

**CHALLENGES AND OPPORTUNITIES FOR BENEFITS-SHARING:
IMPROVING EQUITY IN CONSERVATION FINANCE**

by
Bridget Kennedy

A capstone submitted to Johns Hopkins University in conformity with the requirements for
Master's of Science

Baltimore, Maryland

February 2021

© 2021 Bridget Kennedy

All rights reserved

Abstract

The field of conservation finance has grown steadily in recent decades, as countries recognize and value their biodiversity and seek sustainable financing pathways to safeguard its protection. Roughly 89 Conservation Trust Funds (CTFs) have been established within more than 50 countries. CTFs are considered a cornerstone of sustainable biodiversity financing and serve as a legally independent entity that can raise, invest and disperse funds to amplify conservation impact. Increasingly, conservation practitioners recognize the integral link between successful conservation outcomes and sustainable development of local stakeholders and indigenous communities as resource owners and stewards (Gurney et al., 2014; Carranza et al., 2020).

Benefits-sharing mechanisms, such as delivery of economic incentives to local stakeholders, can improve achievement of integrated socioeconomic and ecological objectives of CTFs. Despite their presence within most CTFs as well as their critical importance for local ownership and fund sustainability, benefits-sharing mechanisms are underrepresented in the conservation finance and Conservation Trust Fund (CTF) literature.

This analysis demonstrates that benefits-sharing mechanisms, although poorly documented within CTFs, are critical to the long-term success of CTFs. Similarly, the establishment of benefits-sharing mechanisms and socioeconomic monitoring, enables CTF practitioners to effectively deliver benefits within local community context, and ensure equitable distribution of benefits among different stakeholder groups. The Palau Protected Area Network and Sovi Basin Protected Area are used as dual case studies that demonstrated the opportunity and importance of benefits-sharing within CTFs.

Primary Reader and Advisor: Christopher Stone

Secondary Reader: Elizabeth Erasito

Dedication

This Capstone is dedicated in honor and memory of Mrs. Kone Laqere Beitaki, the former Conservation Officer for the Sovi Basin Protected Area.

Contents

Introduction.....	1
Conservation Trust Funds	2
Benefits-Sharing Mechanisms:	5
Definitions of Benefits-sharing:	6
Economic Incentives, Monetary and Non-Monetary Benefits:	7
Beyond Economic Incentives:	9
Benefits Sharing in Nepal (an example).....	10
Methodology	12
Case Studies:	12
Key Findings.....	13
Global Review.....	13
Case Studies from the Pacific Islands region.....	22
Case Study I: Micronesia Conservation Trust – Palau Protected Area Network Fund....	22
Case Study II: Sovi Basin Protected Area and Endowment Trust Fund	27
Conclusions and Discussions:.....	33
Gaps, Uncertainties and Further Research	36
References:.....	38
Annex 1: CTF Benefits-sharing overview	43

Introduction

The field of conservation finance has grown steadily in recent decades into a mainstream community of practice. Conservation finance can be defined as any “mechanism through which an indirect or a direct financial investment is made to conserve the values of an ecosystem for the long term” (Credit Suisse Group, 2016). This includes a wide variety of financing mechanisms and pathways that can be deployed to secure the protection and management of high biodiversity ecosystems and habitats, as well as areas of ecological, climate or cultural significance.

Conservation Trust Funds (CTFs) are one of the most popular financing mechanisms among practitioners and can be used independently or in combination with other mechanisms. Although challenging to establish, CTFs are versatile and provide long-term resources for conservation actions. More than 89 CTFs have been established globally of varying amounts and sizes, supporting regional, national and sub-national conservation actions. CTFs and other conservation finance mechanisms support a wide range of conservation actions, including national park or protected area management and sustainable development activities within the local community.

In addition to direct management actions, CTFs can finance livelihood and economic incentives, which practitioners use as a tactic to influence or alter unsustainable behaviors of local stakeholders. When delivered effectively, economic incentives can motivate local stakeholders to reduce harmful environmental practices and shift towards improved management of their natural resources (Bath et al., 2020). In addition to conservation outcomes, economic incentives can deliver social development outcomes, such as reducing poverty and gender disparities among target groups or strengthening traditional stewardship.

When delivering economic incentives and other benefits under CTFs, practitioners must assess equality and equity of distribution within and among communities and community groups, including understanding social and cultural dynamics that affect the supply of benefits. Benefits can be unequally or inequitably divided among local stakeholder groups for a variety of reasons, such as land ownership, community or social hierarchy. It is important to assess equity and equality of benefits distribution within and among communities to mitigate potentially harmful and unintended consequences of the intervention, such as widening of poverty gaps.

Benefits-sharing mechanisms can be applied to address or reduce inequalities in the distribution of benefits under CTFs, and ultimately improve their sustainability and socioeconomic performance. This capstone will first conduct a global review of 15 CTFs to identify the presence or absence of a benefits-sharing mechanism, including through the delivery of economic incentives. The project will then review two CTF benefits-sharing case studies from the Pacific Islands region at different scales and sizes: the Palau Protected Area Network Fund aligned with the Micronesia Challenge Fund (national and regional), and the Sovi Basin Protected Area Trust in Fiji (subnational). Critically, this will include assessing the distribution of benefits within Fiji's Sovi Basin Protected Area, including a review of local governance among landowning *iTaukei* Fijians, the indigenous people of Fiji.

Conservation Trust Funds

Conservation finance is defined as the “mechanisms and strategies that generate, manage, and deploy financial resources and align incentives to achieve nature conservation outcomes” (Meyers et al., 2020). One such mechanism that has been increasingly deployed since the 1990s is the Conservation Trust Fund (CTF).

Financing mechanisms can be regional, national, or sub-national in scale. Scale is a key determinant of the approach, mechanism and resourcing needed for a successful intervention.

Some of the most popular mechanisms include market-based options such as tourism fees or green fees, which, prior to the global COVID-19 pandemic, generated significant annual revenue for conservation activities. For example, Palau has integrated a US\$100 visitor fee into airline tickets and raised millions to support the delivery of its Protected Area Network (PAN). Another increasingly popular mechanism is a debt for nature swap (DNS). A DNS is only feasible when a national government has significant bilateral debt purchased from a foreign government and refinanced. Most DNS are accomplished in partnership with a non-governmental organization (NGO) partner that can facilitate the purchase of debt from a foreign government, establish the terms of the debt swap with the national country, and provide technical assistance for the disbursement and usage of resources for management and protection. Blue and green bonds have also become increasingly popular in the last decade, as countries seek resourcing to deliver on their Aichi Targets under the United Nations Convention on Biological Diversity (CBD) and their Sustainable Development Goals (SDGs).

The conservation finance mechanisms described above are often used in combination. CTFs are among the most popular and widely used mechanisms. CTFs are incredibly versatile and can be applied at any scale, from supporting finance for sub-national protected areas, or regional protected areas. These trust funds provide a platform for investment, management and disbursement of funds raised through other market-based financing schemes.

A recent summary of technical and scientific literature suggests that around 89 CTFs have been established globally (Pikria et al., 2020), yet recognizes the lack of a centralized database or tracking mechanism to verify and progressively update this account over time. A CTF raises a certain amount of capital to establish a trust fund, and then deploys resources nationally, regionally, or globally to deliver conservation outcomes.

CTFs are generally structured to manage three types of funds— endowment funds, sinking funds and revolving funds. *Endowment funds* deploy the annual interest generated by their fund, but keep the principal investment in perpetuity (FCA, 2008; Flores et al., 2008). A place-based example of a CTFs is the Phoenix Islands Protected Area (PIPA) Trust (Mallin et al., 2019).

Alternatively, *sinking funds* aim to spend their entire capital and investment income, generally to deliver specific timebound outcomes or deliverables. A popular example of a global sinking fund is the Global Environment Facility (GEF) Trust Fund, which is resourced primarily by multilateral and bilateral commitments and is replenished through regular fundraising efforts by the GEF. *Revolving funds* also aim to spend all capital and investment income. Still, they integrate recurrent sources of income that regularly replenish the fund and ensure it is never depleted, such as annual revenue generated by tourism entry and exit fees (e.g., Palau Green Fee).

Although expensive to establish, CTFs are among the most effective and popular mechanisms engaged to sustainably fund conservation actions in perpetuity (Mathias and Victurine, 2017). Much of the literature and guidance on CTFs has focused on the structure and process for their establishment, including analysis of the cost modelling and financial structures available, governance structure, assessment of political and economic risks (market volatility and political instability), best practices for fund management, and other considerations necessary for successful establishment (Doinjashvili, 2020). Specific case studies have examined the challenges and successes related to the implementation of conservation actions under established CTFs (Bayon et al., 1999; Spergel and Taïeb, 2008), with a select few assessing the role of CTFs in simultaneously advancing sustainable development goals and aspirations

of local stakeholders through the delivery of improved social and economic benefits (Karki, 2013).

Benefits-Sharing Mechanisms:

Benefits-sharing is most commonly known for its application under forest carbon programs, namely Reducing Emissions from Deforestation and Forest Degradation (REDD+), and with the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity (CBD). The Nagoya Protocol aims to ensure equitable sharing of the benefits derived from the use of genetic resources, such as when scientific discoveries or advancements are derived from harvesting their local resource (Greiber et al., 2012). Implementation of the Nagoya Protocol has been challenging, requiring alignment of national policy, legislation, and strategy, and quantification of benefits and critically identifying modes of distribution of benefits to stakeholders. Experts have suggested that conservation trust funds could offer one modality for distributing benefits to stakeholders under the Nagoya Protocol (Guerin-McManus et al., 2002), however, this has yet to be successfully demonstrated. In general, benefits-sharing under the Nagoya Protocol remains largely theoretical and requires additional effort and investment globally.

Benefits-sharing under REDD+ provides a more effective case study for benefits-sharing under CTFs. Benefits-sharing under REDD+ aims to ensure equitable distribution of benefits derived from payment schemes under avoided deforestation and restoration forest carbon programs. Benefits-sharing schemes are structured to ensure equitable benefits to stakeholders and incentivize stakeholders (e.g., communities, businesses, communities, etc.) to improve land use and reduce overall emissions (IUCN, 2000). This design and scope of benefits-sharing under

REDD+ is determined by the overall benefits derived from the forest carbon intervention, the financial and opportunity costs, and the demand for carbon credits.

Definitions of Benefits-sharing:

The application of benefits-sharing highlights the “social accountability and responsibility to direct returns from use of natural resources, be they monetary or nonmonetary, back to a range of designated participants within socially designed arrangements” (Armitage et al., 2008).

Despite the critical importance of benefits-sharing globally, the concept and approach are not clearly defined (MRC, 2011). Benefit-sharing approaches must be established in alignment with local legal, governance, cultural and socioeconomic considerations and needs.

Learning from the delivery of benefits-sharing schemes under REDD+, there a few key considerations to the development and classification of benefits-sharing:

- Scale of intervention: Benefits-sharing schemes can be delivered at multiple levels, depending on the scale of the funding mechanism or program and the needs of key stakeholders. This analysis reviews national-to-local, subnational-to-local, project-level, and regional-to-national mechanisms benefits-sharing schemes within CTFs.
- Benefits or incentives delivered: Key examples include monetary and nonmonetary, productive and non-productive, conditional or input-based, etc. Some of the most common incentives schemes include compensation of opportunity cost, support for sustainable land use and livelihoods, and support for forest governance and ecosystem service provisioning.
- Need for a structural correction to ensure equitable distribution of benefits to stakeholders: Particularly in the case of national-to-local benefits delivery, benefits-sharing schemes can improve the delivery of benefits to marginalized groups or

communities under national or subnational conservation programs. The Sovi Basin Community Development Fund described later in the document provides a good example of this approach at sub-national level.

Economic Incentives, Monetary and Non-Monetary Benefits: Economic incentives can facilitate delivery of positive social development outcomes to partner communities under CTF schemes, often through a combination of monetary and non-monetary benefits. Many CTFs now articulate clear socioeconomic and poverty alleviation objectives, together with conservation and environmental objectives.

Economic incentives align with the thinking of “neoliberal conservation,” which positions nature as valuable “capital” and establishes market-based mechanisms and approaches to achieve conservation outcomes (Bram et al., 2012). Conservation International (CI) defines economic incentives as “incentives [that] encourage local resource users to adopt sustainable behaviors that conserve biodiversity and natural habitat while enhancing livelihoods (Nieston and Giersten, (2010).” Within this definition there are three types of economic incentives:

- 1) *Buyouts* generally entail the purchase of resource rights or equipment and are usually delivered as a monetary benefit. A primary example of a buy-out is the lease agreement model which has been used in the Pacific Islands region to establish formal protected areas on land owned by indigenous communities. The lease agreement (buy-out) allows government or civil society groups to establish formal protection of a high biodiversity area under indigenous tenure and provides direct monetary compensation to the community. (e.g., Sovi Basin Protected Area, Kilaka Forest Conservation Area)
- 2) *Conservation agreements*, or contractual agreements with communities, deliver monetary (or in some cases, non-monetary) compensation in return for changes in behavior. Results-based payment schemes under REDD+ demonstrate the potential for

Community Conservation Agreements (CCA) to improve conservation outcomes while strengthening community-led land-use management and planning. CCA development often requires intensive community consultation, with agreements tailored to fit the local community, socioeconomic and cultural context.

- 3) Income or subsistence from *sustainable livelihoods* investments aim to improve socioeconomic status of community stakeholders over time. Livelihood support is one of the most common forms of economic incentives under CTFs and requires strong socioeconomic monitoring frameworks to understand impact and success over time.

The above definitions provide a framework for benefits-sharing schemes under CTFs but are not exhaustive or mutually exclusive. These options can be used interchangeably under a benefits-sharing scheme, depending on the need and key stakeholders. For example, conservation agreements with local communities can be used to deliver sustainable livelihoods investment, such as through delivery of farming equipment.

Regardless of the categorization, by removing cash economy stressors and improving socioeconomic wellbeing of local communities and peoples, economic incentives can affect positive behavior change and reduce the potential for resources exploitation or degradation for economic gain, thus improving conservation outcomes (CFA, 2019). Economic incentives (monetary or non-monetary) can also address lost opportunity cost within a community, particularly in the case of establishing conservation areas on indigenous lands.

Critically, the selection and prioritization of economic incentives must be led by local communities and stakeholders to ensure their relevance in alignment with local priorities (Eds: Scheufele and Bennette, 2019). The delivery of economic incentives programs should further build from and strengthen the traditional management practices and knowledge of customary landowners and indigenous peoples.

Beyond Economic Incentives: Effective structuring of benefits distribution is critical to ensure equitable delivery of benefits. As discussed above, benefits-sharing schemes should generally include a structural mechanism to facilitate equitable distribution of benefits to key stakeholder groups, which requires thoughtful consideration of equity and impact. An effective benefits-sharing mechanism can address inequities in the distribution of economic incentives and ensure that marginalized stakeholder groups—such as women, youth or indigenous peoples—receive an equitable share of benefits, or simply spread the benefits to a wider group of stakeholders (Gill, 2017). For example, critics have raised concerns about the marginalization of women under existing benefits-sharing mechanisms, particularly when economic resources are predominately controlled by males, and the need for better inclusion of women in governance and decision-making (Lucas and Alvarez, 2013).

One of the key considerations for establishing an effective benefit-sharing mechanism is understanding the societal and cultural dynamics among different stakeholder groups, including resource owners and stewards, as well as the power dynamics among different stakeholders and social groups that affect management actions. This requires the identification of stakeholder groups that may benefit from or be negatively impacted by the conservation program and those stakeholders who are critical to the success of the intervention. This forms the basis for developing conservation incentives and benefits-sharing strategy to ensure adequate compensation to stakeholders for lost opportunity cost and equitable sharing of any benefits derived from the CTF.

In the case of national or regional CTFs, benefits-sharing schemes can play a valuable and critical role in strengthening local ownership and buy-in of the CTF, and ultimately improve long-term sustainability of conservation outcomes. This has particularly been the case within

Large-Scale MPAs, in which local stakeholders often feel little or no connection to the protected site.

Benefits Sharing in Nepal (an example): Nepal's National Park and tourism entry fee system provides one example of the scope and limitations of benefits-sharing mechanisms, and how they can be improved with structural distribution corrections. An overview of the benefits-sharing arrangements in Nepal is outlined in Table 1 below.

With forests covering roughly 5.96 million ha., or 40% of the total land area, Nepal's forests' governance and management are co-managed with Community Forest User Groups (CFUGs). Nepal is home to exceptional wildlife and biodiversity. It has established an extensive national park network covering 23.31% (34,312 ha.) of its land area and an entrance fee system for tourists visiting its parks. Fees charged to visitors are determined by the type (national park, wildlife reserve, conservation area, hunting reserve) and location (terai, hill, mountain) of the protected area, as well as the nationality of the tourist (national, South-Asian Foreign Visitor (SAF), and Non-South-Asian Foreign Visitor (NSAF) (DNPWC, 2012).

The entrance fee charged to visitors has served as an important source of revenue for management of the national park and for community development, with US\$ 842,088 generated from 115,181 visitors during the 2009-2010 fiscal year, including roughly 92.9% from NSAF tourists (DPNC, 2010). Revenue generated from tourism entrance fees is then captured in a national trust fund. Approximately 50% is dispersed to CFUGs living in the buffer zone of the national park to support conservation activities, community development, job creation and training programs, awareness and outreach and administration. These resources support and encourage CFUGs to manage and use their forest resources sustainably.

Table 1. Overview of benefits-sharing in Nepal

Benefit Type	Monetary / Non-Monetary	Form of Distribution
<ul style="list-style-type: none"> • Incentives and support for sustainable livelihoods (ecotourism, agriculture) • Forest governance and institutional capacity building • Sustainable Development (e.g., water resources management) 	<p>Mixed, generally distributed in the form of grants or non-monetary benefits (provisioning of equipment for livelihoods, market linkages, etc.)</p>	<ul style="list-style-type: none"> • Sub-national to local (scale of distribution) • Grants provided from the Provincial Government to CFUG, based on number of tourism entry fees • Technical assistance from local NGOs for microfinance, financial management, and capacity building and training

However, one of the key challenges is that Nepal’s parks do not receive an equal number of visitors. Only 25% of Nepal’s parks receive more than 50% of visitors, with Chitwan National Park receiving the most annually (Tiwari, 2018). As the amount of funding received by a community correlates with the number of visitors received, this creates an unequal distribution of resources among many CFUGs in the buffer zone. This unequal distribution of resources could be addressed through a centralized distribution scheme, under which a percentage of pooled resources from user entry fees are distributed equitably among all CFUGs. Establishing this benefits-sharing mechanism would strengthen the triple-bottom-line of Nepal’s Conservation Trust Fund, that values and protects the environment (environmental value), generates economic benefits to protected area authorities, owners and communities (economic value), as well as contributes to social and cultural well-being (social values).

According to Guerin-McManus et al. (2002) combined benefits-sharing mechanisms and economic incentives should align with and strengthen co-management of shared resources among local stakeholders, communities, and the state to ensure the continuity of ecosystem service benefits all. In general, local participation and engagement in the development of benefits-sharing schemes is critical to their success. Co-management frameworks can also include the private sector (namely tourism operators), acknowledging the monetary value of ecosystem service benefits for multiple parties and the importance of spreading benefits equitably.

Methodology

Global Analysis: This analysis reviewed 15 CTFs globally to identify the presence or absence of benefits-sharing mechanisms, regardless of their formal recognition by the fund. As there is no singular comprehensive literature on benefits-sharing within conservation finance, the analysis pulls from a range of papers, reports, and literature to identify and analyze existing benefit-sharing mechanisms within CTFs globally. Key literature reviewed include REDD+, Access Benefits Sharing (Nagoya Protocol), and conservation finance/payment for ecosystem services.

Within all 15 CTFs, the analysis reviews the presence, scale, and type of benefits-sharing mechanism, and type of benefits received. In particular, the analysis reviewed the presence of an economic incentives scheme or structural correction to improve equitable distribution. Building from the global research, two case studies from the Pacific Islands region are assessed, with selected CTFs covering different scales of intervention and varying application of benefits-sharing schemes.

Case Studies: The two case studies are the Palau Protected Area Network (PAN) Fund, which is aligned with the Micronesia Challenge Fund (national and regional), and the Sovi Basin

Protected Area (SBPA) and endowment Trust Fund in Fiji (subnational). This includes a more in-depth analysis of the SBPA and its Community Development Fund, including reviewing the socioeconomic survey design and integration of benefits-sharing within local and traditional governance in Fiji.

The SBPA analysis specifically reviewed the role of community benefit-sharing mechanisms within CTFs globally, using the SBPA as a case study of a CTF with poverty alleviation objectives.

Key Findings

Global Review

A global review of 15 CTFs included a diversity of different geographies, scales of intervention, and fund sizes. Of the 15 CTFs assessed, six are national in scope (40%), eight are sub-national (53%), and one is regional in scope. No global trust funds were assessed in this review. The size of these funds ranged from \$2.5 to \$75 million (Table 2) and, although they included a mix of different fund types, they all included some type of endowment fund.

Table 2. Conservation Trust Funds Assessed

Scale	Trust Fund	Protected Area Location	Trust Fund Capitalized Amount (US\$)	Protected Area Size/Scope	Fund Type
Sub-national	Mgahinga-Bwindi Impenetrable Forest Conservation Trust (MBIFCT)	Uganda	6.3 million	321 km ²	Endowment

Sub-national	Tree Kangaroo Conservation Program	Papua New Guinea	2 million	787 km ²	Endowment
National	Suriname Conservation Foundation	Surinam	15 million	23,000 km ²	Endowment
Regional	Micronesia Conservation Trust Palau Protected Area Network	Micronesia/ Palau	10.2 million	500,221 km ²	Revolving (green fee); Endowment
Sub-national	Sovi Basin Trust Fund	Fiji	3.9 million	160 km ²	Endowment
Sub-national	Kilaka Conservation Trust Fund	Fiji	Unlisted	402 ha / 4.02 km ²	Endowment
Sub-national	Phoenix Islands Protected Area Fund	Kiribati	3.5 million	408,250 km ²	Endowment
National	Yayasan Keanekaragaman Hayati Indonesia (Indonesian Biodiversity Foundation)	Indonesia	16.5 million	N/A (national)	Endowment; Revolving Fund
Sub-national	Blue Abadi Fund - Bird's Head Seascape	Indonesia	18 million	36,000 km ²	Endowment
Sub-national	Vatu-i-Ra Seascape Conservation Trust	Fiji	Unlisted	19,425 km ²	Revolving, Endowment

Sub-national	Eastern Arc Mountains Conservation Endowment Fund (Tanzania)	Tanzania	7 million	23,000 km ²	Endowment
National	Jamaica Protected Areas Trust, Forest Conservation Fund	Jamaica	21 million	2,000 km ²	Endowment; Sinking Fund
National	Guyana's Protected Areas Trust	Guyana	8.5 million	17,500 km ²	Endowment
National	Belize Protected Areas Conservation Trust	Belize	Revolving Fund	7,690 km ² of terrestrial reserve; 1,590 km ² of marine reserves; and 1,285 km ² of private conservation initiatives (10,545 km ²)	Endowment
National	Fondation pour les Aires Protégées et la Biodiversité de Madagascar	Madagascar	75 million	30,000 km ²	Endowment

Trends and Findings: Upon review, only 40% of the CTFs assessed identified as having benefits sharing mechanisms (Table 3). Despite this low reporting on benefits-sharing, almost all CTFs (93%) *have* benefit-sharing mechanisms of some kind or another, demonstrating a

significant lack of acknowledgment and identification of benefits-sharing approaches among practitioners.

In addition, 40% of CTFs identified human well-being outcomes as equally critical to delivering conservation outcomes within their vision and mission statements. This is a direct correlation to the funds that identified and reported on benefits-sharing under their fund. All CTFs identified with having benefits-sharing mechanisms (40%) had also established at least a basic monitoring system to track and report on benefits deployed under the intervention—reporting further demonstrated that these CTFs (40%) used a combination of monetary and non-monetary benefits to deliver benefits-sharing.

The analysis outcomes also revealed that younger trust funds adopted more robust human well-being objectives and monitoring frameworks on average. This highlights a notable shift towards holistic conservation programming, that delivers ecological and human well-being outcomes.

Table 3. Conservation Trust Funds and Benefits-sharing Overview

Trust Fund	Location	Identification/ reporting on benefits- sharing mechanism	Presence of Benefits- sharing	Scale of Distribution	Form of Distribution	Benefits provided	Does the CTF have an explicit human well-being objective and monitoring program?
Mgahinga- Bwindi Impenetrable Forest Conservation Trust (MBIFCT)	Uganda	Yes	Yes	Sub-national to Local	Grant-making mechanism	Benefits from community projects including obtaining manure (91.2%), income generation (38.3%), paying school fees (29.8%), improved nutritional levels (21.3%), improved social status (23.4%) and one beneficiary has constructed a bio-gas plant	Yes
Tree Kangaroo Conservation Program	Papua New Guinea	No	Yes	Sub-national to Local	Grant-making mechanism; Direct livelihoods support	Sustainable livelihoods, access to health, education, and skills training	Yes

Suriname Conservation Foundation	Surinam	No	Unclear	National to local; subnational	Grant-making mechanism	Unreported	No
Micronesia Conservation Trust / Palau Protected Area Network	Micronesia/ Palau	No	Yes	Regional to national; national to sub-national; sub-national to local.	Grant-making mechanism	Community livelihoods, management planning support, fishing training, etc.	Yes
Sovi Basin Trust Fund	Fiji	Yes	Yes	Sub-national to local	Community Conservation Agreement	Livelihoods support, school scholarships, infrastructure, other community development aspirations	Yes
Kilaka Conservation Trust Fund	Fiji	Yes	Yes	Sub-national to local	Community Conservation Agreements	Livelihoods support and community-based management / co-management	Yes
Phoenix Islands Protected Area Fund	Kiribati	No	Yes	National to national	Financial instrument - payments to government	Offset fishing license revenue to national government (notably, does not directly engage communities or civil society)	No
Yayasan Keanekaragaman Hayati Indonesia	Indonesia	No	Yes	National to subnational	Grant-making mechanism	Unreported (no singular report)	No

(Indonesian Biodiversity Foundation)							
Blue Abadi Fund - Bird's Head Seascape	Indonesia	Yes	Yes	Sub-national to local	Livelihoods, tourism and grant-making mechanism	Sustainable livelihoods, access to health, education, and skills training, management planning and ecotourism	Yes
Vatu-i-Ra Seascape Conservation Trust	Fiji	Yes	Yes	Sub-national to local	School scholarships	Education grants for students within Yavusa Nagilogilo (40%); Education grants for students from Qoliqoli Cokovata Nakorotubu (30%); and Management of Vatu-i-Ra Conservation Park (30%)	Yes
Eastern Arc Mountains Conservation Endowment Fund (Tanzania)	Tanzania	Yes	Yes	National to sub-national; Sub-national to local	Livelihoods support, Grant-making mechanism to local organizations and groups	Multiple - no comprehensive report	Yes

Jamaica Protected Areas Trust, Forest Conservation Fund	Jamaica	No	Yes	National to sub-national	Grants	Livelihoods support to local communities	No
Guyana's Protected Areas Trust	Guyana	No	Yes	National to sub-national/local	Grant-making mechanism	Monitoring and enforcement of management plans, park rangers, equipment and maintenance, scientific research, and community outreach	No
Belize Protected Areas Conservation Trust	Belize	No	Yes	National to sub-national/local	Grant-making mechanism; Co-management	Livelihoods support to local communities (e.g., ecotourism)	No
Fondation pour les Aires Protégées et la Biodiversité de Madagascar	Madagascar	No	Yes	National to sub-national/local	Grants support on-going management costs but also conservation	Livelihoods support to local communities	No

					and development activities		
--	--	--	--	--	----------------------------------	--	--

Case Studies from the Pacific Islands region

With more than 90% of land in Pacific Island countries owned by indigenous clans, the most effective modality for establishing conservation areas is the land lease, which rejects industrial activity but does not remove access or traditional usage rights for community stakeholders. Benefits-sharing within the Pacific context must be viewed through the appropriate cultural and socioeconomic lens and aim to strengthen the social fabric underpinning community life.

In the Pacific Islands region, there are only a few select examples of conservation trust funds at sub-national, or national level, that support the conservation and management of high biodiversity areas and habitats (Spergel and Taïeb, 2008). Some examples include the PIPA Trust (Kiribati), the Micronesia Conservation Trust (a multi-national trust which includes the Republic of Palau, the Federated States of Micronesia, and the Republic of the Marshall Islands), Mama Graun Conservation Trust Fund (Papua New Guinea), the Kilaka Forest Conservation Area (Fiji), and the Sovi Basin Trust Fund (Fiji), to name a few.

Case Study I: Micronesia Conservation Trust – Palau Protected Area Network Fund

Overview: The Micronesia Challenge began in 2005 as an effort to support conservation efforts in Palau, the Federated States of Micronesia, and the Republic of the Marshall Islands. The Micronesia Conservation Trust manages the Micronesia Challenge Endowment Fund (MCEF), which was seeded with an initial investment of US\$ 11.5 million in 2015, and eventually capitalized at US\$ 18 million. In order to receive financial benefits from the fund, each country is required to provide co-financing to the MCEF which is tracked within separate national trust accounts. To date, Palau is the only Micronesia Challenge country that has met its capitalization target. Table 4 outlines the total funding raised by each country participating in MCEF as of May 2017, noting that these overall amounts have increased in recent years (Varty, 2017).

Table 4. Composition of the Micronesia Challenge Funds in US\$ (snapshot from May 2017)

Contribution	Palau	FSM	RMI
National contribution	2,181,346	450,000	265,000
Donor contributions	4,684,848	3,684,848	3,684,848
Interest from endowment fund	2,216,009	831,932	696,103
TOTAL	9,082,203	4,966,780	4,645,952

The MCEF also requires that countries establish policy, governance, and financial disbursement mechanisms prior to accessing fund resources. To date, Palau is the only country to establish these systems and began accessing its portion of the MCEF endowment fund in January 2017. In 2017, Palau withdrew a total of US\$ 435,362, and in 2018 withdrew an additional US\$ 461,734. Despite these withdrawals, Palau has continued to increase its MCEF allocation every year by contributing a portion of its Green Fee revenue, a national tourism entry fee that provides roughly 50% of annual operating costs for the Palau Protected Area Network, to the MCEF. In 2018, Palau finally reached its MCEF capitalization target of US\$ 10.2 million, by contributing 18% of its Green Fee revenue (totaling US\$ 1,866,702) to the fund.

Palau PAN Fund: The Palau Protected Area Network (PAN) Fund is an independent non-profit organization established to serve as a financial trustee to manage the funds from donations and arrival fees for the PAN. The Palau PAN was approved in 2003, and today, all of Palau’s 16 states participate in the delivery of the country’s biodiversity commitments. Legislation for Palau’s PAN Fund (national CTF) was passed in 2008 and the non-profit became operational in 2012. The PAN Fund manages a diversified portfolio of income and revenue streams, with funding from Palau’s Green Fee as well as annual withdrawals from the Palau MCEF account. Additional revenue comes from audit reimbursements and interest.

Benefits-sharing in Palau: As of 2018, the PAN Fund had dispersed a total of US\$ 13.1 million in funding across Palau's 16 states (Figure 1). These grants are distributed to states and then programmed in partnership with local communities and conservation partners. Each State has developed a management plan for their key sites and established a unique vision and goal in alignment with the local context. Across these 16 States, the Palau PAN brings together Western science and traditional knowledge for successful conservation outcomes that are culturally and scientifically grounded. The traditional concept of *Bul* is central to the design and implementation of the PAN. *Bul* is a traditional management practice used commonly throughout the Pacific Islands region¹ and characterized by the establishment of spatial, temporal, or other types of protections within coastal or traditionally managed marine areas.

Different organizations and stakeholders can prioritize funding to support economic incentives programs and livelihoods programs at the state level. The specific interventions are targeted to the socioeconomic context of the area and income-generating opportunities available to the local communities. For example, the Melekok state financed development of an orchid nursery for local communities near the Nordak Lake conservation area. Other community-based ecotourism ventures have been established in the Rock Islands Southern Lagoon within Koror state, and in the Ngerderar Watershed in Aimeliik state. An overview of benefits-sharing under the PAN Fund is outlined in Table 5.

¹ The concept is similar across the Pacific, but has a different name depending on the location (e.g., traditional management practices and areas in Papua New Guinea is called *Gwala*, and in Fiji known as *Tabu*).

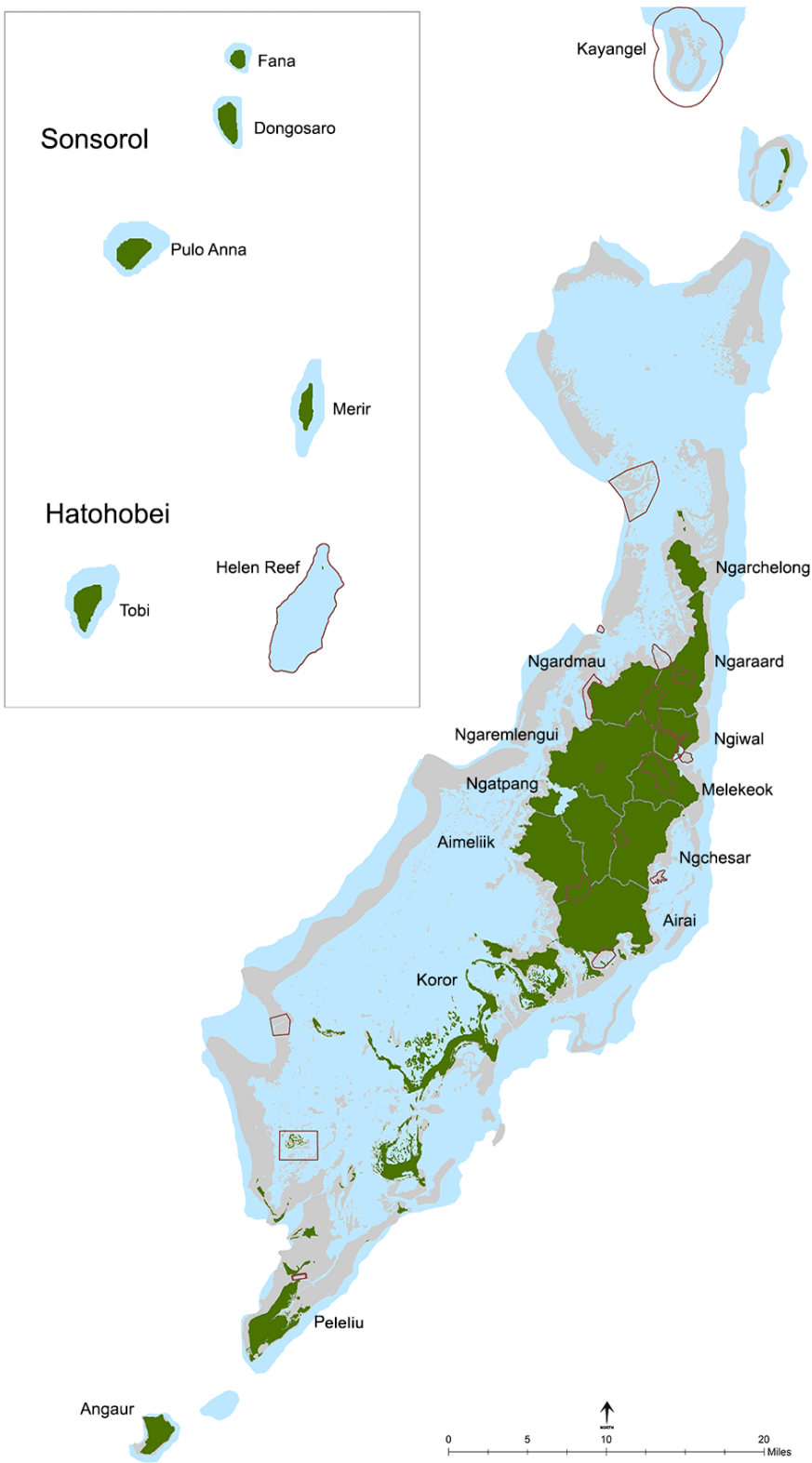


Figure 1. Map of the Palau Protected Area Network (copyright, Palau Protected Area Network)

Table 5. Benefits-sharing approach in Palau

Benefit Type	Monetary / Non-Monetary	Form of Distribution
Incentives and support for sustainable livelihoods (ecotourism, agriculture)	Monetary Benefits	<ul style="list-style-type: none"> • Scale of Distribution: Regional to National (Micronesia Challenge); National the Sub-national; Sub-national/state to local • Grants provided from the state government to local PAN sites
Training and support for sustainable fishing	Non-monetary benefits	
Development of Community-based management plans/co-management plans (ecosystem services provisioning)	Non-monetary benefits	
Fellowship, scholarship and training program	Non-monetary benefits	Application

Socioeconomic Monitoring: The Palau PAN has also developed a socioeconomic monitoring system to track the impacts of the PAN Fund on local communities. The pilot monitoring program was carried out 2013 in Ngardmu State, within an area containing two MPAs and two terrestrial PAs with lessons learned aimed to be applied to the entire Micronesia Challenge Fund.

The pilot study highlighted the critical importance of monitoring ecological and socioeconomic indicators to make informed management decisions and track and monitor trends and changes over time.

The key indicators for the PAN Fund included:

- Household food availability and sources
- Household dependence on local food resources
- Level of harvesting from local resources and their conditions - fishers and farmers

- Household income, expenses, and subsistence distribution by source
- Perception of quality and quantity of water

The survey findings highlighted trends and changes in the availability of local food sources (increased access), and household income and employment (increased employment). The survey also identified the need to better track inclusiveness of community-based management planning under the PAN and understand potential participatory exclusions.

Benefits-sharing Recommendations: The PAN Fund does not have an effective national-scale or centralized benefits-sharing mechanism or institutionalized economic incentives program to directly engage communities. Economic incentives and community engagement are delivered through state-led programs, under which sub-national state governments engage directly with local stakeholders and communities to develop site-level management plans. Some experts have suggested that the PAN Fund establish a centralized small grants program to address this gap and enable more distribution of resources for priority activities to local communities and civil society stakeholders. This would serve as a “structural distribution correction” to ensure that communities and indigenous groups have access to resources for their active participation in management of the PAN.

Regular socioeconomic monitoring is also critical to inform the continued development of benefits-sharing under the PAN Fund. Regular monitoring will enable decision-makers to assess the impact of the fund on local livelihoods and food security benefits, and better structure future benefits to local community groups.

Case Study II: Sovi Basin Protected Area and Endowment Trust Fund

Overview: The Sovi Basin Protected Area (SBPA) was formally established in May 2012 as Fiji’s largest Protected Area at 16,340 ha and endowed with a conservation trust fund. The Sovi Basin Trust Fund is an endowment fund that was initially capitalized at US\$ 3.9 million, but

today sits at around US\$ 4.4 million. The annual interest from the fund pays for annual lease payments to landowners, including an accounting of opportunity cost for foregone timber royalties, annual operating costs of the SBPA, as well as a Community Development Fund that supports livelihoods and other sustainable development actions prioritized by the communities.

With roughly 87% of Fiji's land under indigenous tenure, the legal establishment of the SBPA, was dependent on securing support from the nine *mataqalis* (clans) that have ownership of the Sovi Basin. While no communities reside within the area, nine *mataqalis* have customary ownership of the Sovi Basin Protected Area: Naiwaisomo, Waibasaga, Namataniqavi, Nasava (extinct), Naitavuni, Buasauni, Buluya, Waituitui (extinct), and Nanuku. These clans reside in the villages of Delailasakau, Nadakuni, Naivucini, and Naseuvou.

With an established presence in Fiji, Conservation International (CI) and the National Trust of Fiji (NTF) worked with local landowners to secure widespread consent from all *mataqalis* (clans) to establish the SBPA. After almost a decade of consultations, NTF secured a 99-year conservation lease for the entirety of the area. The Sovi Basin is categorized as a Nature Reserve, which critically, ensures that indigenous landowners maintain both use and access rights to the area for subsistence and traditional purposes, but excludes commercial resources extraction (e.g., mining, logging, building of dams).

NTF is a statutory body in Fiji devoted to the preservation and management of built and natural heritage, created in 1970 under the National Trust for Fiji Act. NTF is the authorized managing entity for the Sovi Basin and is responsible for a range of activities related to the Sovi Basin and its endowment fund, including environmental management of the protected area, management of annual lease payments to communities, and engagement with communities, government, and other key stakeholders regarding the SBPA.

As a core element of the governance model, two committees were established: 1) the SBPA Landowners Committee, comprised of local representatives from each of the *mataqalis* with landownership in the SBPA; and 2) the SBPA Steering Committee, which serves as a platform to share updates about the SBPA and seek technical inputs from experts and stakeholders related to management issues.

The Trust and Community Development Fund: The SBPA was established to deliver core conservation and socioeconomic objectives (Table 6) that are outlined in its management plan (SBPA, 2013). These objectives include a commitment to poverty alleviation within landowning communities, as well as equitable participation of marginalized groups (e.g., women and youth) in co-management of the SBPA. This articulation of socioeconomic objectives is a relatively unique aspect of the SBPA, as demonstrated in the global review of CTFs.

Table 6. Objectives of the Sovi Basin Protected Area

Conservation Objectives	Socioeconomic Objectives
<ul style="list-style-type: none"> • Maintaining or increasing habitat extent within the protected area • Maintaining or increasing habitat critical to the persistence of threatened species within the protected area • Ensuring the persistence of viable populations of threatened species within the protected area 	<ul style="list-style-type: none"> • Fully engaging SBPA landowners including women and youth in the management of the protected area • Raising awareness with surrounding communities and nationally on the local and national significance of the protected area • Formulating with communities' village development plans and jointly implementing agreed development and poverty alleviation priorities, including income-generating activities

The Community Development Fund serves as a distinct benefits-sharing mechanism built into the design of the Sovi Basin Protected Area and Trust Fund. Resources from the Community Development Fund are dispersed equally across *mataqalis* (clans) within three villages, regardless of the percentage of land they own within the Sovi Basin Protected Area. This equal disbursement of resources under the Community Development Fund addresses potential equity issues arising from the lease agreement payments, which are primarily distributed to one *mataqali*.

Socioeconomic Monitoring in the SBPA: Similar to many protected areas and CTFs, the Sovi Basin Protected Area Trust has allocated limited resources for systemic socioeconomic monitoring to ascertain the impacts of the Community Development Fund on traditional landowners. Despite limited capacity and resources, in 2006 and 2013, prior to the establishment and disbursement of the Community Development Fund, the NTF conducted two socio-economic surveys with landowning communities in the Sovi Basin. The goal of the surveys was to assess their current socioeconomic status and prioritize use of the Community Development Fund resources. These surveys were conducted in iTaukei, the indigenous language of Fiji, together with the Sovi Basin Landowners Committee. A comprehensive report was produced following the 2013 survey, documenting changes to the 2006 baseline.

The primary data collection for these surveys was qualitative, gathered through household surveys using a standardized survey questionnaire. The 2006 and 2013 surveys were led by staff from NTF, with participation of selected volunteers at the University of the South Pacific and the Fiji National University. Survey data is sex and age disaggregated and aimed to secure equitable participation across male and female gender groups. Interviews and survey implementation was conducted in iTaukei and English, depending on the preferred medium of the interviewee, with answers recorded in English. The questionnaire is attached as an

appendix. The survey questions gathered basic demographic and socioeconomic data about community members including:

- The number of individuals in a household, including age, gender, relationship, and religious affiliation, as well as the overall district and *mataqali* (clan) to which the household belongs.
- Level of education and access to education, scholarship or jobs training programs.
- Access to social welfare programs including healthcare or health assistance programs, or microcredit programs.
- Nature of employment, including formal employment, entrepreneurship/self-employment, or small business activities (sale of crops on the market) (includes reference to the head of household as well as additional family members).
- Salary and wages from either formal or informal employment, or other sources of income (remittances) - household expenditure sheet completed by each family.
- Access to clean drinking water, source of drinking water, price of associated water consumption, and type of toilet in the house (flush or latrine toilet).
- Type of housing (number of rooms, construction materials used), electricity/lighting source and availability (is access limited to certain hours), the cost of electricity, and what type of appliances are used on a regular basis.
- Relatives and family members that reside in the house on a part-time basis, or have recently relocated, including the reasons for relocation; the number of married couples living in the household; the number of recently deceased members of the household and reasons for their passing.
- Incidence of crime in the village that has affected the household.

- Impacts of natural and manmade disasters on the household (fire, cyclone, earthquake, flooding, etc.).
- System of waste management in the household.
- Focused Group Discussions on resources management action plans, including problems, root causes, management approaches, strategies and accountability.

Participative Benefits-sharing Design and Delivery using Community Conservation Agreements: The 2013 socioeconomic survey results defined the overarching priorities and key needs of communities in the SBPA. Building on this framework, resources from the Community Development Fund are now programmed on an annual basis in alignment with the needs identified in the survey. Each year, NTF works closely with clan leaders and the SBPA Landowners/Committee to identify their priorities for the next fiscal year. These priorities are then documented in a CCA, which is agreed upon by both parties.

Community members receive a diversity of non-monetary and monetary benefits (Table 7), including livelihoods support, technical assistance for marketing access, school scholarship fees, and even village infrastructure projects.

Table 7. Benefits-sharing approach in SBPA

Benefit Type	Monetary / Non-Monetary	Form of Distribution
Incentives and support for sustainable livelihoods (ecotourism, agriculture)	Monetary benefits	<ul style="list-style-type: none"> • Sub-national to local • Community Conservation Agreements established with each <i>mataqali</i> (clan, or landowning unit)
Land-use planning and management activities	Non-monetary benefits	
Co-management and governance strengthening of the Sovi Landowners Committee	Non-monetary benefits	
School scholarship program	Non-monetary benefits	

Benefits-sharing Recommendations: A few communities living on the periphery of the SBPA have access rights but not landownership rights to the SBPA. Without landownership rights, they do not receive benefits from the Community Development Fund or lease payments to local landowners. However, these landowners remain critical stakeholders for successful conservation of the SBPA as they forage and utilize resources within its boundary. In addition to the Community Development Fund, the NTF would like to establish an additional benefits-sharing mechanism to provide benefits to the wider SBPA community and not just the landowners.

Conclusions and Discussions:

This analysis aims to bridge the gap between the benefits-sharing and conservation finance literature and demonstrate that, despite the poor documentation of benefits-sharing approaches within conservation trust funds, benefits-sharing mechanisms are often present and are critical to implementation of CTFs.

The case studies demonstrate significant opportunities to strengthen the delivery of benefits-sharing in ways that improve equitable distribution of benefits in alignment with the unique socio-ecological and governance systems of the local communities and national context.

Some of the key discussion points are outlined below:

- **Socioeconomic impact is important to the success of CTFs, but is often constrained by resources and capacity of management authorities.** Across these various CTF case studies, co-benefits to local communities and resources owners are sometimes highlighted as secondary outcomes, rather than intrinsically entwined with delivery of primary conservation outcomes. These benefits should be more holistically integrated into the goals

and objectives of each fund and, if possible, resources should be made available to monitor their impact. It is notable that younger CTFs often contain integrated goals and objectives that focus on both ecological and socioeconomic or sustainable development outcomes. Shifting trends demonstrate that conservation is no longer the core mandate of many CTFs. Instead, this is often replaced by an integrated focus on poverty alleviation and socioeconomic improvements. By integrating benefits-sharing schemes into the delivery of CTFs, practitioners deliver successful conservation outcomes, as well as positive community and social wellbeing outcomes, and can even advance national and global sustainable development goals, such as improving access to schools and strengthening livelihoods that alleviate poverty.

- **Monitoring of socioeconomic impact is challenging but critical and should be included as a key line item in cost modeling for CTFs.** Defining and measuring social well-being outcomes is difficult, but Fund and Protected Area Managers must identify indicators to understand socioeconomic status and trends within their target communities. This will allow them to effectively structure and prioritize the type and distribution of benefits to local stakeholders while also monitoring their impact. Similarly, cost modeling for CTFs should include costs associated with socioeconomic monitoring of protected area stakeholders as well as biological monitoring within the areas itself.
- **Participative design of benefits-sharing improves ownership and effectiveness.** Benefits-sharing mechanisms acknowledge and address inequities that can affect access to conservation finance resources, such as local power dynamics or land ownership within a protected area, while delivering tangible co-benefits to local communities. It is critical that these benefits-sharing mechanisms are structured, locally developed, and decided through local governance councils such as the Sovi Basin Landowners Committee.

- **CTFs are not a silver bullet.** It is important to recognize that CTFs are not a silver bullet but, when successfully deployed, they can provide significant long-term resourcing for conservation actions. Some of the challenges associated with CTFs include their sometimes complicated legal and governance structures, the significant fundraising effort needed for capitalization of the trust fund, their sensitivity to market volatility, which can reduce endowment capital, and the need to establish systems for long-term management of the fund and its resources. If anything, the Sovi Basin case study demonstrates both the opportunities and complexities of CTFs once established, and perhaps the importance of continued mentoring and participation in the CTF community of practice together with other fund managers and implementers.
- **Community Conservation Agreements serve as useful tools for community-based benefits-sharing.** Tools and models such as CCAs can be used to engage and empower indigenous communities in the CTF decision-making processes related to economic and conservation incentives to identify and deliver priority actions to local communities (Mora et al., 2018).
- **Economic incentives are not always appropriate – practitioners should consider monetary, non-monetary, and penalty-based schemes.** Practitioners have documented their successful application and ability improve development and conservation outcomes. However, in some cases they have proven to be unsuccessful for a complex variety of reasons. Comprehensive guidelines have been developed to assist conservation practitioners in establishing economic incentives programs with their partner communities, which can be used in tandem with CTFs to improve their outcomes.

Gaps, Uncertainties and Further Research

Data availability for CTFs, in particular, detailed information regarding the benefits-sharing mechanisms used, was severely constrained. As a result, the sample size of the review was reduced to a less statistically significant number of CTFs than originally envisioned.

Further research should increase the number of CTFs reviewed and ideally gather first-hand quantitative and qualitative information through surveys and interviews with key stakeholders. Extensive data collection could be carried out in partnership with the Conservation Finance Alliance annual survey. Additional research should also aim to draw stronger correlations related to the fund size, the geographic extent of the protected area, the location and scope of the fund, the year of establishment, and additional information about key beneficiaries. This should include a global assessment of monitoring approaches, efforts, and best practices within CTFs to identify resources, capacity, and context for delivery of effective monitoring.

Gender and marginalized groups must be carefully integrated into existing benefits-sharing mechanisms, to address social and cultural power dynamics that affect equity and participation. Simultaneously, fund managers must navigate societal and cultural dynamics to facilitate engagement and participation of women, youth, elderly, and other marginalized groups in decision-making around use and access to benefits-sharing resources.

In summary, Conservation Trust Funds are one of the most popular sustainable financing mechanisms globally established to finance the management of protected areas. In addition to financing the protection and management of biodiversity, practitioners are increasingly recognizing the potential for CTF resources to contribute to sustainable development and poverty alleviation. Globally, very few CTFs include designated benefits-sharing mechanisms, or have established dedicated socioeconomic monitoring related to the impacts of CTFs on stakeholders and beneficiaries. In the future, cost modelling for CTFs should identify resources

needed for the establishment of both benefits-sharing mechanisms and adequate monitoring activities. This will understandably be contingent upon the availability of adequate resources for CTF capitalization. Regardless, when designing CTFs conservation finance practitioners should consider and account for the potential impacts of benefits-sharing mechanisms on local stakeholders, particularly their contribution to delivering national and global commitments and targets.

References:

- Ahmadia, G.N., Awaludinnoer, L., Glew, F., Pakiding, J., Harris, N., Hidayat, E., Ihsan, M.B., Mascia, D., Matualage, P., Mohebalian, D., Pada, P. (2017). 2016 State of the Bird's Head Seascape MPA Network Report. World Wildlife Fund, Conservation International, The Nature Conservancy, and Universitas Papua, Washington D.C., United States, Jakarta, Indonesia, and Manokwari, Indonesia. DOI: 10.6084/m9.figshare.6977738
- Armitage D., Marschke, M., Plummer, R. 2008. Adaptive co-management and the paradox of learning. *Global Environmental Change* 18(1):86–98. <http://dx.doi.org/10.1016/j.gloenvcha.2007.07.002>
- Bath, P., Valladres, A., Lujan-Gallegos, V., Mathias, K. (2020). Conservation Trust Funds 2020: Global Vision, Local Action. Conservation Finance Alliance.
- Bayon, R., Deere, C., Norris, R., Smith, S. (1999). Environmental funds: lessons learned and future prospects. Washington DC: GEF and IUCN.
- Bram, B., Sullivan, S., Neves, K., Igoe, J., Brockington, D. (2012). Towards a Synthesized Critique of Neoliberal Biodiversity Conservation, *Capitalism Nature Socialism*, 23:2, 4-30, <https://doi.org/10.1080/10455752.2012.674149>
- Conservation Finance Alliance (CFA). (2008). Rapid Review of Conservation Trust Funds. Prepared for the CFA Working Group on Environmental Funds by Barry Spergel and Philippe Taïeb.
- Conservation Finance Alliance (CFA). (2019). ENVIRONMENTAL FUNDS TOOLKIT.
- Carranz, D.M., Varas-Belemmi, K., De Veer, D., Iglesias-Müller, C., Coral-Santacruz, D., Méndez, F.A., Torres-Lagos, E., Squeo, F.A., Gaymer, C.F. (2020). Socio-environmental conflicts: An underestimated threat to biodiversity conservation in

Chile. *Environmental Science & Policy*. 110: pp. 46-59.
<https://doi.org/10.1016/j.envsci.2020.04.006>.

Credit Suisse Group, AG and McKinsey Center for Business and Environment. (2016). Conservation Finance From Niche to Mainstream: The Building of an Institutional Asset Class.

Doinjashvili, P., Méral, P., Andriamahefazafy, F. (2020) Sustaining protected areas through conservation trust funds: a review. *International Journal of Sustainable Development & World Ecology*. DOI: 10.1080/13504509.2020.1762257

DNPWC. (2010). Annual Reports 2011-2012. Kathmandu, Nepal: Ministry of Forests and Soil Conservation, Department of National Parks and Wildlife Conservation (DNPWC).

DNPWC. (2012). Annual Reports 2011-2012. Kathmandu, Nepal: Ministry of Forests and Soil Conservation, Department of National Parks and Wildlife Conservation (DNPWC).

Drumm, A., Echeverria, J., Almendarez, M. (2011). Sustainable Finance Strategy and Plan for the Belize Protected Area System. United Nations Development Programme.

EAMCEF Endowment Fund Secretariat. (2009). Eastern Arc Mountains Conservation Endowment Fund Profile.

Emerton, L. (2000). Using Economic Incentives for Biodiversity Conservation. International Union for the Conservation of Nature (IUCN).

Flores, M., Rivero, G., León, F., Chan, G. (2008). Financial Planning for National Systems of Protected Areas: Guidelines and Early Lessons. The Nature Conservancy, Arlington, Virginia (112 pp.).

Gill, G.Z.D. (2017). A FRAMEWORK FOR COMMUNITY BENEFIT SHARING MECHANISMS: Design and Implementation of CBSM for Forest Conservation in Liberia. MSc. Researcher at Wageningen University. Commissioned by IDH, the Sustainable Trade Initiative; FDA, the Forestry Development Authority.

- Greiber, T., Moreno, S.P., Ahrén, M., Carrasco, J.N., Kamau, E.C., Medaglia, J.C., Olivia, M.J., Perron, Welch, F., in cooperation with Natasha Ali and China Williams. (2012). An Explanatory Guide to the Nagoya Protocol on Access and Benefit-sharing. IUCN, Gland, Switzerland. xvii + 372 pp.
- Guerin-McManus, M., Nnadozie, K.C., Laird, S.A. (2002). "Chapter 19 - The use of conservation trust funds for sharing financial benefits in bioprospecting projects." Eds: Iwu, M. M., Wootton, J.C. *Advances in Phytomedicine*, Elsevier, Volume 1. pp. 211-240, ISBN 9780444508522
- Gurney, G.G., Cinner, J., Ban, N.C., Pressey, R.L., Pollnac, R., Campbell, S.J., Tasidjawa, S., Setiawan, F. (2014). Poverty and protected areas: An evaluation of a marine integrated conservation and development project in Indonesia. 26: pp. 98-107. <https://doi.org/10.1016/j.gloenvcha.2014.04.003>
- IUCN. (2009). REDD-plus and Benefit sharing: Experiences in forest conservation and other resource management sectors.
- Japhet, E. (2019). Economic Viability and Impact of EAMCEF Supported Income Generating Projects Implemented Adjacent to the Eastern Arc Mountains Forests, Tanzania. Tanzania Forest Research Institute.
- Karki, S.T. (2013). Do protected areas and conservation incentives contribute to sustainable livelihoods? A case study of Bardia National Park, Nepal. *Journal of Environmental Management*. 128: pp.988-999.
- Kleiber, D., Koshiba, S. (2014). Micronesia Challenge: Socio-economic Pilot Study, Palau. PICRC Technical Report 14-08. Palau International Coral Reef Center, Palau, Republic of the Marshall Islands. Prepared for National Oceanic and Atmospheric Administration's Coral Reef Conservation Program. 55 p.

- Lucas J.C., Alvarez-Castillo, F. (2013) Fair for Women? A Gender Analysis of Benefit Sharing. In: Schroeder D., Cook Lucas J. (eds) Benefit Sharing. Springer, Dordrecht. https://doi.org/10.1007/978-94-007-6205-3_6
- S. Mangubhai, M.V. Erdmann, et al. (2012). Papuan Bird's Head Seascape: emerging threats and challenges in the global center of marine biodiversity. *Mar. Pollut. Bull.*, 64 (2012), pp. 2279-2295
- Mallin, F.M., Stolz, D.C., Thompson, B.S., Barbesgaard, M. (2019) In oceans we trust: Conservation, philanthropy, and the political economy of the Phoenix Islands Protected Area, *Marine Policy*. 107.
- Mathias, K., Victurine, R. (2017). Conservation trust funds investment survey for calendar year 2016. Conservation Finance Alliance and the Latin American and Caribbean Network of Environmental Funds; [accessed 2020 August 6]. https://static1.squarespace.com/static/57e1f17b37c58156a98f1ee4/t/5a21ec648165f50677c10907/1512172667954/Conservation+Trust+Fund+2016_English.pdf.
- Mekong River Commission. (2011). KNOWLEDGE BASE ON BENEFIT SHARING: Volume 1 of 5. Summary and Guide to the Knowledge Base Compendium. MRC Initiative on Sustainable Hydropower.
- Meyers, D., Bohorquez, J., Cumming, T., Emerton, L., Heuvel, O.v.d., Riva, M., Victurine, R. (2020). Conservation Finance: A Framework, Conservation Finance Alliance, 2020. www.cfalliance.org. DOI: 10.13140/RG.2.2.14186.88000
- Mora, M., Palacios, E., Niesten, E. (2018). Assessing the impact of conservation agreements on threatened fish species: A case study in the Colombian Amazon. *Oryx*, 52(4), 687-696. doi:10.1017/S0030605317000953
- Niesten E, Gjertsen, H. (2010) Economic Incentives for Marine Conservation. Conservation International, Arlington, Virginia, USA

Doinjashvili, P., Méral, P., Andriamahefazafy, F. (2020). Sustaining protected areas through conservation trust funds: a review. *International Journal of Sustainable Development & World Ecology*. DOI: 10.1080/13504509.2020.1762257

Protected Area Trust. (2019). Annual Report 2018. <https://protectedareatrust.org.gy/pat/ptc/media/PAT-Annual-Report-2018-web-format-revised-1-1.pdf>

Scheufele, G., Bennett, J. (eds). (2019). “Annex 6 - Community conservation agreement.” *Buying and Selling the Environment. Academic Press*, pp. 189-194.

SBPA Management Plan. 2013. National Trust of Fiji. Suva, Fiji.

Spergel B., Taïeb P. (2008). Rapid review of conservation trust funds. Washington, DC: Conservation Finance Alliance.

Tiwari, S. (2018). Ecotourism in Protected Areas of Nepal: An Application of Individual Travel Cost Method. *Research Journal of Agriculture and Forestry Sciences*. 5. 1-6.

Varty, N. (2017). Terminal Evaluation of the UN Environment GEF Project “Micronesia Challenge: Sustainable Finance Systems for Island Protected Area Management”. UNEP.

Wildlife Conservation Society (2018). Vatu-i-Ra Conservation Park Management Plan. Wildlife Conservation Society, Suva, Fiji. 32 pp.

World Bank. (2007). Bwindi Impenetrable National Park and Mgahinga Gorilla National Park Conservation Project. Project Performance Assessment Report.

Annex 1: CTF Benefits-sharing overview

Scale	Trust Fund	Location	Trust Fund Capitalized Amount (US\$)	Fund Type	Protected Area size	Identification/ reporting on benefits-sharing mechanism	Presence of Benefits-sharing	Scale of Distribution	Form of Distribution	Benefits provided	Does the CTF have an explicit human well-being objective and monitoring program?	Clear reporting on equity of distribution
Sub-national	Mgahinga-Bwindi Impenetrable Forest Conservation Trust (MBIFCT)	Uganda	6.3 million	Endowment	321 km ²	Yes	Yes	Sub-national to Local	Grant-making mechanism	Benefits from community projects including obtaining manure (91.2%), income generation (38.3%), paying school fees (29.8%), improved nutritional levels (21.3%), improved social status (23.4%) and one beneficiary has constructed a bio-gas plant.	Yes	No
Sub-national	Tree Kangaroo Conservation Program	Papua New Guinea	2 million	Endowment	787 km ²	No	Yes	Sub-national to Local	Grant-making mechanism; Direct livelihoods support	Sustainable livelihoods, access to health, education, and skills training	Yes	No
National	Suriname Conservation Foundation	Surinam	15 million	Endowment	23,000 km ²	No	Unclear	National to local; subnational	Grant-making mechanism	Unreported	No	No

Regional	Micronesia Conservation Trust / Palau Protected Area Network	Micronesia/ Palau	10.2 million	Revolving (green fee); Endowment	500,221 km ²	No	Yes	Regional to national; national to sub-national; sub-national to local.	Grant-making mechanism	Community livelihoods, management planning support, fishing training, etc.	Yes	No
Sub-national	Sovi Basin Trust Fund	Fiji	3.9 million	Endowment	160 km ²	Yes	Yes	Sub-national to local	Community Conservation Agreement	Livelihoods support, school scholarships, infrastructure, other community development aspirations	Yes	Yes - Community Development Fund
Sub-national	Kilaka Conservation Trust Fund	Fiji	Unlisted	Endowment	402 ha / 4.02 km ²	Yes	Yes	Sub-national to local	Community Conservation Agreements	Livelihoods support and community-based management/c o-management	Yes	Yes - Grantmaking mechanism
Sub-national	Phoenix Islands Protected Area Fund	Kiribati	2.5 million	Endowment	408,250 km ²	No	Yes	National to national	Financial instrument - payments to government	Offset fishing license revenue to national government (notably, does not directly engage communities or civil society)	No	No
National	Yayasan Keanekaragaman Hayati Indonesia (Indonesian Biodiversity Foundation)	Indonesia	16.5 million	Endowment; Revolving Fund	N/A (national)	No	Yes	National to subnational	Grant-making mechanism	Unreported (no singular report)	No	No
Sub-national	Blue Abadi Fund - Bird's Head Seascape	Indonesia	28 million	Endowment	36,000 km ²	Yes	yes	Sub-national to local	Livelihoods, tourism and grant-making mechanism	Sustainable livelihoods, access to health, education, and skills training, management	Yes	No

										planning and ecotourism		
Sub-national	Vatu-i-Ra Seascape Conservation Trust	Fiji	Unlisted	Revolving	19,425 km ²	Yes	Yes	Sub-national to local	School scholarships	Education grants for students within Yavusa Nagilogilo (40%); /Education grants for students from Qoliqoli Cokovata Nakorotubu (30%); and Management of Vatu-i-Ra Conservation Park (30%);	Yes	No
Sub-national	Eastern Arc Mountains Conservation Endowment Fund (Tanzania)	Tanzania	7 million	Endowment	23,000 km ²	Yes	Yes	National to sub-national; Sub-national to local	Livelihoods support, Grant-making mechanism to local organizations and groups	Multiple - no comprehensive report	Yes	N/A
National	Jamaica Protected Areas Trust, Forest Conservation Fund	Jamaica	21 million	Endowment; Sinking Fund	2,000 km ²	No	Yes	National to sub-national	Grants	Livelihoods support to local communities	No	No
National	Guyana's Protected Areas Trust	Guyana	8.5 million	Endowment	17,500 km ²	No	yes	National to sub-national/local	Grant-making mechanism	Monitoring and enforcement of management plans, park rangers, equipment and maintenance, scientific research, and community outreach.	No	No

National	Belize Protected Areas Conservation Trust	Belize	Revolving Fund	Endowment	7,690 km ² of terrestrial reserve; 1,590 km ² of marine reserves; and 1,285 km ² of private conservation initiatives. (total of 10,565 km ²)	No	yes	National to sub-national/local	Grant-making mechanism ; Co-management;	Livelihoods support to local communities (e.g., ecotourism)	No	No
National	Fondation pour les Aires Protégées et la Biodiversité de Madagascar	Madagascar	75 million	Endowment	30,000 km ²	No	Yes	National to sub-national/local	Grants support on-going management costs but also conservation and development activities.	Livelihoods support to local communities	No	No