REVISED EDITION

Protected and conserved area governance and management

A resource book for practitioners in development cooperation

giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

As a federally owned enterprise, GIZ supports the German Government in achieving its objectives in the field of international cooperation for sustainable development.

Published by:
Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

In collaboration with:
Asia Protected Areas Partnership (APAP) Secretariat at IUCN Asia Regional Office, Thailand

Registered offices
Bonn and Eschborn, Germany

Programme/project:
Sector Programme Biodiversity – Environment – Ocean, on behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ)
Division Climate Change, Environment, Infrastructure

Address
Friedrich-Ebert-Allee 32 + 36
53113 Bonn, Germany
T +49 228 44 60 - 0
F +49 228 44 60 - 17 66

E info@giz.de
I www.giz.de

Authors (1st and 2nd edition):
Bojan Auhagen, Stefanie Eißing, Katharina Fietz, Carolin Frisch, Dr. Tobias Garstecki, Dr. Mirjam de Koning, Janina Lobmüller, Dr. Petch Manopawitr, Viviane Meyer, Paul Möller, M.K.S. Pasha, Dr. Stefanie Preuß, Isabel Renner, Marie Schoroth, Mitali Sharma, Dr. Wibke Thies.

Responsible:
Barbara Lang, Viviane Meyer, Carolin Frisch

Design/layout:
1st edition: now [nau], kommunikative & visuelle gestaltung, www.now-nau.de
2nd edition: MediaCompany – Agentur für Kommunikation GmbH

Photo credits/sources:
Cover © GIZ/Karsten Leckebusch
p. 196 © GIZ/ProFEB
p. 199 © GIZ/Miriam Factos
p. 209 © GIZ/Tasfiq Mahmood
p. 211 © GIZ/ProFEB
p. 217 © GIZ/Christine Woda
p. 221 © FZS/Daniel Rosengren
p. 222 © FZS/Daniel Rosengren
p. 226 © GIZ/ProFEB
p. 231 © GIZ/Fabian Oswald
p. 233 © GIZ/Carolina Hernández
p. 237 © PONT/Mirjam de Koning
p. 238 © Steffen Mitchell
p. 245 © GIZ/Jutta Benzenberg
p. 250 © GIZ/Diego Pérez
p. 252 © GIZ/Thomas J. Müller
p. 260 © Philipp Kanstinger
p. 261 © Eleanor Briggs

Bonn, October 2025

›› ACKNOWLEDGEMENTS

Special thanks go to the many people who have supported and contributed to the preparation of this publication, both its first and second editions, in particular to Sven Berlin, Hans-Ulrich Caspary, Katharina D'Avis, Florian Dörr, Lucian Elles, Lucy Emerton, Lena Fey, Bastian Flury, Farina Hoffmann, Kirsten Hegener, Svenja Horstmann, Oemar Idoe, Heinz-Gerhard Jansen, Ralf Peveling, Kirsten Probst, Paul Scholte, Silke Spohn, Lisa Steurer, Dorothea Theunissen, Andre Jon Uychiaoco, Carina van Weelden.

We gratefully acknowledge the support of GIZ's Sector Network Natural Resources and Rural Development in Asia and the Pacific (SNRD Asia and the Pacific) for financially supporting the development of this second edition, and thank its Biodiversity Working Group for valuable technical inputs and case studies from the Asia-Pacific region.

We also recognize and thank the Asia Protected Areas Partnership (APAP) Secretariat at the IUCN Asia Regional Office, Thailand, for their continued collaboration and support throughout this process.

>> TABLE OF CONTENTS

>> LIST OF ACRONYMS AND ABBREVIATIONS

AFD	French Development Agency
APAP	Asia Protected Areas Partnership
API	Application Programming Interface
ASEAN	Association of Southeast Asian Nations
BAF	Blue Action Fund
BCP	Biocultural Community Protocol
BFD	Bangladesh Forest Department
BMZ	German Federal Ministry for Economic Cooperation and Development
CBD	Convention on Biological Diversity
CCAD	Central American Commission for Environment and Development
CEPA	Communication, Education & Public Awareness
CFA	Conservation Finance Alliance
CIP	Conservation Investment Plan
CMP	Conservation Measures Partnership
CTF	Conservation Trust Fund
DEFRA	The Department for Environment, Food and Rural Affairs
DOPA	Digital Observatory of Protected Areas
ES	Ecosystem Services
FAO	Food and Agriculture Organisation of the United Nations
FIBA	Fondation Internationale du Banc d'Arguin
FFI	Fauna and Flora International
FPIC	Free, Prior and Informed Consent
GAPA	Governance Assessment of Protected Areas
GBF	Global Biodiversity Framework
GEF	Global Environment Facility
GFW	Global Forest Watch
GIS	Geographic Information System
GIZ	Deutsche Gesellschaft für internationale Zusammenarbeit GmbH
GPS	Global Positioning System
HNN	Hin Nam No
IBA	Important Bird Area
ICCA	Indigenous Peoples' and Community Conserved Territories and Areas
IIED	International Institute for Environment and Development
ILO	International Labour Organisation
IP&LC	Indigenous Peoples and local communities
IUCN	International Union for Conservation of Nature
IPA	Important Plant Area
KBA	Key Biodiversity Area
LLF	Legacy Landscapes Fund

KfW	Kreditanstalt für Wiederaufbau
MARISCO	Adaptive Management of Risk and Vulnerability at Conservation Sites
METT	Management Effectiveness Tracking Tool
MPA	Marine Protected Areas
NGO	Non-Governmental Organisation
NOAA	US National Oceanic and Atmospheric Administration
NORAD	Norwegian Agency for Development Cooperation
ODK	Open Data Kit
OECM	Other effective area-based conservation measures
OS	Open Standards
PA	Protected Area
PA-BAT	Protected Areas Benefits Assessment Tool
PAME	Protected Area Management Effectiveness
PCA	Protected and Conserved Area
PES	Payment for Ecosystem Services
PONT	Prespa Ohrid Nature Trust
PoWPA	Programme of Work on Protected Areas (under the CBD)
PPA	Privately protected area
RAPPAM	Rapid Appraisal and Prioritization of Protected Area Management
REDD+	Reducing Emissions from Deforestation and Forest Degradation
SAPA	Social Assessment of Protected Areas
SERNANP	Servicio Nacional de Áreas Naturales Protegidas por el Estado
SINANPE	Sistema Nacional de Áreas Naturales Protegidas por el Estado
SMART	Spatial Monitoring and Reporting Tool
SNRD	GIZ Sector Network on Rural Development and Natural Resources
SRS	Satellite Remote Sensing
TNC	The Nature Conservancy
TWG	Technical Working Group
UN	United Nations
UNDP	United Nations Development Programme
UNDRIP	United Nations Declaration on the Rights of Indigenous Peoples
UNEP-WCMC	United Nations Environment Program-World Conservation Monitoring Centre
UNESCO	United Nations Educational, Scientific and Cultural Organization
WCPA	IUCN World Commission on Protected Areas
WCS	Wildlife Conservation Society
WHS	World Heritage Site
WWF	World Wide Fund for Nature

>> PREFACE TO THE 2ND EDITION

The last few years have seen an immense movement gathering momentum in the field of area-based conservation. It aimed at raising the ambition to expand protected and conserved areas (PCAs) worldwide and resulted in the so-called "30by30" Target of the Global Framework on Biodiversity (GBF) adopted in 2022 by the Conference of Parties to the Convention on Biodiversity as Target 3: To conserve 30% of the world's terrestrial, freshwater, coastal and marine ecosystems by 2030 while respecting the rights of indigenous peoples and local communities (IP&LC). The target poses an enormous challenge, as these areas are to be "effectively conserved and managed through ecologically representative, well-connected and equitably governed systems of protected areas and other effective area-based conservation measures". Enhancing the quality of protected area governance and management remains, thus, crucial in efforts worldwide to achieve the target, while broadening these efforts to other conserved areas.

Given the positive reception of the first edition of this resource book among protected area practitioners in development cooperation contexts and beyond, we are offering this second updated edition in an effort to support implementation of the new global framework and its Target 3 in particular.

We have expanded the list of tools presented from 56 to 71. While some tools have been removed altogether, others have been updated or replaced. We have added tools on new topics such as guidelines on other effective area-based conservation measures (OECMs), and enlarged the selection for the marine realm and on financing biodiversity. Overall, our aim remains to provide a good mix of already widely used guidance, of newly developed tools to meet emerging needs and ones for specific situations. We also have revised and expanded lessons from the application of tools as well as project examples and included experiences from German financial cooperation implemented by KfW.

In cooperation with the Asia Protected Areas Partnership (APAP) Secretariat based at the Asia Regional Office of the International Union for Conservation of Nature (IUCN) the resource book will be advanced into an easily navigable and searchable digital application, the "PCA Knowledge Kit". Initiated in technical exchanges between GIZ and IUCN staff in Asia, this cooperation complements the growing partnership between IUCN and GIZ, adding to the numerous jointly implemented projects worldwide and the jointly managed PANORAMA Solutions knowledge platform. The digital version of the resource book features the integration of the IUCN Green List highlighting the alignment of its

Components and Criteria with existing tools, guidance materials, and knowledge products, as well as showcasing relevant PANORAMA Solutions to support effective application.

We hope that also this second edition will equip readers with the navigation needed to find their way through the wealth of guidance documents and tools and that the application and project examples will inspire their implementation. As with the first edition, we would like to provide orientation based on professional judgement at the present point in time without claiming to be authoritative or exhaustive.

The offline and online interactive version will be available from **https://pcatoolkit.org.**

Elke Hüttner
Head of Division
Climate Change, Environment, Infrastructure
Sector and Global Programmes

Jochen Renger
Head of Division
Climate Change, Rural Development, Infrastructure
Sectoral Department

>> OVERVIEW

>> HOW TO USE THIS RESOURCE BOOK?

The resource book offers several entry points from which you can access the information provided and navigate to the section you are interested in: basic introductory knowledge, background information on advisory approaches in German technical cooperation, a thematically structured overview of the tools presented, detailed tool descriptions, experiences and lessons learned. Links lead you from one section to other relevant chapters within the document. The **table of contents** provides an overview of all six chapters, including a full list of the tools. If you already know which tool you are interested in, you can navigate from here directly to the detailed tool description in Chapter 3.

Chapter 1 presents the basic concepts of protected area governance and management and core elements of successful support through technical cooperation.

Chapter 2 – the tools in a nutshell - helps you navigate between tools for your specific purpose by offering snapshot introductions and links to the tools described in more detail in Chapter 3. It provides an overview of all the tools selected for this resource book, clustered in seven broad thematic areas: policy and legal framework, spatial planning, management planning, financing, capacity development, assessment/monitoring/evaluation and governance.

Chapter 3 contains detailed descriptions of 71 tools that support governance and management of protected and conserved areas. Tools can be online databases, guidelines and manuals, interactive online platforms, software tools, methodologies, good practice standards, sourcebooks, etc. Each description contains basic information about the tool, assesses its strengths and weaknesses and provides links to case studies, reviews and further reading.

Chapter 4 provides examples of application experience from German development cooperation for three tools.

Chapter 5 presents nine case studies from German development cooperation with reference to instruments described in Chapter 3.

Chapter 6 contains an overview of training courses, training materials and curricula relevant to governance and management of protected areas.

Symbols

	Signifies a link to an external website.
	Signifies an internal link to a relevant section within the document.
	Indicates tools or sections relevant to terrestrial ecosystems.
	Indicates tools or sections relevant to marine and coastal ecosystems.
abc	Blue script is used for references and descriptions particularly relevant to marine and coastal ecosystems.

Web links

The publication provides a large number of external web links. If a link appears to be dysfunctional, please try a different browser or use a search engine to find an updated URL for the required element.

PDF navigation pane

The inbuilt pdf-page navigation pane allows you to easily jump forwards and backwards between chapters and sub-chapters while at the same time reviewing the document.

Interactive version

This second edition of the Resource Book is also available on an easily navigable interactive platform at: **https://pcatoolkit.org/**

1

INTRODUCTION

1.1 PROTECTED AND CONSERVED AREAS – BASIS FOR SUSTAINABLE DEVELOPMENT

From the Serengeti's savanna grasslands to the unique marine ecosystems of the Galapagos Islands: protected areas harbour some of the most spectacular and diverse landscapes and seascapes on earth and are a cornerstone of in situ biodiversity conservation. Different kinds of protected areas maintain important habitats and provide refuge for threatened biodiversity, be it endemic plants, pollinating insects or keystone species such as lions, jaguars, gorillas, otters and whale sharks. They also fulfil vital functions for human wellbeing, both for communities that directly depend on them and for urban agglomerations that benefit from intact water catchment areas, for instance. Healthy, diverse ecosystems provide clean air, safe drinking water, food, fertile soils, climate regulation and an array of recreational and tourism opportunities. Terrestrial and marine protected areas also store and sequester substantial amounts of carbon and play an important role in global climate change mitigation and adaptation. Moreover, as many such areas remain understudied, they form important hubs for scientific research and also provide a variety of employment opportunities. Reflecting local cultural heritage and spiritual values of the communities living in and near them, protected areas serve as places of inspiration, regeneration, knowledge and education and as such are fundamental to conserving both biological and cultural diversity.

Protected areas are commonly understood to be clearly defined spaces dedicated to the conservation of nature where human presence and the use of resources are thus restricted or clearly regulated based on sustainability criteria. Against the backdrop of worldwide growth in consumption and rising resource pressure, it is as crucial as ever to conserve diverse and fragile ecosystems and to work together to achieve effective, equitable and rights-based management. Protected area governance and management need to consider the fragile balance between conservation goals and the rights and livelihoods of local communities and indigenous peoples depending on their resources. Benefits arising from the use of these spaces and the natural resources within them need to be fairly shared.

The Convention on Biological Diversity (CBD) has long since recognised the importance of governance for effective and equitable conservation and thus promoted an understanding of protected areas as a basis for sustainable development, especially with regards to enhancing governance diversity and quality, decision-making processes, stakeholder involvement and participation of indigenous peoples and local communities.[1] The Kunming-Montreal Global Biodiversity Framework (GBF), adopted in 2022, sets ambitious goals to halt and reverse biodiversity loss by 2030. Target 3 aims to ensure that at least 30%

1 Subsidiary Body on Scientific, Technical and Technological Advice to the Convention on Biological Diversity (2018): Protected and conserved areas governance in the Convention on Biological Diversity: a review of key concepts, experiences, and source of guidance. CBD/SBSTTA/22/INF/8.sbstta-22-inf-08-en.pdf

of the planet's land, freshwater, and marine areas are effectively conserved through well-connected systems of protected areas and other effective area-based conservation measures (OECMs), with a specific focus on respecting the rights, roles, and contributions of Indigenous Peoples and local communities (IP&LCs) in biodiversity governance and management.

DIVERSITY OF PROTECTED AREA OBJECTIVES ACROSS TIME[2]

Over the past few decades, focal objectives for protected areas have become increasingly diverse, contributing to rising management complexity. Whereas the preservation of iconic landscapes and wildlife species motivated the first protected area designations towards the end of the 19th century, rationale and objectives have multiplied since the 1950s and have, incrementally, included the following main goals:

- tourism development
- biodiversity conservation
- community welfare and social objectives
- provision of ecosystem services

2 Watson, J.E.M. et.al. (2014). The performance and potential of protected areas. In: Nature, vol. 515.

1.2 PROTECTED AND CONSERVED AREAS – APPROACHES, TERMS AND DEFINITIONS

According to the definition provided by the International Union for Conservation of Nature (IUCN), a protected area is 'a clearly defined geographical space, recognized, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values' and includes terrestrial reserves, inland waters, and coastal and marine areas. Protected areas can range from small community-based reserves for fishery management to multiple-use estuarine river systems under the regime of a multi-stakeholder board to high-altitude mountain ranges administered as a national park by a central government agency. They therefore come in many shapes and sizes and are governed and managed by a variety of actors for a variety of purposes, many of them holding different designations on national, regional and international levels. To bring some order to this complexity, IUCN has developed a system (the IUCN matrix) combining **protected area categories**, based on **primary management objectives**, with protected area **governance types**:

Figure 1: The IUCN protected area matrix of management categories and governance types[3]

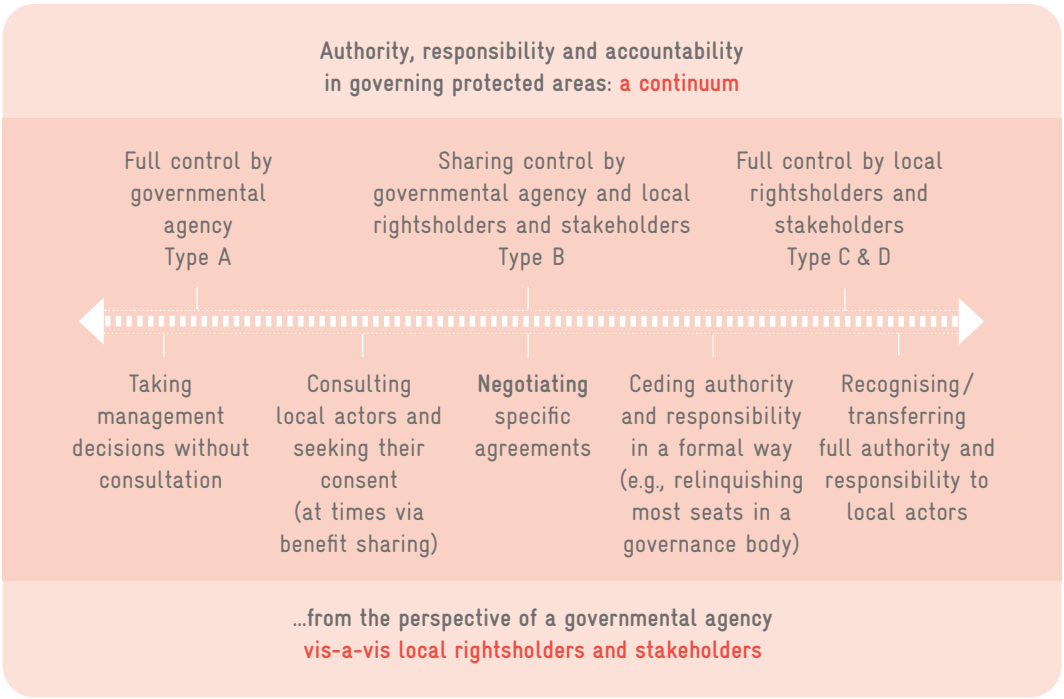
GOVERNANCE TYPE / MANAGEMENT CATEGORY	A. GOVERNANCE BY GOVERNMENT			B. SHARED GOVERNANCE			C. PRIVATE GOVERNANCE			D. GOVERNANCE BY INDIGENOUS PEOPLES AND LOCAL COMMUNITIES	
	Federal or national ministry or agency in charge	Sub-national ministry or agency in charge	Government-delegated management (e.g. to an NGO)	Transboundary governance	Collaborative governance (various forms of pluralist influence)	Joint governance (pluralist governing body)	Conserved areas established and run by individual landowners	...by non-profit organisations (e.g. NGOs, universities)	...by for-profit organisations (e.g., corporate landowners)	Indigenous peoples' conserved areas and territories – established and run by indigenous peoples	Community conserved areas and territories – established and run by local communities
Ia Strict Nature Reserve											
Ib Wilderness Area											
II National Park											
III Natural Monument											
IV Habitat/ Species Management											
V Protected Landscape/ Seascape											
VI Protected Area with Sustainable Use of Natural Resources											

3 Borrini-Feyerabend et.al (2014)

PROTECTED AREA MANAGEMENT CATEGORIES	PROTECTED AREA GOVERNANCE TYPES
◆ Category Ia: Strict Nature Reserve ◆ Category Ib: Wilderness Area ◆ Category II: National Park ◆ Category III: Natural Monument or Feature ◆ Category IV: Habitat/Species Management Area ◆ Category V: Protected Landscape/Seascape ◆ Category VI: Protected area with sustainable use of natural resources	◆ Type A: governance by government (at various levels and possibly combining various agencies) ◆ Type B: governance by various rightsholders and stakeholders together (shared governance) ◆ Type C: governance by private individuals and organizations (usually the landholders) ◆ Type D: governance by indigenous peoples and/or local communities (often referred to as ICCAs)
MANAGEMENT is about the means and actions to achieve given objectives.	GOVERNANCE is about who decides about what is to be done, and how those decisions are taken.

However, the degree to which rightsholders and stakeholders are involved in the governance and management of a protected area is often not as clear-cut as the IUCN governance types and sub-types would suggest, and in many cases it also changes over time. A useful concept to reflect different degrees of sharing authority, responsibility and accountability and possibilities for further evolvement is the **'governance continuum'**.

Figure 2: The governance continuum[4]



4 Ibid., p. 45

A TERM WITH MANY MEANINGS: CO-MANAGEMENT OF PROTECTED AREAS

Co-management or collaborative management is a widely used term in the context of protected areas employed by a variety of actors for different concepts of stakeholder participation. There is no generally applicable definition of the term. It can refer to the roles of state and non-state actors in **decision-making processes** (e.g. on zoning, rules of use) and/or in the **implementation of measures** (e.g. monitoring and surveillance) and/or in the **sharing of rights and benefits**.

The stakeholders in a co-management arrangement often include the entity that is primarily in charge along with local communities, but can also involve NGOs, local or regional administrations, research institutes and private organisations, among others. In the context of **projects** that promote a co-management approach, it is therefore **fundamental for all the actors involved to agree on a common understanding of the co-management concept to be developed** and to reflect on different forms of participation, for example using governance assessments.

Furthermore, there are different **international area designations** that may coincide with nationally designated protected areas or parts of protected areas around the world:

INTERNATIONAL AND REGIONAL DESIGNATIONS

Internationally designated areas (IDAs) are natural areas recognised by a global or regional designation mechanism, such as the following:

- **UNESCO Natural World Heritage Site**: an area designated for being of outstanding value to humanity due to its cultural and natural heritage as well as historical and scientific features.
- **UNESCO Biosphere Reserve**: an area established under the Man and the Biosphere Programme to promote and demonstrate a balanced relationship between humans and the biosphere, promoting solutions to reconcile conservation with sustainable use of resources.
- **Ramsar Site**: a wetland site deemed to be of international importance under the Ramsar Convention established in 1971 by UNESCO.
- **UNESCO Global Geopark**: single, unified geographical areas where sites and landscapes of international geological significance are managed using a holistic concept of protection, education and sustainable development.
- **ASEAN Heritage Parks**: protected areas of high conservation importance, preserving in total a complete spectrum of representative ecosystems of the ASEAN region.
- **Natura 2000**: a network of sites selected to ensure the long-term survival of Europe's most valuable and threatened species and habitats designated under the European Habitats and Birds Directives.

There are currently 266 UNESCO Natural World Heritage sites, 759 UNESCO Biosphere Reserves, 2,536 Ramsar sites, 229 UNESCO Global Geoparks and 62 ASEAN Heritage Parks. Some protected areas carry **multiple international area designations**, creating both opportunities and challenges due to the variety of standards implied by each category.

In recent decades, there has been a substantial **paradigm shift**[5,6] **in the governance and management of protected areas** away from uninhabited and preserved beacons of wilderness, set apart from local people for the exclusive enjoyment of visitors, towards a modern, holistic understanding of protected areas that involves various rightsholders and stakeholders, integrates conservation, culture and indigenous and community rights and draws on site history and traditional knowledge when formulating long-term management objectives.

In addition to formally designated areas, it is important to underline the role of spaces that are not part of the official protected area system of a given country but in which conservation efforts still effectively take place, though conservation may not be the primary management objective for the area. For these areas the broader term **"conserved areas"** has come to be used. They could be any area supporting high levels of biodiversity such as community forests, sites of shipwrecks, sacred natural sites or private hunting reserves. To help recognize such areas towards the global effort of conserving biodiversity the CBD has developed the concept of **other effective area-based conservation measures (OECMs).** However, the terms „conserved area" and "OECM" are not synonymous. Areas can be conserved de facto without any management or governance in place. Such areas would not be in line with the CBD definition of an OECM. Besides, by that definition OECMs are entirely separate from protected areas, whereas the original definition of a conserved area includes those protected areas which achieve their conservation goals and, thus, are effectively conserved[7].

5 Phillips, A. (2003): Turning ideas on their head. The new paradigm for protected areas. The George Wright Forum, vol. 20, no. 2.

6 Stevens, S. (2014): Indigenous Peoples, national parks, and protected areas: a new paradigm linking conservation, culture, and rights. University of Arizona.

7 Conserved areas – ICCA Consortium Meanings and Resources

OTHER EFFECTIVE AREA-BASED CONSERVATION MEASURES (OECMS)

Not all areas in which effective long-term conservation happens are defined or legally recognised as protected areas. The CBD defines the conservation designation 'Other area-based conservation measure' (OECM) as a **'geographically defined area other than a Protected Area, which is governed and managed in ways that achieve positive and sustained long-term outcomes for the in situ conservation of biodiversity, with associated ecosystem functions and services and where applicable, cultural, spiritual, socio-economic, and other locally relevant values'.**[7] **OECMs may be areas where primary voluntary conservation efforts are either not recognised by a national government or where stakeholders refuse to be categorised as a protected area (for example, for reasons relating to self-determination). Considering that the majority of key biodiversity areas worldwide are not adequately covered by protected areas**[8], OECMs can play an important role in increasing the coverage of ecologically representative areas for biodiversity and ecosystem functions and services; it can also enhance connectivity between protected and conserved areas and can support the recovery of threatened species.

It is important to note that OECMs are not established or designated by governments, rather they exist in practice, choose to self-identify with the support of the **IUCN technical guidance.** They may be reported to the **World Database on OECMs** but usually require some form of recognition or support as they are not formally recognised as their protected area counterparts.

The **IUCN Green List of Protected and Conserved Areas** exemplifies the contemporary understanding of protected area governance and management. Developed between 2012 and 2016, it sets a new global standard of best practice underlining the necessity of equitably governed and effectively managed protected and conserved areas through biodiversity conservation and the provision of interconnected social, economic, cultural and spiritual values. Using clearly defined criteria grouped into four key components (Good Governance, Sound Design and Planning, Effective Management and Successful Conservation Outcomes), the IUCN Green List encourages protected area management to consistently measure and enhance achievements.

8 Conference of the Parties to the Convention on Biological Diversity (2018): Decision 14/8 Protected areas and other effective area-based conservation measures. CBD/COP/DEC/14/8.

9 Secretariat of the Convention on Biological Diversity (2020): Global Biodiversity Outlook 5, Montreal.

1.3 SUPPORTING PROTECTED AND CONSERVED AREA GOVERNANCE AND MANAGEMENT THROUGH TECHNICAL COOPERATION

›› ADVISORY APPROACHES

The overarching goal of technical cooperation projects advising on protected area governance and management is to strengthen the partners' overall operational capacity (through capacity development measures) while also resolving specific problems, e.g. in management and financing. This should enable stakeholders to successfully design, govern and manage protected area systems or individual areas, resolve any conflicts that arise with other sectoral policies and conduct policy-related negotiations. So how can cooperation projects maximise their chances of success?

Establish a clear and plausible strategic focus: Projects set up to advise on protected area management usually find themselves supporting change processes affecting personnel and both organisational and policy development. The initial request is usually for technical advice. However, during subsequent talks to clarify the project's mandate, it often becomes clear that additional forms of advice are needed in order to achieve sustainable impacts. In many cases, especially in countries that have not yet established strong governance frameworks and management systems for their protected areas, it may be necessary first of all to create institutions and networks and to design and moderate effective policy- and decision-making processes and evaluation systems. Given the increasingly complex nature of the tasks performed by those bodies set up to manage protected areas, there is also a growing need for organisational advice – especially when it comes to restructuring individual processes or the entire organisation. While there is not always a clear line between technical, organisational, strategic and process-related advice, it is helpful nevertheless to make a distinction in order to classify needs and measures in terms of concepts and methodologies. Ideally, advisory projects should consider the entire policy cycle and identify favourable entry-points and approaches for subsequent interventions. The multi-level approach, i.e. combining long-term policy advice at national level with regional and local implementation and demonstration projects, has proven very effective. It should be noted, however, that projects wishing to offer complementary advisory processes at different administrative levels require very good networking and information management systems.

Be clear who you are working with and what form that cooperation will take: Even relatively small projects are usually negotiated, planned, implemented and managed by a large number of actors, so it is crucial to recognise and consider different perspectives. When working with partners, one of the most important tasks is to identify the key actors involved in managing protected areas (including for instance also national level decision-makers or (groups of) actors that can have a negative impact on individual protected areas), to develop a map of those key actors and to assess potentially conflicting objectives. Cross-sectoral approaches are essential as success can depend to a large extent on decisions in other sectors.

In addition to government agencies, projects can work with in-country and international civil-society groups and organisations, especially in situations with little or no government involvement or oversight. These groups can help to put under-represented interests (e.g. indigenous groups) on the political agenda. They can also form influential networks or even manage protected areas themselves.

Create an effective steering structure: A broadly-based steering structure (e.g. with partners from the environment and agriculture sectors) can increase the effectiveness of protected area projects by addressing the causes of biodiversity loss. In such cases, however, it is vital that each partner is given a sense of ownership. Steering committees or round tables at national or subnational level (including representatives of the protected area authority, sector ministries, indigenous peoples and local communities (IP&LC) and civil society) can act as important building blocks, creating an efficient steering structure that can negotiate and enforce generally binding objectives and rules for nature conservation and protected area management.

Focus on strategically important processes: The aim is to strengthen your partners' overall operational capacity so that they can articulate, negotiate and implement conservation policy objectives in general and protected area policy objectives in particular. Technical cooperation projects can advise on the drafting and implementation of laws, the use of specific tools and the development and piloting of innovative solutions. They can also provide environmental information, promote public awareness, support policy dialogue and generally facilitate cooperation and networking processes. Successful projects combine clearly-defined key processes with a highly responsive approach to everyday policy developments.

Establish and facilitate the use of effective learning processes and platforms: Projects set up to offer technical and policy advice will either need to develop new structures that facilitate dialogue and systematic exchange of experiences or enhance existing platforms. These can be used, for example, to help develop management plans for protected areas, for monitoring purposes or to introduce new financing instruments. In this context, local partner country networks and GIZ's sector networks and thematic working groups are equally important as regional or international platforms such as the IUCN's World Commission on Protected Areas. Partners should be in a position to draft forward-looking strategies and adapt innovative approaches to their national context based on the policy and management advice they receive. The lessons learned should be fed into international learning networks. One such example is the protected area portal of **Panorama Solutions**, which offers many interesting opportunities for learning and innovation.

Projects working with local partners on protected and conserved area governance and management need to advise on a very wide range of technical, organisational, financial and policy issues: core management processes; training for staff at the responsible public authority and other stakeholders; communication and outreach; cross-sectoral coordination and cooperation; stakeholder and risk management; legal matters; forms and sources of financing. A key issue is respecting rights and fostering the participation of Indigenous Peoples and local communities in protected area governance and management. This can be done by involving them in decision-making, encouraging them to assume protected area management responsibilities and by ensuring that they share in the benefits. Moreover, promoting economic development in the surrounding region can be an important starting point for project support. Realising the development cooperation objective of promoting human rights is an increasingly important aspect of technical design and implementation of projects, also in the field of biodiversity conservation, including protected areas. The **Guiding Framework - Human Rights in Biodiversity Conservation** provides guidance and helps to conduct a more focused assessment of human rights risks.

There are three main contexts in which advice and interventions are needed:

1. Enhancement of protected and conserved area systems;
2. Creation of new protected areas; and
3. Strengthening existing protected and conserved areas.

ENHANCEMENT OF PROTECTED AND CONSERVED AREA SYSTEMS (NATIONAL AND SUBNATIONAL)

The project's advisory role here is to help its partners develop a legal and institutional framework and effective strategies for an ecologically representative and well-connected protected area system or network. In most cases, an initial needs assessment will define whether the focus should be on consolidating the existing system or on expanding the system by designating and integrating additional areas.

In practice this involves: helping partners to define conservation priorities (e.g. key biodiversity areas), ecological corridors and spatial planning processes that reflect the flow of ecosystem services, the distribution of related costs and benefits and the associated climate risks; identifying an appropriate combination of management categories and governance types **(see chapter 1.2)**, including any changes to the legal framework that may be required; strengthening cooperation between institutions to minimise the drivers of biodiversity loss; developing an institutional capacity-building strategy for the national protected area

agency; and improving core governance, management and financial planning and monitoring procedures.

When advising on protected area systems, the project's main goal should be to help improve the conditions that are conducive to effective, fair and sustainable governance and management, e.g. a favourable policy and legal framework, a variety of governance arrangements and an appropriate mix of funding sources and financing instruments. Projects can also help to systematically build up their partners' planning and administration capacity, including their ability to manage any funding provided, monitor its effective use and to mobilise additional funds (**see chapter 3.4**). In most situations, the main threat to protected areas is growing pressure on ecosystems or single species, e.g. due to demand for land and natural resources or poaching. These drivers of biodiversity loss need to be addressed. Otherwise, conservation outcomes will be limited, and costs will increase. To prevent this, projects may also need to advise on effective ways of expanding the scope and strategic focus of protected area governance and management beyond the system boundaries through cooperative approaches that reach out to stakeholders and institutions who are not usually involved. In many cases this will require a major shift in attitude and a departure from long held views and interpretations of protected area planning and management. When evaluating the governance of protected area systems, it is also important to consider the governance of areas that do not belong to the formally defined protected area system but nevertheless make a significant contribution to the conservation of biodiversity and ecosystem services. For example, areas traditionally protected by local communities and/or Indigenous Peoples through their own governance systems can have a positive impact on the conservation status of formally protected areas and should be supported and promoted by the state where possible. Encouraging the identification and reporting of such areas as OECMs might be one option in this regard.

See also project example from Peru.

CREATION OF NEW PROTECTED AREAS

Where projects are asked to advise on plans to create new protected areas, they should focus on establishing the most appropriate legal framework (including property rights), a broad sense of ownership that extends beyond the protected area authority and those directly involved in the proposal and a common understanding of conservation objectives and resource-use among all rightsholders and stakeholders. In most cases, partners will also need support with demarcation, communication and outreach as well as consultation processes for free, prior and informed consent (FPIC) where the rights of Indigenous Peoples are affected.

The first step is usually to jointly identify a set of biodiversity values and to determine what management resources are available. Projects can then help their partners to develop a vision for the future design of the area (e.g. expected conservation outcomes, zones for strict protection and for permitted uses). Management and governance structures will be required, along with regulations, sanctions and defined roles and responsibilities for key rightsholders and stakeholders. Projects can also advise on participatory approaches to drafting (strategic and operational) management plans, how to negotiate usage agreements with the local population and, for instance, with tourism businesses, and how to develop a financing strategy. It is particularly important to identify appropriate governance structures (**see the example from Lao PDR**), which will often result in the need to strengthen the negotiating and management skills of local rightsholders and stakeholders. In the case of protected areas that extend beyond national borders, the procedures and legal regulations must be coherent for all participating countries.

To create a broad sense of ownership, projects can help their partners demonstrate the benefits of area-based conservation to other stakeholders and decision-makers. This can be done, for example, by conducting **ecosystem services assessments** to create a solid body of data on social and ecological interactions and interdependencies in the new protected area. The data can then be used to develop messages (ideally prepared together with and disseminated by an influential and credible person or institution) that highlight the site's multiple economic and cultural values. Participatory planning and management are another important way of generating ownership (**see 3.7.4 for a range of tools**). In the medium and long term, inclusive management and governance approaches such as co-management can help to maintain a strong sense of local ownership.

In terms of establishing a common understanding among stakeholders, it can be useful to start by analysing the stakeholder landscape with a focus on needs, interests and potential areas of conflict. Projects can focus here on participatory approaches to developing a vision for the area, on translating the results into appropriate rules and regulations and on building the capacity of those authorities responsible for managing the protected area to resolve conflicting interests in a transparent manner. Demarcation and zoning contribute to transparency, effective management and law enforcement. Participatory zoning aims to balance conservation and development interests and can encourage public dialogue. Here, projects can advise on ways of integrating traditional and scientific knowledge and on the importance of giving due **consideration to ancestral entitlements in participatory land-use zoning** and land-allocation decisions. Robust legal protection is crucial to the future of any protected area. Care should be taken to ensure that customary rights and entitlements are properly examined and

that mechanisms are put in place to resolve any conflicts. **In the case of areas inhabited by Indigenous Peoples or marginalised groups** , consideration must be given to their specific rights and needs as well as their broader human rights. Establishing new protected areas can sometimes have unintended negative impacts on human rights, e.g. gender injustice, discrimination against people living in poverty due to restrictions on the use of natural resources and violations of the right of Indigenous Peoples to free, prior and informed consent (FPIC). Projects can advise on setting up effective complaint mechanisms if they are not already in place.

If one of the project's main objectives is to set up effective and fair management and governance structures, it makes sense during this phase to identify appropriate governance models, provide capacity-building support and facilitate organisational development, e.g. by advising on techniques for identifying and improving core management processes and on job specifications, roles and functions. Bear in mind, for example, that newly created protected area management committees may be grappling with as yet uncertain mandates and may need further support.

›› STRENGTHENING EXISTING PROTECTED AND CONSERVED AREAS

Some projects are set up to strengthen existing protected areas in response to requests from partners for capacity-building support to improve their management and financial planning systems or advise on specific financing instruments.

An **assessment of the current situation** (e.g. through SWOT analysis or specific tools such as **METT**, **MARISCO**, **Governance Assessment**, **SAGE** or the standards of the **IUCN Green List**) can be a good starting point to determine the needs for improvement and to identify promising strategic options together with the partners. A review of core management processes, **governance structures** and **financial planning systems** can help to identify key improvement factors and capacity-building needs.

If one of the goals is to achieve a greater level of **financial sustainability**, the project will need to assess the entire financial and management context. This involves identifying any financial constraints on effective conservation work, investigating new/alternative sources of funding and testing new financial instruments. Other options can include establishing (and scaling up) financial mechanisms that ensure funding is retained at protected area level and building the partners' own capacity to raise funds from public and private sources. A key concern of development cooperation is to help create new sources of employment and income and to ensure that benefits are shared equitably with the surrounding communities.

If the project's primary goal is to improve management effectiveness to improve conservation outcomes and successfully reduce threats, then it is necessary to not only look at the management of the protected area itself, but to identify rightsholders and stakeholders in the adjacent landscape and to set out appropriate approaches to cooperation and the management of conflicting interests. Possible ways to do this might be to place a stronger focus on the biodiversity and ecosystem services of protected areas during spatial and development planning processes, together with effective communication and outreach strategies and efforts towards sustainable management of buffer zones. Ownership and political will can be institutionalised by integrating wider conservation objectives – and those specific to protected areas – into development planning policies and by negotiating adequate budget allocations. Protected area management systems also need to be capable of adapting and responding to new challenges as they emerge, e.g. policy changes, migratory movements and climate pressures that may lead to unsustainable forms of land use.

2

The tools in a nutshell – quick reference for NAVIGATION

POLICY AND LEGAL FRAMEWORK

The resources in this category help PA agencies and advisors to understand and develop the legal and policy framework for PAs and PA systems.

IUCN's environmental law gateway **ECOLEX** (IUCN 2018) provides the most comprehensive global source of information on environmental law (including PA related), and is particularly useful for agencies and advisors involved in legal reform in relation to PAs, i.e. typically at the PA system level. It is a set of online databases of treaties, legislation, court decisions and literature, which is searchable by terms (with or without full text) or an advanced mode including thematic, typological and geographical filters.

While *ECOLEX* can help PA agencies and advisors navigate through a wealth of legal texts from all over the world, IUCN's **Guidelines for Protected Areas Legislation** (Lausche 2011) provide procedural and technical advice for the establishment, further development and implementation of effective national legal frameworks for PA systems. This includes sections specifically for marine and trans-boundary PAs, and a comprehensive thematic bibliography.

›› SPATIAL PLANNING FOR PROTECTED AND CONSERVED AREAS AND PROTECTED AND CONSERVED AREAS SYSTEMS

This category is focused on resources, methods and approaches which enable PCA planners to assess, create and optimize the spatial layout of individual PCAs, and to develop functional PCA systems at the landscape or national level. It considers primarily biodiversity importance but also other factors such as governance.

› SITE PRIORITIZATION METHODS AND APPROACHES

The sub-section "Areas of biodiversity importance" of UNEP-WCMC's **"Biodiversity a-z"** (UNEP-WCMC 2018) gives an overview over methods and approaches for the identification of sites of particular biodiversity importance. This is of interest to PA agencies and advisors who aim to allocate their resources for maximum biodiversity impact, or who aim to achieve maximum coverage of such areas when designing or optimising their PA systems. Descriptions, criteria, maps and other information are provided for each of the categories of areas important for biodiversity.

One such category of areas of particular biodiversity importance, and arguably the most fundamental one, are Key Biodiversity Areas, or KBAs. The method-

ology and criteria underpinning it are explained in **The Global Standard for the Identification of Key Biodiversity Areas 1.0** (IUCN 2016). This can be used to conduct KBA analyses for a given region of interest (usually the national level), in order to identify those areas that are of particular biodiversity importance there, considering a broad range of flora and fauna, and based on objective, transparent and rigorous criteria.

› PROTECTED AND CONSERVED AREA SYSTEM PLANNING, INTEGRATED GAP ANALYSIS, ZONING

Site-level tool for identifying other effective area-based conservation measures (OECMs) (Jonas et al. 2023) provides assessors with a structured way to determine whether and to which degree a site qualifies as an OECM based on a three-step process and eight criteria.

The World Database of Protected Areas presents spatial data on all PAs that are provided by individual states and compiled by UN Environment Programme-WCMC, in collaboration with IUCN. Its online interface **Protected Planet** (UNEP-WCMC 2014) allows agencies and advisors to view PA information by country, region, or for individual areas. This can be used to gain a better understanding of the existing configuration and status of PAs, and to derive ideas for further PA system development. Protected Planet can also be used to download datasets for further analysis, or to follow progress towards PA related policy goals.

Satellite Remote Sensing for Conservation (WWF 2018) provides prospective satellite remote sensing (SRS) users with an overview of SRS technology, how it can be used in conservation, and what resources might be needed. It provides guidance on opportunities to use SRS for mapping and monitoring the extent and condition of ecosystems and habitat, species distributions, and threats to biodiversity.

Global Forest Watch (2014) is an interactive online platform that enables users to monitor the state of forests globally in near real-time based on a collection of datasets and tools. It can provide information on various aspects of forests, such as data on forest cover gain and loss, intactness, biodiversity values, greenhouse gas emissions, and more, which can also be delineated by PA boundaries to show information within specific PAs.

Marxan (Ball et al. 2009) is the most widely used decision support software for conservation planning globally. It is used to optimise the spatial configuration of reserve systems to increase species and ecosystem representation in biodiversity conservation planning with minimal socio-economic costs. It has additional extensions and functions to support various aspects, such as connectivity and zoning.

Zonation (Moilanen et al. 2014) is a computer program for spatial prioritisation and systematic conservation planning to support various needs, such as determining optimal PA configurations, expansions, and zones, finding key connectivity areas, identifying areas for alternative land uses, and related purposes. Its Graphical User Interface (GUI) provides anyone working in this field with a platform to support project management, data analysis, and data visualisation with maps and plots.

Guidelines for conserving connectivity through ecological networks and corridors (Hilty et al. 2020) provides best practice guidance on increasing ecological connectivity to link core habitats, including protected areas and other effective area-based conservation measures (OECMs). The goal is to support the unimpeded movement of species across habitats.

The facilitator's guide **Designing Effective Locally Managed Areas in Tropical Marine Environments** provides step-by-step guidance for planning and implementing Locally Managed Areas in tropical marine environments. It combines scientific principles with community-driven processes to support sustainable fisheries, ecosystem health, and resilience to climate change. It emphasizes participatory zoning, rule-setting, and the use of Fishery Replenishment Zones to sustain community benefits.

MANAGEMENT PLANNING

The approaches, methods and tools described in this section provide general guidance on management planning for PAs, as well as on specific aspects that may be relevant only to some areas.

› GENERAL ON PCA MANAGEMENT PLANNING

The standard, widely applicable framework for PA management planning are the **IUCN-WCPA Guidelines for Management Planning of Protected Areas** (Thomas & Middleton 2003). These help practitioners understand basic concepts and terms, as well as prerequisites of successful management planning and the typical PA management planning cycle. The tool description also links users to more recent additional guidance on PA management planning, which builds on the general approach defined by Thomas & Middleton (2003).

Guidelines for applying protected area management categories, including IUCN WCPA best practice guidance on recognising protected areas and assigning management categories and governance types (Dudley 2013), assists governments and other PA owners and managers on how to identify the most appropriate category for a given site based on management objectives, following the IUCN system. It provides an in-depth discussion of the IUCN PA definition, categories, governance types, and more.

Open Standards for the Practice of Conservation (Conservation Standards) Version 4.0 (CMP 2020) provides conservation teams with a cyclical framework

to support and improve conservation project management based on five phases: 1. Assess, 2. Plan; 3. Implement; 4. Analyse and Adapt; 5. Share.

Miradi (Version 4.6.; Foundations of Success 2023) provides conservation practitioners with a tool that supports the implementation of the Open Standards for the Practice of Conservation (CMP 2020) across all five stages, from conceptualisation to sharing, and helps document the results.

Adaptive MAnagement of vulnerability and RISk at COnservation sites (MARISCO) (Centre for Econics and Ecosystem Management & Eberswalde University of Applied Sciences 2022) provides practitioners, and particularly planners, with a methodology and software based on the Open Standards for the Practice of Conservation (Conservation Standards) (CMP 2020) for proactive ecosystem management in the face of uncertainty (e.g., related to climate change), while also having a people-focused approach.

› SPECIFIC PLANNING TOOLS

Ecological restoration for protected areas: principles, guidelines and best practices (Keenleyside et al. 2012) provides PA managers with concepts, principles, best practices, and case studies on restoring the natural and associated values of PAs to guide restoration activities in PAs and across systems.

Tourism and visitor management in protected areas: guidelines for sustainability (Leung et al. 2018) provides best practice guidance on sustainable tourism in PAs to professionals and stakeholders based on guiding principles and related best practices to improve tourism management in a way that also supports conservation objectives.

The Climate Change Resilience and Adaptation Planning Tool (CC-RAPT) (IUCN WCPA Climate Change Specialist Group 2023) helps marine protected area (MPA) programs improve their management and governance concerning climate change impacts on marine biodiversity and the cultural, social, and economic benefits that marine biodiversity provides. It uses targeted questions on how climate change impacts are addressed through monitoring, vulnerability assessments, resilience and adaptation actions, mitigation efforts, and education and outreach.

Large-Scale Marine Protected Areas: Guidelines for Design and Management (IUCN 2017) assist protected area managers in designing and managing large-scale marine protected areas (LSMPAs, defined as areas greater than 150,000 km2). Technical information on designing and managing LSMPAs is combined with real-world examples in the form of short case studies.

Guidelines for privately protected areas (Mitchell et al. 2018) provides practitioners and policy makers with best practice guidance on various aspects of establishing, managing, and reporting privately protected areas (PPAs) to improve practices, with supporting case studies.

- **Urban protected areas: profiles and best practice guidelines** (Trzyna, 2014) provides best practice guidance to improve the management of protected areas in urban settings by providing managers with 30 management-related guidelines that are supported with case studies.

- **Transboundary conservation: a systematic and integrated approach** (Vasilijević et al. 2015) provides practitioners and other interested stakeholders with best practice guidance on planning and implementing measures for transboundary conservation areas with both conceptual and practical information.

- **Diagnostic tool for transboundary conservation planners** (Version 2.0) (Vasilijević 2020) provides a structured way for interested individuals or groups to determine whether a transboundary conservation area should be developed, based on a detailed questionnaire that is used to create an automated report of the results.

- **The Climate Adaptation Toolkit** is a web-based Climate Adaptation Toolkit for Marine and Coastal Protected Areas (EcoAdapt 2024) resource and training module designed to support managers of marine and coastal protected areas in planning and implementing climate adaptation strategies. It offers a structured, step-by-step approach based on the Adaptation Ladder of Engagement and includes tools for vulnerability assessment, strategy development, and knowledge sharing, supported by case studies and expert guidance with focus in North America.

- **Guidance on other effective area-based conservation measures (OECMs)** (Jonas et al. 2024) provides a comprehensive overview of OECMs to support CBD Target 3 and beyond with good practices based on a simple framework (understanding the enabling conditions and identifying, reporting, monitoring, and strengthening OECMs). It includes many supporting case studies and complements the OECM site-level assessment tool (Jonas et al. 2023).

- The **Designing marine protected area networks to achieve fisheries, biodiversity, and climate change objectives in tropical ecosystems** provides 15 biophysical principles for designing effective marine protected area (MPA) networks to achieve fisheries sustainability, biodiversity conservation, and climate change resilience. These principles are intended for field practitioners and are based on a detailed technical report. The principles are designed to be applied in combination with socioeconomic considerations.

PROTECTED AND CONSERVED AREA FINANCING

This category is focused on knowledge, resources and tools which enable PCA planners to assess, prepare and implement financing solutions. It includes tools and approaches for financial planning at the level of PCA systems, as well as selected specific financing instruments for individual PCAs.

› GENERAL ON PCA FINANCING

Practice guidance for protected and conserved area finance (Meyers et al. 2025) provides diverse stakeholders, especially protected and conserved area practitioners, with guidance on financing protected and conserved areas. The guidance is based on the definition of "conservation finance" by the Conservation Finance Alliance: "mechanisms and strategies that generate, manage, and deploy financial resources and align incentives to achieve nature conservation outcomes" (Meyers et al. 2020, p. 4). Hence, the document includes considerations beyond only increasing funds. The publication also contains factsheets on various financial instruments that provide a detailed description of each tool.

The **Conservation Finance Guide** of the Conservation Finance Alliance (CFA) (2020 and 2002) offers a detailed taxonomy for finance solutions organized into seven major classes, such as return-based investments, economic instruments, and risk management. It aims at improving understanding and comparison of different financing options and mechanisms, supporting decision-making, policy development, and capacity building. Together, these two resources help identifying, evaluating, and applying diverse financing strategies for biodiversity and ecosystem conservation. They draw on and are complemented by the large collection of financing tools of the **UNDP BIOFIN** Initiative's Catalogue of Finance Solutions.

A comprehensive overview of options for financing biodiversity and ecosystem services can be found in **The Little Book of Investing in Nature** (Global Canopy Programme 2021). Beyond introducing essential information on single financing mechanisms, the document highlights the need and potential for synergies not only between financing mechanisms, but also between financing sources earmarked for development, climate change and biodiversity. The publication introduces an overarching framework that organises financial mechanisms under five main headings: revenue generation, delivery, expenditure realignment, avoidance of future expenditures and catalysts.

Guide to Biodiversity Financing for Cities and Regions (ICLEI – Local Governments for Sustainability 2023) provides local and regional governments with an overview of various funding sources and financial instruments for urban biodiversity conservation projects. The guide also offers detailed step-by-step guidance on project implementation.

› ASSESSING, MONITORING AND DIAGNOSING FINANCING STATUS

Financial Sustainability Scorecard for National Systems of Protected Areas (2nd edition; UNDP, 2010) provides a detailed scorecard methodology to help project teams and governments assess the overall financial status of a PA system and track funding trends based on a consultative approach. It incorporates financial data based on financial inflows and outflows, as well as other elements of the financing system that are categorised into three fundamental components: (i) legal, regulatory, and institutional frameworks, (ii) business planning and tools

for cost-effective management (e.g., accounting practices), and (iii) tools for revenue generation.

- The "**PAFSAT: protected area financing self-assessment tool**" (Emerton and Bùi 2021) offers a standardised method for PA managers to collect site-level information using datasheets with both quantitative and qualitative metrics to understand and track the financial condition of a PA. Its purpose is to support sustainable financial planning.

› SPECIFIC FINANCING INSTRUMENTS

- The guideline "**Securing Sustainable Financing for Conservation Areas**" (Amazon Sustainable Landscapes Program and WWF. 2021) supports conservation actors in setting up an overarching financial model to secure long-term financing for protected area systems. It focuses on the Project Finance for Permanence model, which integrates financial planning, governance and stakeholder engagement.

- **Practice Standards for Conservation Trust Funds** (Bath et al. 2020) provides practitioners involved with the design, management, monitoring, and evaluation of Conservation Trust Funds (CTFs) with comprehensive information and voluntary standards on the key elements of CTFs to improve practices across seven thematic areas (Governance, Institutional Effectiveness, Programs, Administration, Asset Management, Resource Mobilization, and Risk Management and Safeguards).

- **Payments for Ecosystem Services (PES): A Best Practice Guide** (DEFRA 2013) provides interested parties with practical guidance on designing and implementing PES schemes, including key principles and concepts, such as information on the main participants in a PES scheme, as well as step-by-step advice and examples.

- **Tourism Concessions in Protected Natural Areas: Guidelines for Managers** (Thompson et al. 2014) provides protected area agency staff guidance, tools, and case studies to help develop and manage tourism concessions. The publication introduces the concept of concession management and expected economic, conservation, and social outcomes, provides guidance on establishing and improving systems, and specifically addresses the challenges of developing countries, including capacity development of concession staff.

› BUSINESS PLANNING

- **Developing Protected Area Conservation Investment Plans – Quick Reference Guide and Workbook** (WCS 2018) provides a practical resource for PA planners and managers to develop conservation investment plans and sustainable financing strategies. It presents guidance and tools for ensuring that the right financial and funding conditions are in place and to communicate PA financing needs to public decision-makers, government staff, potential donors and other stakeholders.

The **Guidebook for the Development of Simplified Business Plans for Protected Areas** (FIBA 2012) is a very clear and simple guide for PA planners on the ground for developing a simplified business plan (for example in a situation of limited resources). The guidebook was originally developed for western Africa, but is applicable more widely. It introduces the rationale of business plans and contains a stepwise guide, including information on methods and a sample business plan.

CAPACITY DEVELOPMENT

This category focuses on tools and approaches that can be used to support capacity development of PA staff from the site to the national level. It is complemented by a separate section on PA training resources (*see Section 6.2)**.*

A global register of competences for protected area practitioners (Appleton 2016) is a framework to support a competence-based approach for staffing and capacity development in PAs. It defines all the possible skills, knowledge, and personal qualities required by PA staff (or other practitioners with similar tasks). The register is a starting point for those whose work involves PAs to plan and manage PA staffing, for educators to identify and meet capacity needs, and for individuals to assess and develop their own skills.

The **Ranger Code of Conduct** serves as an operational framework for rangers, PCA managers and other stakeholders to professionalize the ranger workforce and ensure ethical conduct. Rangers can use the Code of Conduct to reflect upon their roles and to commit to high standards of practice and ethics.

ASSESSMENT, MONITORING AND EVALUATION

The resources in this category support assessment, monitoring and evaluation of a range of different aspects important for the management and governance of a PCA or PCA system. They range from general management effectiveness, surveillance and biodiversity monitoring to assessing governance, social impacts and ecosystem services.

› MANAGEMENT EFFECTIVENESS ASSESSMENT

In order to adaptively manage individual PAs and PA systems, report, learn and allocate resources, practitioners and their supporting organizations need to know whether PA management reaches its goals and objectives. This can be achieved through sound adaptive management frameworks, in conjunction with dedicated PA management effectiveness (PAME) assessment tools.

Management Effectiveness Tracking Tool (METT)-4 (Stolton et al. 2020) is the most common assessment tool to track management effectiveness in individual PAs over time. It is based on a series of questions with a simple scoring system that produces automated outputs in Excel. It is meant to be answered in a participatory setting with a team of PA staff and ideally, other stakeholders.

While both RAPPAM and METT are applicable to terrestrial, freshwater and marine PAs and are based on a subjective appraisal by PA teams, the IUCN toolkit **How is your Marine Protected Area Doing?** (Pomeroy et al. 2004) focuses solely on marine PAs and is based on objectively verifiable indicators. As a result, applying the method requires more effort but at the same time produces more robust assessment results. Additionally, it offers a wide selection of biophysical, socio-economic and governance related indicators for marine protected areas.

Enhancing our heritage toolkit 2.0: assessing management effectiveness of World Heritage properties and other heritage places (UNESCO et al. 2023) provides managers with a self-assessment methodology to evaluate management effectiveness in a World Heritage property or in other natural and/or cultural heritage sites. It includes twelve tools and accompanying worksheets that can be used to understand the strengths and weaknesses of a site. The toolkit can help managers identify ways to improve conservation practices, management processes, and resource allocation.

› GLOBAL PCA PERFORMANCE STANDARDS

IUCN Green List of Protected and Conserved Areas: Standard, Version 1.1 (IUCN & WCPA 2017) provides assessors and practitioners with a global benchmark to assess whether a site is achieving successful conservation outcomes based on seventeen criteria that cover aspects on good governance, sound design and planning, and effective management.

› BIODIVERSITY MONITORING AND SURVEILLANCE TOOLS

PA practitioners often need to identify and measure biodiversity indicators – be it in order to measure progress towards their conservation outcomes or in the context of wider (e.g. national) biodiversity monitoring programmes. GIZ's **Biodiversity Monitoring for Natural Resource Management – an Introductory Manual** (Werner & Gallo-Orsi 2016) provides succinct practical guidance for planning biodiversity monitoring, and addresses some of the principal questions, issues and pit-falls in biodiversity monitoring.

The compilation **Community-based Monitoring, Reporting and Verification Know-how** (WWF 2016) helps PA agencies to better understand this overall concept, but also suggests nine practical tools and approaches to community based monitoring, reporting and verification, ranging from technology for mobile data collection to participatory GIS mapping. All tools are potentially applicable in PAs.

SMART (SMART Partnership 2024), the Spatial Monitoring and Reporting Tool, provides practitioners with a platform that includes a suite of related tools and resources to design, plan, manage, monitor, document, analyse, and report patrolling and monitoring efforts. The main tool it includes is SMART 7, which

is a data management software for monitoring conservation management efforts, particularly suited for patrol data.

An integrated software solution for real-time monitoring of wildlife and habitats is offered through the open-source platform **EarthRanger** (by The Allen Institute for Artificial Intelligence, Ai2). It is targeted at PA management authorities wanting to improve monitoring and surveillance for enhanced biodiversity protection and reduction of human-wildlife conflict.

A framework for monitoring biodiversity in protected areas and other effective area-based conservation measures: Concepts, methods and technologies (Dalton et al. 2024) provides guidance and a framework with four phases (preparatory; conceptual; implementation; re-evaluation) for protected and conserved area (PCA) managers to develop biodiversity monitoring programmes to improve management outcomes.

› COSTS, BENEFITS AND SOCIAL IMPACTS

Protected Areas Benefits Assessment Tool + (PA-BAT+) (Ivanić et al. 2020): A tool to assess local stakeholder perceptions of the flow of benefits from protected areas (Ivanić et al. 2020) provides protected area management agencies, funding agencies, and non-government organisations (NGOs) with a structured approach to assess the benefits of protected areas following a workshop approach involving multiple stakeholders.

Social Assessment for Protected and Conserved Areas (SAPA) (Franks et al. 2018): Methodology manual for SAPA facilitators (Franks et al. 2018) provides a low-cost methodology to assess the positive and negative social impacts of PCAs and related conservation and development activities. Its aim is to increase and more equitably share positive impacts and reduce negative impacts. It relies on a multi-stakeholder assessment for use by PCA managers, communities living within and around a PCA, or other stakeholders and rightsholders at local and national levels.

› ECOSYSTEM SERVICES ASSESSMENT AND VALUATION

Ecosystem services assessments should be 'purpose-driven'. They can be done to gain new insights, to make a strong argument, to start a discussion, to help settle a negotiation, to enhance a planning process, or to reach a decision. There are many different methods for doing an assessment. The ***methods navigator*** *developed by the GIZ-implemented* ***ValuES project*** *helps making sense of these methods and find the appropriate one for a specific need.*

Tools for measuring, modelling, and valuing ecosystem services: guidance for Key Biodiversity Areas, natural World Heritage sites, and protected areas (Neugarten et al., 2018) provides practitioners with guidance on how to choose appropriate methods to assess ecosystem services by providing an overview of the topic and comprehensively comparing and classifying nine existing tools.

Integrated Valuation of Ecosystem Services and Trade-offs – InVEST (Natural Capital Project, 2025) provides software models for mapping and valuing ecosystem goods and services across spatial scales. It supports decision-making about land use and management choices including on trade-offs to balance economic and environmental goals. The free and open-source software allows the development of simple to more complex models based on data availability and expertise.

Cultural and spiritual significance of nature: guidance for protected and conserved area governance and management (Verschuuren et al. 2021) provides best practice guidance to increase the prominence of the cultural and spiritual significance of nature in protected and conserved area (PCA) governance and management based on six guiding principles.

GOVERNANCE

The documents in this category range from theoretical and practical PA governance concepts to collaborative tools and strategies for conflict resolution. They present guidance related to stakeholder analysis and participation and include resources for the work with Indigenous Peoples' and Community Conserved Territories and Areas (ICCAs).

› GENERAL ON PCA GOVERNANCE

Governance of protected areas: from understanding to action (Borrini-Feyerabend et al. 2013) providers PA practitioners and other stakeholders, rightsholders, and interested parties with concepts around PA governance and practical guidance on assessing, evaluating, and improving governance in PA sites and systems.

Governance assessment for protected and conserved areas (GAPA) is one of three IIED tools for stakeholders and rightsholders to themselves assess the social impacts, governance and equity of their conservation efforts. The other two tools are **Tool 53** (Social Assessment for Protected and Conserved Areas, SAPA) and **Tool 60** (Site-level Assessment of Governance and Equity, SAGE). Accountability, participation and benefit sharing are fundamental concepts of conservation practice and can be decisive for its success. For jointly reflecting and assessing the situation at a particular site based on these and other principles of good and equitable governance the manual Governance Assessment of Protected Areas (GAPA) (IIED, 2018) provides hands-on guidance for convenors and facilitators of a multi-stakeholder-led process. Based on IUCN's framework of good governance principles GAPA offers concrete methods and tools for conducting an assessment. It lends itself to a stepwise approach by focusing on a subset of selected priority principles. GAPA can be used for three reasons: as a health check (to determine strengths and challenges), as a diagnostic check (to understand causes of existing challenges and identify actions to improve

the situation) or for monitoring purposes (to establish a baseline for measuring changes over time) of governance arrangements at a specific site.

- The Guidance **Enabling Effective and Equitable Marine Protected Areas - Guidance on Combining Governance Approaches** provides planners, decision-makers and practitioners with evidence-based advice on using the governance of marine protected areas to promote conservation and share sustainable marine resources. It has been developed using 34 marine protected area case studies from around the world covering a variety of marine protected area types, including no-take, multiple-use, small, large, remote, private, government-led, decentralized and community-led protected areas.

- **Site-level assessment of governance and equity (SAGE)** is a tool for stakeholders and rightsholders to assess their conservation efforts' social impacts, governance, and equity. SAGE aims to provide information for reporting on protected and conserved areas (PCA) governance and equity at national and global levels. The tool is structured in two parts. First, a questionnaire captures qualitative information on specific governance challenges. Second, stakeholders come together in a workshop to share findings and discuss ideas for action.

› COLLABORATIVE MANAGEMENT/SHARED GOVERNANCE

IUCN categorizes four different forms of governance of protected areas: Along with state-run protected areas, there are those established and managed by Indigenous Peoples or local communities, there are privately managed protected areas as well as a variety of co-management arrangements. For the latter case, the guideline **Sharing Power – learning-by-doing in co-management of natural resources throughout the world** (2004) supports practitioners in understanding, establishing and further developing collaborative governance of natural resources in a "learning by doing" approach. It includes practical guidance and tools on how to organise, negotiate and implement co-management agreements.

- **The Fisheries Co-Management Guidebook** summarizes the latest research on successful fisheries co-management. Scientific publications are synthesized and presented as a series of infographics. Each infographic includes reflection questions that ask the reader to imagine how they would apply this information in their case.

- **The Collaborative Management Partnership (CMP) Toolkit** is a resource guide to support the identification and establishment of CMPs, a type of public-private, especially public-NGO, partnership for co-management and delegated management of PAs. The publication supports decision-making regarding three different models of CMP. It discusses the value of CMPs and provides considerations to take into account in designing, implementing, and sustaining CMPs.

› INDIGENOUS PEOPLES' AND COMMUNITY CONSERVED TERRITORIES AND AREAS (ICCAS)

A toolkit to support conservation by Indigenous Peoples and local communities: building capacity and sharing knowledge for Indigenous Peoples' and community conserved territories and areas (ICCAs) (Corrigan & Hay-Edie 2013) provides local communities and civil society organisations with a compilation of resources to build capacity for the governance and management of ICCAs. The presented tools revolve around five main themes (1. documenting presence; 2. management planning; 3. monitoring and evaluation; 4. communication; 5. finance and values) and include a variety of case studies from around the world.

› RIGHTHOLDER AND STAKEHOLDER ANALYSIS AND PARTICIPATION

Rightholder and stakeholder engagement is key to PCA management. The following instruments, principles and guidelines provide an overview regarding participation mechanisms throughout PCA planning and management.

Establishing a bottom-up participation and consultation process is fundamental to any project/activity that may affect Indigenous Peoples and local communities, their land and resources. **Free, Prior and Informed Consent (FPIC)** is a specific right pertaining to Indigenous Peoples to realize their collective rights, enshrined in numerous international human rights instruments. It also is a process that goes beyond mere participation and consultations and reserves Indigenous Peoples the right to give or withhold consent to a project or activity affecting them, their culture, or their land, territories and resources. A respectful FPIC process enables them to negotiate the conditions under which the project or will be designed, implemented, monitored and evaluated. FPIC is an essential instrument for any PA practitioner, be it for the establishment of new or the extension of already existing PAs as well as for reviews of how a PA is governed and managed.

Many Indigenous Peoples and local communities have their own (unwritten) protocols to regulate stewardship of their territories and resources. Assisting communities in formulating such rules and protocols in forms that can be understood by other parties can be a valuable step in an **FPIC (Tool 65)** or other consultation process. These new forms of instruments and processes are called **Biocultural Community Protocols (BCPs)**. Every BCP is distinct due to the cultural and environmental specificities that are being formulated by the communities. As such, they are an important process that helps practitioners to create transparency on local governance structures, enable dialogue and strengthen long-term partnerships with communities.

Participatory Management of Protected Areas in the Carpathian Ecoregion, Part II: Guidelines for stakeholder involvement in protected area management (Ioniță & Stanciu 2012) provides site-level decision makers and practitioners with guidance, a methodology, and tools for the development and implementation of stakeholder engagement activities in PAs.

Establishing effective and equitable governance frameworks for Marine PAs requires a thorough understanding of involved institutions, stakeholders and policies. While the resource book **Stakeholder Participation Toolkit for Identification, Designation and Management of Marine Protected Areas** serves as an introduction to the topic of stakeholder participation in MPA management and an overview of the most important tools, the **Guidance on integrating human dimensions into MPA planning and management** shows how MPAs can become more meaningful to society and provides options for integrating social, cultural, economic, political and governance issues into MPA planning and management processes.

A Toolkit for Engaging People in Conservation (Braus 2011) provides conservation professionals with general strategies and an adaptable stepwise approach to engage people in any type of nature conservation work, which are applicable at all levels, from individual PAs to international policy.

› CONFLICT RESOLUTION

For PA practitioners to better comprehend origins of land conflicts and options for action in a project context, the document **Understanding, preventing and solving land conflicts** (GIZ 2017) offers practical insights. It includes case studies and aims to broaden the understanding of the complexity of causes that lead to land conflicts in order to provide for more targeted ways of addressing such situations.

3

THE TOOLS

Indicates tools or sections relevant to terrestrial ecosystems.

Indicates tools or sections relevant to marine and coastal ecosystems.

Blue script

Is used for references and descriptions particularly relevant to marine and coastal ecosystems.

3.1 POLICY AND LEGAL FRAMEWORK

TOOL 1 ECOLEX The Gateway to Environmental Law

English | French | Spanish

2001 | IUCN, UNEP, FAO

TYPE

A set of online databases

PURPOSE

Providing the most comprehensive possible global source of information on environmental law (including PA related) to increase knowledge of, and build capacity on, environmental law at local, national and global levels

STRUCTURE AND FUNCTION

Set of online databases of treaties, legislation, court decisions and literature

- Simple search mode: searchable by terms (with or without full text included)
- Advanced search mode: complex search menu including thematic, typological and geographical filters, which can be combined with each other
- Output is a list of documents (each with description, commentary and additional information) from the above categories, many of which hyper-linked to full text
- Support provided by IUCN Environmental Law Centre

TYPICAL USE

- Very wide range of applications which require access to existing legal documents, e.g. analysis, development, implementation, evaluation of legal tools to support effective PA systems

LEVEL OF APPLICATION

Usually national system and higher

SKILLS AND RESOURCES REQUIRED

- Database access free of charge
- Personal device and internet access required
- Basic understanding of database search and data retrieval methods
- Some basic legal and contextual understanding is required to produce meaningful results from the databases

STRENGTHS

- Wide range of resources covered (largest globally for environmental law)
- Detailed information and full text links for most items
- Relatively easy search function, both in simple and advanced mode
- Operates in three languages
- Availability of support from IUCN Environmental Law Centre
- Website is mobile-responsive

WEAKNESSES

- Outputs are a mix of various classes of documents which typically require further screening
- No export function for outputs to general or literature database programmes

REFERENCE

IUCN, UNEP and FAO: About Ecolex. Accessed on 11 April 2025 at

TOOL1 Continued

VERSIONS AND/OR MODIFICATIONS

Released in 2001, since then successive updating of online database

DOCUMENTED EXPERIENCE

It is likely that most of the uses of this instrument in a development cooperation context have not been documented.

RELATED RESOURCES/FURTHER READING

The United Nations Information Portal on Multilateral Environmental Agreements (InforMEA)

A more detailed description of ECOLEX is included in: IUCN (2012). IUCN Knowledge Products – The basis for a partnership to support the functions and work programme of IPBES. Gland, Switzerland: IUCN. 72 pp Accessed on 7 September 2018

TOOL 2	IUCN Guidelines for Protected Areas Legislation
	English	French	Spanish
2011	IUCN in collaboration with the IUCN Environmental Law Centre

TYPE	PURPOSE
Guidelines	Support and guidance to the establishment, further development and implementation of effective national legal frameworks for protected area (PA) systems

STRUCTURE AND FUNCTION

Guideline document consisting of four parts

1. Basic principles and obligations
2. Governance approaches
3. Chapter 1: Generic elements of protected areas legislation
4. Chapter 2: Special issues for marine protected areas
5. Transboundary protected areas

- Thematic bibliography (structured by "general and cross-cutting", "governance", "marine protected areas" and "transboundary protected areas")
- The guideline provides a systematic overview and detailed explanations of all legal, administrative, and policy aspects that should or could be regulated regarding PAs.
- The document is designed in such a way that individual sections can be consulted in response to specific interest, or for reference on specific themes

TYPICAL USE

- Support for reviewing and drafting legislation tailored to meet diverse national and local requirements
- Stimulation of dialogue between government authorities and other stakeholders to modernize national policy and legal frameworks
- Implementation of international commitments at the level of national PA law
- Guidance on legal drafting relevant to PAs
- Information for those employed in executive agencies that oversee and implement other policies and programmes affecting or affected by PA legislation

Additional use:

- Source of information for those involved with or interested in the progress, review or drafting of PA legislation – e.g. concerned or affected communities, organizations, corporations, groups or individuals
- Source of information for academic audiences interested in the progressive development of protected areas law, such as students, professors or researchers

LEVEL OF APPLICATION

Typically national PA systems

SKILLS AND RESOURCES REQUIRED

A basic to moderate legal understanding is required for meaningful use

TOOL 2 Continued

STRENGTHS	WEAKNESSES
❖ Comprehensiveness and depth ❖ Authority and expertise of IUCN Environmental Law Programme and other contributing IUCN bodies, such as WCPA and other IUCN Commission members ❖ Availability in three languages ❖ Includes comprehensive consideration of specificities for the marine realm and for transboundary situations	❖ Long and complex document which requires some digesting to be applied in new contexts ❖ No step-by-step guidance on key aspects of PA legislation

REFERENCE

Lausche, B. (2011). Guidelines for Protected Areas Legislation. Gland, Switzerland: IUCN. xxvi + 370 pp. Accessed on 20 January 2025

VERSIONS AND/OR MODIFICATIONS

There was an earlier version of these guidelines by the same author in 1980.

DOCUMENTED EXPERIENCE

Case studies on legal frameworks of national and sub-national protected areas systems, legal frameworks for special protected area types such as ICCAs or PPAs and Protected Areas Law Matrices are downloadable from:

RELATED RESOURCES/FURTHER READING

Lausche, B., Farrier, D., Verschuuren, J., La Viña, A. G.M., Trouwborst, A. Born, C-H., Aug, L. (2013). The Legal Aspects of Connectivity Conservation. A Concept Paper, Gland, Switzerland: IUCN, xxiv + 190 pp. Accessed on 20 January 2025

Farrier, D., Harvey, M., Da Silva, S., Leuzinger, M. D., Verschuuren, J., Gromilova, M., Trouwborst, A., Paterson, A. R. (2013). The Legal Aspects of Connectivity Conservation – Case Studies. Gland, Switzerland: IUCN. 78 pp. Accessed on 20 January 2025

For PA Law Capacity Development Online Modules, see section on training resources.

3.2 SPATIAL PLANNING FOR PROTECTED AND CONSERVED AREAS AND PROTECTED AND CONSERVED AREA SYSTEMS

3.2.1 | Site prioritization methods and approaches

TOOL 3	Biodiversity a-z (Section: Areas)
	English
2015	UNEP-WCMC

TYPE	PURPOSE
Compilation of approaches, methods and tools	Overview over different types of areas of biodiversity importance and protected area categories and designations to support site prioritisation for conservation

STRUCTURE AND FUNCTION

Alphabetically listed summaries of globally relevant systems to identify, prioritise and protect areas of importance for biodiversity. These fall into two main categories:

1. **Protected areas** – Sites designated under protected area frameworks, that have legal or other effective protection at the national level. Some have additional recognition through regional or international conventions and agreements (such as UNESCO World Heritage Sites).
2. **Biodiversity designations** (such as KBA, EBSA) are developed by governments, academics and NGOs in order to identify areas of biodiversity importance or areas where biodiversity is threatened, as a means to focus attention and resources on their conservation.

Each entry comprises the following:

- Map of current sites under the given type/designation
- Description
- Supported by
- Year of creation
- Geographical coverage
- Criteria for designation
- Management obligations/requirements
- Business relevance (since this was originally linked to a business and biodiversity initiative)

Downloadable factsheets, hyperlinks to original documentation and references where appropriate are also provided.

TYPICAL USE

- Overview over approaches, methods and tools for site prioritization in the context of conservation planning or PA system development
- Information of other actors (e.g. private sector) about the location of areas important for biodiversity
- Entry point for choosing methodologies for systematic conservation and PA system planning

LEVEL OF APPLICATION

Typically PA system level

SKILLS AND RESOURCES REQUIRED

Personal device and internet access

TOOL 3 Continued

STRENGTHS	WEAKNESSES
❖ Good overview and relatively wide coverage ❖ Includes many of the important approaches and designations, such as Important Bird Areas (IBA), Important Plant Areas (IPA), Alliance of Zero Extinction (AZE) sites, biodiversity hotspots, etc. ❖ Comprehensive and consistent documentation of and links to each approach, method or tool documented ❖ Clear and structured presentation	❖ The collection is comprehensive but not complete

REFERENCE

UNEP-WCMC: About Biodiversity a-z. Accessed on 4 March 2025

VERSIONS AND/OR MODIFICATIONS

Released in 2015. Since then successively updated – no distinct versions

DOCUMENTED EXPERIENCE

Examples of application of one of the area designation methodologies from the portal, namely Ecologically and Biologically Significant Marine Area (EBSA) include:

Hoyt, E. (2016). Getting SE Kamchatka as an EBSA and candidate IMMA from marine mammal data. PANORAMA – solutions for a healthy planet. Accessed on 4 March 2025

Hoyt, E. (2016). Getting notice for a rare blue whale area as an EBSA on road to be an MPA. PANORAMA–solutions for a healthy planet. Accessed on 4 March 2025

TOOL 4	A Global Standard for the Identification of Key Biodiversity Areas (KBA)
	English	French	Spanish
2016	IUCN

TYPE	PURPOSE
Guideline, assessment methodology and global standard	To locate and highlight sites that make significant contributions to the global persistence of biodiversity and, thus, identify high priority areas for protection of biodiversity. Using the criteria ensures that KBA identification is rigorous, transparent and consistent in different countries and over time

STRUCTURE AND FUNCTION

The standard is a set of 11 criteria with corresponding thresholds for KBA status, explanations and guidance for application. If at least one KBA criterion is met, a site is considered a KBA. General guidance on the spatial delineation of KBAs (i.e. where to draw their borders) and a glossary of all relevant terms is also provided.

KBA criteria:

- Threatened biodiversity
  - Threatened species
  - Threatened ecosystem types
- Geographically restricted biodiversity
  - Individual geographically restricted species
  - Co-occurring geographically restricted species
  - Geographically restricted assemblages
  - Geographically restricted ecosystem types
- Ecological integrity
- Biological processes
  - Demographic aggregations
  - Ecological refugia
  - Recruitment sources
- Irreplaceability through quantitative analysis

A separate guideline to use the standard is available.

TYPICAL USE

Can be used by stakeholders wanting to identify sites in terrestrial, inland water and marine environments that should be prioritised in conservation efforts based on their biodiversity's significance.

Relevant processes are:
Site prioritization for PA system development or individual PA siting/zoning, based on occurrence of species of high conservation importance.

Additional potential uses:

- Review and adjustments of existing PA systems
- Development of PA systems
- Site prioritisation for PA system support
- Species conservation action planning in a spatial context
- Site prioritization for other effective area-based conservation measures (OECMs)
- Zoning within conservation areas

TOOL 4 Continued

LEVEL OF APPLICATION

Individual PAs (e.g. for zoning) or PA systems

SKILLS AND RESOURCES REQUIRED

- Sound information on the distribution patterns of globally (or, in the case of national adaptations) nationally important biodiversity that potentially triggers KBA criteria in the area of interest, including on relative abundance/coverage. If this is not readily available, considerable taxonomic and/or field ecological expertise
- GIS expertise for spatial delineation of KBAs
- Capacity to run expert consultation workshops to apply the criteria and to produce reports presenting and discussing the findings

STRENGTHS

- Transparent, reproducible and concise guideline and method with quantitative thresholds
- Uses clear and simple language, making it easy to understand – Relatively simple
- Direct link to IUCN Red List of Threatened Species, which provides sound information base for evaluation of species extinction risk
- Developed with strong expertise and authority of IUCN network, and tested through extensive user consultation during preparation and before publication
- Integrates earlier approaches that focused on individual taxonomic groups, such as birds (IBA) or plants (IPA)

WEAKNESSES

- Focused on site-based conservation measures
- Does not provide clear guidance or a GIS tool for spatially explicit site prioritization
- Requires comprehensive data, particularly in relation to judging the irreplaceability of a given area for the species in question
- Thresholds of criteria are set for global biodiversity importance and may need adaptation to local context
- Method detects importance of sites for biodiversity conservation only – not degree of being threatened or costs of conservation measures. Further analysis may be needed to derive conservation priorities from KBA results

REFERENCE

IUCN (2016). A Global Standard for the Identification of Key Biodiversity Areas, Version 1.0. First edition. Gland, Switzerland: IUCN. 46 pp. Accessed on 22 January 2025

VERSIONS AND/OR MODIFICATIONS

Predecessor version: Langhammer, P. F., M. I. Bakarr, L. A. Bennun, T. M. Brooks, R. P. Clay, W. Darwall, N. DeSilva, G. J. Edgar, G. Eken, L. D. C. Fishpool, G. A. B. Fonseca, M. N. Foster, D. H. Knox, P. Matiku, E. A. Radford, A. S. L. Rodrigues, P. Salaman, W. Sechrest, A. W. Tordoff (2007). Identification and Gap Analysis of Key Biodiversity Areas: Targets for Comprehensive Protected Area Systems. Gland, Switzerland: IUCN. 134 pp. Accessed on 22 January 2025

DOCUMENTED EXPERIENCE

The following reviews discuss the 2007 version of the KBA methodology:

Bennun, L., M. Bakarr, G. Eken, D. A. Da Fonseca (2007). Clarifying the key biodiversity areas approach. BioScience 57: 645–645

Brooks, T. M., N. de Silva, M. V. Duya, M. Foster, D. Knox, P. Langhammer, P., W. R. Marthy, B. Tabaranza Jr. (2008). Delineating Key Biodiversity Areas as targets for protecting areas, Cambridge University Press. (Book Chapter).

TOOL 4 Continued

DOCUMENTED EXPERIENCE

The following publications discuss experience with the 2007 version of the KBA methodology:

Holland, R. A., W. R. T. Darwall, K. G. Smith (2012). Conservation priorities for freshwater biodiversity: The Key Biodiversity Area approach refined and tested for continental Africa. Biological Conservation 148: 167–179. Accessed on 22 January 2025

Sodhi, N. S., G. Acciaioli, M. ERB, A. K.-J. Tan (2008). Biodiversity and human livelihoods in protected areas: case studies from the Malay Archipelago, Cambridge University Press. Accessed on 22 January 2025

Bass, D., P. Anderson, N. De Silva (2011). Applying thresholds to identify key biodiversity areas for marine turtles in Melanesia. Animal Conservation 14: 1–11. Accessed on 22 January 2025

RELATED RESOURCES/FURTHER READING

IUCN (2022). Guidelines for using A global standard for the identification of Key Biodiversity Areas, Version 1.2 Gland, Switzerland: IUCN. 250pp. Accessed on 22 January 2025

Edgar, G. J., P. F. Langhammer, G. Allen, T. M. Brooks, J. Brodie, W. Crosse, N. de Silva, L. D. C. Fishpool, M. N. Foster, D. H. Knox, J. E. McCosker, R. McManus, A. J. K. Millar, R. Mugo, R. (2008). Key biodiversity areas as globally significant target sites for the conservation of marine biological diversity. Aquatic Conservation-Marine and Freshwater Ecosystems 18: 969–983. Accessed on 22 January 2025

Knight, A. T., R. J. Smith, R. M. Cowling, P. G. Desmet, D. P. Faith, S. Ferrier, C. M. Gelderblom, H. Grantham, A. T. Lombard, K. Maze, J. L. Nel, J. D. PARRISH, G. Q. K. Pence, H. P. Possingham, B. Reyers, M. Rouget, D. Roux, K. A. Wilson (2007). Improving the key biodiversity areas approach for effective conservation planning. BioScience 57: 256-261. Accessed on 22 January 2025

Various KBA Partners released a brief to emphasise the importance of the KBA Network for achievement of the goals and targets of the GBF.

Training materials are available through an online self-paced course that trains KBA practitioners and experts in identifying and delineating KBAs according to the KBA Standard.

TOOL 5	Site-level tool for identifying other effective area-based conservation measures (OECMs)
	Arabic	Chinese	English	French	Indonesian (Bahasa)	Korean	Portuguese	Spanish
2023	IUCN, IUCN WCPA (Other Effective Area-based Conservation Measures Specialist Group)

TYPE	PURPOSE
Assessment tool	Process to determine whether and to which degree a site qualifies as an OECM

STRUCTURE AND FUNCTION

Assessment tool that provides assessors with a structured way to evaluate the suitability of proposed sites as OECMs according to the CBD definition based on a three-step process (screening, obtaining consent, and conducting the full assessment) and eight criteria, which are:

1. The site is not a protected area
2. There is a reasonable likelihood that the site supports important biodiversity values
3. The site is a geographically defined area
4. The site is confirmed to support important biodiversity values
5. Institutions or mechanisms exist to govern and manage the site
6. Governance and management of the site achieve or are expected to achieve the in-situ conservation of important biodiversity values
7. In situ conservation of important biodiversity values is expected to be for the long term
8. Governance and management arrangements address equity considerations

The first two are part of the screening assessment, and the remaining six are for the full assessment.

The document contains five main parts:

- Introduction
- Step 1: Screening: Identifying a potential OECM
- Step 2: Consent for full assessment
- Step 3: The full assessment: Identifying an OECM
- Assessment summary and next steps

TYPICAL USE

- Assessment of a site to determine whether and to which degree it qualifies as an OECM
- Gap assessment for future improvements for sites that do not qualify

LEVEL OF APPLICATION

Site level

TOOL 5 Continued

SKILLS AND RESOURCES REQUIRED

- Access to data on the status and designation of protected areas, to determine if the proposed site is recognised as a protected area
- Access to relevant databases to gather information on important biodiversity values. If the site is not mentioned in any existing biodiversity-related database, a relevant expert is needed, including Indigenous and traditional knowledge holders, to assess the site for important biodiversity values
- Knowledge of governance and management bodies relevant for the site and their effectiveness to assess whether these bodies can mitigate threats, conserve biodiversity, and address equity considerations
- Knowledge of the free, prior, and informed consent (FPIC) process as well as related community-consultation skills
- Potentially additional funding, if external consultants and/or other technical support are required for any of the points above
- If a site qualifies as an OECM, it should be reported to the World Database on OECMs (WD-OECM), and familiarity with mapping tools and Geographic Information Systems (GIS) software is needed to accurately submit data on boundaries

STRENGTHS

- Aligned with the Convention on Biological Diversity (CBD)'s definition and criteria for OECMs
- Globally applicable and available in many languages
- Has a clearly structured process for the assessment
- Has simple response options for each criterion, with a clear explanation of how the results can be used to determine whether a site qualifies as an OECM
- Promotes equity by requiring

WEAKNESSES

- Some of the more complex criteria require further explanation due to ambiguity in some contexts
- Although obtaining FPIC is a key component of the assessment, there is limited explanation of how consent can be obtained in practice for OECMs and why the governing body should agree to it, such as explaining the benefits of becoming an OECM
- There is limited mention of monitoring the effectiveness of OECMs, or financial considerations for their management in the criteria or elsewhere

Some of these limitations are addressed in the new IUCN WCPA "Guidance for other effective area-based conservation measures (OECMs)" publication,

REFERENCE

Jonas, H. D., MacKinnon, K., Marnewick, D. and Wood, P. (2023). Site-level tool for identifying other effective area-based conservation measures (OECMs). First edition. IUCN WCPA Technical Report Series No. 6. Gland, Switzerland: IUCN.

DOCUMENTED EXPERIENCE

Case studies are available in the "Guidance for other effective area-based conservation measures (OECMs)" publication

RELATED RESOURCES/FURTHER READING

Tool 6 Protected Planet

Tool 27 Guidance for other effective area-based conservation measures (OECMs)

3.2.2 | PROTECTED AND CONSERVED AREA SYSTEM PLANNING, INTEGRATED GAP ANALYSIS, ZONING

TOOL 6	Protected Planet
	English
2014	UNEP-WCMC, IUCN WCPA

TYPE	PURPOSE
Online portal and database	Informing decision-making and enhancing action on PAs through provision of a comprehensive source of information on protected areas worldwide including georeferenced data and data on their status and trends

STRUCTURE AND FUNCTION

Protected Planet is an online interface to access the World Database on Protected Areas (WDPA), the World Database on Other Effective Area-Based Conservation Measures (WD-OECM) as well as the Registry for Territories and areas conserved by Indigenous Peoples and local communities (ICCA-Registry). Data and information about PAs, OECMs and ICCAs can be retrieved in various formats. It is the most comprehensive global database of marine and terrestrial protected areas, updated monthly with submissions from governments, non-governmental organizations, landowners and communities.
Supported data query and retrieval formats:

- PAs accessible via map view or name search (including country statistics search)
- Free download of WDPA/WDOECM/ICCA Registry geospatial datasets
- Global and regional Protected Planet Reports, summarizing data and insights, are published biennially (2022 skipped due to COVID). Access to statistics and other information on specific countries, and comparison between countries.
- Statistical reports

Specific data and information is also offered for thematic areas:

- Marine PAs
- Management effectiveness (PAME)
- Connectivity conservation
- IUCN Green List of Protected and Conserved Areas
- Equitable Governance in PAs

TYPICAL USE

- Spatial overview and collection of information on PAs and PA systems
- Download of datasets for in-depth analysis of individual PAs or regions
- Visualization in the context of PA system planning and connectivity planning
- Access to statistics and other information on specific PAs and countries, and comparison between countries
- Monitoring of global progress towards PA related policy goals (e.g. 30 x30, Target 3 of the Global Biodiversity Framework, CBD)
- Integration into other tools for enhanced landscape monitoring and management (e.g. Global Forest Watch, DOPA)

LEVEL OF APPLICATION

Individual PAs, PA systems, countries or larger geographical regions (including global)

SKILLS AND RESOURCES REQUIRED

PC with internet access;

Accessing and using the database requires only minimal skills and equipment. However, using some of the output formats supported (e.g. GIS datasets) is only possible with more advanced specialist skills and stronger computational power.

TOOL 6 Continued

STRENGTHS	WEAKNESSES
❖ Comprehensiveness and global coverage ❖ Semi-official character and authority of WDPA (several CBD Decisions have encouraged are encouraged Parties to the CBD to share and update relevant information on their protected areas system with the World Database on Protected Areas) ❖ Allows access to multiple resources of information on many PAs ❖ Thematic map-view ❖ Possibility to download geospatial data sets ❖ Methodology and information about data providers are transparent	❖ Reporting PAs is voluntary; therefore, the database is not always complete and up to date ❖ Sometimes incorrect information is entered – e.g. on overlapping PAs ❖ Limited search function (no keyword search) ❖ Some small PAs only represented by point data

REFERENCE

Protected Planet. Cambridge, UK: UN Environment-WCMC. Accessed on 12 November 2024 at

VERSIONS AND/OR MODIFICATIONS

Various versions of WDPA since the release in 1981, Protected Planet evolving continually since its launch in 2010.

DOCUMENTED EXPERIENCE

Being a data resource, use of Protected Planet and its databases is usually not documented. However, there are some relevant examples:

Gap analysis of natural/mixed World Heritage sites:
Bertzky, B., Shi, Y., Hughes, A., Engels, B., Ali, M.K. and Badman, T. (2013) **Terrestrial Biodiversity and the World Heritage List: Identifying broad gaps and potential candidate sites for inclusion in the natural World Heritage network.** Gland, Switzerland and Cambridge, UK: IUCN and UN-Environment-WCMC. xiv + 70p. Accessed on 8 October 2018

ICCA Consortium (2021) Territories of Life: 2021 Report. ICCA Consortium: worldwide. Available at

WWF, UNEP-WCMC, SGP/ICCA-GSI, LM, TNC, CI, WCS, EP, ILC-S, CM, IUCN (2021) **The State of Indigenous Peoples' and Local Communities' Lands and Territories:** A technical review of the state of Indigenous Peoples' and Local Communities' lands, their contributions to global biodiversity conservation and ecosystem services, the pressures they face, and recommendations for actions. Gland, Switzerland.

RELATED RESOURCES/FURTHER READING

- UN Environment-WCMC and IUCN (2024). **Protected Planet Report 2024**. Cambridge UK and Gland, Switzerland. Accessed on 11 November 2024
  User Manual for the World Database on Protected Areas and world database on other effective area-based conservation measures: 1.6. UNEP-WCMC: Cambridge, UK.
  also available in **French**, **Spanish** and **Russian**
- The following two resources also use data from the WDPA:
  - **Global Forest Watch**. Accessed on 11 November 2024
  - DOPA and **DOPA explorer**. Accessed on 10 December 2024

TOOL 7 Satellite Remote Sensing for Conservation

English

2018 | WWF

TYPE	PURPOSE
Guidelines	Introductory guidance on Satellite Remote Sensing (SRS) technology, its applications in conservation, and the resources needed for using SRS data

STRUCTURE AND FUNCTION

Guidance document that provides prospective SRS users in the conservation community with detailed introductory information on using SRS to support conservation efforts.

The publication has six main parts:

- Introduction to SRS (key concepts, terminologies)
- What satellite imagery is currently available? (focusing on open-access datasets)
- Selecting and processing SRS data to inform conservation
- Applications of SRS imagery in ecology and conservation
- Advanced SRS data types and applications (e.g. LiDAR)
- Caveats and limitations when using SRS data (data resolution, availability & accessibility)

TYPICAL USE

Gaining an overview of current SRS technology and its potential uses for conservation; in particular, SRS-based opportunities for mapping and monitoring the extent and condition of ecosystems and habitats, species distributions, and threats to biodiversity

LEVEL OF APPLICATION

Site and system level

SKILLS AND RESOURCES REQUIRED

- GIS expertise and interpretation skills to use SRS for spatial analysis
- Reasonably fast internet speed for downloading raw data, high processing power, and sufficient data storage for raw imagery and intermediate and final data products
- Hardware and software requirements typically increase with study area size, resolution, and the complexity of analysis. Average scenes have file sizes of 500 MB to 1.62 GB.
- Processing large time series of multi-scene mosaics requires more processing power, and in some cases may require the use of cloud computing services
- GIS Software: commercial (e.g. ArcGIS) or open-access (e.g. QGIS, SAGA GIS, GRASS GIS)

STRENGTHS	WEAKNESSES
❖ Very detailed overview of SRS technology and its usage in conservation ❖ Starts with explaining basic principles, e.g. those underlying remote sensing; hence, it is accessible for every level of prior knowledge	❖ The publication is only a starting point. If one wants to use SRS for conservation, further guidance and/or external technical support may be needed

REFERENCE

Pettorelli, N., Schulte to Bühne, H., Shapiro, A. C. & Glover-Kapfer, P. (2018) Satellite Remote Sensing for Conservation. WWF Conservation Technology Series 1(4). WWF.

TOOL 7 Continued

DOCUMENTED EXPERIENCE

Case studies are included in the publication.

PANORAMA-SOLUTIONS:

- **Triple Level Digital Monitoring** (3LDM) – Remote sensing and IT solutions for monitoring Forest Landscape Restoration (FLR)
- **The vivid practice of biodiversity conservation** in Qianjiangyuan National Park, China
- **Blue Carbon A–Z**: from small projects to policy development

RELATED RESOURCES/FURTHER READING

Melin, M., Shapiro, A. C., Glover-Kapfer. P. (2017). **LIDAR for ecology and conservation. WWF Conservation Technology Series 1(3)**. WWF-UK, Woking, United Kingdom. Accessed on 26.11.2018

TOOL 8	Global Forest Watch (GFW)
	User interface: Bahasa Indonesia	Chinese	English	French	Portuguese	Spanish Supporting materials: Bahasa Indonesia, French, Portuguese, Spanish
ongoing	Global Forest Watch (partnership convened by the World Resources Institute)

TYPE	PURPOSE
Interactive online platform	Monitoring forest change with the help of a variety of data sets and tools and enhancing information transfer between different actors. Platform that provides data and tools to monitor forests in near real-time

STRUCTURE AND FUNCTION

Website that provides users, including governments, businesses, NGOs, and the public, with an interactive platform to monitor forests in near real-time based on cutting-edge technology.

The main information provided through the user interface of the platform is divided into four categories:
MAP: actual toola map with seven categories of data layers
DASHBOARD: and a dashboard providing statistics of the data sets.
BLOG: news about places to watch, data, GFW community and updates
ABOUT: background information on the partnership, impacts and history

GFW incorporates a wide range of data sets that can be overlaid and compared, including:

- Forest change data (including deforestation alerts, tree cover gain and loss, fires, and more)
- Land cover data (including tree cover, intact forest landscapes, and more)
- Land use data (contextual information on area use, such as industrial use, PA boundaries, infrastructure, Indigenous and community lands, and more)
- Climate data (including forest greenhouse gas emissions, biomass density, and more)
- Biodiversity data (including biodiversity intactness, and other areas important for biodiversity, e.g., Key Biodiversity Areas)

TYPICAL USE

- Monitoring forest change, fires and illegal activities
- Sharing information about threats but also success stories
- Do spatial analysis and download data via open data portal
- Build own maps and add information
- Track forest change over time
- Spatial analysis and map development

Additional potential uses:
- Get email alerts as forest clearings happen
- Upload own data sets
- Use the GFW data in communication as an additional source to the FAO Global Forest Resources Assessment
- Supply chain monitoring
- Land use planning and zoning
- Use data to create customized web-based or mobile applications

TOOL 8 Continued

LEVEL OF APPLICATION

Site and system level

SKILLS AND RESOURCES REQUIRED

Downloading data requires a

- A fast internet connection to download data
- An up-to-date browser version to use the full suite of functions an up-to-date browser version is required
- Compared to analysing data with a GIS Programme (e.g. QGIS and ArcGIS) required Moderate computer literacy skills are lower. to use the platform
- Basic understanding of conservation terminology to understand the data

STRENGTHS

- Easy and intuitive application
- Consistent approach to monitor forest change globally
- High transparency due to open source code and Application Programming Interface (API)
- Data is downloadable and some of the datasets can be directly exported to ArcGIS
- Data and forest monitoring and alert systems can be used offline and in the field on a mobile device: Forest Watcher mobile app
- Combines data from different databases (e.g. protectedplanet)
- World Database on Protected Areas)

WEAKNESSES

- The accuracy of the data sets displayed on GFW varies. Check blogs and reviews for information on how to deal with low accuracy.
- Results for forest change of different data sets can be contradictory. Check the method used and underlying presumptions. How did they define forest? Based on which method did they detect forest change?

REFERENCE

Global Forest Watch. (2014.). Global Forest Watch: Forest Monitoring Designed for Action. World Resources Institute. https://www.globalforestwatch.org/. Accessed on 23.Dec 10.2018

VERSIONS AND/OR MODIFICATIONS

2014 launch of GFW 2.0

GFW 2.0 was launched in 2014, further elements have been added continuously (see History in About GFW | Global Forest Watch)

DOCUMENTED EXPERIENCE

A selection of reviews for the tree cover data set are listed below:

Bellot, F.-F., Bertram, M., Navratil, P., Siegert, F., Dotzauer, H. (2017). The high-resolution global map of 21st-century forest cover change from the University of Maryland ('Hansen Map') is hugely overestimating deforestation in Indonesia. Indonesian-German Forests and Climate Change Programme (FORCLIME), Jakarta, Indonesia. 4 pp.

Tropek, R., Sedláček, O., Beck, J., Keil, P., Musilová, Z., Šímová, I., Storch, D. (2014). Comment on "High-resolution global maps of 21st-century forest cover change". Science Vol. 344, Issue 6187, 981 pp. Accessed on 23.10.2018

Scientific publications which used data from GFW in 2017 are available at
Case studies and stories on GFW use

TOOL 8 Continued

RELATED RESOURCES / FURTHER READING

From the "Other Tools" list:
Global Forest Watch Pro
Forest Watcher (mobile and offline version)
Global Forest Review
Map Builder
Global Forest Watch Open Data Portal

For guidance on how to visualize, analyse or download data, tutorials, trainings, webinars, and FAQs, visit

TOOL 9	Marxan
	English
2009	Marxan Conservation Solutions

TYPE	PURPOSE
Software	Decision-support tool for systematic conservation planning

STRUCTURE AND FUNCTION

Computer programme and related extensions that provide users with decision-making support for optimal reserve system configuration and systematic conservation planning.

There are four main steps to conduct a Marxan analysis:

1. Pre-processing data
2. Setting up input files and scenario parameters
3. Running the Marxan software
4. Viewing and interpreting the results

This is an iterative process. Additional steps include:

5. Dividing the study area into planning units
6. Creating a GIS database of conservation features
7. Preparing the Marxan input files
8. Running Marxan simulations and scenarios
9. Reviewing and analysing the results
10. Consulting with stakeholders
11. Adding new information
12. Refining input parameters
13. Re-running Marxan
14. Printing maps
15. Communicating the results

More information on these can be found in the User Manual and Good Practices Handbook

TYPICAL USE

- Calculation of spatial use (including PA) configurations to meet conservation objectives for multiple conservation features (e.g., species and ecosystems), aimed at finding the best configuration of PAs and other conservation areas with the lowest costs (in terms of opportunity costs for other land uses, costs for threat management, etc.)
- Site design and prioritisation for conservation of species/ecosystems
- Estimation of comprehensiveness/effectiveness of PA and area use configurations
- Evaluation of representation and comprehensiveness in reserve systems for biodiversity conservation
- Exploration of trade-offs in PA system design and their impacts on various stakeholders

LEVEL OF APPLICATION

System level

TOOL 9 Continued

SKILLS AND RESOURCES REQUIRED

- Computer with a Microsoft, Linux, or Mac OS that is at least powerful enough to run GIS software
- Solid understanding of systematic conservation planning, spatial optimisation, and the theory behind Marxan
- Advanced GIS (e.g., ArcGIS) and general IT competence
- Advanced competence in data management and dataset preparation
- Financial resources to conduct all the steps required for a Marxan analysis

STRENGTHS

- Can generate reserve configurations to meet conservation targets
- Comprehensive and able to provide spatial solutions to various complex conservation problems
- Can incorporate both biological and non-biological data (e.g., economic and traditional knowledge)
- Can support participatory multi-stakeholder planning processes
- Enhances the rigour, transparency and repeatability of complex and potentially subjective processes
- Applicable across all ecosystems
- Compatible with other planning (particularly GIS) tools

WEAKNESSES

- Steep learning curve to use competently
- It is unable to easily integrate stochastic or temporally dynamic data, or combine different kinds of costs (e.g. land acquisition costs and opportunity costs)
- Outputs need to be interpreted, discussed, and sometimes adapted to be turned into on-the-ground solutions
- Weak in dealing with the demographic interconnectedness of planning units
- Data hungry; preparation of datasets requires time and relatively high competence
- Does not show how an area/zone needs to be managed to conserve its features

REFERENCE

Ball, I.R., Possingham, H.P., & Watts, M.. 2009. Marxan and relatives: Software for spatial conservation prioritisation. Chapter 14: Pages 185-195 in Spatial conservation prioritisation: Quantitative methods and computational tools. Eds Moilanen, A., K.A. Wilson, K.A., and Possingham, H.P., Oxford University Press, Oxford, UK.

VERSIONS AND/OR MODIFICATIONS

- Several versions of the core tool since 1999 – current version is V4.06.
- Marxan with Zones (Watts et al. 2009) is an extension of Marxan aimed to include zonation into spatial solutions
- Marxan with Connectivity is another extension that enables sophisticated connectivity considerations in spatial planning
- Marxan with Probability (MarProb) is an additional function that incorporates the probability of a site being destroyed at some point in the future
- Marxan Web is a web-based App that is based on Marxan (being released soon)
- Zonae Cogito is a companion tool for Marxan that helps manage and visualise Marxan projects.

All freely available on upon completion of the form on the page.

DOCUMENTED EXPERIENCE

Marxan has been used by 6,708 users in 184 countries.

Case studies are available on the Marxan website

PANORAMA-SOLUTIONS:

- Effective zoning as a key spatial planning/management tool
- Lauru Ridges to Reefs Protected Area Network
- Using Systematic Conservation Planning to Identify Priorities for Management

TOOL 9 Continued

RELATED RESOURCES / FURTHER READING

Manual: Serra-Sogas, N., Kockel, A., Game, E. T., Grantham H., Possingham H.P., & McGowan, J. (2020). Marxan User Manual: For Marxan version 2.43 and above. The Nature Conservancy (TNC), Arlington, Virginia, United States and Pacific Marine Analysis and Research Association (PacMARA), Victoria, British Columbia, Canada.

Good practices handbook (to be used with the manual): Ardron, J.A., Possingham, H.P., and Klein, C.J. (eds). 2010. Marxan Good Practices Handbook, Version 2. Pacific Marine Analysis and Research Association, Victoria, BC, Canada. 165 pages.

Tutorials on Marxan and supporting software are available at

There are courses and trainings for Marxan available the Pacific Marine Analysis and Research Association

Marxan with Zones: Watts, M.E, I.R. Ball, R.R. Stewart, C.J. Klein, K. Wilson, C. Steinback, R. Lourival, L. Kircher, and H.P. Possingham. (2009). Marxan with Zones: software for optimal conservation based land- and sea-use zoning, Environmental Modelling & Software.

TOOL 10 Zonation

	English
2014	University of Helsinki (Conservation Biology Informatics Group)

TYPE	PURPOSE
Software	Decision-support system for spatial prioritisation and systematic conservation planning

CONTENT AND STRUCTURE

Spatial tool that provides users, which can comprise anyone working on systematic conservation planning and spatial prioritisation, with features to help solve various problems around spatial conservation resource allocation. It is capable of producing data-rich, large-scale, and high-resolution spatial conservation prioritisation information.

The software has various components and tabs in its Graphical User Interface (GUI) to support project management, data analysis, and data visualisation.

Further information on using this software can be found in the user manuals (see the "Related resources/ further reading" section).

TYPICAL USE

- Identification of optimal reserve areas
- Identification of reserve area expansions
- Identification of areas for alternative land uses
- Spatial planning for biodiversity offsets
- Target-based planning
- Connectivity planning
- Spatial prioritisation for various purposes, such as management and restoration

LEVEL OF APPLICATION

System level

SKILLS AND RESOURCES REQUIRED

- Computer (Windows or Linus OS) and input data
- Effort for data preparation and analysis depends on the scale of use
- Solid understanding of PA system planning and systematic conservation planning for meaningful use
- Advanced GIS and general IT competence
- Advanced competence in data management and dataset preparation

STRENGTHS	WEAKNESSES
❖ Ability to work with large datasets ❖ Takes into account connectivity (for multiple conservation features) benefits and costs in relation to other land uses ❖ Can work with modelled species distribution data ❖ Not based simply on spatial coverage targets for conservation features, but able to work with more derived aggregation algorithms across multiple features	❖ Outputs need to be interpreted, discussed, and sometimes adapted to be turned into on-the-ground solutions ❖ Weak in dealing with the demographic interconnectedness of planning units ❖ Preparation of datasets requires time and relatively high competence ❖ Does not show how an area/zone needs to be managed ❖ to conserve its features

TOOL 10 Continued

REFERENCE

Moilanen, A. & Montesino Pouzols, F. (2014). Zonation v.4. Helsinki: C-BIG Conservation Biology Informatics Group, University of Helsinki.

Moilanen, A., A. M. A. Franco, R. Early, R. Fox, B. Wintle, C.D. Thomas (2005). Prioritising multiple-use landscapes for conservation: methods for large multi-species planning problems. Proceedings of the Royal Society of London B Biological

VERSIONS AND/OR MODIFICATIONS

Various versions since first launch. Currently version V4 (2014)

DOCUMENTED EXPERIENCE

Kukkala, A. S., & Moilanen, A. (2017). Ecosystem services and connectivity in spatial conservation prioritization. Landscape Ecology, 32, 5–14.

Lin, Y. P., Lin, W. C., Wang, Y. C., Lien, W. Y., Huang, T., Hsu, C. C., ... & Crossman, N. D. (2017). Systematically designating conservation areas for protecting habitat quality and multiple ecosystem services. Environmental Modelling & Software, 90, 126–146. [not open access]

Robinne, F. N., Stadt, J. J., Bater, C. W., Nock, C. A., Macdonald, S. E., & Nielsen, S. E. (2020). Application of the conservation planning tool zonation to inform retention planning in the boreal forest of Western Canada. Frontiers in Ecology and Evolution, 8, 584291.

RELATED RESOURCES / FURTHER READING

- Zonation quick introduction manual
- Running Zonation projects manual
- Zv4 technical manual

Moilanen, A., Anderson, B. J., Eigenbrod, F., Heinemeyer, A., Roy, D. B., Gillings, S., Armsworth, P. R., Gaston, K. J., Thomas, C. D. (2011). Balancing alternative land uses in conservation prioritization. Ecological Applications, 21: 1419-1426.

Moilanen, A. (2007). Landscape zonation, benefit functions and target-based planning: Unifying reserve selection strategies. Biological Conservation, 134: 571–579. [not open access]
Ramsar Convention Secretariat.

Ramsar Sites Management Toolkit. Accessed on 07 February 2025

Moilanen, A., Kujala, H., Leathwick, J. (2009). The Zonation framework and software for conservation prioritization. In: Moilanen, A., K. A. Wilson H. P. Possingham (eds). Spatial Conservation Prioritisation: Quantitative Methods and Computational Tools. Oxford, United Kingdom: Oxford University Press. pp 196-210.

TOOL 11	Guidelines for conserving connectivity through ecological networks and corridors
	Chinese	English	French	Korean	Mongolian	Spanish
2020	International Union for Conservation of Nature (IUCN); IUCN World Commission on Protected Areas (WCPA) (Connectivity Conservation Specialist Group); IUCN Global Protected Areas Programme

TYPE	PURPOSE
Guidelines	Best practice guidance on increasing ecological connectivity

STRUCTURE AND FUNCTION

Textbook-style guidelines that allow practitioners, policy makers, spatial planners and other audiences to understand the concept of ecological connectivity, what to consider, and how it can be planned and implemented based on sound scientific considerations.

There are eight main sections in this publication, most of which contain sub-sections:

1. Introduction: The need for connectivity
2. The scientific basis for connectivity
3. Towards a common language of connectivity conservation
4. Ecological networks for conservation
5. Planning and implementing ecological corridors
6. Applications and benefits of ecological corridors in different environments
7. The emergence of connectivity conservation law and policy
8. Conclusion

25 case studies from all continents are included in the Annex.

TYPICAL USE

- Conservation planning to increase ecological connectivity amongst core habitats (including protected areas and other effective area-based conservation measures; OECMs)
- Identification, planning, and implementation of ecological corridors

LEVEL OF APPLICATION

System level

SKILLS AND RESOURCES REQUIRED

- Relevant spatial data and connectivity modelling tools and skills (or access to relevant experts) are needed to map and model connectivity
- Management and stakeholder coordination skills are needed to build ecological networks, as well as conduct monitoring activities
- Partnership skills are needed to build corridors and ecological networks with various governing bodies in other sites
- Financial resources are required to support implementation

TOOL 11 Continued

STRENGTHS	WEAKNESSES
❖ Widely applicable to different contexts and environments, including marine and freshwater sites ❖ Contains practical information and links to tools to support implementation ❖ Includes case studies from across the world with key lessons ❖ Explains the scientific aspects of connectivity and has a strong scientific basis, as well as links to conservation law and policy ❖ Explains key terminology in detail and compares it to other terms to clarify similarities and differences	❖ The publication notes that there are different categorisations of connectivity but does not provide details on these and how they affect the guidance provided ❖ The publication acknowledges the potential drawbacks of increasing connectivity but provides limited information on how these can be mitigated or how other implementation challenges can be addressed

REFERENCE

Hilty, J., Worboys, G.L., Keeley, A., Woodley, S., Lausche, B., Locke, H., Carr, M., Pulsford I., Pittock, J., White, J.W., Theobald, D.M., Levine, J., Reuling, M., Watson, J.E.M., Ament, R., and Tabor, G.M. (2020). Guidelines for conserving connectivity through ecological networks and corridors. Best Practice Protected Area Guidelines Series No. 30. Gland, Switzerland: IUCN.

DOCUMENTED EXPERIENCE

Case studies are included in the Annex of this publication

TOOL 12	Designing Effective Locally Managed Areas in Tropical Marine Environments
	English
2013	The USAID Coral Triangle Support Partnership

TYPE	PURPOSE
Guideline	Guiding the design and implementation of Locally Managed Areas (LMAs) in tropical marine environments

STRUCTURE AND FUNCTION

The guide provides a structured, participatory framework for developing effective LMAs that support healthy marine ecosystems, sustainable fisheries, and climate resilience through participatory planning. It integrates ecological science with community priorities to ensure sustainable resource use and long-term benefits. The content is divided into two main sections:

- Outreach Section: Introduces the importance of LMAs and outlines nine essential ecological and social factors and corresponding zoning and rule recommendations.
- Planning Section: Offers step-by-step facilitation support for mapping, setting goals, defining rules and zones, and integrating science-based strategies into local management planning.

Special emphasis is placed on Fishery Replenishment Zones, eliminating destructive practices, and achieving resilience to climate threats.

TYPICAL USE

Used by multi-stakeholder planning teams and their facilitators (community members, agencies, NGOs) to design and implement site-level LMAs that balance ecological and community needs.

LEVEL OF APPLICATION

Site or system-level

SKILLS AND RESOURCES REQUIRED

Facilitators should have strong communication and participatory planning skills. Teams need community trust, legal backing, ecological and social knowledge, and adequate resources for mapping, planning, and community engagement.

STRENGTHS	WEAKNESSES
❖ Step-by-step participatory guidance for outreach, planning, and implementation ❖ Focus on science-based zones and rules to support community benefits ❖ Encourages climate-resilient design and long-term resource sustainability ❖ Provides user-friendly facilitation tools, such as flipcharts, key messages, and exercises ❖ Promotes FRZs as key tools for rebuilding fisheries and livelihoods	❖ May be complex or resource-intensive for communities with limited capacity ❖ Depends heavily on skilled facilitators for effective delivery ❖ Offers limited guidance on socioeconomic alternatives and livelihood diversification ❖ Provides little detail on enforcement and long-term monitoring of management outcomes

TOOL 12 Continued

REFERENCE

Gombos, M., Atkinson, S., Green, A., & Flower, K. (Eds.). (2013). **Designing Effective Locally Managed Areas in Tropical Marine Environments:** A Facilitator's Guide to Help Sustain Community Benefits Through Management for Fisheries, Ecosystems, and Climate Change. Jakarta, Indonesia: USAID Coral Triangle Support Partnership.

DOCUMENTED EXPERIENCE

The guide builds on practical experiences in LMMA development and application, particularly the use of Fishery Replenishment Zones (FRZs), and highlights case studies that reflect field-tested successes and lessons learned.

RELATED RESOURCES / FURTHER READING

The Locally Managed Marine Area (LMMA) Network provides documents to support LMA planning and management processes, available at

3.3 MANAGEMENT PLANNING

3.3.1 GENERAL ON PCA MANAGEMENT PLANNING

TOOL 13	IUCN WCPA Guidelines for Management Planning of Protected Areas
	Arabic	Chinese	English	French	Georgian	Japanese
2003	IUCN WCPA

TYPE	PURPOSE
Guideline	General guidance on Protected Area management planning

STRUCTURE AND FUNCTION

A Management Plan is a document which outlines the management approach and goals, together with a framework for decision making, to apply in a specific protected area over a given period of time. Critical to the plan is the widest possible consultation with stakeholders and the development of objectives that can be agreed and adhered to by all who have an interest in the use and ongoing survival of the area concerned.
These guidelines represent a working framework for protected area planners to consider and adapt to their needs and circumstances. It consists of explanations on background, prerequisites for PA management planning, and detailed 13 planning steps for the development of a sound management plan.

- Pre-planning
- Data collection, background research and initial field work
- Evaluation of information
- Identification of constraints, opportunities and threats
- Development of management vision and objectives
- Identification of management options (including zoning)
- Drafting of plan
- Public consultation, including public exhibition of draft plan
- Revision of draft management plan
- Approval
- Implementation
- Monitoring and review
- Decision to review and update plan

In addition, it discusses planning for international designations of PAs, as well as abbreviated planning approaches.

TYPICAL USE

- Participatory management planning of a Protected Area– typically implemented through more specific methods and tools
- Introductory reading on PA management planning

LEVEL OF APPLICATION

Site and system level

SKILLS AND RESOURCES REQUIRED

- General PA management planning capacity and mandate needed for putting guidelines into practice.
- Costs for implementation vary depending on scale of project
- For typical implementation, the capacity to conduct participatory planning workshops and to produce complex documents with visual content is necessary

TOOL 13 Continued

STRENGTHS	WEAKNESSES
❖ Broad, general, widely accepted and widely applicable approach ❖ Compatible with or underlying most specific PA management planning approaches, methods and tools ❖ Emphasis on participatory approach	❖ Lack of specific guidance for site-specific challenges ❖ Weak on issues of operational and financial planning ❖ Outdated and may not reflect all information on contemporary best practice

REFERENCE

Middleton, J., Thomas, L. (2003) Guidelines for Management Planning of Protected Areas. World Commission on Protected Areas, IUCN. Accessed on 25 July 2025. Available at

DOCUMENTED EXPERIENCE

The IUCN WCPA PA management planning guidelines underpin management processes of many PAs, at least to some extent, including in the development cooperation context. However, they are quite general and often not cited in relation to site-level processes. There are some application examples, for instance:
Hossain Chowdhury, M. S. (Ed.) (2014). Forest Conservation in Protected Areas of Bangladesh. Policy and Community Development Perspectives. World Forests No. 20. Cham, Heidelberg, New York, Dordrecht, London: Springer. 258 pp.

RELATED RESOURCES / FURTHER READING

- Idle, E.T., Bines, T.J.H. (2005) **Management planning for protected areas: a guide for practitioners and their bosses.** Eurosite Project. Accessed on 22 February 2019.
- Amer, W., Ashong, S., Tiomoko, D. (2015): **Management Manual for UNESCO Biosphere Reserves in Africa.** A practical guide for managers. German Commission for UNESCO. Accessed on 03 April 2025.
- Also available in French
- Rizk, C., Semelin, J., Karibuhoye, C. (2011). **Methodological Guidebook for Development of Management Plans for Marine Protected Areas in West Africa.** FIBA, Fondation internationale du Banc d'Arguin. 79 pp.

Also available in French and Portugais

TOOL 14	Guidelines for applying protected area management categories including IUCN WCPA best practice guidance on recognising protected areas and assigning management categories and governance types
	English	Chinese 2008 version: Arabic	Czech	French	Japanese	Korean	Romanian	Spanish
2013	International Union for Conservation of Nature (IUCN) World Commission on Protected Areas (WCPA)

TYPE	PURPOSE
Guidelines	Best practice guidance on categorising PAs following the IUCN system

STRUCTURE AND FUNCTION

Guidance document that provides governments and other owners or managers of PAs with a method to categorise PAs based on management objectives that can be tailored to national and local contexts. It includes an explanation of the IUCN PA definition, PA categories (including primary and other objectives, distinguishing features, and more), and governance types.

The publication has eight main parts:

1. Background
2. Definition and categories
3. Governance
4. Applying the categories
5. Using the categories
6. Specialised applications
7. International conservation initiatives
8. Effectiveness of the IUCN categories

The Appendix includes information on typology and a glossary.

TYPICAL USE

- PA and PA system planning and policy, particularly (re-)assignment of IUCN PA categories to new or existing PAs
- Climate change adaptation planning

LEVEL OF APPLICATION

Site and system level

SKILLS AND RESOURCES REQUIRED

- Information about the management objectives of PAs to be categorised
- Knowledge and understanding of the values, management, and governance of the PA (system) in question

TOOL 14 Continued

STRENGTHS	WEAKNESSES
❖ Wide applicability ❖ Long-standing, widely accepted approach to PA categorisation ❖ Focuses on management objective–no judgement of relative importance of categories allows for comprehensive, well-balanced PA systems ❖ Clear guidance on category assignment and use ❖ Can be combined with independent categorisation based on governance type	❖ Terminological confusion is possible where national categories have the same names but are defined differently from the IUCN system

REFERENCE

Dudley, N. (Editor) (2008). Guidelines for Applying Protected Area Management Categories. Gland, Switzerland: IUCN. x + 86pp. WITH Stolton, S., Shadie, P., and Dudley, N. (2013). IUCN WCPA Best Practice Guidance on Recognising Protected Areas and Assigning Management Categories and Governance Types, Best Practice Protected
Area Guidelines Series No. 21, Gland, Switzerland: IUCN.

VERSIONS AND/OR MODIFICATIONS

After a decades long revision and consultation process, the first official IUCN PA categorisation system was approved and published in 1994.

Further consultations and developments since then led to the still widely used 2008 edition: Dudley, N. (Editor) (2008). Guidelines for Applying Protected Area Management Categories. Gland, Switzerland:
IUCN. x + 86pp.

DOCUMENTED EXPERIENCE

Case studies are provided in the publication

RELATED RESOURCES / FURTHER READING

Day J., N. Dudley , M. Hockings, G. Holmes, D. Laffoley, S. Stolton, S. Wells (2012). Guidelines for applying the IUCN Protected Area Management Categories to Marine Protected Areas. Gland, Switzerland: IUCN. 36pp.

TOOL 15	Open Standards for the Practice of Conservation (Conservation Standards)
	Catalan	Croatian	English	French	Lao	Mandarin	Mongolian	Portuguese	Spanish	Swedish
2020	Conservation Measures Partnership (CMP)

TYPE	PURPOSE
Methodology	Cyclical framework for conservation project management

STRUCTURE AND FUNCTION

Publication that provides conservation teams with a set of best practices to successfully implement conservation projects based on a five-step cycle (1. Assess; 2. Plan; 3. Implement; 4. Analyse and Adapt; 5. Share), noting that not all teams will need to start at the first step if they have already made progress.

The publication has seven main parts:
- Introduction
- Assess
- Plan
- Implement
- Analyse and Adapt
- Share
- Close the Loop

TYPICAL USE

Improvement of conservation project management processes and decision-making

LEVEL OF APPLICATION

Site level

SKILLS AND RESOURCES REQUIRED

- Experience with conservation projects
- Solid knowledge of the area of interest, including biodiversity and human wellbeing values, climate change considerations, stakeholders, threats with their drivers and root causes
- Prerequisites for project implementation vary depending on nature and scope of project.
- For most applications at the planning stage, the capacity to conduct participatory planning workshops is needed

STRENGTHS	WEAKNESSES
❖ Can be applied at any geographic, temporal, or programmatic scale ❖ Available in many languages ❖ Provides a clear framework for results-based strategic project (including PA) design ❖ Includes the outputs for each sub-step ❖ Includes useful visualisations to support the planning process	❖ The last section, "Close the Loop", is very brief and could include more practical information and decision-making considerations to support practitioners ❖ Case studies are not included in the CS document (available separately on the website)

REFERENCE

The Conservation Measures Partnership. (2020). Open Standards for the Practice of Conservation. Version 4.0. CMP. 51 pp.

TOOL 15 Continued

VERSIONS AND/OR MODIFICATIONS

Several updates since it was first published in 2004. Current version is Version 4 (2020).

DOCUMENTED EXPERIENCE

Case studies are provided on the CS website
PANORAMA-SOLUTIONS: The Conservation Standards-based method for planning and implementing Ecosystem-based Adaptation strategies

RELATED RESOURCES / FURTHER READING

The CMP Resource Library contains guidance, tools, case studies, and other resources to support the implementation of the Conservation Standards.

The Conservation Measure Partnership, Conservation Coaches Network, Miradi, and Miradi Share websites also have related resources to support the Conservation Standards.

Miradi (Tool 16) and Marisco (Tool 17) are related to the CS.

›› 3.3.1 General on PCA management planning

TOOL 16	Miradi
	English (after registration) Bulgarian | Chinese| French | German | Indonesian | Italian | Mongolian Portuguese | Spanish | Ukrainian
2023	Foundations of Success (FOS)

TYPE	PURPOSE
Online platform and software	Approach to support the design and adaptive management of conservation projects based on the Conservation Measures Partnership's Open Standards for the Practice of Conservation

STRUCTURE AND FUNCTION

- Java based software tool
- See programme tutorial for detailed information on structure and function of the tool (downloadable at https://www.miradi.org/software-features/)

Computer-based tool that provides conservation practitioners with a way to support and document implementation of the Open Standards for the Practice of Conservation (Conservation Standards; CMP 2020) across all stages (1. Assess; 2. Plan; 3. Implement; 4. Analyse and Adapt; 5. Share), with additional features to support visualisation and reporting.

The desktop version has seven main tabs under "View":

- Summary (basic information fields on the project, team, scope, location, and planning)
- Diagram (situation model and results chain development)
- Target Viability (status overview based on a viability analysis)
- Threat Ratings (threat impact assessment)
- Strategic Plan (plan development, including an action plan and monitoring plan)
- Work Plan (activities to implement the action plan and monitoring plan)
- Reports (report development)

The online version also has seven main tabs:

- Project overview (includes sub-tabs for a project summary, project scope, map, files & resources, and Miradi project versions)
- Situation assessment (includes sub-tabs for situation models, target viability, threat analysis, assumptions, and strategy effectiveness)
- Theory of change (includes sub-tabs for a results chain diagram, results chain tree, and assumptions)
- Work planning (includes sub-tabs for actions, timeframes, team & partners, and strategy effectiveness)
- Progress tracking (includes sub-tabs for project status, results chains, actions, results, and target impact)
- Reports and data (includes sub-tabs for a dashboard, highlights, data views, report document export, factors, and classifications
- Project admin (includes sub-tabs for Miradi project versions, Miradi access, team & partners, highlights, custom data views, and bulk import)

The key difference between them is that the desktop version does not have information-sharing features, while the online version does. Hence, the online version can be used to share project details with the public and enable collaborative editing within project teams. There are also some other differences; hence, both currently need to be used to enable full functionality.

TYPICAL USE

Design, planning, adaptive management and implementation, monitoring of and learning from conservation projects/programmes and protected areas based on the CMP Open Standards for the Practice of Conservation(Conservation Standards; CMP 2020)

TOOL 16 Continued

LEVEL OF APPLICATION

Site level

SKILLS AND RESOURCES REQUIRED

- Understanding of the site, including biodiversity and threats, and at least a basic understanding of Open Standards for the Practice of Conservation (Conservation Standards; CMP 2020)
- A computer with a standard OS (Windows, MacOS X or Linux) and Java and basic computer skills to use the software
- Additional application prerequisites vary depending on the context
- Financial resources to support implementation, including payment for the software (either as an annual subscription for the Pro version or per project for the Team version—only the personal use version is free)

STRENGTHS

- Relatively easy to use
- Fully compatible with the Open Standards for the Practice of Conservation (Conservation Standards; CMP 2020)
- Desktop version is available in many languages
- Has strong output and reporting functions
- Includes useful visualisation features for the project design phase
- Supported by a strong community of practice and through the project exchange platform Miradi Share, and Conservation Coaches Network
- Integrates project design, planning, management, monitoring, and reporting functions

WEAKNESSES

- Pro and Team versions require payment (annual subscription for Pro or per project for Teams)
- Currently has both an online and desktop version that have different functionalities, and practitioners have to use both to access the full capabilities of the software, which makes it slightly confusing to use and switch between. The team plans to make it fully online in the future once all features have been integrated
- Does not have a clear accompanying manual to teach new users; hence, users have to sift through various sources to learn how to properly use it, such as the video tutorials, articles, and FAQs on their website

REFERENCE

Foundations of Success (FOS). (2023). Miradi (Version 4.6.). Bethesda, MD: FOS.

VERSIONS AND/OR MODIFICATIONS

Several versions and language packs since launch in 2008. Version 4.6. launched in 2023.

DOCUMENTED EXPERIENCE

Shared projects can be found on the Miradi website

RELATED RESOURCES / FURTHER READING

More information available on the Miradi Help Center and their YouTube channel

TOOL 17	Adaptive MAnagement of vulnerability and RISk at COnservation sites (MARISCO)
	English	German
2022	Centre for Econics and Ecosystem Management and Eberswalde University of Applied Sciences

TYPE	PURPOSE
Software and manual	Approach to strategically designing, planning, and managing conservation projects with a particular focus on vulnerability and risks

STRUCTURE AND FUNCTION

Software and an accompanying methodology guide that provides practitioners and especially planners with a people-focused and ecosystem-based approach to devise adaptive management strategies.

The methodology has seven phases with thirty steps that are explained throughout the document:

- Phase I: Motivation and geographical scope
- Phase II: Human well-being and social systems
- Phase III: Ecosystem functionality
- Phase IV: Stresses and risks
- Phase V: Strategies
- Phase VI: Plausibility and effectiveness
- Phase VII: Operational planning and implementation

TYPICAL USE

- Design, planning, and adaptive management of conservation and ecosystem management projects in situations of uncertainty, risk, and vulnerability

LEVEL OF APPLICATION

Site or system level

SKILLS AND RESOURCES REQUIRED

- A team with technical expertise in ecosystems, biodiversity conservation, social elements, assessments, and data management, and experience with strategic project planning and management (and other aspects related to the 30 steps) to support implementation
- A computer and related computer skills to use the software version
- Familiarity with the Open Standards for the Practice of Conservation (Conservation Standards; CMP 2020) (Tool 15) to facilitate understanding, since MARISCO is based on it
- Access to relatively extensive information about the scope area
- Financial resources to support implementation costs, which vary depending on the project; implementation of the full range of MARISCO modules requires the capacity to train implementation staff in the methodology, to conduct extensive participatory planning workshops, and to produce complex documents with visual content

TOOL 17 Continued

STRENGTHS	WEAKNESSES
❖ Dual quality of being both ecosystem-based and people-focused ❖ Aimed at taking into account uncertainty, vulnerability and risk, which are often not considered sufficiently in strategic conservation planning ❖ Detailed phasic and step-wise process based on existing well-known standards (Conservation Standards; CMP 2020) ❖ Has an accompanying software to facilitate efficient strategic knowledge management and decision support, and enables collaboration amongst several people working on the same project	❖ Relatively theory-heavy and information-hungry approach that requires substantial technical expertise and data ❖ Complex and lengthy process with numerous steps involved ❖ Software version is still under development and may not be fully functional or stable; it has issues such as incomplete functionality, bugs and errors, risk of data loss, and limited support from the development team available

REFERENCE

Manual: Schick, A., Krause, A., & Ibisch, P.L. (2022): MARISCO: **Adaptive management of vulnerabilities and risks at conservation sites. Methodology guide.** Eberswalde, Germany: Centre for Econics and Ecosystem Management, Eberswalde University of Applied Sciences.

Software link:

VERSIONS AND/OR MODIFICATIONS

Ibisch, P. L. & Hobson, P. R. (eds.) 2014. MARISCO. **Adaptive MAnagement of vulnerability and RISk at COnservation sites.** A guidebook for risk-robust, adaptive and ecosystem-based conservation of biodiversity. Centre for Econics and Ecosystem Management, Eberswald.

DOCUMENTED EXPERIENCE

Ibisch, P. L. & P.R. Hobson (eds.) 2015. **MARISCO. Adaptive MAnagement of vulnerability and RISk at COnservation sites.** Lessons from case studies applying the MARISCO approach. Centre for Econics and Ecosystem Management, Eberswalde.

PANORAMA-SOLUTIONS: Pilots for the restoration of mangrove ecosystems in Colombia

RELATED RESOURCES / FURTHER READING

For theoretical background information and guidance on conducting MARISCO workshops: Ibisch, P. L. & Hobson, P. R. (eds.) 2014. **MARISCO. Adaptive MAnagement of vulnerability and RISk at COnservation sites.** A guidebook for risk-robust, adaptive and ecosystem-based conservation of biodiversity. Centre for Econics and Ecosystem Management, Eberswald.

Other resources (not specific to the updated publication):

Video tutorials:

The Conservation Measures Partnership. (2020). Open Standards for the Practice of Conservation. Version 4.0. CMP. 51 pp.

3.3.2 | SPECIFIC PLANNING TOOLS

TOOL 18	Ecological restoration for protected areas: principles, guidelines and best practices
	English	French	Spanish
2012	IUCN World Commission on Protected Areas (WCPA) (Ecological Restoration Task Force)

TYPE	PURPOSE
Guidelines	Best practice guidance on restoring the natural and associated values of PAs and systems

STRUCTURE AND FUNCTION

Guidance document that provides PA managers with key concepts, principles, and best practices to ecologically restore PAs and systems across terrestrial, marine, and freshwater realms.

The publication has six main chapters:
Chapter 1: How to Use this Guide
Chapter 2: Restoration and Protected Area Concepts
Chapter 3: Principles and Guidelines of Restoration for Protected Areas
Chapter 4: Best Practices
Chapter 5: Restoration Processes for Protected Areas
Chapter 6: Case Studies

References, a bibliography (further reading), glossary, and an appendix listing "best practices" are provided at the end of the document.

TYPICAL USE

Design and planning of ecological restoration projects/activities in individual PAs or across systems

LEVEL OF APPLICATION

Site and system level

SKILLS AND RESOURCES REQUIRED

- Knowledge on ecosystem management, including invasive species
- Knowledge and consultative skills to obtain free, prior, and informed consent (FPIC) from owners and stewards of the proposed areas for restoration
- Adaptive management skills to plan, manage, and monitor restoration projects
- Stakeholder engagement skills to work collaboratively with diverse stakeholders and rightsholders on restoration projects
- Funding and human resources to implement restoration projects, which will vary depending on the scale and nature of the project

STRENGTHS	WEAKNESSES
❖ Well-founded general principles and broad approach with wide applicability across systems and geographic areas ❖ Includes a stepwise approach to ecological restoration projects ❖ Includes a wide range of case studies with key lessons summarised	❖ Relatively general nature of guidelines, which means that typically there will be a need to consult extensive additional guidance on appropriate restoration approaches, methods and tools in each individual case ❖ Was published in 2012; hence, some examples and aspects may be less relevant today

TOOL 18 Continued

REFERENCE

Keenleyside, K. A., N. Dudley, S. Cairns, C. M. Hall, S. Stolton (2012). **Ecological Restoration for Protected Areas:** Principles, Guidelines and Best Practices. Gland, Switzerland: IUCN. x + 120pp.

DOCUMENTED EXPERIENCE

Case studies are provided in the publication

RELATED RESOURCES / FURTHER READING

A list of related resources (further reading) is included in the guidelines document.

Beatty, C.R., Cox, N. A., and M. E. Kuzee (2018). **Biodiversity guidelines for forest landscape restoration opportunities assessments.** First edition. Gland, Switzerland: IUCN. v + 43pp. (available in English, French, Spanish, Portuguese, and Russian)

Gann, G.D., McDonald, T., Walder, B., Aronson, J., Nelson, C.R., Jonson, J., Hallett, J.G., Eisenberg, C., Guariguata, M.R., Liu, J., Hua, F., Echeverria, C., Gonzales, E.K., Shaw, N., Decleer, K., Dixon, K.W. (2019). **International principles and standards for the practice of ecological restoration.** Second edition. Restoration Ecology. (available in English, Chinese, French, Spanish, Ukrainian, and Portuguese)

IUCN and WRI (2014). **A guide to the Restoration Opportunities Assessment Methodology (ROAM):** Assessing forest landscape restoration opportunities at the national or sub-national level. Working Paper (Road-test edition). Gland, Switzerland: IUCN. 125pp. (available in English, Chinese, Spanish, French, Portuguese, Russian, Indonesian)

Kupilas, Benjamin, et al. (2024). **Compilation of existing guidance on ecosystem restoration.** Ecologic Institute, Berlin.

TOOL 19	**Tourism and visitor management in protected areas: guidelines for sustainability**
	English	French	German	Mongolian	Portuguese	Spanish
2018	International Union for Conservation of Nature (IUCN) World Commission on Protected Areas (WCPA)

TYPE	PURPOSE
Guidelines	Best practice guidance on sustainable tourism in protected areas

STRUCTURE AND FUNCTION

Guidance document that **supports** professionals and other stakeholders (including rights-holders) working on tourism in PAs. **It includes** ten guiding principles and best practices on key issues to help achieve sustainable tourism in PAs in a way that is appropriate, well-managed, and contributes to conservation objectives.

The publication has seven main parts:

1. Tourism and visitation in protected areas: the sustainability challenge
2. The impacts of protected area tourism
3. Aligning management objectives with tourism impacts
4. Adaptive management for sustainable tourism
5. Capacity building for sustainable tourism management
6. Managing tourism revenues and costs to achieve conservation benefits
7. The future of protected area tourism

TYPICAL USE

Improvement of management in PAs to align with sustainable tourism goals, including considerations for capacity building and financing to support conservation objectives

LEVEL OF APPLICATION

Site level

SKILLS AND RESOURCES REQUIRED

- Depends on the best practices and principles being followed. Skills that broadly apply most include those related to PA management, planning, monitoring, financing, research, capacity-building, and stakeholder engagement
- Financial resources to support implementation, e.g., to conduct environmental impact assessments before building tourism facilities and mitigate impacts accordingly, and organise capacity building workshops

STRENGTHS	WEAKNESSES
❖ Provides a comprehensive overview of sustainable tourism in PAs ❖ Includes related considerations to support implementation, such as those linked to capacity building and sustainable financing ❖ Includes many detailed case studies from around the world	❖ The structure of the document is slightly difficult to follow, with a combination of separate guiding principles and best practices divided across sections ❖ The best practices are only briefly highlighted at the end of sections; limited information on when and how to implement them

TOOL 19 Continued

REFERENCE

Leung, Y.-F., Spenceley, A., Hvenegaard, G., and Buckley, R. (eds.) (2018). Tourism and visitor management in protected areas: Guidelines for sustainability. Best Practice Protected Area Guidelines Series No. 27, Gland, Switzerland: IUCN. xii + 120 pp.

VERSIONS AND/OR MODIFICATIONS

Updates two earlier sets of PA tourism guidelines:

McNeely, J.A., Thorsell, J. W. Ceballos-Lascuráin, H. (1992). Guidelines: Development of National Parks and Protected Areas for Tourism. UNWTO and the UN Environment Programme. [not available online]

Eagles, Paul F.J., McCool, Stephen F. and Haynes, Christopher D.A. (2002). Sustainable Tourism in Protected Areas: Guidelines for Planning and Management. IUCN Gland, Switzerland and Cambridge, UK. xv + 183pp.

DOCUMENTED EXPERIENCE

Case studies are included in the publication

RELATED RESOURCES / FURTHER READING

UNESCO Sustainable Tourism Toolkit

World Travel & Tourism Council environmental reports and guidance

TOOL 20	Climate Change Resilience and Adaptation Planning Tool (CC-RAPT)
	English	Spanish
2023	IUCN WCPA Climate Change Specialist Group

TYPE	PURPOSE
Assessment tool	Helping marine-protected area (MPA) practitioners consider how climate change relates to MPA management and how practitioners can strengthen respective management practices

STRUCTURE AND FUNCTION

The tool uses targeted questions to assess how climate change impacts are currently being addressed in an MPA through monitoring, vulnerability assessments, resilience and adaptation actions, mitigation efforts, and education and outreach. Answers are made by assigning a score (1-5 scale) and an explanation to justify the score. Each question includes an "ideas for improvement" field to inform future action. Each category of question also has a "tools/resources/examples" section that includes links to key references or experiences of other MPAs.

While the tool produces a final 1-5 score, the core purpose of the tool is to provide MPA managers with an opportunity to reflect on management best practices under changing climate conditions. Gaps identified through this self-reflection process may trigger additional management interventions.

TYPICAL USE

- MPA programmes wanting to improve their management and governance in relation to climate change impacts on marine biodiversity and the cultural, social, and economic benefits that marine biodiversity provides
- MPA managers, staff, and implementing partners wanting to identify strengths and areas for improvement in terms of climate resilience and adaptation
- MPA managers wanting to generate data to drive climate-informed research, management, and collaboration as well as underpin proposals, or provide data for broader assessments

LEVEL OF APPLICATION

Site level

SKILLS AND RESOURCES REQUIRED

- Sufficient knowledge and/or background documents about the MPA to be able to answer the targeted questions
- Any resulting proposals for adapting the management of the MPA require consultation with all stakeholders involved and the mandate to do so

STRENGTHS	WEAKNESSES
❖ Ready to use tool ❖ Low-key option that can be used as a first step to address climate change impacts ❖ Combination of scoring system and options to add site-specific details	❖ Users need to be aware of the fact that the tool may produce different results depending on the scale at which it is applied ❖ The numeric scores may not be comparable between sites

TOOL 20 Continued

REFERENCE
The Climate Change Resilience and Adaptation Planning Tool. Accessed on 25 July 2025. Available at
VERSIONS AND/OR MODIFICATIONS
Version 1
DOCUMENTED EXPERIENCE
Greater Farallones National Marine Sanctuary was the first MPA to use CC-RAPT
RELATED RESOURCES / FURTHER READING
This tool complements existing climate change resources for protected areas, such as: ❖ **MPA Adaptation Toolkit** ❖ **Climate Adaptation Methodology for Protected Areas** ❖ **Climate Vulnerability Index** Further resources: ❖ **OCTO Resources for Guiding MPA Climate Change Adaptation and Mitigation** – Curated list of resources on climate change adaptation and mitigation in MPAs. ❖ **ThinkHazard!** – Project-area-specific guidance on hazard risks. ❖ **INFORMRisk Index** – Country-specific information on disaster prevention, preparedness, and response.

TOOL 21	Large-Scale Marine Protected Areas: Guidelines for Design and Management
	English
2017	IUCN

TYPE	PURPOSE
Guideline	Practical guidance for the design of new and the management of existing large-scale marine protected areas (LSMPAs, defined as areas greater than 150,000 km²)

STRUCTURE AND FUNCTION

The guideline provides a general overview of large-scale marine protected areas before going into detail on designing LSMPAs, management planning and managing LSMPAs in a multi-stakeholder setting.

It is structured into four chapters:

1. Understanding the connection between equitable and effective governance, and successful ongoing management
2. Designing LSMPAs: Using a series of interrelated steps
3. Management Planning: Exploring elements of management planning and logistical considerations
4. Managing LSMPAs: Scientific insights and experiences from current LSMPAs

General advice is combined with real-world examples in the form of short case studies.

TYPICAL USE

Focused on assisting protected area managers in designing or managing LSMPAs. Besides, it can be used by anyone involved in supporting LSMPAs, including the communities that hold an interest in them

LEVEL OF APPLICATION

Site level

SKILLS AND RESOURCES REQUIRED

- Ability and mandate to convene and facilitate a process that covers multiple jurisdictions and potentially conflicting or competing legal mandates
- Understanding of stakeholders involved and good facilitation skills to bring together and adequately address the rights of all parties, including engaging local communities
- Political backing and significant level of continued funding required for, inter alia, enforcement and surveillance of a LSMPA

STRENGTHS	WEAKNESSES
❖ With its focus on large-scale marine protected areas, this guideline fills a niche ❖ Guidelines provide valuable insights and new perspectives for both stakeholders who are new to large-scale marine management as well as seasoned professionals ❖ Step-by-step guide provides a clear guideline and understanding of what to consider and reflect upon ❖ Contextual information combined with real-world examples in the form of short case studies	❖ The guidelines' specific focus on LSMPAs applies to very few marine protected areas, making it relevant for only a limited number of sites ❖ Guidance is derived mainly from two LSMPAs and without examples from LSMPAs in developing countries

TOOL 21 Continued

REFERENCE

Lewis, N., Day, J.C., Wilhelm, A., et al. (2017) Large-scale marine protected areas: Guidelines for design and management. Best Practice Protected Area Guidelines Series, Nr. 26, Gland, Switzerland. Accessed on 25 July 2025. Available at

RELATED RESOURCES / FURTHER READING

Within the guidelines there is a list of additional useful resources on the topic

TOOL 22	Guidelines for privately protected areas
	English	French	Japanese	Polish	Portuguese	Spanish
2018	International Union for Conservation of Nature (IUCN), IUCN World Commission on Protected Areas (WCPA) (Privately Protected Areas and Nature Stewardship Specialist Group), and IUCN Global Protected Areas Programme

TYPE	PURPOSE
Guidelines	Best practice guidance on privately protected areas (PPAs)

STRUCTURE AND FUNCTION

Guidance document that provides practitioners and policy makers with information on various aspects of PPA establishment, management, and reporting to improve practices, supported by case studies.

The publication is divided into parts A to E:
Part A: What is a privately protected area?
Part B: Best practices
Part C: Looking forward: Opportunities for realising the potential of PPAs
Part D: Case studies
Part E: Resources

TYPICAL USE

Private landowners and stakeholders wanting to
- establish a PPA
- plan for its management
- report on PPAs

Governments wanting to regulate and support PPAs as part of a national PA system

LEVEL OF APPLICATION

PA level and national PA systems

SKILLS AND RESOURCES REQUIRED

- Knowledge of protected areas in general, particularly based on the IUCN definition
- Experience with protected area management to implement the management aspects of the guidance
- Engagement and partnership skills to work with stakeholders, including Indigenous Peoples and local communities
- Mapping skills using relevant Geographic Information System (GIS) tools and knowledge on reporting procedures to report the site to the World Database on Protected Areas (WDPA)
- External consultants or other technical specialists may be needed to support certain aspects of implementing the guidance
- Financial resources to support the activities mentioned, e.g. conducting assessments, undergoing certification, securing sustainable financing, etc.

TOOL 22 Continued

STRENGTHS	WEAKNESSES
❖ Comprehensively covers various aspects of PPA establishment, management, and integration into national and international conservation frameworks ❖ Includes numerous case studies from across the world ❖ Each section highlights which target audience it is developed for, making the information more relevant and accessible ❖ Goes beyond site-level PPA guidance and emphasises the benefits of PPA networks and integration into national PA systems, as well as linking PPAs to various policy frameworks	❖ Some of the best practices have limited information on them, and there is limited guidance on practical implementation

REFERENCE

Mitchell, B.A., Stolton, S., Bezaury-Creel, J., Bingham, H.C., Cumming, T.L., Dudley, N., Fitzsimons, J.A., Malleret-King, D., Redford, K.H. and Solano, P. (2018). Guidelines for privately protected areas. Best Practice Protected Area Guidelines Series No. 29. Gland, Switzerland: IUCN. xii + 100pp.

DOCUMENTED EXPERIENCE

Case studies on PPAs are provided in the publication

RELATED RESOURCES / FURTHER READING

Dudley, N., Redford, K. H., Stolton, S. (2014). The futures of privately protected areas. Gland, Switzerland. xii, 114p.

Tool 14 Guidelines for applying protected area management categories including IUCN WCPA best practice guidance on recognising protected areas and assigning management categories and governance types

Tool 57 Governance of protected areas: from understanding to action

TOOL 23	Urban protected areas: profiles and best practice guidelines
	English	French	Portuguese
2014	International Union for Conservation of Nature (IUCN), IUCN World Commission on Protected Areas (WCPA) (Urban Specialist Group), and IUCN Global Protected Areas Programme

TYPE	PURPOSE
Guidelines	Assisting PA managers to understand and address management issues specific to urban settings

STRUCTURE AND FUNCTION

Guidance document that provides an overview of urban protected areas and their value, and provides urban protected area managers with recommendations to improve management practices, supported with case studies that share key lessons.

The publication includes 30 guidelines and 15 international profiles (case studies) on urban protected areas.

The publication has three main parts:
Part 1: Urban protected areas – context and concept
Part 2: Profiles of urban protected areas
Part 3: Best practice guidelines, which are categorised into four sections:

1. Urban protected areas and people
2. Urban protected areas and places
3. Urban protected areas and institutions
4. Promoting, creating and improving urban protected areas.

It enables managers of PAs in urban settings to reflect and act on the specifics of urban PAs, such as having more regular visitors, a higher likelihood of having invasive alien species and pollution, and more opportunities for collaboration with local institutions.

TYPICAL USE

- Management planning for urban protected areas
- Reflecting specifics of urban settings for PA management

LEVEL OF APPLICATION

Site and system level

SKILLS AND RESOURCES REQUIRED

- An understanding of protected areas in general is needed before using this resource, particularly based on the IUCN definition
- Financial resources or skills to secure funding are needed to implement certain management guidelines included in this publication
- Practical experience in protected area management, particularly in urban settings, is needed to implement many of the listed guidelines in practice
- Communication skills are needed to build partnerships and engage with diverse groups

TOOL 23 Continued

STRENGTHS	WEAKNESSES
❖ Comprehensive publication on protected areas in urban settings that is suitable for both technical and non-technical audiences ❖ The case studies are international and detailed, and include key lessons ❖ The guidance goes beyond simply managing an urban protected area and covers many other aspects, such as advocacy, accessibility, collaboration with diverse stakeholders, and integrating nature into urban planning outside of just urban protected areas	❖ The guidance document was published in 2014; hence, some of the examples and other aspects may be less relevant today ❖ The publication acknowledges the need for a wider range of case studies in future versions ❖ The publication does not mention how the 30 guidelines should be prioritised for practical implementation if there are funding restrictions, for instance

REFERENCE

Trzyna, T. (2014). Urban Protected Areas: Profiles and best practice guidelines. Best Practice Protected Area Guidelines Series No. 22, Gland, Switzerland: IUCN. xiv + 110pp.

DOCUMENTED EXPERIENCE

Case studies on urban protected areas are provided in the publication

RELATED RESOURCES / FURTHER READING

IUCN. (2023). IUCN Urban Toolbox. IUCN Heritage and Culture Team - IUCN Centre for Society and Governance.

Worboys, G. L., Lockwood, M., Kothari, A., Feary. S., Pulsford, I. (eds). (2015). Protected Area Governance and Management. ANU Press. Canberra.

Tool 14 ▶ Guidelines for applying protected area management categories including IUCN WCPA best practice guidance on recognising protected areas and assigning management categories and governance types

TOOL 24	Transboundary conservation: a systematic and integrated approach
	English
2015	International Union for Conservation of Nature (IUCN); IUCN World Commission on Protected Areas (WCPA) (Transboundary Conservation Specialist Group)

TYPE	PURPOSE
Guidelines	Best practice guidance on transboundary conservation

STRUCTURE AND FUNCTION

Guidance document that provides transboundary conservation practitioners and those intending to become involved in transboundary programmes with definitions, models, advice, and best practice examples on transboundary conservation arrangements to deepen knowledge on initiating, establishing, governing, managing, and monitoring transboundary programmes.

The publication has two main parts with eight key headings:
Part 1: Understanding transboundary conservation: history and key concepts

1. Introduction
2. Background
3. Definitions and typology
4. The benefits of transboundary conservation
5. Transboundary conservation governance

Part 2: From principles to action

6. Context and planning the transboundary conservation process
7. The establishment and management of transboundary conservation initiatives
8. Measuring results: the monitoring and evaluation of transboundary management effectiveness

TYPICAL USE

- Transboundary programme initiation, establishment, governance, management, and monitoring

LEVEL OF APPLICATION

Site and system level

SKILLS AND RESOURCES REQUIRED

- Stakeholder analysis skills to assess feasibility
- Stakeholder engagement and consultation skills to work with diverse groups of people across boundaries, particularly to secure political support and buy-in
- Leadership skills to initiate and guide transboundary conservation efforts
- Mapping skills and access to relevant data to delineate and map a transboundary conservation area (or access to relevant experts)
- Capacity and resources to organise workshops across boundaries for cooperative planning and management purposes
- Technical skills and knowledge to support and implement management planning, including financial management, international agreements for transboundary areas, legal and policy instruments, and monitoring and evaluation measures (or access to relevant experts)
- Financial resources from diverse funding sources to support all aspects of planning and implementation

TOOL 24 Continued

STRENGTHS	WEAKNESSES
❖ Provides clear definitions and a typology of Transboundary Conservation Areas (TBCAs), including diagrammatic representations and comparisons to the definitions in the previous version of this publication ❖ Offers practical guidance for TBCAs that includes various considerations ❖ Includes detailed case studies and examples from around the world	❖ The guidance document was published in 2015; hence, some of the examples and other aspects may be less relevant today ❖ The publication acknowledges that it does not offer specific advice for marine transboundary conservation, although some examples include coastal and marine elements

REFERENCE

Vasilijević, M., Zunckel, K., McKinney, M., Erg, B., Schoon, M., Rosen Michel, T. (2015). **Transboundary Conservation: A systematic and integrated approach.** Best Practice Protected Area Guidelines Series No. 23, Gland, Switzerland: IUCN. xii + 107 pp.

VERSIONS AND/OR MODIFICATIONS

The publication builds on and updates the 2001 IUCN WCPA Best Practice Protected Area Guidelines **"Transboundary protected areas for peace and co-operation: based on the proceedings of workshops held in Bormio (1998) and Gland (2000)"** (Sandwith et al., 2001)

DOCUMENTED EXPERIENCE

Case studies are provided in the publication

Clamote Rodrigues, D., Fischborn, M. (eds.) (2016). **Solutions in focus: transboundary protected area solutions.** Gland, Switzerland: IUCN. 34 pp.

Global Transboundary Protected Areas Network (TBPA). (o. J.). Case studies. Accessed on 9 July 2025

RELATED RESOURCES / FURTHER READING

Tool 25 ▶ Diagnostic tool for transboundary conservation planners

TOOL 25	Diagnostic tool for transboundary conservation planners
	English
2020	IUCN World Commission on Protected Areas (WCPA) (Transboundary Conservation Specialist Group)

TYPE	PURPOSE
Assessment tool	Diagnostic tool to support decision-making for the establishment of transboundary conservation areas

STRUCTURE AND FUNCTION

Diagnostic tool that provides individuals and institutions intending to plan, initiate, design, facilitate or support the transboundary conservation process, and other concerned stakeholders, with a structured way to assess the necessity and feasibility of establishing a transboundary conservation area through a detailed questionnaire.

The tool is in an Excel sheet format with three main parts:

1. Introduction and instructions
2. Questionnaire
3. Report

The questions assess four thematic areas, and the responses will be automatically analysed and reflected in the report:

1. Compelling ecological reasons for transboundary conservation
2. Benefits and challenges beyond the ecological reasons
3. Stakeholders
4. Capacity to work across international boundaries

TYPICAL USE

- Feasibility assessments to establish transboundary conservation areas
- Status updates and improvements on ongoing transboundary conservation initiatives

LEVEL OF APPLICATION

Site level

SKILLS AND RESOURCES REQUIRED

- Access to Microsoft Excel to use the spreadsheet
- Knowledge or access to information on the potential transboundary area of interest to answer the questionnaire
- If the questionnaire is being answered as a group or with relevant stakeholders, financial resources will be needed to support meetings for this

TOOL 25 Continued

STRENGTHS	WEAKNESSES
❖ Excel format enables automated scoring and report development ❖ Designed for use by anyone interested in initiating a transboundary conservation process, not necessarily for experts ❖ Flexible and versatile tool that can be used across ecosystems and geographic regions ❖ Relevant thematic coverage that focuses on key issues for diagnostic purposes	❖ The tool can be used in a participatory way but it is not a requirement; hence, the results could depend on one person's opinion as a self-assessment, who also does not need to be an expert, and may not result in an accurate reflection of the situation ❖ The tool identifies potential challenges and risks, but does not provide guidance or links to other resources to help address these, or other considerations for next steps ❖ The tool mentions that it is not only for experts but some of the questions have technical terminology that are not explained in the glossary section or elsewhere

REFERENCE

Vasilijević, M. (2020). Diagnostic tool for transboundary conservation planners. IUCN WCPA Transboundary Conservation Specialist Group.

VERSIONS AND/OR MODIFICATIONS

Version 1.0:

Vasilijević, M. (2012). Diagnostic Tool for Transboundary Conservation Planners: Suggested Questions to Determine Feasibility for Transboundary Conservation. In: Erg, B., Vasilijević, M. and McKinney, M. (eds.). Initiating Effective Transboundary Conservation: A Practitioner's Guideline Based on the Experience from the Dinaric Arc. Gland, Switzerland and Belgrade, Serbia: IUCN Programme Office for South-Eastern Europe.

DOCUMENTED EXPERIENCE

Experiences with using the tool are included in a webinar organised by the IUCN WCPA Transboundary Conservation Specialist Group with the following presentations:

- ❖ An overview of the Diagnostic tool for transboundary conservation planners by Maja Vasilijević;
- ❖ Experience with implementing the diagnostic tool in Europe by Boris Erg; • The use of the tool to develop a Joint Management Plan for the Lower Awash – Lake Abbe Transboundary Conservation Landscape between Djibouti and Ethiopia by Dominique Verdugo;
- ❖ Using the tool as part of an educational process with students in the transboundary context by Todd Walters.

IUCN WCPA Transboundary Conservation Specialist Group (2021) Vital Sites 2021 – Webinar: The Diagnostic Tool for Transboundary Conservation. Accessed on 25 July 2025. Available at

RELATED RESOURCES / FURTHER READING

Tool 24 Transboundary Conservation: A systematic and integrated approach.

Training Module on Initiating Transboundary Conservation

TOOL 26	Climate Adaptation Toolkit for Marine and Coastal Protected Areas
	English	French	Spanish
2024	The Climate Adaptation Knowledge Exchange (CAKE) by EcoAdapt

TYPE	PURPOSE
Web platform and training module	To support marine and coastal protected area (MPA) managers in understanding and responding to climate change impacts

STRUCTURE AND FUNCTION

The Toolkit is a modular resource providing a structured framework and practical tools. It is designed to guide MPA managers through the full climate adaptation planning cycle. It is structured around seven steps of the Adaptation Ladder of Engagement: awareness, assessment, planning, implementation, integration, evaluation, and sharing.

It includes:

- **Rapid Vulnerability Assessment (RVA):** A tool for evaluating climate change risks to habitats
- **Adaptation Actions Table:** Suggested strategies linked to vulnerabilities, with case studies and supporting science
- **Adaptation Actions Search:** A keyword-based search for locating strategies, plans, or case studies
- **Foundational Resources:** Curated tools and guides mapped to each planning step
- **Experts List:** A network of practitioners available for advice and collaboration

The Toolkit is complemented by a training module, which introduces the framework and supports capacity-building through guided exercises.

TYPICAL USE

Used by site-level MPA managers and planning teams to assess climate risks, select appropriate adaptation actions, and implement and monitor site-specific strategies

LEVEL OF APPLICATION

Site level

SKILLS AND RESOURCES REQUIRED

Requires a working knowledge of climate impacts, adaptive management, and site ecology. Teams should have planning capacity, access to relevant data, stakeholder engagement skills and sufficient time and resources to implement and evaluate actions

STRENGTHS	WEAKNESSES
❖ Provides a structured, step-by-step process for climate adaptation ❖ Tools are tailored for marine and coastal management contexts ❖ Integrates case studies and resources to support real world application ❖ Built on an established planning framework (Adaptation Ladder of Engagement)	❖ Primarily developed for North American MPAs; may need external adaptation elsewhere ❖ Requires capacity, time and funding for full implementation ❖ Focuses more on adaptation than mitigation, which may limit holistic climate approach ❖ Uncertainty around climate projections and ecological responses may affect planning

TOOL 26 Continued

REFERENCE

Climate Adaptation Knowledge Exchange (EcoAdapt) (o. D.) **Climate Adaptation Toolkit for Marine and Coastal Protected Areas (MPAToolkit)**. Accessed on 25 July 2025. Available at

DOCUMENTED EXPERIENCE

The toolkit includes embedded case studies and supporting resources that provide insight into practical applications. Users are encouraged to contribute new case studies and share their learning via CAKE.

RELATED RESOURCES / FURTHER READING

The toolkit itself is a primary resource, and its "Tools" menu is a key starting point. Within this menu, you will find:

Adaptation Actions Table: This table is a rich source of information, providing specific adaptation actions and options, as well as links to relevant case studies, scientific reports, and technical guidance. The case studies in this table offer real-world examples of how others have implemented adaptation strategies. Adaptation Actions Search: This tool allows you to search for specific keywords to find relevant resources. You can use it to locate case studies, management plans, and other documents that pertain to your habitat type, climate stressors, or adaptation actions.

Foundational Resources: This is a curated list of tools, documents, and guides organized according to the steps of an adaptation planning process.

Climate Adaptation Knowledge Exchange (CAKE): This website is a potential source of case studies and reports on the practical application of the toolkit, although the provided sources do not include any specific examples. The case studies in the Climate Adaptation Toolkit can be used as a guide for the level of detail to include when sharing a project on **CAKE**.

The training module (English) is available at

TOOL 27	Guidance on other effective area-based conservation measures (OECMs)
	English | Will be released in more languages later in 2025
2024	IUCN WCPA (Other Effective Area-based Conservation Measures Specialist Group)

TYPE	PURPOSE
Guidelines	Good practice guidance on OECMs

STRUCTURE AND FUNCTION

Guidance document that provides a wide range of stakeholders and rightsholders with information on various aspects of OECMs to help them understand the enabling conditions for OECMs, identify whether a site meets the CBD criteria for an OECM, report OECM data, and monitor and strengthen OECMs.

The publication has eight main parts:

1. Introduction
2. CBD definition and criteria
3. Key considerations and enabling conditions for OECMs
4. Introducing the site-level identification tool
5. Identifying OECMs: Screening, consent and full assessment
6. Reporting OECMs to the World Database on OECMs
7. Monitoring OECMs
8. Strengthening OECMs

The Annexes include other supporting information on OECMs (e.g., various financial mechanisms, questions to support national OECM processes, relation to other CBD targets, etc.).

TYPICAL USE

- Encouraging voluntary area-based conservation action outside of protected areas
- Developing or supporting national OECM processes Support for identifying, reporting, monitoring, and strengthening OECMs, including understanding the enabling conditions (e.g., considerations related to developing a national OECM process, reviewing related laws and policies, etc.)

LEVEL OF APPLICATION

Site and system level

SKILLS AND RESOURCES REQUIRED

- Good understanding of area-based conservation and the concept of protected areas.
- For specific skills and resources associated with using the OECM site-level identification tool, see Tool 5 (Jonas et al. 2023)
- Further skills and resources required will depend on the way the guidance is used as there are various aspects covered that require different skills and resources (e.g., monitoring will require relevant data collection skills, biodiversity knowledge, and supporting financial resources)

TOOL 27 Continued

STRENGTHS	WEAKNESSES
❖ Comprehensive guidance on OECMs that is suitable for both readers with limited knowledge on the topic, as well as experienced practitioners ❖ Provides a clear framework for OECMs that supports CBD requirements ❖ Covers additional aspects to further support sites, including financing, legal recognition, and more ❖ Includes many case studies from around the world ❖ Provides further information on using the site-level assessment tool (Jonas et al. 2023)	❖ Some sections contain more practical and specific details than others (countries will likely need to have further discussions to resolve ambiguities and determine clear processes nationally)

REFERENCE

Jonas, H. D., Wood, P. & Woodley, S., Volume Editors (2024). Guidance on other effective area-based conservation measures (OECMs). IUCN WCPA Good Practice Series, No.36. Gland, Switzerland: IUCN.

VERSIONS AND/OR MODIFICATIONS

This version is an update of the 2019 edition:

IUCN-WCPA Task Force on OECMs. (2019). Recognising and reporting other effective area-based conservation measures. Gland, Switzerland: IUCN.

DOCUMENTED EXPERIENCE

Case studies are included in the publication

RELATED RESOURCES / FURTHER READING

Tool 5 ▶ Site-level tool for identifying other effective area-based conservation measures (OECMs).

Tool 6 ▶ Protected Planet

TOOL 28	**Designing marine protected area networks to achieve fisheries, biodiversity, and climate change objectives in tropical ecosystems: A practitioner guide**
	English
2013	The Nature Conservancy (TNC) and the USAID Coral Triangle Support Partnership

TYPE	PURPOSE
Guideline	To provide science-based guidance for designing networks of marine protected areas (MPAs) for multiple objectives

STRUCTURE AND FUNCTION

The guide offers a practical framework focused on 15 biophysical principles to support field practitioners in designing resilient MPA networks.

These principles are categorized under five themes:
- risk spreading (representation and replication),
- protection of critical areas,
- incorporation of connectivity,
- threat reduction, and
- sustainable use.

The document prioritizes principles to help practitioners make informed decisions when compromises are required. While focused on biophysical aspects, it acknowledges the importance of integrating socioeconomic factors for effective implementation.

Key features include recommendations such as protecting 20–40% of each habitat type, ensuring replication across sites, aligning MPA design with species' movement patterns, and incorporating climate-resilient and unique sites.

The guide is structured to provide clear, accessible guidance supported by figures, references, and a glossary. It draws from a comprehensive technical report and global best practices.

TYPICAL USE

MPA practitioners designing site- or system-level MPA networks that address multiple ecological goals

LEVEL OF APPLICATION

Site or system level

SKILLS AND RESOURCES REQUIRED

Field-level practitioners with basic scientific understanding can use the guide. Access to ecological data, species movement patterns, and collaboration with stakeholders is recommended. It supports adaptive management and can be used with limited technical resources

STRENGTHS	WEAKNESSES
❖ Integrates ecological objectives with a prioritization framework ❖ User-friendly and grounded in scientific literature ❖ Emphasizes adaptive management and long-term implementation ❖ Supports climate resilience and biodiversity conservation simultaneously	❖ Focused primarily on biophysical principles; limited guidance on socioeconomic integration ❖ Provides principles without detailing the implementation process ❖ Application may be limited by site-specific data gaps and local conditions

TOOL X Continued

REFERENCE

Green, A., White, A., Kilarski, S. (Eds.) 2013. **Designing marine protected area networks to achieve fisheries, biodiversity, and climate change objectives in tropical ecosystems: A practitioner guide.** The Nature Conservancy, and the USAID Coral Triangle Support Partnership, Cebu City, Philippines. viii + 35 pp. Printed in: Cebu City, Philippines, February 2013

RELATED RESOURCES / FURTHER READING

The guide itself is based on a detailed technical report, **"Biophysical principles for designing resilient networks of marine protected areas to integrate fisheries, biodiversity and climate change objectives in the Coral Triangle"**. This report, by Fernandes et al. (2012), provides the scientific basis for the 15 principles presented in the guide.

Other resources and further reading materials that are either cited or related to the guide include:

- The Coral Triangle Initiative website **(www.coraltriangleinitiative.org)** provides more information about the six-nation initiative and its goals.
- **The US Coral Triangle Support Partnership website** has additional information about the work of the partnership that funded the guide.
- The US Coral Triangle Initiative website **(www.uscti.org)** provides further information on the initiative and its work, and contains the technical report upon which the guide is based.

3.4 PROTECTED AND CONSERVED AREA FINANCING

3.4.1 GENERAL ON PCA FINANCING

TOOL 29	Practice guidance for protected and conserved area finance
	English
2025	International Union for Conservation of Nature (IUCN) and IUCN World Commission on Protected Areas (WCPA)

TYPE	PURPOSE
Guidelines	Improve understanding of conservation finance and financial solutions for protected and conserved areas (PCAs)

STRUCTURE AND FUNCTION

Guidance document providing general orientation and describing four main strategies or "practice guidelines" to improve conservation finance: (i) optimise resource efficiencies, (ii) discourage harmful actions, (iii) incentivise positive actions, and (iv) increase financial capital for conservation
The guidance is aligned with the Conservation Finance Alliance's definition of "conservation finance": "mechanisms and strategies that generate, manage, and deploy financial resources and align incentives to achieve nature conservation outcomes" (Meyers et al. 2020, p. 4). Hence, this document goes beyond guidance on simply increasing funding, and explores, for instance, how reducing investments with negative impact for biodiversity is also a critical consideration.

The publication has eight main parts, of which the first four are introductory and for general orientation on finance planning and public finance. In chapters 5-8 the four above-mentioned practice guidelines (i) – (iv) are each spelt out for different funding sources and contexts:

1. The case for protected and conserved area finance
2. Foundations of protected and conserved area finance
3. Finance strategy and planning
4. Public finance for protected and conserved areas
5. International cooperation, donors and philanthropies
6. Site-based finance
7. Finance for Indigenous peoples conservation areas
8. Private sector finance

In addition, the publication contains annexes with recommendations and sixteen factsheets on various financial instruments.

TYPICAL USE

- Textbook-style support for a greater understanding of conservation finance and financial solutions for PCAs for diverse actors, particularly PCA practitioners.
- Implementation of financial solutions in ways that empower communities and lead to equitable benefit distribution

LEVEL OF APPLICATION

Site and system level

TOOL 29 Continued

SKILLS AND RESOURCES REQUIRED

- The publication was primarily developed for PCA practitioners as the main audience; hence, general knowledge about PCAs would be beneficial for understanding the material better
- For implementation, various skills (e.g., PCA management, stakeholder engagement, and more) and additional resources may be needed depending on the financial solution(s) chosen (e.g., baseline data and third party verification may be needed for biodiversity credits)

STRENGTHS

- Based on a clear framework that includes additional considerations beyond raising more funds
- Provides ample context and introductory information on PCA finance, enabling non-specialists to have an in-depth understanding of the material
- Provides detailed information on planning and practical implementation
- Covers several categories of PCA finance across different sections
- Contains sixteen factsheets that describe and assess various financial solutions following a standardised structure, which also include case studies

WEAKNESSES

- Does not have a concluding section to summarise the key takeaways for financial tool selection and implementation
- Some of the factsheets do not include the risks or challenges associated with the financial solution, which makes it more difficult for readers to evaluate their usefulness

REFERENCE

Meyers, D., Fitzgerald, K. H., Athanas, A., Balasubramanian, H., Barr, R., Bellot, M., Berghöfer, A., Bohorquez, J., Bowers, K., Cumming, T., Emerton, L., Gölz, H., Leineweber, M., Lister, K., Martinez, A., McGreevey, M., Mohanan, K., Monteiro, C., Rhodes, A., Ruiz, L., Smith, J., Snyman, S., Stevens, C., Thiele, T., Troeger, U., Van Zyl, H., Victurine R. & Waldron, A. (2025). Practice guidance for protected and conserved area finance, IUCN WCPA Good Practice Guidelines Series No. 37. IUCN.

VERSIONS AND/OR MODIFICATIONS

Replaces previous IUCN guidance on protected area financing:

Emerton, L., Bishop, J. and Thomas, L. (2006). Sustainable Financing of Protected Areas: A global review of challenges and options. IUCN, Gland, Switzerland and Cambridge, UK. x + 97pp.

DOCUMENTED EXPERIENCE

Case studies are included in the publication

RELATED RESOURCES / FURTHER READING

Meyers, D., Bohorquez, J., Cumming, T., Emerton, L., Heuvel, O.v.d., Riva, M. & Victurine, R. (2020). Conservation finance: A framework. Washington, DC: Conservation Finance Alliance.

Tool 32 Guide to Biodiversity Financing for Cities and Regions

Tool 33 Financial Sustainability Scorecard for National Systems of Protected Areas

Tool 34 PAFSAT: Protected Area Financing Self-Assessment Tool

Tool 36 Practice Standards for Conservation Trust Funds

Tool 37 Payments for Ecosystem Services (PES): A Best Practice Guide

Tool 38 Tourism Concessions in Protected Natural Areas: Guidelines for Managers

Tool 39 Developing Protected Area Conservation Investment Plans: Quick Reference Guide and Workbook

TOOL 30	Conservation finance guide
	English Some tool descriptions are available in French and Spanish
2020 / 2002	Conservation Finance Alliance (CFA)

TYPE	PURPOSE
Taxonomic framework and collection of tools	To provide an overview and practical tools to support the expansion of sustainable finance mechanisms for biodiversity conservation

STRUCTURE AND FUNCTION

The Conservation Finance Guide comprises an overview document "Conservation Finance: A Framework" (2020) and a collection of definitions and, in some cases, more detailed descriptions of individual finance solutions with links to examples.

It presents a taxonomy of finance mechanisms and strategies consisting of 7 major "classes" each containing between 4 and 5 independent finance solution "categories" for a total of 34. The guide includes a one-page overview over the whole taxonomy.

The 7 major taxonomic classes are:

A. Return Based Investments
B. Economic Instruments
C. Grants and Other Transfers
D. Business and Markets
E. Public Financial Management
F. Risk Management
G. Financial Efficiency

The guide serves as a platform to provide orientation and increase understanding of the range of finance mechanisms available, thus, building conservation finance literacy.

It brings together the taxonomy developed in the CFA framework paper and the over 150 finance mechanisms catalogued by the UNDP-implemented BIOFIN project, and organises them in a coherent structure.

Additionally, the platform provides downloadable descriptions for a selection of tools dating from 2002 as well as links to some specific tools.

TYPICAL USE

- Obtain an overview and improve one's understanding of finance mechanisms and strategies
- Review and compare financing options and support decision-making in conservation finance

Additional use:
Policy development, advocacy, training, and capacity development in conservation finance

LEVEL OF APPLICATION

Various (not PA specific)

SKILLS AND RESOURCES REQUIRED

Knowledge of the nature of the finance challenge that one seeks to address

TOOL 30 Continued

STRENGTHS	WEAKNESSES
❖ Discusses conservation finance challenges and ways to address them in a wholistic manner, not just focussing on cash-flows ❖ Provides a comprehensive and structured overview of biodiversity finance mechanisms and strategies ❖ For some of the mechanisms, case studies and links to real-world examples and best practice guides are included ❖ Provides comprehensible explanations and definitions of financial concepts and terms	❖ The way the information is organised on the website is not intuitive. The layout seems outdated and is not user-friendly ❖ Does not in itself provide step-by-step methodological guidance on implementing specific financing solutions ❖ The presentation of the "Legacy Conservation Finance Guide" from 2002 alongside or as part of the overall Guide is confusing

REFERENCE

Conservation Finance Alliance: Conservation Finance Guide. Accessed on 25 July 2025. Available at

VERSIONS AND/OR MODIFICATIONS

The CFA Finance Guide builds on and incorporates an earlier version of a CFA tool collection, the so-called Legacy Conservation Finance Guide dating from 2002

DOCUMENTED EXPERIENCE

See case studies linked in individual tools

RELATED RESOURCES / FURTHER READING

Meyers, D., Bohorquez, J., Cumming, T., Emerton, L., Heuvel, O.v.d., Riva, M., and Victurine, R. (2020). Conservation Finance: A Framework, Conservation Finance Alliance, 2020. Accessed on 25 February 2025 at

BIOFIN Catalogue of Finance Solutions | BIOFIN

Tool 32 Guide to Biodiversity Financing for Cities and Regions.

›› 3.4.1 General on PCA financing

TOOL 31	The little book of investing in nature
	The book is available in Bahasa Indonesia	English	French	Mandarin and Spanish. Summaries are available in Bahasa Indonesia	English	French and Spanish.
2021	Global Canopy Programme

TYPE	PURPOSE
Sourcebook	Providing general guidance and decision support on financing options for biodiversity

STRUCTURE AND FUNCTION

The publication introduces an updated overarching framework that organizes financial mechanisms into five categories:

1. Revenue generation
2. Better delivery
3. Expenditure realignment
4. Avoidance of future expenditures
5. Catalysts

The book outlines mechanisms such as public and private finance, biodiversity offsets, natural climate solutions, green financial products, and sustainable supply chains. It presents case studies and provides criteria for evaluating different financing options.

TYPICAL USE

Review and compare biodiversity financing options, understand biodiversity finance strategies, and support investment decision-making in conservation finance

ADDITIONAL POTENTIAL USES

Policy development, advocacy, training, and capacity development in conservation finance

LEVEL OF APPLICATION

Various (not PA specific). Applicable to government, private sector, financial institutions, and conservation practitioners at national and international levels

SKILLS AND RESOURCES REQUIRED

Basic understanding of biodiversity finance, economic instruments, financial planning, and policy frameworks

STRENGTHS	WEAKNESSES
❖ Provides a comprehensive and structured overview of biodiversity finance mechanisms ❖ Includes case studies and real-world applications ❖ Offers a framework to compare financing mechanisms based on standardized criteria ❖ Aligns biodiversity finance with broader economic and policy frameworks, including climate finance	❖ Does not provide step-by-step methodological guidance on implementing specific financing solutions ❖ Some financing mechanisms require further policy or regulatory development for effective application

TOOL 31 Continued

REFERENCE

Tobin-de la Puente, J., & Mitchell, A.W. (eds.), 2021. The Little Book of Investing in Nature. Global Canopy. Oxford.

VERSIONS AND/OR MODIFICATIONS

The 2021 edition builds upon and replaces The Little Biodiversity Finance Book (2012).

DOCUMENTED EXPERIENCE

Includes a variety of examples and case studies that illustrate different aspects of nature finance

RELATED RESOURCES / FURTHER READING

- Meyers, D., Bohorquez, J., Cumming, T., Emerton, L., Heuvel, O.v.d., Riva, M., and Victurine, R. (2020). Conservation Finance: A Framework, Conservation Finance Alliance, 2020. Accessed on 25 February 2025 at

UNDP The Biodiversity Finance Initiative Platform offering
a) Finance Solutions Catalogue – database of tools
b) Finance Solutions Map – what is implemented where
c) Finance Resources for Biodiversity (FIRE) – a list of funding opportunities

UNEP (2023). The State of Finance for Nature 2023. Accessed on 25 February 2025 at

Tool 32 Guide to Biodiversity Financing for Cities and Regions

TOOL 32 Guide to Biodiversity Financing for Cities and Regions

	English
2023	ICLEI – Local Governments for Sustainability

TYPE	PURPOSE
Guidelines	Guidance on financing urban biodiversity projects

STRUCTURE AND FUNCTION

Guidance document that enables local and regional governments to navigate funding sources, financing instruments, and various stages of project development to finance urban biodiversity conservation projects. The document is complemented by the "Biodiversity Finance Decision-Making Tree" to enable local and regional governments select the most appropriate financing tool for their project.

The publication has four main parts and several sub-sections:

1. Introduction
2. Biodiversity finance landscape
   - 2.1. Definition, trends, overview
   - 2.2. Actors and sources
   - 2.3. Financing biodiversity
3. Accessing finance
   - 3.1. Enabling conditions
   - 3.2. Project development
   - 3.3. Selecting financing options
4. Conclusions and recommendations

The annexes include checklists for stakeholder identification and project feasibility.

TYPICAL USE

Decision-making on financing options for urban biodiversity projects

LEVEL OF APPLICATION

General biodiversity policy, strategy, and project implementation level in a local/regional government context; not PA-specific

SKILLS AND RESOURCES REQUIRED

- Financial management skills to support planning and implementation
- Stakeholder engagement and consultation skills to implement Stage 2 of project development
- Biodiversity project management skills
- Knowledge of the status of biodiversity and the ecology of the region in question, including species composition and distribution, habitat quality, etc.
- Knowledge of relevant laws, regulations, and policies according to the type of project
- Ability to work collaboratively with other stakeholders
- Understanding of environmental assessment processes
- Digital competences
- Ability to assess and mitigate typical risks for biodiversity projects (political and socio-economic risks, technical risks, natural risks, and security risks)
- Knowledge of potential sources of funding and budget management, skills on fundraising and grant writing

TOOL 32 Continued

STRENGTHS	WEAKNESSES
❖ Useful overview of biodiversity financing that covers both public and private sources, and traditional and innovative ones ❖ Separates the project development process into clear and detailed stages ❖ Includes international case studies ❖ Complemented by a practical decision-making tree ❖ Contains many infographics to illustrate concepts	❖ The advantages and disadvantages of the financial instruments are not evaluated ❖ The case studies do not follow a clear and consistent structure, which makes it more difficult to compare the financial instruments ❖ Not PA-specific

REFERENCE

ICLEI – Local Governments for Sustainability. (2023). Guide to Biodiversity Financing for Cities and Regions. Bonn, Germany: ICLEI – Local Governments for Sustainability.

DOCUMENTED EXPERIENCE

Case studies are provided in the publication

RELATED RESOURCES / FURTHER READING

Tool 29 Practice guidance for protected and conserved area finance

Tool 33 Financial sustainability scorecard for national systems of protected areas

Tool 34 PAFSAT: Protected area financing self-assessment tool

Tool 37 Payments for ecosystem services (PES): best practice guide

Tool 38 Tourism concessions in protected areas: guidelines for managers

Tool 39 Developing protected area conservation investment plans – quick reference guide and workbook

3.4.2 | ASSESSING, MONITORING AND DIAGNOSING FINANCING STATUS

TOOL 33	Financial Sustainability Scorecard for National Systems of Protected Areas
	English	French (only the scorecard with no introductory section)	Spanish
2010	United Nations Development Programme (UNDP)

TYPE	PURPOSE
Assessment tool	Simple checklist for recording and diagnosing the current status of PA financing in a country

STRUCTURE AND FUNCTION

Assessment methodology based on a scorecard system to help governments, donors, and NGOs evaluate and record significant aspects of a PA financing system to show its current status and to indicate if it is moving towards an improved financial situation over the long-term. It is intended for a participatory workshop setting.

The publication has four main sections:

1. Introduction
2. Financial Scorecard – Part I – Overall financial status of the protected areas system
3. Financial Scorecard – Part 2 – Assessing elements of the financing system
4. Financial Scorecard – Part 3 – Scoring and measuring progress

The scorecard incorporates financial data based on financial inflows and outflows, as well as other elements of the financing system that are categorised into three key components: (i) legal, regulatory, and institutional frameworks, (ii) business planning and tools for cost-effective management (e.g., accounting practices), and (iii) tools for revenue generation.

TYPICAL USE

- Assessment and monitoring of PA system-level financing for sustainable financial planning
- Often included as a core part of GEF project baselines and targets, and required for GEF project reporting

LEVEL OF APPLICATION

System level

SKILLS AND RESOURCES REQUIRED

- Availability of comprehensive financial data (both inflows and outflows) for the PA system of interest, including government expenditures, PA revenues, and donor funding
- As this tool is designed to be filled in via a consultative process, it is also usually necessary to plan for a roundtable or workshop that brings together different PA and financial planners and managers– this will require additional funding resources and capacity to organise
- Basic understanding and skills related to data and financial management and reporting, and sound numeracy skills
- At least basic computer equipment (personal computers and spreadsheet programmes)

TOOL 33 Continued

STRENGTHS	WEAKNESSES
❖ Provides a simple yet relatively comprehensive approach to assess the financial status of PA systems ❖ Useful for establishing a baseline and monitoring trends in funding amounts. Scoring can be used to track progress or to set goals for it ❖ Suitable for catalysing discussion amongst stakeholders	❖ Requires comprehensive data about a PA system's financing situation ❖ By looking at scores and funding only, more subtle developments in the financing situation may be overlooked or under-appreciated, such as non-monetary aspects or constraints to PA financial sustainability ❖ It does not diagnose or improve financial sustainability or provide a way to identify financing "solutions". This would require a much deeper analysis, e.g., institution and context analysis, decision analysis, and political economy assessments

REFERENCE

Bovarnick, A. (2010). Financial Sustainability Scorecard for National Systems of Protected Areas. 2nd edition. New York. UNDP.

VERSIONS AND/OR MODIFICATIONS

First edition: 2007; second edition (current version): 2010

DOCUMENTED EXPERIENCE

Bovarnick, A., J. Fernandez Baca, J. Galindo, H. Negret (2010). Financial Sustainability of Protected Areas in Latin America and the Caribbean: Investment Policy Guidance. New York and Arlington, Virginia: United Nations Development Programme (UNDP) and The Nature Conservancy (TNC). 162 pp.

Flores, M. & Leiva, J. (2017). Financial Sustainability of the National System of Protected Areas (SNAP), Ecuador. UNDP.

RELATED RESOURCES / FURTHER READING

PA financial sustainability scorecard is usually best-applied in combination with an institutional context analysis or detailed political economy assessment (check the other tools in this section).

Tool 34 PAFSAT: PROTECTED AREA FINANCING SELF-ASSESSMENT TOOL

Tool 39 Developing Protected Area Conservation Investment Plans – Quick Reference Guide and Workbook

Tool 40 Guidebook for the Development of Simplified Business Plans for Protected Areas

TOOL 34	PAFSAT: Protected Area Financing Self-Assessment Tool
	English
2021	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)

TYPE	PURPOSE
Assessment tool	Structured approach to understand the financial condition of a protected area (PA)

STRUCTURE AND FUNCTION

Assessment tool that provides PA managers with a structured approach to collect site-level information on PAs to understand the financial status of a PA. It is designed to be used as part of PA monitoring, evaluation, and planning processes and enables PA managers to prepare "scorecards" on a PA's financial situation, monitor changes over time, compare financial indicators between PAs, and provide diagnostic information to highlight concerns that can be integrated into financing strategies.

The publication has three main parts:

1. Introduction
2. Filling in the datasheets
3. Analysing, presenting, and using the data

The "PA financing self-assessment tool (PAFSAT).xls" Excel spreadsheet should be used with this resource as it contains the datasheets.

The datasheets contain questions tailored to three groups that have a direct influence on the financial status of PA core and buffer zones:

- PA management board
- Finance and budget planners in the PA "parent" agency
- Buffer zone commune authorities

The questions are intended to be answered during meetings with each of the three groups.

TYPICAL USE

- Financial situation assessment and monitoring for PAs
- Financial comparisons between PAs
- Sustainable finance strategy planning for PAs

LEVEL OF APPLICATION

Site level

SKILLS AND RESOURCES REQUIRED

- Access to Microsoft Excel to use the datasheets
- Facilitation and communication skills to conduct the required meetings and discussions, and access to financial resources and facilities to organise these
- Access to relevant financial data on assessed PA for the datasheets
- Knowledge of financial concepts and budgeting processes for the datasheets, or access to relevant experts

TOOL 34 Continued

STRENGTHS	WEAKNESSES
❖ Has a user-friendly and structured approach with detailed practical information ❖ The datasheets are easy to follow, with simple response options and clear instructions ❖ Addresses potential issues with self-reporting biases by making users conduct the assessment in a team instead of individually ❖ Goes beyond assessing quantitative financial data and examines other aspects such as constraints and enabling conditions to reflect the multidimensional nature of financial sustainability in PAs	❖ Since the tool was developed for Vietnam, some aspects of the datasheets may need to be revised before the tool can be used in other geographic contexts, though it is still mostly broadly applicable ❖ Does not include further guidance on next steps based on the potential results of the scorecard

REFERENCE

Emerton, L. and Bùi, T.H.L.. (2021). PAFSAT: protected area financing self-assessment tool. Hanoi, Viet Nam: GIZ.

DOCUMENTED EXPERIENCE

Case studies on the application of PAFSAT can be found in separate publications:

Site profile: Bidoup Núi Bà National Park

Site profile: Cát Tiên National Park

Site profile: Thần Sa-Phượng Hoàng Nature Reserve

Site profile: Trạm Tấu Protection Forest

RELATED RESOURCES / FURTHER READING

PAFSAT can be applied as an add-on or plug-in alongside these other tools:

Tool 29 Practice guidance for protected and conserved area finance

Tool 33 Financial sustainability scorecard for national systems of protected areas

Tool 43 Management effectiveness tracking tool (METT) and METT handbook

Tool 52 Protected Areas Benefits Assessment Tool + (PA-BAT+)

Tool 53 Social assessment for protected areas (SAPA)

Rapid assessment and prioritization of protected areas management (RAPPAM)

3.4.3 | SPECIFIC FINANCING INSTRUMENTS

TOOL 35	Securing Sustainable Financing for Conservation Areas
	English	Spanish
2021	Amazon Sustainable Landscapes Program WWF

TYPE	PURPOSE
Guideline and framework document	Providing a structured approach for securing long-term financing for large ecosystems, particularly through the Project Finance for Permanence (PFP) model

STRUCTURE AND FUNCTION

The document is structured around the Project Finance for Permanence (PFP) model, which integrates financial planning, governance, and stakeholder engagement to secure long-term financing for national protected area systems or sub-sets of such systems.
The model consists of four phases:

1. Assessment phase: Identifying feasibility and enabling conditions for a PFP.
2. Design phase: Establishing governance, financial mechanisms, and conservation plans.
3. Implementation phase: Ensuring fund disbursement, monitoring, and long-term sustainability.
4. Case studies: Examples from Brazil, Colombia and Peru.

TYPICAL USE

- Conservation actors designing and implementing long-term sustainable financing strategies for conservation areas
- Governments, NGOs, and donors structuring conservation finance initiatives

ADDITIONAL POTENTIAL USES

- Evaluation of existing conservation financing structures
- Capacity development for stakeholders involved in conservation finance
- Strategic planning for sustainable conservation funding models

LEVEL OF APPLICATION

National and regional conservation areas

SKILLS AND RESOURCES REQUIRED

- Understanding of legal and policy frameworks
- Financial planning expertise
- Stakeholder negotiation and institutional governance capabilities
- Conservation management knowledge

STRENGTHS	WEAKNESSES
- Clear step-by-step guidance on building an overarching financial model - Includes real-world case studies of successful PFP initiatives - Addresses both financial and governance aspects of conservation funding	- Focuses heavily on the PFP model, which may not be applicable in all conservation contexts - Requires significant upfront investment and political commitment, which may be a barrier in some countries

REFERENCE

- Cabrera, H. et al. (2021). Securing Sustainable Financing For Conservation Areas: A Guide To Project Finance For Permanence. Washington D.C. Amazon Sustainable Landscapes Program And WWF. 107pp. Accessed on 25 February 2025

TOOL 35 Continued

DOCUMENTED EXPERIENCE

Includes detailed case studies from Brazil, Colombia and Peru and additional examples from Bhutan and other countries

RELATED RESOURCES / FURTHER READING

Tool 34 PAFSAT: Protected Area Financing Self-Assessment Tool

IUCN (2023). Sustainable investing in protected areas and biodiversity. Key enabling conditions in policy, law and institutions. Accessed on 25 February 2025 at

TOOL 36	Practice Standards for Conservation Trust Funds
	English	French	Spanish
2020	Conservation Finance Alliance (CFA)

TYPE	PURPOSE
Standards and good practice guidelines	Improving the design, management, and monitoring/evaluation of CTFs, based on voluntary standards

STRUCTURE AND FUNCTION

The publication is divided into three main parts:
a) an introductory section with a "how-to-use"-guide and an overview table of the standards,
b) a section called "expanded standards" with detailed supporting information on each standard and
c) a section of five annexes with additional information.

The standards are organized into seven core areas:
- Governance (10 standards)
- Institutional Effectiveness (8 standards)
- Programs (12 standards)
- Administration (12 standards)
- Asset Management (10 standards)
- Resource Mobilization (9 standards)
- Risk Management and Safeguards (7 standards)

Integrated into those areas are four cross-cutting themes with standards for:
- Communications
- Human resources
- Monitoring and Evaluation
- Technology

The annexes include guidance on prioritisation, a table comparing the 2014 and 2020 Practice Standards and a summary of the standards for the cross-cutting themes.

An assessment of a CTF against the Practice Standards can be carried out with the help of a separately available Excel assessment sheet and the Self-Assessment Tool Manual (see Further reading below).

TYPICAL USE

- Conservation professionals drawing orientations for the design, management, monitoring, and evaluation of CTFs
- Assessing existing CTFs against the standard
- Not designed or meant to be used as a certification tool in their current form

LEVEL OF APPLICATION

Site and system level

SKILLS AND RESOURCES REQUIRED

- Involvement with a CTF. The Standards are most relevant to organisations which either run a CTF or have the capacity and intention to do so
- Other specific skills and resources depend on which standards are applied to fit particular needs; in general, this will involve management and financial planning skills, and related application costs

TOOL 36 Continued

STRENGTHS	WEAKNESSES
❖ Broad and comprehensive thematic focus ❖ Explains the reason for each standard ❖ Provides practical considerations for each standard based on practices that have been successfully used by CTFs ❖ Provides detailed guidance on key elements of CTFs and in which documents of a CTF these might be evidenced ❖ Contains several useful and detailed Annexes to support the Standards	❖ Does not provide a detailed methodology on how each of the standards can be met ❖ Does not provide supporting case studies based on experiences from the previous version of the Standards ❖ Lengthy document (over 250 pages) and does not include a clear up-front summary with the key takeaways, which makes it difficult for readers to easily assess the content

REFERENCE

Bath, P., Luján-Gallegos, V. & Guzmán-Valladares A. (2020). **Practice Standards for Conservation Trust Funds – 2020 edition**, Conservation Finance Alliance, New York.

VERSIONS AND/OR MODIFICATIONS

Previous version:
Spergel, B. & Mikitin, K. (2014). **Practice Standards for Conservation Trust Funds:** Conservation Finance Alliance. 113 pp.
Differences to the 2020 edition are mapped in Annex 4.

DOCUMENTED EXPERIENCE

Berghöfer, A. et al. (2017). Sustainable financing for biodiversity conservation: A review of experiences in German development cooperation, UFZ Discussion Papers, No. 1/2017, Helmholtz-Zentrum für Umweltforschung (UFZ), Leipzig. 143 pp. Accessed on 19 September 2025 at
See also experiences from German development cooperation presented in **chapter 5**

RELATED RESOURCES / FURTHER READING

The Conservation Finance Alliance's "Self-Assessment Tool for Conservation Trust Funds" - a user-friendly and dynamic instrument that allows Conservation Trust Funds (CTFs) to periodically assess their performance to increase their impact on global biodiversity conservation effort. Available in English, Spanish and French at:
Recorded webinars:

Monteiro, C. (2024). **Conservation Trust Funds, Factsheet 5. Sustainable Finance Factsheets Series.** IUCN WCPA Sustainable Finance Specialist Group.

Bath, P., Guzmán-Valladares, A., Luján-Gallegos, V. and Mathias, K. (2020). **Conservation Trust Funds 2020: Global Vision, Local Action.** Conservation Finance Alliance, New York.

Global Environment Facility (1998). **Evaluation of Experience with Conservation Trust Funds.**

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) (2014). **Sustainable Financing of Protected Areas: Conservation Trust Funds and Projects.** Comparative Advantages.

Association for the Sustainable Financing of Mediterranean MPAs (2019). **Gender Mainstreaming Plan for the M2PA. Mediterranean Environmental Fund Initiative. Mainstreaming gender concerns across governance, administration and granting levels of the fund.**

Moye, M., Nazerali, S. (2019). **Road Map for Establishment and Operation of a Mozambique Conservation Trust Fund.** Conservation Finance Alliance (CFA).

TOOL 37	Payments for Ecosystem Services (PES): A Best Practice Guide
	English
2013	Department for Environment, Food & Rural Affairs (UK)

TYPE	PURPOSE
Guidelines	Best practice guidance on designing and implementing Payments for Ecosystem Services (PES) schemes

STRUCTURE AND FUNCTION

Guidance document that provides the key participants in a PES scheme (e.g., buyers, sellers, intermediaries, and knowledge providers) with best practices and steps to implement PES schemes.

The publication has three main parts:

- Part 1. Introduction to PES including the key principles and concepts which underpin scheme development, and provides a useful resource for those seeking an overview
- Part 2. Step-by-step advice on designing and implementing PES schemes with references to case studies
- Part 3. Provides further information and resources

TYPICAL USE

Design and implementation of PES schemes

LEVEL OF APPLICATION

Site and system level

SKILLS AND RESOURCES REQUIRED

- Knowledge of or access to data on biophysical information (status and trends in the flow of ecosystem services), supply and demand for the ES, and key stakeholders (e.g., providers, beneficiaries, intermediaries) to support planning and implementation
- Skills related to ecosystem services assessments and valuation, stakeholder assessment and management, negotiation, monitoring and evaluation, and financial planning to support implementation

STRENGTHS	WEAKNESSES
- Clear methodological guidance for PES schemes - Provides key questions for buyers and sellers in the process of establishing a PES scheme	- Includes examples mainly from industrialized countries

REFERENCE

Smith, S., Rowcroft, P., Everard, M., Couldrick, L., Reed, M., Rogers, H., Quick, T., Eves, C. and White, C. (2013). Payments for Ecosystem Services: A Best Practice Guide. Department for Environment, Food and Rural Affairs, London.

DOCUMENTED EXPERIENCE

Examples are included in the publication and case studies are compiled in a separate Annex

TOOL 37 Continued

RELATED RESOURCES / FURTHER READING

Wunder, S. (2005). Payments for environmental services: Some nuts and bolts. Occasional Paper No. 42. CIFOR.

Forest Trends & The Katoomba Group. (2008). Payments for Ecosystem Services. Getting Started: A Primer. Forest Trends & The Katoomba Group.

Forest Trends & The Katoomba Group. (2010). Payments for Ecosystem Services: Getting Started in Marine and Coastal Ecosystems: A Primer. Forest Trends & The Katoomba Group.

Fripp, E. (2014). Payments for Ecosystem Services (PES): A practical guide to assessing the feasibility of PES projects. Bogor, Indonesia. CIFOR.

Greiber, T. (Ed) (2009). Payments for Ecosystem Services. Legal and Institutional Frameworks. Gland, Switzerland. IUCN. xvi + 296 pp.

TOOL 38	Tourism Concessions in Protected Natural Areas: Guidelines for Managers
	English
2014	United Nations Development Programme (UNDP)

TYPE	PURPOSE
Guidelines	Guidance on developing and managing tourism concessions

STRUCTURE AND FUNCTION

Guidance document that provides PA agency managers, planners, and staff, local communities who live around PAs, and concessionaires who run their businesses in PAs with a comprehensive collection of accumulated knowledge, lessons, and experiences on tourism concession management. Guidance is provided on topics ranging from planning and implementing concessions to environmental impact assessment and monitoring performance of concessions in the field. The publication has twelve main parts:

Chapter One: Getting the foundation right
Chapter Two: Concessions in a development context
Chapter Three: Planning for concessions
Chapter Four: Environmental Impact Assessment
Chapter Five: Awarding business opportunities
Chapter Six: Doing the deal – fees and contracts
Chapter Seven: Monitoring performance in the field
Chapter Eight: Managing the concession business and other resource use concessions
Chapter Nine: Staff capability
Chapter Ten: A quality visitor experience through concessionaires and interpretation
Chapter Eleven: What operators think
Chapter Twelve: Going the extra mile

The appendices can be downloaded separately; the tools provided in the appendix include, for example, model texts on concession law, regulation and policies, checklists to identify and mitigate potential effects of proposed concession activities, a competence self-assessment tool for concession staff or a valuation form for clients of concessionaires.

TYPICAL USE

- Robust concession system development
- Improving concession system management

LEVEL OF APPLICATION

Site or system level

SKILLS AND RESOURCES REQUIRED

- Experience in financial management, legal and contract design, planning processes, and basic computer skills to develop a tourism concession system
- Knowledge of environmental impact assessment (EIA), monitoring, and compliance processes, incentives, law and policy, tourism operations, and data management to work in and run a tourism concession
- Good relationship-building skills to engage tourists and other stakeholders
- Expertise or access to experts to assess the project from different perspectives (socio-political, socio-ecological, and market needs)

TOOL 38 Continued

STRENGTHS	WEAKNESSES
❖ Includes many detailed case studies with lessons learned ❖ Presents concessions as only one part of a sustainable financing plan ❖ Provides the concessionaire's perspective, not only that of PA managers ❖ Specifically addresses the challenges of developing countries, including capacity development needs	❖ Lengthy document (over 300 pages) and does not include a clear up-front summary with the key takeaways, which makes it difficult for readers to easily assess the content

REFERENCE

Thompson, A., Massyn, P.J., Pendry, J., Pastorelli, J. (2014). **Tourism Concessions in Protected Natural Areas: Guidelines for Managers.** United Nations Development Programme. 302 pp.

DOCUMENTED EXPERIENCE

Case studies are included in the publication

RELATED RESOURCES / FURTHER READING

Thompson, A., Massyn, P.J., Pendry, J., Pastorelli, J. (2014). **Tourism Concessions in Protected Natural Areas: Appendices**. United Nations Development Programme. 51 pp.

Spenceley, A., Snyman, S., Eagles, P. (2017). **Guidelines for tourism partnerships and concessions for protected areas: Generating sustainable revenues for conservation and development.** Report to the Secretariat of the Convention on Biological Diversity and IUCN. 60 pp.

Synman, S. 2024. **Tourism Concessions, Factsheet 2.** Sustainable Finance Factsheets Series. IUCN WCPA Sustainable Finance Specialist Group.

World Bank Group. (2016). **An introduction to tourism concessioning: 14 characteristics of successful programs**. World Bank Group. 32 pp.

3.4.4 | BUSINESS PLANNING

TOOL 39	Developing Protected Area Conservation Investment Plans: Quick Reference Guide and Workbook
	English
2018	Wildlife Conservation Society (WCS) Myanmar

TYPE	PURPOSE
Guidelines	Guidance on creating conservation investment plans (CIPs) for protected areas

STRUCTURE AND FUNCTION

Guidance document that provides PA planners and managers with a step-by-step framework to develop CIPs to give a picture of a PA's financing rationale, needs, anticipated outcomes, and a way to communicate these to governments, potential funders, and other stakeholders.

The publication provides context on CIPs and outlines seven steps to develop them, including guidance, key questions, and tables to record information for each step:

1. Reviewing the financing status & context
   What are the key financial constraints, opportunities and risks to effective PA management?
2. Calculating management plan costs
   What will the management plan and biodiversity conservation cost, and for whom?
3. Assessing funding needs & gaps
   What funds are available, how much is still needed, what are the other financial conditions for effective management?
4. Identifying new financing sources
   What potential new revenues, funders and other financial instruments can be developed to meet these needs?
5. Developing investment packages
   What is the best way of organizing and presenting funding needs to potential investors and budget holders?
6. Designing the strategy for engagement
   How and to whom should the CIP be communicated, what are the best means of engagement and most strategic entry points?
7. Setting targets & actions for delivery
   What needs to be done to secure funding and financial sustainability, when and by whom?

TYPICAL USE

CIP development to ensure that the right financial and funding conditions are provided to support the management plan

LEVEL OF APPLICATION

Site or system level

SKILLS AND RESOURCES REQUIRED

- Stakeholder engagement and facilitation skills
- Detailed expenditure and cost figures from both the annual PA budgets and the management plan
- Funding resources and planning skills to organise brainstorming meetings or workshops for CIP development

TOOL 39 Continued

STRENGTHS	WEAKNESSES
❖ Provides a clear, hands-on, and stepwise approach to develop a CIP ❖ Simple and practical, usually no external expertise needed ❖ Includes strategy development (e.g., investment packages and marketing)	❖ Is supposed to be an integrated part of the PA management planning process, but might lead to separate exercises in some cases ❖ Does not provide case studies or links to further information

REFERENCE

Emerton, L., Tizard, R. and Htun, S. (2018). Developing Protected Area Conservation Investment Plans – Quick Reference Guide and Workbook. WCS Myanmar, Yangon.

RELATED RESOURCES / FURTHER READING

Tool 40 Guidebook for the Development of Simplified Business Plans for Protected Areas.

TOOL 40	Guidebook for the Development of Simplified Business Plans for Protected Areas
	English	French	Portuguese
2012	Fondation Internationale du Banc d'Arguin (FIBA)

TYPE	PURPOSE
Guideline and summary collection of methods	Guidance to PA managers for development of simplified PA business plans

STRUCTURE AND FUNCTION

Guidebook on simple PA business planning, including general sections and step by step guidance on developing a simple PA business plan. The guidebook was originally developed for western Africa, but is applicable more widely.

General sections:
- Role of business plan;
- Main steps in completing a simple business plan;
- Guidance on developing and completing MS Excel files for PA business planning;
- Further reading;
- Sample table of content of a PA business plan.

Stepwise guide (each step with sub-steps and summaries of specific methods that can be used):
1. Determining long-term financial needs.
2. Presentation of existing funding sources.
3. Identifying other possible funding (including discussion of existing funding mechanisms).
4. Identifying and setting up Payments for Environmental Services (PES) schemes.

The last step is optional as applicability of PES depends on the given PA.

TYPICAL USE

PA business planning in resource limited situations

ADDITIONAL POTENTIAL USES

Assessment of existing business plans

LEVEL OF APPLICATION

Individual PAs (possibly sets of several of them)

SKILLS AND RESOURCES REQUIRED

- Medium computer literacy including sound MS Excel skills
- Information about funding and likely costs for the given PA
- Sound numeracy skills
- Capacity and resources to conduct planning workshops

TOOL 40 Continued

STRENGTHS	WEAKNESSES
❖ Good simple overview with easy how-to guidance ❖ Simple language and good step-by-step structure	❖ Relatively general ❖ Quite a lot of text is dedicated to summarizing specific PA funding mechanisms/approaches which are described more comprehensively elsewhere ❖ Relatively text heavy for a methodological guide ❖ PES is not a part of PA business planning and the section could be misinterpreted

REFERENCE

Landreau, B. (2012). **Guidebook for the Development of Simplified Business Plans for Protected Areas**. Dakar, Senegal: FIBA. Accessed on 08 May 2025.

RELATED RESOURCES / FURTHER READING

A CD with sample excel files for business planning was created in 2012, but is currently not publicly available

3.5 CAPACITY DEVELOPMENT

TOOL 41 A global register of competences for protected area practitioners

	Burmese	English	French	Nepali	Spanish
2016	International Union for Conservation for Nature (IUCN) World Commission on Protected Areas (WCPA)

TYPE	PURPOSE
Directory and guidelines	Guidance on promoting and improving the professionalisation of PA management and the performance of PA organisations and personnel

STRUCTURE AND FUNCTION

Guidance document that provides people whose work involves PAs, including trainers, management teams, non-government organisations (NGOs) and more, with a directory of competences to build capacity and improve standards and performance in these areas following a "competence approach".

The publication has four main parts:

1. Background and overview
2. The competence register explained
3. How to use the competence register
4. The competence register

The competence register is a list of 300 skills and competences regularly required in PAs and in associated work around the world. These are organised in 15 categories within three groups:

1. Planning, management and administration
2. Applied protected area management
3. General personal competences

For each competence, specific needs are described for four staff levels of PA practitioners from "Executive" to "Senior Manager", "middle manager/technical specialist" and "Skilled Worker". Some competences are only relevant to some levels.

The competence register is also available in an Excel spreadsheet format

TYPICAL USE

- Management planning
- Skills assessment
- Staffing structure organisation
- Staff training and capacity building prioritisation
- Training curricula and course development
- National occupational definitions and standards development
- Job description development

LEVEL OF APPLICATION

Site and system level

TOOL 41 Continued

SKILLS AND RESOURCES REQUIRED

- Access to a computer, laptop, or tablet, Microsoft Excel, and intermediate computer literacy to use to the Excel worksheet
- Knowledge of PAs and conservation to understand technical terminology
- Additional skills and resources will depend on the intended use of the publication, such as management experience, training skills, funding for programme development, and more

STRENGTHS

- Can be flexibly adapted and used according to local needs, contexts, working practices and cultures
- Can be used at different levels of detail
- Low cost
- Provides guidance for every field of application (see typical and additional potential uses)
- The Excel Workbook includes assessment and certification examples for every competence

WEAKNESSES

- As the tool is intended to be applicable in a wide range of contexts, the formulation of the competences and examples provided require a certain ability of abstract thinking to be able to adapt them to the specific context and may need translation into context-specific terms by a facilitator during the assessment
- Due to the rather technical vocabulary, its application might be challenging for people without a good command of one of the languages it is available in

REFERENCE

Appleton, M.R. (2016). A Global Register of Competences for Protected Area Practitioners. Excel Workbook. IUCN, Gland, Switzerland.

DOCUMENTED EXPERIENCE

Appleton, M. R., Toussaint, A., Daltry, J.C. (2017). From forestry to protected area and ecosystem management: organisational change in Saint Lucia, West Indies. PARKS Vol. 23.2. 51–62 pp.

Indo-German Biodiversity Programme (GIZ): Training materials under the Project –'Conservation and Sustainable Management of Coastal and Marine Protected Areason Coastal and Marine Protected Areas (CMPA) and on Human Wildlife Conflict (HWC). Accessed on 05 February 2025

RELATED RESOURCES / FURTHER READING

Stolton, S., Timmins, H.L., Dudley, N., Appleton, M., Álvarez Malvido, M., Singh, R., Tao, B., Biegus, O., Moreto, W., Itela, S. & Mupeta-Muyamwa, P. (2024). Building trust between rangers and communities, IUCN WCPA Good Practice Guidelines Series No. 35. IUCN.

Kopylova, S. L., Danilina N. R. (Editors) (2011). Protected Area Staff Training: Guidelines for Planning and Management. Gland, Switzerland: IUCN. xiv + 102 pp.

The competences can be cross-referenced with various widely used plans and tools that support the improvement of PA standards, e.g., with the Management Effectiveness Tracking Tool (METT) Tool 43.

TOOL 42 Ranger Code of Conduct

Assamese | Arabic | Chinese | Dutch | English | French | Malay | Malayalam | Nepali | Portuguese | Spanish | Swahili | Urdu

2021 | International Ranger Federation (IRF)

TYPE

Code of Conduct

PURPOSE

Providing an operational framework for rangers, their employers and stakeholders to professionalise the ranger workforce, maintaining high standards of practice and ethics among rangers and inspiring to excellence

STRUCTURE AND FUNCTION

The Code of Conduct is divided into three sections and the appendix.

1. Ranger Definition: This section describes in a defining manner the ranger profession including services typically provided by rangers. Different titles for rangers are listed in the appendix.

2. Ranger Values: This section offers short normative statements on
   - natural and cultural values
   - principles and accountability
   - excellence
   - collaboration, loyalty and leadership
   - respect
   - safety
   - fortitude

3. Code of Conduct: This section provides a collection of committing statements written in the first person perspective covering the topics of: Professionalism, human rights and dignity, integrity and transparency, legality, confidentiality, safety, response to violations of this code of conduct and additionally, to be used where relevant, also the topics use of force, protection of persons, firearms.

The Appendix provides other common titles for rangers and examples of non-English titles for rangers.

TYPICAL USE

Used by rangers to reflect upon their roles and to develop own individual or group commitments to professional and ethical conduct of their work. Can also be used by protected area managers to promote professional and ethical conduct among their workforce and show their commitment to it

LEVEL OF APPLICATION

Site or system level

SKILLS AND RESOURCES REQUIRED

- Ability to translate the CoC into the specific context and adapt it to the ranger role
- Potentially financial resources to organize workshops to familiarize rangers with the CoC

TOOL 42 Continued

STRENGTHS	WEAKNESSES
❖ Concise and at the same time comprehensive ❖ Developed in an iterative consultation process with a wide array of stakeholders from 51 countries. It was developed by rangers for rangers. ❖ Supplemented by the CoC guidelines by IRF which provide additional guidance on how to apply the CoC ❖ Available in many languages and due to broad scope applicable to all rangers ❖ Ranger groups can adapt the CoC to their specific context	❖ Some sections may not be relevant to all rangers ❖ The CoC has a broad perspective and its implementation by a ranger or ranger group needs effort and imagination

REFERENCE

International Ranger Federation. (2021). Ranger Code of Conduct. Version 1.0. International Ranger Federation, Victoria, Australia.

VERSIONS AND/OR MODIFICATIONS

Version 1.0

RELATED RESOURCES / FURTHER READING

Code of Conduct Guidelines, English version. Also available in many other languages on the URSA Resources Webpage

URSA Resources Webpage:
Resources - URSA | Universal Ranger Support Alliance

IRF Website:

Ranger Code of Conduct Virtual Workshop Series:

2019 Chitwan Declaration:

Global Ranger Competences:

Hyères Declaration (various languages available on URSA), English:

A summary framework for effective engagement of IPLCs and rangers:

Lotter, W.D., Roberts, K., Singh, R., Clark, K., Barlow, C., de Kock, R., Steiner, K., Mander, D., Khadka, M. and Guerrero, J. (2016): Anti-poaching in and around protected areas: Training guidelines for field rangers. Best Practice Protected Area Guidelines. Series No. 01. Accessed on 05 February 2025

H. Karki-Chettri, R. Small & E. Watson (2024) Fauna & Flora Ranger Training: Human rights in conservation (a facilitation and training manual). Fauna & Flora, Cambridge.

WCS (2023): Human Rights Training Manual for Rangers. For ranger trainers and supervisors in Central Africa. (available in French and English)

3.6 ASSESSMENT, MONITORING, EVALUATION

3.6.1 MANAGEMENT EFFECTIVENESS ASSESSMENT

TOOL 43	Management Effectiveness Tracking Tool (METT)
	Albanian	English	Russian	Spanish
2021	WWF

TYPE	PURPOSE
Assessment tool	Method to identify progress on management effectiveness in Protected Areas

STRUCTURE AND FUNCTION

Assessment methodology that enables practitioners to evaluate the effectiveness of management activities in individual PAs over time in a relatively short time frame based on a series of questions.

The assessment has three main components:

- A data sheet that collects basic information on the assessed PA
- A series of questions to assess management based on the framework for PA management assessment developed by the IUCN World Commission on Protected Areas. Most of the questions have four options and assessors choose the one that most closely matches the situation in their PA
- Sheets to fill in additional information on each question, including data sources where possible, justification for the answers given, and action needed if the score is less than perfect, which is used to develop a full action plan

Results, including graphs, based on the questionnaire responses are automatically generated in the Excel workbook.

TYPICAL USE

- Tracking of management effectiveness trends of individual PAs or PA-related projects over time
- Identification and prioritisation of key management issues in a specific PA, and how to resolve them in an adaptive management context
- Identification of appropriate follow-up steps, particularly at the site level
- Reporting of management effectiveness for a PA system (e.g., proportion of PAs that have undergone an assessment, and the scores achieved)
- Collective reflection and learning of PA management teams about their own PAs

SKILLS AND RESOURCES REQUIRED

- Information about and an understanding of the aspects addressed in the METT questionnaire
- Capacity and financial resources to run small two-day long METT workshops with a team of PA staff (and ideally, other stakeholders)

TOOL 43 Continued

STRENGTHS	WEAKNESSES
❖ Simple and relatively fast implementation ❖ Universal applicability ❖ Produces a score that can be monitored over time ❖ Relatively high standardisation and reproducibility (guiding questions for scoring system) ❖ Complementarity with IUCN PAME framework (Hockings et al. 2006) ❖ Wide acceptance as a standard tool	❖ Limited comparability between PAs possible due to a lack of required and standardised indicators ❖ Lack of integration with the strategic management frameworks used in sites ❖ Issues of stakeholder participation and governance are only addressed to a very limited extent although they often have a large influence on overall effectiveness of a PA ❖ Gives only limited weight to outcomes, although these are key for adaptive management ❖ Weak at discovering whether that management is ultimately successful in terms of nature conservation and other values

REFERENCE

Stolton, S., Hockings, M., & Dudley, N. (2020). Management Effectiveness Tracking Tool. Reporting Progress at Protected Area Sites: Fourth Edition. Gland, Switzerland: WWF.

VERSIONS AND/OR MODIFICATIONS

First published in 2002, with several versions developed since. In 2020, METT-4 (current version) was released. For the first time, METT-4 is presented as an Excel tool.

A version for MPAs has been developed based on the first edition of the METT, published by the World Bank (Staub & Hatziolus 2004).

DOCUMENTED EXPERIENCE

Case studies are included in the METT-4 Handbook

Management Effectiveness (PAME) assessments using METT

PANORAMA-SOLUTIONS: Closing the gap between strategic and operational planning for protected areas

Transboundary strategy for communication about nature conservation

RELATED RESOURCES / FURTHER READING

Guidance:

- METT-4 Handbook: a guide to using the Excel version of the METT-4 (доступно на русском языке, descargar el manual en español)
- Introductory video: a 30-minute training video on using the METT-4 Excel tool
- Guidance for translating and adapting METT-4
- Technical help: how to enable macros permanently in a trusted location

Key webinars on the METT: Introduction to the METT-4 and Using the new METT-4

Best practices for implementing the METT are summarised in a paper.

TOOL 44	How is your MPA doing?
	Arabic	English	French	Italian	Spanish
2004	IUCN, WWF and US NOS/NOAA

TYPE	PURPOSE
Guideline including a collection of indicators	Design and planning of PAME evaluations for MPAs

STRUCTURE AND FUNCTION

- Broadly builds on IUCN PAME framework (Hockings et al. 2000)
- 2 sections: (1) sequence of steps in PAME evaluation (2) indicators
- Steps in MPA PAME assessment: (1) indicator selection, (2) evaluation planning for selected indicators, (3) data collection and analysis, (4) communication of results and input into adaptive management
- Indicator set: 10 biophysical, 16 socio-economic, 16 on governance
- Each indicator discussed in detail (definition, purpose, data collection, analysis and interpretation, strengths and limitations, requirements and outputs, references)
- Guidance supported by flow charts of evaluation process and worksheet (checklist of steps to be completed)

TYPICAL USE

Design and planning of marine MPA management effectiveness assessments

LEVEL OF APPLICATION

Individual PAs (MPAs)

SKILLS AND RESOURCES REQUIRED

- Understanding of site(s) and basic understanding of ecology and social sciences present within team
- MPA has existed for at least two years, has explicitly stated goals and objectives (e.g. in management plan)
- Evaluation costs depend on indicators chosen and assessment protocol (e.g. intensity of data collection). Some indicators require considerable expertise and equipment for their use. These are discussed in the indicator sections

STRENGTHS	WEAKNESSES
❖ Detailed instructions for indictor use and interpretation ❖ Designed for close integration with management goals and objectives of MPAs in question ❖ Wide range of indicators including biophysical, socio-economic and governance related ❖ High standardization of indicators and resulting replicability makes tool suitable for trend monitoring and inter-site comparison, as well as system level synthesis of findings ❖ Broad complementarity with IUCN PAME framework (Hockings et al. 2006) ❖ Concise documentation and referencing of guidelines	❖ Relatively high requirements on skills, effort, and costs associated with indicator-based PAME evaluations ❖ Sustained implementation (e.g., in a monitoring context) requires ongoing effort and resource input Outcome-focused approach makes the evaluation highly dependent on the availability and quality of monitoring data. ❖ Large number of potential indicators can lead to inconsistent selection by individual PA managers, reducing comparability across different sites. ❖ Further standardisation needed for some indicators

TOOL 44 Continued

REFERENCE

Pomeroy, R.S., J. E. Parks, L. M. Watson (2004). **How is your MPA doing? A Guidebook of Natural and Social Indicators for Evaluating Marine Protected Area Management Effectiveness.** Gland, Switzerland and Cambridge, UK: IUCN.

VERSIONS AND/OR MODIFICATIONS

Pomeroy, R. S., L. M. Watson, J. E. Parks, G. A. Cid (2005). **How is your MPA doing? A methodology for evaluating the management effectiveness of marine protected areas.** Ocean & Coastal Management 48 (7–8): 485–502 pp.

DOCUMENTED EXPERIENCE

Review of early global post-launch experience summarized by Parks, J. (2009). **Lessons Learned from "How Is Your MPA Doing?" Considerations for evaluating networks of MPAs.** The Nature Conservancy.

Lopez, A. C. (2015). **A holistic strategy for Protected Area management. Panorama – solutions for a healthy planet.**

Zeng, X., Chen, M., Zeng, C., Cheng, S., Wang, Z., Liu, S., & Zou, C. (2022). **Assessing the management effectiveness of China's marine protected areas: Challenges and recommendations.** Ocean & Coastal Management, 224, 106172 p.

Fox, H. E., Holtzman, J. L., Haisfield, K. M., McNally, C. G., Cid, G. A., Mascia, M. B., Parks, J. E., Pomeroy, R. S. (2014) **How Are Our MPAs Doing? Challenges in Assessing Global Patterns in Marine Protected Area Performance, Coastal Management,** 42:3, 207-22 pp.

TOOL 45	Enhancing our heritage toolkit 2.0: assessing management effectiveness of World Heritage properties and other heritage places
	English | Polish
2023	UNESCO, ICCROM, ICOMOS, and IUCN

TYPE	PURPOSE
Methodology and toolkit	Self-assessment methodology and tools for evaluating management effectiveness in World Heritage properties or other heritage sites

STRUCTURE AND FUNCTION

Publication that provides World Heritage site managers with a four-phase self-assessment methodology (1. preparing, 2. gathering information, 3. implementing, and 4. reporting and acting on findings) and a selection of twelve tools that cover various themes to support management effectiveness evaluations. It can also be applied to other heritage places.

The publication has five main parts:

1. Introduction to the Enhancing our heritage toolkit 2.0
2. Using this toolkit
3. How to start a management effectiveness assessment
4. The main phases of the assessment
5. The Enhancing our heritage toolkit 2.0 assessment tools

TYPICAL USE

- Management effectiveness evaluations
- Improvement of conservation practices
- Improvement of management processes
- Improvement of resource allocation

LEVEL OF APPLICATION

Site level

SKILLS AND RESOURCES REQUIRED

- Knowledgeable and organised personnel with the skills to support the roles needed in the assessment process, e.g., to form a team for the assessment, act as facilitators, convenors, notetakers, etc. This would include having good communication, problem-solving, analytical, and reporting skills
- Access to relevant documents and data for the worksheets
- Financial resources to organise related meetings and workshops; the number of these needed will depend on the scale and level of the assessment, but a full assessment will take at least five full working days for Phase 3, and an additional final workshop may be needed for Phase 4

STRENGTHS	WEAKNESSES
- Includes a clear step-by-step methodology to apply the toolkit - Includes detailed information on practical implementation - The tools cover a broad range of themes	- Does not include case studies, which were included in the first version - Relatively time-consuming process to complete a full assessment - Does not have clear metrics for overall scoring, which makes it more difficult to compare results

TOOL 45 Continued

REFERENCE

UNESCO, ICCROM, ICOMOS, & IUCN. (2023). Enhancing our heritage toolkit 2.0: assessing management effectiveness of World Heritage properties and other heritage places. UNESCO, ICCROM, ICOMOS, & IUCN. 137 pp.

VERSIONS AND/OR MODIFICATIONS

Enhancing Our Heritage Toolkit (Version 1; 2008)

DOCUMENTED EXPERIENCE

Case studies are included in Version 1

PANORAMA-SOLUTIONS: Interlinking research and practice for improving management

RELATED RESOURCES / FURTHER READING

World Heritage Resource Manual Series:

3.6.2 | GLOBAL PCA PERFORMANCE STANDARDS

TOOL 46	IUCN Green List of Protected and Conserved Areas: Standard
	Albanian	English	French	Malay	Montenegrin	Spanish
2017	International Union for Conservation of Nature (IUCN) and IUCN World Commission on Protected Areas (WCPA)

TYPE	PURPOSE
Standard	Global standard for assessing the effectiveness of protected and conserved areas (PCAs) at delivering successful conservation outcomes

STRUCTURE AND FUNCTION

Global standard that provides assessors and practitioners with an international benchmark to assess the ability of PCAs to deliver successful conservation outcomes through good governance, sound design and planning, and effective management.

The publication has three main parts:

1. Global Standard
2. Generic Indicators and Sample Means of Verification
3. Guidance for Components and Criteria

The Standard contains 17 criteria. Sites that meet all the criteria can apply for certification in the IUCN Green List if they wish to obtain a Green List status. Decisions on awarding the Green List status is taken by the IUCN Green List of Protected and Conserved Areas Committee.

TYPICAL USE

- Gap analysis of performance against the IUCN Green List Standard as a diagnostic tool and improvement towards best practices
- Demonstration of performance and maintaining the capacity of PCAs to deliver conservation results
- Demonstration of meeting global standards as a Green Listed site, if certified

LEVEL OF APPLICATION

Site level

SKILLS AND RESOURCES REQUIRED

- Skills, knowledge, and resources related to the 17 criteria, such as strong PCA management and planning skills, knowledge of equity processes, knowledge of laws and regulations, knowledge of biodiversity conservation, and funding resources for implementation
- For sites that are applying for certification:
  - Mandate to commit to the Standard on behalf of an area's management authority
  - Knowledge and understanding of the IUCN Green List Standard and user manual (and proficiency in one of the languages in which it is available)
  - Resources to conduct site-level stakeholder consultations and host visits of international experts
  - Resources and capacity to prepare and submit a full nomination dossier on how the site meets the criteria of the Standard

TOOL 46 Continued

STRENGTHS	WEAKNESSES
❖ Global, widely supported, increasingly respected, and comprehensive standard for good PCA governance and management ❖ Clear guidance in many languages and support on demand available from IUCN ❖ Relatively lean certification process ❖ Adaptability of indicators for criteria to fit national/regional situations	❖ The Green listing process can take a considerable amount of time (up to several years) and therefore many resources are required for this process ❖ Evidence for meeting some of the criteria (e.g., measures of success) requires considerable data and on-site monitoring systems that do not exist in many PCAs ❖ Some of the generic indicators leave considerable room for interpretation in national adaptations of the Standard, which poses a challenge to the quality assurance mechanisms of the overall programme ❖ For certification, the requirement that the Green List certification needs prior commitment of a whole jurisdiction, including setting-up structures and processes to support implementation, may act as a barrier for managers of individual sites

REFERENCE

IUCN and World Commission on Protected Areas (WCPA) (2018). **IUCN Green List of Protected and Conserved Areas: Standard**, Version 1.1. Gland, Switzerland: IUCN.

VERSIONS AND/OR MODIFICATIONS

Four previous versions: Version 0.1, 0.2, 0.3, and 1.0

DOCUMENTED EXPERIENCE

IUCN Green Listed sites are documented online

PANORAMA-SOLUTIONS:

- SEA Success: The ingredients for an impactful peer-to-peer knowledge exchange visit
- IUCN Green List Standard to promote integrated management of UNESCO multi-designations
- Enhancing access to information for rural communities

RELATED RESOURCES / FURTHER READING

IUCN Green List website

IUCN, World Commission on Protected Areas (WCPA) and Assurance Services International (ASI) (2019). **IUCN Green List of Protected and Conserved Areas: User Manual**, Version 1.2. Gland, Switzerland: IUCN.

3.6.3 | BIODIVERSITY MONITORING AND SURVEILLANCE TOOLS

TOOL 47	Biodiversity Monitoring for Natural Resource Management – an Introductory Manual
	English	French	Spanish
2016	GIZ SNRD Asia

TYPE	PURPOSE
Practical manual and resource book	Providing practical guidance for planning biodiversity monitoring including for selecting indicators and engaging partners. It addresses some of the principal questions, issues and pitfalls in biodiversity monitoring and offers carefully selected references for further reading

STRUCTURE AND FUNCTION

The manual is divided into seven chapters:

1. Introduction (definition and purpose of biodiversity monitoring; international commitments)
2. Selecting suitable indicators (indicator categories and quality)
3. Engaging partners (stakeholder engagement; participatory biodiversity monitoring; other partners)
4. Planning monitoring activities (monitoring types; data acquisition, management and analysis; usage of results)
5. References cited
6. Further resources (adaptive management and opportunistic monitoring; participatory monitoring; selection of monitoring indicators; study design and data analysis; survey methods for specific organism groups; software for data management and analysis)
7. Appendix

TYPICAL USE

Search for overview information and an introduction into how to plan and implement biodiversity monitoring in practice

LEVEL OF APPLICATION

Individual PAs

SKILLS AND RESOURCES REQUIRED

No specific skills required, manual serves as a first introduction to the topic

STRENGTHS	WEAKNESSES
Helps practitioners to get a brief overview of the topic against the background of the overwhelming amount of information available	The manual is only a starting point and doesn't provide in depth information.

REFERENCE

Werner, Florian A. & Gallo-Orsi, Umberto. 2016. Biodiversity Monitoring for Natural Resource Management – An Introductory Manual. GIZ, Eschborn and Bonn, Germany. DOI: 10.13140/RG.2.1.3141.8488/1. 35 pp. Accessed on 08 May 2025.

RELATED RESOURCES / FURTHER READING

A broad collection of further resources (including tools and methodology) is listed in the document under chapter 6.

Wildlife Insights – a platform for sharing and analysing camera trap

Tool 51 A framework for monitoring biodiversity in protected areas and other effective area-based conservation measures: Concepts, methods and technologies

TOOL 48	Community-based Monitoring, Reporting and Verification Know-how: Sharing knowledge from practice
	English
2015	WWF Forest and Climate Programme

TYPE	PURPOSE
Resource compilation	Compilation and evaluation of resources to support community-based monitoring, reporting, and verification of carbon stocks and other forest data

STRUCTURE AND FUNCTION

Resource compilation document that provides REDD+ practitioners, community organisations, civil society, and other stakeholders with an evaluation of tools and approaches, and key lessons to facilitate community-based monitoring processes and similar initiatives.

The publication has seven main parts:

1. What is community-based monitoring, reporting and verification?
2. Tools and approaches
3. Enabling conditions
4. Case study: community-based forest monitoring in Guyana
5. Key takeaways
6. Conclusions
7. Further reading and resources

It describes and assesses nine tools and approaches:

1. Open Data Kit
2. GeoODK
3. Geo-Wiki
4. Moabi DRC
5. Sound recordings
6. Sapelli
7. Cybertracker
8. Interactive Forest Monitoring
9. Participatory mapping and GIS

TYPICAL USE

Community-based monitoring, reporting, and verification of carbon stocks and other forest data

LEVEL OF APPLICATION

Site level

SKILLS AND RESOURCES REQUIRED

- Specific skills and resources depend on the tool and approach chosen; generally, these will require:
  - Knowledge of relevant indicators
  - Data collection and management skills and access to relevant software, applications, and tools
  - A desktop and/or mobile phone

TOOL 48 Continued

STRENGTHS	WEAKNESSES
❖ Developed based on a workshop in which various stakeholders tested and analysed the methods presented based on real world situations ❖ Describes the tools individually and also compares them to other tools in a table ❖ Chosen tools and methods are relatively simple, cost effective, and contribute to community empowerment ❖ Includes lessons learned and enabling conditions	❖ The chosen tools have limitations to types of data that can be collected and often need internet access ❖ Only has one case study ❖ The further reading and resources section is limited despite the introductory nature of the document

REFERENCE

WWF (2015). **Community-based monitoring, reporting and verification know-how: sharing knowledge from practice.** Gland, Switzerland: WWF. 42 pp.

DOCUMENTED EXPERIENCE

One case study included in the publication

RELATED RESOURCES / FURTHER READING

Corrigan C. & Hay-Edie T. 2013. **A toolkit to support conservation by indigenous peoples and local communities: building capacity and sharing knowledge for indigenous peoples and community conserved territories and areas** (ICCAs). UNEP-WCMC, Cambridge.

Further reading and related resources included at the end of the publication.

TOOL 49	SMART (Spatial Monitoring and Reporting Tool)
	Website: English	French	Spanish Training manual: French	Portuguese	Spanish The SMART 7 software can be used in over 10 languages
2024	SMART Partnership

TYPE	PURPOSE
Platform	Suite of related tools to plan, measure, evaluate, and improve the effectiveness of conservation management activities

STRUCTURE AND FUNCTION

Platform that provides practitioners with a set of software and tools to standardise and streamline data collection, analysis, and reporting to support a broad range of conservation management activities, including law enforcement, biodiversity conservation, and natural resources use.

The platform includes several related resources and tools:

- SMART 7 (main tool for data management)
- SMART Mobile (mobile data collection)
- SMART Collect (citizen science and community reporting)
- SMART Connect (data integration)
- Supporting training and technical manuals
- Case studies and webinars
- Resources for various supporting plugins (e.g., an R plugin)

TYPICAL USE

- Monitoring of patrolling and law enforcement by PCA rangers
- Data collection and monitoring of infractions and other information relevant to management (e.g., poached carcasses)
- Monitoring of the state of biodiversity in support of PCA management

LEVEL OF APPLICATION

Site and system level

SKILLS AND RESOURCES REQUIRED

- Standard PC (Linux/Mac or Windows), mobile, and shapefiles for PA boundaries to use the SMART software
- Handheld GPS sets and skills to use them
- Data collection, management, and processing skills
- Financial resources for maintenance and replacement of equipment
- General patrol capacity (including trained staff, equipment, and infrastructure) and adaptive management considerations to conduct law enforcement
- Species identification skills/resources (for biodiversity monitoring applications)

TOOL 49 Continued

STRENGTHS	WEAKNESSES
❖ Open source and freely available in many languages ❖ Scalable and customisable to various locations and contexts ❖ Integration of software, standards, training materials, planning and evaluation functions, analysis and reporting ❖ Standardisation for all aspects of law enforcement monitoring ❖ Extensibility through plug-ins ❖ Community platform for mutual learning ❖ Does not require extensive IT/GIS expertise	❖ Complex with many components; will require time and training to build competence in use (has 11 training modules) ❖ Other OpenROSA- and XLSForm-based mobile data collection tools (e.g., KoBo Toolbox, (geo) ODK) not supported ❖ Data security not yet addressed in SMART in spite of sensitivity of many SMART results

REFERENCE

SMART Partnership. (2024). SMART. Website accessed on 2 Dec 2024 at

VERSIONS AND/OR MODIFICATIONS

Version 1.0.0 was released in 2013; since then, it has been continuously updated. Current version: 7.5.9 (2024).

DOCUMENTED EXPERIENCE

SMART Annual Report 2022 (includes six case studies)

Featured case studies on the SMART website:

Experiences from German development cooperation

PANORAMA-SOLUTIONS:

- SMART: A digital monitoring system for effective management of protected areas
- Intersectoral Collaboration and Conservation Technology Pipelines to Combat Biodiversity Loss in Protected and Conserved Areas of Vietnam
- SMART for Effective Law Enforcement and Wildlife Monitoring in the Sundarbans Mangrove Forest, Bangladesh
- Catalyzing Community-led Conservation to Reduce Deforestation and Biodiversity Loss through an Integrated Ecosystem Approach
- Integration of local knowledge in park management
- SMART approach to improve law enforcement in protected areas
- SMART for improved protected area management in Vietnam

RELATED RESOURCES / FURTHER READING

SMART 7 training manual and modules:

SMART Webinar - Getting started with SMART

SMART Marine Webinar: Implementing SMART in the Marine Environment

TOOL 50	EarthRanger
	English	Support also available in French	Spanish	Swahili
2015	The Allen Institute for Artificial Intelligence (Ai2)

TYPE	PURPOSE
Integrated software solution	Provides management authorities with real-time, spatially explicit data from various sources, and analytical tools for monitoring and surveillance of protected areas

STRUCTURE AND FUNCTION

EarthRanger is an application that combines three fundamental data types: (1) observations, the time-sequential set of linked measurements from a given device; (2) events, singular measurements recorded by a human or device; (3) spatial layers, vector spatial data.

EarthRanger uses an application programming interface, Gundi, which enables data integration from multiple external sources and data collection devices, such as apps, cameras or sensors.

EarthRanger's web interface provides a rich set of tools for data visualisation, collection and editing.

A mobile application, particularly for offline data collection, complements the system.

With these structural features the platform

- provides real-time updates on key metrics, such as wildlife location, ranger patrol activities, and potential threats (e.g. poaching).
- offers mapping and GIS (Geographical Information Systems) tools to visualize data.
- includes tools for processing and analysing data to generate insights such as trend analyses, and creates customizable reports for stakeholders.

TYPICAL USE

- Informing conservation-related operational decisions.
- Used by ecologists and biologists to study wildlife and habitats, and to advocate for their protection.
- Visualizing threats to enhance anti-poaching and security operations.
- Scientific research.
- Reducing human-wildlife conflicts with timely alerts, incident tracking and analysis of migration corridors.
- Identifying infrastructure repair and maintenance needs.

LEVEL OF APPLICATION

Depending on objectives: small projects to government-wide systems

SKILLS AND RESOURCES REQUIRED

- EarthRanger is cloud-based, requires only a computer or a mobile device with internet connection and can be accessed via app or browser.
- An End-User Licence Agreement needs to be concluded with The Allen Institute for Artificial Intelligence (Ai2)
- Deploying EarthRanger entails extensive configuration and orchestration to deploy the core application, API and Web application using multiple services, however, AI2 provides free set-up, deployment and hosting of EarthRanger for conservation, ecological monitoring and protected area management.
- No specialized IT knowledge needed for basic operation and management
- IT knowledge might be needed to use and incorporate data from different sources or further analysis.

TOOL 50 Continued

STRENGTHS	WEAKNESSES
❖ EarthRanger is free to use ❖ Provides a unified, live view of data from multiple sources on an intuitive map, enabling real-time decision-making ❖ Enables real-time monitoring of vast tracts of land with limited resources ❖ EarthRanger is device-agnostic, supporting integration with more than 100 leading hardware, data services, and software providers, such as SMART, allowing users to choose the best tools for their specific conservation needs ❖ Through the mobile offline version, rangers can use the platform in remote areas, making it practical for field operations ❖ Integrates satellite services like Skylight, NASA's FIRMS, and Global Forest Watch ❖ Supports data export in multiple formats and offers APIs for custom development using tools like R, PowerBI or Python ❖ A comprehensive set of training material is freely available on the EarthRanger website in English, Spanish and French ❖ Level of data security, sovereignty and access are flexibly adjustable to needs of the user ❖ Widely used ❖ Wide array of topics can be covered: tracking ranger movements, animal monitoring, human-wildlife conflicts, invasive alien species, illegal fishing, deforestation, encroachment, poaching incidences	❖ While the system is offline-capable, full functionality relies on periodic internet access for data syncing ❖ While being device and data agnostic is an asset, it can complicate device setup, integration, and ongoing diagnostics, requiring specialized knowledge for each compatible system ❖ The accuracy and utility of EarthRanger relies heavily on the quality and consistency of external data sources like satellites, sensors, and manual inputs. Poor data quality can hinder decision-making ❖ Managing and maintaining compatibility with a wide array of hardware and software can be resource-intensive, especially for organizations with limited technical support ❖ Despite having robust security features, including user access controls and data encryption, some aspects should be discussed with the software company to ensure data protection regulations are complied with ❖ The End User Licence Agreement and Data Privacy Policy should be checked carefully by users whether required data sharing arrangement are compliant with own data security policies and those legally applicable in the country

REFERENCE

Allen Institute for AI EarthRanger – Real-time data platform for protected area management. Accessed on 25 July 2025. Available at

VERSIONS AND/OR MODIFICATIONS

Continually updated

DOCUMENTED EXPERIENCE

Success Stories - EarthRanger

PANORAMA-SOLUTIONS:

❖ Digitising Data Collection for Enhanced Wildlife Management
❖ Integrated technology platform to support conservation – protecting wildlife and people

RELATED RESOURCES / FURTHER READING

❖ Training Material **EarthRanger Training Registration** - EarthRanger Support also in **French** and **Spanish**
❖ Wall et al. (2024). EarthRanger: An open-source platform for ecosystem monitoring, research and management. **Methods in Ecology and Evolution**. Access via

TOOL 51	A framework for monitoring biodiversity in protected areas and other effective area-based conservation measures: Concepts, methods and technologies
	English
2024	IUCN, IUCN WCPA, Carinthia University of Applied Sciences, UNESCO Chair on Sustainable Management of Conservation Areas

TYPE	PURPOSE
Guidelines and framework	Guidance on developing biodiversity monitoring programmes in protected areas and other effective area-based conservation measures (OECMs)

STRUCTURE AND FUNCTION

Guidance document that provides protected and conserved area (PCA) managers with general orientations as well as a step-by-step framework to develop long-term biodiversity monitoring programmes in protected areas and OECMs that support improved management outcomes.

The publication has eight main parts:
Chapter 1. Introduction
Chapter 2. Preparatory phase
Chapter 3. Conceptual phase
Chapter 4. Implementation phase
Chapter 5. Re-evaluation phase
Chapter 6. General considerations
Chapter 7. A review of methods and technologies to implement efficient and effective biodiversity monitoring programmes
Chapter 8. Synthesis: A new age of biodiversity monitoring

It enables PCA managers to understand the elements and functions of a monitoring system needed for adaptive management. It helps managers, technical experts, and stakeholders to jointly reflect on site-specific monitoring needs and come to agreements on the scope and design of a suitable and effective system.

TYPICAL USE

Biodiversity monitoring programme development for management purposes

LEVEL OF APPLICATION

Site level

SKILLS AND RESOURCES REQUIRED

- Scientific knowledge on biodiversity conservation, taxonomy, and ecosystems to select relevant indicators and features, or access to relevant experts
- Knowledge about sampling methods, including for data collection, or access to relevant experts
- Stakeholder engagement skills for a collaborative approach to support implementation
- Data management and analysis skills to analyse the data, or access to relevant experts
- Monitoring resources such as technical devices, monitoring equipment, laboratories, and vehicles
- Funding to support implementation

TOOL 51 Continued

STRENGTHS	WEAKNESSES
❖ Provides a clear, step-by step framework ❖ Provides an overview of various monitoring methods and considerations, including benefits and limitations ❖ Includes case studies from across the world ❖ Includes practical tools and considerations, such as checklists and worksheets ❖ Includes additional considerations for efficiency and effectiveness	❖ May be too technical for PCA managers with limited expertise in biodiversity research methods ❖ The guidance for monitoring methods, sampling, and analysis are presented as summaries and are not detailed; additional resources will need to be consulted ❖ The case studies do not follow a clear and consistent structure, which makes it more difficult to compare the monitoring methods

REFERENCE

Dalton, D., Berger, V., Kirchmeir, H., Adams, V., Botha, J., Halloy, S., Hart, R., Švara, V., Torres Ribeiro, K., Chaudhary, S. & Jungmeier, M. (2024).
A framework for monitoring biodiversity in protected areas and other effective area-based conservation measures: Concepts, methods and technologies. IUCN WCPA Technical Report Series No. 7, Gland, Switzerland: IUCN.

DOCUMENTED EXPERIENCE

Includes examples within the publication to illustrate aspects of the framework

RELATED RESOURCES / FURTHER READING

Tool 48 ▶ Community-based monitoring, reporting and verification know-how: sharing knowledge from practice

Tool 49 ▶ Spatial monitoring and reporting tool (SMART)

Werner, F., Gallo-Orsi, U. (2016): Biodiversity Monitoring For Natural Resource Management. An Introductory Manual, Dhaka: GIZ.
Also available in Spanish and French.

3.6.4 | COSTS, BENEFITS AND SOCIAL IMPACT

TOOL 52	**Protected Areas Benefits Assessment Tool + (PA-BAT+): A tool to assess local stakeholder perceptions of the flow of benefits from protected areas**
	English
2020	IUCN Global Protected Areas Programme; IUCN World Commission on Protected Areas (WCPA)

TYPE	PURPOSE
Assessment tool	Structured approach to collect and assess information from stakeholders on the overall benefits of protected areas

STRUCTURE AND FUNCTION

Assessment tool that provides PA management agencies, funding agencies, and non-government organisations (NGOs) with a practical approach to evaluate the benefits of PAs by conducting structured workshops with stakeholder groups.

The publication has four main parts:

1. What is the PA-BAT+?
2. The PA-BAT+ methodology
3. Using and communicating the results
4. Case studies

The Appendices contain a background information data sheet and detailed guidance on PA-BAT+ questions and stakeholder responses.

TYPICAL USE

- Management planning
- Funding mechanism identification
- Awareness building amongst stakeholders

LEVEL OF APPLICATION

Site level

SKILLS AND RESOURCES REQUIRED

- At least two external personnel (i.e., not PA staff) with knowledge and skills related to PAs, stakeholder engagement, facilitation, and report writing
- Financial resources, necessary documentation (e.g., letter of support, invitations, etc.), and technology (e.g., projector, laptop with Microsoft PowerPoint, microphones, etc.) (or suitable alternatives) to organise the workshop

TOOL 52 Continued

STRENGTHS	WEAKNESSES
❖ Provides a clearly structured process to obtain an overview of the benefits of PAs with input from multiple stakeholders with tangible results ❖ Contains comprehensive, practical, and detailed information on implementation, analysis, and communication, including "hints and tips" in separate boxes and additional information in the Appendices ❖ Flexible and adaptable to different contexts, and can also be applied to other effective area-based conservation measures (OECMs) ❖ Includes detailed case studies from around the world	❖ Based on a workshop methodology, which could be subject to bias if more dominant participants overtake discussions, unless the facilitators are skilled ❖ Limited number of case studies and they are based on the PA-BAT rather than the PA-BAT+

REFERENCE

Ivanić, K-Z., Stolton, S., Figueroa Arango, C. and Dudley, N. (2020). Protected Areas Benefits Assessment Tool + (PA-BAT+): A tool to assess local stakeholder perceptions of the flow of benefits from protected areas. Gland, Switzerland: IUCN. xii + 84 pp.

VERSIONS AND/OR MODIFICATIONS

Protected Area Benefit Assessment Tool (PA-BAT) (2009)

As described in the PA-BAT+ document, the key differences between the PA-BAT and the PA-BAT+ are:

1. The PA-BAT+ was developed for use in workshops with local communities and other stakeholders living in or around protected and conserved areas
2. The complexity of data on individual benefits outlined in the datasheets of the 2009 PA-BAT has been simplified in the PA-BAT+ to fit the day-long or half-day long workshop approach, with the focus shifting to gathering input from local people rather than the detailed data suggested in the original version

The original PA-BAT can still be used if it better suits the data requirements of a project.

DOCUMENTED EXPERIENCE

Case studies are provided in the publication [for PA-BAT]
Applicability of the PA-BAT+ in the evaluation of values of urban protected areas

RELATED RESOURCES / FURTHER READING

PA-BAT is included in Tool 54 ▶ Tools for measuring, modelling, and valuing ecosystem services: guidance for Key Biodiversity Areas, natural World Heritage sites, and protected areas

TOOL 53	Social Assessment for Protected and Conserved Areas (SAPA): Methodology manual for SAPA facilitators
	English	French
2018	International Institute on Environment and Development (IIED), UN Environment-WCMC, and Fauna and Flora International (FFI)

TYPE	PURPOSE
Methodology and manual	Framework and guidance for assessing the social impacts of PCAs and related conservation and development activities

STRUCTURE AND FUNCTION

Publication that first introduces PCA managers, communities, and other stakeholders to the SAPA methodology, and then provides facilitators with step-by-step guidance to conduct the SAPA to assess social impacts of PCAs on local people. It aims to increase and more equitably share positive social impacts and reduce negative ones.

The publication has two main sections with several sub-sections:

Section A: Introducing SAPA
1. Background to SAPA
2. Understanding SAPA
3. SAPA methodology: an overview

Section B: Step-by-step guidance
1. Phase 1: Preparing
2. Phase II: Scoping
3. Phase III: Information gathering
4. Phase IV: Assessing
5. Phase V: Taking action

The annexes contain terms of reference for SAPA facilitators, templates, and workshop agendas.

TYPICAL USE

- Assessment of the positive and negative social impacts of PCAs on local people
- Generation of recommendations for concrete action by PCA managers and stakeholders how negative impacts of a PA can be reduced or mitigated and positive impacts can be enhanced and benefits shared more equitably

LEVEL OF APPLICATION

Site level

TOOL 53 Continued

SKILLS AND RESOURCES REQUIRED

- Financial resources to conduct the process, which is estimated to cost between US$5,000 to US$15,000 per site
- Available time and capacity to conduct the process, which takes a few months to complete
- Access to facilitators to form a SAPA facilitation team, consisting of 3–6 facilitators with an even gender balance
  - The team should include at least two of the following: staff of the PCA management authority, members of local communities, staff of local and/or national NGOs, staff of other key stakeholders, or researchers from universities
  - The team as a whole should have the following: social surveys skills and experience, community meeting facilitation skills, PCA knowledge and experience, knowledge of community activities linked to PCAs, and appropriate language skills to engage with communities

STRENGTHS

- Low-cost application
- Applicable to any governance type, management category, and ecological context
- Provides background information as well as detailed and specific step-by-step guidance
- Provides helpful supporting resources (terms of reference, templates, and agendas) for practical implementation in the annexes

WEAKNESSES

- The SAPA process is relatively time-consuming as it takes a few months to conduct
- Has detailed requirements for the SAPA facilitation team, which may make it difficult to find suitable facilitators
- Document does not include case studies

REFERENCE

Franks, P., Small, R. and Booker, F. (2018). **Social Assessment for Protected and Conserved Areas (SAPA) Methodology manual for SAPA facilitators**. Second edition. IIED, London.

VERSIONS AND/OR MODIFICATIONS

The first edition was published in 2016

DOCUMENTED EXPERIENCE

Research reports with case studies:

Franks, P., & Small, R. (2016). **Understanding the social impacts of protected areas: a community perspective. IIED Research Report**. IIED, London.

Franks, P., Booker, F., Small, R., Nzilani, J., Niwamanya, R. and Pinto, R. (2021). Assessing and improving the social impacts of protected areas: case studies from Kenya and Uganda. IIED, London.
Available at

PANORAMA-SOLUTIONS: **Enhancing Community Resilience against the impacts of COVID-19 in Southern Kenya**

RELATED RESOURCES / FURTHER READING

Franks, P., Roe, D., Small, R., Schneider, H. (2014). **Social Assessment of Protected Areas: Early Experience and Results of a Participatory, Rapid Approach**. IIED Working Paper. IIED, London.

Further resources available on the IIED website

3.6.5 | ECOSYSTEM SERVICES ASSESSMENT AND VALUATION

TOOL 54	**Tools for measuring, modelling, and valuing ecosystem services: guidance for Key Biodiversity Areas, natural World Heritage sites, and protected areas**
	English	Korean
2018	IUCN

TYPE	PURPOSE
Guidelines	Best practice guidance on selecting ecosystem service (ES) assessment and valuation methods

STRUCTURE AND FUNCTION

Guidance document that provides practitioners with reasons for assessing ecosystem values and information on nine existing tools to measure or model ES in Key Biodiversity Areas (KBAs), natural World Heritage sites (WHS), and PAs to support decision making.

The publication has five main parts:

1. Introduction
2. Overview of Key Biodiversity Areas, natural World Heritage sites, and protected areas
3. Why measure, model, or value ecosystem services delivered by sites?
4. Comparison of ecosystem services tools
5. Summary: Key differences between tools

The annexes contain additional supporting information and case studies on the nine tools, as well as additional tools.

TYPICAL USE

Decision making for the preparation of ES assessments and valuations

LEVEL OF APPLICATION

Site and system level

SKILLS AND RESOURCES REQUIRED

- Skills needed and application costs depend on the context and selected assessment tool (e.g., written vs. computer-based modelling)
- Basic data on ES will be needed in any case

STRENGTHS	WEAKNESSES
❖ The nine selected tools are commonly used, freely available, and can be applied in various contexts ❖ Contains comprehensive descriptions and classifications of the featured methods and tools	❖ The information presented may not be sufficient for non-experts to make decisions ❖ Does not emphasise that ES assessments should be closely linked to policy questions

REFERENCE

Neugarten, R.A., Langhammer, P.F., Osipova, E., Bagstad, K.J., Bhagabati, N., Butchart, S.H.M., Dudley, N., Elliott, V., Gerber, L.R., Gutierrez Arrellano, C., Ivani´c, K.-Z., Kettunen, M., Mandle, L., Merriman, J.C., Mulligan, M., Peh, K.S.-H., Raudsepp-Hearne, C., Semmens, D.J., Stolton, S., Willcock, S. (2018). **Tools for measuring, modelling, and valuing ecosystem services: Guidance for Key Biodiversity Areas, natural World Heritage Sites, and protected areas**. Gland, Switzerland: IUCN. x + 70pp.

TOOL 54 Continued

DOCUMENTED EXPERIENCE

Links to case studies are provided in the publication

RELATED RESOURCES / FURTHER READING

Comprehensive compilation of ES assessment tools and methods: ValuES Database

TOOL 55	Integrated Valuation of Ecosystem Services and Tradeoffs (InVEST®)
	English	Chinese	Spanish
2025	Natural Capital Project (Stanford University, University of Minnesota Chinese Academy of Sciences, TNC, WWF, Stockholm Resilience Centre, Royal Swedish Academy of Sciences)

TYPE	PURPOSE
Approach, method and software models	Mapping and valuing ecosystem goods and services across spatial scales to inform decision making

STRUCTURE AND FUNCTION

InVEST® is a suite of free, open-source software models used to map and value the goods and services from nature that sustain and fulfil human life. It provides managers of natural resources with an effective tool for balancing environmental and economic goals. The models allow to assess quantified trade-offs associated with alternative management choices and to identify areas where investment in natural capital can enhance human development and conservation.

The toolset includes distinct ecosystem service models designed for terrestrial, freshwater, marine, and coastal ecosystems, as well as a number of "helper tools" to assist with locating and processing input data and with understanding and visualizing outputs. These models are packaged in a user interface called InVEST Workbench. It is complemented by a User Guide.

TYPICAL USE

Decision making on land use (often involving multiple land use options) based on the impact of alternative land use scenarios and trade-offs on ecosystem service provision and the benefits derived from them by various actors

LEVEL OF APPLICATION

Site-level

SKILLS AND RESOURCES REQUIRED

- Required resources for applying the method are dependent on data availability, available expertise for using the InVEST models and the scale of stakeholder process required for analysing the issue of interest
- The InVEST software is free of charge. Hiring experts with GIS skills and knowledge of using InVEST is likely to be the main cost influencing factor
- Basic to intermediate skills in GIS are required

STRENGTHS

- Geared towards real decision-making processes – not just an academic method
- Tiered design allows the use of simple to more complex models based on availability of data and expertise
- Yields suggestions for optimisation and trade-offs
- InVEST is open source and available for free. Compatibility of most modules with free GIS software
- Extensive collection of background materials, trainings and tutorials available.
- Regularly updated and expanded with new models

WEAKNESSES

- Quality and availability of input data can be an issue and can influence the quality of results
- Experience and expertise in using InVEST can influence the credibility of results
- Processing and interpreting results can be difficult for beginning users
- Some models may be oversimplified for a particular purpose. In this case it is recommended people use alternative ecosystem service models such as Soil and Water Assessment Tool (SWAT) in combination with InVEST

TOOL 55 Continued

REFERENCE

Natural Capital Project, 2025. InVEST 0.0. Stanford University, University of Minnesota, Chinese Academy of Sciences, The Nature Conservancy, World Wildlife Fund, Stockholm Resilience Centre and the Royal Swedish Academy of Sciences.

VERSIONS AND/OR MODIFICATIONS

Various updates since first release in 2007. Current version is 3.14.3. (2024)
Urban InVEST: Suite of models focused on incorporating the value of nature into urban design:

DOCUMENTED EXPERIENCE

See InVest publication database for a list of publications using InVEST and other Natural Capital Project software:

PANORAMA-SOLUTIONS:

- Applying ecosystem-based disaster risk reduction (Eco-DRR) in Integrated Water Resource Management (IWRM) in DRC
- Valuating climate adaptation options on Placencia Peninsula

RELATED RESOURCES / FURTHER READING

- InVest downloads, user guides, and data sources:
- InVest models:
- InVest tutorial video series:
- Trainings and tutorials:

TOOL 56	Cultural and spiritual significance of nature: guidance for protected and conserved area governance and management
	English	Spanish
2021	International Union for Conservation of Nature (IUCN); IUCN World Commission on Protected Areas (WCPA) (Cultural and Spiritual Values of Protected Areas Specialist Group); IUCN Global Protected Areas Programme

TYPE	PURPOSE
Guidelines	Providing guidance on how to reflect the cultural and spiritual significance of nature in integrated and holistic approaches for the governance and management of protected and conserved areas (PCAs)

STRUCTURE AND FUNCTION

Guidance document that provides PCA managers, planners, policy makers, and all stakeholders, with principles and guidelines to increase the prominence of the cultural and spiritual significance of nature in PCA governance and management.

The publication has five parts:
Part 1: About these guidelines
Part 2: The context
Part 3: Cultural and spiritual significance of nature
Part 4: Principles, guidelines and examples
Part 5: Case studies

Part 4 being the main part presents 41 guidelines, each illustrated by an example. They are grouped under 12 themes based on six overarching principles.

The principles are:
- Respect diversity
- Build diverse networks
- Ensure safety and inclusivity
- Account for change
- Recognise rights and responsibilities
- Recognise nature-culture linkages

TYPICAL USE

- Governance and management planning for PCAs
- Reflection and consultation among stakeholders concerned with nature-culture linkages to establish common ground for collaboration

LEVEL OF APPLICATION

Site and system level

TOOL 56 Continued

SKILLS AND RESOURCES REQUIRED

- Stakeholder engagement and cultural sensitivity skills to build relationships with diverse groups of relevant stakeholders
- Communication and mediation skills to support consensus building and conflict resolution
- Knowledge of cultural and spiritual values, including indicators
- Knowledge of free, prior, and informed consent (FPIC) requirements to support participatory processes and information sharing
- Value assessment skills and access to relevant data and materials to assess and document the cultural and spiritual significance of nature (or access to relevant experts)
- Culturally-inclusive planning and management skills for PCAs
- Monitoring and evaluation skills for cultural and spiritual values to assess the effectiveness of measures in PCAs
- Interpretation and education skills to communicate the cultural and spiritual significance of nature to a wider audience
- Financial resources for implementation

STRENGTHS

- Provides comprehensive orientation regarding cultural and spiritual values and concepts such as significance-led conservation
- Offers a comprehensive overview on integrating the cultural and spiritual significance of nature into PCA governance and management
- Contains clearly presented guidelines that include a supporting example for each
- Contains detailed and structured case studies from around the globe with best practices and key lessons included

WEAKNESSES

- There is limited information on strategies to implement the 41 individual guidelines beyond the example provided for each

REFERENCE

Verschuuren, B., Mallarach, J-M., Bernbaum, E., Spoon, J., Brown, S., Borde, R., Brown, J., Calamia, M., Mitchell, N., Infield, M. and Lee, E. (2021). **Cultural and spiritual significance of nature. Guidance for protected and conserved area governance and management**. Best Practice Protected Area Guidelines Series No. 32, Gland, Switzerland: IUCN. XVI + 88pp.

DOCUMENTED EXPERIENCE

Case studies are provided in the publication

RELATED RESOURCES / FURTHER READING

Mallarach, J.-P. (ed.) (2008). **Protected Landscapes and Cultural and Spiritual Values**. Volume 2 in the series Values of Protected Landscapes and Seascapes, IUCN, GTZ and Obra Social de Caixa Catalunya. Kasparek Verlag, Heidelberg

3.7 GOVERNANCE

3.7.1 | GENERAL ON PCA GOVERNANCE

TOOL 57	Governance of protected areas: from understanding to action
	English	French	Portuguese	Spanish
2013	International Union for Conservation for Nature (IUCN) World Commission on Protected Areas (WCPA)

TYPE	PURPOSE
Guidelines	Best practice guidance on governance in PAs

STRUCTURE AND FUNCTION

Guidance document that provides PA practitioners, Indigenous Peoples and local community representatives, and other stakeholders and interested parties with concepts and practical guidance, including frameworks, to enhance governance capacities in PAs.

The publication has two main parts with several sub-sections:

Part 1: Understanding governance
1. Key concepts
2. Conservation, protected areas and governance
3. Governance types
4. The IUCN Protected Area Matrix and the finer nature of governance types
5. Voluntary and ancillary conservation
6. Governance quality ("good governance")

Part 2: Towards effective action
7. Assessing and evaluating governance for protected areas
8. A framework for assessing and evaluating governance for a system of protected areas
9. A framework for assessing and evaluating governance for individual protected areas
10. Reporting and action
11. Main sources, references and further reading

Additionally, the publication has three annexes in a separate document

- DOs and DON'Ts in recognising and supporting Indigenous Peoples' and Community Conserved Territories and Areas (ICCAs)
- A group exercise to examine and discuss governance quality
- Suggested indicators for monitoring governance quality

TYPICAL USE

- Governance assessments and evaluations to improve effectiveness, inclusiveness, and equitability of PAs
- Policy, legal, and regulatory framework revisions and adaptations

LEVEL OF APPLICATION

Site and system level

TOOL 57 Continued

SKILLS AND RESOURCES REQUIRED

The skills and resources required depend on the purpose of use and scope of the assessment:

- For a participatory governance assessment, it will be useful to have a small team comprising trusted individuals with good communication, convening, and stakeholder engagement skills to design and facilitate the process
- A system-level assessment needs to draw on spatial data management expertise. The process will need a convening agency and resources for workshops and potentially for data gathering or mapping work

STRENGTHS

- Comprehensive clarification of concepts illustrated by examples based on a wide range of experiences around the world
- Provides broad guidance for PA governance assessments that can be adapted to different needs and purposes
- In line with international policies provided by the Convention on Biological Diversity

WEAKNESSES

- Assessment methodology needs adaptation to specific contexts for practical application
- Suggested comprehensiveness of assessments can seem overwhelming

REFERENCE

Borrini-Feyerabend, G., Dudley, N., Jaeger, T., Lassen, B., Pathak Broome, N., Phillips, A., and Sandwith, T. (2013). Governance of Protected Areas: From understanding to action. Best Practice Protected Area Guidelines Series No. 20, Gland, Switzerland: IUCN. xvi + 124pp.

DOCUMENTED EXPERIENCE

Case studies are provided in the publication
Experiences from German development cooperation in chapter 4.1 ▶ and chapter 5.3 ▶

RELATED RESOURCES / FURTHER READING

Borrini-Feyerabend, G., Bueno, P., Hay-Edie, T., Lang, B., Rastogi, A., and Sandwith, T. (2014). A primer on governance for protected and conserved areas, Stream on Enhancing Diversity and Quality of Governance, 2014 IUCN World Parks Congress. Gland, Switzerland. IUCN.

Convention on Biological Diversity. (2018). Protected and conserved areas governance in the Convention on Biological Diversity: A review of key concepts, experiences, and sources of guidance. Subsidiary Body on Scientific, Technological and Technical Advice, CBD/SBSTTA/22/INF/8. Montreal. CBD.

Convention on Biological Diversity. (2018). Decision adopted by the Conference of the Parties to the Convention on Biological Diversity 14/8: Protected areas and other effective area-based conservation measures. Sharm El-Sheikh. CBD.

IUCN, World Commission on Protected Areas (WCPA) and Assurance Services International (ASI). (2019). IUCN Green List of Protected and Conserved Areas: User Manual, Version 1.2. Gland, Switzerland. IUCN.

TOOL 58	Governance Assessment of Protected Areas (GAPA)
	English
2019	International Institute for Environment and Development (IIED)

TYPE	PURPOSE
Methodology manual for process facilitators	Multi-stakeholder-led methodology for assessing the effectiveness, equity and sustainability of governance within protected areas and other conserved areas (CAs)

STRUCTURE AND FUNCTION

Collection of methods and tools consisting of two main sections and an extensive list of annexes.

Section A serves as an introduction to GAPA and contains background information on governance and key concepts that underpin the methodology.

Section B is a step-by-step guidance which outlines the different phases of GAPA: Preparation (I), Scoping (II), Information Gathering (III), Assessing (IV), Taking Action (V).

Based on IUCN's framework of governance principles and considerations GAPA presents 11 principles of good PA/ CA governance which encompass the core principles of participation, transparency, accountability as well as mitigation of negative impacts and benefit sharing.

The GAPA methodology uses a combination of i) key informant interviews and focus group discussions to identify the governance strengths and chal-lenges and ideas for action and ii) stakeholder workshops to discuss and validate the results and review the ideas for action to improve the situation. There is an optional extra: iii) a site-level governance scorecard to provide a quantitative assessment of PA/CA-related governance issues and the diversity of views on these issues within and across communities.

A variety of tools can be found in the annex, including assessment plans, workshop agendas, templates for stakeholder analysis, communications strategy, action planning and progress monitoring as well as resources for information gathering and reporting.

TYPICAL USE

GAPA can be used
- as a health check to determine governance strengths and challenges and identify issues that need attention,
- as a diagnostic to understand the underlying causes of challenges and identify actions that could improve the situation
- and to establish a baseline for monitoring changes in governance over time

Preparation for achieving Green List standards (and certification) in the governance dimension

LEVEL OF APPLICATION

PAs and other CAs: Focused on site level, but able to contribute to system-level governance assessment

SKILLS AND RESOURCES REQUIRED

- Prior experience of facilitating group discussions and conducting interviews
- Third party technical support such as an in-country NGO, university or consulting firm with some social research expertise will be beneficial

TOOL 58 Continued

STRENGTHS	WEAKNESSES
❖ Universally applicable to PAs of any governance type and management category ❖ Multi-stakeholder: engaging all key actors determined by stakeholder analysis ❖ Self-assessed: conducted by stakeholders, not external experts ❖ Socially differentiated and able to capture different social groups' perspectives ❖ Action-oriented: generating ideas for action to address identified challenges ❖ Standardised, yet adaptable: using the same process, good governance principles and methods, yet able to focus on a site's specific priorities	Due to its recency, GAPA remains work in progress. At the time of publishing the toolkit, the final action phase which provides a structured approach to applying results and reviewing progress is still being tested and developed at different sites. Furthermore, a multi-stakeholder approach like GAPA will only work under certain conditions and needs strong, impartial facilitation. In situations where in-depth governance assessment is neither advisable nor feasible, IIED's Social Assessment for Protected and Conserved Areas methodology (SAPA) could be more adequate (cf. Related resources)

REFERENCE

Booker F and Franks P (2019). Governance Assessment for Protected and Conserved Areas (GAPA). Methodology manual for GAPA facilitators. IIED, London. Accessed on 13 March 2025

DOCUMENTED EXPERIENCE

So far, the methodology has been applied at ten different sites across five countries: Bangladesh, the Philippines, Kenya, Uganda, and Zambia.
Six of these case-studies from Bangladesh, Kenya, Philippines and Uganda are documented in the IIED Working Paper on the same subject (cf. Related resources)

PANORAMA-SOLUTIONS:
- ❖ Integration of the Batwa cultural values to save world mountain gorillas at Bwindi using GAPA
- ❖ Enhancing Governance and Conservation in biodiversity protected area management

RELATED RESOURCES / FURTHER READING

Franks, P and Booker, F (2018). Governance Assessment for Protected and Conserved Areas (GAPA): Early experience of a multi-stakeholder methodology for enhancing equity and effectiveness. IIED Working Paper, IIED, London.

Franks P, Small R, and Booker F (2018). Social Assessment for Protected and Conserved Areas (SAPA). Methodology Manual for SAPA Facilitators. IIED, London

Tool 53 Social Assessment for Protected and Conserved Areas (SAPA): Methodology manual for SAPA facilitators

Tool 60 Site-level assessment of governance and equity (SAGE)

TOOL 59	Enabling Effective and Equitable Marine Protected Areas - Guidance on Combining Governance Approaches
	English
2019	UN Environment

TYPE	PURPOSE
Guidance	The Guide provides evidence-based advice on how to govern marine protected areas to promote conservation and share sustainable marine resources

STRUCTURE AND FUNCTION

The Guide provides guidance for implementing an integrated, incentives-based governance strategy that can combine the roles of national governments, local communities, and market schemes (by using economic and property rights approaches) to enhance the effectiveness of marine protected areas.
Technical information is presented in the MPA Governance Guide.
This is complemented by a Case Study Compendium of 34 marine protected area (MPA) case studies from around the world covering a variety of MPA types, including no-take, multiple-use, small, large, remote, private, government-led, decentralized and community-led protected areas. They highlight different governance approaches, challenges faced, and solutions implemented to achieve conservation objectives.

Apart from introductory chapters on governance generally and in marine settings in particular, the guide presents a step-wise approach for setting up a Marine Protected Area Governance (MPAG) framework based on five categories of incentives: legal, knowledge, economic, participation and communication.

TYPICAL USE

- Planners, decision-makers and practitioners engaged in MPA development and implementation
- Stakeholders wanting to improve their general understanding of MPA governance
- Managers and stakeholders wanting to assess the current situation of their MPA and reflect on challenges, needs and potential solutions as part of an adaptive management cycle

LEVEL OF APPLICATION

Site and system level

SKILLS AND RESOURCES REQUIRED

- Knowledge of the main stakeholders, their interests/mandates and relationships
- General guidance needs to be translated to fit a specific context

STRENGTHS	WEAKNESSES
❖ Deep dive into governance incentives ❖ Fills niche with focus on governance of MPAs ❖ Combination of technical information and case study experiences ❖ Collection of incentives with examples provided in the annex can serve as inspiration	❖ Rather high-level document. Needs to be translated into process and action when applying to a specific MPA ❖ The underlying governance theory, categorisation into three main approaches (state/market/people) and their focus on incentives for human behaviour are not referenced

REFERENCE

United Nations Environment Programme (2019) Enabling Effective and Equitable Marine Protected Areas: Guidance on Combining Governance Approaches. Accessed on 25 July 2025. Available at

TOOL 59 Continued

DOCUMENTED EXPERIENCE

Case Study Compendium:

RELATED RESOURCES / FURTHER READING

- The guide consists of two documents:
  - the MPA Governance Guide
  - the Case Study Compendium
- Marine protected areas: Securing Benefits for Sustainable Development (Frontiers, 2017)

TOOL 60	Site-level assessment of governance and equity (SAGE)
	English
2023	SAGE initiative, implemented in lead by IIED and jointly with GIZ, IUCN, and Kings College London.

TYPE	PURPOSE
Methodology	To jointly self-assess the social impacts, governance, and equity of conservation efforts among stakeholders and right-sholders. To inform reporting on protected and conserved areas (PCA) governance and equity at national and global levels

STRUCTURE AND FUNCTION

SAGE is a guiding framework (including a manual for facilitators, and a data entry and analysis tool) for a facilitated stakeholder process based on (a selection of) 10 principles in a workshop setting with two parts:

1. In the first part, different stakeholder/rightsholder/actor groups complete the SAGE questionnaire in their groups. The SAGE questionnaire captures qualitative information, including specific governance challenges identified by various stakeholders, reasons for differences in perspective, and suggested actions to address the challenges.
2. In the second part, these actor groups come together to share their findings and their ideas for actions to improve governance and equity. Such a workshop can take one to three days, depending on how many of the ten principles are covered and the time needed for discussion.

TYPICAL USE

Assessing the status of governance and equity, planning actions to improve, and monitoring progress

LEVEL OF APPLICATION

Typically, site-level – focused on one protected or conserved area (PCA)

SKILLS AND RESOURCES REQUIRED

- Identification of all relevant stakeholders and financial means to allow them to participate in the workshops
- Excellent facilitation skills to conduct conflict-sensitive stakeholder workshops considering participants' technical background, local conditions, and cultural settings including gender-sensitivity and inclusiveness of typically marginalized groups

STRENGTHS	WEAKNESSES
- Uses a simple framework of ten equitable governance principles - The stakeholder-led and interactive process builds trust and gives Indigenous Peoples and local communities a strong voice	- Implementation of actions developed requires funding and strong initiative to follow through with them - There is no mechanism to assess if and how agreed actions are being implemented and show an impact

REFERENCE

International Institute for Environment and Development (2023) SAGE Version 2.0 – Tool for improving governance, equity and nature conservation. Accessed on 25 July 2025. Available at

TOOL 60 Continued

VERSIONS AND/OR MODIFICATIONS

This description refers to SAGE version 2.0 (2023), which changed its focus from methodology development (version 1.0, 2019) to supporting scaling up

DOCUMENTED EXPERIENCE

- SAGE was piloted in 2019 in nine countries: Cambodia, Vietnam, Philippines, Chad, Cameroon, Tanzania, Zambia, Greece and the UK.
- SAGE version 1.0 has been used in many more countries, including Bolivia, Colombia, Kenya, Côte d'Ivoire, Malawi, Lesotho, Madagascar, Mozambique, Democratic Republic of Congo, Uganda, Seychelles, Nepal and Indonesia. These assessments have covered marine and terrestrial sites that are owned and managed by state agencies, local communities, and Indigenous Peoples.

RELATED RESOURCES / FURTHER READING

- Background on SAGE: Site-level assessment of governance and equity (SAGE) | International Institute for Environment and Development
- SAGE is one of three tools for stakeholders and rightsholders to themselves assess the social impacts, governance, and equity of their conservation efforts. The other two tools are:
  1) Social assessment for protected and conserved areas (SAPA) – Tool 53
  2) Governance assessment for protected and conserved areas (GAPA) – Tool 58
- Guidance on which tool to use in which contexts:
- SAGE manual for facilitators:
- SAGE data entry and analysis tool (xlsx):
- IIED offers a 'SAGE Support Package' of online training and one-to-one (1:1) guidance to provide new users of SAGE with technical support. It is available from IIED at a cost of GBP 3.000.

3.7.2 | COLLABORATIVE MANAGEMENT / SHARED GOVERNANCE

TOOL 61	Sharing power – learning-by-doing in co-management of natural resources throughout the world
	English	French
2004	IIED, IUCN and partners

TYPE	PURPOSE
Guideline including tool descriptions and case studies	Supporting co-management practitioners in understanding, establishing and further developing collaborative management of natural resources in a "learning by doing" approach. It includes practical guidance and tools on how to organise, negotiate and implement co-management agreements

STRUCTURE AND FUNCTION

The guideline is divided into four parts and eleven chapters:

Part I. Towards a contextual framework

1. Managing natural resources: a struggle between politics and culture (introduction of the different interests towards natural resource use)
2. Actors, entitlements and equity in natural resource management (description of actors and associated rights)
3. Co-management of natural resources (characteristics of co-management)

Part II. Towards effective processes

4. A point of departure (identification of feasibility for collaboration)
5. Preparing for the partnership (organisational aspects before the start of the negotiations)
6. Negotiating the co-management agreement and organisation (agreeing rules and procedures and managing the negotiation process)

Part III. Towards effective institutions

7. Co-management agreements (forms and functions of agreements)
8. Co-management organisations (types and characteristics of organisations)
9. Learning-by-doing in co-management institutions (flexible procedures to ensure successful co-management)

Part IV. Towards an enabling social context

10. Natural resource policy and instruments (features of a supportive policy environment)
11. Empowering civil society for policy change (possibilities for civil participation)

Each chapter encompasses multiple case studies, amounting to 121 in total both from the global South and North. Chapters 2, 4–7, 9–11 also include 31 practical checklists on specific aspects of co-management.

TYPICAL USE

- Establishing new arrangements for co-management of natural resources
- Reviewing and adapting existing co-management arrangements

Additional potential uses:

- Informing development of policy and legal frameworks on co-management of natural resources

TOOL 61 Continued

LEVEL OF APPLICATION

Not specific to protected areas (PAs) but can be applied to PAs at the site level

SKILLS AND RESOURCES REQUIRED

Skills and resources required for applying the tools presented vary

STRENGTHS

- Builds on vast practical knowledge on co-management processes (predominantly in PAs) around the world
- Offers a wealth of illustrative examples
- Provides guidance for stepwise processes and checklists for practitioners

WEAKNESSES

- The comprehensiveness and wealth of information can be overwhelming
- Although the processes and approaches described are still pertinent to any co-management arrangement, they may not fully reflect more recent developments in conservation policy

REFERENCE

Borrini-Feyerabend, G., Taghi Farvar, M., Kothari, A., Pimbert, M., Renard, Y. (2004). **Sharing Power. learning-by-doing in co-management of natural resources throughout of the world**. The International Institute for Environment and Development (iied), The World Conservation Union (IUCN), The IUCN Commission on the Environmental, Economic and Social Policy (CEESP), The CEESP Collaborative Management Working Group (CMWG), Centre for Sustainable Development (CENESTA). 456 pp. Accessed on 27 January 2025.

VERSIONS AND/OR MODIFICATIONS

First edition (2004)
Second edition (2007) as Earthscan publication
Published **ebook** (2013)

DOCUMENTED EXPERIENCE

The majority of the 121 case studies are situated in PAs

RELATED RESOURCES / FURTHER READING

Beltrán, J. (2000). **Indigenous and traditional peoples and protected areas: principles, guidelines and case studies**. Gland, Switzerland: IUCN, 2000. xi, 133pp. Accessed on 27 January 2025.

Borrini-Feyerabend, G., A. Kothari, G. Oviedo (2004). **Indigenous and Local Communities and Protected Areas: Towards Equity and Enhanced Conservation. Gland, Switzerland and Cambridge**, UK: IUCN. xviii + 111 pp. Accessed on 27 January 2025.

TOOL 62	The Fisheries Co-Management Guidebook: Emerging Research for the Effective Management of Small-Scale Fisheries
	English
2023	WorldFish, CGIAR, James Cook University, Wildlife Conservation Society, SECOS

TYPE	PURPOSE
Guidebook	Assisting practitioners in understanding the science-base for successful fisheries co-management – a collaborative arrangement between a fishing community and another organization or entity to manage a fishery

STRUCTURE AND FUNCTION

The guidebook synthesizes research on fisheries co-management divided into five sections:

1. What is fisheries co-management? – defines small-scale fisheries and co-management.
2. Ethical principles – outlines ethical considerations that should form the basis of any program.
3. Fisheries management – outlines specific management strategies, ecological considerations, and how they can be applied to achieve certain objectives.
4. Social structures – discusses the social contexts and processes surrounding any co-management system.
5. Managing for impact – outlines the processes required to understand whether management is making a difference.

Information is presented as a series of infographics with each infographic including reflection questions that ask the reader to imagine how they would apply this information in a small-scale fishery with which they are familiar, as well as suggested further reading.

TYPICAL USE

- Get an up-to-date overview on the science-base on small-scale fisheries and small-scale fisheries co-management
- Joint reflection by stakeholders in small-scale fisheries management and conservation on whether and how to proceed with co-management

LEVEL OF APPLICATION

System level

SKILLS AND RESOURCES REQUIRED

- Basic understanding of interactions and interdependencies between fisheries management and protected area management
- When applying to a specific site, mandate to include and access to new set of stakeholders

STRENGTHS	WEAKNESSES
❖ Great compendium of research on the topic ❖ Information is presented in a structured, well-illustrated manner and easily digestible	❖ No reference on how fisheries co-management can link to/be part of PA management ❖ High-level summaries of a selected number of articles on the topic requires translation to fit a specific PA context

REFERENCE

WorldFish (2023) The Fisheries Co-Management Guidebook: Emerging research for the effective management of small-scale fisheries. Accessed on 25 July 2025. Available at

RELATED RESOURCES / FURTHER READING

See list of references within the guideline document

TOOL 63	Collaborative Management Partnership Toolkit
	English	French
2021	World Bank Group, supported by GEF

TYPE	PURPOSE
Toolkit	Collaborative Management Partnerships (CMP) are a type of public-private or public-NGO partnership used in the conservation sector to improve protected area management and support sustainable development. The toolkit is a resource guide to support the identification and establishment of such partnerships for co-management or delegated management of PAs

STRUCTURE AND FUNCTION

The publication consists of three sections:

1. The Value of Collaborative Management Partnerships describes different CMP models, their strengths and weaknesses.
2. How to Establish Collaborative Management Partnerships includes a decision-making framework for governments considering CMPs and provides information on feasibility studies, partner selection, stakeholder engagement, tendering materials, and contract development.
3. Recommendations to Sustain Collaborative Management Partnerships highlights the key factors governments and partners need to consider throughout the CMP process.

The Toolkit explains and compares three different models of public-private partnership for co-managing PAs based on 24 best practice principles and case study examples from Africa. It raises awareness on the role of these partnerships for reducing the protected area funding gap, catalysing rural development, and supporting job creation.

TYPICAL USE

The Toolkit is designed for governments, protected area authorities and NGOs to assist with:

- Decision-making on whether CMPs are suitable for their protected area(s)
- Decision-making on whether a CMP is suitable to their goals, legal and organisational status
- (Co-)designing of effective partnerships that will result in enhanced protected area management and green growth
- Learning from real-life CMP best practices

LEVEL OF APPLICATION

Site and system level

SKILLS AND RESOURCES REQUIRED

To apply the Toolkit to a specific protected area, the information provided has to be translated into a case-specific process, which requires process management abilities

TOOL 63 Continued

STRENGTHS	WEAKNESSES
❖ This Toolkit is one of the most comprehensive reviews of CMPs in Africa. It serves as a reference guide for governments and implementing partners considering the establishment of CMPs to address challenges and threats to protected areas and wildlife ❖ It raises awareness of CMP experiences, highlighting benefits, challenges, risks and lessons learned ❖ While the case studies and lessons in the Toolkit are derived from national protected areas in Africa, it can be applied to private and community protected areas and other protected areas worldwide	❖ Lengthy document without links to other sections in the PDF document ❖ The information in the Toolkit is generalized to fit a broad range of protected areas. Thus, applying the Toolkit to a specific protected area requires effort to specify and adapt the steps described in the Toolkit to the particular case

REFERENCE

World Bank (2021) Collaborative Management Partnership Toolkit. Accessed on 25 July 2025. Available at

DOCUMENTED EXPERIENCE

The Toolkit includes case studies on existing CMPs in the Central African Republic, Ethiopia, the Republic of Congo, Mozambique, Nigeria, Rwanda, South Africa, Zambia, and Zimbabwe

RELATED RESOURCES / FURTHER READING

- ❖ Resource Guide (articles, case studies, reports and websites of relevance to CMPs):
- ❖ Case Studies:
- ❖ Story Map Rwanda:
- ❖ Story Map Mozambique:
- ❖ Story Map Republic of Congo:
- ❖ Blog post "Collaborative management partnerships: How PPPs help advance conservation & development in Africa":

3.7.3 | INDIGENOUS PEOPLES' AND COMMUNITY CONSERVED TERRITORIES AND AREAS (ICCAS)

TOOL 64	**A toolkit to support conservation by Indigenous Peoples and local communities: building capacity and sharing knowledge for Indigenous Peoples' and community conserved territories and areas (ICCAs)**
	English
2013	United Nations Environment Programme World Conservation Monitoring Centre (UNEP-WCMC) and UN Development Programme (UNDP)

TYPE	PURPOSE
Toolkit	Compilation of resources on ICCAs to build capacity

STRUCTURE AND FUNCTION

Toolkit that provides civil society organisations and local communities with information and resources to help support and build the capacity of ICCAs.

The document contains an introductory section (including definitions) and a compilation of methods, tools, and case examples organised in five themes, including many links to more specific tools, ordered by themes/purposes.

The five key themes it includes are:

1. Documenting Presence. Provides solutions for communities to establish proof of its physical presence through various formats, such as paper claims or maps
2. Management Planning
3. Monitoring and Evaluation. Helps communities engage in monitoring efforts. Shows how evaluating progress at regular intervals, especially through the participation of community members, ensures that monitoring is locally meaningful, and can be used for adaptive learning
4. Communication. Various communication methods are presented for local organisations to draft and create their own narratives
5. Finance and values. Supports communities who govern and manage ICCAs to access appropriate resources, including finance, which are in line with their local value systems, and can help support their conservation initiatives

TYPICAL USE

Capacity building for effective ICCA management and governance

LEVEL OF APPLICATION

Site and system level

SKILLS AND RESOURCES REQUIRED

Implementation costs vary depending on the tools chosen and context. Typical use will require the capacity (in terms of network/access, logistics, facilitation, equipment, and financial resources) to conduct training and participatory planning workshops

TOOL 64 Continued

STRENGTHS	WEAKNESSES
❖ Developed specifically for use by local communities and civil society organisations ❖ Clear and simple structure that is based on user needs ❖ Includes case studies from around the world ❖ Includes many links to more specific resources, including methodologies and online tools	❖ Published in 2013; hence, newer resources would not be included in this toolkit and some resource links no longer work ❖ Only includes short descriptions of the tools included and does not evaluate them

REFERENCE

Corrigan, C., Hay-Edie, T. (2013). **A toolkit to support conservation by indigenous peoples and local communities: building capacity and sharing knowledge for indigenous peoples' and community conserved territories and areas (ICCAs)**. Cambridge, UK: UNEP-WCMC. 72 pp.

DOCUMENTED EXPERIENCE

Case studies are included in the publication

RELATED RESOURCES / FURTHER READING

ICCA Consortium key resources

Stevens, S., Hay-Edie, T., Miranda, C., Ramos, A. & Pathak Broome, N. (Eds.). Stevens, S. with contributions by Eghenter, C., Fitzsimons, J., Goradze, I., Ironside, J., Mellis, C., Nitah, S., Parling, P., Reyes, G. & Tabanao, G. (2024). **Recognising territories and areas conserved by Indigenous peoples and local communities (ICCAs) overlapped by protected areas. IUCN WCPA Good Practice Guidelines No. 34**. Gland, Switzerland: IUCN. Recognising territories and areas conserved by Indigenous peoples and local communities (ICCAs) overlapped by protected areas.

UNEP-WCMC's Protected Planet thematic area on ICCAs:

Borrini-Feyerabend, G., with Jaeger, T. (2024). **Territories of life. Exploring vitality of governance for conserved and protected areas, ICCA-GSI with ICCA Consortium, IUCN and UNDP GEF SGP**

3.7.4 | RIGHTHOLDER AND STAKEHOLDER ANALYSIS AND PARTICIPATION

TOOL 65	Free, Prior and Informed Consent (FPIC)
	See tool selection below under reference
NA	NA

TYPE	PURPOSE
Standard, principle and process	Safeguard the collective rights of Indigenous Peoples to self-determination by enabling them to negotiate the conditions under which the project / activity will be designed, implemented, monitored and evaluated. FPIC ensures that rights holders are involved in all stages of projects / activities that will affect their land, livelihoods and resources through freely chosen representatives and according to customary laws or other institutions

STRUCTURE AND FUNCTION

What is FPIC?

- An internationally enshrined human rights standard that is referenced in the ILO Convention 169, the Convention on Biological Diversity (CBD), UN Declaration on the Rights of Indigenous Peoples (UNDRIP) as well as safeguards policies of international financing agencies . It is not a stand-alone right but enables a wider set of collective Indigenous Peoples' rights and freedoms, including the right to self-determination. Transferring consent rights to non-indigenous communities like local communities has to be done in a context-sensitive manner, when non-indigenous and Indigenous communities are affected in a comparable way by land use restrictions and their different treatment can lead to an unintended exacerbation of local conflicts or social discord
- A principle that a community has the right to give or withhold consent to activities that are likely to affect land and resources they own, occupy or customarily use
- It is a collective and iterative process between a project proponent (government, company, NGO, or other) and the affected community. It is not a "tick-the-box" procedure that is completed with the community signing an agreement

What does FPIC stand for?

- Free: a process self-directed by the community without coercion, intimidation, manipulation, threat or bribery
- Prior: consent has been sought sufficiently in advance, before the authorization / commencement of any project / activity; also, time requirements of the community's internal consultation / consensus processes have been respected
- Informed: Information has been provided in a language and form that are easily understood by the community. It should be clear, complete, neutral and transparent, and cover the (i) nature, size, pace, reversibility and scope of the project or activity; (ii) its purpose, duration and locality; (iii) information about areas that will be affected, (iv) economic, social, cultural and environmental impacts, including potential risks; (v) information on all involved actors, and (vi) the procedures that the project or activity may entail (permits, licenses, administrative procedures)
- Consent: The right of Indigenous Peoples to give or withhold their consent to any decision that will impact their lands, territories, resources, and livelihoods

TOOL 65 Continued

TYPICAL USE

FPIC becomes relevant or, depending on the country, legally binding in any context where an Indigenous community enters a relationship with a third party that intends to implement projects / activities with likely impacts on the community, their land, territories and resources. With the rising legal recognition of Indigenous Peoples' rights in international law and instruments, the use of FPIC has grown significantly, encompassing development projects in infrastructure and extractive industries as well as in forestry, REDD+ and protected areas.

The UN Declaration on the rights of Indigenous Peoples (UNDRIP) defines six cases where consultation of Indigenous Peoples in order to obtain their free, prior and informed consent (FPIC) is necessary: 1. Relocation, 2. use of cultural, intellectual, religious and spiritual property, 3. legislative or administrative measures affecting Indigenous Peoples, 4. Loss of lands, territories and resources, 5. storage or disposal of hazardous materials, and 6. any project affecting their lands, territories and resources.

In the context of biodiversity conservation, all six cases could be relevant. For example, FPIC is applicable when establishing a new protected area, expanding an existing area or elaborating / adjusting PA management plans and use regulations that will affect indigenous communities living within or adjacent to the area or that will affect the lands, territories and resources they have traditionally owned and used.

Beyond the legal requirement, following an iterative two-way FPIC process is a respectful and meaningful tool to engage with Indigenous Peoples and local communities. It can create transparency on the project / activity as well as on the community's culture, governance and traditional use of land and resources.

Respecting FPIC and following the respective processes, can:

- Increase the mutual understanding between Indigenous Peoples / local communities and external actors and contribute to mutually beneficial cooperation;
- Promote and strengthen customary decision-making processes as well as customary or other institutions;
- Contribute to improved governance and self-determination beyond the project /activity, through tools employed in FPIC process (e.g. socio-economic research, leadership training, capacity-building, stakeholder, land and resource mapping, etc.)

LEVEL OF APPLICATION

Mainly PA level; possibly for selected communities within PA

SKILLS AND RESOURCES REQUIRED

Respecting FPIC and reaching robust and legitimate outcomes will require:

- Time, as the rights-holders need to be consulted fully and effectively to understand, appraise and analyse the project for as long as they deem necessary
- Wide participation, as broad involvement of the affected community may increase the legitimacy of the decision taken and reduce the risk of conflict, dispute or grievances at later stages. Also, including different interest groups will consider the diversity of values, uses and resources that may be present in heterogenous communities. A special focus should be on the inclusion of women and youth
- Resources, as meaningful engagement with a community will require investments in people, capacity building, communication materials as well as technical and legal advice
- Mutual trust and respect, as transparent, two-way communication, repeated negotiation and good-faith engagement are fundamental building blocks of a meaningful FPIC process
- Cultural sensitivity, as Indigenous Peoples will have cultural norms that are likely to shape consultation processes, decision-making mechanisms as well as time requirements
- Accepting a "no" by the community, as a rejection of the project / activity is an equally legitimate outcome of an FPIC process. In this case, the result should be documented and project activities stopped

TOOL 65 Continued

STRENGTHS	WEAKNESSES
The meaningful application of FPIC: ❖ Means that duty-bearers (primarily the state, but also companies, NGOs) and rights-holders (Indigenous Peoples, in some contexts also local communities) follow a human-rights-based approach to conservation projects and PA management in particular ❖ Minimizes the risk for the state, companies and NGO that disputes escalate into conflicts, jeopardizing the sustainability of the project ❖ Contributes to establishing open, equitable and culturally appropriate relations between Indigenous Peoples and third-party stakeholders ❖ Furthers understanding / recognition of the strong cultural and spiritual ties many Indigenous Peoples have with their land and territories ❖ Provides a safe operating space for projects and all actors involved	❖ Given the diversity of legal, social, economic and cultural contexts, there is no "one-size-fits-all" approach for FPIC. Technical, legal and anthropological advice as well as capacity building may be required to make the process meaningful for the specific community ❖ Projects / activities are often highly complex and require a high degree of information. Getting the right balance for providing full and accurate information without raising expectations or confusing community members constitutes a challenge ❖ The manipulation of traditional institutions and decision-making processes by indigenous elites (elite capture) constitutes a risk for the project's overall legitimacy ❖ Following Indigenous Peoples' or local communities' decision-making processes is time-consuming and resource intensive. Considering FPIC as part of project development and duly following it can however enhance the legitimacy and hence sustainability of the intervention ❖ The representation of women, youth and marginalized groups may not always be guaranteed in traditional institutions and decision-making processes and thus requiring additional attention ❖ In some contexts, legitimate representation institutions of Indigenous Peoples have been destroyed for example by colonialism, displacement and killings, and need to be rebuilt for meaningful FPIC processes ❖ Indigenous governance structures are highly diverse. Some communities have established FPIC protocols or biocultural protocols, in other contexts, they have to be developed ❖ Specific challenges arise in states where Indigenous Peoples are not recognized and no national or sub-national legislation on FPIC exists

TOOL 65 Continued

REFERENCE

There are manifold reference documents on FPIC, including practical guidelines, toolkits as well as full studies and reports. Listed here are four practical guidance documents. For further information on lessons learned, see 'documented experience' and for position papers, discussion papers and other studies see 'related resources' below.

FAO FPIC Manual (2016) **Free Prior and Informed Consent: An indigenous peoples' right and a good practice for local communities**

Respecting free, prior and informed consent: Practical guidance for governments, companies, NGOs, indigenous peoples and local communities in relation to land acquisition. Food and Agriculture Organization (FAO), Rome 2014.

RECOFTC – The Center for People and Forests & Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH: **Free, Prior, and Informed Consent in REDD+: Principles and Approaches for Policy and Project Development.** Bangkok, 2011.

Theresa Buppert and Adrienne McKeehan. **Guidelines for Applying Free, Prior and Informed Consent: A Manual for Conservation International.** Arlington, VA: Conservation International, 2013.

DOCUMENTED EXPERIENCE

Project case study: Inclusive processes of consultation with indigenous communities to underpin sustainable development in the Mesoamerican Biological Corridor (**chapter 5.1** ▶)

Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung (BMZ). **Free Prior and Informed Consent (FPIC) for the Transboundary World Heritage Nomination of Hin Nam No National Park,** 2023. Accessed on 08 May 2025.

Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung (BMZ), Deutsches Institut für Menschenrechte. **Promising Practices – On the human rights-based approach in German development cooperation: Consult – Consent – Cooperate: Integrating indigenous practices in biodiversity conservation in the Agusan Marsh, Mindanao, Philippines, 2015.** Accessed on 11 March 2025.

Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung (BMZ). **Negotiating with the Spirits: Recognizing the Conservation Values of Indigenous Knowledge Systems and Practices of the Agusanon Manobo, Agusan del Sur, Philippines, 2017.** Accessed on 11 March 2025.

Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH. **Assessing Free and Prior Informed Consent (FPIC) implementation in the Philippines, 2013.** Accessed on 11 March 2025

PANORAMA-SOLUTIONS: **A natural climate solution financed by the voluntary carbon market that benefits both people and biodiversity**

TOOL 65 Continued

RELATED RESOURCES / FURTHER READING

United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), A/RES/61/295. United Nations General Assembly, 13 September 2007.

Voluntary guidelines on the responsible governance of tenure of land, fisheries and forests in the context of national food security (VGGT), Food and Agriculture Organizations of the United Nations (FAO), Rome, 2012.

International Finance Corporation (IFC) Performance Standard 7 on Indigenous Peoples (2012).

World Bank Environmental and Social Standards (ESS). Standard 7 on Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities, 2017.

Indigenous and Tribal Peoples Convention (Convention 169), International Labour Organization (ILO), Geneva, 1989.

Cathal M. Doyle. Indigenous Peoples, Title to Territory, Rights and Resources: The Transformative Role of Free Prior and Informed Consent. Routledge, 2015.

UNPFII Étude de CPLCC. (2023). Implementing free, prior and informed consent in the context of Indigenous Peoples.

Organismes et mécanismes de protection des droits de l'homme. (2018). Consentement préalable, libre et éclairé : une approche fondée sur les droits de l'homme. Étude réalisée par le Mécanisme d'experts sur les droits des peuples autochtones.

Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ). Guiding framework – Human rights in biodiversity conservation. Eschborn, 2020.

Fauna & Flora International's position on free, prior and informed consent. FFI, May 2019

IWGIA. Study on Consultation and Free, Prior and Informed Consent with Indigenous Peoples in Africa, 2022.

FPP. Free Prior Informed Consent Protocols as Instruments of Autonomy, 2019.

Report of the International Workshop on Methodologies Regarding Free, Prior and Informed Consent. E/C.19/2005/3, United Nations Economic and Social Council.

Marcus Colchester and Maurizio Farhan Ferrari. Making FPIC Work: Challenges and Prospects for Indigenous Peoples. Forest Peoples Programme, Moreton-in-Marsh, 2007.

TOOL 66 Biocultural Community Protocol (BCP)

English

NA | NA

TYPE	PURPOSE
Instrument and process	Support Indigenous Peoples and local communities (IP&LCs) to secure their rights and responsibilities and strengthen customary ways of life and stewardship of their territories and resources

STRUCTURE AND FUNCTION

What is a BCP?

- It is a statement about the natural resources a community is stewarding and the traditional knowledge it uses to manage it;
- It proclaims rights and sets out terms and conditions for outsiders engaging with the community;
- It demands respectful treatment, according to prescribed standards and procedures

A BCP is developed in a participatory, iterative process led and shaped by the community.

A BCP is usually compiled in the form of a document, which may contain the following elements:

- Definition of the community and its governance structure
- Aspiration / goals of the community
- Description of natural resources and related management systems / knowledge / practices
- Ways of life, culture, spirituality, customary laws, values
- Responsibilities and duties regarding use of biodiversity – often related to customary practices
- Relevant rights under national and international law
- Conditions for access to resources / knowledge – e.g. procedure for (F)PIC
- Challenges faced by community

TYPICAL USE

The approach is relevant in any context where a community would like to clarify its position, rights and responsibilities in relation to the sState or other external actors. The first BCPs were developed in the context of access and benefit-sharing (ABS), but the approach was soon applied also in other contexts, such as REDD+, extractive industries, large infrastructure projects or protected area management.

In all these contexts, a BCP is an instrument and process for communities to collectively identify their values, rights and interests with regard to their territories and resources and to agree on how to communicate that to outsiders. Beyond defining rights and responsibilities, BCPs help communities counteract power asymmetries in negotiations with external actors.

From the perspective of external actors (government, researchers, private sector, NGOs, etc.) a BCP creates transparency with regard to local governance structures, rights and responsibilities, clarifying, for instance, who can make decisions and grant access to resources on the community's behalf. In the context of protected areas, a BCP can inform the development and implementation of (co-)management plans, as it documents customary practices of natural resource management and sustainable use.

TOOL 66 Continued

A BCP process:

- Fosters a community dialogue on cultural values, rights and obligations regarding their natural resources and traditional knowledge, which has positive impacts on the conservation of these resources and of the community's knowledge
- Includes a key element of legal empowerment. In some countries, BCPs can even be officially recognised as by-laws
- Promotes the active participation of all groups within the community and can help build fair internal governance structures
- Can help to define "the community" in the specific context (e.g. inhabitants of a certain territory, several communities who provide the same resource or share common knowledge)

LEVEL OF APPLICATION

Typically PA Level

SKILLS AND RESOURCES REQUIRED

- A BCP process requires a skilled facilitator who is familiar with the respective community's culture and way of life and who is trusted by the community
- Developing the protocol is a complex process, in which a good understanding of the legal basis at the local, national and international level is necessary. Therefore, external legal support is usually necessary
- A BCP depends on active participation. Sufficient resources are thus required to allow for regular consultation with all members and/or subgroups of the community
- Depending on the context, the implementation of a BCP may require further facilitation and/or legal support in the follow-up

STRENGTHS

BCPs ...:

- Make customary ways of managing and sustainably using natural resources visible and understandable
- Lead to greater transparency of community procedures, and therefore greater certainty for users of genetic resources and traditional knowledge
- Are developed within the community, through a participatory decision-making process, based on traditional norms, values and law

WEAKNESSES

- Being a community-led process, developing a BCP is complex. It can be time-consuming and in most cases requires external support
- Process could be overly influenced by certain parties, which could reinforce power asymmetries within the community
- Developing a BCP could raise unrealistic expectations within the community
- In politically sensitive contexts, actively raising issues of rights may cause conflict with external actors
- It may be difficult to ensure community-based monitoring and evaluation of the process and outcomes
- If the process is rushed or not inclusive, it may create internal conflict and mistrust.
- BCPs risk becoming a top-down imposition if driven by governments or consultants rather than communities

TOOL 66 Continued

REFERENCE

There are several sources and guidelines for BCPs. Listed here are a factsheet and three guidelines / toolkits. For further information on lessons learned, see 'documented experience' and 'related resources' below.

Lassen, B. (2012). **Biocultural Community Protocols**. Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, Bonn and Eschborn, Germany. 2 pp. Accessed on 27 January 2025.

Shrumm, H., Jonas, H. (2012). **Biocultural Community Protocols: A Toolkit for Community Facilitators**. Natural Justice: Cape Town. 120 pp. Accessed on 27 January 2025 (also available in **Spanish**)

LPP. (2018). **Community protocols for pastoralists and livestock keepers: Claiming rights under the Convention on Biological Diversity**. League for Pastoral Peoples and Endogenous Livestock Development, Ober-Ramstadt, Germany. 103 pp. Accessed on 27 January 2025.

Heinrich-Böll Stiftung. **Community Protocol Tool Box and Project Report**. Accessed on 27 January 2025.

DOCUMENTED EXPERIENCE

Natural Justice, ABS Capacity Development Initiative (2018): **Community Protocols in Africa – Lessons learned for ABS implementation**. Accessed on 27 January 2025.

Natural Justice, ABS Capacity Development Initiative, ONG CESAREN (2017). **Experiences and Lessons Learned from the Development and Implementation of Community Protocols and Procedures – Contribution to the first Assessment and Review of the Effectiveness of the Nagoya Protocol**. Natural Justice. 20 pp. Accessed on 27 January 2025.

For further documented experience, see links under "related resources /further reading"

RELATED RESOURCES / FURTHER READING

www.naturaljustice.org
https://absch.cbd.int/en/
www.abs-initiative.info/topics/integrating-iplc/

The websites contain a wide range of supplementary multimedia resources including short films, articles, books, e-learning modules and existing community protocols from Africa, America, Asia and Pacific.

UNEP and EDO NSW. (2013). **Community Protocols for Environmental Sustainability: A Guide for Policymakers**. UNEP, Nairobi and EDO NSW, Sydney. 82 pp. Accessed on 27 January 2025.

IIED. (2012). **Biodiversity and culture: exploring community protocols, rights and consent. Participatory learning and action**, 65, 223 pp. IIED, London, UK. Accessed on 27 January 2025.

Ruiz, M. (2012). **Possibilities and Limitations for a Biocultural Protocol(s) in Countries in the Andes and Amazon Basin**. Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, Bonn and Eschborn, Germany. 30 pp. Accessed on 25 January 2025.

TOOL 67	Participatory Management of Protected Areas in the Carpathian Ecoregion, Part II: Guidelines for stakeholder involvement in protected area management
	Czech	English	Hungarian	Polish	Romanian	Serbian	Slovakian	Ukrainian
2012	World Wide Fund for Nature (WWF) Danube-Carpathian Programme

TYPE	PURPOSE
Guidelines	Guidance on stakeholder involvement in PA management

STRUCTURE AND FUNCTION

Guidance document that provides site-level decision makers and practitioners with a methodology and tools to support more effective and enhanced participatory management and stakeholder involvement.

The publication has four main sections:

1. General recommendations for site-level decision makers
2. Guidelines for planning stakeholder involvement in the management of protected areas
3. Theoretical background
4. Participatory management toolbox

The annexes contains a detailed methodology for analysis, assessment, and planning for stakeholder involvement, and information on PA value categories, threat categories, and important threats in the Carpathian ecoregion.

TYPICAL USE

Development and implementation of stakeholder engagement activity

LEVEL OF APPLICATION

Site level

SKILLS AND RESOURCES REQUIRED

- Application costs vary according to context
- Typical use will require the capacity (in terms of networks, logistics, equipment, and financial resources) to conduct participatory consultation/planning workshops and support the continued operation of stakeholder participation mechanisms in PAs
- Several of the more specific methods described require sound facilitation and partly mediation skills

STRENGTHS	WEAKNESSES
- Combination of a sound approach and good practice principles, explanation of underlying concepts, and detailed step-by-step guidance, including worksheet templates - Compendium of methods and tools - Strong tools for initial situation analysis	- Does not include case studies - Developed for a specific regional context (the Carpathian ecoregion), though the guidance can still adapted and applied to other areas

REFERENCE

Ioniță, A. & Stanciu, E. (2012). Participatory management of protected areas in the Carpathian ecoregion, Part II: Guidelines for stakeholder involvement in protected area management. Vienna: WWF Danube-Carpathian Programme. 148 pp.

RELATED RESOURCES / FURTHER READING

Participatory Management of Protected Areas in the Carpathian Ecoregion: Part I: Rapid Assessment and Recommendations; Part II: Guidelines for stakeholder involvement in protected area management

TOOL 68	Stakeholder Participation Toolkit for Identification, Designation and Management of Marine Protected Areas
	English
2013	UN Environment / Mediterranean Action Plan Regional Activity Centre for Specially Protected Areas IUCN-Mediterranean IUCN Environmental Law Center

TYPE	PURPOSE
Resource Book	Provide strategic orientations for stakeholders' participation in MPA management and planning with view to improving good governance of MPAs

STRUCTURE AND FUNCTION

The Resource Book serves as a quick general introduction to stakeholder engagement in its 16-page main part, supplemented by a collection of useful materials collated from other sources in the annexes.

The two introductory chapters describe the origins of the toolkit and the process of development.

Part I: Stakeholders' participation – some basic definitions as an introduction and useful classification, relevant for applying tools

Part II: Typology of protected areas governance provides an overview of the IUCN typology.

Part III: What are the main phases/actions/processes existing in MPA planning, identification, creation, and management? And where are the various categories of stakeholders usually involved for better planning, identification, creation, and management?
Provides lists detailing different phases and recommended involvement of which stakeholders on which aspects of the process.

Part IV: Participatory tools commonly used in the context of MPAs planning, identification, creation, management - provides a short description of the most important tools.

In the annexes details on certain processes are described in more detail and the toolkit ends with tips and links to make stakeholder engagement a success (including e.g. tips how to conduct meetings, or resources on conflict resolution)

TYPICAL USE

Project planning and understanding options for stakeholder engagement. Introduction into the topic and overview of most important tools

LEVEL OF APPLICATION

A single MPA or MPA network

SKILLS AND RESOURCES REQUIRED

Depends on approach or tool chosen

STRENGTHS	WEAKNESSES
❖ Short and concise overview with well-structured lists and graphics	❖ Level of detail is not sufficient to use the tools ❖ No concrete examples of their application are provided ❖ Limited geographical focus on Mediterranean

TOOL 68 Continued

REFERENCE

Stakeholder Participation Toolkit for Identification, Designation and Management of Marine Protected Areas. RAC/SPA and IUCN-Med. Ed. RAC/SPA, Tunis. 30pp.Accesed on 10 April 2025

RELATED RESOURCES / FURTHER READING

Website for the Resource Book, also available in French and Arabic. Accessed on 10.04.2025

IUCN, WIOMSA, UNEP, WWF, CZMC. (2004). **Managing Marine Protected Areas – A Toolkit for the Western Indian Ocean. Print Version and Online Version.** Accessed on 07 February 2025

TOOL 69	Guidelines on Integrating Human Dimensions into MPA Planning and Management
	English
2014	Department of Environmental and Geographical Science, University of Capetown, South Africa, and WWF South Africa

TYPE	PURPOSE
Guideline including case studies	Enhancing understanding of the human dimensions of MPAs and improving their integration into MPA planning and management processes

STRUCTURE AND FUNCTION

Section A: deals with understanding human dimensions and the steps and processes required for identifying, understanding and integrating human dimensions into various stages of the MPA planning and management cycle.

Section B: provides supporting information and further reading.

The core guidelines consist of eight steps:

1. Understand the context: initiate the planning process
2. Engage stakeholders
3. Identify the key values and attributes of the area
4. Develop the vision, goals and draft objectives
5. Gather further information and conduct in-depth assessments
6. Identify and evaluate different management scenarios
7. Develop or review the management plan
8. Monitoring, evaluation and adaptation

TYPICAL USE

Integration of human dimensions into MPA planning and management

Additional potential uses:

- Assessment and evaluation of existing MPAs
- Development of system level guidance on human dimensions of MPAs
- CEPA
- Learning

LEVEL OF APPLICATION

Typically, individual MPAs

SKILLS AND RESOURCES REQUIRED

Typical use requires the capacity (in terms of logistics, facilitation, equipment and financial resources) to conduct participatory consultation/planning workshops and integrate the results in PA management systems.

Because of the interdependency of integrating human dimensions with the overall management system, sound knowledge, understanding and skills in PA management planning are usually also required.

TOOL 69 Continued

STRENGTHS	WEAKNESSES
❖ Clear approach and eight-step methodology ❖ Good documentation and explanation, which helps to set out the rationale and justification of the approach ❖ High quality production and illustrations of guidelines	❖ Limited initial geographical focus (mainly South Africa)

REFERENCE

Sowman, M., Raemaekers, S., Sunde, J. (2014). Guidelines for integrating human dimensions into MPA planning and management. Cape Town, South Africa: WWF Neobank Green Trust and University of Capetown. 140 pp. Accessed on 10 April 2025.

DOCUMENTED EXPERIENCE

Main focus is on South Africa. Nine case studies included in guideline document, including from Fiji.

RELATED RESOURCES / FURTHER READING

Dedicated Webpage from WWF South Africa, including the full version but also a short version and a policy brief. Accessed on 10 April 2025

TOOL 70	Tools of Engagement: A Toolkit for Engaging People in Conservation
	English
2011	Audubon Society (publisher—BirdLife USA), in cooperation with the U.S. Fish and Wildlife Service, the Environmental Education and Training Partnership (EETAP) and TogetherGreen

TYPE	PURPOSE
Guidelines and toolkit	Guidance on how best to engage people in any type of nature conservation work, including PAs

STRUCTURE AND FUNCTION

Guidance document that provides conservation professionals with a step-by-step framework, approaches, and tools to engage people in conservation activities. The guidelines can be adapted to the context of each individual planning process and are meant to be used in conjunction with general conservation planning approaches, such as the Open Standards for the Practice of Conservation.

The publication has eight main chapters:

1. Getting started
2. What are you trying to do?
3. What's causing the problems?
4. Who do you need to engage and why?
5. Getting to know your audience
6. Developing messages that matter
7. Exploring the social strategies
8. Moving from planning to action

It also contains planning tools and other resources.

TYPICAL USE

Strategy development and planning for stakeholder engagement

LEVEL OF APPLICATION

Site and system level

SKILLS AND RESOURCES REQUIRED

- General knowledge of conservation threats and activities to support targeted planning
- Other required skills and resources vary depending on tools chosen and context

STRENGTHS	WEAKNESSES
❖ General nature of approach and wide applicability ❖ Wide range of specific methods for stakeholder engagement included ❖ Compatibility with Open Standards for Practice of Conservation and other planning frameworks ❖ High quality, well-structured publication, including effective graphics and summary messages ❖ Questions for self-reflection at the end of each chapter to relate the guidance to one's own situation	❖ Relatively complex structure ❖ Not PA specific (but widely applicable to PAs)

TOOL 70 Continued

REFERENCE

Braus, J. (Editor) (2011). Tools of Engagement: A Toolkit for Engaging People in Conservation. Washington, D.C.: Audubon Society. 215 pp.

RELATED RESOURCES / FURTHER READING

Ardoin, N., J. Heimlich, J. Braus, C. Merrick (2013). Influencing Conservation Action: What the Research Says About Environmental Literacy, Behavior, and Conservation. New York: The National Audubon Society. 87 pp.

Bonta, M., T. DeFalco, C. Taylor Smith (2015). Diversity and the Conservation Movement. New York: The National Audubon Society. 44 pp.

3.7.5 | CONFLICT RESOLUTION

TOOL 71	**Understanding, preventing and solving land conflicts: A practical guide and toolbox**
	English
2017	GIZ

TYPE	PURPOSE
Guideline including tool descriptions and case studies	The Guideline aims to broaden the understanding of the complexity of causes that lead to land conflicts in order to provide for more targeted approaches for resolving and preventing them. For this purpose, it provides tools and strategies that can be used to analyse and settle ongoing land conflicts, and to prevent new ones

STRUCTURE AND FUNCTION

The guideline is divided into eight chapters:

1. Introduction (examples of land conflicts; defining land conflicts)
2. Understanding land conflicts (different types of land conflicts and consequences and social dimension)
3. Analysing land conflicts (type of information/data needed for land conflict analysis; tools to visualize and analyse land conflicts)
4. Dealing with land conflicts (approaches to uncover hidden land conflicts; forms of land conflict resolution; tools to solve land disputes)
5. Preventing land conflicts (creating awareness; establishing institutional framework; tools to prevent land dispute)
6. The role of land in (violent) conflict and peacebuilding (land as cause of broader conflicts; the role of land during and post-conflict settings)
7. Case studies – Good practices from a project level
8. Conclusion

Each chapter (except No. 7 and No. 8) ends with concepts for review, questions for discussion, exercises and further reading. In addition, Chapter 3 – 5 provide tools to support the process of solving land conflicts.

TYPICAL USE

- Search for overview information and guidance to better understand land conflicts and options for action in a project context
- Support in processes of analysing, settling or preventing land conflicts
- The end of chapter notes can be used for general courses on land administration and land management

LEVEL OF APPLICATION

Level of application depends on purpose. If it is used to analyse land disputes it would typically be at the individual PA or sometimes at the PA system level

SKILLS AND RESOURCES REQUIRED

Skills and resources required for applying the individual tools presented vary

TOOL 71 Continued

STRENGTHS	WEAKNESSES
❖ Provides clear definitions and explanations of terms and concepts illustrated by examples ❖ Includes good practice case studies ❖ Broad overview over tools regarding land conflicts ❖ Includes further reading, concepts for review, question for discussion and exercises to deliberate the lessons learned	❖ Need of external support (e.g. mediator) for the application of tools presented ❖ Not PA-specific

REFERENCE

Wehrmann, B. (2017). **Understanding, preventing and solving land conflicts. A practical guide and toolbox**. Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, Bonn/Eschborn; Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung (BMZ), Berlin. 156 pp., accessed on 05 February 2025

VERSIONS AND/OR MODIFICATIONS

- First edition (2008)
- Revised second edition (2017)

DOCUMENTED EXPERIENCE

Of six case studies two are PA-related (Laos, Philippines)

RELATED RESOURCES / FURTHER READING

An accompanying Training Manual can be obtained upon request at landmanagement@giz.de

E-learning course: FAO. (2014). **Addressing Disputes and Conflicts over the Tenure of Natural Resources**. Accessed on 05 February 2025

Food and Agriculture Organization of the United Nations. (2012). **Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security**. Food and Agriculture Organization of the United Nations, Rome. 40 pp. Accessed on 05 February 2025

4

EXPERIENCES with selected tools in projects of German development cooperation

4.1 GOVERNANCE ASSESSMENT IN HIN NAM NO IN LAOS – FOR EQUITABLE AND EFFECTIVE PROTECTED AND CONSERVED AREA MANAGEMENT

The objective of the GIZ Hin Nam No project (predecessor project of the current GIZ ProFEB project) was that the Management Authority of the National Protected Area (nowadays: National Park) and local communities conserve the biodiversity in Hin Nam No (HNN) in Laos in mutual agreement through a co-management approach.

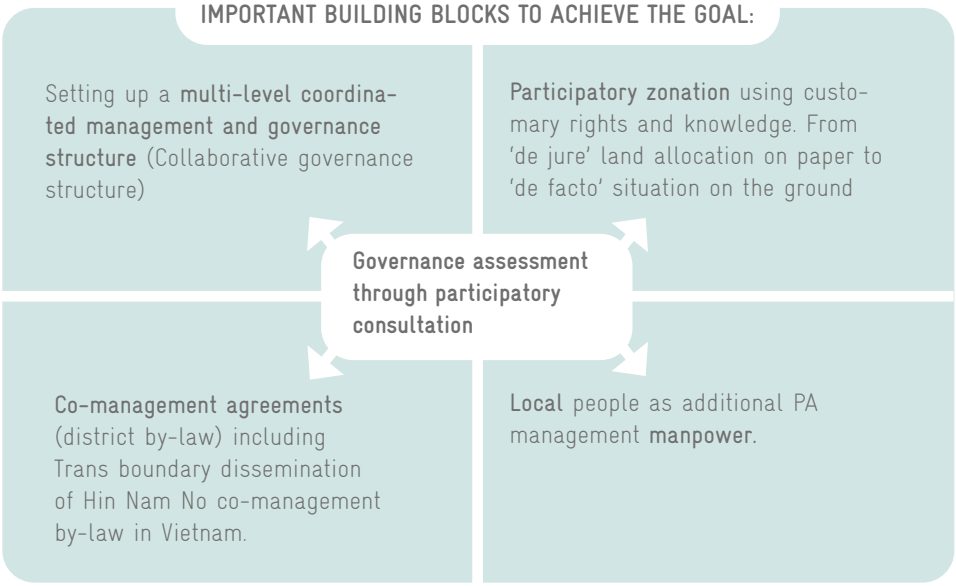
>> METHOD

Entry point for the governance assessment was the need for advice and poor results during the project Progress Review in January 2013. The project rating was unsatisfactory and negative results were predominant despite identifiable positive results. This was due to the difficult institutional situation (e.g. transition from responsible ministries, the delay in implementation and the misconception of the co-management concept). The project strategy and steering were lagging behind expectations. Benefit and necessity of participatory management was widely accepted, but it became obvious that key stakeholders had different conceptions of what the participatory approach means in practice. Some people equated the right to participate in forest protection as an obligation to help implement existing laws. It was important for stakeholders to become aware that true participation is voluntary and motivated by self-interest. Consequently, the obligations and duties must be linked to rights and privileges. Most importantly, the participatory management is a partnership between PA authorities and local communities.

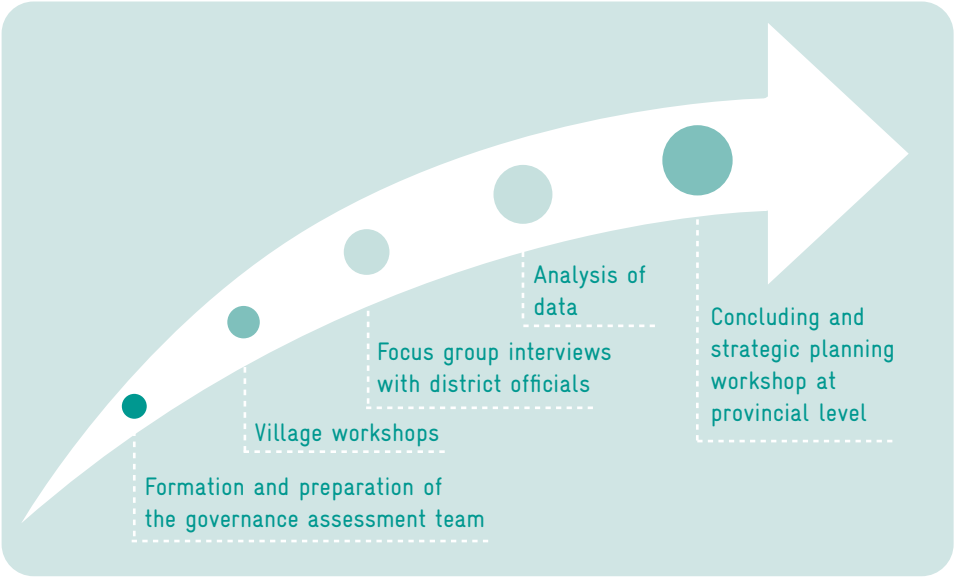
>> MAIN CHALLENGES

- An increasing demand for timber, non-timber forest products and wildlife from within Laos and neighboring countries.
- Balancing biodiversity conservation and livelihoods of local people around Hin Nam No (20 villages/8.000 people) as it is difficult to find alternative income (NFPs; eco-tourism) that is more lucrative compared to illegal logging/poaching.
- Institutional weakness of proteced area authorities (staff/budget/capacity/skills/equipment).
- Lack of political will and poor governance as well as a lack of rule of law and law enforcement.
- Lack of knowledge and skills of local population.
- Hydropower, mining, road and other developments.
- Slash and burn practices.
- Climate change (fires; floods).

>> 4.1 Governance assessment in Hin Nam No in Laos – for equitable and effective protected and conserved area management



GOVERNANCE ASSESSMENT PROCESS IN FIVE STEPS



1. **Formation and preparation (three weeks)** of the governance assessment team – PA authority (mandate); the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH (methodology and support); and local NGO (adaptation to local context and neutral facilitation) – and the team planning process and document review (e.g. International Union for Conservation of Nature (IUCN) Guidelines **Governance of Protected Areas: From understanding to action.** Development of tools, interview questionnaire and methodology.

2. **Village workshops (one week):** five workshops with selected participants from several villages (elders, women, etc.) at village cluster level to gather data/villagers' perspectives and assess the situation through group interviews and participa-

tory mapping; problem tree exercise and SWOT (strengths–weaknesses–opportunities–threats) analysis.

3. **Focus group interviews with district officials (one day)**: interview questionnaires and questionnaire for the (annual) good governance assessment at district level (derived from suggested indicators presented in annex 3 of the **IUCN Guidelines** and adapted to a METT – **Management Effectiveness Tracking Tool** – format).

4. **Analysis of data (two weeks)**

Benefit sharing in law enforcement

Delegation of authority to local people

GOVERNANCE ASSESSMENT RESULTS AND SUBSEQUENT INTERVENTIONS

Outcome governance assessment (Feb 2014)	Proposed intervention, progress so far (Mar 2017)
◆ Unclear delegation of decision making/implementation (authority to villages) ◆ Governance system is ad hoc and top-down, with lack of benefit sharing ◆ Lack of skills and capacity; lack of involvement by women ◆ Unclear zonation of Hin Nam No into manageable units per guardian village ◆ Local rules exist but are unknown or not implemented by outsiders ◆ Willingness of guardian villages/village rangers to be involved in Hin Nam No management ◆ Law enforcement system is unclear, slow and ineffective	◆ Tasks delegated to villagers through co-management bylaws ◆ Development and implementation of a co-mgmt plan, participatory planning/reporting and equitable revenue sharing mechanisms with local communities ◆ Gender-sensitive capacity development plans ◆ Participatory zonation and mapping of trails, park boundary and controlled-use zones ◆ Support for participatory development of use regulations and dissemination of co-mgmt bylaws ◆ Monthly participatory monitoring and patrolling based on SMART, co-mgmt bylaws and ranger protocols ◆ Rapid and effective response through joint law enforcement by villagers and co-mgmt agencies

Cost-effective biodiversity monitoring and patrolling (USD 50 per km²/year)

Capacity development and empowerment of local people

Decentralised governance with inclusion of local knowledge

Access and resource use rights

5. **Concluding and strategic planning workshop at provincial level (three days)**

- ❖ Knowledge, understanding and sharing of results of governance assessment (village, village cluster and district level)
- ❖ Sharing experiences with political institutions (National Academy of Politics and Public Administration, NAPPA)
- ❖ Identification of key bottlenecks and development of a strategic action plan
- ❖ Promotion of a collaborative governance approach via community-based solutions
- ❖ Interventions proposed by the provincial authorities

>> GOVERNANCE ASSESSMENT ANALYSIS AND LESSONS LEARNED

The results from the participatory governance assessment tool (who, how) and the Association of Southeast Asian Nations (ASEAN) Heritage Park management effectiveness self-assessment tool (what) led to acceptance of the need for more effective and equitable management of Hin Nam No.

First of all, a governance assessment brings stakeholders together to receive guidance on a shared goal. The evidence of successful implementation and the impact achieved is that more PA staff are local people, capacity development/ empowerment of guardian villages and village rangers has been provided and supported, co-management committees have been set up and co-management agreements have been prepared and signed by all the authorities involved. Access and resource rights for local people are clear, understandable and respected. Poaching fines and other revenues from park-related activities are shared with local people. This approach is widely seen as a pilot participatory model for Laos's national protected areas, with the delegation of authority to local villagers, which can be extended to other areas. Several study tours to Hin Nam No and a training of trainers course have already been organised, and some PAs have started replicating certain parts of the model.

>> IMPACT

- Species conservation
- Benefits for village service providers
- Improved management: increase of 15% in its Good Governance score and 13% in its Management Effectiveness score over two years (2014–2016)

>> ENABLING FACTORS THAT LEAD TO SUCCESS

- The right people (champions) do the governance assessment (open to change).
- The governance assessment guidelines are adapted to the local situation with the help of a local facilitator.
- The governance assessment conducted leads to the acknowledgement that resources are limited and to the creation of a vision to effectively and equitably manage the area through shared governance.
- Connectivity of local people to the land makes them eager to be part of conservation.
- 'Good governance' is broken down into understandable pieces.
- Bottom-up piloting of good governance recommendations.

>> FURTHER READING

de Koning, M. et al. (2017): **Collaborative Governance of Protected Areas: Success Factors and Prospects for Hin Nam No National Protected Area, Central Laos.** Conservation and Society 15(1): 87–99, 2017.

de Koning, M. (2015): **Additional local manpower improves protected area management effectiveness.** In: Panorama Solutions for a Healthy Planet.

Lang, B. et.al. (2017): **Experiences and added value of participatory governance assessments of protected areas in Bangladesh, Laos and the Philippines.** E-poster. Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)/Sector Network Natural Resources and Rural Development, Asia.

Franks, P., Booker, F. (2018) **Governance Assessment for Protected and Conserved Areas (GAPA) – Early experience of a multi-stakeholder methodology for enhancing equity and effectiveness.** International Institute for Environment and Development (IIED).

4.2 EXPERIENCES AND LESSONS LEARNED FROM THE APPLICATION OF METT IN GERMAN TECHNICAL COOPERATION PROJECTS

>> BACKGROUND

German technical cooperation projects that have used – or supported the introduction of – the **Management Effectiveness Tracking Tool (METT)** to assist partners in enhancing protected area management effectiveness (PAME) are shown below (Table 1).

PROJECT/ PROGRAMME TITLE	COUNTRY (TERM)	AREA(S)	PROJECT OBJECTIVE	COMMENTS
Sustainable management of natural resources – GESOREN	Ecuador (2008 – 2013)	Siete Iglesias Municipal Ecological Conservation Area and Tinajillas–Río Gualaceño Forest and Vegetation Cover Area	Local people in the programme regions apply strategies and methods for sustainable natural resources management and increase their income.	PA-related indicator: monitoring results from 300,000 ha in at least two PAs supported by the programme show an improvement in the ecological situation of at least 10 points. METT was only used in some of the participating PAs.
Development of the Taï and Comoé nature conservation and economic areas in Côte d'Ivoire – PROFIAB I and II	Côte d'Ivoire (2013 – 2016 and 2016 – 2019)	Taï National Park (PNT) and Comoé National Park (PNC)	The park authorities and people living on the periphery of the parks have improved protection, the sustainability of ecosystem services and regulated economic use.	An increase in annual METT scores for the two parks is one of the project's indicators.
Protected Area Management Enhancement in the Philippines – PAME	Philippines (2013 – 2017)	64 existing and around 100 newly established protected areas	Improved protection and management of Key Biodiversity Areas is achieved in the Philippines.	Relevant indicators are improvement in the management effectiveness of 60 national PAs by at least 30 % on average and achievement of management effectiveness scores of 20 % on average in 100 PAs newly established with project support.
Biodiversity and Climate Change Project – BCCP (GIZ and ASEAN Centre for Biodiversity)	Ten countries in South-East Asia (2015 – 2019)	30 ASEAN Heritage Parks (various PA management categories)	As the body mandated to advise ASEAN member states on regional biodiversity and climate change policies and strategies, the ASEAN Centre for Biodiversity is increasingly involved in the ASEAN integration process.	Part of wider support to the ASEAN Centre for Biodiversity

>> WHAT NEEDS WAS METT INTENDED TO ADDRESS?

Generally, PA agencies and development projects use METT and other PAME assessment methods to assess the current state of PAME, to direct and monitor their interventions, to strengthen PA management and to document their achievements in this field:

- The GESOREN programme (Ecuador) used METT to inform and monitor activities aimed at improving management of two municipal PAs in Ecuador. In particular, the method was used in conjunction with a land use and land cover study to understand the initial management effectiveness of these areas, to identify high-priority areas for improvement, to direct and adapt measures aimed at achieving this and to analyse their impact.
- The PAME project (Philippines) formulated a central objective in PAME terms: it aimed to improve the management effectiveness of 60 existing national protected areas by at least 30%, in addition to establishing 100 new protected areas in Key Biodiversity Areas and bringing their management effectiveness up to at least 20% on average.
- In Taï and Comoé National Parks, (Côte d'Ivoire), METT was used to inform the implementation and revision of management and development plans, to indicate management performance to the national trust fund for protected areas and to inform periodic reporting for UNESCO World Heritage sites and for benchmarking within the national network of PAs. In addition, the project itself used METT scores as one of its outcome indicators.
- In the BCCP, adapted METT assessments were conducted as part of a wider assessment of 30 ASEAN Heritage Parks in order to identify their current state as well as challenges and opportunities faced by them, to identify widely applicable good practices and to formulate common regional strategic directions on the conservation and sustainable use of these PAs.

Beyond these specific needs, the PA agencies involved in these projects were interested in launching and institutionalising PAME because it responded to their commitments under the Convention on Biological Diversity, its Programme of Work on Protected Areas and its Strategic Plan 2011-2020, specifically Aichi Target 11.

>> WHAT PRACTICAL STEPS WERE TAKEN TO SUPPORT THE USE OF METT?

The GESOREN programme (Ecuador) proposed PAME assessments as a routine step to inform, guide and monitor its interventions in participating PAs. The programme contracted experienced facilitators who helped convene local PA staff as well as government representatives and civil society actors and conduct the assessment workshops. These were meticulously documented. In subsequent assessment runs, PA staff increasingly used the method independently.

The PROFIAB programme (Côte d'Ivoire) used METT in the same way. However, once an experienced facilitator had introduced the tool, PA staff of the Taï National Park quickly used it on their own. METT was scaled up within the national PA network by using experienced facilitators from PAs.

The PAME programme (Philippines) differed from the other projects in that it had a much wider focus (60 existing and 100 new PAs). The project partnership followed a careful stepwise process to develop and implement its PAME assessment. METT was only chosen after comparison with another locally developed PAME method, which had previously been widely used for the marine realm. Inspired by the identified advantages of that method, the METT indicators were adapted with the addition of more precise criteria to reduce the scope for variability in scoring. Six national consultant teams were contracted and trained to facilitate the assessments in 60 PAs. These were conducted in two steps: first, the consultants collected supporting documents and individual scoring results typically from 20 members of PA management boards. Then, the consultants shared the individual scoring results and their views based upon the document review and facilitated a consensus score for each indicator. As variability in scoring was still observed, a single independent consultant was contracted to review all scores and systematically recommend scores based only on available documentary evidence. These became the project's baseline scores for the 60 existing PAs to be enhanced against which further progress could later be measured.

During the BCCP for the ASEAN Heritage Parks, METT was chosen and adapted based on a desk-top study and used in two ways. Questionnaires were sent to all ASEAN parks (with a 57% return rate). In addition, they were used as a basis for on-the-ground, in-depth facilitated appraisals in five selected PAs. The results were analysed to identify common issues, opportunities and good practice in all parks. Some comparisons across areas – similar to the ones Rapid Assessment and Prioritisation of Protected Area Management (RAPPAM) is usually used for – were also drawn. This was a one-off appraisal also involving other document analysis and field inspections (in the five selected PAs). It did not address changes over time.

>> RESULTS AND IMPACTS

The GESOREN programme managed to introduce PAME – and particularly METT in those areas where it was applied – into the routine management cycle of the participating PAs. The method clearly showed advances in management effectiveness in all aspects according to the IUCN WCPA (World Commission on Protected Areas) PAME framework, which could be attributed to programme interventions (Figure 1). METT further helped managers and local authorities identify critical future directions for PAME improvement, including better management planning, implementation and financing, increased personnel, better participation, communication and inter-institutional cooperation. It was particularly effective as a basis for a collective critical self-evaluation and collective reflection on PA management, which helped PA staff and stakeholders to develop a joint understanding of a given area and its priorities. This contributed to better ownership, orientation, coordination and collaboration in PA management.

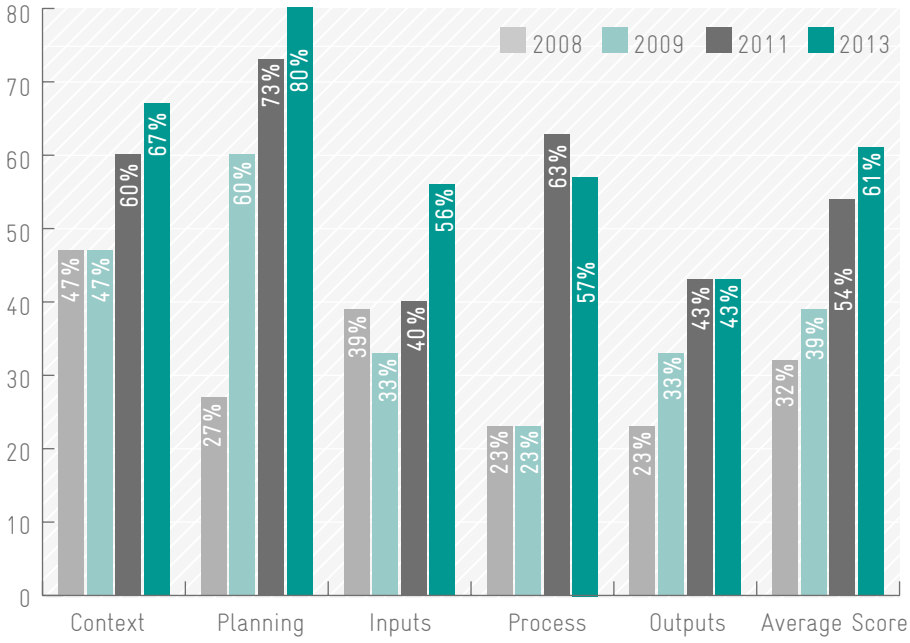


Figure 1. METT results from the Tinajillas–Río Gualaceño Forest and Vegetation Cover Area, 2008–2013
Source: Limón Indanza municipality – GIZ 2013

The initial results of a METT assessment in the PAME programme (Philippines) helped design a capacity building programme and financial subsidies to enhance the management effectiveness of participating PAs. The project trained over 17,000 participants from PA agencies, local government and management partners. As a result, the management effectiveness of 64 existing PAs increased from an average rating of 34% to 50% towards the end of the project. The METT method detected improvements in all aspects of management effectiveness. It was also instrumental in justifying increases in staff numbers and resources for law enforcement and conservation.

In the case of Taï and Comoé National Parks (Côte d'Ivoire), METT results demonstrated improvements in all aspects of management effectiveness, according to the IUCN WCPA PAME framework, over a period of three years.

Lower scores in specific management issues were used to prioritise specific activities in annual operational planning. In the interest of alignment with partner agencies' monitoring instruments and because of the programme's specific objective to improve PA management, changes in METT scores were attributed with caution to project interventions and thereby used to measure achievement of the outcome indicator.

The adapted METT assessments conducted by the BCCP enabled the ASEAN Centre for Biodiversity to prioritise threats and management constraints that affect all 30 ASEAN Heritage Parks, to differentiate – with some caution – between more and less effective PAs, to compile a list of good practices which could be applied more widely and to formulate 25 strategic directions for its future support to the ASEAN Heritage Park network.

>> ENABLING FACTORS

- Successful PAME assessment requires a desire to improve PA management as well as a culture of transparency and adaptive management on the part of the participating institutions.
- A certain degree of institutional continuity and memory is necessary to pursue and measure PAME improvements in the long term. Therefore, it is necessary to incentivise experienced staff to stay in their PAs and to introduce new staff to past and ongoing PAME assessments with their results and follow-up activities.
- METT data and information needs are generally easy to satisfy, but exceptions exist in relation to some indicators. PAs that already have systems for data collection and management will find METT assessments easier.

>> LESSONS LEARNED/COMMENTS/RECOMMENDATIONS

A number of important lessons have been learned through the application of METT across these German technical cooperation projects:

- Irrespectively of the specific methodology employed, PAME assessments are useful, particularly to support PA planning and the prioritisation of actions. The adaptive management culture in which PAME assessments are embedded and the way in which the results are used are as important as the specific method chosen.
- PAME results achieve the strongest impact if shared broadly.
- PAME needs to be institutionalised at the PA or PA system level to facilitate periodic reassessments and thereby achieve optimal and sustainable results. This can be supported by including PAME in the PA budgeting process and anchoring it in standard PA procedures and staff training.

- Local government and other community representatives need to be closely involved in both the PAME assessments and in the design and implementation of measures to improve effectiveness. A multi-institutional and multi-disciplinary perspective contributes to assessment quality.
- METT has proven to be a simple, easy and cost-effective (both in financial and workload terms) PAME assessment methodology, which is also compatible with the IUCN WCPA PAME framework and other specific methodologies. As it is replicable, it can be used to track progress in improving PAME over time and to document achievements.
- It takes time for the conservation outcomes of improved PAME to become measurable, but this is a key outcome which needs to be monitored. Since METT does not detect changes in biodiversity status or provide detailed information about threats, these need to be monitored separately.
- METT is a relatively superficial assessment method, which cannot be used to analyse trends in PAME in depth. At the same time, users need to look beyond the specific scores and use assessments to analyse functional relationships to the extent possible. In the analysis, the information from METT must be complemented with information from other tools or methods.
- METT results can be communicated graphically in various intuitive ways, such as radar plots.
- METT assessments provide most – and the most conclusive – information if they are conducted face-to-face during site visits, rather than by mailing questionnaires to respondents and analysing the responses. This is not only because of the often limited return rate, but also because appraisal questions can be misunderstood and evaluation categories used inconsistently. Furthermore, any additional information generated by discussions that does not directly respond to any of the questionnaire's questions might be missed when using METT remotely.
- Special caution is needed when using METT scores to compare PAs with each other, rather than comparing scores over time for individual PAs. Some appraisal categories do not apply equally to all areas and might skew average scores if they are not pre-excluded from analysis. Since METT does not use objectively verifiable indicators, there is also the danger of subjective bias.
- In this respect, care also has to be taken when different language versions of the METT tool are used. The English and the French versions, for example, sometimes differ considerably. For the francophone context, it is therefore important i) to develop, from the outset, an accurate French translation of the tool based on the English version or ii) to apply the original French version but to refer to the English version in case of ambiguity over specific documentation.

›› REFERENCES

Ministerio del Ambiente del Ecuador, Dirección Nacional de Biodiversidad, Sustainable management of natural resources (GESOREN)/ GIZ: Evaluación de efectividad de manejo sistema nacional de áreas protegidas (2012)

GIZ. (2013). **Sistematización de las experiencias de aplicación de la Evaluación de Efectividad de Manejo en las áreas protegidas apoyadas por el Programa Gestión Sostenible de Recursos Naturales (GESOREN) de la Cooperación Alemana al Desarrollo**

A. Mardiastuti et al.: **Management Effectiveness of ASEAN Heritage Parks: A study report**, GIZ and ASEAN Centre for Biodiversity (2013)

Évaluation de l'efficacité de gestion du parc national de Taï à l'aide de l'outil « Management Effectiveness Tracking Tool », Rapport de l'Atelier (2016), Office Ivoirien des Parcs et Réserves (OIPR)

A. Uychiaoco: Philippine experience in Protected Area Management Effectiveness Tracking Tool, 2013 – 2017 (2017) (unpublished)

4.3 EXPERIENCES AND LESSONS LEARNED FROM THE APPLICATION OF SMART IN GERMAN TECHNICAL COOPERATION PROJECTS

>> BACKGROUND

Projects that have supported the introduction of the **Spatial Monitoring and Reporting Tool (SMART)** are shown in the table below together with their objectives

PROJECT TITLE	COUNTRY (TERM)	AREAS	PROJECT OBJECTIVE	COMMENTS
Integrated management of the coastal and marine protected areas of the Sundarbans and the Swatch of No Ground in Bangladesh (SoNG) (and predecessor projects)	Bangladesh (2015–2025)	Sundarbans Mangrove Forests Swatch of No Ground (SoNG) Marine Protected Area (MPA)	The coordination of relevant actors for the protection and sustainable use of the Swatch of No Ground (SoNG) Marine Protected Area in the Bay of Bengal has been strengthened.	> 6,000 km^2 of contiguous mangrove forest with globally important biodiversity. Parts listed as UNESCO World Heritage Site. >1,738 km2 of Marine areas in the Bay of Bengal.
Protection and Sustainable Use of Forest Ecosystems and Biodiversity (ProFEB) (and predecessor projects)	Laos (2010–present)	Hin Nam No National Park	The management authority and local communities conserve the biodiversity of the Hin Nam No NP through a mutually agreed co-management approach.	PA of 94,121 ha with globally important biodiversity. In 2025, Hin Nam No National Park was nominated as a natural World Heritage Site as a transboundary extension to Phong Nha-Ke Bang National Park in Vietnam.

Table Continued

PROJECT TITLE	COUNTRY (TERM)	AREAS	PROJECT OBJECTIVE	COMMENTS
Conservation and sustainable use of forest biodiversity and ecosystem services in Viet Nam (phase 2) and other forest and biodiversity small packages	Viet Nam (2014–present)	National	State administrative agencies at national and provincial level responsible for the management of protected forests implement mechanisms which provide benefits from biodiversity conservation and sustainable forest management to local communities.	SMART guidelines/ handbooks developed+ standard training modules and trainings conducted for national upscale + SOP for SMART application for PAs + standardised SMART data model insitutionalized for PA application + coaching for 02 PAs + 11 PAs supported with SMART equipments SMART network and cooperation strengthened
Governance and sustainable management of natural resources in the Comoé and Taï areas (Pro2GRN)	Côte d'Ivoire (2013–2025)	Taï and Comoé National Parks; Bossematié Nature Reserve	The rural population significantly increases its income from agriculture, with a particular focus on ecological sustainability, against a backdrop of improved conditions for conserving biodiversity in protected areas.	The Comoé (11,492 km²) and Taï (5082 km²) national parks are UNESCO World Heritage sites and part of the Biosphere Reserve network. The Bossematié Nature Reserve (220 km²) was formerly a classified forest, which changed status in 2022 to become part of Côte d'Ivoire's network of protected areas.

>> WHAT NEEDS WAS SMART INTENDED TO ADDRESS?

SMART was originally designed to help PA agencies to better monitor, evaluate and adaptively manage patrolling activities. While in some of the projects it was introduced primarily for this purpose, others also used it to support general monitoring and adaptive management:

- In Bangladesh, the projects piloted SMART to strengthen law enforcement and monitoring. In the Sundarbans, it addressed a need to summarise data from patrol teams and generate information for PA management. In Viet Nam, SMART was piloted and then officallyofficially applied and upscaled to wider application by PAas to respond to the need for monitoring and planning patrols by forest rangers. In the upscaling process, the scope of use of SMART has been gradually expanded to include contract-based community forest protection groups and the collection of information on wildlife sightings or forest processes.
- In Laos, SMART was brought in to help set up a community ranger system for better spatial monitoring of threats and wildlife. One specific objective, from 2017, was to replace periodic expert missions by external experts with continuous monitoring efforts by village rangers. SMART was also intended to enable the Hin Nam No NPA administration to better integrate information from trail mapping, community rangers and scientific monitoring.
- In Côte d'Ivoire, SMART was introduced mainly at Taï National Park, following an in-depth evaluation of the park's monitoring strategy in 2014. In view of the convincing results obtained with this tool after a few years of implementation, the Office Ivoirien des Parcs et Réserves (OIPR), with the support of its technical and financial partners, has opted to use it in all its protected areas in order to improve the effectiveness of monitoring.

>> WHAT PRACTICAL STEPS WERE TAKEN TO SUPPORT THE USE OF SMART?

The way in which SMART was introduced differed depending on the intended purpose and circumstances. It was particularly well-documented for the Sundarbans in Bangladesh. SMART introduction was facilitated by cooperation between the project and the Wildlife Conservation Society (WCS):

1. Forest Department (BFD) established a SMART Technical Working Group consisting of BFD staff and partners and a SMART enforcement committee for the interpretation of SMART patrol reports and management decisions.
2. A standardised approach to data collection/processing, operating procedures (SMART OPs) and a patrolling handbook were prepared to guide patrolling. These now provide a consistent framework for enforcement and monitoring.
3. Training curricula were developed, and training of trainers, basic training and more advanced specialist training (e.g. on data collection with CyberTracker for frontline staff and on SMART software, data management and reporting for mid-level staff) was conducted.

4. The newly trained patrol teams were mentored by trainers/experts for 91 days during patrols.

Building on this experience, the BFD and its partners have drawn up guidance for the introduction of SMART in additional PAs. The development of a national SMART Strategy to enable application across Bangladesh is now being considered by the BFD.

A similar approach to the one used in Bangladesh was taken in Viet Nam. In addition, a Vietnamese version of SMART was developed, making it more user-friendly for those who do not speak English.

In Hin Nam No (Laos), the introduction of SMART started with the redesigning of the database on which SMART is built to make it suitable not only for enforcement but also for wildlife monitoring. After testing, volunteers and rangers were trained to use the new database. In Côte d'Ivoire, three training modules on administration and user rights were developed. These targeted rangers, PA managers and monitoring experts as well as managers of the national protected area agency. Subsequently, the project supported an internal test of the system and on-the-job coaching of sector managers by the monitoring experts in the field.

>> RESULTS AND IMPACTS

In the Sundarbans (Bangladesh), the introduction of SMART involved 1,488 days, covering 146,557 km from January 2018 to July 2022. As a result, 23,442 sightings of 23 key indicator wildlife species were made, 903 people were arrested, illegal items were seized, and legal action was initiated. SMART has helped the BFD to better prioritise patrolling efforts and set standards for patrolling. This has improved enforcement of forest, wildlife and fishery laws and rules as well as monitoring of poaching, illegal fishing, etc. Ranger motivation has increased as they now feel that they are more effective. Senior managers were satisfied with the improved monitoring and evaluation of patrolling. Based on these results and impacts, the BFD is planning a broader rollout of SMART across terrestrial and possibly marine PAs.

In Hin Nam No National Park (Laos), the use of SMART led to successful enforcement and monitoring, thereby creating positive incentives for cooperation between state agencies and villagers. Zoning was also improved. Adaptive PA management was generally improved because as better spatial information on threats and biodiversity status became available it was regularly shared with co-management stakeholders and used as a basis for joint decision-making. A positive feedback loop was established; providing information to management created awareness at that level and resulted in further requests for information. This motivated community and government rangers as well as PA staff responsible for analysis and reporting to keep up their efforts.

The uptake of SMART across participating PAs in Viet Nam was strong. Besides the three PAs where SMART was originally piloted and the eight additional PAs directly involved in the project, another 16 are now making efforts to adopt SMART and two PAs were provided direct techncialtechnical coaching for the application of SMART in their patrolling and management. The joint development of a standardized SMART data model (to be adopted by the national Department of Forestry) for guiding to all PAs will strengthen the official uptake of SMART in PA protection. In the project areas, SMART is used not only for data collection and documentation, but also for patrol planning (e.g. by focusing on hotspots where violations are most prevalent). It helps managers evaluate staff performance on an objective basis and has improved the quality of databases, particularly in terms of spatial data. Data are managed in a transparent and consistent manner. Reports that can be synthesized and exported with SMART inform monthly monitoring meetings and planning as well as managerial boards in some PAs.

In Côte d'Ivoire, a series of training sessions have been held for Comoé and Taï Park staff on the SMART tool in general and its various variants such as SMART Mobile, SMART Desktop and SMART Connect. These training sessions focused mainly on the following topics: Designing data models, configuring the server, collecting and displaying data on smartphones and computers, analysing data and interpreting results, designing automated reports, formulating queries, etc. Currently, 100% of monitoring activities in the Comoé and Taï national parks and the Bossematié Reserve are carried out using the SMART tool, which has considerably improved the efficiency of operational activities in the field. All field agents receive regular training to improve their efficiency during surveillance missions. Today, with all the experience gained in using the SMART tool, OIPR managers have extended it to the entire network of protected areas in Côte d'Ivoire, thus implementing the new strategy for monitoring protected areas in Côte d'Ivoire, which includes the use of this tool.

>> ENABLING FACTORS

Some enabling factors relate to the external enabling environment:

- A key factor in the Sundarbans and Viet Nam has been the desire and commitment of high-level authorities to improve management of the area. This was further aided by clearly stated conservation priorities and an understanding of the biodiversity present and critical threats as well as an already existing adaptive management system at the site and system level.
- In any co-management setting where monitoring is part of shared responsibilities, government commitment needs to be matched by a commitment from the co-managing partners in order to make SMART introduction successful. In Hin Nam No (Laos), the interest in controlling village land against external intruders was an important prerequisite. In such a setting, SMART helps to provide a common understanding of the status of conservation among different stakeholders and a basis for joint evidence-based decision-making.
- Clear trend and strong will with clear plan and priority by the government in all sectors put for digitialization in the management of PAs in Viet Nam also enable the collaboration from both national and local level in SMART applications.
- SMART patrolling must be consistent with legal and regulatory provisions in force for surveillance and enforcement, particularly if it is to be introduced as widely as in Bangladesh or Viet Nam. If such a framework is not in place, one may need to be created.
- Clear mandates for rangers to enforce laws when they detect an infringement, such as those already in place in Laos prior to SMART introduction, have been an enabling factor.
- At the management level, enabling conditions have included effective leadership, understanding of patrol techniques, analytical skills for evaluating data and feedback given to rangers.
- Budgeting for SMART-supported patrolling (fuel, daily rations, accommodation, maintenance/replacement of data loggers and other equipment, etc.) by the responsible PA agencies will enable routine use and enhance impacts. This is a precondition for making project-supported SMART introduction sustainable in the long term.
- The added value of SMART patrolling and monitoring depends partly on PA size. Very small or relatively biodiversity-poor areas may not warrant the introduction of SMART.

The approach taken during SMART introduction proved as important as the enabling factors mentioned above:

- As the Sundarbans example illustrates, successful SMART introduction often involves more than the software. It needs to be approached as a broad, long-term reform of the culture, procedures and resourcing of patrolling, monitoring and adaptive management.

- In relation to the above, SMART introduction efforts tend to be the most successful und sustainable when it is invested broadly in knowledge, understanding and competence for the whole range of actors from rangers to senior managers including extensive training of trainers. For instance, an understanding by senior staff about how to use information generated by SMART patrols for decision-making unlocks its full potential and thereby yields positive feedback. Sound data management and vetting skills among technicians and middle managers need to be developed to maintain the system.
- Partnerships among actors involved in PA patrolling and monitoring (e.g. government agencies and community rangers) are needed for successful SMART implementation.
- SMART needs to be translated into national languages if it is to be widely used.

›› LESSONS LEARNED/COMMENTS/RECOMMENDATIONS

In general, SMART proved cost effective and was easily integrated into existing patrol schemes. The GIZ-supported projects also yielded the following lessons learned:

- Most sites use SMART primarily as a data collection tool; fewer use it for data analysis. Fewer still use it to guide meetings between rangers and managers, and only a few sites use it for planning or performance evaluation and incentives. There are great opportunities to strengthen SMART implementation by focusing on planning, evaluation and incentives.
- Several projects report a shift towards using SMART not just to monitor patrolling activities, but also to monitor the PA more generally in order to inform adaptive PA management.

- SMART can improve patrolling and monitoring effectiveness and efficiency, but limiting factors such as weak logistics support and resourcing shortages (e.g. ranger stations, fuel budget allocations, provision for rangers' basic needs, incentives, etc.) need to be addressed at the same time.
- If a sound management (including patrolling) system and infrastructure are already in place, this enhances the chances of successful SMART use.
- If there are few rangers, it may be possible to teach community groups to conduct SMART patrols, as was done in Laos. The same applies to the staff of other government agencies.
- There are opportunities to enhance SMART use and outcomes through language updates, using SMART Connect, links to databases on enforcement, fixed poacher cameras, plug-ins for designing wildlife surveys (line transects, point counts), etc.
- A trial-and-error approach during introduction is important. Tools and protocols to improve these aspects are currently being developed.
- Since in areas with shared governance systems it is paramount that all partners are able to participate in evidence-based decision-making, participatory processing and analysis of SMART data is important but can also be challenging.
- The issue of data security is not really addressed yet in SMART, which is rather sensitive in view of the data processed by the system. The network is working on solutions to this challenge, but user agencies also need to be aware of it.
- Since the resolution of monitoring data collected by SMART depends on species identification skills, among other factors, identification manuals should be produced where necessary.

>> FURTHER READING

Bangladesh Forest Department, Wildlife Conservation Society and Deutsche Gesellschaft für Internationale Zusammenarbeit (2017). **Handbook for SMART Patrols in the Sundarbans Mangrove Forest of Bangladesh.** Published by the Wildlife Conservation Society, Dhaka, Bangladesh.

Dobbelsteijn, R. (2016). **Integration of local knowledge in park management.** PANORAMA – solutions for a healthy planet.

http://smartconservationtools.org/

5

PROJECT case studies

5.1 INCLUSIVE PROCESSES OF CONSULTATION WITH INDIGENOUS COMMUNITIES TO UNDERPIN SUSTAINABLE DEVELOPMENT IN THE MESOAMERICAN BIOLOGICAL CORRIDOR

PROJECT TITLE	**Biodiversity conservation and local development in the Mesoamerican Biological Corridor**
COMMISIONED BY:	German Federal Ministry for Economic Cooperation and Development (BMZ)
COUNTRIES:	Honduras, Nicaragua
OVERALL TERM:	2013 – 2018
LEAD EXECUTING AGENCIES:	Central American Commission for Environment and Development (CCAD)

>> PROJECT OBJECTIVE

Local stakeholders in the core zone of the Mesoamerican Biological Corridor have improved the management of their territories.

>> CONTEXT

The forests on both sides of the border between Honduras and Nicaragua are among the most biodiverse areas in the world. They form the core zone of the Mesoamerican Biological Corridor and are home to various Indigenous Peoples. Unchecked logging, forest fires and clearance of forest land to make way for agriculture and livestock farming – facilitated by corruption, political influence, unresolved land tenure issues and drug-related crime etc. – are causing progressive deforestation. This is constraining not only the key ecological functions of the forest, but also the resources on which the lives and livelihoods of the (mostly Indigenous) rural population depend.

In both countries, the Indigenous territories of the project region are located in or close to protected areas: the Bosawás Biosphere Reserve in Nicaragua and the Río Plátano and Tawahka Asangni biosphere reserves and Patuca National Park in Honduras.

In Nicaragua, difficult political circumstances meant that the project had to be temporarily suspended, hence it was only able to instigate sporadic local initiatives. The remarks below therefore relate chiefly to Honduras.

>> CHALLENGES

In Honduras the relationship between Indigenous organisations and the government institutions responsible for the protected areas was difficult and fraught with conflict. Neither side had sufficient financial, organisational and technical capacities to participate in processes of constructive negotiation.

Often the actors involved also lacked the will to engage in such processes. The idea of protected areas, for instance, was rejected by most of the Indigenous actors as a Western concept. The only relevant issue as far as they were concerned was land title. There was no common understanding of the purpose of the protected areas and how to manage them, either among the Indigenous Peoples, or between them and the responsible national agency for forest and nature conservation (Instituto Nacional de Conservación y Desarrollo Forestal, Áreas Protegidas y Vida Silvestre – ICF, Honduras). There were no joint structures for governance and management.

>> APPROACH

› THE CONSULTATION PROCESS – FREE, PRIOR AND INFORMED CONSENT (FPIC)

During the project appraisal phase the Indigenous communities demanded a consultation process. Both GIZ and the governments promised to deliver this. However, time constraints meant that the process could only be partially launched during the appraisal phase. Based on ILO 169, an agreement was therefore reached between GIZ and the Indigenous Peoples, and between GIZ and BMZ, to implement a consultation process when the project was launched. This meant that in the project offer, two out of three results indicators at the level of objectives were formulated in general terms only so as to provide broad guidance. It was envisaged that they would be defined in specific detail through the consultation process, once the project was launched.

This process was conducted in the four Indigenous project areas in Nicaragua and Honduras with the aim of obtaining the Indigenous communities' free, prior and informed consent (**FPIC**) for the project. A total of 24 meetings with over 2,000 people were organised. In each case, the first step here was to obtain basic 'approval' for the project to commence work in the Indigenous territories, provided that evaluation and coordination mechanisms involving the traditional structures of the Indigenous Peoples were in place.

After that, issues of importance to the Indigenous communities were identified and discussed. To structure the 191 topics identified, these were assigned to the project's three areas of activity (promotion of economic alterntives in the protected areas, capacity development for the Indigenous Peoples and their organisations, and promoting and establishing local and binational consultation and

coordination mechanisms). In a further participatory process, the topics were prioritised and the project activities resulting from them were defined. Similarly, objectives indicators for quality of life were specified in line with the Indigenous worldview.

The topics that went beyond the scope of the project (a total of 335 are listed), and for which the Indigenous communities requested external support, were forwarded to relevant institutions. The Indigenous communities in Honduras sought to use the opportunity provided by the consultation process as a 'megaphone' through which to communicate their most important needs to the government and other actors (land title, education, health etc.). Since this was the first channel through which the Indigenous communities had voiced their needs to the government, this was an indication that they placed a very high degree of trust in the project.

› GOVERNANCE STRUCTURES

In conjunction with the third area of activity, which involved creating consultation and coordination mechanisms, the project promoted dialogue between government agencies and Indigenous umbrella organisations – particularly in Honduras. It also focused on mainstreaming and designing coordination mechanisms for joint management of the protected areas. The trust established among the Indigenous communities through the inclusive consultation process created an enabling environment for the two sides to grow closer together. An international workshop conducted by the project at the outset on the topic of Indigenous communities and protected areas in Honduras, which included examples of co-management in Colombia, acted as a catalyst in the process of open dialogue between the Indigenous communities and the responsible government institutions.

Towards the end of the project, the national forest and nature conservation agency and the umbrella organisations of the various Indigenous Peoples in the project region in Honduras signed declarations of intent concerning the co-management of the protected areas in question. Concerning processes for consulting Indigenous communities (**FPIC**) in general, and the amendment of forestry legislation, basic ideas were jointly discussed and subsequently fed into the parliamentary legislative process by the responsible bodies. The amendment of forestry legislation is designed to incorporate Indigenous values and rights, and thus for instance enable forests to be communally owned instead of being either government-owned or privately owned as was the case to date, and establish an Indigenous forest standard. This will make it possible to transfer to private structures some of the sovereign tasks of forest management, such as granting permits for logging for private purposes (e.g. house construction), which those affected would otherwise have to apply for at the forest management offices, which are usually very far away.

Due to the low presence of state structures in the remote and sometimes poorly accessible project region in both countries, promoting local governance structures was essential. Together with the local Indigenous population, maps were drawn up for six Miskito territories. These maps formed the basis for development planning and rules of use in the Indigenous territories aligned with the principles of sustainability and the objectives of the biological corridor. This in turn supported participatory, stakeholder-owned decision-making processes and structures for natural resource management on land in the Río Plátano Biosphere Reserve for which titles were recently awarded in favour of the Indigenous communities.

› SUSTAINABLE ECONOMIC PROCESSES

As part of a development partnership with the private sector, the project supported the establishment of a sustainable value chain for the perfume ingredient liquidambar balsam, also known as styrax resin (introduction of minimum standards, sustainability standards, fair prices for producers, protection of Indigenous rights, sustainable forest management etc.).

During the initial phase of this cooperation, the project came across the already highly specific draft produced by external consultants to the ICF for creating a national park on the territory of the Pech people, with which local actors were unfamiliar. However, a protected area in the national park category would have prohibited the extraction of styrax resin, thus violating the traditional rights of use enjoyed by the Pech people. There are also settlers for whom using water sources in the envisaged protected area is crucially important. The project responded by launching a consultation process, which led to the use of liquidambar at community level being declared an element of cultural heritage, and the 34,000-hectare forest area being designated the Montaña El Carbón Anthropological Reserve (rather than a national park). This is the first Indigenous protected area in Honduras that allows nature conservation to be combined with the protection of Indigenous rights and traditional practices under the co-management of the national forestry administration and the Pech. Together with the local population a plan was drawn up for the sustainable management of styrax resin on 19,500 hectares of forest land.

>> LESSONS LEARNED

- Implementing the complex consultation process and the planning events based on it led to the target group clearly identifying with the project and, over the course of time, to a solid foundation of trust between German development cooperation activities and the Indigenous Peoples. This point is crucial in implementing the project in a setting which is otherwise characterised by mistrust.
- The consultation process (which also involved government representatives) also paved the way for promoting dialogue between Indigenous Peoples and government agencies. This was only possible because the project was seen as an impartial moderator (with no agenda of its own) and was able to build trust.
- An open consultation process can be a very enriching way of truly understanding the needs of the population.
- When preparing an inclusive consultation process, plans should allow sufficient resources and time.
- The issue of whether and to what extent Indigenous leaders or organisations are mandated by the communities they represent needs to be addressed. Repeated consultations between Indigenous leaders and their grass roots on specific points make a consultation process very cumbersome.
- The issues identified during the consultation process should during the process itself be clearly sorted into those which the project can address and those which clearly go beyond its scope. Otherwise there is a risk that the project may create expectations among the local population which cannot be met.
- Aligning state institutions and rules for forest management with the Indigenous context, as for instance in the case of communal forest ownership made possible by the new forest standard, is an important factor in facilitating cooperation with Indigenous groups.
- Partly also as a result of the project activities, the Indigenous groups recognised that developing management plans and entering into forest use agreements with government institutions provides a legal foundation on which to protect territories against illegal settlement, illegal sale and over-exploitation. Whether and how the local and Indigenous structures are themselves able to curb environmental crime remains to be seen.
- Difficult political circumstances (such as those which arose in Nicaragua in this case) can jeopardise such a long participatory process. In many cases, the local population will then see the implementing institution in a negative light.

>> LITERATURE

Wode, Christine & Johannes Mayr 2015: **Der Duft des Waldes – Oder wie ein Parfümgrundstoff hilft, indigene Rechte zu wahren.** Zeitschrift nah dran – Aus der Arbeit des GIZ-Entwicklungsdienstes 01/15, pages 20–21.

5.2 THE LEGACY LANDSCAPES FUND (LLF)

PROJECT TITLE	**The Legacy Landscapes Fund (LLF)**
COMMISIONED BY:	German Federal Ministry for Economic Cooperation and Development (BMZ)
COUNTRY:	Worldwide
OVERALL TERM:	2021 – 2071+
LEAD EXECUTING AGENCIES:	Legacy Landscapes Fund

>> PROJECT OBJECTIVE

Guarantee long-term public and private conservation funding for nature, climate, and people with a diverse portfolio of 30+ outstanding landscapes by 2030.

>> CONTEXT

In recent decades, the loss of species and habitats has accelerated perilously. Human interventions in nature have dramatically increased the pace of biological loss. For example, each year ten million hectares of forest is lost, or every day up to 150 plant and animal species disappear from the Earth. The World Economic Forum now ranks biodiversity loss among the top threats to global prosperity, with food security already at risk. To stop the biodiversity loss, the international community decided at the Summit of the UN Convention on Biological Diversity in Montreal (2022) that 30% of the Earth's surface should be effectively managed, restored, and conserved by 2030 (Global Biodiversity Framework (GBF) targets 1-3) respecting the rights and territories of Indigenous Peoples and local communities. For this, the global protected area on land must roughly double over the next seven years, requiring $200 billion annually (GBF target 19).

>> CHALLENGES

Half of the global annual GDP depends on nature, estimates on nature's contribution to the global economy are at $125 trillion per year. Three-quarters of the most biodiverse regions in the world are in developing countries and emerging economies. Many of them do not have the financial resources to effectively manage their existing protected areas. As a result, protected areas cannot fulfill their ecological, economic and social functions. Furthermore, with public funds

for development cooperation shrinking in times of worldwide crises, there is an increasing need to mobilise additional private capital to narrow the $200 billion annual investment gap. However, the lack of return of investments into biodiversity conservation, the lack of financial viability of ecosystem services, the public goods character of nature and the need for cooperation with multiple partners do not attract private investment.

>> APPROACH

> THE SET-UP OF LLF

LLF was set up in 2020 as a conservation trust fund (CTF) under German foundation law and based on the **Practice Standards on CTFs of the Conservation Finance Alliance**. The CTFs are an important finance mechanism and generate additional capital from return of investments in international capital markets for organisations and projects with high development impact but no or limited revenue-generating potential.

What sets LLF apart is its commitment to long-term funding, ensuring conservation sites have stable financial resources to focus on biodiversity protection rather than constantly seeking new grants. Also, the required size (at least 2000 km2) as well as the possibility to include areas outside state protected areas to form a legacy landscape are unique characteristics of LLF. Furthermore, LLF also innovates by blending contributions from public institutions, private donors, and philanthropic foundations, creating a unique public-private partnership for conservation financing. This model not only secures more resources but also enhances flexibility and accountability, challenging traditional funding approaches and strengthening the impact of conservation efforts.

LLF has four government funding partners: Germany, through the German Federal Ministry for Economic Cooperation and Development (BMZ) in cooperation with KfW Development Bank; Norway, through the Norwegian Agency for Development Cooperation (Norad); France, through the Agence Française de Développement (AFD); and Great Britain, through the Department of Environment, Food and Rural Affairs (DEFRA). In addition to public funding, ten private match-funding partners each contribute at least 5 million USD per site. Currently (2025), LLF has mobilised €271 Mio. in public funds and leverages €92 Mio. in private and philanthropic funds. With these funds LLF currently supports 16 Legacy Landscapes with $1 Mio. per year. This is generated from a capital stock (approximately $30 Mio. per Legacy Landscape fed from an endowment fund) as part of a responsible investment strategy (“perpetual grants”), which should enable a funding period of at least 50 years. There is also a second financing model over 15 years, which is fed from a sinking fund (sustaining grants).

Implementing partners are international conservation NGOs which sign **co-management agreements** with national nature protection agencies and co-operate with Indigenous Peoples and local communities.

› ACHIEVEMENTS

In total, LLF supports the improved management of approximately 485,000 km² of both protected and non-protected areas. Many Indigenous lands are also part of these landscapes, with Indigenous Peoples receiving support to manage their territories and implement their life plans. Currently, about 20% of the LLF portfolio consists of officially recognized Indigenous territories.

In these supported landscapes 18.36 gigatons (18,360,000,000 tons) of carbon (above ground, below ground, soil) are stored and climate change mitigation and/or adaptation considerations are being integrated into all landscapes' management plans.

All recorded population trends of key species show either stability or growth. In fragile ecosystems, maintaining stable populations is a significant conservation success. These trends are supported by statistical data and species surveys. Poaching incidents of five out of six flagship species decreased.

By investing in partnerships with Indigenous Peoples and local communities, LLF helps create long-term solutions that balance environmental protection with human needs. From supporting alternative income opportunities to enhancing food security and education, LLF's work ensures that conservation is not only about protecting nature but also about empowering the people who depend on it. This way 387 groups of Indigenous People and local communities are being supported, benefitting about 120,000 people. Currently, community income from selected value chains is actively monitored in three LLF-supported landscapes, to assess the impact of conservation-driven economic opportunities. Income from fisheries activities is more than three times higher since the beginning of the LLF support, that from sustainable coffee and wool production has more than doubled. Other value chains such as essential oils and spices are improving as well. Furthermore, more than 2,500 local staff is being employed by implementation partners.

>> LESSONS LEARNED

- Long-term impact in conservation can only be achieved by long-term funding mechanisms
- Unlike fragmented short-term projects, LLF consolidates diverse funding sources into a streamlined, impactful mechanism that provides flexible, reliable support for conservation efforts for the next 15-50 years to come.
- As a Conservation Trust Fund LLF remains a stable and long-term partner in a world where political will and funding priorities fluctuate.
- As a stable and long-term partner LLF attracts also private funds, thus contributing to target 19 of the GBF.
- Fostering equitable development together with nature conservation is as essential as ensuring social and human rights standards into conservation management.
- By encouraging supported Legacy Landscapes to exchange among each other, LLF also functions as a learning platform and builds a global community for learning, innovation and conservation solutions.

>> LITERATURE

CFA. 2013. **Practice Standards for Conservation Trust Funds.**

LLF. 2025. **Annual Report 2024**.

WEF. 2020. **Nature Risk Rising: Why the Crisis Engulfing Nature Matters for Business and the Economy.**

5.3 PRACTISING CO-MANAGEMENT IN THE HIN NAM NO NATIONAL PARK IN LAOS

PROJECT TITLE	**Protection and Sustainable Use of Forest Ecosystems and Biodiversity (ProFEB), Laos**
COMMISIONED BY:	German Federal Ministry for Economic Cooperation and Development (BMZ), co-funded by the European Union
COUNTRY:	Lao PDR
OVERALL TERM:	2010 – 2027
LEAD EXECUTING AGENCIES:	Ministry of Natural Resources and Environment (MoNRE) up until March 2017 and Ministry of Agriculture and Forestry (MAF) from April 2017

>> PROJECT OBJECTIVE

The protected area management team and the local population work hand in hand to protect biodiversity in the Hin Nam No (HNN) National Park (co-management approach).

>> CONTEXT

Hin Nam No was first designated as a National Protected Area in 1993 and was initially managed as a conservation forest under the Laotian Forest Law at the time. In 2020, it was officially declared a National Park, and its boundaries were subsequently expanded to cover 94,121 hectares-the current extent of Hin Nam No National Park. This expansion was undertaken both in response to land use changes since 1993 and to strengthen the ecological integrity of the protected area. The unique karst landscape is one of the largest in the world and is tremendously important to biodiversity – forests, wetlands, limestone formations and cave systems offer many species a habitat, including a host of endemic flora and fauna.

The region is also situated in the country's poorest district. Around the protected area are 20 villages with 15,743 inhabitants, many of whom belong to ethnic minorities. The mostly very poor population derives much of its food and household supplies from the natural resources in the HNN National Park.

>> CHALLENGES

The HNN National Park is managed at district level and its protection status is enshrined in law. The area is extremely difficult to access, the management team had initially only a small number of staff (meanwhile grown to 20 out of a total of 25 positions filled, along with 8 volunteers) and sustainable funding has not been secured yet.

The pressure on the protected area's resources (wood, non-timber forest products and wild animals) is high due to increasing demand, but mostly as a result of external parties exploiting the area illegally. The economic alternatives for the local population are slim due to the karst landscape and the many unexploded bombs still present in the area.

With the help of several organisations, an initial management plan based on a co-management approach was developed in **2010.** However, it could not be implemented forcefully due to a lack of resources. Although awareness of the opportunities and the need for a participatory management approach was generally widespread, there was no common understanding of what an approach of this kind actually meant. Likewise, there was no common understanding among the actors before the project began regarding the protection objectives and use regulations. The zoning carried out up to that point had not been based on legal requirements and had not considered the villages' traditional rights of use.

>> APPROACH

The project is based on co-management principles. In 2013, a participatory **governance assessment** process was launched to establish a common understanding of the co-management concept and forge an effective partnership between the protected area administration and the local communities. In connection with this, the project also supported a process of evaluating the management effectiveness based on a version of the **Management Effectiveness Tracking Tool (METT)** adapted to the local context. Since then, the evaluation based on questionnaires, in particular, has been repeated annually as it is simple and cost-effective. All co-management partners are involved in the process and can voice their opinions in group discussions. Weaknesses were identified and measures derived from this were incorporated into the next plan of operations.

The governance assessment process uncovered what needed to be done in order to develop an effective co-management approach:

>> PARTICIPATORY ZONING

In the framework of establishment of the Hin Nam No Collaborative Management System in 2015, a participatory zonation with communities was carried out. In accordance with the Protected Area Regulations at that time, it distinguished between Controlled Use Zone (CUZ) and Total Protection Zone (TPZ). In 2020, the Lao Government designated HNN as National Park with a boundary that differs in some parts from the former National Protected Area to accommodate for actual uses and to improve its integrity. Therefore, in 2024/2025, the National Park area underwent a process of participatory re-zoning based on the previous zonation, the knowledge of the local communities and their customary rights as well as UNESCO World Heritage requirements.

The process was driven by the outcomes of a Free, Prior, and Informed Consent (FPIC) process conducted for the World Heritage nomination of Hin Nam No National Park, during which villagers, particularly ethnic minorities, raised concerns regarding the previous zonation. It revealed shortcomings of the zoning of the former Hin Nam No National Protected Area regarding the location of the boundary and questions regarding tenure and access, especially to customary areas and for some ethnic groups, delineation and implementation.

Therefore, the aim of the re-zonation was to ensure the recognition and protection of Indigenous and local community rights while delineating the area into total protected zones (TPZ) and controlled use zones (CUZ), as required by law. Controlled-use zones are areas for local needs-such as non-timber forest product collection, agricultural land, fishing, cultural sites, and tourism areas. In contrast, inaccessible zones and areas critical to ecosystem services or the park's Outstanding Universal Value (OUV) are designated as total protected zones.

In a first step, a technical planning meeting comprising a 23-member team, including representatives from local authorities, community groups, and park management, focused on agreeing on criteria and methods for participatory zonation, covering CUZ and TPZ zoning, use types, tenure forms, and data collection formats. Village meetings were held to ensure all customarily used areas, including those in distant areas and those that had previously been (falsely) designated as TPZs, were accurately reflected as under customary use. In cases of overlap, TPZs were redefined as CUZs with additional conservation measures. A collaborative resource-use survey was conducted with local communities for data collection.

These discussions were supported by sketch maps developed using data from trail mapping, satellite imagery, topographic maps, GPS training, and field surveys, complemented by traditional place names and landmarks.

Field surveys were conducted for creating the final maps using GIS systems. Once completed, specific usage regulations will be established for each area, with community agreements. This data will also serve as the baseline for the village conservation funds.

Until now, this on-going process already generated a great deal of understanding on both sides and demonstrated to the villagers the importance of their knowledge.

>> VILLAGE RANGERS – THE LOCAL POPULATION FURNISHING ADDITIONAL MANPOWER

Initially, the villages were looking for people with knowledge of the area to appoint as potential future rangers. Nowadays, the village rangers (over 150) are paid a performance-based fee for undertaking biomonitoring and patrols.

It is however important that there are additional rangers from outside the local area to pursue violations of the law because village rangers are not permitted to inform on, let alone arrest their neighbours. In the HNN National Park, the village rangers are also accompanied by police or soldiers from the village to enable them to handle even well-equipped poachers.

As the village rangers have extensive knowledge about the area, they are also more willing to venture into difficult and remote areas than external rangers are. Locals who participate in managing the protected area benefit from an additional or alternative source of income, while their involvement also contributes to a more effective and resource-efficient approach for the responsible authorities. Long-term funding does, however, need to be found for this.

>> MONITORING

The **SMART instrument** was used as a basis for collecting data in a way that is adapted to the local context (patrolling, area data, sighting species, poaching, etc.). The rangers and the park staff were trained in using this tool. As many of the rangers have only limited reading and writing skills, the method for entering data into the log was simplified and given a code. Trained park staff enter the data gathered into the database, analyse it and develop recommendations for the management.

Collecting data which feeds into the continued management of the area raises the awareness and boosts the motivation of the employees.

A key lesson learned was that SMART proved to be a practical and user-friendly tool for data collection and management, even in contexts with limited technical capacity. Furthermore, peer-to-peer learning emerged as a valuable approach - rangers from one national park were able to train and support rangers from another, fostering collaboration, building capacity, and strengthening networks among protected area staff.

>> COLLABORATIVE MANAGEMENT AND GOVERNANCE STRUCTURES

The management structure of the HNN National Park with its technical units was established in 2013 with the help of the National University of Laos. This was the beginning of and the basis for creating the governance structure. The two structures are closely connected in this case.

Co-management committees were elected in all villages. Their members are officially confirmed by the district governor, giving them a formal mandate. Regular communication ensures that feedback is given to the technical unit. There are also co-management committees at district level, where the representatives at village level (bottom-up) and those from district and provincial government (top-down) present their ideas. Since 2021, a Provincial Steering Committee for HNN NP is to oversee implementation of the Management Plans for HNN NP, the transboundary management activities between Hin Nam No National Park and Phong Nha-Ke Bang National Park in Vietnam and Community Resolutions stemming from the consultations surrounding free, prior and informed consent (FPIC) for the World Heritage nomination. In addition, a district-level women's council and women community management committees in 20 villages were formally established to ensure women's concerns are integrated into the co-management of Hin Nam No National Park, with a mandate to promote gender equality, develop a gender charter, advise on grievance mechanisms, and facilitate regular exchanges with village-level committees.This gives all stakeholders the chance to express their needs and play a role in the decision-making process.

>> CO-MANAGEMENT AGREEMENTS/BYLAWS

The first drafts for agreements on use regulations and responsibilities for protection have been drawn up at village meetings in conjunction with an impartial moderator. A standardised co-management agreement was reached at a joint workshop. After various meetings and discussion panels, this agreement was officially approved by the district governor and shared with all villages in the immediate vicinity of the park and with other surrounding villages, as well as with the authorities and rangers of the neighbouring Phong Nha-Ke Bang National Park in Viet Nam.

The system of these agreements also works well because the villages have a vested interest in keeping people from other villages away from the areas that only they can use. It creates a sense of ownership and pride to have the right and the duty to protect their areas from others. In order to clarify violations of rights of use between the villages and to firm up the regulations, providing external support (mediation) to the village authorities may be important.

>> LESSONS LEARNED

> REQUIREMENTS FOR CO-MANAGEMENT

- common understanding of the concept of co-management
- mutual trust between those involved
- impartial, participatory moderation
- voluntary and self-motivated participation
- the local population must be empowered to develop the necessary structures and organisations
- duties and tasks must be linked to rights and privileges
- motivation of the competent authorities – broadening the focus from a pure management function for the protected area to a platform for the integrated and sustainable development of the entire region has boosted motivation at district level to establish co-management committees.

> CO-MANAGEMENT AND CO-GOVERNANCE

- creates a clear leadership role and ownership in the local authority
- generates support among the village population for the implementation of the agreements
- can consolidate the ownership and commitment of the local population by integrating environmental education measures
  - leads to more informed decisions by involving
  - village rangers on village co-management committees
  - head of the villages on the district co-management committee
  - technical units of the protected area administration on the district co-management committee
  - women representatives on the district co-management committee
- has improved the annual participatory self-assessment of management effectiveness and good governance (better awareness of use regulations, higher level of information, more training, greater benefit for villagers)

> CO-MANAGEMENT AND CO-GOVERNANCE NEEDS

- cooperation with local organisations which will carry the process forward
- repeated self-reflection – by revising structures, zonings and use agreements, common understanding can be strengthened and changes can be made, where necessary.

› AS WELL AS

- **upscaling:** transferring lessons learned to other protected areas through training given by local organisations
- upscaling: incorporating lessons learned into ministerial decrees on protected area management

>> FURTHER READING

Mirjam de Koning et al. 2017: **Collaborative Governance of Protected Areas: Success Factors and Prospects for Hin Nam No National Protected Area, Central Laos.** In: Conservation and Society 15(1): 87–99, 2017.

GIZ 2016: **Co-Management. Integration of local knowledge in park management. Training and Lessons Learned Guide 2.**

Larsen, P. B., & Chanthavisouk, C. (2024). **Free, prior, and informed consent, local officials, and changing biodiversity governance in Hin Nam No, Laos. Conservation Biology, 38**, e14388.

5.4 A BOTTOM-UP APPROACH WITH HORIZONTAL COLLABORATION FOR TRI-NATIONAL COORDINATION IN THE SELVA MAYA

PROJECT TITLE	**Conservation and sustainable use of the Selva Maya**
COMMISIONED BY:	German Federal Ministry for Economic Cooperation and Development (BMZ)
COUNTRIES:	Belize, Guatemala, Mexico
OVERALL TERM:	2011 – 2019
LEAD EXECUTING AGENCIES:	Central American Commission for Environment and Development (CCAD)

>> PROJECT OBJECTIVE

Key government and civil society actors carry out coordinated measures for the protection and sustainable management of biodiversity and natural resources in the Selva Maya.

>> CONTEXT

The Selva Maya, which extends from Mexico's southern border across Belize and into northern Guatemala, is Mesoamerica's largest forest area. Its ecosystems, which range from dry forests to evergreen rainforests, are home to an extraordinary diversity of endemic species, some of which are endangered. Of the 100,000 km^2 of forest, more than 42,000 km^2 are now in a protected area, of which there are over 19 in different categories that apply various governance models (ranging from national parks to biosphere reserves).

The region was inhabited by the Mayas more than a thousand years ago, which is why many important historical and cultural sites can be found here. Today the forest is under enormous pressure due to the fact that it is inhabited by some 600,000 people, who belong to a wide variety of ethnic groups. Population growth and the increasing demand for agricultural produce are causing the agricultural frontier to advance (extensive grazing practised by large-scale farmers, as well as small-scale agriculture and livestock farming by the local population, most of whom are poor). Forest fires, illegal logging, trade in flora and fauna, unsustainable agriculture and oil production are interfering with ecosystems and protected areas, and the forest is becoming increasingly fragmented. Moreover, the impacts of climate change are now palpable. These include longer dry seasons and fewer watering points for animals.

>> 5.4 A bottom-up approach with horizontal collaboration for tri-national coordination in the Selva Maya

>> CHALLENGES

Responsibility for protection of the forest and the sustainable development of the Selva Maya region rests with the three countries concerned and their respective government agencies for protected area management, along with other public authorities such as those concerned with forestry and agriculture. Other actors operating in the region include various institutions such as local governments and non-governmental and civil society organisations.

The actors in the region share a sound understanding of the protection goals and rules governing forest use in the protected areas themselves. Outside the region, on the other hand, views often vary widely. Various rules apply for instance to the use of transition zones, ranging from large-scale maize plantations to sustainable agriculture practised on small plots. Similarly, outside the protected areas there is often a lack of certainty regarding land use rights. In conjunction with pronounced social inequality this leads to conflicts within the rural population. Consequently, in most cases pressure on the protected areas comes from outside.

The protected area authorities lack the human and financial capacities to develop and effectively implement protective measures. Constant cuts in funding create difficulties, particularly with regard to fighting forest fires. At the national level, sector ministries do not possess sufficient operational capabilities for inter-sectoral coordination and consultation, and policies and programmes often conflict with each other. At the regional level there is a lack of joint strategies for coordinated protection of the Selva Maya, hence activities are often confined to single countries and one-off interventions. There is also a lack of legal frameworks for cross-border cooperation in protected area management. The key challenge for long-term sustainable natural resource management in the Selva Maya is therefore coordination of the key governmental and civil society actors.

>> APPROACH

The project is gradually implementing a multi-level approach. Key to its success is close coordination between the different levels and within the project team.

When the project was launched it focused initially on the micro level. By implementing specific local measures, it succeeded in building trust and openness, among both the local population and protected area staff. Gradually it then became possible to organise knowledge transfer by building horizontal links between protected area managers and user groups from the three countries, for instance, and to scale-up the project activities. A common denominator of this kind is key to performing any kind of work on a tri-national level.

> EFFECTIVE AND COLLABORATIVE MANAGEMENT OF THE PROTECTED AND CONSERVED AREAS

Effective protected area management as a key component of the response to pressure (caused by forest fires, illegal logging etc.) is only feasible if the public authorities, civil society and local communities work together.

An example – Fighting forest fires and strengthening volunteer fire departments
One of the greatest threats faced by the Selva Maya is forest fires, which are often caused by agricultural fires that get out of control. Establishing community-based early warning systems aims to reduce these fires by putting management and contingency plans in place. Involving the local population is fundamentally important here. First of all, most protected areas lack sufficient human and financial resources. Secondly, communities are able to respond much more rapidly because they are locally based. The project is supporting the capacity development of these volunteer fire departments, which now not only successfully fight fires within and outside of the protected areas, but also perform monitoring and patrol duties.

An example – Working together across borders by exchanging park rangers
By exchanging park rangers working in neighbouring protected areas, project actors have identified joint challenges and planned monitoring activities strategically. Joint workshops and patrols have standardised procedures and led to improved cooperation. Cross-border training activities in forest fire management, conducted jointly with the village officers representing the volunteer fire departments, have helped raise awareness and increase active participation in fighting forest fires. Preparing an annual cross-border plan for these additional joint activities was an important tool used to achieve this. The higher-level political backing expressed underlined the importance of training, for instance, thus boosting participation by rangers and villagers.

› SUSTAINABLE INCOME-GENERATING ALTERNATIVES

Working in conjunction with the local population, the project developed various options for sustainable natural resource management. Where there is no local population, or where local communities are unable to generate a profit from sustainable forest management, illegal loggers for instance or people seeking quick profits will have an easy time of it.

An example – Honey and ramon nuts
The project supported the development of local user group capacities to sustainably manage non-wood forest products, such as honey and ramon nuts (also known as Maya nuts), the promotion of value chains and certification of products. Supported by the project, over 750 people have acquired knowledge and skills in the fields of processing, food hygiene, accounting and marketing, which will enable them to work in small enterprises and generate added value from forest conservation. Over 3,000 families are benefiting from this.

The honey producers around one of the protected areas have become part of a volunteer fire department for this protected area, and thus have multidimensional links. On the one hand, they support the protected area authority with monitoring, control and forest fire-fighting activities. On the other hand, they benefit from the existence of the forest through their beekeeping activities.

An example – Forest concessions for local communities
In the community forest concessions in the biosphere reserve in Guatemala, the different communities are permitted to sustainably manage wood and non-wood forest products (leaves for the flower market, chicle, ramon nuts etc.)– albeit subject to tight restrictions and on the basis of management plans. Among other things, the project is advising on the ramon nut value chain and on management of the concessions.

Without joint efforts by all stakeholders, long-term protection of the Selva Maya is inconceivable. To achieve this, coordination mechanisms must be introduced at the local, regional and international levels.

Cross-border cooperation between park rangers (exchange, joint activities, training, patrols etc.) and exchange between user groups (honey, ramon nuts etc.) has led to a sense of commonality and what might be termed 'corporate branding' (**'We are Selva Maya'**), which has paved the way for improved coordination across the three countries. This led to coordination among the directors of the protected areas, who then joined forces to form the tri-national Selva Maya operational coordination group (Grupo Operativo de Coordinación de la Selva Maya – GOC). To also strengthen transboundary cooperation at the strategic level the tri-national Grupo Estratégico de Cooperación de la Selva Maya (GEC) was established, in which the directors of the nature conservation authorities of the three countries intend to develop a long-term strategy to protect the Selva Maya, for example.

LESSONS LEARNED

- A multi-level approach and a bottom-up structure for regional cooperation are key to transboundary protection. Local actors can then feed successful activities upwards to the next level, which means they can always be scaled up. This also reduces dependency on personnel changes at higher political levels, e.g. as a result of elections.
- To support this approach, it is important that the project maintains a presence in all three countries (through the project offices) at locations close to the protected areas and the relevant public agencies. This makes implementation more efficient and effective compared to management from central locations (capital city, or only one project office).
- It is also important here that the lessons learned from work at the local level are fed into country-wide work by the national experts. Closely linking these three levels gives the project credibility and weight at the tri-national level.
- The three countries that share the Selva Maya differ widely, as do their institutions. The project therefore had to address the different needs in order to gradually win over the stakeholders for transboundary cooperation. This meant that different activities were often supported in each of the countries, and that the project pursued different ways of working with partners with regard to planning and joint implementation. Accordingly, few tri-national activities took place, particularly in the initial years.
- It is also important to involve remote villages in regional cooperation, for instance by sharing lessons learned (e.g. organising reciprocal visits by farmers so that they can share their experience with marketing honey or nuts).

- Protection strategies that support sustainable management increase the

self-interest factor of relevant actors, thus making them more willing to participate in them.

- Developing a joint understanding of environmental conditions and the protection goals is a key factor for success.
- It is also important to establish sound management structures that enable effective joint work. Although a lot of the work is done on a voluntary basis a minimum budget is required, which is not always available in all cases.
- Acceptance and ownership in communities is strengthened by giving them strong rights of codetermination, either through co-management (as in the case of fighting forest fires) or autonomous management (as in the case of forest concessions).
- It is important to facilitate a change in mindset among all stakeholders so that they see the government not as a body that issues prohibitions (for instance by designating a protected area), but one that creates opportunities to generate income sustainably. This will create a positive link between people and the natural environment, and make them willing to work to preserve it.
- Through their local knowledge and information sharing, motivated park rangers who tackle the challenges jointly with their peers help develop an effective protection strategy.
- When different projects in the same region work together with the same partners on the same topics, it is important to involve the partners in joint planning early on in order to persuade them of the benefits of effective coordination so that they provide the proactive support needed for cooperation.
- In order to protect the forest in the long term, it will be very important to ensure that the concessions, which people will have to reapply for in the future, remain at the local level. Forest concessionaires who come from outside often have no vested interest in preserving the forest in the long term.
- A formalisation of cooperation at the tri-national level, e.g. through an agreement, would boost the sustainability of the activities supported by the project, and strengthen future cooperation.

5.5 PRESPA OHRID NATURE TRUST

PROJECT TITLE	**The Prespa Ohrid Nature Trust (PONT)**
COMMISIONED BY:	German Federal Ministry for Economic Cooperation and Development (BMZ) and MAVA Foundation
COUNTRIES:	Albania, Greece, and North Macedonia
OVERALL TERM:	2015–2040+

>> PROJECT OBJECTIVE

Conserve nature for a sustainable future through long-term partnerships and financing and reconnect transboundary conservation areas to sustain important biodiversity hotspots where people live and work in harmony with nature.

>> CONTEXT

The Prespa-Ohrid region between the three countries Albania, Greece and North Macedonia is regarded as one of Europe's most ecologically valuable areas. Lake Prespa and Lake Ohrid are the oldest lakes in the world. Their watersheds provide water to five neighbouring protected areas. They have been internationally recognized as a "freshwater biodiversity hot spot" and as special wetlands under the Ramsar Convention. The Prespa-Ohrid lake basin is a refuge for many rare and endemic species as well as numerous cultural and historical monuments. The region comprises several transboundary protected areas such as the trilateral transboundary Prespa Park. From this original focus area, PONT has expanded its geographic reach to now include additional protected areas (e.g. the Albanian Alps National Park), conserving important ecosystems and protecting connectivity corridors around and between those parks to consolidate the landscape elements and to ensure species movement between areas.

>> CHALLENGES

In the Prespa-Ohrid basin, biodiversity is severely threatened by climate change and environmentally damaging socio-economic developments (including illegal logging, poaching and unsustainable fishing, agriculture and livestock farming). Due to a lack of funding, hardly any institutionally stable environmental actors (e.g. non-governmental organizations - NGOs) have been able to develop in the Prespa-Ohrid basin. However, these are very important for the development of a modern environmental sector - and thus for the protection of biodiversity.

›› APPROACH

› THE SET-UP OF PONT

The Prespa Ohrid Nature Trust (PONT) operates under the foundation law of the German federal State of Hesse since 2015 and was established though the efforts of the MAVA Foundation, the KfW Development Bank and WWF Greece. It provides financing in the form of grants (i) to protected areas management authorities to support their essential operating costs and (ii) for the conservation, sustainable development and resource management activities of environmental actors which include non-governmental organisations, governmental, scientific or academic institutions, and other bodies or agencies whose purposes align with those of PONT. Grants are typically in the range of EUR 0.1 to 1 million.

PONT combines investment income from its endowment and sinking fund, as well as annual donations from other private donors (e.g. from the Sigrid Rausing Trust) to generate grant-making resources. PONT is one of only eight transboundary conservation trust funds world-wide and the first of its kind in the Balkans.

Total assets as of 2024 were €70.3 million. They include €30 million as endowment capital from BMZ/KfW, MAVA Foundation and the Hans Wilsdorf Foundation; and an initial funding capacity reserve (sinking fund) totalling €54.6 million, to be spent until 2030 for MAVA and 2040 for BMZ/KfW and Hans Wilsdorf Foundation. This mix of endowment and sinking fund capital is designed to provide PONT with flexibility to secure its operation and grant funding.

Governance structure: The Management Board, currently consisting of a sole Executive Director designated by the Supervisory Board, directs the business of the ongoing administration including the financial planning according to applicable statutory law and its charter. The Supervisory Board consists of 3-9 members (currently six), three of which are third-party appointed by the founding organization MAVA, the rest is board-elected. One member is appointed by KfW, one by WWF Greece. The Supervisory Board supports, advises and supervises the Management Board in its direction of the activities of the Foundation, and ensures that all key risks are identified and decides whether to accept, mitigate or transfer the risk. An Investment Committee and an Audit Committee support the work of the Supervisory Board. The founding document is a Charter which sets forth PONT's purpose, principles of managing its endowment and the duties of each constituent body. PONT participates in a shared services entity, the Nature Trust Alliance (NTA), along with three other CTFs. NTA provides various back-office services such as payment services, expense control, audits, etc.

PONT was established according to the **Practice Standards for Conservation Trust Funds** and by 2023 fully implemented 95% of its standards.

› WHAT PONT FUNDS

PONT has two funding programmes:

- PONT enables protected areas administrations in the area of PONT's geographic focus area to develop and implement their management plans to conserve nature through sustainable co-financing of operational costs.

- PONT provides grants to environmental actors who are qualified not-for-profit organisations implementing conservation actions in the same geographic focus area (Prespa-Ohrid, Korab-Shara and Albanian Alps regions, including ecological corridors between these areas) in line with official management plans.

PONT supported 36 grantees in 2024 (10 grants for protected area management authorities managing 11 protected areas and 26 environmental actors) and disbursed €3.8 million in grants (€1.2 million for 11 Protected Areas and €2.6 million for 26 environmental actors.

PONT grants require co-financing of at least 50% of eligible costs for grants to protected area administrations and for grants for state-financed environmental actors. Grants for NGOs require at least 25% co-financing. Eligible sources of co-financing are government funding; own contributions by beneficiaries; and financial contributions by other projects (other than from the German Government).

› ACHIEVEMENTS

Park management authorities and environmental actors work together, because PONT promotes and facilitates formal and informal partnerships between key actors. This way Protected Areas benefit from diverse but harmonized activities fully aligned with official management plans.

Communities engage with conservation. PONT has promoted and financed the establishment of local offices that allow NGOs to be part of the communities and this encourages trust. Hiring local staff has helped to break down barriers and increases local employment. Also, interest of local people to engage as "citizen scientists" is increasing which shows that the relationship between communities and the protected areas is improving.

In numbers, PONT's achievements are:

- 351.234 hectares of Protected Areas are supported by PONT operating in line with international (IUCN) standards.
- 36 partnerships, strategically financed by PONT, have been established between protected areas administrations and environmental actors.
- 127.500 hectares of ecological corridors received strengthened management of biodiversity
- 90 green businesses/initiatives have been supported
- Management effectiveness of the supported protected areas has increased by 23.2% (average annual value of **Management Effectiveness Tracking Tool for PAs**)

>> LESSONS LEARNED

- PONT as a CTF is uniquely placed to advance cross-border projects that can present obstacles for other donors. It has the agility to work directly on transboundary cooperation rather than through bilateral arrangements.
- PONT's two-pillar approach (PA administrations and environmental actors) creates maximum flexibility to tailor support effectively to high-performing partners in local nature conservation.
- The mix of considerable endowment resources that must not be spent but are used to generate revenues in the long term and large sinking funds that can be spent with maximum flexibility ensures a high expenditure level in a long start-up phase of two decades of operation while maintaining a minimum capital stock for long-term sustainability.
- PONT has the flexibility to provide also operating support (e.g. training to use equipment) that is complementary to investments made with donor funding.
- PONT requires match-funding, 25% for Environmental Actors, 50% for Protected Areas. To ensure a good funds-leveraged-ratio, PONT's fundraising strategy includes partnering and helping grantees identify sources of funds to meet their co-funding requirements. This ensures ownership and provide leverage for additional resource mobilization.
- PONT's grant award cycle for grants to environmental actors is only four months from the launch of a call for proposals to the signature of a grant agreement. For Protected Areas it is two months. A grant cycle that is short and dependable helps grantees with their own financial planning and ensures that activities can continue without gaps.
- A stable core-financing attracts additional donors.
- Governments of beneficiary countries are not part of the governance structure. This ensures independency of decisions and avoids conflict of interests, especially important for a foundation that benefits several neighbouring countries.
- To ease the obligations of the Executive Director as sole Management Board member, PONT has appointed a Programme Coordinator as well as two additional Grants Coordinators. Also, outsourcing several financial functions through contracted accounting and tax services and NTA, helps to facilitate administrative tasks.

>> LITERATURE

CFA. 2013. Practice Standards for Conservation Trust Funds. Available at: **Practice Standards for CTFs – Conservation Finance Alliance**

PONT. 2024. **Annual Report 2024.** Available at: Prespa Ohrid Nature Trust – PONT – Conservation, Sustainability

5.6 PRESERVING BIODIVERSITY, SHARING RESPONSIBILITY – TRANS-BOUNDARY ECOSYSTEM MANAGEMENT IN A SETTING OF MULTIPLE JURISDICTIONS, MANDATES AND INTERESTS IN SOUTH-EAST EUROPE

PROJECT TITLE	**Conservation and sustainable use of biodiversity at Lakes Prespa, Ohrid and Shkodra/Skadar**
COMMISIONED BY:	German Federal Ministry for Economic Cooperation and Development (BMZ)
COUNTRIES:	Albania, North Macedonia and Montenegro
OVERALL TERM:	2012 – 2020
LEAD EXECUTING AGENCIES:	Ministries responsible for environment and nature conservation in Albania, North Macedonia and Montenegro

>> PROJECT OBJECTIVE

The overall objective of the project is: 'The lakes' natural resources are managed on a transboundary basis and in compliance with EU environmental and biodiversity protection targets'. In order to achieve this, the project focuses on protected areas (PAs) as instruments for biodiversity conservation as well as other mutually re-enforcing interventions:

- institutional strengthening of regional organisations relevant to the transboundary management of lakes and watersheds;
- supporting lake-wide fisheries management in accordance with European standards and regulations; and
- initiating lake-wide monitoring programmes in compliance with the EU Water Framework Directive (WFD) and nature conservation legislation.

Such a multi-pronged approach focusing on the larger landscape or ecosystem level is common for PA-related projects in the context of technical development cooperation. Local PA agencies participated in some of these interventions, e.g. in fisheries management and in establishing the conservation status of species and habitats of common interest to riparian countries. With regard to PAs in a narrower sense, the project aimed to establish strict protection zones at each lake, with a view to developing species action plans, and to build general management capacity.

>> INITIAL SITUATION WITH REGARD TO PCA GOVERNANCE AND MANAGEMENT

The lakes are exceptionally rich in biodiversity and endemism and therefore an important part of European natural heritage.

Complex and overlapping patchworks of nationally and internationally designated PAs cover the Ohrid and Prespa lakes and their surroundings, including the transboundary Ohrid-Prespa UNESCO Biosphere Reserve (Albania and North Macedonia), Prespa National Park and Ohrid Protected Landscape in Albania and Galičica National Park in North Macedonia (which includes the islands of Prespa and the Natural and Cultural Heritage of the Ohrid Region under consideration for UNESCO World Heritage nomination). In the case of Lake Prespa, Greek territories are also included. The Albanian part of Lake Shkodra/Skadar is a Protected Landscape and the Montenegrin part a National Park.

All the riparian countries are members of the Drin Core Group (DCG), the precursor to a Drin River Basin Commission covering the three lake sub-basins. However, the potential for coordinated transboundary governance to protect these ecosystems has not yet been fully met. This has compromised sustainable water and natural resources management in line with relevant EU directives. As a consequence, the lakes have been increasingly affected by threats and pressures related to agriculture, pollution from sewage systems, overfishing, tourism and the development of associated infrastructure, particularly along the shorelines.

>> CHALLENGES TO SUCCESSFUL PCA GOVERNANCE AND MANAGEMENT

The project had to overcome a number of challenges with regard to effective PA governance and management, which directly relate to identified success factors for PAs:

- **Broad ownership of conservation objectives:** while all stakeholders committed to the project's objective to strengthen transboundary resources management in line with relevant EU directives, the same cannot be said, for example, for the specific objective to strengthen and/or establish strict protection of areas or species. Concerns on the part of local resource users about potential use limitations were shared by some government representatives, resulting in different perspectives on the purpose and (future) use of these areas.
- **Common understanding of management objectives for the lake ecosystems and rules for their use:** a multiplicity of different interests and related organisational mandates affected the lake ecosystems, with each sector operating primarily according to its own objectives and rules, e.g. fisheries, water and sanitation, agriculture and tourism development, but without much consideration of interlinkages between different uses and objectives. There were also differences in understanding between government institutions and NGOs. Even where agreement on management objectives for individual PAs was reached, this was not necessarily sufficient for successful PA management since objectives were often not aligned with those established for the parts of the lakes and their wider catchment areas not under protection.

- **Clearly demarcated PA boundaries and internal zonation:** challenges in this regard were not so much the lack of demarcation but rather overlapping designations and insufficient mechanisms for transboundary cooperation. Well-justified internal zones within PAs were also partly lacking.
- **Effective and equitable governance setups and management:** the PAs at the three lakes are predominantly under state governance. Some management plans were out of date or ineffective in terms of providing practical guidance. This may have contributed to conflicts between conservation on the one hand and (infrastructure) development and resource use interests on the other.
- **Sustainable financing:** national governments, financial assistance projects and, more recently, cooperation with Greece and the Prespa Ohrid Nature Trust all contribute to financing PAs in the region. However, financing remains a constraint to effective PA management and monitoring. The financial situation of PAs differs from one lake to another, with the Albanian part of Lake Shkodra/Skadar, for example, facing particular challenges.
- **Staff capacity:** the availability of trained staff was pivotal to successful interventions (e.g. related to monitoring or specific conservation actions), highlighting the importance of this success factor.

Other success factors, such as the need for legally established protection regimes in existing PAs, were by and large met at the three lakes.

>> PROJECT APPROACH

The project adopted a broad approach aimed at developing expertise and strengthening inter-ministerial and transboundary cooperation, thereby supporting ministries and downstream authorities responsible for nature conservation, water management and fisheries in their efforts to implement the EU Water Framework Directive and EU nature conservation legislation. All interventions, including those not specifically aimed at improving the functioning of PAs, were designed to contribute to improving the conservation status of the lakes.

The overall intervention fields broadly correspond to the success factors identified for PAs and related challenges:

- By cooperating with a multiplicity of partners, the project fostered **a sense of shared responsibility** among environmental ministries, PA agencies, fisheries authorities and fishing associations, research institutions, nature conservation NGOs and municipalities for improved cooperation, better biodiversity management and more effective monitoring at transboundary, national and local levels.
- Based on a shared commitment by partners to work towards and comply with the EU environmental framework (*acquis communautaire*), the project facilitated dialogue between ministries responsible for environment and bio-

diversity conservation[1], water management and fisheries and their subordinate agencies, NGOs and municipalities as well as resource users in order to develop a **joint understanding of concrete conservation objectives and ways to reconcile different uses.** To this end, institutions were supported in setting up regional technical working groups (TWGs) on the WFD, biodiversity conservation and fisheries.

- The TWGs – along with the Drin Core Group – were systematically used to leverage alignment among multiple conservation and resources management agendas and initiatives both within and across lake sub-basins.
- The approach aimed to achieve **a participatory governance** setup, particularly with regard to local resource users (e.g. fishers), who were involved in the formulation of fisheries agreements, and conservation NGOs, which strongly contributed to the TWGs.
- Surveys and monitoring activities (e.g. fish spawning areas) and the mapping of lakeshore structures and habitats were conducted to create a sound basis for the **delimitation of strict protection zones** within PAs. As local municipalities build on this information, PAs will more effectively protect the ecological functioning and services of the lakes, particularly in their shore zones.
- While the project did not engage in PA management planning directly, it did build capacity for biodiversity monitoring – with technical backstopping for project partners such as EuroNatur[2] – as a key prerequisite for adaptive PA management. It used species action planning to design conservation measures for several bat species and the Dalmatian pelican. This contributed to an overall strengthening of the **capacities for monitoring and conservation management** of PA administrations and their partners.

Few **methods and tools** included in the toolbox were used. The context of EU integration meant that the focus was on EU instruments rather than globally applicable tools and methods. Another reason was that biodiversity conservation was approached as a cross-cutting issue by this project.

In order to diversify PA governance and introduce co-management of entire PAs or of certain resources (e.g. fish), the IUCN WCPA Guidelines **Governance of Protected Areas: From understanding to action** (Borrini-Feyerabend et al. 2013) were consulted.

1 Namely, the Albanian Ministry of Environment (now Ministry of Tourism and Environment), the North Macedonian Ministry of Environment and Physical Planning and the Montenegrin Ministry of Sustainable Development and Tourism

2 EuroNatur – Stiftung Europäisches Naturerbe (European Nature Heritage Fund)

>> RESULTS, IMPACTS AND LESSONS LEARNED

The results of all the interventions contributed to more coordinated and effective ecosystem management and to a more enabling environment for PA governance and management at the three lakes:

- Support for regional cooperation between the riparian countries involved PA agencies and contributed to better resources management. For example, high-level consensus and joint understanding among countries was facilitated, including discussion of bilateral agreements on transboundary collaboration and resources management. Furthermore, a fisheries agreement was drafted for Lake Shkodra/Skadar (Albania and Montenegro), which is expected to be signed in the near future.
- Transboundary TWGs provide a forum for regional and transboundary cooperation, spanning all lakes and acting as platforms for knowledge exchange and learning. The TWGs have overseen implementation of joint monitoring programmes in compliance with the EU WFD and nature conservation legislation and maintain close links with the DCG. They also proposed measures for using natural resources sustainably, protecting biodiversity and improving the ecological status of the lakes. Effective implementation of these measures will contribute to improving water quality and the ecological status of the three lake ecosystems.
- As a result, momentum for cooperation between government institutions and civil society on biodiversity monitoring has been created, and participatory PA governance has been strengthened.

Some impacts will, of course, take more time to fully materialise. Regarding PA

governance and management, the project achieved the following direct results:

- Critical bat habitats and pressures at Lake Shkodra/Skadar were identified and action plans drafted, as a basis for improved conservation management plans (Albania and Montenegro).

- Management of the core breeding zone for Dalmatian pelicans at Lake Skadar (Montenegro) has improved, leading to increased breeding success of this charismatic yet vulnerable flagship species.
- Monitoring and conservation schemes for 18 species of flora and fauna (including nine Natura 2000 species[3]) and two Natura 2000 habitats have been launched.
- Public awareness of nature conservation was increased, e.g. through high media coverage of project activities and other events, such as UN International Day for Biological Diversity, World Wetlands Day and Biodiversity Summer Schools.

Furthermore, the project has generated some important lessons learned:

- Up to 2017, much effort had been put into conducting surveys and developing monitoring capacity, as a prerequisite for successful PA management. During the current phase, emphasis has shifted towards developing tangible mechanisms to use the information generated to inform decision-making and management.
- There is a need to institutionalise frameworks for cross-sectoral and transboundary cooperation, such as the DCG and Lake Commissions, in order to make cooperation sustainable and effective. This is another main direction of the current phase.
- In PAs subject to infrastructure development and diverging resource-use interests, it is crucial to bring those who have a strong influence on conservation success but potentially conflicting interests to the table. This may include ministries in charge of agriculture, fisheries, finance and infrastructure development as well as businesses.
- In order to make PAs successful in complex stakeholder environments, it is important to understand both the official and the hidden agendas of the various actors. It is equally important to foster dialogue between competing stakeholders at an early stage and at an informal level in order to avoid entrenched positions later on.

3 Namely, species listed in the annexes of the EU Birds and Habitats Directives.

5.7 SYSTEM-LEVEL CAPACITY DEVELOPMENT IN PERU TO HELP SAFEGUARD NATIONAL NATURAL CAPITAL

PROJECT TITLE	**Contribution to the environmental objectives of Peru (ProAmbiente II)**
COMMISIONED BY:	German Federal Ministry for Economic Cooperation and Development (BMZ)
COUNTRY:	Peru
OVERALL TERM:	April 2017 to March 2021
LEAD EXECUTING AGENCIES:	Ministry of Environment (Ministerio del Ambiente – MINAM)

>> PROJECT OBJECTIVE

The implementation of political goals is improved in the areas of environmental governance and management, the conservation and sustainable use of biodiversity, and sustainable forest management.

>> CONTEXT

Peru is a nation of more than 30 million inhabitants and has a territory of 1,285,000 km^2. Its identity can be explained by its tremendous cultural, biological and geographical diversity, something which makes it one of the world's most megadiverse countries. The National Biodiversity Strategy (2021) promotes biodiversity and ecosystems as an essential part of the country's natural capital. This capital has historically provided the basis and sustenance for social, cultural and economic development.

The management of protected areas is considered to be a key part of sustaining biodiversity and ecosystem services and fostering sustainable development in the country, including climate change mitigation measures. Nevertheless, mobilising the required financial, human and institutional resources remains a challenge. As a subordinate agency of the Ministry of Environment, the National Service of Protected Natural Areas (Servicio Nacional de Áreas Naturales Protegidas por el Estado, SERNANP) is the governing body for the management of the National System of Natural Areas Protected by the State (Sistema Nacional de Áreas Naturales Protegidas por el Estado, SINANPE). Established in 1990, SINANPE currently comprises 76 nationally administered protected areas. Complementing SINANPE and working under the same legal protection framework, regional governments and civil society manage regional and private conservation areas respectively (these voluntary conservation efforts are recognised by the national government and, in the latter case, managed by individual landowners or their representatives). SINANPE has experienced steady growth

(the number of areas under national administration has risen from 40 in 2003 to 76 in 2018). At the same time, conditions for effective management are improving, as can be observed by the fact that, from 2003 to 2015, numbers increased for staffed protected areas from 33 to 61, and from 17 to 41 for protected areas with master plans. (OECD 2016). The implementation of SINANPE is financed primarily through public funds and revenue generation from tourism. Financing is supplemented by international funds which are mostly channelled and partly managed through the Fund for the Promotion of Protected Natural Areas of Peru (Fondo de Promoción de las Áreas Naturales Protegidas del Perú, PROFONANPE) and private funds, for instance, from private carbon markets.

>> MAIN CHALLENGES

Peru has been experiencing significant economic growth for over two decades now. Ecosystems face growing pressure from large-scale infrastructure, hydroelectric and mining projects, expansion of the agricultural frontier, unplanned urbanisation, deforestation and climate change. All of these developments threaten the flow of nature´s benefits to society and undermine what could be the foundations of solid long-term growth. Thus, the management of biodiversity and ecosystem services inside and outside protected areas and the development of an interconnected network of core areas, buffer zones and corridors are key to balancing development needs and nature conservation. The main challenges to protected area management can be summarised under the following topics:

1. **The creation of effective and equitable governance and management structures, especially inter-institutional coordination and cooperation, including clearly demarcated protected area and zone boundaries, remains a challenge.**

   - Peru's biodiversity is unique, but most of it is situated in large protected areas that are highly inaccessible. This makes it difficult to ensure adequate monitoring. There is a lack of control and monitoring capacities to generate management-relevant information on the degree of risk to protected areas and the effective enforcement of environmental regulations in buffer zones. Moreover, the process of adequately demarcating PA boundaries is very costly.
   - Improvements in the quality of management plans for protected areas and a clear strategic orientation – taking into account the links with other development plans – are only slowly taking hold. Many protected areas in the system have developed and been implemented in diverse and non-systematic ways, without following a logical, planned sequence.
   - The roles that each level and sector of government have to play in the ongoing decentralisation process are yet to be fully clarified and defined. For example, the competencies of regional governments are often un-

clear, and they have very limited resources and structures for carrying out effective work as development actors. Besides managing Regional Conservation Areas, the regions have also assumed greater responsibility under the process of decentralisation for territorial planning and environmental and natural resource management.

2. **Despite the expansion of SINANPE, SERNANP still faces significant shortages of staff, equipment, infrastructure and other resources and capacities for guaranteeing the long-term conservation and effective management of protected areas.**

   - There are no formal education programmes for the country's park rangers and protected area managers, and job profiles and required qualifications are insufficiently defined. Most employees have technical expertise, for example in biology, but few management and communication skills. The institutional capacity development strategy and related measures do not meet the stringent requirements for protected area planners and managers in the system.
   - Information and knowledge management systems need to be further adapted and optimised.

3. **Funding insecurity is among the biggest challenges to effective conservation. In the case of SINANPE, long-term financing of all costs incurred is not secured.**

   - Despite significant increases in annual budget appropriations (from USD 2.2 million to approximately USD 17 million between 2009 and 2016), the resources provided for effective protected area management have not kept pace with the growth of the protected area system (GEF 2017). Further investments, also on the part of regional governments and the private sector, are needed in order to ensure the long-term viability and coverage of the running costs for SINANPE as a whole.
   - Financial planning for protected areas is not always sufficiently linked to conservation outcomes and performance benchmarks, while financial administration capacities are poor in many cases. Strategic conservation planning and long-term financial planning are insufficiently integrated and development of financial mechanisms to supplement the public budget is limited (GEF 2017). Additional potential for reducing management costs through participatory and collaborative mechanisms, such as inter-institutional and cross-sectoral cooperation/budget articulation, conservation agreements, public- private partnerships and management contracts, remains untapped.
   - Tourism is considered a major driver of revenue generation, yet the potential of tourism for enhancing protected areas is yet to be exploited. According to a study (MINAM, 2010), tourism in the country generates USD 3.5 billion each year, of which 80% is linked to 11 protected areas. The promotion of basic tourism infrastructure (such as environmental information centres, hiking trails) and tourism services can provide signif-

icant impetus for development and also contribute to the creation of jobs in the park administration and surrounding area. The granting of usage rights plays an important role in this context.

>> HISTORY OF COOPERATION AND APPROACHES

Peru and Germany have a longstanding history of cooperation, and the conservation and sustainable use of biodiversity (inside and outside protected areas) has always been an important element in this cooperation relationship. In the last two decades, support for SINANPE, especially SERNANP, regional governments and other stakeholders of protected area management in the country has been channelled principally through relatively large environmental programmes, with broad thematic approaches and a large number of partner institutions. Essentially, the advisory approach for technical cooperation in protected area management has evolved over time from providing support to single protected areas towards employing a systemic multi-level and multi-partner approach following programme building in the green sector of German cooperation to support the consolidation of the national system SINANPE. The characteristics and focal areas of the advisory approaches, adopted in response to the challenges identified in the previous section, in the different phases can be summarised as follows:

1. **Strengthening of subnational conservation systems and mainstreaming of protected area planning in zoning and regional planning processes. Focus on policies and strategic planning at regional level.**

   - Providing support for the development of strategies and tools for identifying priority conservation areas in the context of land-use zoning and land-use planning at subnational level (e.g. gap analysis, GIS tools for connectivity and ecological network modelling).

- Advising regional and local governments on the establishment of regional protected area systems.
- Implementing capacity development measures for establishing and managing local and regional protected areas (development of a toolbox).
- Developing innovative financing instruments and mechanisms, such as payments for ecosystem services.

2. **Consolidation of SINANPE, including procedures and processes of protected area management and promotion of public investment. Focus on cross-sectoral policy coordination, procedures and budget.**

- Providing policy advice on strengthening regulation of the National System of Public Investments (SNIP) for investments in biodiversity conservation and protected area management to increase the self-financing share.
- Strengthening regional participation in the national budgetary programme (Programa Presupuestal 057) for biodiversity conservation and sustainable use of natural resources.
- Offering advice to regional governments on including investment in biodiversity conservation in regional development planning. Strengthening the regional planning committees and the regional environmental commission and supporting the National Centre of Strategic Planning (CEPLAN) with environmental topics for the preparation of the Concerted Regional Development Plan (Plan de Desarrollo Regional Concertado).
- Providing advice and coaching to SERNANP and regional governments on creating public investment projects for biodiversity conservation compatible with the regional development plan.
- Developing technical guidelines for identifying funding strategies, capacity development for preparing project proposals and improving approval procedures.
- Supporting PROFONANPE in the process of gaining Green Climate Fund accreditation.
- Providing advice on organisational development for enhancing and accelerating key management procedures by means of clarifying mandates, roles and functions between institutions and developing software tools to facilitate access to information. Offering support for mainstreaming SINANPE in the National System of Environmental Management (Sistema Nacional de Gestión Ambiental, SNGA), especially linking it to the National System of Environmental Impact Assessment (SEIA) for the effective application of tools such as the environmental impact assessment. Providing assistance with defining quality criteria standards for the technical opinions of SERNANP and using capacity development measures to optimise the issuance of technical opinions on environmental procedures requested of SERNANP. Offering support for the development of an exemplary concept for establishing a biosphere reserve.
- Developing capacity for integrating an ecosystem services approach in protected area management planning.

3. **Optimisation of core management processes of PAs in SINANPE. Focus on system support and optimisation (current phase).**

   - Strengthening governance of and access to protected areas and promoting the sharing of their benefits, for example, by supporting analysis and improvement of the process for awarding tourism concessions in PAs and the sustainable use of natural resources in buffer zones.
   - Further supporting the promotion of public investments in natural infrastructure related to protected areas.
   - Enhancing the information system for the process of granting usage rights.

>> LESSONS LEARNED

- The alignment of advisory processes within the Peruvian institutional landscape and regulatory frameworks with the logic of the state's functional systems, such as SINANPE, is of great importance for sustained success.
- The enhancement of any conservation tool, such as protected areas, through development cooperation must follow the explicit and implicit policy guidelines of the relevant sector at national level. The fact that it has been identified as a local technical need might not be enough, since, without a sufficient legal framework to support it, the sustainability of the advisory services provided is fragile.
- Developing the capacity of SERNANP as the governing body of protected areas to coordinate and articulate matters with other sectors and stakeholder groups is key to achieving a shared understanding and ways and means of conserving the natural capital that sustains social, cultural and economic development.
- The national policy for modernising public administration promotes an approach of co-operative and participatory steering in SERNANP. This has allowed more effective implementation in contrast to the former system of hierarchical control.
- The impact of technical advisory services is increased when issues are addressed at system level, such as in the discussion and implementation of guidelines for PA master plan development in SINANPE, rather than at site level.
- Combining capacity and organisational development within technical advisory support makes it possible to achieve highly effective outcomes with political and policy advice.

5.8 PROMOTION OF PROTECTED AND CONSERVED AREAS ON THE BASIS OF COLLABORATION BETWEEN SMALLHOLDERS, PARK AUTHORITIES AND AGRO-INDUSTRY: THE EXAMPLE OF CÔTE D'IVOIRE

PROJECT TITLE	**Development of the Taï and Comoé nature conservation and economic areas (PROFIAB)**
COMMISIONED BY:	German Federal Ministry for Economic Cooperation and Development (BMZ)
COUNTRY:	Côte d'Ivoire
OVERALL TERM:	2013 – 2020 (PROFIAB I and II)
LEAD EXECUTING AGENCIES:	Ministry of Agriculture and Rural Development and other implementing partners

>> PROJECT OBJECTIVE

Rural economic development and biodiversity programme: The rural population increases its income from agriculture significantly and in particular in environmentally sustainable ways, while conditions for the conservation of biodiversity in the protected areas are also improved.

Objective of the value chains component: Stakeholders in the promoted value chains employ production, processing and marketing methods that boost incomes, have no adverse impacts on biodiversity and are environmentally sustainable.

Objective of the biodiversity component: The park management authorities and the population living on the periphery of the parks have improved the protection, the sustainability of ecosystem services and the regulated economic use of the Taï and Comoé national parks and the adjoining zones.

>> CONTEXT

The Taï National Park in the south-west of Côte d'Ivoire and Comoé National Park in the north-east are both UNESCO World Heritage Sites; each forms the core zone of the biosphere reserve of the same name. The Taï National Park, which covers an area of 5,500 km^2, is the last major intact rainforest in West Africa, providing a haven for many threatened species. The Comoé National Park is one of the largest protected areas in West Africa. Extending over an area of 11,500 km^2, it harbours ecosystems from savannahs to dry forests with high species diversity.

In the wake of the political unrest at the start of the millennium, the national parks were increasingly targeted by poachers and gold diggers; the impacts of this exploitation are still visible. Both protected areas have also come under significant pressure as a result of population growth, migration, illegal land use,

the expansion of export-oriented agricultural production, livestock farming and inappropriate agricultural practices – problems that cannot be adequately addressed by the local park management bodies on their own.

The ecosystems of the biosphere reserves provide the basis for agriculture in the region. Both parks help to improve the local microclimate and the regulation of water and thus help safeguard agricultural production in the vicinity of the parks. Palm oil and rubber are grown around the Taï National Park and about 15% of the world's cacao is produced in this area. The stable microclimate secures the production activities and incomes of nearly 200,000 smallholders and their families. Despite this, 40% of the local population lives below the poverty line.

From 2002 onwards, the division of the country induced by political conflict severely restricted management of the Comoé National Park. This led to poaching, gold digging and intensive use of water and grazing resources by herders that had such a detrimental impact on the area that in 2003 UNESCO placed the park on the list of World Heritage Sites in Danger. The expansion of cashew production is further exacerbating the pressure.

>> CHALLENGES

The agricultural sector, which is the country's chief source of income, uses and simultaneously jeopardises the ecosystem services provided by the national parks. The population and stakeholders in agricultural value chains have little incentive to participate in protecting the national parks. There is insufficient shared understanding of protection goals and usage regulations. The management capacities of the responsible protected area authorities are technically sufficient for the primary task of protection but not for development measures in the adjoining zones. Long-term financing of the protection of the two national parks has been provisionally secured from the Ivorian foundation for protected areas to meet the primary objective of protection. However, this cannot cover all the measures and investment required, such as environmental education and development activities in the peripheral zones.

>> APPROACH

> STRENGTHENING THE PARK AUTHORITIES AND IMPROVING MANAGEMENT AND GOVERNANCE STRUCTURES

Both for biosphere reserves as model regions for sustainable development and for national parks/World Heritage Sites, it is imperative that the pertinent protected area authorities and the responsible regional governments have a common vision for sustainable development. Each must be involved in the

formulation of the other's development strategies to ensure that the protected area becomes an integral part of the region.

The relevant local stakeholders must also be integrated in governance and management structures. Although the intersectoral park management committees formed have only a consultative role, they play a part in reviewing local agreements between the park authorities and local user groups on the management of natural resources in the economic area around the protected areas. This is to ensure that these agreements are subsequently observed. The involvement of local administrative bodies and the population has made a major contribution to the success of the now significantly improved management of the protected areas.

Another important factor in this regard was the strengthening of capacities within the protected area authorities. For example, park staff were trained in monitoring with **SMART** and provided with equipment. Particular attention is paid to poaching, illegal land takeovers and fire monitoring.

Thanks to these efforts, the Comoé Park is now significantly better protected and its ecosystems are slowly recovering. Consequently, Comoé has after 14 years been removed from the UNESCO list of World Heritage Sites in Danger.

› VALUE CHAINS AND PUBLIC-PRIVATE PARTNERSHIPS

A cornerstone of the project is support for poverty reduction by boosting income from sustainable agriculture in the areas around the periphery of the parks. As part of this approach, five value chains incorporating improved production methods have been promoted. With a focus on cacao, cassava (Taï) and cashews, onions and rice (Comoé), the project has initiated nine public-private partnership (PPP) measures with agro-industrial companies.

The local park management committees play a major part in this context. In contrast to the park authorities, the members of these committees, which include local authorities, have a mandate to develop the peripheral zones. They can therefore promote sustainable agricultural value chains in the peripheral zones and can help include private farms and agro-industrial businesses in the vicinity of the protected areas in the protection strategies.

› ASSESSING ECOSYSTEM SERVICES

The many different services that protected areas provide for people are fundamental to the livelihoods of the population of the areas surrounding the parks. Making the government and the private sector aware of the benefits of ecosystem services can help raise the necessary funds for conservation of the protected areas.

An **ecosystem services assessment** was conducted in the Taï National Park, triggered by the business plan's projection of a funding gap of 6.8 million euros for implementation of the management plan for 2014 – 2020. Important steps in this process were:

Defining the scope of the assessment: The concept and its relevance to the fundraising effort were presented at an initial stakeholder workshop. The workshop was also designed to bring stakeholders representing a wide range of interests on board to support the assessment. As a first step, working groups discussed the various ecosystem services in relation to their 'recipients'; the services considered included ecosystem services of public interest (government), those that affect economic activities (private sector) and those of interest to (international) donors in the nature conservation and development sector.

Various services were then selected for a more detailed study. Scenarios in the event of sufficient and of insufficient funding of the protected area authorities were also drawn up. Even a rough outline of this nature can foster a common understanding and highlight the urgency of protection measures.

Findings of the assessment: The assessment concentrated on three areas:

- Regional climate regulation for local households and agricultural production: Although quantifiable analysis was beyond the scope of the study, it can be assumed that large-scale tree-felling in the park would change the climate of the region and hence have a (negative) impact on agricultural production. More than one million people in the area depend on farming for their livelihood: within a radius of about 50 km of the park some 200,000 households cultivate cacao, coffee, palm oil and rubber, mainly for export.
- Water regulation and supply: Around half a million people benefit from the water resources regulated by the national park (river flows, retention basins, groundwater levels, etc.). The possibility of generating hydropower from rivers whose catchment area lies within the park is a further fundraising argument.
- Carbon sinks for global climate regulation: The value of the Taï Park as a carbon sink was calculated with the help of an assumed deforestation rate and the price for avoided deforestation agreed by stakeholders in the national REDD+ process as an appropriate 'value for carbon'.

Using the findings: Effective communication is essential in order to impart the findings to the various stakeholders. A range of materials was produced for this purpose. In particular, the 20-page summarising brochure, a plea for the conservation of nature and ecosystem services aimed at decision-makers, was widely used as an argumentation aid by policy-makers and managers, contributing to the following initiatives:

A specific plea was addressed to the private sector, focusing on individual issues: the value chains for cacao and coffee, rubber and palm oil and hydropower, and corporate social responsibility policy in the financial and telecommunication sectors. With regard to corporate social responsibility, this was directed particularly at companies that might be interested in supporting the 'flagship' park even though they have no direct connection with the area. The fundraising itself then concentrated primarily on the cacao sector. So far this has resulted in the Ivorian foundation for protected areas and the Ivorian park authority signing an agreement with the chocolate producer CEMOI and the project developer ECOTIERRA on developing zero-emission cacao production in the zone bordering the park. The Taï economic area is also a focus of the World Cocoa Foundation's Cocoa & Forests Initiative. The initiative, which was set up at the 23rd UN Climate Change Conference in 2017, brings together the two largest cacao-producing countries – Côte d'Ivoire and Ghana – and 32 leading cacao-processing companies.

The argumentation has also had an impact on applications and grants for climate financing, such as the award of 2 million US dollars to promote sustainable management of the Taï National Park as part of the World Bank's Strategic Climate Fund – Forest Investment Project (SCF-FIP) agreed in 2018. Furthermore, in 2018 the Carbon Fund of the Forest Carbon Partnership Facility (FCPF) agreed in principle to a proposal by Côte d'Ivoire that is designed to enable implementation of an emissions reduction programme document (ER-PD) in the Taï economic area and provides for the direct acquisition of emission certificates (Emissions Reduction Purchase Agreements, ERPAs) to the value of around 45 million euros between 2020 and 2024 for investments in the forestry sector.

>> LESSONS LEARNED

Assessment of ecosystem services can

- focus and shape communication on and the plea for the conservation of protected areas
- significantly raise awareness of nature conservation at the level of local stakeholders and relevant decision-makers if they are involved in the assessment process
- open up opportunities to mobilise additional financing for protected areas and the development of their peripheral zones.

International recognition can

- provide a significant incentive to improve the management of protected areas
- be vital to potential allocations of funds: the removal of the Comoé National Park from the list of UNESCO World Heritage Sites in Danger was an achievement at international level for the Ivorian Government and can help mobilise additional national budget funds for management of the park as well as attract external funding for an internationally recognised public good.
- highlight the importance of protected areas and enhance awareness of them in the private sector as well as elsewhere; this promotes local acceptance of the parks' protected status and boundaries and can give rise to on-site involvement in nature conservation by global economic players.

>> FURTHER READING

Augustin Berghöfer, Joshua Berger, Inza Koné, Ulrike Tröger, Hans Ulrich Caspary (2018): Ecosystem services for conservation finance: applying the TEEB stepwise approach in Côte d'Ivoire. Biodiversity and Conservation. Springer Nature B.V. 2018

Joshua Berger, Anna Deffner, Fabien Quetier, Florence Baptist, Prof. Inza Kone, Prof. Constant Yves Adou Yao (2015): Résumé pour décideurs Evaluation de la valeur du Parc national de Taï. Evaluation des services écosystémiques du Parc national de Taï. Patrimoine mondial – Réserve de biosphère – Côte d'Ivoire

GIZ (2016): In a nutshell. **CASE STUDY: Taï National Park sustains regional agriculture, Ivory Coast. Multiple PA benefits are key to livelihoods and help win co-finance from private sector. ValuES**

5.9 THE BLUE ACTION FUND

PROJECT TITLE	**The Blue Action Fund (Blue Action)**
COMMISIONED BY:	German Federal Ministry for Economic Cooperation and Development (BMZ)
COUNTRIES:	Worldwide
OVERALL TERM:	2016–2030+
LEAD EXECUTING AGENCIES:	Blue Action Fund

>> PROJECT OBJECTIVE

Address the financing gap in the ocean conservation space and thus conserve the marine biodiversity for future generations and improve the livelihoods of coastal communities in developing countries.

>> CONTEXT

All life on Earth depends on a healthy ocean. The ocean covers over 70% of the surface of our planet and makes up over 95% of its living space. It also generates more than 50% of our oxygen and has been absorbing more than 90% of our excess heat as well as about 25% of our annual carbon dioxide emissions. More than one third of the global population lives in coastal areas and hundreds of millions of people are dependent on ocean-based industries like fishing and tourism. Particularly in developing countries, where more than 95% of the world's fishers live, fish are a vital source of both protein and income. Marine ecosystems, such as mangrove forests and coral reefs, protect coastlines against storms and floods – a service that is increasingly critical in the face of climate change.

All these services are at risk: increasing human pressure, climate change, fish stocks being overexploited, mangroves decimated, and never-ending flows of plastics and untreated pollutants threaten oceans and coastlines.

Conserving the global ocean and reversing the devastating loss of marine biodiversity is one of humanity's greatest challenges. To stop the biodiversity loss, the international community decided at the Summit of the UN Convention on Biological Diversity in Montreal (2022) that 30% of the Earth's surface should be effectively managed, restored, and conserved by 2030 (Global Biodiversity Framework (GBF) targets 1-3), including marine areas, respecting the rights and territories of Indigenous Peoples and local communities. For this, the global protected marine area must roughly increase four times over the next seven years, requiring $200 billion annually (GBF target 19).

>> CHALLENGES

While only 8.3% of oceans are currently protected, the United Nation's SDG 14 Life Below Water is the most underfunded Sustainable Development Goal. According to the Organisation for Economic Co-operation and Development (OECD), between 2013 and 2018, less than 1% of Official Development Assistance (ODA) was invested in the sustainable use of the ocean. Furthermore, many existing Marine Protected Areas (MPAs) offer little real protection in the water. Known as 'paper parks', these sites may exist on maps and in legislation, but do not actually protect marine resources and ecosystems. To be able to do so, additional effort and funding is needed to turn these paper parks into effectively managed MPAs.

>> APPROACH

The set-up of Blue Action

The Blue Action Fund, or "Blue Action" in short, is an independent conservation foundation under German foundation law and based on the **Practice Standards on CTFs of the Conservation Finance Alliance**, that was initiated by the German Federal Ministry for Economic Cooperation and Development (BMZ) and KfW in 2016. Launched as a voluntary contribution to the first United Nations Ocean Conference, Blue Action is actively contributing towards the goal of protecting 30% of the global ocean by 2030 by supporting projects aimed at establishing or improving the management of marine protected areas (MPAs) and enhancing local livelihood conditions and food security.

Nature conservation has concentrated more on "charismatic ecosystems" on land, such as rainforests and savannahs. With Blue Action, more financial attention is being paid to "blue" development challenges such as coral reefs and tidal ecosystems such as mangrove forests.

Blue Action provides grants to national and international NGOs working in ODA-eligible countries to conserve marine biodiversity and to improve the lives of local people. Grants are typically in the range of € 2–5 million.

Blue Action is a flexible funding instrument and can easily launch competitive calls on thematic or regional areas, such as Ecosystem-Based adaptation in the Western Indian Ocean or Blue Carbon and mangroves.

It primarily works as a sinking fund in addition to EUR 2 million endowment capital. Funds are invested to provide grants of up to EUR 5 million for 5 years to projects resulting in measurable outcomes. Currently (April 2025), the total volume of committed funds amounts to €174 million, of which Blue Action's contribution is €126 million (72%) and match funding provided by grantees is €48 million (28%), either in form of own resources or from co-financing.

Germany, through the German Federal Ministry for Economic Cooperation and Development (BMZ) in cooperation with KfW Development Bank; Sweden, through the Swedish Ministry for Foreign Affairs; France, through the Agence Française de Développement (AFD); Norway, through the Norwegian Agency for Development Cooperation (Norad); and Ireland, through Irish Aid are funding partners of Blue Action. The Green Climate Fund joined as a funding partner in 2021. Blue Action constantly seeks to re-fill the sinking fund with contributions from existing and new funding partners.

› WHAT BLUE ACTION FUNDS

Blue Action selects projects through open Calls for Proposals, which are appraised and selected with the support of the International Union for the Conservation of Nature (IUCN), a Strategic Advisor to Blue Action.

The implementation of the projects is based predominantly on activities that support the following four areas:

- Governance of Marine Protected Areas (MPAs), including management plans; mapping and demarcation; monitoring, control and enforcement; data collection; and training of staff.
- Sustainable livelihoods including saving clubs; sustainable tourism; reduction of harvest loss; empowerment of women.
- Species conservation and sustainable fisheries including gear selectivity; co-management; conservation measures for key species.
- Habitat conservation and restoration in mangroves, coral reefs and seagrass beds.

› ACHIEVEMENTS

Some impacts will, of course, take more time to fully materialise. Regarding PA governance and management, the project achieved the following direct results:

- By April 2025, Blue Action's Grant Programme was supporting 35 active projects across 22 countries, spanning ocean regions from the Pacific to the Eastern Tropical Pacific, the eastern Atlantic and the Western Indian Ocean.
- Almost 304,000 km2 of MPAs are now more effectively managed and Blue Action supported the establishment of 158,000 km2 of new MPAs.
- With its programmes supporting sustainable livelihoods and empowering local communities to manage their natural resources, Blue Action by now has reached more than 760,000 people.

>> Lessons learned

- Blue Action provides grants to NGOs and their local partners collaborating with state agencies in marine conservation. This is deemed an effective approach given that MPAs, where management authority is shared among multiple government and non-government actors, are, for example, 98% more likely to have higher fish biomass than MPAs governed by state agencies alone.
- MPAs can only work with the support of the people. Therefore, all Blue Action projects implement extensive stakeholder consultation and participation processes. They have a strong focus on sustainable livelihoods to ensure that MPAs provide benefits to local communities.
- By incorporating social standards that uphold and promote fundamental human rights (both substantive and procedural), Blue Action is empowering its

partners to embrace rights-based approaches to marine conservation. This includes addressing access restrictions to ensure economic and social rights, such as the right to food and an adequate standard of living. Indigenous Peoples rights are protected through mechanisms like Free, Prior, and Informed Consent (FPIC) and ensuring access to sites of spiritual significance.

- By also working with organisations headquartered in developing countries that have so far not received similar amounts of public funding but are well positioned to deliver impact on the ground, Blue Action strengthens the often missing local structures between funders and local level implementation.

>> Literature

- Blue Action. 2025. **Annual Report 2024.**
- CFA. 2013. **Practice Standards for Conservation Trust Funds.**
- Mast et al. 2025. **Shared governance increases marine protected area effectiveness**
- More information at: **https://www.blueactionfund.org/**

6

TRAINING opportunities and resources

6.1 HIGHER EDUCATION

Please note that this collection is neither comprehensive nor based on any quality evaluation or ranking.

>> MSC COURSES

› Conservation-specific

Management of Protected Areas, University of Klagenfurt (Austria), accessed on 03 February 2025 at

Protected Area Management Major, James Cook University, Townsville/ Cairns (Australia), accessed on 03 February 2025 at

World Heritage Management & Conservation, University College Dublin (Ireland), accessed on 03 February 2025 at

Forest and Nature Conservation, Wageningen University & Research (Netherlands), accessed on 03 February 2025 at

Protected Area Conservation, University of Tasmania (Australia), accessed on 03 February 2025 at

Marine Conservation, University of Plymouth, accessed on 03 February 2025 at

Conservation and Biodiversity, University of Exeter (UK), accessed on 03 February 2025 at

Global Biodiversity Conservation, University of Sussex (UK), accessed on 03 February 2025 at

Marine Conservation, University of Auckland (New Zealand), accessed on 03 February 2025 at

International Nature Conservation, University of Göttingen (Germany), accessed on 03 February 2025 at

Ecology and Nature Conservation, Ben-Gurion University of the Negev (Israel), accessed on 03 February 2025 at

Biodiversity Conservation Management, University of Peradeniya (Sri Lanka), accessed on 03 February 2025 at

Conservation, University of Hong Kong (China), accessed on 03 February 2025 at

Conservation Studies, Hazara University Mansehra (Pakistan), accessed on 03 February 2025 at

Environmental Conservation, University of Wisconsin–Madison (USA), accessed on 05 March 2025 at

Resource Conservation, University of Montana (USA), accessed on 05 March 2025 at

Conservation and Restoration Science, University of California, Irvine (USA), accessed on 05 March 2025 at

Marine Conservation, University of Miami (USA), accessed on 05 March 2025 at

Sustainable Natural Resource Conservation and Management, Indiana University Bloomington (USA), accessed on 05 March 2025 at

Wildlife & Wildlands Conservation, Brigham Young University (USA), accessed on 05 March 2025 at

General on management of natural resources

Sustainable Forest and Nature Management (SUFONAMA), Erasmus Mundus Programme of University of Copenhagen (Denmark), Bangor University (UK), University of Göttingen (Germany), Swedish University of Agricultural Sciences (Sweden) and University of Padova (Italy), accessed on 03 February 2025 at

Sustainable Resource Management, TUM School of Life Science Weihenstephan (Germany), accessed on 03 February 2025 at

Sustainable Tourism Management, Sustainability Management School, Gland (Switzerland), accessed on 03 February 2025 at

World Heritage Studies, Brandenburg University of Technology Cottbus-Senftenberg (Germany), accessed on 03 February 2025 at

Marine Environmental Management, University of Exeter (UK), accessed on 03 February 2025 at

Renewable Natural Resources / Wildlife and Ecotourism Management, University of Ibadan Postgraduate College (Nigeria), accessed on 03 February 2025 at

Environmental Management of Mountain Areas, Free University of Bozen-Bolzano (Italy), University of Innsbruck (Austria), accessed on 03 February 2025 at

Natural Resource Management, Namibia University of Science and Technology (Namibia), accessed on 03 February 2025 at

Land and Water Management, University of Nairobi (Kenya), accessed on 03 February 2025 at

Biodiversity, National Taiwan University (Taiwan), accessed on 03 February 2025 at

› ONLINE MSc COURSES

Biodiversity, Wildlife and Ecosystem Health (Online Learning), University of Edinburg (Scottland), accessed on 03 February 2025 at

Wildlife Forensic Sciences & Conservation (Online), University of Florida (USA), accessed on 07 February 2025 at

Environmental Management (Online), The Open University (UK), accessed 07 February 2025 at

6.2 DEDICATED TRAINING INSTITUTIONS, INITIATIVES AND NETWORKS WHICH OFFER RELEVANT COURSES

› INTERNATIONAL

BIOPAMA project (IUCN): project with a strong capacity development (including training) focus on PAs in African, Caribbean and Pacific countries; has developed curricula and conducted trainings on many aspects of PA management and governance, accessed 03 February 2025 at .

PANORAMA Blue (GIZ, IUCN, Grid-Arendal, UNEP, OCTO): is a global platform dedicated to sharing best practices in marine and coastal conservation and sustainable use. By continuing the Blue Solutions Initiative (2013-2021) it enables practitioners to learn from each other, exchange experiences, and find inspiration. With hundreds of adaptable cases and a vast community of engaged members, PANORAMA Blue accelerates the implementation of "blue solutions" worldwide, accessed on 03 February 2025 at .

The Blue Capacity Hub is an open-source platform offering training courses designed to enhance the skills of decision-makers and practitioners in marine and coastal management. The three available courses include Ecosystem-based Marine Spatial Planning and Management, Sustainable Blue Economy and Blue Leadership, accessed on 03 February 2025 at .

CCNET Conservation Coaches Network: a global network of practitioners, coaches and trainers with the goal to support the implementation, learning and teaching of the Conservation Measures Partnership Open Standards (CMP OS), trainings focus on preparing new coaches, accessed on 03 February 2025 at .

› EUROPE

Conservation Leadership Programme, FFI, BirdLife International, & WCS (mainly UK), accessed on 03 February 2025 at , (mainly project based learning for early career conservationists, not exclusive to PAs but highly relevant)

Klaus Toepfer Fellowship Programme, German Federal Agency for Nature Conservation, Isle of Vilm (Germany), accessed on 03 February 2025 at (for EECCA countries only, focus on general biodiversity conservation but high relevance to PAs)

› ASIA-PACIFIC

International Ranger Federation, Asquint NSW (Australia), accessed on 03 February 2025 at , (runs World Ranger Congress every three years, with strong learning elements on PAs)

Protected Area Learning and Research Collaboration (Australia), accessed on 03 February 2025 at , (network of research institutions with relevance to conservation and particularly PAs in the Asia, Pacific and Oceania region, with various relevant courses)

Wildlife Institute of India, Uttarakhand (India), accessed on 03 February 2025 at , (various courses on conservation and PAs with a geographic focus on India)

› AFRICA

Southern African Wildlife College (South Africa), accessed on 03 February 2025 at , (various courses on conservation and particularly PAs with a geographic focus on southern Africa

›› E-LEARNING

CBD Secretariat: Programme of Work on Protected Areas (PoWPA) Curricula (19 online modules with certificates), Conservation Training, accessed on 03 February 2025 at

Conservation Measures Partnership (CMP) Open Standards Curriculum (15 online modules), Conservation Training, accessed on 03 February 2025 at

Introductory Courses for Coastal Management and Marine Protected Areas (5 online courses), Coral Triangle Center, Conservation Training, accessed on 03 February 2025 at

Ecosystem Restoration (10 modules, English/French/Spanish), Learning for Nature (UNDP), accessed on 05 February 2025 at

Identifying and delineating Key Biodiversity Areas (approximately 10 hours, also available in **Portuguese** , **French** and **Spanish**), KBA Partnership/Conservation Training, accessed on 05 February 2025 at

InforMEA learning (over 20 free online courses on Multilateral Environmental Agreements), accessed on 03 February 2025 at

MOOC on Protected Areas Management in Africa (7 modules, English and French, open access; further courses on Ecological Monitoring, Law Enforcement and Species Conservation) IUCN and PAPACO, accessed on 03 February 2025 at

MOOC on Marine protected areas (6 modules, open access) IUCN and Papaco, accessed on 05 February 2025 at

Natural Resources Risk and Action Framework (GIZ) self-paced course (approximately 10 hours), accessed on 05 February 2025 at

QGIS Tutorial for QGIS v3.0, Texas A&M University (USA), accessed on 03 February 2025 at

UN Environment Programme World Conservation Monitoring Centre (One Introduction module on Spatial Data for Biodiversity and one module regarding the role of Environmental data in area-based planning), accessed on 05 February 2025 at

Wetland Conservation and Management in India (GIZ, MoEF&CC, BMUV, IKI, GEF, UNEP, WISA) self-paced and interactive introductory course (approximately 3 hours), accessed on 05 February 2025 at

›› COURSE CURRICULA AND TRAINING MANUALS

BirdLife International, Fauna & Flora International (FFI), Tropical Biology Association (TBA), University of Cambridge (2016): Intrinsic. **Integrating Rights & Social Issues into Conservation. A trainer's Guide.** Accessed on 05 February 2025 at

Indo-German Biodiversity Programme (GIZ) (2017): **Curriculum and modularized course on Coastal and Marine Biodiversity and Protected Area Management for MPA Managers.** Accessed on 05 February 2025 at

WildTeam (2018): **Delivering Training Workshops for Wildlife Conservation v1.** WildTeam, Cornwall, UK. Accessed on 05 February 2025 at

Worah, S./RECOFTC (2008): **Participatory Management of Forests & Protected Areas – A Trainer's Manual.** Accessed on 05 February 2025 at

Deutsche Gesellschaft für
Internationale Zusammenarbeit (GIZ) GmbH

Registered offices
Bonn and Eschborn

Friedrich-Ebert-Allee 32 + 36
53113 Bonn, Germany
T +49 228 44 60-0
F +49 228 44 60-17 66

Dag-Hammarskjöld-Weg 1 – 5
65760 Eschborn, Germany
T +49 61 96 79-0
F +49 61 96 79-11 15

E info@giz.de
I www.giz.de

On behalf of

Federal Ministry
for Economic Cooperation
and Development