliged to utilize compensatory mechanisms for biodiversity impacts, and *voluntary offsetting schemes* within which developers provide compensation beyond or outside legal requirements. Regulatory mechanisms with legal obligations may or may not involve market structures, labeled for instance as mitigation banking, habitat banking, species banking, or wetlands mitigation (Hrabanski 2015). Regulatory offsetting systems are common in developed countries but not in developing countries. Although most developing countries have some form of environmental compensation rules in their legislation (typically connected to EIA or concession procedures), these typically do not include specific rules regarding biodiversity, let alone a ‘no net loss’ policy. Currently, biodiversity offsetting in developing countries mainly consists of voluntary commitments by international companies, for instance from the mining and oil sector, and they are usually implemented in collaboration with international conservation NGOs. Voluntary commitments

usually follow requirements of the development bank that is funding the investment (according to IFC standards and/or Equator Principles) or aim at reducing reputational risks and improving stakeholder relations. Catalyzed by the establishment of the Business and Biodiversity Offsets Programme (BBOP), the notion of “biodiversity offsets” has experienced a strong momentum in policy and academic debates over the last decades. BBOP and its members from companies, financial institutions, government agencies and civil society organizations are testing and developing best practice on biodiversity offsets and conservation banking worldwide. An additional push for biodiversity offsetting can be expected from recent pledges for *zero net deforestation* made by several corporations in the consumer goods sector, including Unilever¹ and Proctor and Gamble². Several global initiatives and public-private partnerships, such as the Tropical Forest Alliance 2020³, aim to end commodity-driven tropical deforestation for major supply chains such as palm oil, paper, and beef.

Interviewed experts generally argued in favor of promoting offsetting mechanisms in developing countries, since “economic development will go on anyway” and they agreed that biodiversity offsetting has a high potential for enhancing private sector investment in conservation, including for PA financing. Biodiversity offsetting needs to be treated with caution, however, due to inherent pitfalls and challenge to achieve “no net loss” or even net gains for biodiversity (see e.g. Goncalves et al. 2015). Care has to be taken that offsetting remains at the end of the mitigation hierarchy, the limits to which components of biodiversity can be offset need to be clearly defined, and a precautionary approach needs to be taken. Limits can involve no-go zones, for instance habitat to critically endangered species or sacred land to indigenous, and the definition of non-offsetable thresholds for critical ecosystem types. There is a risk that offset policies become largely symbolic and yet neutralize environmental concerns by a false perception that impacts were being adequately compensated (Pilgrim and Ekstrom 2015). Moreover, regulatory offsetting systems should build on or complement – and not replace - other functioning instruments dealing with environmental impacts, such as fines, licenses, liability schemes, and insurances.

KfW as a development bank is naturally more inclined to support the creation of *voluntary offsetting mechanisms*, in particular for their investments through German financial cooperation. KfW is indirectly involved in offsetting by supporting BIOFUND, which develops offsetting schemes in Guinée, Uganda, Mozambique and Madagascar. Several interviewees expressed strong opinions that (conservation) trust funds, the main financing vehicle for conservation in German financial cooperation, have high potential to manage (voluntary) offsetting mechanisms. Trust funds have proven effective both for fundraising from different sources and for managing funds for targeted conservation actions. Their governance structures allow involving broad range of stakeholders from public and private sector and their operations can be run in more flexible and adaptive ways than government agencies (comparable to “business units”). All of these characteristics make them highly suitable for managing offset funds, as an intermediary between the companies that provide offset funds and the implementing agencies that undertake conservation actions. It may hence be worthwhile to assess opportunities of financial cooperation trust funds to further collaborate with ongoing initiatives on biodiversity offsetting mechanisms. In the past, KfW had participated closely in the offsetting debate and institution building around BBOP, but has more recently reduced its

¹ <https://www.unilever.com/sustainable-living/transformational-change/eliminating-deforestation/>

² <http://us.pg.com/sustainability/environmental-sustainability/policies-practices/palm-oil>

³ <https://www.tfa2020.org/>

engagement due to a perceived lack of progress (“round table nightmare”). In light of the importance of lender requirements for voluntary offsetting, and the scope of KfW involvement in financing development projects, it could consider re-entering and helping further shape and safeguard international offsetting requirements. In cases with particularly important investment activity through financial cooperation, it could play an active brokering role when new investments are planned and implemented (as frequently done by the World Bank).

To our knowledge, German technical cooperation, namely through GIZ, is so far not involved in offsetting mechanisms. And yet, it has a potential role in supporting and capacitating partner countries in particular towards developing *regulatory offsetting systems*. Such work could involve

- critically assessing the country-specific potential and willingness of government for the introduction of regulatory offsetting mechanisms,
- promoting dialogue and “introductions” between potential offset funders, conservation agencies and host governments,
- assistance in building capacity to understand the potentials, pitfalls, and enabling conditions,
- (if government indeed wishes to pursue offsets) assistance in establishing policies that adequately build on existing regulation to follow the mitigation hierarchy and aim at no net loss of biodiversity,
- facilitating technical knowledge-exchange, for instance for mapping biodiversity and ecosystem services and cross-country learning, sharing of international best practice and lessons

7.2. Eco- or Green Funds

Private enterprises or projects in the areas of sustainable agriculture, fisheries, agro-forestry, eco-tourism, or green infrastructure can have a significant positive conservation impact, typically situated in the wider landscape outside protected areas. There is a strong need to meet the capital needs of small-scale sustainable enterprises that are too large for micro-credit, but too small or without sufficient credentials for receiving reasonable conditions by regular commercial banks (“missing middle”). In order to help those enterprises reach „investment readiness“, Eco- or Green Funds can be a useful instrument for providing necessary debt and equity finance (e.g., funds for high-risk equity in start-up phase, lenient loans with grace period and longer duration). Whereas a number of biodiversity-based venture capital and private equity funds have for some time been operating in the USA and Latin America, investment facilities in Africa and Asia remain relatively scarce. It turned out to be difficult to evaluate the performance of funds currently investing in developing countries, since there are not yet any solid results available on financial and ecological return on investment. Nevertheless, there is considerable momentum in developing such Funds. At the IUCN world congress in September 2016, a broad Coalition for Private Investment in Conservation (CPIC) was formed⁴.

Interviews and literature review revealed a long list of barriers and challenges for financing green investments with positive biodiversity impacts (e.g. Huwyler et al 2016): high project identification costs due to lack of a standardized process for tracking and evaluating investable opportunities;

⁴ <https://portals.iucn.org/congress/sites/congress/files/sessionupdates/13826-private-finance-public-good/files/922016cpic-statement-intent-final.pdf>

capacity constraint (no ‘one-stop’ shop in the market currently possessing all the skills required to identify investable projects); lack of project and management track record; unpredictability of underlying income sources; absence of collateral to reduce project risk; lack of tested and agreed conservation impact monitoring frameworks; insufficient project scalability/replicability; and lack of cash flow aggregators to bundle a diverse set of small projects into a single investment product large enough for most investors. In light of these challenges, “hybrid” eco-funds that combine a philanthropic part with a commercial investment part seem suited best to support green investments. They can build capacity of green businesses at the same time as new enterprises are funded and rolled out, thereby helping to overcome some of the structural constraints to the development (and profitability) of biodiversity-based businesses, and build a more permanent base for conservation investments to flourish and take off in the future. The non-profit part essentially allows supporting the capacity and institution building involved in “green” rural development - with all its complexities and inertia – and buffering the financial risks.

With the eco.business fund (www.ecobusiness.fund), German development cooperation has been involved in the establishment of a highly promising initiative. It has reached an investment volume of USD 41 million and aims to achieve USD 60 million until the end of 2016. Positive biodiversity impact is ensured by reliance on selected labeling/certification schemes that include a stringent biodiversity component. The biodiversity impacts cannot be directly influenced by KfW – co-designer of the fund, however, and impact assessments are not yet possible. Apart from continuing the co-management activity of the eco.business fund, KfW could (re)assess its institutional links and participation in Global Landscape Forum (www.landscapes.org), the Conservation Finance Alliance (www.conservationfinance.org), or the new Coalition for Private Investment in Conservation (CPIC)⁵ and be open and supportive to new partnership approaches, e.g., for co-financing and de-risking.

German technical cooperation has the capacity to play a valuable role in facilitating conservation related rural development and sustainable forestry; also to address the non-financial barriers to investments (technical capacity, institution building, etc.). In fact it does seem to fulfill this role already in many countries, such as, for instance, via the India Business and Biodiversity Initiative or the ASEAN-wide project on biodiversity-based products, or within the development partnership with SAP through the develoPPP.de programme for sustainable coffee production in Uganda⁶. Within GIZ, a cross-sectorial technical task force has been set up on the issue of impact investment development. With their sustainable forestry experts GIZ already participates actively in the institutional landscape on green development financing, in particular in the Global Landscape Forum but also within the European Tropical Forest Research Network (ETFRN – www.etfrn.org). The links between these efforts and biodiversity conservation could be strengthened.

⁵ In its roadmap for 2016, the CPIC is announcing a workshop for interested parties in autumn 2016: see URL https://portals.iucn.org/congress/sites/congress/files/sessionupdates/13826-private-finance-public-good/files/8302016cpic-road-map-final_0.pdf

⁶ See factsheet of the develoPPP.de-Programm, URL: <https://www.giz.de/Wirtschaft/de/downloads/giz2015-de-factsheet-sap.pdf>

7.3. Green Bonds

Green bonds are a second type of instruments with the ambition to stimulate private investments in environmentally friendly commercial activities. Bonds are a very common instrument for debt financing. They can be issued by companies, governments, or municipalities who seek debt capital to finance their activities. Bond investors look for low-risk and rather long-term investment where they receive a fixed interest rate and repayment at maturity. Many bonds are government backed, and usually rated by independent rating organizations. Over the recent years there has been a sharp increase in issuance of “Green bonds” to finance investments with a positive impact on the environment and climate. Green bonds are predominantly financing renewable energy and energy efficiency as well as sustainable transport, however, and few projects deal with Agriculture, Forestry and Ecosystems (see e.g., CBI 2015, Schneeweiß 2016). There has also been much discussion about the use of ‘forest bonds’ to finance biodiversity and ecosystem conservation, yet there appear to be no actual instances of such bonds being issued or having successfully been used to generate funds for conservation.

The main challenges for using green bonds for supporting pro-biodiversity private investments is the current lack of sufficient scale of pro-biodiversity business opportunities, and the fact that their financial returns and risk-structures rarely meet the expectations of mainstream investors. Bonds are essentially riskless investment vehicles for individual investors, and institutional investors want to make quick decisions on large volume - with a quick scan of financial and “green” return on investment. According to the KfW expert on green bonds, the main task - and core challenge for financing of biodiversity related activities with bonds - is to set up structures and standards that allow (institutional) investors to decide very rapidly on large investment volume. Therefore, green bonds are more appropriate to finance portfolios of already well-established projects, technologies, or programs. Additional challenges are the requirements of a mature bond market (e.g. in developing countries) and the legal preparedness of issuers.

Specialized units within German implementing agencies already work on green bonds. KfW is one of the leading issuers of Green Bonds, mainly for financing German renewable energy. GIZ has started an alliance with the Swedish Bank SEB towards development of Green Bonds in countries with emerging economies (Brazil, China, India, Mexico, etc.). Considering the challenges for green bond development related to positive biodiversity impacts, it seems appropriate to temper high expectations for biodiversity finance. Although immediate successes for biodiversity finance seem unlikely, bonds could in the future become useful vehicles for refinancing and/or up-scaling once well-running pro-biodiversity business portfolios are identified and tested. A close and focused exchange and cooperation among the responsible units in GIZ and KfW would certainly benefit the possibilities to use bonds as an element of biodiversity finance in future German development cooperation.

7.4. Project Finance for Permanence (PFP)

The Project Finance for Permanence (PFP) approach is based on the model used by large-scale private sector practices for organizing and financing complex, expensive, and well-defined projects. It aims to secure long-term commitments from several sources within a long-term sustainable financing strategy, where investments are to become effective simultaneously at a single closing. This means that all funds are held and only distributed when the total fundraising target is reached and all legal and financial conditions are met. PFP projects are supposed to cover large territories to avoid

piecemeal approaches and ensure biodiversity conservation at landscape level. Three large conservation projects are typically mentioned as good practice experiences (see e.g. Redstone Strategy Group 2011a): the Amazon Region Protected Areas (ARPA) for Life project in Brazil, the Great Bear Rainforest project in coastal British Columbia, and the Forever Costa Rica project, implemented President Arias's 2007 "peace with nature" initiative. PFP approaches are however gaining ground and a number of new initiatives are in the final stages of planning or early stages of implementation. Currently, projects in Peru and Bhutan are for example being initiated.

The PFP approach demands high-level political commitment. For instance, in Bhutan the prime minister now acts as champion for the national initiative. Moreover, the financing strategy typically envisions substantial international donor funding in the beginning, but subsequently gradual phasing out of donor funding until government funding fully takes over. Implementation of PFP projects rely on global conservation NGOs with the skills and important relationships, as well as sufficiently strong social standing to coordinate efforts locally, as well as a series of large international funders, typically foundations or development banks (Linden et al 2012). WWF has achieved support from large US foundations and there is currently a lot of enthusiasm about the approach. PFP was an important topic at the recent IUCN World Conservation Congress in Hawaii. Redstone Strategy Group (2011b) provide some lessons and guidance for PFP design and implementation and formulate as main recommendations to expand program scale by diversifying funding sources, to increase emphasis on political and social sustainability, to avoid compromising on conservation goals, and to set clear expectations for each major stakeholder. The approach leaves significant flexibility in modes of implementation and operations.

KfW as implementer of German financial cooperation has been involved in ARPA and is currently in discussions with WWF and other partner organizations (e.g. at the 2016 IUCN World Conservation Congress in Hawaii). In that sense, KfW is well aware of the "buzz" and strong momentum around the concept. As follow-up to this study, strategic collaboration between technical and financial cooperation could be increased to coordinate efforts in upcoming PFP initiatives. The PFP approach typically requires financial and technical cooperation in biodiversity-based development of landscapes surrounding PAs. Whereas KfW for financial cooperation, GIZ could provide valuable experience and capacities, in particular for capacity and institution building. Due to the broadness of the approach, the specific potential for technical and advisory input has to be clarified on case-by-case basis. It also needs to be clarified in terms of implementing organisations where GIZ can complement the expertise offered by the large international NGOs that take a key role in PFP initiatives (mainly WWF). The PFP initiative currently starting in Peru could be a good entry-point for testing contributions by technical cooperation to the approach and for understanding how it can be streamlined with ongoing technical cooperation projects in the country. Another follow-up to the present study could be a more detailed analysis of the conditions under which countries or regions fit to the PFP approach, which countries or regions seem particularly promising, and how the approach could complement ongoing German development cooperation work on conservation financing instruments. This would probably have to happen in close collaboration with WWF.

7.5. General findings regarding innovative financing instruments and approaches

First, the study on innovative financing approaches underpins the tendency to think biodiversity finance broader than PA boundaries. Biodiversity offsetting may offer financing opportunities for PAs, but the ambition to achieve additional biodiversity gains (i.e., beyond existing commitments and a

business as usual scenario) will often imply conservation and restoration measures outside PAs. The pro-biodiversity private investments supported by eco funds (or potentially green bonds) are typically found outside PAs, apart perhaps from eco-tourism services. The link to financing of PA systems is relatively strong in the PFP approach, yet this approach also tends to include the wider landscape.

In line with findings from the country case studies, a lesson from the interviews was that innovation for effective conservation financing does not necessarily require new instruments. Interviewees frequently mentioned that there is plenty of room for improving and spreading financing mechanisms that have proven successful in the past. For instance, conservation trust funds are a very useful vehicle, where plenty of innovations can occur in a context-specific and innovative design (e.g., with respect to modes of governance, combination of funding sources, or more efficient use of funds to meet conservation objectives). Green credit lines from national agricultural or development banks can in many countries provide the needs of pro-biodiversity businesses, but there is a need for capacitation staff and intermediaries, as well as technical assistance for entrepreneurs or farmers. Successful green credit lines may then also provide the test-ground and create the conditions for extended financing via green bonds. Public-private partnerships also continue to be a promising approach, such as for instance the initiative of Unilever together with Rainforest Alliance and other partners towards 100% sustainable tea production by 2020⁷.

The interviews revealed that the (main) implementing agencies of German technical and financial cooperation, GIZ and KfW, are already involved in all four novel financing instruments and approaches that were analyzed for this study. However, experts are scattered and there seems to be potential for more integration and collaboration of experts and within and between the two organizations. This is particularly true for including the link to biodiversity conservation (and PA financing) in ongoing efforts on innovative “green” financing. For instance, the GIZ unit dealing with biodiversity finance may want to further liaise with the team that is responsible for the GIZ/SEB strategic alliance for developing green bonds in transition economies, which in turn could share experiences with the green bonds team at KfW. The newly established GIZ internal task force on impact investment would benefit from participation of biodiversity and forest protection units. KfW and GIZ both have a long track record and experience in working with financial intermediaries, businesses, private sector partnerships, funds, etc. This knowledge should be harnessed for biodiversity. Some institutional innovation may be possible, for instance when units that traditionally worked only in conservation reach out to units that haven’t and jointly engage in strategic thinking on the opportunities for new biodiversity finance approaches, and on appropriate forms of impact and risk assessments for biodiversity impacts in the wider landscape. Finally, continued participation in international initiatives and networks that promote the development of landscape-financing approaches is advisable in order to be at the forefront of new developments and be able to identify opportunities for targeted contributions. This includes, for instances, the Conservation Finance Alliance (CFA), the Global Landscape Forum (GLF), the Business and Biodiversity Offsets Programme (BBOP), and the newly established Coalition for Private Investment in Conservation (CPIC).

⁷ See URL: <https://www.unilever.com/sustainable-living/the-sustainable-living-plan/reducing-environmental-impact/sustainable-sourcing/sustainable-tea-leading-the-industry/>

8. Conclusions and recommendations

The following overall conclusions build on findings from the 8 case study countries in Africa (Mauritania, Cameroon, Tanzania, Namibia, and Madagascar), Latin America (Ecuador, Peru) and Asia (Viet Nam), and on exchange with experts on ('innovative') financing instruments. Naturally, their relevance for orienting biodiversity finance in in other countries depends on country contexts.

A__On pursuing financial sustainability for biodiversity conservation

1. **There is a chronic financial shortage for biodiversity conservation and the financing gap is likely to widen.** All case study countries are facing increasing needs for land and natural resources, often induced by national development aspirations, agricultural intensification driven by foreign direct investments, or population growth. Overall, this implies that costs of biodiversity conservation in and around protected areas are rising, due to increasing pressures on PAs and to increasing opportunity costs of conservation, i.e. the locally foregone benefits from other land uses. At the same time government budget allocations in case countries cannot be assumed to rise or remain stable because biodiversity conservation consistently ranks lower than more immediate development needs and aspirations. So the gap is likely to widen in many countries. **Therefore, German contributions remain critical for biodiversity conservation in case study countries.**

Recommendations:

- 1.1. **Support for biodiversity conservation via German development cooperation should be increased.** Whether this support is geared to single PAs, to the entire PA-system, whether it takes a wider landscape approach (incl. PAs), or adopts a trade or value chain approach (as in anti-poaching efforts), should principally depend on an analysis of the specific intervention context (see below).
 - 1.2. **Use German contributions to negotiate increases in domestic allocations for biodiversity conservation.** While international attention already improves the visibility of biodiversity on the domestic political agenda in many countries, the German financial contribution in various cases could in some cases be used in negotiations to leverage additional national budget allocations.
2. **Financial and technical cooperation are both needed to enhance the financial sustainability of conservation efforts.** While funding shortages are critical, more money does not *per se* translate into better conservation. Case study countries differ significantly in the total financial amounts available for conservation, with e.g. Viet Nam and Peru being relatively well-equipped, and e.g. Ecuador and Cameroon struggling with substantial shortages. Yet, all of them face significant, albeit different, financing challenges. **Effective support requires a thorough understanding of the specific constraints to sustainable biodiversity financing** in a country. Beyond acute funding shortage, these constraints encompass the diversity, security and conditionality of funding flows, strategic financial planning and spending efficiency, and the enabling context for conservation. From this follows that financial and technical cooperation are both needed.

In several of the analysed cases German development cooperation is targeting critical gaps and has contributed important components to enhance the overall success of conservation efforts. Examples include reducing opportunity costs of conservation in Viet Nam, the design of a

transnational trust fund in Cameroon or the proactive strategy to deal with an anticipated reduction of ODA funding in Namibia.

Recommendations:

- 2.1. **Approach financial sustainability comprehensively and systematically by examining the various constraints and then take a needs-based approach.** In view of the dynamic settings and diversity of existing funding sources encountered in almost all of the case countries, and considering comments by several interviewees, investing significant time and resources in such an analysis and in subsequent screening of possible approaches on the basis of their ‚fitness-for-context‘ remains an important and useful approach. This is not a matter of commissioning additional studies. National experts and German advisers have profound experience and knowledge in this regard, and are best placed for conducting and keeping such an analysis updated.
 - 2.2. **For the appraisal of financial constraints, build on analyses within the CBD (financial) reporting framework, where available, or contribute to them.** Governments have various reporting commitments that are relevant for understanding financial constraints and developing strategies in response to them. Although German development cooperation has already been supporting governments also in meeting their CBD reporting commitments efforts could be increased, also benefitting future project design.
 - 2.3. **Respond to constraints by further integrating technical and financial cooperation.** This would allow to jointly pursue (i) improved absorptive capacity (including e.g. building institutions, management effectiveness and staff motivation), and (ii) direct investments in conservation action and infrastructure. How this is to be done, needs to be developed in the strategy (2.1), but limited absorptive capacity is a critical challenge across all case study countries.
 - 2.4. **Develop guidance for the systematic appraisal of financial constraints and strategy development.** Understanding and responding to constraints to financial sustainability requires knowledge and action across different policy levels and encompassing technical & financial cooperation. While there is ample literature, hands-on guidance would be useful, ensuring a systematic, time-efficient and collaborative appraisal process. Given the diversity in contexts, different factors shape the constraints to financial sustainability. Consequently, a systematic appraisal should draw on a broad range of concepts and methodologies that go beyond financial planning tools, and apply them flexibly according to country-specific information needs. Such concepts and methodologies include e.g. institutional context analysis, PA benefit assessment tools, social impact assessment of conservation, screening of opportunities for integrating development and conservation in the wider landscape. The TEEB Guidance Manual, and UNDP’s BIOFIN framework offer very relevant orientation. Such guidance should also serve to further improve the CBD financial reporting framework.
3. **In many case study countries, fundraising capacity is low.** The national structures in charge of biodiversity conservation, typically work with donors already interested in supporting them. While they have some experience in formulating funding proposals, and applying and interpreting their regulations, they lack experience in approaching new potential contributors, e.g. from the private sector. For example, the principal CTF in Madagascar has now approached one donor to organize a fundraising training for them to enlarge the donor base.

Out-sourcing fundraising to professionals in donor countries likely yields higher returns, and more quickly. However, encouraging national structures (PA authorities, CTFs and NGOs) to move from 'recipient' to 'acquisitor' of funds would yield two important benefits: (i) a mind-shift from cameralistic to results-focused spending and management, and (ii) empowerment and incentives to develop and pursue their own funding strategies, and thereby possibly opening further pathways for more diversified funding streams for conservation.

Recommendations:

- 3.1. **Offer partners training, learning exchange and technical assistance for fundraising.** The water sector, export agriculture and carbon are typical markets where conservation provides ecosystem service benefits to companies. Equip partners with the means to prevent 'greenwashing', and to look for funding that actually meets their needs.
- 3.2. **Support partners to engage in dialogue with different public and private sectors.** Encourage partners to develop narratives, and compile the necessary evidence, to communicate the importance of biodiversity conservation and of specific PAs for regional/national socio-economic development and for different public/private sectors.
- 3.3. Given that funding decisions by international companies are mostly taken at their headquarters, **consider developing an in-house fundraising support unit/taskforce for partners**, building on GIZ/KfW's quasi-global presence and large international networks.
- 3.4. **Engage more strongly in the Conservation Finance Alliance**, an international network promoting south-south dialogue and technical exchange. Encourage the participation of partners in this network.

B___On biodiversity conservation spending

4. **A disconnect between conservation planning, budgeting & implementation limits more efficient use of conservation funds.** In some cases, government budget regulations or donor ear marking of funds create difficult situations, e.g. where vehicles are available for surveillance, but staff, petrol or maintenance cannot be paid for. In other countries, financial planning is done by units not involved in implementation, and hence not sufficiently knowledgeable of local conditions (e.g. Madagascar). In multi-national anti-poaching efforts, difficult investment decisions need to be made between more or less technology-driven approaches.

In all case study countries, German development cooperation has supported the development and/or updating of PA management plans. In some countries, longer-term business plans and annual budget planning are also being supported. Such instruments can strongly enhance spending efficiency, particularly if jointly developed.

Recommendations:

- 4.1. German development cooperation can **contribute to spending efficiency by further supporting the development of conservation management and business plans.** For these plans, the different conditions of existing funding flows should be explicitly considered, e.g. by means of developing risk profiles for them. Even though more cost- and time-intensive than out-commissioned plans, the collaborative development of such plans can significantly enhance a shared understanding and buy-in from key stakeholders, including regional authorities of PA surrounding landscapes.

4.2. German development cooperation should **advise governments to allow for more flexible use of government allocations**, e.g. by promoting more results-based public budgeting, or more explicit alignment of operational and investment budget allocations with management and business plans.

5. **Enhancing conservation management effectiveness is a pre-requisite for efficient spending and hence for financial sustainability.** Frameworks exist to build staff capacity and organisational learning. In addition to conservation management planning, German development cooperation has a long history of supporting technical capacity, institutional consolidation and improvements of governance for conservation. Despite of these efforts, the absorptive capacity of conservation funding by public structures remains in several case study countries a serious constraint (e.g. Cameroon) both to conservation practice and to its longer-term funding situation.

Recommendations:

5.1. Continue the joint approach of technical and financial support, and **focus on absorptive capacity at national and at site level**, by means of capacity building, and consolidation of management structures.

5.2. In addition, consider to also explicitly **build staff motivation** to stay in the organisation and to increase performance. How this can be done is highly context specific. Options comprise financial incentives (increase in salaries, performance based bonus payments), but also public recognition/appreciation to build reputation, and increased decision power and financial management autonomy at site level to enhance ownership/identification.

6. **Past efforts on consolidating conservation structures can become obsolete, if sudden changes in the wider policy or economic context disrupt core funding flows.** This refers equally to sudden drops in funding (e.g. due to the economic crisis in Ecuador) and sudden funding increases (e.g. new players in anti-poaching, Tanzania). Likewise, the frequently changing combination of different project-based funds and more regular, but inflexible, government allocations can create situations where small financial gaps have major impacts because funding for key activities has been interrupted, as e.g. in the case of fisheries co-management in Banc d'Arguin NP, Mauritania. Thus, at times small additional money can have considerable impact if it comes at the right moment to fill new gaps.

Recommendation:

6.1. **Consider a rapid response facility for sudden funding shortages so as to secure past consolidation efforts.** Alternatively, allow for more flexible use of ODA in case of sudden changes in the intervention context. For such short-term additional funding interventions ('emergency fund'), eligibility criteria, decision procedures and exit options need to be clear. Next to maintaining critical operations for a limited period, such interventions need to be accompanied by a negotiation mandate with the beneficiary government and other donors.

C__On moving towards a landscape approach in biodiversity finance

7. **Addressing the drivers of biodiversity loss is a long-term strategy for slowing the increase in conservation costs.** Therefore conservation efforts need to expand beyond PAs and their buffer zones. Yet, in many of the case studies, sustainable conservation financing even within PAs is still a challenge, and differing competences of regional authorities and PA authorities make it difficult to reach beyond PA boundaries.

Landscape approaches to integrated conservation are well-suited to address drivers of biodiversity loss – yet they require enhanced collaboration. Food-security, climate adaptation, poverty reduction, and conservation are often interrelated policy objectives, for which integrated approaches exist, such as ecological corridors and biosphere reserves. German development cooperation has been implementing such integrated approaches, for example in Mexico, and in many PA buffer zone programmes, e.g. in Viet Nam and Côte d'Ivoire. Nonetheless, inter-agency and cross-sector collaboration often face considerable practical barriers and limited incentives. Furthermore, the related programmes build on concepts which are not mutually understood/used across sectors.

Recommendations:

- 7.1. **Shifting from funding to co-funding buffer zone investments can incentivize inter-agency collaboration.** Development and conservation investments in PA buffer zones hold important cost-savings potential, if harmonized. Beyond facilitating exchange (see below), German development cooperation can design projects and condition (co-)funding in ways that provide clearer incentives for agencies to work together.
- 7.2. **Support national partners in developing, advocating and implementing national biodiversity and climate (mitigation/) adaptation strategies.** These documents explicitly pursue integrated approaches – but they often lack sufficient backing to gain political momentum. They are prime opportunities to put comprehensive biodiversity conservation on a broader legal and financial basis.
- 7.3. **Connect conservation support with programmes in other policy areas at regional or national policy level,** including e.g. fishery, agriculture, urban development, or economic development programmes. Such linkages de facto foster the understanding and recognition that many PAs – via the ecosystem services they provide – are important contributors to socio-economic well-being (and to various policy programmes), but cannot functioning well if dealt with as isolated 'islands'.
- 7.4. **Promote private and community conservation areas to complement public PAs.** Such diversification of PA governance types (including various types of delegated management arrangements) can accommodate various conservation and development objectives (and associated financial needs) in a landscape approach to biodiversity.
- 7.5. **Promote measures for corridor development via integrated landscape planning** which include those sectors that are considered drivers for biodiversity loss (see example of project "Biological Corridor Sierra Madre Oriental" in Mexico). These measures should emphasize the need for deleting contradicting subsidies or subsidies that promote the destruction of biodiversity.

8. **Close coordination between (and among) donors and partners is pre-requisite for a landscape approach to conservation – and indispensable for efficient conservation spending.** In several case study countries, engagement of international donors is well-coordinated. Also, conservation trust funds have acted as a suitable vehicle for further intensifying coordination. In other cases, such as anti-poaching activities in Sub-Saharan Africa, the situation is less clear. Due to the high economic value of illegal wildlife products, poaching and trafficking has turned into a highly sophisticated transnational crime. Anti-poaching efforts require a combination of activities at local/regional level and of interventions along the illegal trade chain. Here, a range of organisations with different agendas are active, and co-ordination becomes paramount, as for example promoted by the German project “Combating Poaching and Illegal Wildlife Trade in Africa and Asia”.

Coordination requires trustful relationships, access to sensitive information, and the good will and ability to adapt (and seek compromise). There are trade-offs between political buy-in and openness/effectiveness of such exchange. Also, there are potential disincentives to coordinate, not only in terms of time requirements and unclear outcomes, but potentially also with regard to donor competition or political competition. German development cooperation has been reported to have a key competence in facilitating or supporting donor-to-donor and donor-government coordination in several countries.

Recommendations:

- 8.1. **Diversified formats and increased attention to more effective donor coordination** and exchange can in many countries optimize conservation spending. To tackle these challenges, existing structures should be strengthened (e.g. NBSAP committees), and new formats for needs-based coordination should be explored and facilitated, with different scopes regarding participant group, thematic foci, policy level etc.
- 8.2. **Approaches along the trade chain of critical wildlife products (such as ivory), can significantly enhance coordination** between conservation organisations and various ministries across several countries, and thereby complement existing regional/national efforts.

D___ On establishing new financing mechanisms

9. **Establishing new financial mechanisms in many instances will require new institutions, skills and new partnerships – this takes years to decades.** Only where new instruments could directly build on existing structures, were their set-up processes foreseeable – such as the buffer zone forest PES programme supported by German development cooperation in Viet Nam. Other initiatives, such as boosting PA-income from tourism in Cameroon are struggling with difficult circumstances and require substantial and prolonged support to take off the ground.

Recommendations:

- 9.1. **Before looking at a new financing mechanism, it is recommendable to focus analysis on options for improving existing instruments,** and to build on existing structures and programmes. For example, reforming an entrance fee system (to better capture visitor willingness to pay – as in Tanzania) is more promising, than to set up an entrance fee system from scratch (as in Cameroon).

9.2. Given the range of region/site specific conditions and the dynamic processes it takes to establish a new financing mechanism as part of biodiversity financing, German development cooperation should (continue to) build interventions on strategies mainly developed within the country context, and **decide on the choice and design of a new financing mechanism in view of the specific needs** for effective conservation (financial and non-financial).

9.3. **Improve analytic capacity for examining constraints to financial sustainability when planning for a new financial mechanism**, and strengthen inclusion of financial sustainability aspects in project/proposal evaluations. The required methodical guidance needs to be developed and disseminated (see above).

10. **Conservation trust funds (CTFs) are a principal financing mechanism with multiple benefits for financial sustainability.** German development cooperation is one of the principal bilateral donors to CTFs, technically and politically supporting their establishment, assuming set-up costs and contributing to their endowment funds. In addition to securing a more stable and long-term funding stream for conservation, CTFs contribute to overall domestic attention to biodiversity financing, and serve as a platform for coordinating donors. CTFs have the potential to attract further income streams (e.g. from offset payments). They are suitable mechanisms to improve PA governance and management effectiveness (e.g. Madagascar) by establishing access criteria that include administrative capacity and by inviting competitive or needs-focused proposals from applicants. While most CTFs focus on financing PAs, this mechanism is fully compatible with more comprehensive biodiversity financing in a wider landscape approach.

On the other hand, CTFs can require prolonged establishment processes until they are fully functional (e.g. in Mauritania) and their operational costs during this phase can be considerable. The appropriate involvement of government and civil society in set-up processes and governance structures is frequently a considerable challenge (e.g. Cameroon).

Recommendations

10.1. **Consider scale when establishing a new CTF.** Scale determines operational costs, return on investment and practical feasibility. Regional CTFs may serve more PAs than (sub-)national ones while economies of scale could be realized in set-up efforts and operational costs. Pooling of tasks across several CTF is another promising option.

10.2. **Co-develop CTF design within context.** The role of technical experts, civil society organizations and government representatives in the CTF structures for decision making, implementation and oversight need to be carefully balanced. For this, legitimacy and effectiveness are the guiding – albeit often opposing – principles. (Peer-to-peer) coaching can help navigate set-up processes, and the particular challenges of poor governance contexts need to be duly considered.

10.3. **Develop and use CTFs as platforms for engaging new financial contributors.** CTFs are suitable structures to approach the private sector, other ministries, and further foreign donors, because of their established quality criteria, relative political autonomy and transparency mechanisms. As a CTF typically serves several regions and/or PAs, they are also well-placed to engage in fundraising.

11. **Further innovative financial mechanisms for biodiversity conservation have variable potential for up-take within German development cooperation.** The *Project Finance for Permanence* (PFP) approach pursues long-term commitments between partner government and multiple donors on specific regions or programs. The approach typically envisions substantial international donor funding (for achieving larger scale conservation outcomes), which are gradually phased out until domestic government funding fully takes over. So far, implementation of PFP projects relies on global conservation NGOs who coordinate efforts locally, as well as on large international funders.

Biodiversity offsetting has significant potential to generate funding for conservation. For example, in Mauritania and Madagascar different compensation arrangements are in place for the oil and the mining sectors. However, care has to be taken that offsetting remains at the end of the mitigation hierarchy.

Eco- or Green Funds support private enterprises with a positive conservation impact, typically in the areas of sustainable agriculture, fisheries, agro-forestry, eco-tourism, or green infrastructure. They are thus relevant for a landscape approach to biodiversity conservation. A main barrier for using *green bonds* for supporting pro-biodiversity private investments is the fact that their financial returns and risk-structures rarely meet the expectations of mainstream investors.

Recommendations:

- 11.1. **The Project Finance for Permanence (PFP) approach could complement the biodiversity portfolio in German development cooperation.** The approach is currently gaining momentum in Brazil, Peru and Bhutan (see e.g., WWF 2016). The PFP approach typically requires financial and technical cooperation in biodiversity-based development of landscapes surrounding PAs.
- 11.2. **Establishing offsetting mechanisms has significant potential,** especially in countries with industrial development and industrial resource extraction. Given poor records in realizing the mitigation hierarchy, international standards need to be de facto implemented, for which government capacity is often weak. Financial cooperation could invest in voluntary offsetting mechanisms, in particular for their own investments. Technical cooperation can support governments in developing and implementing the regulatory framework for offsetting.
- 11.3. GIZ and KfW units are involved in the international knowledge exchange and in the development of eco funds, notably KfW with the eco.business fund. They could consider **engaging with the newly formed Coalition for Private Investment in Conservation (CPIC).**
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Sustainable financing for biodiversity conservation - a review of experiences in German development cooperation

Annex Section: Projects and case studies

10. Annex 1: Overview of selected projects

Overview of selected German development projects relevant for biodiversity financing in case study countries

TC/FC Technical cooperation/ Financial cooperation	Title	Duration	Strategy and goals
Mauritania			
TC	Natural Resources Management Programme	2014-2017	To improve sustainable management of the ecosystems and their natural resources the programme is focussing on three key areas: a) policy advice and technical and organisational consultancy to improve the effectiveness of the Ministry of the Environment; b) supporting the preservation of the marine and coastal biodiversity by making biodiversity management more professional and safeguarding the financial security of a selection of protected marine and coastal areas; and c) strengthening the decentralised management of natural resources in the agricultural, woodland and pasture areas in the south of the country.
TC	Increasing capacities for adaptation to climate change in rural areas	2014-2018	To improve the adaptation to climate change in rural areas the programme is focussing on supporting i.a. the Ministry of Environment and Sustainable Development in integrating the issue of climate change adaptation more comprehensively into the national strategy and planning processes.
FC	Investments surveillance for sustainable fishery		The fishery monitoring and surveillance project has for years used the most advanced radar surveillance techniques to help protect the fish stocks of this coastal nation against overfishing by foreign fishing fleets. By protecting the Banc d'Arguin National Park, this project also preserves the most important spawning grounds in Western Africa, and therefore the livelihoods of thousands of people.
FC	Investments in coastal		Capitalising "Banc d'Arguin, and Coastal and Marine Biodiversity Trust Fund Limited" to a) provide long-term contribution to finance operating

	biodiversity conservation		costs of coastal and marine PAs; and b) support locally adapted and eco-friendly infrastructure development.
Cameroon			
TC	Support of the transboundary national park BSB Yamoussa	2014-2017	The programme is focussing on five fields of activities: a) supporting the management of Sena Oura National Park (Tschad); b) supporting the management of Bouba Ndjida National Park (Cameroon); c) supporting transboundary cooperation; d) strengthening local and regional human resources of the transboundary National Park BSB Yamoussa; and e) development of long-term management and financial plan for the transboundary park.
FC	Program for the Sustainable Management of Natural Resources Cameroon Southwest Region		The programme aims at the conciliation of conservation of high value ecosystems and endangered species and socio-economic development of adjacent communities in and around Mt. Cameroon (Bomboko Forest Reserve, Korup National Park, Takamanda and Mone Forests) and the improvement of the livelihood situation of local communities.
FC	Fonds Tri-National du Sangha (TNS)		German financial cooperation through KfW has so far contributed a total of EUR 20.5 million to capitalise the fund, as well as facilitating technical assistance to PA management in the TNS landscape. In Cameroon's Lobéké National Park, a protection and utilisation strategy has been drawn up and is under implementation with the active involvement of PA authorities, local government, private sector and adjacent communities.
Tanzania			
TC	Sustainable Management of Natural Resources	2013-2016	Key fields of activity: a) reform of the wildlife authority; b) strengthening the district administrations in connection with the management of natural resources; c) Community-based conservation and benefit-sharing; d) strengthening the management of the Serengeti National Park and the Selous Game Reserve; e) improving the social and economic infrastructure in selected districts; and f) strengthening the clampdown on poaching under TAWA and in the districts.
FC	1) Serengeti Ecosystem Development and Conservation Project (SEDCP)		SEDCP supports the Serengeti ecosystem management project. Furthermore it works with local communities to find alternative livelihood opportunities and promote conservation through: a) facilitating village land-use plans, and developing mechanisms for rewarding adherence; b) CBNRM establishment and strengthening of good governance; c) support to Village Scouts in ensuring the protection and monitoring of CBNRM; d) investments into social and economic infrastructure and rehabilitation of feeder roads in adjacent districts; and e) supporting the establishment of Community Conservation Banks (COCOBA) to boost conservation-friendly micro-businesses.
FC	Selous Ecosystem Conservation and Development Project (SECAD).		The project finances the introduction of new management methods, infrastructure and equipment. In buffer zones, support includes community-run wildlife management areas and rural infrastructure development.

Namibia			
TC	Biodiversity-Management and Climate Change	2012-2016	Aiming at diversifying and securing the livelihoods of local users of natural resources by coherent implementation of biodiversity and climate-related policies, strategies and practices the project is supporting: a) formulation and implementation of environmental policy, b) Community-based natural resource management under changing climate conditions in selected areas; and c) cross-sectoral mainstreaming of biodiversity, adaptation to climate change and a green economy.
TC	Resource Mobilisation for Effective Implementation of the Updated Biodiversity Strategy	2013-2017	The project focuses on three priority areas to achieve the project objective: a) Natural capital accounting – working with the World Bank's Wealth Accounting and the Valuation of Ecosystem Services (WAVES) project on natural capital accounting; b) Resource mobilisation – aiming at a resource mobilisation strategy, the project works closely with the United Nations Development Programme's Biodiversity Finance Initiative (BIOFIN); and c) skills development – by establishing a network of environmental economists that offers customised training sessions, as well as an enhanced training of environmental economists at Namibian universities.
FC	Integrated National Park Management in Namibia		Current financial cooperation in natural resource management focuses on supporting: a) the development of National Parks in Namibia by issuance of a financial grant to co-finance park management infrastructure and park equipment as well as management and tourism development plans; b) the Kavango Zambezi Transfrontier Conservation Area through the issuance of a grant to co-finance the development of park infrastructure, train park staff and support various community livelihood projects as well as to enhance human-wildlife conflict mitigation measures; and c) the Community Forestry Project which provides support to the development of forestry for livelihoods.
Madagascar			
TC	Conservation and sustainable use of natural resources	2004-2017	The programme is working in three regions in Madagascar (Diana, Boeny and Atsimo-Andrefana) with activities being carried out in four areas: a) supporting sustainable value chains for tourism and honey production; b) expansion and professionalization of the biomass energy value chain; c) strengthening of the political, institutional and legal framework for sustainable use of natural resources; and d) integration of environmental and social sustainability aspects into small-scale mining.
FC	Investment Fund Madagascar National Park (Phase II + III)	2014-2017	Support of Madagascar National Park (MNP) in implementing by investing in operation and infrastructure to a) increase management capacity of MNP; b) tap the touristic potentials of PAs; and c) small-scale development support in PA buffer zones.
FC	Co-financing the capitalisation of the 'Foundation for Protected Areas and Biodiversity'	2015-2020	Increasing capitalization will augment the foundation's capacity to increasingly cover gaps in the operating costs of individual parks and MNP (it is already making up 30% of total MNP funds for period 2016 to 2020) and support capacity building of PA and MNP management staff.

Viet Nam			
TC	Conservation and sustainable use of biodiversity and ecosystem services of forests in Viet Nam	2013-2017	The programme works in three main areas: a) Legal framework – by advisory support for the drafting of legal documents, including for conservation-oriented financing mechanisms (payment for environmental services, PFES), protected area management, and sustainable forest management; b) Development of institutional capacity – by assisting partner ministry in implementing the National Capacity Development Plan for Protected Area Management, and c) Timber legality - advising partners within the context of FLEGT negotiations, including the design of timber legality assurance systems and strengthening the capacities of the verification authorities.
FC	Integrated nature conservation and sustainable management of natural resources in Phong Nha-Ke Bang National Park Region	2007-2016	The project is a cooperation arrangement involving the Provincial People's Committee of Quang Binh, as well as GIZ and KfW development bank. It works in the following priority areas: a) Biodiversity monitoring; b) Biodiversity-friendly livelihood models; c) Transboundary cooperation; and d) Policy advice.
FC	Supporting sustainable forest management for biodiversity conservation and greenhouse gas reduction		Biodiversity conservation, climate change mitigation and livelihood support by protecting and promoting sustainable use of forest ecosystems in selected sites of Viet Name provinces Yen Bai, Lai Chau, Lao Cai und Ha Giang: a) developing forestry management systems for natural as well as commercial forests to support conservation efforts and local livelihoods; b) co-developing measures for biodiversity protection with local population.
FC	Prevention of Deforestation, Forest Degradation and Leakage Effects in the Border Area of Central Viet Nam and in the South of Laos for long-term Maintenance of Carbon Sinks and Biodiversity	2011-2016	The project partners are developing and putting into practice a sustainable management plan for a forested area of roughly 220,000 hectares, which consists of four protected areas and two connecting corridors. The project is improving monitoring of the corridors and provides training to relevant institutions in effective management of protected areas. Local administrations are also learning how mechanisms for reducing emissions from deforestation and forest degradation (REDD+) work, how they can develop appropriate project outlines and how to determine the carbon stocks of the forests and track changes to them. Furthermore, the project is restoring areas of natural forest in other forest corridors in the border area between Viet Nam and Laos through reforestation, enrichment planting schemes and sustainable forest management.
Peru			
TC	Co-Management Amazon Region Peru (CoGAP)	2013-2017	To support efficient co-management, the project focusses on four areas: a) establish a financial basis for the representatives of the local population (ECA) and improve cooperation between the co-management actors; b) develop context-adapted and culturally appropriate instruments to improve nature conservation and to be applied by the institutions and organisations participating in the co-management; c) promote sustainable value chains for forest products in the buffer zones; and d) embed co-management by sharing partners experiences, disseminating the improved co-management concept as an effective

			nature conservation approach and feeding it into the nature conservation reform process.
TC	Contribution to the environmental objectives of Peru (ProAmbiente)	2014-2016	ProAmbiente is implementing the "Contribution to the environmental objectives of Peru" programme aimed at achieving environmental objectives derived from international covenants signed by the country, related to sustainable use and conservation of ecosystems, for the protection of biodiversity and mitigation and adaptation to climate change; which are expressed in national policies, strategies and plans implemented via local and regional development plans
FC	PAN III / PROFONANPE II		Contribution to conservation trust fund
FC	PROFONANPE	2000-2005	Improvements in infrastructure and equipment sought to improve monitoring and achieve more effective law enforcement in six Peruvian protected areas. The project agency was PROFONANPE, the Peruvian fund for protected areas, with SERNANP, the official conservation authority within the Ministry of the Environment, in charge of actual implementation.
Ecuador			
TC	Biodiversity, climate change and sustainable development (ProCamBio)	2013-2017	The project supports decision-makers and institutions in relevant sectors, at the national, regional and local levels, in developing and executing strategies for the sustainable use and valorisation of biodiversity. In this way, it contributes to improved coordination and communication between the various state authorities and civil society. The programme's four areas of activity are: a) Sustainable production systems; b) Incentive models; c) control and monitoring models; and d) mitigation and adaptation to climate change.
TC	Program for the protection of biodiversity, forests and climate change mitigation and adaptation	2013-2017	The Sustainable Development of the Yasuní Biosphere Reserve programme is being implemented in conjunction with the Ecuadorian Environment Ministry as part of a special programme focused on the Yasuni Biosphere Reserve. The main areas of work are: a) Nature conservation; b) Sustainable agriculture and forestry; c) Training on biodiversity conservation; and d) Spatial planning and adaptation to climate change.
TC	Strategies for ecosystem-based adaptation to climate change in Colombia and Ecuador	2014-2018	The project supports national and local authorities in Colombia and Ecuador with integrating the EbA approach – for ecosystem-based adaptation to climate change – into relevant policies, plans and strategies. Work is being undertaken in four fields of activity: <ul style="list-style-type: none"> a) EbA measures are being planned and implemented in cooperation with the project partners; b) National and local authorities, communities and other stakeholders gain the knowledge required to understand the impacts of climate change on their daily lives and to increase their resilience, for instance through individual or institutional training; c) Public authorities, private sector companies and communities outside the project regions incorporate approaches based on EbA into their planning; and d) project's progress, results and successful models are collated and disseminated both nationally and internationally.

FC	FAN CTF	Contribution to conservation trust fund
FC	FAN Galapagos Invasive Species Fund (FEIG)	Contribution to conservation trust fund

11. Annex 2: Case studies

Country	Author
Vietnam:	Lucy Emerton
Cameroon:	Lucy Emerton
Namibia:	Hugo van Zyl
Tanzania:	Hugo van Zyl
Madagascar:	Christoph Schröter-Schlaack
Mauritania:	Augustin Berghöfer
Peru:	Alonso Moreno Diaz
Ecuador:	Alonso Moreno Diaz

Supplementary case:

Côte d'Ivoire: ValuES project – www.aboutvalues.net

Sustainable financing for biodiversity conservation - a review of experiences in German development cooperation

Case study: Viet Nam

Author: Lucy Emerton

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List of Acronyms

CBD	Convention on Biological Diversity
DoNC	Department of Nature Conservation
FSSP	Forest Sector Support Programme
GEF	Global Environment Facility
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH
KfW	Kreditanstalt für Wiederaufbau
MARD	Ministry of Agriculture and Rural Development
MOF	Ministry of Finance
MONRE	Ministry of Environment and Natural Resources
MPI	Ministry of Planning and Investment
NSAP	National Biodiversity Strategy and Action Plan
PA	Protected area
PFES	Payments for forest environmental services
PPC	Provincial People Committee
REDD	Reducing Emissions from Deforestation and Forest Degradation
VCF	Vietnam Conservation Fund
VND	Viet Nam Dong

1 Overview

Biodiversity and protected areas in Viet Nam

Viet Nam is one of the world's ten most biologically diverse countries, containing about ten percent of the world's species, including over 1,500 that are globally threatened, 49 critically endangered, 82 endangered and 166 vulnerable (UNDP 2010). Until recently, protected areas (PAs) were primarily taken to include Special Use Forests (one of three forest management categories in Viet Nam, the others being protection and production forests). However, in 2009, the Law on Biodiversity extended the concept of "conservation areas" to cover national parks, nature reserves, species/habitat conservation areas and landscape conservation areas in a variety of terrestrial and aquatic biomes.

As of May 2015, the government listed 164 existing forest PAs covering an area of 22,700 km² or 7 per cent of the country (of which five are managed centrally by the Ministry of Agriculture and Rural Development (MARD), while the rest are managed at the decentralised level by Provincial People Committees (PPCs)), nine gazetted and seven proposed marine and coastal PAs covering a total area of just over 3,300 km² including 1,600 km² of sea, and 45 inland water PAs covering an area of 1,700 km² which are yet to be established (MONRE 2015).

Resource mobilisation for biodiversity under the CBD

The Ministry of Natural Resources and Environment (MONRE) is the national focal point for the Convention on Biological Diversity (CBD) as well as (through the Biodiversity Conservation Agency) the focal point for the CBD's Programme of Work on Protected Areas. It should however be noted that all PAs are under the jurisdiction of MARD or PPCs.

The State budget continues to lie at the core of resource mobilisation biodiversity under the CBD (MONRE 2014). The NBSAP to 2020 proposes a plan of financial mobilisation which also draws on a number of other supplementary sources, including self-mobilised funds, payments for ecosystem services, contributions from the private sector and international assistance (MONRE op. cit.). Particular emphasis is given to encouraging and mobilising community participation and business-sector investments, investigating possibilities for the establishment of a biodiversity conservation fund, and developing mechanisms to diversify private sector and market-based investment sources (CBD 2013):

Funding to biodiversity has increased substantially over recent years (MONRE 2014) with government spending now accounting for approximately 0.4 per cent of the total national budget (MONRE 2015). In 2006 it was reported that government budgetary allocations to National Biodiversity Strategy and Action Plan (NBSAP) implementation totalled around USD 2 million, around USD 6.5 million came from bilateral and multilateral donors, and some USD 0.5 million was channelled through international NGOs (VEPA 2006). By 2009, the total reported figure had reached USD 20 million (VEA 2009). Germany is a key donor to biodiversity and CBD implementation in Viet Nam. According to OECD aid data, the value of German bilateral financing to biodiversity rose from less than USD 250,000 in 2003 to more than USD 6 million in 2014, and expanding from a 14 per cent to a 41 per cent share of all overseas development assistance (OECD 2016). An initial allocation of USD 12.12 million for biodiversity focal area activities was made to Viet Nam under GEF Cycle 5 (2010-14), of which 99.9 per cent or USD 12.11 million was utilised, and a sum of USD 13.17 million has been allocated under the GEF-6 replenishment for the period 2014-18 (GEF 2016).

Focus of the case study

Germany has a long history of support to biodiversity and PAs in Viet Nam. For more than 20 years now, German financial cooperation has been active in the forest sector, with KfW-10, the tenth forestry support project, is currently underway. While the initial focus was more on forest rehabilitation/reforestation and production, forest conservation and protected area management have been increasingly incorporated. Meanwhile, German technical cooperation (via GIZ) has been one of the key development assistance organizations supporting community forestry projects in Viet Nam since the mid-1990s. Starting in 2005, the Vietnamese German Forestry Programme spearheaded the piloting of payments for forest environmental

services (PFES) in the country whereby a number of PAs receive annual payments, and GIZ has continued to support the development of models for PA financing and effective management through studies and on-the-ground activities under the 2010-2013 “conservation of biodiversity in forest ecosystems in Vietnam” and 2014-2017 “conservation and sustainable use of forest biodiversity and ecosystem services” Project. Through the 2007-2016 Integrated nature conservation and sustainable management of natural resources in Phong Nha-Ke Bang National Park Region project, GIZ also supported in Phong Nha-Ke Bang National Park/World Heritage Site, with a particular focus on biodiversity-friendly livelihood models and the creation of alternative income opportunities.

This case study focuses primarily on experiences and lessons learned in forest and PA financing drawn from these projects, especially KfW support to the development of novel payment and incentive schemes for forest plantations and management through the use of “savings books”, and GIZ work on PFES and related sustainable PA financing mechanisms.

2 Status of PA financing

PA funding flows and gaps

The financial resources available to PAs in Viet Nam are clearly prescribed in the law, which specifies three sources: the State Budget, income from the supply of forest environmental services, and support from domestic and foreign organisations and individuals. In 2010, PA funding was estimated to total some VND 500 trillion, worth around USD 28 million at today’s prices⁸ (UNDP op. cit.).

It is important to remember that Viet Nam is a “socialist-oriented market economy” which retains a high degree of state intervention and control. The vast majority – around 90 per cent – of PA funding is thus channelled through the public budget, including a large portion of external grants as well as many self-generated revenues and income from private and even market sources (Emerton et al. 2011). Total government funding has been calculated to average USD 1,200/km²/year, of which recurrent spending comprises just over a third or USD 410. These figures measure up well with other countries at comparable levels of development and with similar economic conditions, and even with PA spending in Western European and North American countries (Emerton 2003, 2006). Viet Nam’s PA funding situation can be considered to be somewhat unusual in several ways, because of the wide range and relatively high levels of public funding streams (see below) and also due to the prominent role of capital investment spending (MONRE op. cit.). It is estimated that more than half of PAs have higher budgets for equipment, infrastructure and construction than for operational expenditures (UNDP op. cit.).

Regular state budget allocations to PAs have registered a steady increase over the last decade or so. Overall, public funding to centrally-managed PAs doubled in real terms between 1999 and 2006 and increased almost fourfold for Provincially-managed PAs (Emerton et al. op. cit.). Other sources of PA finance have shown a greater fluctuation over time, as donor interests have waxed and waned and as various national programmes and special funds have been created and run their course. It is interesting to note that the relative share of different sources in overall PA funding has however remained remarkably stable.

The public budget

State budget allocations to PAs can take a number of forms. Looking at funding patterns over the last 15 years, only around a third comes from the regular annual budget allocations that are made on the basis of the ten-year “master plans” and annual workplans that each PA must develop (Emerton et al. op. cit.). Capital investment projects may also be funded under “non-regular” allocations, special projects and funds, national target programmes, and loans for revenue-generating investments. Just under a tenth of PA budgets since 2001 came from irregular investments, and more than half was provided from special programmes and funds.

⁸ All PA funding figures have been converted to 2016 prices.

“Special funds” remain outside regular State Budget planning processes, and administer (usually earmarked) funding from government, international donors and other domestic sources. For example, the Vietnam Conservation Fund (VCF) was set up as a sinking fund in 2007 and capitalised with contributions from the Government of Viet Nam, the Global Environment Facility (GEF) and European Commission. Worth a total of USD 17.5 million, by the end of 2010 it had disbursed more than USD 5.5 million’s worth of sub-grants to 60 PAs to finance the operational costs of on-the-ground conservation activities. National target programme funds are directly allocated by the Ministry of Finance (MOF), and are public investments which are intended to support activities which achieve one or several key development targets across several regions or territories, over a specific period. Over the years, some have acted as a major source of funding for biodiversity conservation and sustainable use, most notably Programme 661 (the Five Million Hectare Reforestation Programme), Programme 135 (Reducing Poverty in Mountainous and Ethnic Minority Areas) and Programme 147 (Support for Development of Forest Plantations).

In Viet Nam, PA management boards are categorised as State Organisations, set up as “revenue-generating economic public-service units”. This means that they are permitted to carry over unused funds into the next fiscal year, to obtain bank loans and ODA resources, and to benefit from certain tax reduction and exemption privileges. They also have the capacity to generate part or all of their recurrent budgets from the revenues raised from economic activities. However, only a minority of PAs are able to earn self-generated revenues, primarily from tourism-related activities. Although various other public revenues are earned from the use of PA lands and resources, they are not always retained by PA Management Boards. For example, PA entry fees are mostly collected by local authorities, and fines and penalties levied on illegal land and resource uses and environmental infringements in PAs accrue as revenues to District Forestry Branches or other agencies.

Forest management and protection contracts

Programme 661, set up in 1998, was the first nation-wide attempt to generate direct payments to local communities for undertaking conservation activities (and, to a large extent, also laid the ground for payments for forest environmental services to be developed, a decade or so later). Contracts are signed with a household, group of households or village to protect a forest. In return, cash remuneration is provided according to fixed per hectare cost norms. A series of German-funded smallholder afforestation projects have worked alongside Programme 661 since the 1990s, and have supported the development of innovative financing mechanisms for community and private forest management. These involve both the allocation of use rights over forest land (confirmed by “Red Book Certificates”) and the provision of cash and in-kind support to carry out forest management and protection activities on this land. Participating households receive “green savings books” at the Bank for Social Policies, with interest-yielding credit balances reflecting the area of forest land that is being managed and the cost norms that have been established for particular activities and operations. Initially focused on production forestry, these arrangements have recently been scaled up to cover protection activities in and around forest PAs such as patrolling and monitoring.

Payments for forest environmental services

The 2005-14 Vietnamese German Forestry Programme made a substantial contribution to biodiversity financing in Viet Nam through supporting the development of PFES (payments for forest ecosystem services). This support works mainly to assist forest-adjacent communities. PFES were piloted for the very first time in Viet Nam starting in 2008, in Son La Province (with German technical support) and Lam Dong Province (under a USAID-funded project). The two provincial pilots established a model whereby key commercial ecosystem service beneficiaries (most notably downstream hydropower plants, water supply utilities and tourism companies) make cash payments (calculated per unit of electricity generated, water consumed or as a percentage of earnings) which are paid on a per hectare basis to “forest owners” (including individuals, households, communities, enterprises and PA management boards). By the end of 2010, a national decree had been set in place, scaling up PFES across the whole country (Thuy et al. 2013).

Forest carbon finance

Forest carbon finance represents an emerging, although as-yet relatively undeveloped, area of biodiversity financing in Viet Nam. While a number of forestry projects have been developed under the auspices of the Clean Development Mechanism, these so far focus only on production (not protection) forest landscapes. Several voluntary carbon projects are under development or implementation which target forest ecosystem restoration and conservation (including the “CO2OL Biodiversity Project” in Kon Tum Province, which includes a German company as one of the project developers, and has received support from German technical cooperation). German development cooperation has also supported REDD+ readiness activities in Viet Nam. At least three conservation-related REDD+ pilot projects are under preparation, in Lam Dong and Binh Phuoc Provinces, and around the buffer zone of Cat Tien National Park (UN-REDD 2010).

Private sector and corporate finance

Over the last few years, the private sector has been taking an increasingly active role in funding biodiversity conservation. For example under a collaborative programme with WWF, Coca Cola has since 2008 been supporting activities aimed at protecting Tram Chim National Park and supporting sustainable livelihoods among communities living in its buffer zone. Holcim Ltd., an international company specialising in the manufacture and distribution of cement and aggregates, has since 2007 been providing funding to biodiversity conservation in and around Kien Giang Man and the Biosphere Reserve. These activities are currently being followed up with the initiation of a biodiversity offset programme, aiming to compensate for the unavoidable impacts of limestone quarrying and clay extraction by supporting the establishment of two new nature reserves (IUCN 2010). A biodiversity offset assessment has also been carried out for the Long Son Petrochemical complex in the in the southern province of Ba Ria-Vung Tau.

3 Key financing constraints to effective PA management

Overall funding to PAs is relatively high, but many PAs lack budgets for core conservation activities

While there is broad consensus that a lack of funds poses a critical constraint to effective PA management (see, for example, Emerton 2006, ICEM 2003, UNDP op. cit., WWF 2002), it is important to see this problem in context. At the aggregate level, the amount of financial resources being spent on PAs and biodiversity conservation in Viet Nam is actually relatively high, especially when compared to per hectare spending in other developed and developing countries. It is clear that it is not the overall level of funding that is the major concern, but rather how budgets are planned, administered and spent (Emerton 2003). Viet Nam’s PA system does not necessarily suffer from a shortage of funding *per se*, but many PAs face a critical lack of resources to cover the costs of priority conservation activities. This is an extremely important point: for many PAs in Viet Nam, spending on staff salaries and infrastructure in key (often high profile) locations tend to dominate PA budgets, leaving few resources available for essential equipment, activities and investments or for other sites (such as more remote ranger stations). Some of the key reasons for this are investigated below.

Financial resources are unequally distributed between PAs and over time

While, overall, average spending is relatively high, there is significant variation in funding between different PAs. A review of funding flows to 16 PAs carried out in 2011 for example found that almost half of total funding was allocated to just three MARD National Parks and that, at the site level, budgets ranged from a low of several thousand USD to a high of several million a year, or from less than USD 100/km² to almost USD 3,000 (Emerton et al. op. cit.). The reality is that a small sub-set of PAs receive the lion’s share of funding, and that the majority rely only on a minimum level of basic state budget allocation. These discrepancies are particularly pronounced between central and Provincial PAs, even though these designations do not reflect any difference in priority or value as regards biodiversity conservation⁹. Government funding to MARD-

⁹ Centrally-managed PAs are those that overlap Provincial boundaries.

managed PAs is, at an average of USD 1,900/km²/year, more than two and a half times as high as for Provincially-managed PAs of only USD 700 (Emerton et al. op. cit.). The differences are even more pronounced for external projects and grants, with spending on Provincial PAs averaging just USD 45/km²/year as compared to USD 360 for those managed by MARD.

At the same time, while regular annual budget allocations remain fairly stable and predictable (and have been increasing steadily over time), other funding sources are highly variable. Externally-funded projects and irregular state budget allocations comprise the most variable components of PA funding (Emerton et al. op. cit.). There is also often uncertainty in budget allocation over the course of the year. Although annual budget plans are generally prepared and submitted in October of the previous year, figures are adjusted several times, disbursements are often delayed, and funds may only actually be received and spent towards the end of the financial year (Emerton op. cit.). These factors combine to make it difficult for PA managers to take a long-term financial planning perspective, or to benefit from any degree of security about funding from one year to the next (ICEM op. cit.).

PA budgets are disconnected from management plans and conservation priorities

As is the case with all government agencies in Viet Nam, the management and administration of PA funds is regulated by the Budget Law and Circulars of the MOF, while budget planning and negotiations are overseen by the Ministry of Planning and Investment (MPI). While these procedures are well-established and widely-understood, there remains a fundamental disconnect between the expenditure categories that are used to prepare and submit annual budget requests to MPI and MOF, and the more activity-based or results-based frameworks that are typically applied in PA conservation planning at the site level. It is also worth noting that there is often little communication between the staff and units that are responsible for planning and delivering conservation activities, and those that are responsible for preparing and administering PA budgets. It is interesting to note that this institutional separation has sometimes acted as a constraint to German development cooperation projects. For example, even though PA financing forms a core area of support under the current “conservation and sustainable use of forest biodiversity and ecosystem services” project, budget planning and allocation issues are dealt with by the Planning and Finance Departments of MARD and by MoF and MPI, not by the project’s counterpart agency DoNC.

In line with the expenditure categories and cost norms that are proscribed for public financial planning, PA budgets tend to focus on staff, travel and office running costs, making it difficult to integrate the operational requirements of on-the-ground conservation management activities. Furthermore, the cost norms that are applied to calculate recurrent expenditure estimates are often outdated, and do not accurately reflect actual prices and needs (Emerton op. cit.). As a result, the amount of funding received by a PA does not always reflect either its ease of management, its needs and priorities for action, or its value in conservation terms. At the same time, the line items and expenditures that are submitted and approved as part of PA budgets rarely correspond to the costs of delivering on the activities that are laid out in conservation management plans.

Capital budget needs are largely set at the time that a PA is established (at which time an investment plan must also be prepared), and are – like recurrent budget items – guided by various standardised norms. Although capital budget allocations to PAs are sometimes substantial, they do not always reflect the highest priority equipment and facilities in conservation terms. The efficiency of investment is low, usually focusing on infrastructure construction rather than on the equipment that is needed to carry out scientific research, management and protection activities” (MONRE op. cit.). The disproportionate focus on built infrastructure is also linked to the budget delays noted above: when funds are only available at the end of the financial year and must be disbursed quickly, it is often easiest to spend on infrastructure, roads and construction (Emerton et al. op. cit.).

PA and buffer zone budgets and plans are uncoordinated and sometimes contradictory

Until recently, there remained no integrated mechanism for funding biodiversity conservation in the broader PA landscape. The conservation and development activities carried out within PAs and those taking place in buffer zones were subject to different institutional, planning and financial arrangements, and usually oriented

towards varying (and sometimes conflicting) policy goals (Emerton op. cit.). The mandate of Management Boards extended only as far as the boundaries of the PA, and was heavily focused on patrolling, monitoring, protection and the operation of core PA facilities and equipment. Meanwhile, the local authorities and line agencies that have jurisdiction over buffer zone areas were concerned primarily with delivering on socio-economic development goals, and tend to pay little attention to (and spend little budget on) PA biodiversity conservation (Ly et al. 2009). The result was a fundamental lack of integration between conservation and development goals, and typically weak incentives (and at the worst unwillingness) to support biodiversity conservation efforts on the part of local communities. It is worth noting that, although some of these problems of disconnect still remain, the situation has improved somewhat over recent years. Circular 100 of 2013 stipulates that a sum equivalent to USD 2,000 will be allocated to buffer zone villages from MARD budgets, serving as a pro-conservation investment mechanism. This also serves to indirectly extend the influence of PA management boards beyond PA boundaries.

4 Findings and lessons

There remains a lack of clarity and certainty about the link between PA financing, management effectiveness and conservation incentives

The question of the actual impacts and side effects of financing mechanisms and flows on the overall situation in and around PAs remains an important – and often unanswered – one. It remains a common assumption that increasing the amount of funding to PAs will automatically improve their management effectiveness. Yet, while there is ample indication that funding to PAs in Viet Nam has increased significantly over the last two decades, both due to increasing government budgets and the emergence of a relatively wide range of new external and market-based financing mechanisms, little is known about whether or not this has actually served to enhance biodiversity conservation. In fact, evidence appears to suggest that conservation threats and challenges persist, largely unabated. A particular problem is that rangers have few incentives to go into the field to perform their activities; the motivation and capacities of field staff remains a huge bottleneck to effective protection. At the same time, PA managers face little accountability for securing conservation outcomes: they report to Provinces, which tend to have other concerns.

There remains an urgent need for government and donor budgets to be invested not just in the equipment and facilities that are needed to run PAs, but also to focus on the human resources and information collection that is required to monitor this performance as well as to develop budget allocation approaches that recognise the importance of results-based performance. As is the case in many parts of the world, the lack of monitoring systems remains a major barrier to understanding the impacts and effects of PA financing flows in Viet Nam. While this is an issue in relation to tracking the management impacts and cost-effectiveness of PA budgets in general, it remains an especially critical gap with respect to the case of funding and payments which are meant to be results-based or are released on a conditional basis. For example, one notable shortcoming of the PFES system has been the continuing lack of concrete evidence of either socio-economic or conservation impact, and associated difficulties in tracking compliance (Wunder et al. 2005, Bui Dung The and Hong Bich Ngoc 2006, Ha et al. 2008). Efforts are however underway to remedy this situation, and establish monitoring systems. These include investigating the possibilities transfer and apply the GIS and SMART approaches which have been used as part of the savings book approach to track and verify performance.

Building on existing structures and instruments can be an effective way to gain the acceptance and buy-in that is required to institutionalise new PA financing mechanisms

Viet Nam represents a fairly dynamic situation as regards the current mix of financing mechanisms and flows. Major changes in conservation funding have taken place over the last two decades: public budget allocations to PAs have substantially increased and diversified, and a variety of new financing instruments have been established and taken root. Important lessons learned emerge in relation to the factors that contributed towards this success. One of the most important is the need to secure strong government support and buy-in,

if new PA financing mechanisms are to be accepted and take root. This is particularly important in countries (such as Viet Nam) where the state maintains a strong directive role.

In the case of PFES, three key success factors, in particular can be highlighted. One was the carefully-phased approach that was taken. PFES were initially piloted in just two Provinces of the country. Only once concrete on-the-ground successes had been demonstrated (and a degree of interest and comfort had been established among decision-makers) were they then scaled up to 13 additional Provinces, and then after two years of piloting were extended to the country as a whole. Depending on their readiness, different Provinces could commence PFES implementation in their own time. A second reason was that efforts were made from the start to build support and to embed PFES within non-environmental ministries. In this sense, MARD was not acting alone in advocating for this new source of conservation financing. Although the Government Office played the decisive role in developing PFES, both MOF and MPI (highly influential apex ministries, which are ultimately responsible for national budget and financial planning matters) also bought into the concept and helped to act as champions in presenting them to high-level decision-makers in government and the National Assembly. A third, and very important, feature was the fact that PFES built on the pre-existing, already-functioning, widely-accepted and tried-and-tested approach of forest management and protection contracts. Although it had been applied to quite a different aspect of forest management, the concept of paying forest owners for the delivery of certain specified services had been in place for some years under Programme 661, and had already become institutionalised. The fact that PFES provided incentives was a key factor in its popularity and success.

These success factors also spill over into the ways that German technical and financial cooperation were delivered. Despite the prior experience of forest protection contracts under Programme 661, both GIZ's support to piloting PFES and KfW's role in developing the savings book approach represented fairly novel approaches. Although the idea for PFES had already been led by Prime Minister's office, there was a risk that the savings book approach would be perceived as a threat or a challenge to existing forest conservation approaches and public budget procedures, or be seen as things which were introduced from outside and not wholly relevant or appropriate to the Vietnamese context. However, the fact that both GIZ and KfW had been working with the Government of Viet Nam on forestry and biodiversity conservation activities for several decades meant that a considerable level of mutual trust and dependence had been built up. This undoubtedly helped in establishing credibility and fostering buy-in from government.

A fourth and final point to emphasise is that new PA financing mechanisms often need to incorporate incentives for the staff and agencies that are mandated to deliver them (as well as fulfilling the obvious role of generating funding for PES). In Viet Nam, an important reason that the government embraced PFES relatively quickly (it only took 5 years or so between the initiation of the first pilots and the development of a national law and PFES system) was because it was recognised to be a new and additional stream of revenues which would also serve as a means of reducing central and Provincial government funding needs. In addition, the system of payment (incorporating the possibility to utilise central and Provincial Forest Protection and Development Funds) allows for management fees to be earned at each level of the government system that administers funds. The generation of cash for management authorities to spend is thus built into the system. At the same time, the development of PFES also offers important non-monetary benefits to those involved because it is considered to be a new, exciting and innovative system, as well as one that has attracted a lot of international interest and recognition. Government agencies and staff are enthusiastic about being associated with this high-profile and cutting-edge financing mechanism.

Getting the right 'mix' of PA financing mechanisms often generates more impact and leverage than focusing on single funding instruments in isolation

One of the key insights about financial sustainability and the interplay of different financing mechanisms and flows is that the combined effects of a mix of complementary or mutually-reinforcing PA financing mechanisms often far exceed the sum of their individual impacts. Here, too, the interplay and complementarity of PFES and savings books approaches in relation to each other, and to pre-existing PA financing flows, is apparent. These lessons learned are particularly evident in relation to the weak integration

of biodiversity conservation spending into buffer zone development budgets and, conversely, the almost complete absence activities and incentives targeted at local communities in PA budgets. In Viet Nam, this has long proved a difficult situation to remedy via conventional public budget channels, given the rigidities and separations between different government agencies' territorial and policy mandates. However, as both PFES and savings book-based payment schemes operate outside the core public budget system, they have been able to complement existing PA and buffer zone budget financing and fill the gaps that exist between them.

In this context, German financial and technical cooperation appear to have reinforced each other very well. Although both PFES and savings books worked with similar institutional counterparts (MARD), beneficiary populations (forest-adjacent communities) and issues (the need to generate direct financial incentives for sustainable forest management and conservation), each was targeted towards different forest management goals (afforestation and PA conservation) and employed a slightly different approach (the provision of payments for carrying out specified activities and for the provision of specified ecosystem services). There were considerable lessons learned to be shared and transferred between the two approaches. Today, forest protection activities are being incorporated into savings book payment schemes, while the use of savings books and associated monitoring systems are being investigated as tools to improve PFES performance.

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Interviewees:

Carsten Kilian (KfW Principal Project Manager, Division Natural Resources & Climate, Asia)

Dominic Stanculescu (GIZ Programme on Conservation and Sustainable Use of Forest Biodiversity and Ecosystem Services in Vietnam)

Nguyen Si Ha (GIZ former Conservation of Biodiversity in Forest Ecosystems in Vietnam Project; now GIZ Strategic Mainstreaming of Ecosystem-Based Adaptation in Vietnam Project)

To Thi Thu Huong (former Vietnamese German Forestry Programme; now GIZ Programme on Conservation and Sustainable Use of Forest Biodiversity and Ecosystem Services in Vietnam)

Sustainable financing for biodiversity conservation - a review of experiences in German development cooperation

Case study: Cameroon

Author: Lucy Emerton

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List of Acronyms

CAMCOF	Cameroon Mountains Conservation Foundation
CBD	Convention on Biological Diversity
COMIFAC	Commission of Central African Forests
FEDEC	Fondation pour L'Environnement et le Developpement au Cameroun
GEF	Global Environment Facility
MINEPDED	Ministry of Environment, Nature Protection and Sustainable Development
MINFOF	Ministry of Forestry and Wildlife
PA	Protected area
PES	Payments for ecosystem services
PSMNR-SWR	Program for Sustainable Management of Natural Resources Cameroon South West Region
TNS	Sangha Tri-National
TRIDOM	Tri-National Dja-Odzala-Minkébé
WCS	Wildlife Conservation Society
WWF	Worldwide Fund for Nature

1 Overview

Biodiversity and protected areas in Cameroon

Cameroon is one of the most biologically-diverse countries in Africa. Almost 40,000 km² of land and sea are gazetted as 32 protected areas (MINFOF 2016), and an additional 20 sites covering just under 12,000 km² have been proposed for protection (Republic of Cameroon 2014). Including hunting zones, a total of more than 95,000 km² (or around 20% of the national territory) is currently under some form of conservation management.

Resource mobilisation for biodiversity under the CBD

In 2004, the Ministry of Forests and Environment was divided into the Ministry of Forestry and Wildlife (MINFOF) and the Ministry of Environment, Nature Protection and Sustainable Development (MINEPDED). MINFOF oversees the management and financing of protected areas, while MINEPDED is the coordinating institution for biodiversity and serves as the national focal point for the Convention on Biological Diversity (CBD). Domestic resource mobilisation for biodiversity under the CBD is founded on the public budget. In addition to the core budget provided to MINEPDED, biodiversity has explicitly been integrated into the budgets and workplans of eleven other sectors (Republic of Cameroon 2009) as well as being mainstreamed into key national strategies such as the Poverty Reduction Plan, National Plan for Achieving the Millennium Development Goals and the National Sustainable Development Plan (CBD 2013). In 2006, the government reported budgetary allocations towards CBD-related activities by national and local government as well as different sectoral ministries of CFAF 10 million, worth some USD 21,500 at 2016 prices (Republic of Cameroon 2006).

External funding also continues to provide a significant source of support to CBD-related activities, around three quarters of which is channelled through bilateral agencies (Republic of Cameroon 2014). Germany is a key donor. According to OECD aid data, the value of German bilateral financing to biodiversity rose more than tenfold between 2002-14, from around USD 400,000 to more than USD 4 million, and expanding from a 13% to a 57% share of all overseas development assistance (OECD 2016).

Focus of the case study

Biodiversity and nature conservation have formed a priority area of German technical and financial cooperation with Cameroon for two or more decades now. This case study focuses primarily on experiences and lessons from German development cooperation in protected area (PA) financing in Lobéké National Park (via the Sangha Tri-National Trust Fund), Mount Cameroon, Korup and Takamanda National Parks and Banyang Mbo Wildlife Sanctuary (through Program for the Sustainable Management of Natural Resources Cameroon Southwest Region) and in the Congo Basin region (carried out in partnership with COMIFAC, the Commission of Central African Forests).

2 Status of PA financing

PA funding flows and gaps

Funding to PAs was calculated to total USD 10.8 million in 2010 (some USD 1.3/ha/year at today's prices¹⁰), of which 28% came from government sources, 65% from international development cooperation and just 7% from self-generated revenues (Galindo 2010). This figure is extremely low in both absolute and relative terms. It does not compare well with most neighbouring countries, being only half as high as the average funding provided to PAs in Republic of the Congo, one third of that in Gabon, and less than one sixth of the figure for Equatorial Guinea (Galindo op. cit.). Protected areas also play only a very minor role in government and donor

¹⁰ All PA funding figures have been converted to 2016 prices.

budgets, accounting for less than 0.05% of the public budget and only around 1.4% of official development assistance to Cameroon (Emerton and Nlom 2010a).

Protected Areas in Cameroon suffer a substantial funding gap. With operational costs (mainly staff salaries) consuming around 70% of spending (Emerton and Nlom 2010b), recurrent budgets average USD 92/km²/year across the PA system. In contrast, the costs of effectively managing a representative PA system are estimated to be more than three times this amount, in the region of USD 290/km²/year (Blom 2004, Galindo op. cit. and Wilkie et al. 2001 all come up with similar figures when converted to current prices). This translates into an annual funding gap of something between USD 7.8 million (for existing PAs only) and USD 21.3 million (for all current and proposed conservation areas). In addition, it is projected that something between USD 86-138 million is needed to fund basic capital investments (Galindo op. cit.).

Despite – or perhaps because of – the critical funding shortages that exist, a relatively wide range of innovative biodiversity financing mechanisms have been tried and tested over the years. Several of these have been supported by German development cooperation.

Trust funds

Trust funds represent a major focus in conservation financing efforts, and are an area in which German technical and financial cooperation have been particularly active. They have a relatively long history in Cameroon. For example, La Fondation pour L'Environnement et le Développement au Cameroun (FEDEC) was established in 2001 as a 28-year sinking fund to absorb offset payments made by the Chad/Cameroon oil pipeline project. The main spending focus is on National Park Mbam-Djerem and Campo-Ma'an National Parks and associated community-based activities (Bisseck 2003). Start-up capital was provided by the consortium of international oil companies involved in the project (ExxonMobil, Chevron and Petronas), supplemented by contributions from the two international NGOs that lead in disbursing the funding in the two PAs: Wildlife Conservation Society (WCS) and Worldwide Fund for Nature (WWF). Another interesting, although less successful, experience is provided by the Cameroon Mountains Conservation Foundation (CAMCOF). Dating from 2001, CAMCOF was designed as a USD 12 million endowment fund that was expected to serve as exit strategy for the DFID (later GIZ) Mount Cameroon Project. Weak control mechanisms, governance issues and inadequate participation however resulted in severe problems of financial mismanagement, leading to the withdrawal of donors and closure of the fund in 2007.

One of the most well-known (and arguably most successful) examples of PA trust funds in Cameroon is the Sangha Tri-National (TNS) Trust Fund. This was registered in 2007 as an endowment fund set up to finance the conservation of three protected landscapes at the borders of Cameroon, the Central African Republic and the Republic of the Congo. German financial cooperation has so far contributed a total of EUR 20.5 million to capitalise the fund, as well as facilitating technical assistance to PA management in the TNS landscape. In Cameroon's Lobéké National Park, a protection and utilisation strategy has been drawn up with the active involvement of PA authorities, local government, private sector and adjacent communities, although is still yet to become fully operational. It is anticipated that this will start to gain momentum once a new tranche of German-funded activities commence in early 2017.

Building on these models, the establishment of a trust fund for the Tri-National Dja-Odzala-Minkébé (TRIDOM) transboundary forests of Cameroon, Congo and Gabon is currently being investigated, possibly combined with some form of conservation concession or biodiversity offset agreement with commercial mining operations (Quetier et al. 2015, UNESCO 2010). Most recently, the possibility of establishing a Foundation for Mount Cameroon National Park is being considered as a long-term financing mechanism. This would serve to attract, administer and disburse new funds (mainly from the private sector) to sustain the collaborative management approach initiated under the project and to support government agencies and NGOs working in the area (Kupper 2014, Normand 2015).

Non-conventional user fees

Non-conventional user fees represents another category of biodiversity financing mechanisms which has been tried out in Cameroon (albeit one in which German development cooperation has played only a minor role to

date). These represent an effort to move away from the traditional reliance of PA self-generated revenues on tourism-related income. One example is bioprospecting charges: as early as 1993 an agreement was signed between the Centre for the Study of Medicinal Plants in Yaoundé and the National Cancer Institute of the USA, and benefit-sharing arrangements have also been developed by the International Cooperative Biodiversity Group which involved a range of payments to different stakeholders at different stages of the bioprospecting process (Landell-Mills and Porras 2002). As in other parts of the world, the possibilities associated with payments for ecosystem services (PES) have also attracted a great deal of interest in Cameroon over recent years (see Lescuyer et al. 2009, Tchifofo Lonsi 2008). Although as yet there are however no functioning PES schemes in Cameroon, it has been reported that payments to Deng Deng National Park are s being negotiated as part of the development of Lom Pangar hydropower scheme and dam, involving Elecricité du Cameroun, the World Bank and Agence Française de Développement (Emerton and Nlom op. cit.).

Forest carbon finance also represents an emerging (although still very limited) source of financing for ecosystem restoration and conservation. Most efforts are targeted at the voluntary market: for example WWF is carrying out a reforestation project with the mobile phone provider MTN in the north of the country, and the Cameroon Wildlife Conservation Society is undertaking a 'blue carbon' project in Douala-Edea mangrove forest (Forest Trends 2016). Several REDD+ pilot projects are also in the preliminary stages of development and feasibility assessment, including one that is located beside Takamanda National Park and Ngoyla-Mintom forest (aiming to create a new protected area linking the Nki National Park and Dja Biosphere Reserve).

Local benefit-sharing and conservation incentives

Last but not least, there is a growing recognition that biodiversity financing efforts must also encompass conservation incentives and funding for the local communities that live in and around PAs. Revenue-sharing principles are now to some extent embedded in Cameroonian forest policy and legislation: for example, community forests and hunting zones allow for local residents to receive a proportion of concession fees and hunting taxes (Oyono 2004). Community-managed hunting zones extend into both the permanent and non-permanent forest estate; wildlife management committees have been established to co-manage these areas with the hunting guides selected by the wildlife administration and to receive a portion of the fees paid by hunting guides to support local development (Lescuyer et al. 2016). Benefit-sharing has also long been a guiding principle in German development cooperation projects in and around PAs. The German-funded Program for Sustainable Management of Natural Resources Cameroon South West Region (PSMNR-SWR), together with WCS and WWF, has since 2005 been supporting collaborative management approaches and local development initiatives around Mount Cameroon, Korup and Takamanda National Parks. These partnerships are run through 'conservation development agreements', contracts negotiated and signed between the PA authorities and adjacent villages.

3 Key financing constraints to effective PA management

Inadequate funding and narrow financing portfolios

As evidenced by the massive gap between the budget that is required and that which is actually available, one of the most binding constraints to effective PA management in Cameroon is, quite clearly, a lack of funds. Many (if not most) PA managers face a situation where the financial resources they receive are simply insufficient to enable anything beyond a very basic level of management. Spending tends to be dominated by salaries, leaving little money available for anything else. This means that on-the-ground conservation actions are minimal, or absent altogether in many PAs. Financing portfolios are typically undiversified. Almost 95% of PA funding comes from government and external donors, with the remainder relying on just two revenue streams: hunting charges and park entry fees (Emerton and Nlom op. cit). Not only does this narrow base limit the amount of funding that is available to PAs, it is also risky: should one source decline or fail, there is the danger that budgets will collapse altogether. For example, when CAMCOF was closed down in 2006, not only

was the financial sustainability of the PAs covered by the trust fund seriously compromised, but the funding base of a good number of other sites supported by the fund's donors was also undermined (GEF 2008).

Low uptake and impact of innovative financing mechanisms

Yet, although a wide variety of innovative biodiversity financing mechanisms have been identified or piloted in Cameroon that attempt to address these funding-related issues (inadequate budget and a narrow revenue base), very few have taken root. For the most part they remain as one-off experiences, piloted on a somewhat *ad hoc* basis under externally-funded projects. In consequence, it is difficult to discern any overall impact (i.e. at the system level) on the status of PA financing in Cameroon – although, it should be noted, a significant improvement in financial status has been registered in small number of PAs in which innovative financing mechanisms have been able to be sustained over the longer-term (for example Lobéké National Park Mbam-Djerem and Campo-Ma'an National Parks).

One key reason that these new PA financing mechanisms seem to have registered only minimal uptake or impact is that many of the broader financial constraints to biodiversity conservation still persist (and, in many cases, may even be worsening). It is important to recognise that a lack of funding is not the only (and may not even be the most binding) barrier to more effective PA management in Cameroon. It follows that the development of any new funding mechanisms must also seek to address these broader issues and constraints, if they are to lead to any meaningful (and permanent) improvements in either the financial sustainability of PAs or their conservation status.

Systemic weaknesses in PA financial planning, management and governance

Perhaps the most critical set of barriers relates to systemic weaknesses in PA financial planning, management and governance. These mean that, even where funds are available, they are not always used effectively and do not necessarily reach the sites, activities and groups that need them the most. Although public financial administration systems in Cameroon are slowly being reformed, PA budget planning and administration tends to be complex and cumbersome, and often faces significant uncertainties and delays. Meanwhile, revenue allocation and disbursement procedures remain fairly centralised, meaning that new sources of revenues are not retained by the PA that generate them. Weak governance, transparency and accountability can further exacerbate these issues: PA financing systems and funding flows remain highly vulnerable to leakages and diversions. The experiences of CAMCOF provide a graphic example of the ways in which fraud and corruption can undermine the functioning of PA financing mechanisms. In 2006 the fund experienced severe financial mismanagement problems which led to a state of bankruptcy and suspension of activities. Foundation staff found to be responsible for the misuse of funds were suspended, donors withdrew, and the fund collapsed (Kupper op. cit.).

Limited demand and poorly-functioning markets for PA goods and services

A second constraint relates to the on-the-ground practicalities of developing new PA revenue streams. There remains a limited demand and poorly-functioning markets for many of the goods and services that are typically used to generate PA revenues. The fact that many PAs are located in remote and inaccessible regions of the country exacerbates this problem still further. For example, both international and domestic wildlife tourism in Cameroon remains relatively insignificant compared to other countries in sub-Saharan Africa, and the basic infrastructure that would be required to develop the sector further is for the most part lacking (Emerton and Nlom op. cit., Wilkie and Carpenter 1999). Here, it is important to distinguish between the situations in the northern savannas and the southern forests. Whereas the tourism sector in the former has collapsed, the latter is slowly building up. Likewise, the difficulties that have arisen in operationalising water-based PES schemes is closely linked to the very limited number of mains electricity and water consumers and their low willingness to pay, as well as to weaknesses in revenue collection and disbursement systems in these sectors (Lescuyer et al. op. cit.).

Unmet economic needs among local communities

The economic gaps that exist for PA-adjacent communities in relation to biodiversity conservation pose a third, and major, financial barrier to effective PA management. It is now widely recognised that PAs incur significant costs and losses to local livelihoods in terms of alternative land and resource uses foregone. The opportunity costs of maintaining PAs in Cameroon that contain commercially valuable tree species has for example been estimated at up to US\$ 1,500/km²/year (Wilkie et al. op. cit). In many cases this imbalance of conservation costs and benefits has been exacerbated by a history of conservation management which has been driven by a dominant paradigm of excluding local communities from PAs and from the benefits that they generate (Lambi et al. op. cit., Oyono op. cit). In the absence of these benefits (or appropriate and acceptable alternative livelihood sources), few people are likely to be willing to support conservation when it imposes a net cost on them – and many will simply be economically unable to do so. Although this situation has changed somewhat over recent years, on paper at least, it is still only in a minority of PAs that concerted efforts are being made to share conservation benefits or revenues with adjacent communities – which, perhaps more pertinently, means that only a tiny proportion of PA-adjacent dwellers benefit in direct terms. Again, governance issues remain a problem: funds that are meant to be shared locally are not always well-managed, and the amounts that actually reach villages tend to be quite low (Ndjanyou and Majerowicz 2004). It is estimated that, in the case of forest tax, widely varying amounts ranging from 2-60% are effectively paid to local people (Nlom 2010), and the practice of overcharging and diverting funds is all too common (Lescuyer 2007). Weak governance and enforcement capacity on the part of the State also raises serious questions about the effectiveness of community hunting zones, and the recent decrease in the profitability of trophy hunting has also served to undermine the revenue flows reaching local wildlife management committees (Lescuyer et al. 2016).

Broader economic policy disincentives and barriers to biodiversity conservation

It is worth underlining that, in turn, a host of broader economic policy disincentives and barriers to biodiversity conservation underlie – and to some extent drive – these PA financial constraints. Land conversion and agricultural encroachment pose some of the most pervasive threats to biodiversity in Cameroon. Although many of the farming subsidies that were provided in the 1970s and 1980s have now been dismantled, their net impact on PAs areas cannot be discounted (Toham et al. 2003). Even today, a wide variety of price and market distortions remain which serve to artificially inflate the profitability of arable agriculture and agro-industry and encourage habitat clearance in biodiversity-rich areas (Usongo and Nagahuedi 2008). Logging, mining, oil, gas and other biodiversity-impacting sectors have also been explicitly encouraged by Cameroon's trade and investment policies, which have long offered extractive industries and export-oriented companies incentives such as low charges and royalties, tax breaks and holidays, exemptions on duties and tariffs, as well as the preferential acquisition of land and resources (Emerton and Nlom op. cit). In many cases these economic stimuli are reinforced by the subsidies or other support offered to the international companies operating in or trading with Cameroon by their own governments, most notably the G8 countries (Sizer 2000) and China (Canby et al. 2008). At the same time, it cannot be denied that substantial "under the table" payments often accompany these official incentives. These economic threats to biodiversity, combined with rapidly intensifying needs for land, resources and income within Cameroon and around many PAs, mean that the effective cost of biodiversity conservation is rising in terms of both direct management expenditures and opportunity costs (Emerton and Nlom op. cit). More and more funding is needed for effective PA management, spread over an increasingly diverse range of recipients, activities and sites.

4 Findings and lessons

The case of Cameroon provides many useful insights into the way that PA financing mechanisms and funding flows operate, interact and have impact. Important lessons also emerge from the experiences of German development cooperation.

Seek to improve existing financial systems before introducing novel funding mechanisms

A major finding in relation to the current mix of financial flows and mechanisms is that, even though insufficient budgets undoubtedly serve to undermine biodiversity conservation, the development of new and additional funding sources may neither be the first priority, nor by itself be sufficient to overcome the financial constraints to PA management. Rather, efforts need to be made to revitalise existing PA financing sources and enhance local and national capacity to plan for, manage and spend funds effectively. This underlines the important point that there are various ways to understand ‘innovative’ and ‘sustainable’ PA financing, and that even conventional funding mechanisms may need an innovative approach if they are to function properly, or to increase their effectiveness and impact. In the case of Cameroon, the most critical need is to focus on improving the planning and administration of existing public budget mechanisms. Government sources will (and must) remain the core of PA funding over the long-term.

Ensure there is sufficient capacity to plan, manage and spend funds effectively

Many of the novel financing mechanisms that have been piloted in Cameroon have failed to take hold or to result in significant conservation impacts, precisely because they were not accompanied (and supported) by efforts to enhance the capacity of PA staff to plan, manage and spend funds effectively. This is especially important when new financing mechanisms are complex or costly to operate, or require the development of new partnerships, skillset and, ways of operating. For example, one of the reasons cited for the failure of CAMCOF to take hold was that its focal region was too large, with many different stakeholders, diverse interests and differing local conditions (Kupper op. cit.). This, combined with very weak capacity and experience to manage grant funding on the part of Foundation staff, made it difficult to create an efficient decision making structure, or to efficiently implement and monitor the grant projects – resulting in higher administration costs (and heightening the potential for the corruption and misuse of funds that is described below).

Good governance is also of paramount importance, if PA financing mechanisms are to have impact, or be sustainable. This is particularly the case when large, new inflows of funds are being generated where none existed before. A key factor contributing towards the success of the TNS trust fund was the explicit focus on good governance from the design stage onwards, including setting in place transparent and effective financial and institutional management systems as well as engaging different interest groups and stakeholders. Conversely, the fact that governance wasn’t adequately considered when CAMCOF was set up seems to have been a major cause of its failure to work. Civil society involvement was limited as four out of five ‘civil society’ board members were in fact retired or acting government employees, no international NGO members were included, and the selection of the chairman of the board was a political decision than based on skills and experience (Kupper op. cit.).

Another important and related point is that absorptive capacity remains extremely low for most of the agencies involved in managing Cameroon’s PAs (at both the system-wide level and in individual sites, and for both government and the NGO communities). Even if new funding flows can be accessed, it may be difficult to ensure that they are spent effectively or, indeed, spent at all. These concerns have, for example, been raised in relation to the recent large inflows of international funding that have been made available for PAs in the north of the country (estimated to total USD 40 million or more). With the majority of domestic and international spending having been focused on PAs in the south of Cameroon over the last two decades, the ability of conservation partners in the north of the country to manage and utilise these new funds remains a major question.

Employ a long-term perspective and work in partnership with local stakeholders

Some interesting findings also emerge as regards PA financial sustainability and the interplay of different mechanisms. The development of new or additional financing mechanisms does not necessarily enable new or additional conservation activities to be carried out. This is, for example, the case in Lobéké, Mbam-Djerem and Campo-Ma'an National Parks, where trust fund income has mainly served to substitute for scarce or absent core government funding, and is used to cover basic operational costs. These issues of substitution and additionality also have implications as regards PA financial sustainability: as long as there are shortfalls in core PA budgets, then additional financing sources are likely to remain – and be required – as a major way of filling these gaps. In this sense, generating new funding cannot be seen as a means of making PAs more financially sustainable.

There is little indication that this situation is likely to change in Cameroon in the near future. Again, this underlines the point raised above concerning the need to employ innovative approaches which will improve the management and administration of existing PA budgets. It also highlights the practical need for donors to employ a long-term perspective, at the same time as taking care that these funding inflows neither undermine the sovereignty of the host government nor serve to encourage the state to abrogate its responsibility in any way as regards allocating sufficient budgetary resources to PAs. One of the success factors in GIZ and KfW support to initiatives such as the TNS Trust Fund and the PSMNR-SWR has been the willingness of the German government to commit relatively long-term investments (with projects to date running for more than 12 years and 10 years respectively, in addition to earlier commitments), and to take a partnership approach which is based on working with and through local partners and government agencies.

PA financing mechanisms should be responsive to changes in local and external contexts

The review of Cameroon's experiences also highlights inbuilt flexibility as being key to the success (and sustainability) of PA financing mechanisms. One of the reasons that many so-called 'innovative' PA financing mechanisms were not in the event sustained or were unable to be scaled up beyond their initial pilot is that they were too narrowly-focused on the specific conditions and needs in the site and at the time in which they were initially developed. When the internal or external context changed, they became less effective or (at the worst) redundant. This issue has, for example, been raised in relation to the TNS and FEDEC trust funds. Both were designed in the late 1990s and early 2000s, when international capital markets were buoyant and interest rates relatively high. Their design assumptions were over-optimistic: the size of endowment and income generated have not proved sufficient to cover fund administrative costs and at the same time generate a meaningful surplus to support on-the-ground conservation activities. External grants and project funding have been required to supplement the lower-than-anticipated trust fund income and to support core PA conservation requirements. There are also some doubts whether the planned TRIDOM fund will prove to be viable, given current the state of global financial markets and interest rates, as well as the low commodity prices which may affect the willingness and ability of the mining sector to contribute.

Financing impacts on PA management are not always obvious, immediate or direct

Findings are mixed as regards the impacts of financing mechanisms and flows on the overall situation around PAs in Cameroon. While the development of new financing mechanisms and flows has undoubtedly had a major positive influence on funding status and sustainability some PAs (most notably Mbam-Djerem and Campo-Ma'an National Parks), these impacts remain patchy. Overall, at the system level, there has been little change in the composition of PA financing portfolios – despite a relatively wide range of new funding mechanisms having been tried and tested over the last decades. Most PAs continue to rely almost entirely on core public budgets, only a minority also have access to supplementary external funding, and few or none are able to generate new and additional sources of revenues which must be channelled through sources other than the PA budget.

Here, it is worth noting that the impact of financing flows on biodiversity conservation and PA management have not always (or only) been obvious, immediate or direct. Some of the positive effects of the TNS and FEDEC trust funds have only recently become apparent, a decade or more after they were established. The

development of a high profile funding mechanism in the TNS landscape has not only funded management activities (such as introducing monitoring and patrolling activities where none existed before, or enabling the purchase of core equipment and construction of basic infrastructure), but has also served to increase its international reputation and to enhance awareness of biodiversity values among people in neighbouring communities and at the national level (KfW 2014) – although it seems that these effects may have been more pronounced in the Central African Republic than in Loboké National Park, where the situation has seen some decline over recent years. It has also provided a major impetus (and enabling structures) to improve dialogue between the national authorities, PA management and local population – an outcome that is considered to be equally as important as its direct funding impacts. Yet, to a certain extent, the link between these ‘soft’ impacts and the conservation status of the PA remains unclear. Whereas there is now much better communication and collaboration between different stakeholder groups, and local communities have benefited directly from alternative livelihood activities, there is still no systematic evidence that these changes have led either to an improvement in local socio-economic status or a reduction in biodiversity-damaging activities.

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Interviewees:

Martin Boström (KfW Chargé Principal de projets)

Christian Ruck (KfW Director Cameroon)

Paul Scholte (Coordonnateur, GIZ Programme Gestion Durable des Forêts dans le Bassin du Congo)

Sustainable financing for biodiversity conservation - a review of experiences in German development cooperation

Case study: Namibia

Author: Hugo van Zyl

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1 Overview

1.1 The protected areas system

Protected areas (PAs) in Namibia can be divided into those primarily managed by the state, by communities and those that are private PAs mostly in the form of private nature reserves. For state managed areas, the Directorate of Parks and Wildlife Management (DPWM) within the Ministry of Environment and Tourism (MET) is responsible for management within 9 national parks and a further 14 other PAs including game reserves and recreational areas. These areas cover approximately 17% of the land area of Namibia.

The more formally protected parks directly managed by MET are supplemented by Communal Conservancies, Community Forests and private nature reserves which add another 20% of the total Namibian land surface to the conservation estate. There are a total of 82 Communal Conservancies (with another 14 in development) covering 161,900 km² the majority of which are adjacent to protected areas or in the corridors between them. Approximately 189,230 people live within these areas (see the Namibian Association of CBNRM Support Organisation, <http://www.nacso.org.na>, for a wealth of statistics, maps and details). Their key benefits include (NACSO, 2011):

- Creating management structures for the sustainable use of natural resources in communal areas.
- Creating employment including game guards to monitor and manage wildlife and other natural resources
- Enabling controlled tourism development and income generation

- Curbing poaching and other illegal activities
- Mitigating human wildlife conflict and limiting losses incurred through living with wildlife
- Working with neighbours to promote a large landscape approach

There are also over 150 private nature reserves including mixed ranches. These vary in size with one of the largest being Namibrand Nature Reserve which covers 175,000 ha and has five exclusive concessions to tour operators (see Appendix 1 for a map of all PAs in Namibia).

Tourism is a key sector in the economy and the system of PAs play the primary role in attracting tourists to the country. This contribution was first quantified in a 2004 study commissioned as part of the Strengthening the Protected Areas Network (SPAN) project which found that the total direct and indirect contribution of protected area tourism to national GDP was between 3.1% and 6.3% (Turpie et al., 2004). The independent Terminal Evaluation of the SPAN project found that “The investment that the project made in the study on the economic value and financing of protected areas in 2004 and updated in 2008 which indicated that the PA system contributed upwards of six percent (6%) of the country’s Gross Domestic Product has resulted in increased investments into the sector by government with annual budgetary allocations to park management having been increased by 310% in the last four years.” (Chapeyama, 2012, pg. 21). NACSO also conducts ongoing research on the economic value of spending on the national CBNRM programme thereby assisting with the process of making the case for investment in their activities. Their data indicates that between 1990 and 2014, the programme has had an average economic internal rate of return of 23% per year with economic benefits (~N\$520 million) comfortably exceeding costs (~N\$115 million) in 2014 (NACSO, 2015).¹¹

1.2 German development cooperation and protected areas

German Development Cooperation (DC) focused on PAs is provided under the Focal Sector: Natural Resource Management. Technical Cooperation (TC) takes place under the Biodiversity Management and Climate Change project which builds on the Biodiversity and Sustainable Land Management project before it. The overall objective of the Biodiversity Management and Climate Change project is, “The coherent implementation of biodiversity and climate-related policies, strategies and practices through the Ministry of Environment & Tourism (MET) in close cooperation with other ministries and non-governmental actors is increasingly contributing to diversifying and securing the livelihoods of local users of natural resources.” It consists of three components:

1. Formulation and implementation of environmental policy;
2. Community-based natural resource management under changing climate conditions in selected areas; and
3. Cross-sectoral mainstreaming of biodiversity, adaptation to climate change and a green economy.

For components one and three, the geographical focus is the entire country, while component two targets communal conservancies and community forests in the north-central and north-eastern parts of Namibia. The form that support takes includes capacity development, training, advisory services, a limited supply of material resources, a financing contract with the MET so that it can carry out workshops and project activities independently, and grants for NGOs to support local initiatives in the pilot regions (GiZ, 2015).

Current Financial Cooperation (FC) in natural resource management focuses on (KfW, 2016):

1. The Namibia National Parks Programme which supports the development of National Parks in Namibia. It operates through the issuance of a financial grant to co-finance park management infrastructure and park

¹¹ If one isolates data from 2015 only, the internal rate of return was 16% and economic benefits were estimated at ~N\$644 million.

equipment as well as management and tourism development plans in Namibia's North-East and Coastal Parks.

2. Support to the Kavango Zambezi Transfrontier Conservation Area where poaching illegal wildlife trade, increasing human-wildlife conflict, and incompatible policies among its partner countries threaten the biodiversity and balance of the area's ecosystems. Support occurs through the issuance of a grant to co-finance the development of park infrastructure, train park staff and support various community livelihood projects as well as to enhance human-wildlife conflict mitigation measures. Note that this is FC project with SADC and not a bilateral with Namibia.
3. The Community Forestry Project which provides support to the development of forestry for livelihoods.

These financial cooperation projects currently in place are to be followed by the Integrated Wildlife Protection Management Project and Solid Waste Management in Protected Areas Project (KfW, 2016).

1.3 Resource mobilisation projects

In order to support the sustainable financing of PAs and wider biodiversity conservation in Namibia, GiZ is partnering with the MET in implementing the Resource Mobilisation Project. This Project is ongoing and is part of the International Climate Initiative of the German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety. It aims to mobilize resources to support the effective implementation of Namibia's Second National Biodiversity Strategy and Action Plan (NBSAP2) using approaches and methods similar to those associated with the global Biodiversity Finance (BIOFIN) Project under the UNDP (NNF, 2014).

2 Status of PA financing

When considering revenue and financing flows it is useful to make the distinction between PAs managed by the state (MET) and others managed by communities or private land holders. This section focuses on those managed by the state and Communal Conservancies.

2.1 State managed PAs

Namibian PAs managed by MET are financed by government allocations and donor funding. Revenue retention via a revolving trust fund (the Game Products Trust Fund – GPTF)¹² is arguably meant to occur but does not. For park entrance fees, as explained in MET (2016:15), "MET - through the still valid Treasury Authorisation of 2005 - is entitled to 25% of park entrance fees for reinvestment in protected area management. MET has been unsuccessful in claiming these fees since 2008 when the last successful claim was lodged. This lack of success is attributed to an arrangement where MET first deposits all income into the state revenue account and only claims from the Treasury afterwards. The Ministry of Finance (MoF) maintains that such arrangement is in contravention of the State Finance Act."

Namibia Wildlife Resorts (NWR), a parastatal company, manages the majority of the resorts within state PAs which are generally combined with other tourist activities for guests such as tours. They do not pay a fee or royalty to MET. NWR also collected entry fees for the parks until 2004 when collection responsibilities were transferred to MET, but only after MET wrote off N\$48 million in entrance fees which NWR failed to transfer to MET (Turpie et al., 2010).

MET also have allocated about 20 tourism concessions inside the PAs they manage to neighbouring conservancies who often operate them as joint ventures with private sector operators. The conservancies are required to pay 25%

¹² The GPTF was originally established in the 1997 to channel proceeds from the sale of wildlife and wildlife products including ivory back into wildlife management, conservation and conservation-compatible rural development. It is likely that the proceeds of the auction recently announced by MET (June 2016) of the trophy hunting rights for three black rhino would be deposited in the GPTF.

of their concession fees to MET. This share is paid directly into the state revenue account as MET cannot retain it as is the case with park entrance fees (MET, 2016).

Concessions within state PAs are governed by the MET Policy on Tourism and Wildlife Concessions on State Land (MET, 2007). This policy places a significant emphasis on favouring local communities either living in or nearby PAs when awarding concessions in recognition of their stewardship role and as they “suffer most costs caused by wildlife as well as loss of access to land and resources” (MET, 2007: 12). These communities can either be the outright owners of concessions or enter into partnerships with other private sector operators with whom they share proceeds. Empowerment of formerly disadvantaged Namibians is also strongly encouraged while being careful to warn against so-called ‘fronting’ in which empowerment status is used to acquire a concession which is then sub-let to a non-empowerment entity. Instead, where capacity or capital is a constraint to empowerment entities, they are, “advised to enter into mutually beneficial joint ventures with established companies instead, within an equitable framework to ensure the transfer of skills, full accounting of the contributions from both parties, and sharing in the management, decision-making, ownership and financial benefits from a concession” (MET, 2007: 12).

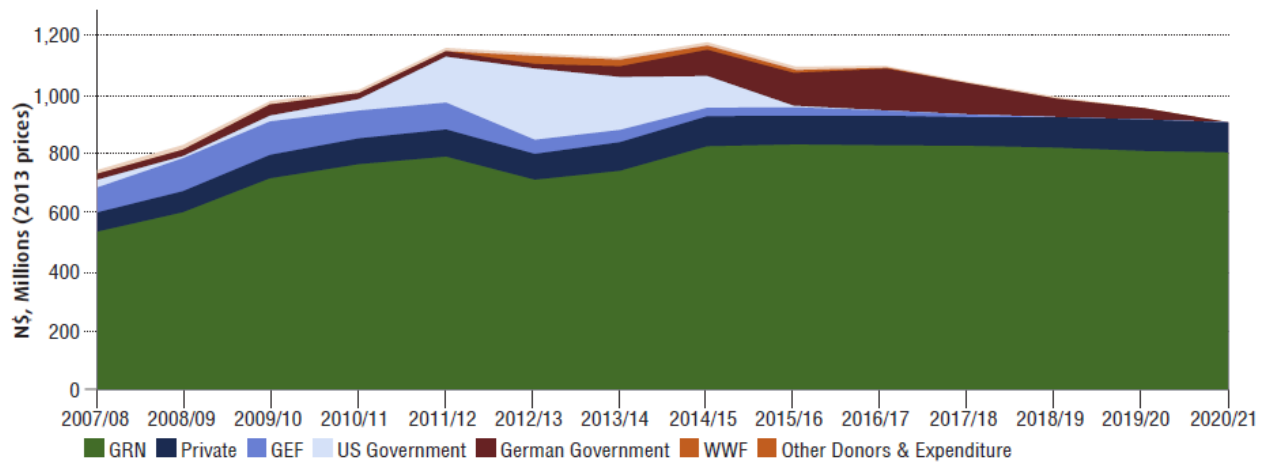
2.2 Communal Conservancies

Communal Conservancies are outside of state PAs and are not managed by MET although they do receive government support and significant NGO support services mostly funded by donors. The Namibian CBNRM programme focused on the formation and support of Communal Conservancies since the 1990s and is seen as an internationally recognised model particularly in terms of devolving rights to wildlife and direct benefit sharing with local communities. Once a community declares a Conservancy (with a sustainable management plan agreed to by MET), they are given substantial autonomy over management and are given rights over game and tourism opportunities. They can then engage with concessionaires, allocate hunting licences, etc and keep 100% of resultant income. At the end of 2014 there were 41 joint-venture tourism enterprises in Conservancies across Namibia with 708 full time and 230 part time employees, 48 conservation hunting concessions with 134 full time and 108 part time employees and 32 small/medium enterprises (mostly tourism/crafts) with 156 full time and 40 part time employees. Cash income to conservancies and members rose from less than N\$1 million in 1998 to N\$74.3 million in 2014 reflecting both the increased number of Conservancies and their earning power (NACSO, 2015).

2.3 Adequacy of funds for PA management

The Baseline of Biodiversity Expenditure in Namibia developed for the Resource Mobilisation Project roughly following the BIOFIN approach contains detailed data on all government (GRN) and non-governmental expenditure on biodiversity conservation including PAs (NNF, 2014). Figure 1 below provides a summary of all historical expenditure, which peaked near N\$1.2 billion in 2014/2015, and plots gradually lower expenditure projected into the future. Expectations are that donor funds in particular will reduce with time particularly as Namibia becomes a higher income country. In absolute terms, government expenditures on biodiversity conservation are predicted to stagnate. As a proportion of total government expenditure they are predicted to decrease gradually (NNF, 2014). Focusing on German Government funding for biodiversity-related projects, total funding fluctuated around €2m/yr from 2007 to 2012, growing to €3.30m in 2013. From 2013, expenditure was projected to increase rapidly peaking at €14m by 2016, before falling gradually back to €2m by 2019 (NNF, 2014).

Figure 1: Total expenditure on biodiversity conservation in Namibia



Source: NNF, 2014

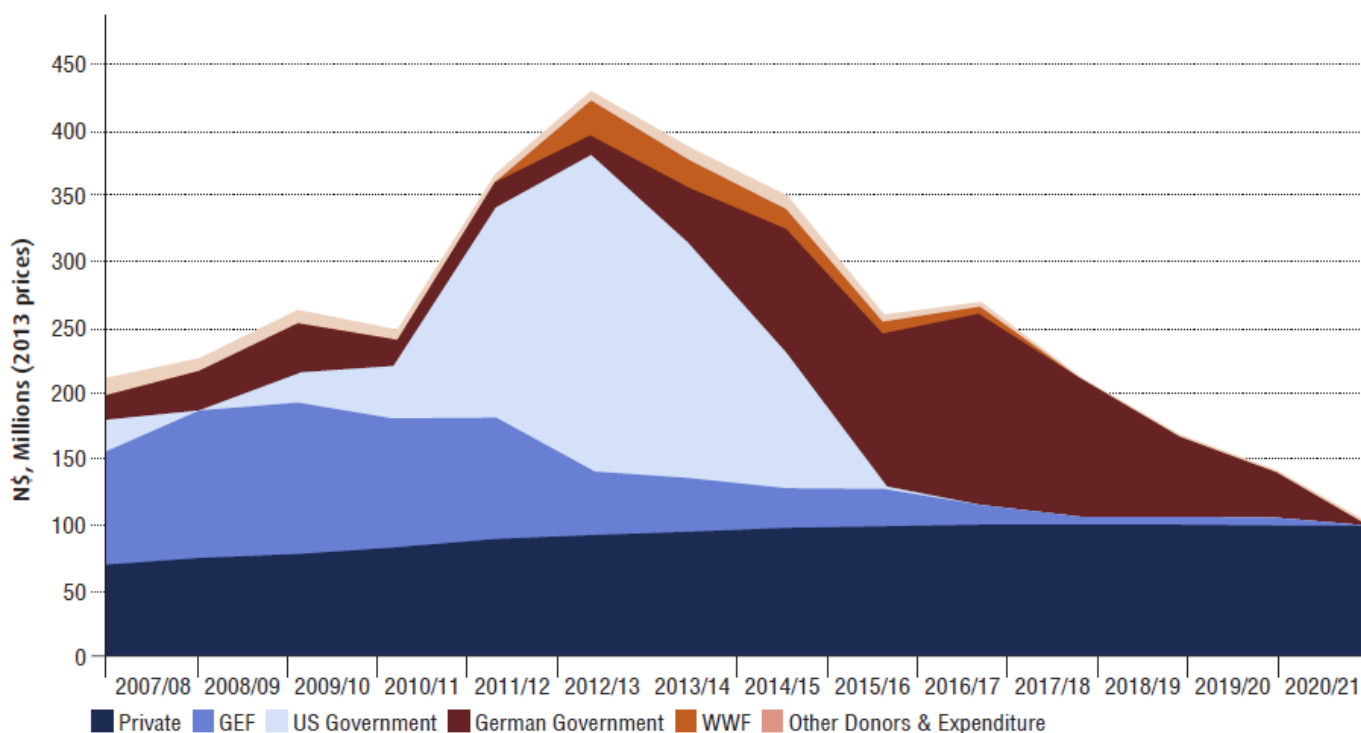
Estimation of the funding gap for biodiversity conservation should be done during 2017 under the Resource Mobilisation project. The following research is, however, also instructive:

- Previous research by Turpie et al. (2010) on the funding gap for PAs in 2008 estimated that the gap to maintain the status quo for PAs (i.e. PAs remain significantly underfunded) was low at N\$8.8 million/yr in 2008. This suggested that in 2008 at least, PAs could be self-financing through access to a greater proportion of revenues from entrance fees under the status quo. If they were to be adequately funded and able to achieve the 'Parks Vision', then the gap would increase substantially to N\$113 million/yr (see Appendix 2 for more details).
- In the Sustainable Protected Area Financing Strategies in Namibia report it is noted that „Historically the costing of the MET Strategic Plan was always at variance with the budgetary allocations by a factor of three. For instance, the 2008 Strategic Plan had an annual budgetary need of N\$648.7 million against an actual budgetary allocation of roughly N\$299 million“ (MET, 2016: 10).
- NACSO conducted a gap analysis to measure current and anticipated future funding requirement to finance the programme of support required by Communal Conservancies (the so-called minimum support packages or MSPs). This found a minimum financial gap of US\$2.5 million per year (N\$30 million at the time) over the next 15 years, with additional funding being required to cover other non-essential services such as human-wildlife conflict mitigation, conservancy management costs and others (NACSO, 2016).

3 Key financing constraints to effective PA management

Although the budgets of PAs managed by MET increased significantly prior to 2012, they remain relatively low. This is particularly pronounced for capital expenditure which donors tend to fund. Donor funding can, however, be lumpy and is on a downward trend due to global economic conditions and because Namibia is growing, becoming more developed and therefore becoming less of a priority for donors. Figure 2 below from shows anticipated trends in which donor funding is expected to become largely irrelevant over the next five to seven years highlighting the need to move away from a reliance on donors.

Figure 2: Total non-governmental expenditure on biodiversity conservation in Namibia



Source: NNF, 2014

Aside from funding challenges, those associated with good planning and efficient use of budgets in PA management are present though more difficult to pin down. Staffing challenges are also clear and not unique to the Namibian situation. It remains difficult to attract and retain good staff particularly those with the commercial/business skills required to increase revenue generation and improve financial management. Own income retention within the system of PAs managed by MET remains highly limited and through the GPTF. This may have advantages in terms of the centralisation of collection and allocation but results in lower incentives for income generation.

Key challenges associated with CBNRM in Communal Conservancies are monitored by NACSO. In their most recent review of the state of CBNRM, they highlight the following challenges (NACSO, 2015):

- Removing barriers to private sector investment in communal areas.
- Developing revenue streams in areas with low tourism potential or few natural resources.
- Increasing engagement with the private sector.
- Improving the quality of community-run tourism enterprises.
- Enabling optimum conservancy governance capacities, effective decision-making and wise leadership, as well as proactive members
- Countering the pressure to ban the legal and well-controlled consumptive use of wildlife based on urban moral ideals.
- Optimising land allocation and administration in communal areas.
- Ensuring long-term technical support to community conservation structures.
- Achieving self-sufficiency and programmatic sustainability

4 Findings and lessons

The preceding sections have outlined the PA financing context along with the challenges it faces. This section focuses on key findings and lessons which are generally inter-linked and therefore difficult to allocate to specific themes. This is nevertheless done to the extent possible under the following themes which guide the analytical framework for all the case study countries:

- Theme 1: Understanding the current mix of finance flows and mechanisms,
- Theme 2: Financial sustainability and the interplay of finance flows and mechanisms,
- Theme 3: Impacts and side effects of finance flows and mechanisms on the overall situation in and around PAs,
- Theme 4: Potential for new measures.

4.1 Understanding the current mix of finance flows and mechanisms

Income retention and flexibility of PAs in income generation is seen as a constraint to a more dynamic PA system. A lack of own income retention can also be a constraint to achieving basic value for money from income generated because income needs to first be channelled to head office before it is allocated back to PAs. This process adds a definite layer of administrative costs. In addition, the use of the GPTF adds a layer of complexity to the process. Unequal revenue from commercial sources per PA is less of an issue as the system allows for the necessary cross-subsidisation of PAs.

Limited capacity especially at PA level in commercial management acts as a significant constraint to greater revenue generation particularly for state-run PAs. PA managers tend to have an education and background in wildlife management not business management. Salaries are in any event particularly low if one is trying to attract more commercially skilled people.

The importance of only competing directly for donor funds when appropriate should be emphasised. This is particularly challenging when funding flows decrease for NGOs. In the Namibian case, initially, there was some level of tension between the Environmental Investment Fund (EIF) and NACSO who are in the process of establishing Trust Fund in support of Communal Conservancies and CBNRM. Through engagement, however, initial misunderstandings on the purpose and targeting of funders have essentially been cleared up and the focus seems to have shifted to synergies. For example, it was important for all parties to see that the EIF is a state-run fund which will receive the clear majority of its funding from environmental levies. A potential future CBNRM Trust Fund would focus on getting funds primarily from private non-Namibian donors.

The level of interactions with National Treasury and the co-ordination of these interactions among those in the conservation sector is probably higher than in many countries but is still seen as too low. This is one of the reasons for suggesting that a Environmental Fiscal Reform (EFR) Commission should be formed to act as a forum for the necessary interactions on an ongoing basis.

The Namibian model of PA financing indicates that secure and sustainable PA funding requires diversification of sources and must ensure that local communities, that bear the opportunity costs of PAs, have a significant share in benefits. This is a relatively obvious point but its application worldwide is far less widespread than one would hope for. It is worth bearing in mind that truly secure funding is elusive as much depends on the willingness of the government of the day to support PAs, facilitate income generation (and reward it) and engage in constructive cooperation with NGOs, etc. It is thus important for PAs and their parent ministries to be vigilant and continue to make the case for funding and enabling conditions on an ongoing basis.

4.2 Financial sustainability and the interplay of financial flows and mechanisms

Over-reliance on donors can be particularly problematic as funding flows can be particularly lumpy and inconsistent. In addition, donors do not have a clear constituency (at least when compared to the state) making it

potentially more difficult to influence them. A combination of funding sources is thus vital in terms of spreading funding risks for PAs.

Experiences with private sector concessionaires tends to be mixed among PA management authorities and Conservancies. Some concessionaires are ethical, committed to benefit sharing and ownership and a pleasure to work with while others are not. Local rural communities are required to engage in sometimes sophisticated negotiations and agreements with concessionaires. They often do not have the capacity to do this effectively so NGOs (mostly co-ordinated through Namibian Association of CBNRM Support Organisation – NACSO) tend to provide this very important supporting role in partnership with the MET. Integrated Rural Development and Nature Conservation (IRDNC) is one such NGO. Their tourism coordinator, for example, points out that they “often help facilitate conversations between the private sector and communities. There can be a huge power differential when the groups sit down at the table. Community representatives may only have an elementary-level education; they may not know what a percentage is. We join the conversation to help ensure that it is balanced.”¹³

Concerns regarding the sustainability of this funding flow for support are one of the reasons why the establishment of a Trust Fund in support of CBNRM to be known as the Community Conservation Fund of Namibia (CCFN) is in under way in order to assist with accessing more sustainable funds. Such a Fund may also provide the chance to direct funding to less fortunate Conservancies in particular (i.e. those which play an important conservation role but do not have tourism or hunting assets that can be converted into income). See Section 4.4.1 for more details on the proposed Fund.

Namibian Wildlife Resorts (NWR) was expected to be able to generate a profit within a reasonable period after its formation in the late 1990s. This is yet to be achieved and the subsidisation of NWR remains while state and private sector frustration with the situation continues to grow. Perversely, some even argue that the presence of NWR resorts in a PA actually results in more opportunities for the private sector as NWR offerings and services are so inferior. A renewed focus on turning NWR around was initiated in 2015 by the new Minister of the Environment and Tourism.¹⁴ Theoretically, the reservation of the prime sites within state PAs for NRW should be good for increased overall benefits to the country (the state profits as its the only shareholder in NWR). However, this depend critically on NWR being more like the private sector, offering a good product, managing efficiently and cost effectively and being able to generate a profit in the first instance. Unfortunately, similar to other examples of state owned enterprises that are not subject to normal market forces/discipline, it is not clear that the incentives they face can be adequately geared towards these outcomes.

The need for greater private sector funding streams for PAs beyond the tourism sector is widely recognised. The challenges associated with this are also recognised though and no easy/clear solutions seem to have emerged. Rather there are a number of measures being considered including trust funds, biodiversity offsets and other discussed in Section 4.4.

4.3 Impacts and side effects of finance flows and mechanisms on the overall situation in/around PAs

Poaching has increased in intensity particularly in the north eastern and north western Namibia. In some of the PAs in these areas there are reports of wardens spending 70% to 80% of their time and resources on anti-poaching measures. The situation has escalated to the point where a national anti-poaching unit has been established under the MET totalling 300 - 500 personnel. It stands to reason that this will lead to less overall funding for the other conservation and PA management functions though it is too early to measure such effects.

The Namibian CBNRM programme centred around Communal Conservancy is generally seen as a model for local involvement and benefit sharing. A key point of departure is the recognition of the rights of locals to wildlife and of the opportunity costs which local communities incur when pursuing conservation. This then translates logical into

¹³ See <https://www.worldwildlife.org/magazine/issues/spring-2016/articles/a-promising-future-for-africa-s-wildlife>

¹⁴ See <http://www.leramobile.com/content/49915/Government-needs-a-profitable-NWR-Shifeta/>

the local retention of all of the revenue from tourism and hunting. In cases where revenue potential is low, this may not be as strong an incentive for conservation. The principle of revenue retention is at least applied to its full potential which is not the case in many other countries.

4.4 Finance mechanisms in development and new finance mechanism with potential

The consideration and assessment of new finance mechanism has received significant attention in Namibia of late and it is beyond the scope of this project to interrogate these initiatives and reports or provide summaries of them. They are, however, referenced and a few key mechanisms are chosen for somewhat more detailed consideration.

The Sustainable Protected Area Financing Strategies in Namibia Project investigated current protected area financing in Namibia and recommended appropriate financing strategies to the Ministry of Environment and Tourism (MET, 2016). The report contains a number of recommendations, many of which are encouragingly focused on reforming current mechanisms and institutional arrangements. For example, under-priced entrance fee amounts are a target for reform and significant focus is placed on reforming and leveraging the retention of PA revenue. The following recommendations are made in this regard (MET, 2016):

- Initiate steps to write off the 25% park entrance fees outstanding since 2008 on the basis that it is unlikely and probably impossible to successfully claim the outstanding fees even with valid legal arguments.
- Looking to the future, take legal opinion and engage the Ministry of Finance (MoF) to find a way of giving effect to the 2005 Treasury Authorisation that should allow for the retention of 25% of revenues. Also, use these negotiations to pursue the possibility for retaining an increased percentage of entrance fees - e.g. aim for 50% based on a sound economic/financial case.

NACSO has identified mechanisms as part of its sustainable financing strategy aimed at assisting Conservancies and reducing dependence on declining donor support to Namibia. The introduction of the Community Conservation Fund of Namibia (CCFN) is the key mechanism in this regard along with associated wildlife incentives and credits aimed at incentivising Conservancies and rewarding them directly for conservation outcomes.

Potential new finance mechanisms have also been considered as part of the 'Options for Environmental Fiscal Reform in Namibia' project (see Aequilibrium, 2013) and currently as part of the Resource Mobilisation project (see Linked, 2016 - Baseline Assessment of Economic Instruments for Biodiversity Conservation in Namibia.). Key new mechanisms mentioned in these projects that are either in process or are seen to have particular potential include the following:

- Increased funding for and use of the Environmental Investment Fund (EIF)
- Introduction of mandatory biodiversity offsets
- Establishment of an Environmental and Fiscal Reform Commission

Existing plans for the CCFN and these three mechanisms are outlined in the sections below.

4.4.1 The Community Conservation Fund of Namibia (CCFN)

Part of the success associated with Communal Conservancies can be attributed to their being able to access key 'extension' services such as training and technical assistance without charge. As discussed previously, Conservancies are, for example, required to engage in sometimes sophisticated negotiations and agreements with concessionaires. For the bulk of these services, Conservancies are supported by NGOs who are, in turn, reliant on donors for their funding. Concerns regarding the sustainability of this funding flow are one of the reasons why the Community Conservation Fund of Namibia (CCFN) is being developed. The Fund is set up to assist CBOs (i.e. Conservancies and or Community Forests) and the CBNRM Programme at large. The intention is to move away from donor/NGO supply driven services to a more demand driven professionalised approach to servicing Conservancies. Furthermore, an equally important priority of the CCFN is to develop a financing mechanism for coverage of

human-wildlife conflict costs. Thirdly, the CCFN could also become a conduit mechanism for PES schemes where conservancies are receiving a payment for conservation services.

In keeping with the funding gap analysis discussed previously, the CCFN seeks to initially raise and manage US\$30 million as an endowment fund for maintaining minimum services to existing Conservancies and an additional US\$16 million in sinking funds to finance more expansion and on-going development needs. In terms of progress, the Government of Namibia has endorsed the Fund, the CCFN name has been reserved and it is awaiting legal registration as a non-profit organisation. Draft governance and management structures and internal regulations are being developed. These will be strict and, along with the composition of the board of governors, are expected to appeal to private donors outside Namibia, which the fund will target (NACSO, 2016). NACSO and its partners are also piloting and exploring the potential of wildlife incentives and credits to be channelled directly to conservancies or through the CCFN is appropriate. These would be aimed at creating incentives for people to conserve wildlife with funds allocated to specific WMAs, species and conservation activities as specified by the funding agency or private donors.¹⁵

4.4.2 Increased funding for and use of the Environmental Investment Fund (EIF)

There is an opportunity currently being implemented to elevate and expand the EIF giving it substantially more funding streams and power over allocating these funds. The EIF was established in 2012 but has not played a prominent role in funding environmental protection primarily as it has not been well resourced. However, its ability to raise funds and distribute them is being enhanced through legislative changes that will see it become a more prominent extended arm of government which has somewhat more flexibility and higher potential to innovate in its operation. From an income perspective it has identified and will soon receive income from environmental levies on electronic waste, lubricant/oil and car batteries which are expected to generate +/- N\$140 to 160 million/yr. It will also be able to receive bi-lateral and multi-lateral aid as well as development bank contributions as per its resource mobilisation strategy / business plan. It has a relatively limited focus on attracting private donors in keeping with its close alignment with and control by the state. It was recently also awarded Green Climate Fund accreditation. Disbursement of funds will then be through grants, loans, interest subsidies, start-up equity stakes (i.e. investment in the initial stages of higher risk but high potential environmental businesses with view to selling stakes on once business are on their feet). The potential to rationalize and incorporate the Solar Fund and Game Product Trust Fund (GPTF) into the EIF has also been mooted given the potential efficiencies associated with one fund.

Earmarking of environmental tax or levy revenues for certain purposes is something that is often recommended as a solution to generating funds but is a complex matter. Allowing earmarking and in particularly the accumulation of funds can conflict with the need for flexibility in the national budget allocation process including restricting the ability of government to undertake fiscal consolidation. For example, institutions that get earmarked funds may end up treating them like endowments thereby accumulating a significant cash holding which the MoF tends to view in a negative light when they are having to borrow funds at high cost instead of using the saved cash holdings. The result is that public sector endowment-type funding situations are not generally supported.

4.4.3 Biodiversity offsets

Biodiversity offsets are seen as something with future potential in the medium to longer term in terms of unlocking private sector resources. The rapid growth of uranium and other mining across much of western Namibia in particular is impacting on PAs. The potential of biodiversity offsets are recognised in the Sustainable Protected Area Financing Strategies in Namibia report although they are not rated as having especially high potential for PAs relative to other potential sources of finance. The Strategy recommends that a detailed assessment of the potential for the scaling up of offsets needs to be undertaken (MET, 2016). NACSO has also shown an interest in offsets given their potential to benefit conservancies and safeguarding biodiversity (see NACSO, 2015).

¹⁵ See <http://www.nacso.org.na/fundraising>.

Given their complexity and position at the end of the mitigation hierarchy, offsets tend to require a particularly well developed and entrenched EIA mechanisms and practice in a country. Namibia has such a system in place which gives it a good platform for considering the introduction of a statutory offsets regime that is formally integrated into the EIA process (as opposed to the more ad-hoc application of offsets). Readiness for implementation should, nevertheless, be one of the considerations that are explored alongside potential workability if the government and other stakeholders wish to consider the introduction of offsets in a structured fashion.

The introduction of such a regime could learn from other countries that have instituted offsets. Neighbouring South Africa, for example, has biodiversity offsets policies in some of its provinces which have been applied with varying degrees of success. The need for a national offsets policy was, however, recognised some time ago and, after a public consultation programme, a draft policy was issued by the Department of Environmental Affairs for comment in 2016. At present the policy is still being considered and may face further obstacles. It will be particularly important to ensure buy-in from institutions such as National Treasury as offsets would imply additional financial costs for government departments or parastatals undertaking development in highly conservation-worthy areas. It has also been recognised that broad policy will need to be accompanied by clarity on how offsets are to be implemented and administered including how financial flows are to be handled.

4.4.4 Establishment of an Environmental and Fiscal Reform Commission

Experience has shown that it is critically important that the Ministry of Finance (MoF) is intimately involved when new financing ideas are being considered as they are likely to require MoF support and potentially implementation. Such initiatives require MoF involvement and ownership from early on if they are to succeed and should not remain internal to the MET and/or environmental NGOs and donors beyond their initial conceptual stages. The interactions and relationships required in this regard could benefit from becoming more structured as an ongoing programme of work and less as ad-hoc in nature. The establishment of a Namibia Environmental and Fiscal Reform (EFR) Commission which could be composed of representatives of relevant ministries, as well as selected non-governmental experts has thus been recommended. The Commission could serve as a coordinating body and think tank to support the realization of prioritized EFR instruments, as well as to identify additional EFR instruments.

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Interviewees:

Konrad Uebelhör, GIZ Namibia, konrad.uebelhoer@giz.de

Martin Nowack, GIZ Namibia, martin.nowack@giz.de

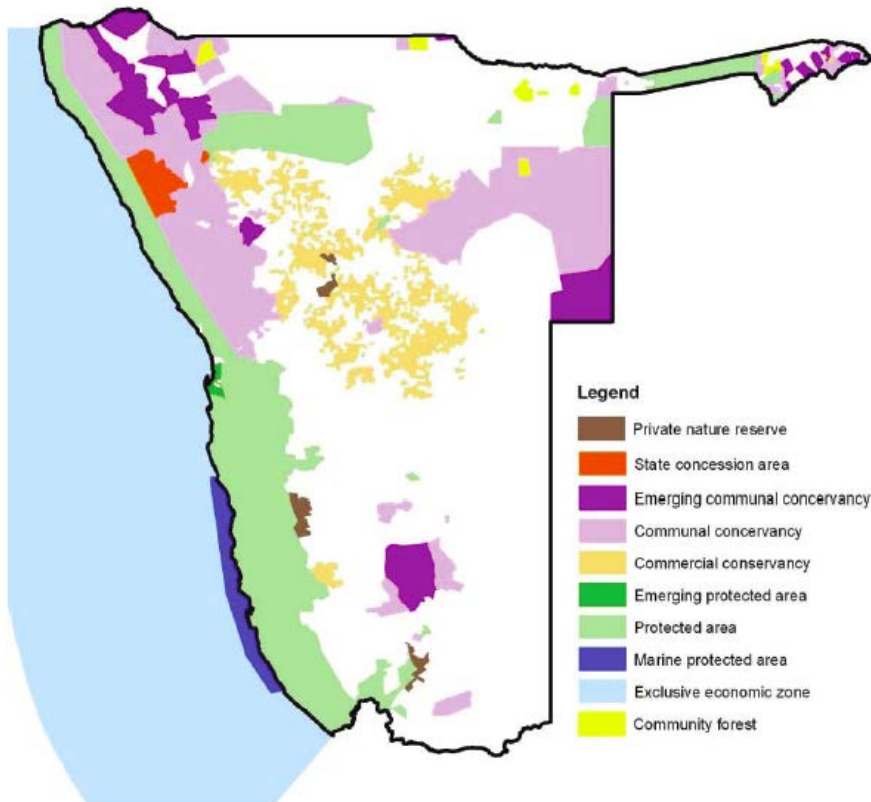
Lydia von Krosigk, KfW Namibia, lydia.von-krosigk@kfw.de

Benedict Libanda, CEO of the Environmental Investment Fund (EIF) Namibia, benedict_blibanda@eifnamibia.com

Richard Diggle, WWF Namibia, rwdiggle@wwf.na

6 Appendices

Appendix 1: Map of PAs in Namibia



Source: Turpie et al. (2010)

Appendix 2: Estimation of the financing gap for the protected area system under two expenditure scenarios (N\$ millions, 2008 values)

(Constant 2008 prices, N\$ millions)	Minimum expenditure scenario to maintain the status quo			Optimal expenditure scenario to achieve the Vision		
	2008-2012	2013-2017	2017-2022	2008-2012	2013-2017	2017-2022
(i) Estimated financing needs for management costs and investments to be covered	766.5	766.5	766.5	1331	929.5	929.5
(ii) Projected revenues (over 5 year period)						
Entrance fees (current estimate + 5% growth rate)	287	366	468	287	366	468
Concessions	10	10	10	99	214	296
Live sales & other	12	12	12	12	12	12
Total projected revenues	309	388	490	398	592	776
(iii) Amount of PA generated revenues retained in the PA system for re-investment	83.75	103.5	129	83.75	103.5	129
(iv) Total government budget (incl donor funds)	638.8	638.8	638.8	683.5	683.5	683.5
(v) Financing gap for 5-year period	44	24	-1	564	143	117
(vi) Estimated average annual financing gap (financial needs – available finances)	8.8	4.9	-0.2	113	29	23

Source: Turpie et al. (2010)

Resource mobilization for biodiversity conservation in German Development Cooperation: From sustainable financing of protected areas towards more comprehensive financing strategies for biodiversity

Case study: Tanzania

Author: Hugo van Zyl

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1 Overview

1.1 The protected areas system

Tanzania's protected areas network includes 16 national parks, the Ngorongoro Conservation Area (NCA), 28 Game Reserves, 42 Game Controlled Areas, 38 Wildlife Management Areas and four Ramsar Sites. The total land area covered by these PAs is roughly 317,000 km² or 34% of the country (URT, 2014) – see map of these areas in Appendix 1. Four protected areas are UNESCO World Heritage Sites, namely Ngorongoro Conservation Area, Serengeti National Park, Kilimanjaro National Park and Selous Game Reserve.

Tanzania National Parks (TANAPA), a parastatal, manages all National Parks while the Ngorongoro Conservation Area (NCA) is managed by the Ngorongoro Conservation Area Authority (NCAA), also a parastatal. The Wildlife Division within Ministry of Natural Resources and Tourism (MNRT) regulates wildlife management outside the National Parks and NCA. It has been responsible for the management of Game Reserves and Game Controlled Areas and for overseeing Wildlife Management Areas (WMAs). This is now done through the recently formed Tanzanian Wildlife Authority (TAWA) which became operational in 2016 leaving the MNRT to focus more on policy related issues. TAWA is also expected to take a lead in anti-poaching operations and is in its establishment and institution building phase.

Wildlife Management Areas (WMAs), which are community managed with assistance from TAWA, have received particular attention over the last few years given their potential to realise benefits for locals living near other protected areas which may provide relatively limited benefits to them or even impose costs (e.g. problem animals and human-wildlife conflicts). From 2006 to 2012, the area under WMA management in Tanzania grew from 6,700 km² to about 27,430 km² (greater than 3% of the country's land area). By end 2012, 17 WMAs had been declared (covering 148 villages with a population of more than 440,000 people). This number had grown rapidly to 32 by 2014 (WWF, 2014). Most often, WMAs are on communal land that borders existing PAs. In Tanzania, they provide important buffer zones for 18 national protected areas (eight national parks, one conservation area, eight game reserves and one game controlled area) and 16 forest reserves. In addition, they serve as critical wildlife corridors and dispersal areas for wildlife in the PA system (WWF, 2014).

The intended management structure of WMAs places emphasis on district and local village level management and oversight as outlined in Appendix 2. The community organisations (i.e. Authorised Associations) responsible for the day to day management of WMAs are accountable to Village Councils which, in turn, are advised by Village Boards and interact with District Councils regarding WMA management. District Natural Resource Advisory Boards (DNRABs) advise District Councils which are then the key link to MNRT/TAWA.

The fifth report to the implementation of the Convention on Biological Diversity (CBD) outlines the importance of biodiversity to the Tanzanian economy. It notes that, "Biodiversity is critical to the national economy contributing more than three quarters of the national GDP and sustaining livelihoods of majority of Tanzanians. Agriculture, livestock, forestry, and fisheries together contribute over 65% of GDP and account for over 80% of total employment and over 60% of the total export earnings. Furthermore, forests provide over 90% of energy consumption in the country while hydropower contributes about 37% of power supply in the country. The average Total Economic Value (TEV) of catchment forest reserves was established to be more than US\$17,250/ha" (URT, 2014: ii). It also points out that tourism is a key sector in the economy worth over US\$1 billion annually and making a contribution around 17.5% to the gross national product. Wildlife viewing, hunting and other ecotourism experiences in PAs play the primary role in attracting tourists to the country.

1.2 German development cooperation and protected areas

German Development Cooperation (DC) for PAs is provided under the Conservation and Sustainable Use of Biodiversity in Tanzania Programme including both financial (FC) and technical cooperation (TC). The Programme's objective is that the effective conservation and sustainable use of the natural resources contribute to rural development in selected districts and to safe-guarding the integrity of globally important ecosystems. The target group of the Programme is the predominantly poor rural population living near the protected areas. The Programme started in 2012 and has recently been extended until 2019 (TC) and 2020/22 (FC). The key fields of activity are:

1. Reform and strengthening of the wildlife administration and authority;
2. Strengthening the district administrations in the area of natural resources management;
3. Community-based conservation and benefit-sharing;
4. Strengthening the management of the Serengeti National Park and the Selous Game Reserve;
5. Improving the social and economic infrastructure in selected districts.

The contributions of the two German implementing organisations (KfW/FC, GIZ/TC) are made in the selected areas on the basis of close cooperation, in some cases also with non-governmental organisations such as the Frankfurt Zoological Society and WWF.

In the mid-2000s the government discussed the 'Serengeti Highway' which would have been routed through the northern part of the Park. Germany (along with other donors, conservationists and stakeholders) discussed with the Tanzanian government the road's likely and substantial negative impacts on biodiversity and wildlife, such as an interruption of the wildebeest migration routes. Following from the Tanzanian decision against the 'Serengeti Highway' Germany and Tanzania set up the programme to support the Serengeti National Park and communities living nearby. In addition, financial support was provided for the assessment and potentially funding of a bypass road around the Park.

Technical Cooperation (TC) takes place under the Sustainable Management of Natural Resources project with the objective that central government, autonomous agencies and local governments have implemented mechanisms to improve the protection of globally significant wildlife resources and created incentives for the local population to sustainably manage natural resources (GiZ, 2016). The project supports TAWA and the Wildlife Division in developing their organisational capacities. In the Serengeti and Ngorongoro Districts it supports the District Administration in increasing and managing revenues from natural resource management. Challenges addressed by the project are the in-transparent and irregular distribution of revenues to the districts/communities by the central government and in-transparent procedures for administering them. Support involved capacity building in financial management at district, ward and village level. As a result, the districts now disclose separately income derived from natural resources management and reinvestments in their financial plans. The project also helps to improve their service delivery capacities in the area of natural resource management. The form that support takes includes capacity development, training, advisory services, a limited supply of material resources, and local subsidies for NGOs to support local initiatives in the pilot regions (GiZ, 2016).

Current Financial Cooperation (FC) in natural resource management focuses on support for Serengeti National Park and surrounds along with the Selous Game Reserve. The main elements are investments in social and economic infrastructure of the districts adjacent to the protected areas, rehabilitation of the road network, land use planning and the establishment of WMAs as well as improvement of management instruments, equipment and infrastructure in the Serengeti National Park. In the Selous

Game Reserve support is rendered in the form of investments into the management capacity, equipment and infrastructure in the reserve and in adjacent WMAs.

Apart from the direct support to the protected area authorities Germany renders support through the SEDCP project which recognises that, despite living adjacent to protected areas, local communities often do not receive sufficient benefits to incentivise conservation. SEDCP supports alternative livelihood opportunities and promotes conservation through:¹⁶

- Support to Serengeti's ecosystem management programme
- Facilitating village land-use plans, and developing mechanisms for rewarding adherence
- CBNRM establishment and strengthening of good governance.
- Support to Village Scouts in ensuring the protection and monitoring of CBNRM
- Investments into social and economic infrastructure and rehabilitation of feeder roads in adjacent districts
- Helping to establish Community Conservation Banks (COCOBAs) which are community savings and banking loans model where participating villagers that contribute to the savings pool can then access small loans to establish conservation-friendly micro-businesses.

2 Status of PA financing

When considering revenue and financing flows it is useful to make the distinction between PAs directly managed by parastatals (i.e. TANAPA and the NCAA) and other PAs in the form of WMAs, Game Reserves and Game Controlled Areas which are under the oversight of TAWA, but managed by local communities. As it is beyond the scope of this project to cover all PA types equally, this section, and the remainder of this report, focuses relatively more on National Parks and WMAs

2.1 National Parks and the NCA

TANAPA and the NCAA are in a rare (if not globally unique) and unenviable situation as they have gradually been required to generate all of their own income (with assistance from donors). They receive no government funding and are instead a source of income for government. This represents a reversal of the historically situation as, in the 1980s, TANAPA did receive a government subsidy allowing for greater reinvestment in their parks. However, as own income rose, government stopped subsidies and started to impose taxes.

In addition to current taxation, the Tanzanian government introduced further measures in 2015 abolishing the revenue retention scheme which up to then allowed parastatals and other government agencies to keep (at least in parts) their self-generated revenue. This measure essentially imposes de facto taxes on TANAPA and the NCAA whilst also severely restricting their flexibility in terms of spending their budgets. These changes were essentially part of an attempt to reform parastatals under the new government. Under the new dispensation, all income is transferred to National Treasury who then keep 15% and allocate the remaining 85% back to TANAPA and NCAA based on what national government perceives to be their needs (relative to other priorities in the overall national budget one assumes). This has put further financial pressure on these institutions. Importantly, the allocation process is also more cumbersome/inflexible and park wardens have reported being severely curtailed in their effectiveness. In particular, funding cycles are no longer under their control which reduces their ability to adapt to seasonal needs and to issues such as

¹⁶ See more details at <https://sema.fzs.org/en/>

poaching were the ability to access additional funds quickly and to concentrate them in a given area is often paramount.

TANAPA and NCAA are able to generate significant own income in large part due to the highly attractive tourism assets which they manage. For TANAPA, Kilimanjaro and Serengeti National Parks are the primary keys to financial sustainability as they consistently generate a clear surplus which can then be used to cross-subsidise other less popular Parks. Taragire, Lake Manyara and Arusha National Parks tend to break even at a minimum and are achieving a surplus more frequently.

TANAPA continues to pursue increased tourism revenue primarily through concessions and entrance fees. The latter are revised relatively frequently including most recently in 2015. Revisions are often partially informed by willingness to pay (WTP) surveys of tourist such as those conducted by the Conservation Strategy Fund (CSF) in collaboration with TANAPA in 2003 and 2015 (see Bruner et al., 2015). With respect to community support, TANAPA has extended financial support to 577 villages bordering national parks for implementation of community development projects through the program of Support for Community Initiated Projects (SCIP). These projects focus on education, health, transportation and water supply. It is also investigating the feasibility of TANAPA Income Generating Projects (TIGPs) as a complement of the SCIP which would focus on support for small enterprises that effectively contribute to poverty alleviation for the communities living around the national parks, while gaining their support for conservation.¹⁷

Approximately 901,892 people, roughly 60% of whom were foreign tourists, visited Tanzanian National Parks in 2012/2013. Tourism growth to National Parks has been relatively robust in the recent past with an average annual growth rate of 8% from 2008/2009 to 2012/2013. Average annual revenue growth for the same period was 11% with revenues reaching TZS124.81 billion in 2012/2013 (roughly US\$57 million using the current exchange rate of TZS2200:US\$1).¹⁸ These were derived from entry fees, camping and accommodation fees, activity fees (e.g. game drives, canoeing, fishing, etc.), filming fees and concession fees.

Similar to the National Parks, hunting is not allowed in the Ngorongoro Conservation Area which relies on tourism revenue for own income. In 2012/13 the NCA earned about TZS47 billion (equivalent to US\$21.3 million) from 507,984 tourists who visited the area (URT, 2014).

2.2 WMA, Game Reserves and Game Controlled Areas

WMAs tend to generate revenue from tourism focused on game viewing and hunting. The Authorised Associations (AAs) that manage the WMAs market opportunities for private hunting and tourism concessions and select investors through a competitive tender system. Before negotiating with potential investors, the AAs are required to obtain the advice of the District Natural Resources Advisory Board. The proposed investments are also subject to approval by MNRT/TAWA. Investors pay the revenue directly to the government which then distributes the revenue as per the 2012 WMA Regulations. For tourism revenue, 20% goes to MNRT/TAWA, 15% to the District Council and 65% to WMAs. The distribution of hunting revenues is more complex and makes the distinction between block, game, conservation, observers' and permit fees as shown in Table 1. The majority of fees go to central government and the WMAs with a relatively low portion going to local government.

¹⁷ See http://www.tanzaniaparks.com/corporate_information.html

¹⁸ Data on visitors and revenues sourced from http://www.tanzaniaparks.go.tz/index.php?option=com_content&view=article&id=14:about-tanapa&catid=2&Itemid=173

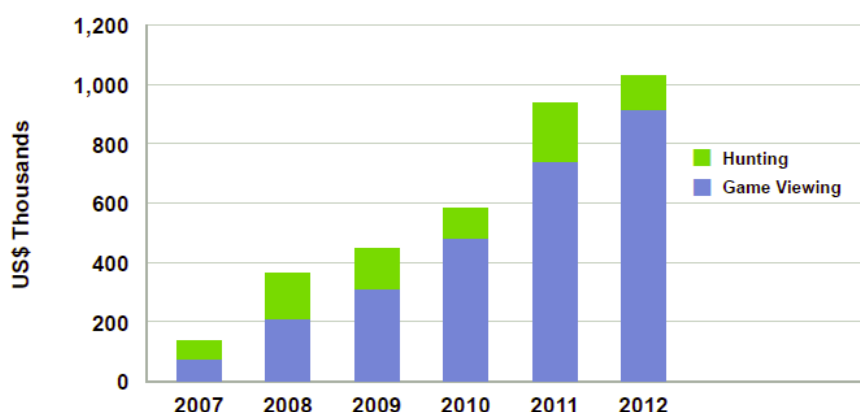
Table 1: Government and WMA sharing of hunting revenue

	Central Government	Local Government	WMA
Block Fee	25%	0%	75%
Game Fee	40%	15%	45%
Conservation Fee	55%	0%	45%
Observers' Fee	55%	0%	45%
Permit Fee	85%	0%	15%

Source: WWF, 2014

Revenue amount generated by all WMAs in Tanzania from tourism and hunting have risen sharply over time from approximately US\$130,000 in 2007 to just over US\$1 million in 2012 as per Figure 3 below. The split between the contribution of tourism and hunting has varied over time. Tourism has, however, consistently been the more important source of revenue exceeding 80% of revenue in 2012.

Figure 3: WMA revenues in nominal US\$



Source: WWF, 2014

Hunting is the most significant source of revenue for Game Reserves and Game Controlled Areas. In this they differ substantially from National Parks and the NCA where hunting is not allowed and from WMAs where hunting is a minor source of revenue. Table 2 shows combined revenue for Game Reserves, Game Controlled Areas and WMAs all under the oversight of TAWA. Total revenue accruing to the government between 2009 and 2012 was US\$73 million from trophy hunting, US\$233,250 from live animal sales and US\$11.8 million from tourism. Hunting and live animal sale were thus responsible for approximately 86% of total revenue over this period.

Table 2: Combine revenues trends for Game Reserves, Game Controlled Areas and WMAs in Tanzania (2009-2014)

Source of Revenues	2009/10	2010/11	2011/12	2012/13
Trophy hunting (USD)	18,444,881	23,536,347.00	15,062,217.75	15,971,430.93
Live animal trade (TZS)	172,046,203	137,866,585.06	26,469,234.15	151,354,374.82
Photographic tourism	USD: 2,706,603	2,863,287.24	2,080,978.00	3,904,808.35
	TZS: 261,639,400	44,638,750.00	74,289,980.00	5,307,565

Note: USD and TZS amounts for photographic tourism needed to be add together

Source: URT, 2014

2.3 Adequacy of funds for PA management

Although it has not been assessed systematically there is clear evidence that the funds available for PA management are generally inadequate. According to Kebebe et al. (2013), from 2010 to 2012 Wildlife Division in the MNRT was allocated an average of US\$2.15 Million per year, but the requirement was for US\$20 million per year. Even if this is an overstatement, needs comfortably exceeded funding according to these findings. This is also conformed if one asks park managers.

Inadequate funds also need to be understood in terms of the unique Tanzanian situation in which the currently under-funded system of National Parks are a source of funding for the government and not the other way around. Such an arrangement should arguably only be considered if the Parks system generates a surplus after keeping enough revenue for effective management including the necessary re-investment in capital assets. Globally, this kind of situation is either non-existent or, at best, extremely rare and highly case specific.

3 Key financing constraints to effective PA management

Limited funding is a key constraint to effective PA management as outlined in the previous section. This challenge is made worse by the fact that PA management authorities are increasingly treated as a source of income for central government. Unless this trend is reversed, PAs seem destined to increasingly under-perform in terms of wildlife conservation and of tourism development which requires re-investment in order to continue to thrive. Other, arguable less core functions of PAs especially in the form of community engagement and benefit sharing are likely to be restricted to an even greater degree.

Challenges associated with good planning and efficient use of budgets in PA management are present though more difficult to pin down and variable across management authorities and parks. As discussed, relatively recently introduced requirements mean that PAs are essentially allocated budget where they used to be able to retain their own income. Aside from decreasing funds available to them, this has also significantly decreased spending flexibility. Corruption and pressure from government to pay for unrelated costs have also been highlighted by, for example, Kebebe et al. (2013).¹⁹ Staffing challenges are also clear and not unique to the Tanzanian situation. It remains difficult to attract and retain good staff particularly those with the commercial/business skills required to increase revenue generation and improve financial management.

¹⁹ Kebebe et al. (2012) cite the example that the TANAPA building, built with TANAPA funds, was co-opted and given to the Human Rights Court in 2012, forcing TANAPA to rent alternative premises.

Local people, particularly those living in or near PAs, have arguably not benefited from these areas to the degree that they should. This is reflected in the situation of WMAs in particular. Potential solutions to financing and benefit sharing recommended by the Copenhagen Centre for Development Research (CCDR) following a review of WMAs include that, “The state and WMAs need to give communities more power to negotiate. Communities should be able not only to revisit terms of agreement, but to withdraw from WMAs that are unworkable and/or impose unacceptable opportunity costs.” In addition, “Grossly skewed distribution formulae for benefit sharing and taxation need radical revision in favour of communities. Local economic viability could be strengthened through better state co-funding for WMA-derived community initiatives (e.g. salaries for health or education personnel staffing WMA revenue-funded facilities)” (CCDR, 2015: 3).

Poaching continues to be a major challenge facing PAs with significant financial implications. This has a main component focused on the poaching of elephant and rhino for the international market. The sharp increase in poaching poses huge demands on PAs especially in terms of increased surveillance, enforcement and collaborative efforts. With respect to the latter, for instance, PA managers have to spend time better understanding legal processes and collaborating with law enforcement authorities. Increasingly, due to population increases, demand for bush meat has also increased to cater for both subsistence and commercial needs resulting in local trade.

4 Findings and lessons

The preceding sections have outlined the PA financing context along with the challenges it faces. This section focuses on key findings and lessons which are generally inter-linked and therefore difficult to allocate to specific themes. This is nevertheless done to the extent possible under the following themes which guide the analytical framework for all the case study countries:

- Theme 1: Understanding the current mix of finance flows and mechanisms,
- Theme 2: Financial sustainability and the interplay of finance flows and mechanisms,
- Theme 3: Impacts and side effects of finance flows and mechanisms on the overall situation in/around PAs,
- Theme 4: Potential for new measures.

4.1 Understanding the current mix of finance flows and mechanisms

The financial pressure specifically on TANAPA and the NCAA have increased significantly recently especially since the abolishment of the income retention scheme, essentially imposing additional de facto taxes and restricting spending flexibility. This is likely to have implications for their financial sustainability and will probably lead to increased requests for donor assistance. It will also likely affect their ability to remain active participants in newer projects that are not clearly core to their mandate, for example the expansion of their community awareness and benefit sharing initiatives. These new financially restrictive measures are also likely to apply to PAs under TAWA, even if not in the initial stages of its development, imposing similar restrictions on its ability to grow and deliver on its mandate. This will add to its existing challenges and implies the need for significant support for TAWA. The Selous Game Reserve is a case in point. The Selous was allowed to retain 50% of its income until 2006 when this was scrapped resulting in a significant decline in management performance according to Kebebe et al (2013). The question of a retention scheme for the Selous was an issue when it was managed by Wildlife Division and is thus likely to be equally important under TAWA.

Limited capacity especially at PA level in commercial management acts as a significant constraint to greater income generation for PAs. PA managers tend to have an education and background in wildlife management not business management. Salaries are in any event particularly low if one is trying to attract people with more commercial skills.

Particularly low levels of awareness of their rights (including to some level of local communal ownership) among the rural population is a key contextual element of the country which feeds into outcomes on the ground and created the need to improve this awareness in tandem or even before progress can be made on benefit sharing initiatives. Hence the need to enhance community awareness particularly for WMAs.

The rapid growth in the number of WMAs declared has been positive for conservation, but has also introduced risks associated with the ability of the government and other organisations to adequately support and sensitively manage this growth. From the start, it also seems particularly important to manage expectations and spend adequate time with communities before declaration in order for them to fully understand what declaration will mean for them and their livelihoods in terms of both realistic opportunities and opportunity costs. Not doing this risks turning a generally pro-conservation community into one that is resentful of conservation.

WMAs are not allowed to collect and retain their own income. All income goes to the central government who then allocates a portion back to WMAs in a process that is not regarded as adequately transparent. It appears that part of the reason given for this situation is that WMAs are 'not ready' to collect money and manage funds. This seems to be a fairly paternalistic view and there is less clarity from government on how these constraints can be overcome and by when. Although not perfect, the implementation of CBNRM activities through Communal Conservancies in Namibia shows that income generation, retention and spending is possible with adequate support. There have also been cases in Tanzania where communities have essentially flouted the law and made agreements directly with private sector investors who pay local communities directly thereby circumventing the national government. Perceptions among locals that they should keep more of the income earned is a driver in this regard. In any event, there is a lack of clarity on the exact nature of the law on this issue of collection, retention and sharing of income. Part of the technical cooperation project through GIZ is to conduct a legal review on this which is currently ongoing. This should provide more clarity and then feed into awareness and capacity building initiatives.

Decisions regarding the allocation of the money that flows back to WMAs from government are made by the District Natural Resources Advisory Council. In some cases, these Councils have not functioned well and management of finances has been poor (in many cases due to no systems being in place and because of low capacity). Conflicting goals can also be a problem – for example, conservation oriented partners such as TANAPA, TAWA and donors may want more money spent on conservation while Districts are more interested in other development projects such as schools, roads, etc.

It is worth bearing in mind that truly secure funding is elusive as much depends on the willingness of the government of the day to support PAs, facilitate income generation (and reward it) and engage in constructive cooperation with NGOs, etc. It is thus important for PAs and their parent ministries to be vigilant and continue to make the case for funding and enabling conditions on an ongoing basis.

4.2 Financial sustainability and the interplay of financial flows and mechanisms

Experiences with private sector concessionaires tends to be mixed among PA management authorities and WMAs. Some concessionaires are ethical, committed to benefit sharing and ownership and a pleasure to work with while others are not. Outcomes are mostly case specific for such investments. For example, a project to build a visitor centre or other facility that is not carefully investigated in close collaboration with relevant stakeholders could be rushed and not integrated with other infrastructure increasing the likelihood of failure.

WMAs tend to face significant challenges where they are not capacitated in dealing with private sector investors. As the number of WMAs increases it will be vital to also ensure that support and capacity building for WMAs is forthcoming from government and from NGOs or donors. This should help to limited the number of situations where WMAs are exploited which can have a very detrimental effect on their willingness to continue with the WMA programme and CBNRM activities.

4.3 Impacts and side effects of finance flows and mechanisms on the overall situation in/around PAs

Much more thorough understanding of the needs of partners, their capacities, cultural and institutional realities is needed first before proceeding with projects. One has to lay the groundwork and build relationships first which can take time and then move into scoping with some minimum level of flexibility. All of this does take more time and effort but it cannot be avoided or shortened. It also requires a level of adaptability which larger organisations are not known for.

Poaching is a major challenge along with funding counter measures and achieving a co-ordinated response. Anti-poaching efforts received significant attention from a number of donors and large and small NGO.²⁰ There has been significant interest from the private sector who see potential business opportunities. For example, security companies and advisors have emerged as stakeholders. Purely from a co-ordination perspective, this imposes costs and takes time from government who need to engage with multiple parties. They have to try to co-ordinate resource allocation and efforts among donors in particular all of whom tend to have very specific rules about the kind of support that they can provide. Some only want to provide capital equipment such as vehicles (but not drivers for the vehicles and maybe not the brand of vehicle that government garages are able to service), others focus on capacity building, very few are able to fund additional staff needed to increase patrols which is often what is most needed, etc. They also tend to have their own rules and procedures around procurement, human resources, monitoring and evaluation, financial management and reporting. These are generally inflexible and do not match those of government causing additional difficulties. There also tends to be limited options for adjustment and adaptive management – once funds are committed to a project in a given area then it is difficult to change even if circumstances change which is likely in a highly dynamic environment. It also stands to reason that the focus on anti-poaching is likely to lead to less overall funding for the other conservation functions though it is difficult to measure this.

Difficulties in the co-ordination of anti-poaching spending and effort between the state and donors is arguably severely restricted by the PA management planning context. Stakeholders mentioned that coordination, on this and other matters of common interest, is hard to achieve unless PAs (especially the larger more prominent ones) have up to date management and associated business plans that can then be translated into more frequently drawn up work plans. There is no point in ‘over-planning’ but without these plans it is difficult to achieve a common understanding and clarity on what actions or investments are most needed.

4.4 Finance mechanisms in development and new finance mechanism with potential

The programme of work focused on WMA capacity building, income generation and potentially greater income retention is a key focus for government, Germany, through its technical cooperation, and other donors such as USAID. These components are part of a large programme of providing support to TAWA particularly as it has only become operational this year. With specific reference to

²⁰ Although no data was available for Tanzania, South Africa has over 100 NGOs involved in anti-poaching in some way and, given their proliferation and need to try to coordinate their efforts, the Department of Environmental Affairs has a registration process for them.

new financial mechanisms, USAID commissioned research on “Wildlife Management Areas (WMAs) Financial Viability Analysis Study” in 2016 which is ongoing. This work makes some preliminary recommendations which are best viewed as points for discussion as opposed to endorsed measures. Some of these recommendations are far reaching and include de-proclamation of WMAs which are considered to be ‘paper parks’.

The importance of always bearing in mind that PAs and conservation are a public good was emphasized. This means that regardless of how funding flows, it does so either directly through or at the ultimate discretion of the state who also will set the rules in terms of own income generation and retention by PAs. So the primary focus that needs to be borne in mind before new measures are considered is the need to make the case for the funding of PAs and conservation. Making the case also cannot be driven by one-off studies. It needs to be an ongoing process.

The difficulty associated with establishing a REDD+ programme in Tanzania was cited as an example of how more sophisticated mechanisms need to be treated with care. Often the legal system, institutional set-up and administrative capacities are not well suited to the introduction of such mechanisms. A recent review of REDD+ in Tanzania confirmed that the flow of funds from donors including Norway came to an end in 2014 and that there are no known plans to continue funding of any REDD+ activities (see Forest Trends, 2016). The review also raises the issue of expectations. Key REDD+ readiness activities such as training of communities, participatory carbon measurement and the establishment of village land use plans were placed on hold indefinitely. This has led to understandable disappointment among local communities whose expectations of future benefits were raised during REDD+ pilot projects some of which included trial payments to local communities (Forest Trends, 2016).

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Interviewees:

Bennie Bloemberg, GiZ Tanzania, bennie.bloemberg@giz.de

Benjamin Neusel, GiZ Tanzania, benjamin.neusel@giz.de

Uwe Klug, KfW Tanzania, uwe.klug@kfw.de

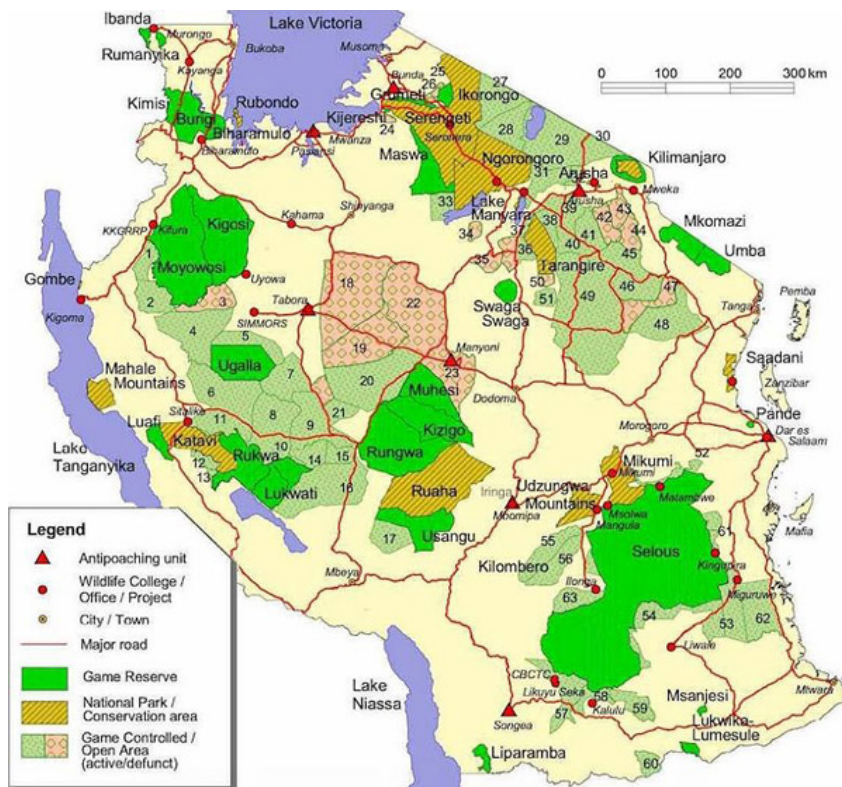
William Mwakilema, Senior Warden Serengeti National Park, TANAPA, mwakilema2009@gmail.com

Dennis Rentsch, Frankfurt Zoological Society Serengeti Ecosystem Management project (FZS-SEMA), dennis.rentsch@fzs.org

Ezekiel Dembe, TANAPA, hezidembe@gmail.com

6 Appendices

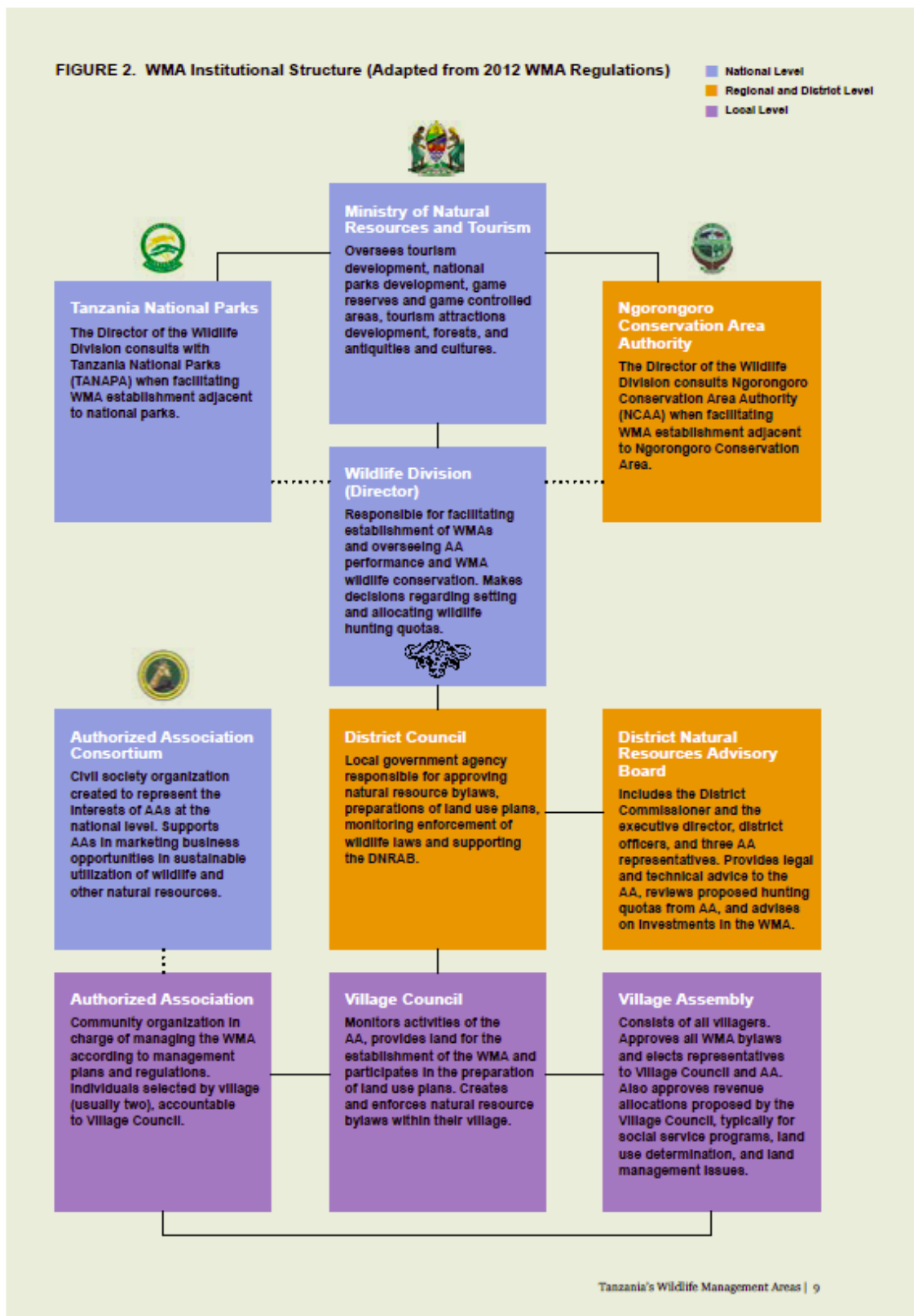
Appendix 3: Map of Tanzanian protected areas



Note: Includes key state PAs. Excludes WMAs and may exclude some other areas

Source: <http://safarisandexpeditions.com/index.php/game-reserves.html>

Appendix 4: Wildlife Management Area (WMA) institutional structure



Note: Solid lines signify direct reporting and broken lines indicate consultation

Source: WWF, 2014

Resource mobilization for biodiversity conservation in German Development Cooperation: From sustainable financing of protected areas towards more comprehensive financing strategies for biodiversity

Case study: Madagascar

Author: Christoph Schröter-Schlaack

Final version as of Nov 30th 2016

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Abbreviations

ANGAP	l'Association Nationale pour la Gestion des Aires Protégées (now called MNP)
CI	Conservation International
EIA	Environmental Investigation Agency
FABPM	Foundation for Protected Areas and Biodiversity (Fondation pour les Aires Protégées et la Biodiversité de Madagascar)
IUCN	International Union for Conservation of Nature
MEF	Ministry of Environment and Forests
MNP	Madagascar National Parks (formally known as ANGAP)
NAP	New Protected Areas (Nouvelle aire protégée)
NEAP	National Environmental Action Plan
PA	Protected Area
ONE	National Environment Office (Office National de l'Environnement)
SAPM	System of Protected Areas of Madagascar
TDG	Transfert de gestion (Community natural resource management contract)
WCS	Wildlife Conservation Society

1 Overview

Madagascar is blessed with unparalleled biodiversity and natural resources. It is estimated that five percent of known species worldwide are found in Madagascar, and approximately 90 percent of flora and 70 percent of vertebrae are endemic (World Bank, 2015). The country offers a wide variety of landscapes and vegetation types, ranging from dense and humid forest in the north and eastern escarpment, to dry forest in the west and semi-arid spiny forest in the south. Besides a huge potential for tourism, the protected area network and forests provide other benefits in the form of hydrological services, regulating the flow of water and helping to reduce floods and water shortages, essential services for downstream urban water users and hydroelectricity generation. Following the 2003 “Durban Vision” the Government initiated the System of Protected Areas of Madagascar (SAPM) and the expansion of the protected area network has been rapid and impressive; from 46 protected areas to more than 140 protected areas today. SAPM entails 122 PAs: 43 national parks managed by Madagascar National Parks (MNP), a non-profit association to manage the national network of strictly protected areas, and 79 so called New Protected Areas (NAP), of which 63 are administered with support of international organizations and 16 are administered by the Ministry of Environment (World Bank, 2016).

With GDP/capita estimated at US\$ 453 in 2010, Madagascar is categorized amongst the poorest countries in the world and the gap in terms of GDP/capita between Madagascar and the Sub-Saharan African region has widened in recent years, with current national GDP/capita less than half the regional average (WAVES, 2015). About 62 percent of the population live below the extreme (food) poverty line (that is, with an income that is less than the cost of consuming 2100 calories a day); (ii) three out of four people live below the absolute poverty line; and (iii) over ninety percent of the population live on US\$ 2/day or less, which is about the same proportion as in Congo DRC, Liberia, and Burundi (IMF, 2015). Madagascar’s economic development has been hindered by repeated political crises, occurring every decade on average since the country’s independence in 1960 that also heavily impacted environmental conservation. The latest crisis followed the unconstitutional change of regime in 2009, and lasted close to five years. It left the economy severely crippled, led to a sharp rise in poverty levels and also affected conservation funding, as many international donors withdrew and national funding of conservation vanished (WAVES, 2015). It also considerably slowed down the process of creating a permanent status of NAPs with initially temporary protection (World Bank, 2015). The periods of political unrest have created power vacuums within which there has been a near-total collapse of environmental governance leading to natural resource exploitation and dramatic reductions in revenues from tourism and other key natural resource based sectors. Current threats are likely to be compounded by demographic pressures, with annual population growth of around 2.8 percent and a doubling of the population projected in the coming 25 years, and climate change which will bring increasingly intense and frequent extreme weather events to a country that has been identified as amongst the top five most climate change vulnerable countries worldwide (World Bank, 2013).

Close to 80 percent of the population live in rural areas, where absolute poverty is almost twice as high compared to urban areas. As a result, 86 percent of the poor live in rural areas. Most farmers practice subsistence farming with yields that are barely enough to feed their families. Real per capita value added in agriculture has been falling by about 1 percent a year since 1960 (IMF, 2015). More than 95 percent of the population relies on timber for fuelwood, charcoal and construction purposes. Energy needs create significant pressures on forests, and are thought to amount to 80 percent of yearly domestic wood consumption (WAVES, 2015). The majority of remaining native vegetation cover - estimated at 9 to 11 million hectares - is contained in the national protected area network that covers 12 percent of the national territory (World Bank, 2013). Demand in fuelwood is expected to start outstripping supply in the next 10 to 15 years, and if no alternative is proposed, populations will increasingly target protected areas (WAVES, 2015).

Against this background, German development cooperation is focussing on (1) protection and sustainable management of forest resources, (2) protection and sustainable use of biodiversity and

natural resources, and (3) adaptation to climate change, in particular adaptation of agricultural value chains. The recent funding period (2015-2021) entails a budget of EUR 50.2 million for technical cooperation (including contribution of EUR 7.7 million from EU and EUR 0.5 million from Australian Government) and a budget of EUR 68 million for financial cooperation.

2 Status of PA financing in Madagascar

A significant financing gap persists for the SAPM network, with management cost estimated in the order of US\$ 19 million per year (World Bank, 2013). Current domestic sources of financing for the PA network cover approximately eight percent of network costs and include tourism entry fees that contribute approximately US\$ 0.5 million per year, the Foundation for Protected Areas and Biodiversity (FAPBM) trust fund which contributes US\$ 1.0 million per year (see below), and pre-sales of carbon credits that have generated relatively modest one-off funding for certain protected areas. The remaining 92 percent of the network's costs are currently met by external sources; notably donors, NGOs and private Foundations.

Over the last two decades the World Bank has been a primary source of development assistance to Madagascar's environment sector through the framework of the National Environmental Action Plan (NEAP), which was adopted in 1990. The NEAP, which was the first to be prepared in Africa, was implemented through a three phase Environment Program with a total budget of approximately US\$ 400 million that drew together the support of a large number of technical and financial partners. During the political crisis, World Bank decided to increase the third phase of its program by a US\$ 40 million. With the closure of the third and final phase of the World Bank's Madagascar Environmental Program Support Project in 2014, and the withdrawal of nearly all of the traditional financial partners from the environment sector due to the ongoing political crisis, this marked a watershed moment for the country's environment sector. Very recently, the World Bank and Malagasy Government have agreed to the preparation of the US\$ 65 million Sustainable Agriculture Landscape Project, which to a large extent is expected to fill this vacuum (World Bank, 2016).

Two trust funds operate in the environmental sector – the Foundation for Protected Areas and Biodiversity (FAPBM) and the Foundation Tany Meva. Besides an endowment fund of now US\$ 75 million capital FABPM is also managing a 20-year sinking fund financed by a debt conversion agreement between the Malagasy Government and the German Government as of April 2003. For the endowment fund beneficiaries' choice is made after an annual prioritization list: only sites which have an official protected statute can pretend to subvention from the Foundation. MNP receives about 60 percent of FAPBM's total budget (makes up to 30 percent of total MNP funds for period 2016 to 2020) (GFA, 2016) and makes applications to FAPBM on their members' behalf. Germany is supporting FAPBM to significantly increase capitalisation (EUR 22 million in 2016).

The current capital of Tany Meva is in the order of US\$ 18 million and since 1996 it has funded 1170 projects for a total value of US\$ 9.3 million, however it has been less effective than the FAPBM in terms of its visibility and its ability to secure large sources of financing from traditional donors (World Bank, 2013).

2.8 million hectares of protected areas in 43 national parks are managed by MNP with an estimated cost of US\$ 8 million per year (World Bank, 2013). MNP was established in 1990 as a non-profit association to manage the national network (only national parks back then) of protected areas on behalf of the State. Despite over twenty years of existence, MNP remains strongly dependent on external assistance to meet its operating budget. In recent years, the Government has provided no financing for MNP from its internal budget, and tourism generated revenues represent only a small proportion of its budgetary needs. The remaining budget is provided by FABPM and external donors, notably the World Bank through the Third Environmental Program Support Project and its additional funding during the political crisis (World Bank, 2016). German financial cooperation is directly

supporting MNP with EUR 22 million between 2014 and 2020 for investments in tourism-related infrastructure in 19 protected areas based on MNP's strategic plan.

The more than 90 NAPs now established (some of them still under temporary conservation) are in many cases run as community based conservation and are implemented via management transfer contracts (TDG - transferts de gestion). Such contracts aim to persuade the local populations living at the edge or within the NAP to participate, e.g. in forest conservation. Often these NAPs are run by international NGOs such as Wildlife Conservation Society (WCS), Conservation International (CI), Bird Life International or Missouri Botanical Garden. GIZ is supporting the establishment of value chains for the sustainable use of natural resources, e.g. honey, charcoal and artisanal mining (sapphire & gold) in NAPs so-called Nouvelles Aires protégées (NAP - Newly Protected Areas, IUCN category V and VI) outside the MNP-managed PA of Madagascar. Total budget available is EUR 12.5 million for 2015 and 2016.

3 Key financing constraints to effective PA management in Madagascar

Political unrest and socioeconomic crisis leaving biodiversity conservation vulnerable

The political crisis 2009-2013 in Madagascar has led to a withdrawal of nearly all traditional financial partners from the environment sector. In 2011, a transition government was put in place but election only took place in December 2013. The election did not result in a clear majority in parliament and the President had to build an alliance of parliamentarians that would be willing to support him. Between April 2014 and in December 2015, two different Prime Ministers and two different Ministers of Environment were in office (World Bank, 2016). This has created a power vacuum within which there has been a near-total collapse of environmental governance leading to dramatic reductions in revenues from tourism and other key natural resource based sectors but an increasing (and often illegal) natural resource exploitation (MEF, 2014).

Insufficient response options to illegal activities

Reviewing the implementation of its Environmental Program, the World Bank concluded that important pressures on PAs and forests come from low agricultural yields, weak enforcement and rule of law, and little participation of decentralized government (World Bank, 2016). PA management agencies, such as MNP, CI and WCS have only partial control over these factors. Although Madagascar is among the top ten countries in the list of countries receiving aid for environment protection from the international community (Miller et al., 2012), this has not protected Malagasy forests against the threat of deforestation: from 2000–2010, Madagascar recorded an annual loss of close to 44,000 hectares of natural forests, i.e., 0.5 percent per annum (ONE, 2013). As it is expected that demand in fuelwood is expected to start outstripping supply in the next 10 to 15 years populations will increasingly target protected areas and deforestation has to be dealt with by giving sustained development opportunities to local communities (World Bank, 2013). Although a ban on the harvesting of Malagasy rosewood and ebony has been in place since 2006 illegal trade has continued, with little viable stocks of rosewood remaining outside of PAs (Treanor, 2015). An investigation co-organized by the Malagasy Forestry Administration, MNP and NGOs revealed intensive logging in a national park in the Northeast, a failure of the Forestry Administration to control illegal harvesting and trade, and revenues of US\$ 460,000 per day on international markets pocketed by a dozen timber barons within Madagascar. It was also estimated that only one percent of the value of Malagasy rosewood remains in Madagascar, with 98 percent exported to China (Global Witness and EIA, 2010). In this respect another study found that persistent logging of precious timber in the Sava region's protected areas is the result of state capture by local timber trading elites (World Bank, 2010).

Interviewees said, that the official inter-ministerial coordination mechanism between ministries of agriculture, fisheries and environment is deemed as insufficient and hence important potentials for synergies/complementarity of actions is not being realised. It is against this background that World Bank is now moving towards financing a comprehensive, multi-sectoral objective rural development

programme. The project is to improve agricultural productivity and management of associated natural resources in selected landscapes. This approach is grounded in the principle that the sectoral approaches adopted so far, of which the Environment Program is a notable example, are ill-suited to address risks that are found outside the boundaries of the environmental sector (World Bank, 2016).

Low management capacity of MNP

While created as an independent association, the statutes of MNP state that the Minister for Environment is the President of the Board, and that the Ministry selects a majority of other Board members. The high expectations in reaching financial sustainability and higher conservation effectiveness by setting up a state-independent structure were soon disappointed. While institutionally, MNP has built up a solid reputation as a relatively effective manager of the country's system of national parks and reserves, through effective donor coordination under earlier phases of the NEAP, it falls short in terms of conservation management, as its IUCN-based index for effective management stays at only 41 percent (World Bank, 2016). As main reasons interviewees mentioned overly complex administrative procedures, centralised and hierarchical structures, and lack of management capacity. This is mirrored by the findings of World Bank: Areas that specifically required attention included: (i) strengthening management and implementation capacity at the field level; (ii) establishing more effective measures to reduce encroachment; and (iii) developing tourism potential (World Bank, 2016). Moreover, despite substantial financial support through KfW directly (and via FABPM) there is a financing gap of more than EUR 11 million in MNP's business plan for the five years 2016-2020 (GFA, 2016).

Low spending efficiency of MNP is due to a divergence between ambitious planning and limited implementation capacity. For example, PA staff budget planning of MNP (and hence application to FABPM) was based on an expected increase in number of staff and monthly salaries which both didn't materialized. In consequence, funds approved by the FABPM could be spent but remained blocked despite possibly being urgently needed elsewhere. As a response, FABPM invests operational resources in providing additional advice to MNP and PA staff on PA management performance.

Interviewees see another need in making PA income flow more stable, as by now the main source of funding is project-based. Project format is deemed to demotivate staff because also when programmes run well they may have to be shut down, once project has finished. Providing more permanent funding in case of successful programmes and structures might increase overall management performance.

Tourism related PA income falling short of its potential

Madagascar's unique biodiversity and landscapes offer a great potential for attracting tourists. The direct contribution of Travel & Tourism to GDP was 8.1 percent of total GDP, with 340,000 jobs directly accruing from tourism (6.4 percent of total employment) in 2014. Share of tourism on GDP is forecast to fall by 7.7 percent in 2015 (and destroying 10 percent of jobs) (WTTC, 2015). A large share of tourism is directly related to the country's outstanding forest and coastal biodiversity and high endemism. However, interviewees mentioned that apart from several project-funded community-based tourism initiatives, national service providers in the sector are not sufficiently aware of their dependence on well-conserved landscapes to engage in co-financing PAs. For most PAs tourism-income is not an option due to their remote location and a lack of access to tourism market and tourism related infrastructure. Lastly, the political instability and ongoing economic crises impeded private investment in developing touristic infrastructures. This also resonates in tourism related funding flows to PAs: current capture of the economic benefits of tourism within the network of protected areas is very low – only US\$ 1 million/year is generated by tourism through park entry fees (WAVES, 2015). A prior to crisis study has however estimated that ecotourism may have the potential to generate US\$28 million/year (Carrot & Loyer, 2003).

4 Findings and lessons

The preceding sections have outlined the PA financing context, the current mix of funding flows and financial mechanisms along with the challenges present in Madagascar. This section focuses on key findings and lessons which are generally inter-linked and therefore difficult to allocate to specific themes. This is nevertheless done to the extent possible, aiming in particular on theme 2 (financial sustainability and the interplay of finance flows and mechanisms) as well as on theme 3 (Impacts and side effects of finance flows and mechanisms on the overall situation in and around PAs).

Financial sustainability and the interplay of financial flows and mechanisms

Crucially important external funding flows but low conditionality: As mentioned above, over the period 2009-2012, PA financing in Madagascar was confronted with the withdrawal of nearly all of the traditional financial partners from the environment sector due to the political crisis. Besides the crucial funding provided by World Bank and German financial cooperation, the conservation trust fund FAPBM established in 2005, buffered some of the impacts by providing funding for basic operations for a large group of PAs. Significant German resources were made available not only to FABPM at a moment where national government withdrew from funding the majority of its PAs but also directly to MNP to ensure a minimum extent of conservation despite the tremendous financing gap. However, FABPM considers that German financial support to conservation is insufficiently made conditional upon funding commitments by the national government. Furthermore, donors like Germany often make financial contributions to FABPM and directly to PAs, thereby limiting the coordinating potential of the fund.

Importance of keeping government ownership in funding flows: During the crisis, the World Bank suspended dialogue with government and teams on the ground were not in contact with senior government officials. In its recent review of action (World Bank, 2016), the Bank concluded that it “may at this stage have underestimated the importance of government ownership when it decided to proceed with the project restructuring without allowing the government to implement activities directly”. Thus, implementation of the AF was affected by very low government ownership. This meant, for example, that key aspects of the community development approach, such as the official approval of management transfers between government and local communities, took place at a slower pace. In line with this, it was also found that creation of overly strong implementing agencies drains qualified staff and lowers morale in the line ministries. To balance the short term interests of the project with long term interest of sector development, it is important to approach sector capacity building comprehensively, with a clear understanding of division of responsibilities among the line ministries and implementing agencies, especially those envisioned to stay in place permanently as service providers. A lack of comprehensive approach leads to staffing strain on line ministries and high staff turnover among implementing agencies as they compete for qualified staff.

On the other hand, it is acknowledged that effective governance in Madagascar is challenged by the non-competitive political and economic institutions which are subservient to the elites. Interference in the application of the legal framework has resulted in widespread impunity for both political and economic elites and other stakeholders, adversely affecting development effectiveness. In terms of biodiversity conservation and against the backdrop of the recent political instability this constitutes a strong argument for urgent action despite low local government ownership.

Impacts of finance flows and mechanisms on the overall situation in/around PAs

Overcoming the disconnect between planning and implementation via capacity building and cooperation: Particularly for MNP but also for some NAPs, spending effectiveness is deemed to be low mainly due to a lack of planning capabilities and a disconnect between planning of conservation activities and actual implementation (see also above). To address these constraints, FAPBM is

spending considerable (also financial) efforts on tri-/and bi-annual audits of conservation activities of PAs to enhance impact on the ground. On top of regular financial audits this covers environmental indicators and measurements of management effectiveness. If audit results are poor, options for improvement are discussed with PA managers, in particular in NAPs where FAPBM is financing activities.

The importance of strengthening MNP management capacity is not only acknowledged by KfW and the direct support provided but also called upon by the World Bank's review on its Environmental Program (World Bank, 2016): Strategically placed regional and local capacity for environmental management – in terms of trained staff and basic office support – is essential for efficient implementation of field-level project activities in target zones. Such capacity may also form an important link between central structures and local communities.

Investing in buffer zone management and rural livelihoods to reduce pressures on activities undermining conservation in PAs: To ensure sustainability, environmental projects must complement the field-level conservation measures with a provision of alternative livelihood opportunities. Alternative livelihoods, based, e.g., on agricultural intensification or ecotourism, help to reduce the pressure on natural resource overexploitation and degradation, and enhance the effectiveness and sustainability of direct conservation measures. GIZ is a pioneering supporter of the implementation of NAP via management transfer contracts (*transferts de gestion*). Such contracts aim to persuade the local populations living at the edge or within the NAP to participate, e.g. in forest conservation. However, there is research that revealed how a series of political decisions during the political crisis impeded village consultation. While the high-profile announcement successfully mobilized biodiversity conservation funds, it also drew attention towards meeting the demands of capital city-based politicians, foreign donors, and international NGOs and away from effectively engaging rural communities, thereby reinforcing nonlocal decision-making power (Corson, 2012).

The importance of buffer zone management to reduce pressures on PAs and to raise awareness of the importance of biodiversity protected via conservation measures was also stressed by FAPBM representatives. The fund in Madagascar is thus funding PA buffer-zone activities, including building of schools and sustainable livelihoods programmes based on the assumption that improving coordination among concerned ministries and promoting joint planning in buffer-zones will reduce PA operating costs. However, these claims remain yet unproved as neither long-term data nor baselines to compare PA spending on monitoring and enforcement of protection are available.

Activities to stimulate fund raising: FAPBM covers only up to 80 percent of total costs of a proposal to incentivize search for co-financiers. This is also to enhance collaboration with government programmes, esp. in buffer-zone management. Moreover, FAPBM itself is very interested in winning foreign philanthropy and private sector funds that are most probably coming from international companies. The fund is already in contact with telecommunications and airline and is planning to do a 'road show' in US and Scandinavia. By now, however, FAPBM is lacking the adequate capacity to do fundraising and they applied for according coaching to increase total capitalization of the trust fund.

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Interviewees:

Martin Boström, KfW, Principal Project Manager Madagascar

Christian Burren, GiZ Madagascar

Gerard Rambeloarisoa, Executive Director La Fondation pour les Aires Protégées et la Biodiversité de Madagascar (FAPBM)

Resource mobilization for biodiversity conservation in German Development Cooperation: From sustainable financing of protected areas towards more comprehensive financing strategies for biodiversity

Case study: Mauritania

November 2016

Author: Augustin Berghöfer

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Abbreviations

AFD: Agence Française pour le Développement

BACoMaB: Fonds fiduciaire du Banc d'Arguin et de la Biodiversité Côtière et Marine (Banc d'Arguin, and Coastal and Marine Biodiversity Trust Fund limited)

MAVA: MAVA Fondation pour la nature (Swiss NGO)

MEDD: Ministère de l'Environnement et du Développement Durable (Ministry for Environment and Sustainable Development)

NBSAP: National Biodiversity Strategy and Action Plan

PANE: National Action Plan for the Environment

PNBA: Parc National du Banc d'Arguin (Banc d'Arguin National Park)

PND: Parc National du Diawling (Diawling National Park)

1 Overview

Mauritania belongs to the group of least developed and also of highly indebted countries. While macro-economic development since 2010 is considered to be positive, the low iron ore and petroleum prices are considered to reduce government income from 2015 onwards for a longer period. The Human Development Index places Mauritania on rank 156 out of 188, with about one third of the population living below the poverty line (Mertes 2016). Under the presidency of Abdel Aziz (since 2009) the political situation in Mauritania is considered to have gained considerable stability after a period of turmoil (ibid.).

Biodiversity conservation in Mauritania focuses on coastal and marine areas. The country has 2 national parks: The Parc National du Banc d'Arguin (PNBA) covers about 12.000 km² (~50% of them being marine area), and the Parc National de Diawling (PND) comprises about 160 km² (mostly wetlands), embedded in a much larger bi-national biosphere reserve. PND's extension to 590 km² is currently being prepared. Both parks are managed by government entities.

According to Mauritania's NBSAP (2014) the **principal threats** to terrestrial ecosystems include: overgrazing, overexploitation of forest products; habitat fragmentation and rapid urbanization; salinization; erosion; alien invasive species; pollution, and the effects of climate change. For coastal and marine ecosystems the principal threats are: overfishing, use of wrong (destructive) fishing gear, mining and oil exploitation, rapid urbanization and the effects of climate change. As principal drivers to these threats, the national action plan for the environment (PANE) emphasizes rapid population growth and associated uncoordinated and or uncontrolled use of land and natural resources.

German development cooperation supports activities in the following areas (BMZ n.d.):

- Good governance and institutional strengthening
- Coastal and marine biodiversity conservation
- Sustainable use of terrestrial and marine natural resources, including fisheries management
- Capacity building for adaptation to climate change

Status of biodiversity conservation financing in Mauritania:

According to OECD aid data, France and Germany jointly provided about 90% of ODA disbursements for biodiversity conservation since 2004, with Spain, Belgium and the US being minor contributors.

Annual ODA disbursements for biodiversity have been highly fluctuating over the last decade. From 2004 to 2008, they ranged from €600.000 to €1.5 million. After the coup d'état they dropped to less than €100.000 (2009-2011). In 2012, they peaked at €6.5 million and in 2014 they settled at €3 million (OECD 2016).

Current **commitments of German development cooperation in the environmental sector** comprise the following actions over a multi-year period (according to an internal report dated June 2015):

Type	Theme	Committed amount
Financial cooperation	Investments in coastal biodiversity conservation	€22 million
Financial cooperation	Investments surveillance for sustainable fishery	€20.4 million
Technical cooperation	Support for the sustainable use and management of natural resources	€4.4 million (+ €6 million as of 10/2016)
Technical cooperation	Building capacity for climate adaptation	€3.2 million

At PA level, biodiversity conservation spending differs significantly between the two parks, not only due to the difference in size, but also for historical reasons. Since the 1980's the PNBA has received significant attention from foreign NGOs due to its international recognition as an important bird conservation area. Thus, compared to the PND, the PNBA has more experience and reputation to attract project based funding. Nonetheless, for the PNBA a financial gap of €7.5 million for 2015-2019 is being expected (see below). According to one interviewee, rising costs are mainly due to salaries for park administration off-site (and not for field personnel). Another interviewee indicated that the gap may be over-estimated.

Regular government budget allocations have been stable over the last years, and to date, are being disbursed for salaries and recurrent costs (~40%) and investments (~60%). The following table indicates that regular government budget allocations to the PNBA cover less than 40% of total expenses in 2016. Furthermore, it shows, that the annual allocations of about €1.5 million, are not expected to change, despite substantial fluctuations in expected future expenses.

Table: Overview of different funding flows for the PNBA. Numbers are in million UM (and need to be multiplied by 2500 for a € estimate). Source: translated from internal document (réponse_PNBA-UNESCO_fev16.ppt)

	2015	2016	2017	2018	2019
Expected costs	1357	1696	2035	1866	1526
Expected income					
Gov operational allocations	240	240	240	240	240
Gov investment allocations	360	360	360	360	360
BACoMaB	50	90	90	90	90
KfW	309	878	900		
FFEM/AFD		63			
Penalty payments	3	3	3	3	3
Tourism receipts	1,5	1,5	2	2	2
Expected total income	964	1636	1595	695	695
Financial gap	-393	-61	-440	-1171	-831

Resource mobilisation for biodiversity under the CBD framework (Aichi target no. 20) has been judged as 'weak, due to lack of financial resources' in Mauritania's fifth national report to the CBD (MEDD 2014, p.93). The monetary value of the PNBA's ecosystem services (mainly fish and blue carbon) will be estimated in 2017 (a study financed by France through BACoMaB), with the objective to mobilise financial and political support for the PNBA.

BACoMaB, the country's principal conservation trust fund has been formally established in 2009. Since 2014 the CTF financially supports conservation action in the two PAs, for example for co-management, biodiversity monitoring and marine surveillance (BACoMaB 2016a). For 2016 BACoMaB disbursements are estimated at about 400.000€. In 2016 the CTF also supported local NGOs (with €30.000), in addition to the two parks.

BACoMaB plans are to reach a capitalisation of €55 million by 2020, which is expected to cover up to 90% of not further specified operating costs of the two PAs, based on the assumption that these costs do not exceed €1.1 million annually (BACoMaB 2016b). BACoMaB is a donor initiative which began in 2002, also in response to a partial withdrawal of foreign funding for PNBA. It is aimed to attract and stabilize funding flows for Mauritania’s parks and to enhance long-term funding security.

Currently, BACOMAB has an endowment of €21.3 million:

Donor	Amount disbursed by Dec 2015
EU-Mauritanian fisheries partnership agreement	€1.8 million
BMZ/KfW	€10 million
Fondation MAVA (NGO)	€6 million
Agence Française de Développement	€2.5 million
Fond Français pour l’Environnement Mondial	€1 million
Total	€21.3 million

Source: BACOMAB 2016a,b

Private sector contributions for biodiversity conservation are unclear in Mauritania. The national fishing industry is considered a principal beneficiary of marine conservation, yet the informal and highly dispersed structure of the fishery value chain has made biodiversity co-financing from Mauritanian fishery (e.g. by means of a PES or licensing scheme) as yet unfeasible. However, as part of EU-Mauritanian fisheries partnership agreement, BACoMaB has so far received €1.8 million for conservation, which – though being public funds – can be attributed to the international fishing sector.

Income from entrance fees and ecotourism to PNBA and to PND is negligible. Mauritania is not an international tourism destination (ranking 167 out of 187 countries in international tourism receipts in 2014 (WTO n.d.)), whose nature tourism sub-segment is unlikely to significantly increase, given security issues, and limited access to the international tourism market. In 2015, income from tourism covered not even 0,1% of total expenditures of the PNBA.

The mining sector has contributed to an environmental compensation fund, named Fonds d’Intervention pour l’Environnement (FIE), which has a sub-component explicitly reserved for coastal and marine conservation and restoration. However, according to interviewees neither the amounts contributed to the fund, nor the decision structure for disbursements, nor the actual activities which have been financed by them, are publicly known. Jointly with UNDP, IUCN und WWF, German development cooperation supported until the end of 2015 a programme for the integration of marine biodiversity conservation in the (off-shore) oil/gas sector. The industry contributed about €200.000 for environmental monitoring and capacity development (outside national parks).

Based on the above information which focuses on the PNBA, the **current mix of funding flows** for biodiversity conservation can be **characterized** in the following way:

- Foreign donors (France, Germany and the MAVA Foundation) are the principal funding source, both via direct contributions and via the BACoMaB CTF
- Until 2019, regular government budget allocations will constitute 30-60% of total expected PA income.
- The private sector does not yet play a significant role in co-financing biodiversity conservation.

- The overall funding gap is unclear; for Mauritania's principal PA, the PNBA, current estimates of future expenses and income (table above) result in a financial gap of €7.5 million for 2015-2019, for which no sources appear feasible/probable, other than an increase in government allocations, or foreign donor contributions (either directly or via a further capitalisation of BACoMaB's endowment fund).

2 Key financing constraints to effective PA management in Mauritania

High development pressures inside parks and nearby

Financing for biodiversity conservation cannot deliver expected results if macro-developments and sectoral decision making result in increased environmental pressures on the ground.

The IUCN/UNESCO (2014) mission report to PNBA points to threats resulting from infrastructure development within and nearby the parks. Gold mining activities on land and off-shore petroleum exploration pose considerable pollution threats. A new settlement (Chami) has been established close to park borders in the north and is rapidly growing without adequate planning. A new road has been constructed inside the park connecting settlements inside and outside the park, without environmental impact assessment. Likewise, construction of a new road and harbour in proximity to the PND is being initiated without adequate environmental impact assessment. The development of fishmeal processing industries at the coast also causes serious pollution, according to one interviewee.

Due to poor regional planning and the absence of an integrated vision, conservation concerns and environmental legislation are considered to *de-facto* play an insufficient role in decisions regarding these developments.

According to Mauritania's NBSAP (2014), The National Action Plan for the Environment (PANE II 2012-2016) explicitly focuses on biodiversity in various sectors. While progress in institutional capacity has been noted, the documents submitted to the CBD indicate that the effectiveness and outcomes of NBSAP related actions have been weak so far.

Regarding the much smaller PND, located in the estuary of the Senegal river, Mauritania's principal agricultural region, previous dam development, pollution from rice farming and recent biological invasions (*Salvia molesta*) posed principal conservation challenges (Triplet et al 2000). Here considerable progress has been achieved since 2012, so that the PND was taken off the Montreux record of endangered RAMSAR sites in 2009.

Limited absorptive capacity at site level

The legal basis and the formal institutional structures of the PNBA are clearly established and considered appropriate (IUCN/UNESCO 2014).

However, there seems considerable room for improving the actual management capacity of the PNBA. The IUCN/UNESCO mission notes that governance structures (e.g. the scientific advisory committee) mostly existed on paper only. Interviewees had pointed out that local outreach and consultations in the context of PNBA's participatory management had been interrupted also due to funding shortages. This is confirmed by the review of PNBA's last management plan (2010-2014) which indicates that the plan had been overambitious and not sufficiently legitimized by consultations with key stakeholders (EMCI21 2015). Here, the effects of limited management capacity and funding shortages are interlinked and cannot be clearly separated.

The problem of poor governance has been mentioned in various interviews, though rather indirectly. Apart from a wider context of comparatively poor government accountability, difficulties related to management performance have been described. Some officials in conservation have been characterized as 'being used to high spending levels', or 'applying for funds for already funded activities', or 'not being entrusted with their position on the basis of required technical credentials', or 'charging unclear amounts for research fees'. Furthermore, several interviewees indicated that difficult personal relations seem to have been an obstacle to more effective management of the park and to sound cooperation and coordination between the park, foreign donors and also BACOMAB.

No generalisations should be made, as there is also contrary evidence: PND has significantly and sustainably improved its management capacity within a period of 4 years so as to qualify for applications to BACOMAB.

What can be generalised is that next to institutional support and technical capacity building, **the incentives need to be set right for PA staff** to perform in view of conservation objectives. It may be worthwhile for biodiversity financing, to take staff incentives more into account.

3 Findings and lessons

The preceding sections have outlined the PA financing context, the current mix of funding flows and financial mechanisms along with the challenges present in Mauritania. This section focuses on three findings and lessons which refer to financial sustainability and the interplay of financing mechanisms, and to the impacts of biodiversity financing on the overall situation in and around PAs.

Financial sustainability and the interplay of financial flows and mechanisms

BACoMaB can provide clear benefits to financial sustainability, but is by itself a costly instrument

Does the conservation trust fund BACoMaB in practice enhance financial sustainability? Currently, the CTF is reserved to complement funding for specific operations. BACoMaB's objectives are to support the government's financial effort and to ensure a sustainable financing of field activities. Given the stable government budget allocations, the CTF does so far not risk to crowd-out government funding.

BACoMaB benefits go beyond providing additional income for PAs, and clearly enhance financial sustainability in the wider sense (cf. analytical framework):

- BACoMaB bundles funding from 5 different sources for more coherent spending, and thereby stabilizes volatility in project-based funding.
- The fund provided clear incentives for PNBA to improve, and for PND to build, management and administrative capacity – which is a pre-requisite for applying for BACoMaB funds, and checked by an audit.
- Applications to BACoMaB require planning, budgeting and justification, and draft proposals are being reviewed and refined in exchange between PA management and BACOMAB staff. The application process itself therefore provides more opportunities for improving management performance, than regular government budget allocations, which are being allocated through public financing procedures that do not require elaborate budget motivation.
- BACOMAB also supports local NGOs. In the mid-term, this is a vehicle to go beyond PA finance towards more diversified and comprehensive biodiversity conservation at the landscape level.

On the other hand, there are **several challenges**:

Interviewees differed in their opinion whether BACOMAB contributions can motivate substantial management improvements in the PNBA. On the one hand, the internal auditors' report for 2015 is said to point out that the contributions of BACoMaB have been better managed and reported than those coming from the Government. On the other hand, given the political importance of the PNBA, some interviewees have raised doubts whether the CTF criteria for applications will be stringently applied to the PNBA. The IUCN/UNESCO mission report has a similar concern (2014, recommendation 17).

This may be a structural problem: If a CTF is dedicated to supporting 2 parks only, and if donors have considerably invested in setting up and capitalising the fund, there is a certain 'spending pressure' and limited scope for competition among applicants.

A further challenge: the unclear set-up costs of BACOMAB. Work for establishing BACOMAB began in 2002. The CTF was formally established in 2009. First contributions to the fund were made in 2011, first minor disbursements in 2014. Plans for the fund include a further capitalisation by about 30 million within the coming five years, however, the fund itself has as yet no fundraising capacity. Set-up efforts include considerable staff time from various organisations (including GIZ and KfW) over several years. Furthermore German financial and technical cooperation, as well as the MAVA Foundation have provided more than 770T€ in 2011-2015 for setting up the secretariat and covering its start-up costs. According to interviewees annual operational costs of the secretariat are estimated at €150.000. So far, these costs are not covered by the fund's investment returns but by its principal donors. This raises the question how much time is required to turn a new financial instrument, such as a CTF, operational and what financial and in-kind support for establishing a CTF is feasible in times of low returns from endowment capital (see Winter 2015 for ideas on pooling management tasks across various CTFs).

Diverse formats for coordination and their skilled facilitation optimize conservation spending.

In Mauritania, several thematic groups and sub-groups exist where donors coordinate amongst themselves, and with Mauritanian partners. GIZ facilitates one of these groups. Coordination groups meet monthly or on demand, they are technical or more policy-oriented in focus, they include or exclude government and PA staff participation. For example, the environment coordination group with about 40 members from technical and financial partners meets on a monthly basis. One of its sub-groups, facilitated by France, is exclusively geared to issues relating to the PNBA, and meets rather on an ad-hoc basis.

The governance structures of BACoMaB and of the two parks comprise further consultative fora and committees for information exchange, advice, or joint decision making.

The recent surge in foreign funded climate adaptation projects has increased the need for coordination between donors, implementing organisations and the ministry for environment (MEDD). Coordination appears to be flexibly organized by the principal technical and financial partners.

By organizing coordination and exchange in various fora different needs are being served. The trade-offs between political buy-in and openness of exchange can thereby be compensated. Also, in contexts of poor government capacity and/or proneness to corruption, such fora play critical role for learning and for control.

This aspect seems paramount. According to some interviewees, the success of efforts to consolidate PA institutions and also of new financial instruments (BACoMaB) should be judged in terms of their capacity to better bring key actors together for more effective coordination.

Outside formal hierarchies, coordination requires trustful relationships. These can grow where the right people meet, i.e. those participants who are appropriate according to the nature of the issue.

Perhaps more importantly, the skilled and continuous facilitation of such fora is critical for their functioning. In Mauritania, this has so far been ensured by GIZ and AFD.

Impacts of biodiversity financing on the overall situation in/around PAs

Alignment of sustainable development interventions in the buffer zone requires continuous follow-up

It is a specific challenge for biodiversity finance to deliver conservation outcomes in the buffer zone. Cross-checking the implementation of development activities for their compliance with conservation objectives, requires a close follow-up and an in-depth understanding of local resource use dynamics. Buffer zone interventions affect these dynamics – for better or worse – in ways that cannot be fully anticipated when funding for support actions is being applied for, or decided upon.

For example, the local fishermen of the PNBA do count on traditional fishing rights. Yet, while the population inside the park has not significantly grown, annual landings have increased from 500t to more than 3000t over the past 15 years, shifting the resource use patterns from subsistence to commercial fishery. Part of the reason is beyond the control of conservation authorities, i.e. improved market access via new roads, or the influx of non-local fishermen being hired on local boats. However, ODA support for the PNBA included modernisation and of the local fishing fleet, which, according to one interviewee, unintendedly acted as a further catalyst to unsustainable fishing inside the park.

As local development aspirations and conservation objectives are not per se compatible, the positive impact on biodiversity of supporting sustainable livelihoods requires continuous follow-up. Here, benchmarking and audits of actual implementation (not only of financial flows) could be expanded to better grasp environmental side effects.

In this context, German support for maritime surveillance and marine ecological research and monitoring is potentially highly beneficial in further improving necessary environmental and resource use data.

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Interview partners:

Britta Jell & Klaus Mersmann - GIZ

Ahmed Lefghih - BACOMAB Fund

Thorsten Schneider, Henning Baur, Uwe Klug – KfW

Anne Littaye – CIM, PNBA

Resource mobilization for biodiversity conservation in German Development Cooperation: From sustainable financing of protected areas towards more comprehensive financing strategies for biodiversity

Case study: Ecuador

Author: Alonso Moreno Diaz

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Acronyms

PA	Protected Area
CI	Conservation International
FAN	National Environmental Fund
FAP	Protected Areas Fund, managed by FAN
GAD	Autonomous Decentralized Government
GEF	Global Environment Facility
GESOREN	Sustainable Management of Natural Resources. MAE-GIZ Programme.
KfW	German Development Bank
MAE	Ministry of Environment of Ecuador
OLACEFS	The Organization of Latin American and Caribbean Supreme Audit Institutions
NGO	Non-governmental Organisation
PANE	Patrimony of Natural Areas of the Ecuadorian State
ProCamBio	Climate Change, Biodiversity and Development"
UNDP	United Nations Development Programme
SENPLADES	National Secretariat of Planning and Development
SNAP	National System of Protected Areas
SocioBosque	Forest Protection Programme
TNC	The Nature Conservancy
WWF	World Wildlife Fund
WCS	<i>Wildlife Conservation Society</i>

1 Overview

The Political Constitution of Ecuador (2008) states in article 313: “Biodiversity, which is one of the strategic sectors, comes under the decision making and exclusive control of the State, that due to its importance and size, exert a decisive economic, social, political or environmental impact and must be aimed at ensuring the full exercise of rights and the general welfare of society. Thereof, the State reserves the right to administer, regulate, monitor and manage strategic sectors, following the principles of environmental sustainability, precaution, prevention and efficiency” and in article 405: “The National System of Protected Areas shall guarantee the conservation of biodiversity and the maintenance of ecological functions... The State shall allocate the financial resources needed to ensure the system’s financial sustainability and shall foster the participation of communities, peoples, and nations who have their ancestral dwelling places in the protected areas in their administration and management” (MAE, 10).

To date PANE includes 51 protected areas, comprising 19.146.036 hectares, from which 4.907.609 hectares are land and 14.238.427 hectares are marine (MAE, 5). These results indicate that Ecuador has already achieved its commitment with the Aichi 11 Target, with respect to the number of protected hectares (OLACEFS, 15).

The SNAP has 4 subsystems: i) Heritage of Natural Areas of the Ecuadorian State, PANE; decentralized autonomous (provincial and/or municipalities), community and private subsystems.

2 Status of PA financing

Within the analysis of the 2007-2016 period, two stages are confirmed: The first, that can be called “boom or progress” between 2007 and 2013, and the second called “slow down and regression” between 2014 and 2016. The variations were due to the availability or not of government resources, mainly due to the fluctuations in the price of oil.

2.1. Sources of financing and flow of funds for Protected Areas

The main sources are:

[Budget of the State through the Ministry of Environment.](#)

By the end of 2012, the State’s contribution reached US\$21 million. It is reported that contributions in 2011 and 2012 signified more resources than the sum of all the previous decade. At this time, the State’s contribution reached 94% of the total, which minimized the importance of the diversification of sources and the efforts to obtain them. Funds were aimed at investments in infrastructure (35%), current expenditure (39%) and systemic costs (26%). Current expenditures increased in these years due to an increase in personnel, especially in forest wardens. (MAE, 5).

Although it was not possible to find concrete figures, most of interviewees indicate that since 2014 there has been a considerable reduction. Moncayo and Solano (14) states that MAE will undergo from an investment of 59.56 million in 2013 to 29 million in 2017. The State’s General Controllershship’s Office Audit (1) on Protected Areas points that “financial budgetary and extra-budgetary resources allocated to 28 administrations, corresponding to 58.33%, attended partially the territories’ demands, thus activities such as control and oversight were affected due to lack of resources. 16 administrations, equivalent to 33.33% did not have any resources to attend the demands. Only 4 administrations, 8.34% had the resources to attend territories’ demand.

The flow of funds crisis (as a consequence of the drop in the price of oil) has deepened in 2016, since in April, the National Government and MAE decided unilaterally to liquidate the National Environmental Fund. This decision slowed immediately the flow of funds of the FAP to protected areas. At the moment of the study, total uncertainty reigns on how this problem will be solved. The arguments for liquidating FAN, after 20 years working as independent and autonomous mechanism,

are that public funds shall be managed by the State and that there shall be more control from the Government. The last proposal of the Ministry of the Environment is to carry out a profound reform of the FAN, in such a way as to avoid its liquidation.

The Protected Areas Fund (FAP) of the National Environmental Fund (FAN).

The Protected Areas Fund (FAP) is an Endowment Fund developed in 1999 between the Ministry of Environment of Ecuador (MAE) and the National Environmental Fund (FAN) with the support of the international cooperation, whose objective is to diversify financing sources to public protected natural areas by providing stable financing resources at long term. Fund contributions have come from the Government of Ecuador, the debt swap mechanism with the German Government (main contributor), the GEF and small private contributions from international NGOs. There have also been sinking funds from the Netherlands, the Andean Community, foundations and international NGOs. (FAN, 2). In 2012 FAP granted US\$1.1 million upon 30 protected areas of SNAP, especially used for operative costs, administration strengthening, control and oversight and in less proportion for infrastructure consolidation and environmental education. The Fund contributed to complement infrastructure investments carried out that year by the State. The average contribution to each area was about US\$50.000 per year. Due to the crisis generated by the liquidation of the Fund, each PA has received during 2016 only US\$5,000.

International Cooperation.

During the analysis period, PA-system was supported by: German Cooperation through the Support Programme of the SNAP (KfW) and the Programme "GESOREN" (GIZ), the Financial Sustainability Project for Protected Areas of SNAP, GEF-UNDP and the BIOFIN initiative. International environmental NGOs such as WWF, CI, TNC, WCS support different activities. The support given by the Cooperation is calculated in 5% of the total. (MAE, 3 and 5).

German financial cooperation through KfW supports also the Socio Bosque Program, which subsidizes communities and individual producers who undertake to keep the primary Forest. (MAE, 3). The German technical cooperation stopped supporting PAs directly in 2013 with the end of the GESOREN Programme. Indirectly, the ProCamBio Program (GIZ) influences the APs through its advice on issues such as access to genetic resources, and the Socio-Bosque in the buffer zones Program. The KfW project continues with its tasks, but the delicate situation of FAN, in which a contribution for the FAP has been done, makes activities to progress slowly and in an insecure situation. The same applies for some international NGOs contributing to FAN.

Self-management resources.

Self-management resources are calculated by 1% for 2012. They come from: the issuance of licences or permits for various activities. These actions have little motivation because collected resources go to the State's cash, and they are expected to be returned to the areas via budget. PAs Head Offices are indecisive about these aspects. Decisions are made at the headquarters' level. (MAE, 6) Self-management have decreased since the President's Office decided to introduce free tickets to protected areas, as a measure to increase visitors to PA and publicize their importance, but with the negative consequence of increasing costs, without being able to compensate them.

Other private contributions

It is estimated that private contributions so far represent 0.1%. Private contributions are provided due to some concession agreements and the payment made by an electric company for water provision (MAE, 5).

The mechanisms used for the acquisition and management of financial resources are: Management plans, Financial Sustainability Strategy, ESF, Annual Management Operating Plan PGOA and Management effectiveness evaluation.

3 Key financing constraints to effective PA management

In most PAs in Ecuador there are not multiple funding flows. Even government core funds are few and far between. So it is difficult to talk about complementarity between FF/FM. Protected areas have not yet had the necessary resources to achieve a consolidated scenario.

Efforts made up to now show a gap between “must be” and “be” regarding the areas management. This is an area that requires institutional reforms (greater autonomy for PA) and greater coherence between the mechanisms of monitoring and evaluation planning.

Strategies to reduce the gap between different PA, particularly between terrestrial and marine coastal and marine, which are far from the consolidation level.

The analysis of investments made in SNAP indicates that in 2012, the concentration of investments per PAs was high. Five PAs account for 42% of the total investment of the system, while on the other end, 26 PAs receive barely 8% of the investment of that year. In addition these same PAs have taken much of donors and cooperating institutions attention during the last 20 years (MAE 5).

The Audit (1) showed that: - 23% of the areas do not have an approved management plan; it is under elaboration and delayed due to regulations and their financial needs are unclear. – 21 (67%) out of 34 areas with a management plan, have out of date documents.

SNAP has only registered a new area of the decentralised, or community or private subsystems, showing a standstill in its development. The area was: "Siete Iglesias", which was created in 2006 with the support of German Cooperation. There is lack of regulations, political dialogue and promotion of mechanisms to enhance their development.

The Controller's Office Audit (Controller's Office, 1) shows that 25% of PAs do not interact with other Government levels, 50% maintain low cooperation and 25% interact, especially in the form of in-kind support.

4 Findings and lessons

Understanding the current mix of FM/FF

It seems that there is still no concerted vision on the meaning and the way of managing the areas. For example, for some tourism is the salvation and should be oriented to increase and satisfy visitors. For others, on the contrary the kernel is conservation, tourism is just a support.

*ack of capacity is also a huge problem in the PA of Ecuador. This is also because do not have specialized staff in the areas related to the work to manage protected areas. Therefore their knowledge and expertise not adequately contributes to this effort.

Flow of funds from the State budget is highly correlated with growth rates or decrease budget.

Lack of diversification of funding sources.

Financial sustainability and the interplay of FF/FM

Political will demonstrated by the new Constitution to give greater importance to nature, conservation of biodiversity and renewable natural resources. This statement has not been fulfilled, especially when crises occur.

The predominant style of centralised and hierarchical decision making is a break for PAs Heads to contribute better to achieving their objectives.

Relations with the private sector have been scarce.

The LA Audit on PA scored Ecuador according to an index (Indimapa) composed of several management indicators: 14% of the areas are scored low, 69% scored medium, and 17% scored high.

Compared with the Latin American score (low: 29%, medium: 52% and high: 19%), Ecuador is above the mean (OLACEFS, 15).

Despite the progress made, PAs face a serious problem that is slowing down their development. High staff turnover, blurred line in decision-making in MAE Provincial Bureau, the Biodiversity and Protected Areas Bureau, the Deputy Secretariat of Natural Heritage, and the Vice-minister's Office, and the articulations with other governmental bodies, are strong challenges to achieve an efficient and effective management. Training is a key element, but with no reform to reduce turnover, it would be less efficient and effective.

Impacts and side effects of FF/FM on the overall situation in/around Pas

Public awareness and dissemination of information on biodiversity has increased.

One-third of the areas have improved their infrastructure and strategies to better serve visitors.

The introduction of subsidies to conservation of primary forests has improved maintenance of forests and contributed to the decline of rural poverty.

The implementation of sustainable productive projects (especially agroforestry) in the buffer zones of more than one third of the PA have helped to improve the income of the families involved and to reduce costs of control and surveillance. However, the challenge remains to better articulate such projects to conservation efforts. The bio trade and payment programs for environmental services are still very incipient.

The Administration of the areas have articulated funds from Decentralised Autonomous Governments and eventually some companies, through receiving in-kind donations.

Lessons from these findings

The development of the areas has followed the cycle of growth and decrease of tax resources, and it depends, up to date, upon decisions made by centralised bodies. There is a small space for teams that administrate the areas in order to seek new sources of flows and to adapt the existing mechanisms. Although technicians have knowledge on the different types of financial instruments, they cannot put into practice the innovations due to their weak position in the system. New financing instruments have been discussed, but not used.

There are supported proposals to conduct the necessary adjustments, both in instruments improving the resources flows (bigger participation of the private sector and civil society), and in existing mechanisms and institutional reforms (creation of a public company that manage PA and insert into the national policy of changing productive and energy matrixes; improvement and standardisation of management plans, formulation of strategies on financial sustainability, planning of the Annual Operating Management and standardisation of assessment on management effectiveness). The challenge is how to achieve a smoother work between the technical and the political element in order that the research studies have a real effect and are not only an academic exercise.

The existing crisis due to the unilaterally ordered "liquidation of FAN and therefore of FAP" must be swiftly solved, because the consequences of uncertainty and unavailability of resources in the areas increase the degradation of illegal wood cutting, illegal wildlife trade, and discontinuity of initiated projects in several subjects of the management plans.

In regard with subjects discussed with German Cooperation and PAs dealt with, both in the financial and technical factors, significant progresses have been obtained as long as the intervention has taken place. The main activities were advisory and support to the development of SNAP, especially in the preparation of guidelines for the development of subsystems (local, community and private) for ecological corridors, human resource training, support in the elaboration of proposals and support to infrastructure, signalling, delimitation and rapport with communities through the preparation of community development plans and productive projects. The Cooperation has been a bridge for

creating bonds with GADs and for the creation and incorporation of the single municipal area (Siete Iglesias of San Juan Bosco Municipality). After the declaration of the municipal areas, the environmental authority has been weak to incorporate new areas, although some local governments have begun the process of declaration. This is because the little linkage with other sectors and lack of technical and administrative knowledge of the institution. Training is the key element.

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Interview Partners:

- 1) Claudia Mayer AV of ProCamBio Programme MAE, GIZ.
- 2) Marcela Torres and David Veintimilla, MAE's Biodiversity and Protected Areas Bureau.
- 3) Zornitza Aguilar, Head of the "Financial Sustainability Project for the National System of Protected Areas, SNAP", MAE, GEF, UNDP.

- 4) Tania Villegas, former Deputy Secretary of National Heritage and current Advisor for the Agricultural and Environmental Offices.
- 5) Diego Burneo, former Director of the National Environmental Fund.
- 6) Luis Tonato, former Head of Yasuní National Park.
- 7) Pablo Drouet, Responsible for the SNAP Project, MAE-KfW.
- 8) Miriam Factos, Advisor for Biodiversity in ProCamBio Programme, MAE, GIZ. .
- 9) Eudoxia Tello from KfW.
- 10) Luis Suarez from Conservation International.

Resource mobilization for biodiversity conservation in German Development Cooperation: From sustainable financing of protected areas towards more comprehensive financing strategies for biodiversity

Case study: Peru

Author: Alonso Moreno

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Acronyms

ACBT	Tropical Forest Conservation Agreement
BIOFIN	The Biodiversity Finance Initiative
CI	Conservation International
GEF	Global Environment Facility
INRENA	National Institute of Natural Resources
KfW	German Development Bank
MEF	Ministry of Economy and Finance
MINAM	Ministry of Agriculture
OLACEFS	The Organization of Latin American and Caribbean Supreme Audit Institutions
NGO	Non-governmental Organisation
PDRS	Sustainable Rural Development Program, GIZ, Peru
UNDP	United Nations Development Programme
PAs	Protected Areas
ProAmbiente	“Contribution to the environmental objectives of Peru” Programme. MINAM, GIZ
Profonanpe	Promotion Fund of Protected Natural Areas of Peru
REDD+	Reducing Emissions from Deforestation and Forest Degradation
SERNANP	National Service of Natural Protected Areas
SINANPE	Peruvian National System of Protected Areas
SNIP	National Public Investment Systems
SPDA	Peruvian Society for Environmental Law
TNC	The Nature Conservancy
UOFTUR	Functional Operating Unit of Tourism Management
WWF	World Wildlife Fund

1 Overview

The environmental sector has gained much visibility in the 2009- 2016 period of analysis. The creation of the Ministry of Environment in 2008 and its positioning achieved nationwide and worldwide have improved the awareness raising of political actors and civil society, about the defence of nature and the recognition of its value.

Institutional framework of Protected Areas. SINANPE is composed of natural areas protected by the national administration (PAs), complemented with Regional Conservation Areas (ACR) and Private Conservation Areas (ACP) (MINAM, 7). SERNANP was created in 2008 as a technical specialised public body depending on the Ministry of Environment. It is the guiding entity of SINANPE, aims at ensuring renewable natural resources and biodiversity conservation and its responsible and sustainable use through an effective and efficient management of the PAs. (Controller's Office, 1).

PAs play a major role in the entire strategy of local, regional and national development due to goods and services offered. For instance, it is estimated that 61% of the hydroelectric power produced in the country is taken from water bodies coming from areas of SINANPE; 16 water supply and sewage companies nationwide, with more than 2.7 million of users (León, 4) also obtain resources from PAs. They also contribute to food security and income generation for local populations, to basin protection (sedimentation and erosion control); and to generation of eco-systemic services, carbon fixation and capture, ecotourism, and medicinal and pharmaceutical prospecting of products (Sanclemente, 11).

There are currently a total of 183 PAs comprising 22,5 million ha. This represents 17.22 % of the national territory, which indicates that Peru has accomplished Aichi Target 11 (MINAM, 13).

In 2014 the government issued the Law on Compensation Mechanisms for Ecosystem Services, MRSE. In July 2016 MINAM published the decree, which regulates the Law and promotes its application. The regulation provides guidelines for MRSE in PAs. Thus it is expected that the PAs may have in the future a new form of financing.

2 Status of PA financing

Sources of financing and flow of funds for Protected Areas.

The mechanisms used for the acquisition and management of financial resources are: Management plans, Financial Sustainability Strategy, ESF, Annual Management Operating Plan PGOA and Management effectiveness evaluation (MINAM 8). The main sources are:

Budget of the State through the Ministry of Environment.

The total budget for SERNANP climbed from 6.11 million dollar in 2009 to 22 million in 2016, without considering some items such as: voluntary forest wardens, community oversight, and reduction of costs due to sustainable extraction projects, among others. The budget contribution from the National Government to PA was significantly increased in recent years; from 2.19 million dollar in 2009 to 16.7 million dollar for 2015 and a similar amount in 2016 (MINAM, 8).

Promotion Fund of Protected Natural Areas of Peru Profonanpe.

This Environmental Fund is a public interest non-profit private entity, specialised in efficiently fundraising and administration of financial resources used in the execution of programmes and projects contributing to biodiversity conservation, mitigation and adaptation to climate change. From its beginning, it has been related to supporting programmes to PAs. Most of the programmes of the German Financial Cooperation have been executed through this institution.

Over more than twenty years of activities conducted by Profonanpe, it has channelled financing for approximately 80% of PAs. Only in 2015, a total of 35 out of 77 natural protected areas existing in Peru received benefits. The major financial sources that have worked with Profonanpe are: BMZ, BMUB, GEF, BID, Gordon and Betty Moore Foundation, Critical Ecosystem Partnership Fund

(CEPF), Hunt Oil Exploration and Production Company of Peru, Pluspetrol, Burlington Resources Peru Limited – ConocoPhillips, and lately the Green Climate Fund (Profonanpe. website, 10).

Contributions via Profonanpe have been decreasing in recent years. From contributions of US\$ 6.038.253 in 2009, they dropped to 1.226.337. This decrease is explained because the resources from the Cooperation have been increasingly addressed to issues such as Climate Change, Forest Management, and less to APs. (Sanclemente, 11).

International Cooperation.

As an average for the 2009- 2015 period, it is estimated that 18 million dollar were obtained as resources for PAs per year including resources coming from bilateral, multilateral cooperation and NGOs.

Projects and programmes from German Cooperation, Belgian Cooperation, European Union, USAID, BIOFIN, FIDA, GEF and international NGOs: Moore Foundation, WWF, Blue Moon Fund, CI and TNC, are executed. The most used tools are: specific programmes and projects, debt-for-nature swaps. The way of executing the Cooperation has evolved: from traditional specific thematic programs to budget aids within the modality of Budget Focused on Results (EU).

German Technical Cooperation currently supports SERNANP through ProAmbiente and PDRS Programmes (BMZ) and Co-Management Amazon Region Peru (BMUB).

Financial Cooperation has played a major role through several programmes via Profonanpe in which the financing is used for the improvement of facilities of sentry boxes, data interpretation centres, equipment and some current expenditure and in productive projects. 12 financial cooperation projects to PAs has been executed through KfW, and currently SINAMPE III is being conducted by Profonanpe and two under negotiation process (Profonanpe, 10).

Self-management resources.

Self-generated resources, or directly raised, include revenues from fees collections (administrative rights), economic payments due to the use of landscape resources or renewable resources, and mainly, due to payment of tickets and fees to APs. Between 2009 and 2016, resources coming from this item represented, in average, 22% of the total budget, being the activities with tourism companies those that received higher contributions. The number of visitors went from 628.808 in 2009 to 1.602.153 in 2015 (MINAM, 8).

Promotion of sustainable use of natural resources in PAs and buffer zones. This is a key element for conservation of valuables of PAs and for their sustainability. Boosting these sustainable extraction processes in areas defined for this activity gives benefits through two ways: reduction of costs for oversight and control because communities become allies for these activities, and through higher valuation of goods and services generated, and diminution of pressures and threats (MINAM, 8).

Contracts of administration.

They are a modality of long-term alliance between the Administration of SERNANP and private institutions (NGO, Indigenous Communities, through Community Reserves). These are processes of joint management of PAs, in which the private sector provides support in management and fundraising.

During the last five-year period, three (3) new Contracts of Administration were signed, (7 are the total number). In the Amazon Region, three (3) REDD+ projects are highlighted, these are being executed for the conservation of an area larger than two million of hectares of pristine forests in four (4) PAs. These projects are feasible thanks to the mechanism of Contracts of Administrations that

provide legal grounds for the investment of more than 114 million soles coming from trading more than 13 000 000 of carbon credits between 2013 and 2015; amount that is used for the conservation of mega diversity zones and the promotion of sustainable economic development of local populations (MINAM 8).

Community Reserves (10 with 4 million of has) look for co-management between SERNANP and indigenous communities which form part of legally established organizations (ECA). Currently, 8 out of 10 Community Reserves count with Contracts of Administration (SERNANP, 14).

Environmental incentives.

There are incentives for conservation used in several environmental activities and also in PAs: Credits for the Income Tax of 50% in exchange of investment in environmental activities, income Tax Exemption for companies mainly engaged in ecotourism, accelerated Depreciation for fixed assets for the use in environmental projects, return of IGV (sales tax) paid in the import of capital goods and supplies for the exclusive use in environmental projects and duty free for import of goods included in environmental projects (MINAM, 7 and Trinidad, 16).

3 Key financing constraints to effective PA management

Interviewees accept that the lack of personnel and its training are causes limiting the growth of resources in PAs.

In most PAs in Peru there are not multiple funding flows. Even government core funds are few and far between. So it is difficult to talk about complementarity between FF/FM. For the few PAs that do have additional sources of funding, these mainly serve to substitute for scarce or absent core government funding or to cover basic conservation needs, not to enable new or additional activities.

Between the PAs there is a high heterogeneity in the quality of the mechanisms used in the availability of resources to meet its objectives and the efficiency of its use.

It has been estimated a financial gap of USD 10 million per year as an average for the fulfilment of set objectives. Based on established financial planning and the gap, the income should be from USD 75 to USD 125 million dollar coming from international cooperation funds and private donors (MINAM, 7).

SNIP allows that SERNANP, alone or in alliance with municipal or regional governments or with other entities, present projects in biodiversity and eco-systemic services; it is a new mechanism to improve ESF (MEF, 5).

The creation of a strategy of long-term financial sustainability for PAs, agreed with MINAM, WWF, Blue Moon Fund, Profonampe, SPDA and the German Cooperation builds confidence that the system will continue advancing and overcoming existing constraints.

As a measure for the improvement of sustainability, authorities of SERNANP have developed in the last two years a baseline of costs for PAs, enabling that in the future, to enhance management and to elaborate, with more grounds, investment and cooperation proposals.

4 Findings and lessons

Understanding the current mix of FM/FF.

Planning must be improved in order to achieve consistency between the mechanisms and the allocation of resources. To improve understanding of FM/FF is needed: Improving managerial capacity of SERNANP, using more the National Public Investment System as a source of resources, improving monitoring and information to achieve more efficiency and efficacy, deepening inter-institutional

articulation with the private sector, encourage the use of new financial instruments: Biodiversity offsets and Conservation agreements with companies and deepening of Payments for Environmental Services.

Financial sustainability and the interplay of FF/FM.

It is necessary to use the good positioning achieved recently by MINAM because it has improved the political will and citizen's support to natural resources and biodiversity conservation. It means to make more efforts in the preparation of financing instruments, proposals and strategies.

Efforts of staff training and hiring more personnel specialized in areas indicated in the Master Plan is a permanent task of bigger scope. Trained staff will enable to harvest fruits from the modernization of the system.

Participation with different actors has been declared a priority; however more improvements can be still obtained. Management Committees are less active and their commitment is weak.

Issuing regulations on MRSE in 2014 and 2016 increase the chances for PAs to improve relations with actors in their environment and increase the flow of resources for sustainability. To date the work of the PAs in this subject is very incipient.

Impacts and side effects of FF/FM on the overall situation in/around Pas.

Protected areas have improved their financial situation during the analyzed period.

Relations with the private sector have been increased and improved.

New tools were introduced for financing and they are functioning: The "contracts of administration" with NGOs and Communities.

The new strategy of financial sustainability is promising and means a public-private alliance with paramount projection for the entire SINANPE. It has already begun to implement.

Sustainable tourism activities have generated the development of local entrepreneurship for rendering services and have enhanced the employment for the communities.

The Administration of the areas have articulated funds from Decentralized Autonomous Governments and eventually some companies, through receiving in-kind donations.

The use of natural resources comprises a strategy that has empowered local communities and producers' organizations because they enable them to become small-sized entrepreneurs, and mainly, to increase their levels of income and quality of life.

Lessons from these findings.

In recent years the development of SERNANP has been very dynamic and has persisted a spirit of improvement and a change effort. While the financial resources available for areas have improved, the deficit to reach the state of consolidation is high.

In regard with subjects discussed with German Cooperation and PAs included, both in the financial and technical factors, significant progresses have been obtained as long as the intervention has taken place. Innovations achieved are maintained and recognised.

In the future it is worthy improving the negotiation process and conformation of the Programme Conducting Committees where co-responsibility and commitments to be fulfilled are clearer.

The Financial Cooperation model, through Profonanpe has been successful, has best practices and lessons learned, and can contribute to the modernization process wanted by SERNANP.

Interviewees understand that there is a field for International Cooperation in the near future: Managerial Improvement of SERNANP, improvement of existing financial instruments and mechanisms, advisory on the use of new proposed instruments accompanying the preparation of proposals that integrate climate change and forests, participation in the strategy of financial sustainability, and deepening in advisory on co-management and development of ACRs and PAs.

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Interview Partners:

- 1). Fernando León, Advisor for ProAmbiente GIZ Programme, and current Vice-Minister of the MINAM.
- 2). Pedro Gamboa, Head of SERNANP.

- 3). Stephan Amend, Coordinator for Co - Management, Amazon Region, Peru Project, BMUB, GIZ, SERNANP.
 - 4). Claudia Godfrey R., Director of Development and Supervision, Profonanpe.
 - 5). María del Carmen Cerpa S., Administration and Finances of Profonanpe.
 - 6). Cecilia Yañez, Sector Specialist on Biodiversity, Forests and Rural Development for KfW, Peru.
 - 7). Fabian Schmidt-Pramov, Responsible for Component 1 of ProAmbiente, GIZ.
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Supplementary case study which illustrates the context of work on biodiversity finance in Côte d'Ivoire.

FROM: WWW.ABOUTVALUES.NET

Côte d'Ivoire: Taï National Park sustains regional agriculture

Multiple PA benefits are key to livelihoods and help win co-finance from private sector.

Compiled by: Augustin Berghöfer (UFZ), with inputs from Ulrike Tröger (GIZ) and Joshua Berger (Biotope). Reviewed by: Hans-Ulrich Caspary (GIZ). 2016. Contact: info@aboutvalues.net

In a nutshell

Several training and scoping workshops with stakeholders guided an assessment of the Taï Park's multiple ecosystem services, and helped align it to the purpose of drumming-up support for conservation. This case illustrates the importance of intensive initial scoping prior to examining ecosystem services in more depth. Study results are now being used by park authorities to motivate increased government budget allocations, and to interest the international cocoa industry in co-financing the Taï Park – in their own best interest.

1. Background of the ecosystem services assessment

Ivory Coast's Taï National Park (TNP) covers an area of 536.000 ha. It is the largest remaining intact primary rain forest in West Africa, a region that has witnessed rapid deforestation over the past decades. TNP is recognized as a UNESCO world heritage site, as a biosphere reserve, and is exceptionally well conserved due to effective management and donor involvement for more than 20 years.

Nonetheless, future prospects are difficult: About 400.000 inhabitants are estimated to depend on cacao and palm oil production directly adjacent to the park, i.e. within a 10 km wide zone around the park's borders (Varlet & Kouame 2013). Threats are expected to increase due to in-migration and population growth in the region. Also, all remaining forests outside the park's borders have been converted into agricultural land over the last two decades, so there is no further land available for agricultural expansion. Poaching and artisanal and small scale gold mining inside the protected area pose additional threats.

With support from German ODA and other partners, OIPR, the park authority has developed a management plan in a participatory process. Park management structures are consolidated and outreach activities to the park's buffer or support zone have helped build good relations with adjacent communities and public authorities. In 2013/2014 a business plan for the park was commissioned which identified the financial needs associated with implementing the management plan: For 2014-2020 a financing gap of about €8.4 million has been estimated.

To address this financial situation, OIPR together with its partners and the German International Cooperation (GIZ) decided to adopt an ecosystem services perspective for supporting Ivorian fundraising efforts.

2. Scoping the ecosystem services assessment

GIZ invited stakeholders for an **initial stakeholder workshop** in July 2014. Participants included representatives from local and regional government, national level ministries, the agricultural sector, (inter-)national company interests (e.g. the World Cocoa Forum), NGOs and academia. The workshop served to introduce to the ecosystem service concept, explore its relevance for fundraising, and ensure buy-in into the assessment.

Given the overall fundraising purpose, one could have commissioned a Total Economic Value estimate of the PNT's benefits, hoping that some ecosystem service values may be directly useful. However, given the overall data and resource constraints for the assessment to be commissioned, a different pathway was chosen: In group exercises, the PNT's different ecosystem services were discussed: Which services correspond to public priorities (relevant for government funding)? Which services provide inputs and favourable conditions for economic activity (relevant for private sector funding)? And which services are important to conservation/development donors (relevant for international funding)? From this exercise, a short list of park benefits was agreed upon, to be prioritized in the assessment.

Furthermore, **scenarios** were developed that contrasted the likely consequences of insufficient funding to a situation where park management would be adequately resourced. Contrasting these two scenarios was considered useful for convincingly making the case.

While these scenarios, based on stakeholder insights, could not go beyond a first rough approximation of possible future developments, it helped develop a shared understanding of the urgency to ensure park conservation in view of significant likely losses that would otherwise be incurred. The scenarios also served as agreed-upon references to one section in the future ecosystem service assessment, where such losses would be further described.

A **steering committee** to the assessment was established and mandated to finalise the Terms of Reference, based on workshop outputs, for the assessment, and an overall roadmap was agreed upon. The steering committee consisted of the PA authority (OIPR), the national conservation trust fund (FPRCI), and representatives of the ministries of (i) agriculture, (ii) environment and (iii) planning, individual researchers from national universities and GIZ. OIPR and FPRCI were furthermore the principal intended users of the expected study results.

A **second workshop** was organised in October 2014, for the full stakeholder group and with the participation of the consultant in charge of conducting the assessment. During this workshop, the prioritized ecosystem services were revisited in more depth with the purpose to provide the consultant with orientation and inputs for his research and analysis.

Furthermore, the future use of study results was discussed. Stakeholders agreed to split the assessment into two different reports, so as to be able to make good use of results: one general report geared to policy makers, and a second, more specific document to address the private sector, notably the cocoa sector and hydro-electricity. With these inputs the consultant team was well equipped to conduct a much more specific assessment.

3. Assessment results

The assessment's main focus was on three ecosystem services, that stood out for their significant benefits: regional climate regulation for local livelihoods and agricultural output, water supply/regulation for water security and hydro-electricity, carbon storage/avoided deforestation for global climate mitigation.

Regional climate regulation for local livelihoods and agricultural output

The study characterized the importance of TNP's positive influence on the regional climate. In-depth field research and modelling to describe the exact magnitude of this positive influence was beyond the resources available for the assessment. However, following the precautionary principle, that in case of doubt, one should better stay on the safe side, it was assumed that it might make sense not to risk a situation, where the regional climate changes due to large scale deforestation inside the TNP (even if the exact link is unclear). In this line of thought, the study focussed on describing the multiple beneficiaries from this ecosystem service, without seeking to specify the exact degree of their dependency. While this approach can clearly provide preliminary conclusions only, it was considered appropriate for the specific context and purpose.

A significant proportion of Côte d'Ivoire's agricultural output benefits from the TNP forests, and the regional climate regulation they provide:

- 176.000 (households) cocoa producers, producing 477,000 tons, that is to say about 40% of the national production or 16% of global cocoa production. This production contributes to around 3.1% of the national;
- 74.000 (households) coffee producers, producing 82,000 tons;
- 7.000 (households) palm oil producers, producing 20,000 tons;
- 78.000 (households) hevea (rubber) producers, producing 112,000 tons;

Water supply/regulation for water security and hydro-electricity

Data on the flows of rivers originating from its forests and on subterranean aquifers are extremely insufficient and huge data gaps exist. As a consequence, it was not possible to reliably assess the role of the forests in the regulation of water flows between the dry and the wet seasons (in theory, the forests would contribute to a stabilisation of flows), nor their role in the supply of groundwater.

The robustness of the estimation provided by the assessment is therefore low, and requires further investigation since this ecosystem service seems significant. Due to the overall importance of water security, the study tried nonetheless to describe the beneficiaries depending on water from the TNP. In essence, about half a million Ivoirians benefit from the contribution of the TNP's forests to regional water security.

Furthermore, hydro-electricity depending on rivers flowing from the park represent 1% of the national total energy production, new dams are being planned and built, and some may rely on stable supply of water from rivers which depend on the TNP. Ensuring the preservation of the forests could thus be in the interest of hydropower companies and of the government and demonstrating this role adds another fundraising argument for the OIPR and the FPRCI.

Carbon storage/avoided deforestation for global climate mitigation

Carbon storage represents a highly valuable ecosystem service of TNP which was relatively straightforward to assess in terms of quantities and value. A national study on the costs and benefits of REDD+ had been conducted in Côte d'Ivoire in 2013 (Salva Terra, 2013) and the price it considered for the "value of carbon", agreed by national stakeholders at the time, was used to be coherent with the REDD+ process in Côte d'Ivoire.

However, no baseline scenario regarding the deforestation of the PNT has ever been agreed upon and the construction of the baseline deforestation scenario for the assessment was a source of controversy. One model considers that deforestation is demand-driven and depends on the number of inhabitants and businesses in the area: from historical data, it concludes deforestation should amount

to around 10,000 ha / year. A second model assumes deforestation is supply-driven: a vast forest will trigger the deforestation of bigger areas than a small one each year: it estimates deforestation could reach 50.000 ha / year. In the REDD+ context estimates reach even up to 200.000 ha /year. For the assessment, a conservative assumption of 10,000 ha / year was chosen as the baseline deforestation rate.

The value of carbon storage results from the reduced emissions from shifting from a baseline deforestation scenario to zero deforestation. If reduced emissions are assessed through its potential market value, they could represent up to €24million/year, which exceed the current annual management costs of the PA. However, this value is merely theoretical at this point and will not be translated in actual funding flows before several years, if and when the REDD+ framework in Ivory Coast is fully functional.

Currently, the very high theoretical value of this ES could have a counterproductive effect on fundraising, by wrongly suggesting national decision-makers that the TNP does not need proper national financial support from the government as REDD+ will provide ample resources to it. In reality, the TNP cannot wait for the REDD+ money, if its forests are cut before the REDD+ framework is established. In order to avoid such a counterproductive effect, the steering group decided to reduce the assumed baseline deforestation scenario to 5.000 ha / year, despite historical data suggesting a faster future rate.

4. Making use of results

In a **third stakeholder workshop**, the consultant presented draft results to the full stakeholder group, so as to discuss and validate them. Feedback was used to finalize the emphasis in key messages of the report, and to further refine the format of required communication materials, notably a synthesis document for approaching high level government.

The synthesis document, a 20-page brochure, was revised and further discussed by the steering committee, in view of its suitability for being used in regular government budgeting procedures. Whether this has led to increased allocation is as yet unclear. However, OIPR has already requested similar brochures, describing park benefits to the wider region, for two other national parks in the country, to be able to make the case in various ways and with various examples.

In March and June 2015, the steering committee agreed on the format of the second report, geared to the private sector. Four sectors/topics were prioritized: Cocoa & coffee; rubber & palm oil (including processing industries), hydro-electrical power generation, and corporate social responsibility arguments for important companies without direct links to the region, but with potential interest in supporting the 'flagship park' TNP (e.g. telecommunications).

Practical fundraising efforts then focused on the cocoa sector: While global demand is rising, global supplies are more volatile, resulting in a concern in the industry for secure long-term sourcing of high quality cocoa that is sustainably produced. Ivory Coast supplies 30 percent of the world's total cocoa.

The World Cocoa Foundation represents a large share of the global cocoa and chocolate industry. For its annual partnership meeting 2016 in Abidjan, OIPR/FPRCI/GIZ prepared presentations, pitches, personal meetings and a 4-pager with key messages regarding the various links between the cocoa industry, deforestation and the TNP.

Key messages comprised a mix of negative and positive arguments: the cocoa industry arguably contributes to deforestation in the region, yet it directly benefits from the TNP's forests, namely in view of climate regulation. The 4-pager also describes options for the private sector to engage in co-financing or technically supporting the park in the context of an 'Alliance with the TNP'. Based on this experience, FPRCI/OIPR/GIZ now plan to approach the other three sectors as well. _