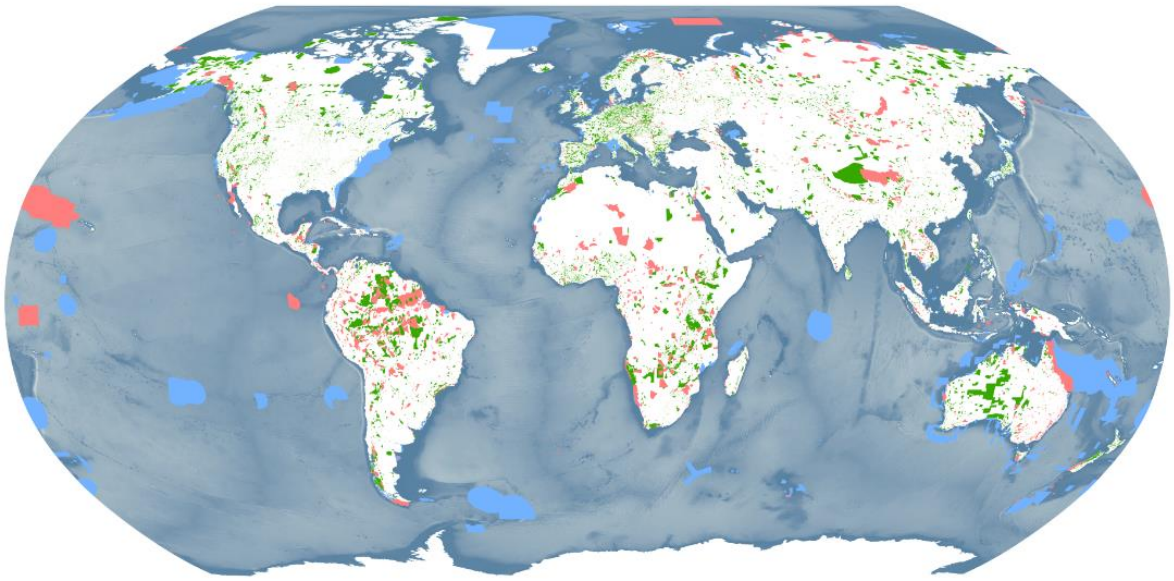
Global Database on Protected Area Management Effectiveness

User Manual 1.0



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Global Database on Protected Area Management Effectiveness User Manual 1.0

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Contents

Manual at a glance

The Global Database on Protected Area Management Effectiveness (GD-PAME) is the most comprehensive database of protected area management effectiveness (PAME) information. It was originally developed at the University of Queensland. It is a joint effort of IUCN World Commission on Protected Areas (WCPA) and UN Environment, managed by UNEP-WCMC, and aims to compile PAME evaluations for all countries in the world from governments and other authoritative organizations, which are referred to as data providers. The GD-PAME is hosted on the Protected Planet website, along with the World Database on Protected Areas (WDPA) at www.protectedplanet.net, where the PA effectiveness data in the GD-PAME database can be viewed and requested.

This GD-PAME User Manual provides information and guidance on the GD-PAME and its history, as well as the PA management evaluations it contains, how these are collected, managed and distributed, and how the PAME information should be interpreted and used for analyses and research. The Manual has been prepared for GD-PAME data providers and users. It is structured in 4 sections and includes 3 appendices.

In this Manual 'PAME evaluations' are also referred to as 'data'.

Section 1 is a quick introduction to the GD-PAME its history and current structure.

Section 2 describes the GD-PAME Data Standards that aim to ensure that the data are supplied in a common format that is globally interoperable and useable.

Section 3 explains how the GD-PAME is compiled through a quality control process underpinned by the GD-PAME data standards.

Section 4 addresses the use of the GD-PAME including how it can be accessed and how it should be cited.

The GD-PAME user manual is a dynamic and evolving document. It is recommended that all parties interested in using information from the GD-PAME read these guidelines prior to using the GD-PAME for any research purposes, or for analyses that will inform policy or decision making. For any queries regarding collation, use, or processing of the database, or any feedback regarding this manual please contact protectedareas@unep-wcmc.org.

1. What is the Global Database on Protected Area Management Effectiveness?

1.1. Background and History

There has been a significant growth of the protected area (PA) network over the past few decades (Figure 1.1). However, despite this increase in PA coverage, biodiversity loss continues to decline, even within some PAs (Anthony & Shestackova, 2015). One important factor linked to the underperformance of PAs is the effectiveness and level of management. There is good evidence that protected areas best conserve biodiversity when they are well-managed. Such thinking has triggered the development and widespread uptake of **Protected Area Management Effectiveness (PAME)** evaluations, which has been defined as "the assessment of how well protected areas are being managed – primarily the extent to which management is protecting values and achieving goals and objectives" (Hockings et al. 2006, p xiii).

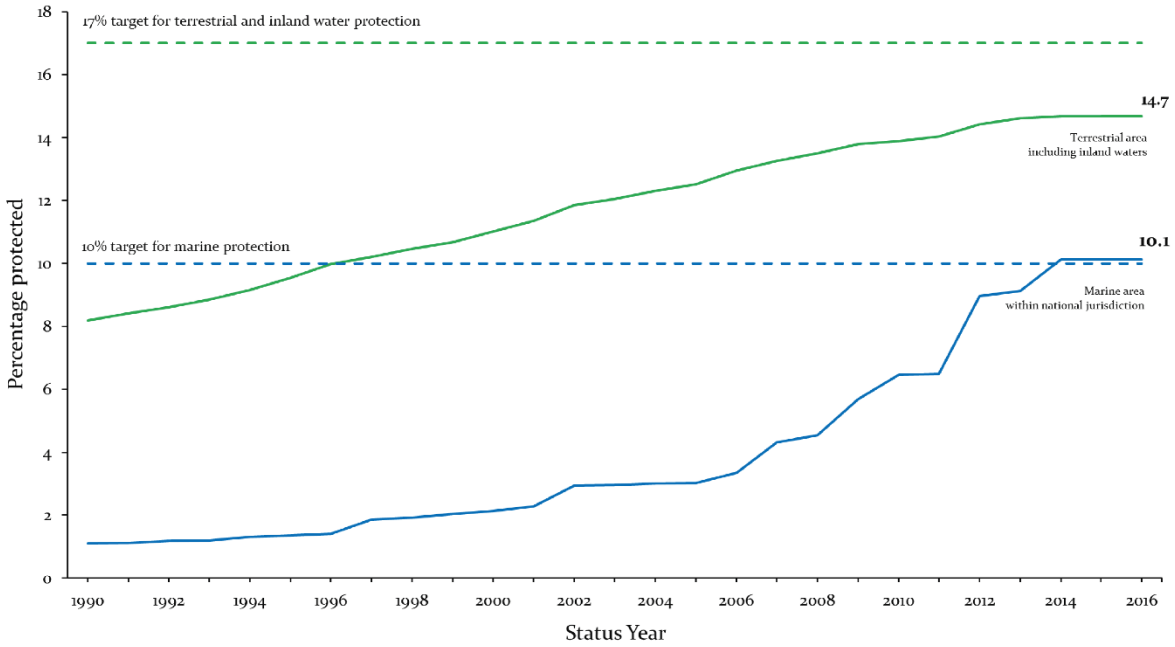

Figure 1.1: Growth of the global protected area network since 1990 (source UNEP-WCMC and IUCN 2016)

Since the 1990s's academics, non-government organizations and protected area agencies across the world have developed a range of methodologies to assess Protected Area Management Effectiveness (PAME) at a site or system level (Leverington et al. 2008). Most of the methodologies are based on self-assessment surveys containing a number of questions against which progress towards specific management objectives is scored, although many include components assessed through quantitative data where it is available.

Most PAME methodologies are based around the IUCN WCPA framework for protected area management effectiveness (Hockings et al. 2006). The aim of the framework is to provide overall

guidance to managers and encourage standards for PAME assessment and reporting. The WCPA framework six key elements: context, planning, inputs, processes, outputs and outcomes (Figure 1.2). Examples of PAME methodologies, which are based around this framework, include: Management Effectiveness Tracking Tool (METT) (Stolton et al. 2007), Rapid Assessment and Prioritization of Protected Area Management (RAPPAM) (Ervin 2003), Enhancing our Heritage (EoH) (Hockings et al. 2008), Marine Tracking Tool (Leverington et al. 2008). More information about these methodologies can be found on the protected planet website.

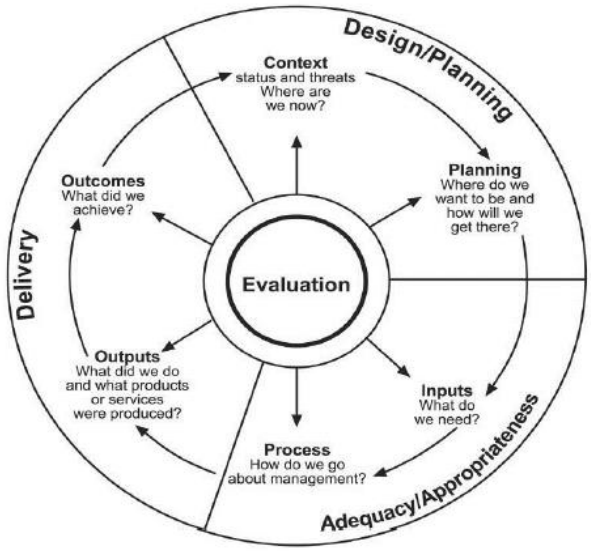

Figure 1.2: The IUCN WCPA Framework for assessing management effectiveness of protected areas (Source: Hockings et al., 2006)

In order to compile all of the PAME evaluations undertaken throughout the world, the Global Database on Protected Areas Management Effectiveness was created in 2006. The database now comprises 14,297 assessments, carried out in 6,802 protected areas in 72 countries and territories. However, it is clear that these numbers are only representative sample of all assessments that have been carried out globally and the database is still very much incomplete.

The GD-PAME started as a research database at the University of Queensland and UN Environment World Conservation Monitoring Centre (UNEP-WCMC), under a programme jointly funded by WWF and The Nature Conservancy (TNC). It is now a joint project between the UN Environment and the International Union for Conservation of Nature (IUCN) and its World Commission on Protected Areas (WCPA), and since 2014 it has been compiled and managed by UNEP-WCMC and IUCN-WCPA, in collaboration with data providers from governments, non-governmental organizations, academia and industry.

Today the GD-PAME is the most comprehensive global database of PAME assessments of sites. It provides PAME information on protected areas reported in the World Database of Protected Areas (WDPA), which is the only comprehensive global database on marine and terrestrial protected areas. Both databases are made available online through Protected Planet (www.protectedplanet.net)

where the data is both viewable and downloadable.

Assessments reported in the GD-PAME are carried out through many different types of methodologies, most of which are developed around the IUCN WCPA framework. Therefore, while still centred around the six main elements of the framework, the assessments' questions may vary from one methodology to another. A 'common reporting format' was created to allow the cross analysis of the PAME information from the wide range of different assessment methodologies.

The original version of the GD-PAME contained many interlinked tables that stored a wide range of information on the different methodologies used for the assessments and about the assessment results. Based on the review of over 2,000 questions from more than 40 different PAME methodologies 36 headlines indicators, each scoring on a scale from 0 to 1, were developed. The scores' that are scaled from 0 to 1 reflected a continuum from no management up to perfect management (Leverington et al. 2010).

The integration of the assessments' information in the GD-PAME were done through a two-step translation process:

1. Step 1 - Questions from the various PAME assessment methods were allocated to the GD-PAME advanced attributes (common reporting format) (Figure 1.3)
2. Step 2 – The scores assigned to the original questions were then translated, based on predefined translation rules, to the standardized 0-1 scale before being entered into the GD-PAME against the allocated advanced attribute in the CRF (Figure 1.4).

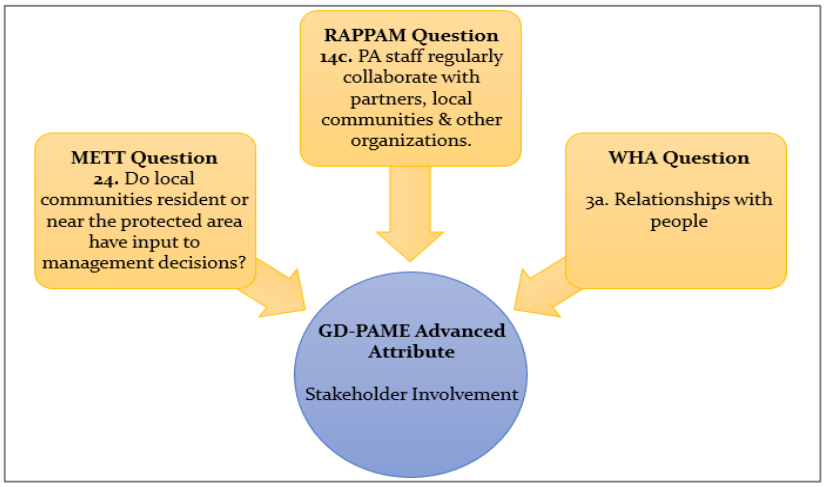

Figure 1.3: Step 1 of the translation process: allocation of assessment methods' questions to the GD-PAME advanced attributes

Method	Scoring System	Poor Management →			Good Management
METT	Original	0	1	2	3
	Translation	0	0.33	0.67	1

Figure 1.4: Step 2 of the translation process: conversion of the original questions' scores to the standardized 0-1 GD-PAME scale

1.2. Sites included in the GD-PAME

In 2010, the countries of the World agreed on the Convention on Biological Diversity (CBD) Strategic Plan 2010-2020 to halt biodiversity loss and ensure the sustainable use of natural resources (CBD 2010). The plan includes 20 Aichi Biodiversity Targets to be met by 2020 and acknowledges the central role of protected areas in meeting biodiversity conservation goals. Target 11 sets out a series of equally important and necessary elements that a global protected area network should deliver*: By 2020, at least 17 per cent of terrestrial and inland water areas and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through* ***effectively and equitably managed****, ecologically representative and well-connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscape and seascape (CBD, 2010).*

Furthermore, the CBD also recognizes the need for information on PAME and the importance of national and regional dataset on PAME information; and calls for '*Parties to expand and institutionalize management effectiveness assessments to work towards assessing 60 per cent of the total area of PA by 2015 using various national and regional tools, and report the results into the GD-PAME*'.

The GD-PAME only accepts assessments of protected areas that are already integrated in the WDPA. The IUCN definition of a protected area has been the primary criterion for including PAs in the WDPA, although the latter is being expanded to also include areas which do not meet this definition but that might have a positive contribution to conservation (referred to as OECMs). For further information about this, please refer to the WDPA User manual (UNEP-WCMC, 2016).

1.3. The GD-PAME today

As of November 2016, there were 14,297 assessments with a reported WDPAID, from 181 countries and territories and derived from 56 different methodologies reported in the GD-PAME (Figure 1.5).

The GD-PAME is the most comprehensive database on protected area management effectiveness. It is compiled in collaboration with a wide range of governmental and non-governmental

organizations, who submit protected area data to UNEP-WCMC for both databases, the WDPA and the GD-PAME. These are referred to in this document as data providers.

In order to be included in the GD-PAME, the protected area evaluated through the assessment must also be included in the WDPA. This is one of the specific standards that data providers must comply with. The GD-PAME data standards are explained in detail in Section 2 of this manual. Section 3 describes how the data is collected, verified, and incorporated into the GD-PAME. Primary users of the PAME assessments include NGOs (e.g. WWF, BirdLife International, CEPF), International Programmes (The World Bank, the GEF), national government agencies or academic institutions (See Section 4).

Data providers should consult with UNEP-WCMC if they wish to provide data for a site that is not yet included in the WDPA. Please contact: protectedareas@unep-wcmc.org.

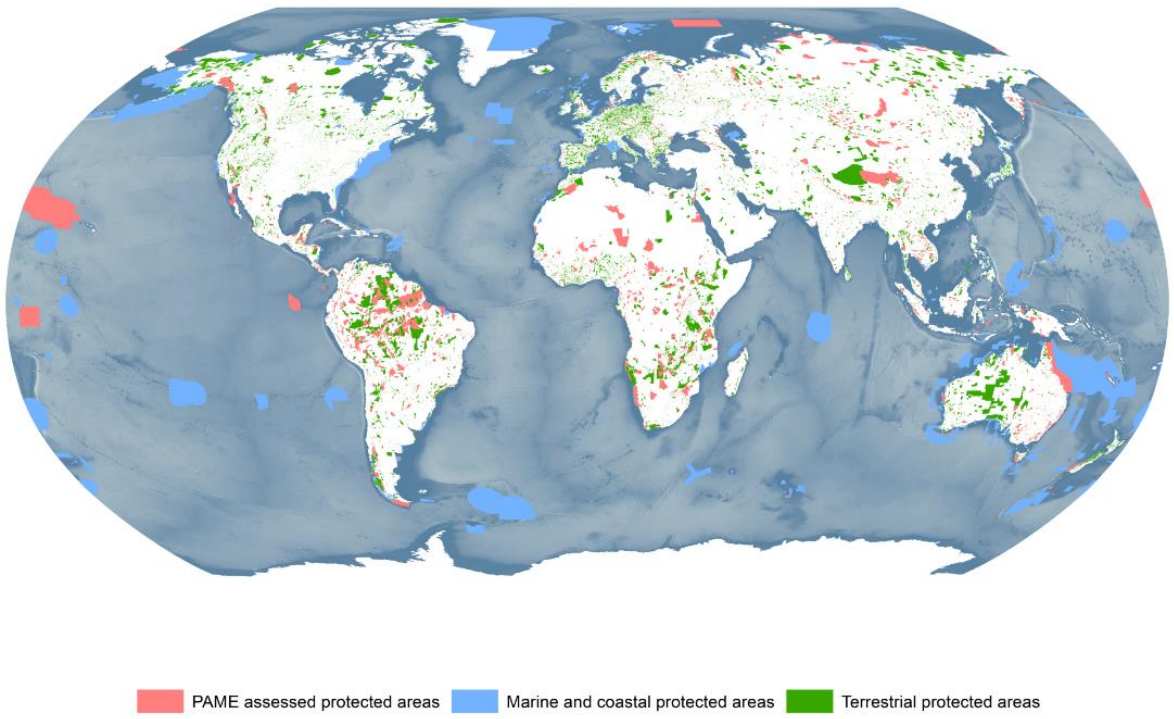

Figure 1.5 Protected Areas represented within the Global Database on Protected Area Management Effectiveness as of January 2017.

1.4. GD-PAME Data Structure

In 2016, the schema of the GD-PAME was simplified from 77 fields to 7 fields. Due to the development of an increasing number of methodologies to assess management effectiveness of protected areas worldwide and to fit with the local context, it was becoming more and more difficult to translate them according to the common reporting format. This process was also based on a high level of subjectivity. Furthermore the translation of methodologies that were not yet in the GD-PAME

had to be done by the same person that had translated the other methodologies in order to remain consistent. This was requiring a lot of consultation, was very-time consuming and not sustainable on the long term.

In order for the database to be most efficient and useful, the number of fields reported has therefore been decreased to 7. The main purpose of the database is to inform on whether a protected area in the WDPA has been assessed and if made available to view the sites' assessment(s).

The Global Database on Protected Areas Management Effectiveness (GD-PAME) is stored as an SQL database comprising one main database table, the raw assessments and a source table (Figure 1.6).

- **A database table:** the table records basic tabular information of protected area management effectiveness key attributes (See section 2). As of November 2016, the GD-PAME includes assessments on 6,802 protected areas that are reported in the WDPA, of which 3,106 have more than one assessment.
- **Raw assessments:** the raw assessments, if submitted, are stored separately in a document management system.
- **One source table:** the GD-PAME source table describes the source of the data in the GD-PAME, containing information on the data provider, currency of dataset and other metadata (See section 2).

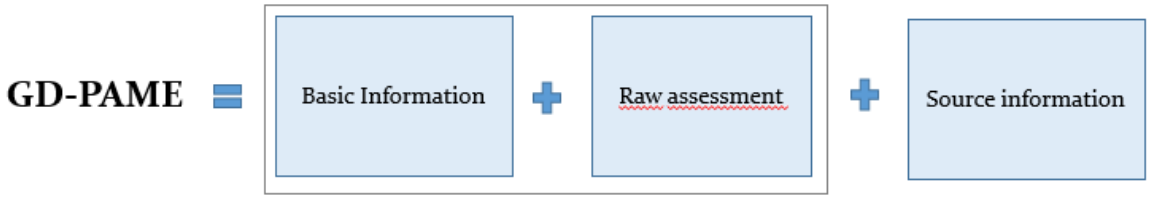

Figure 1.6: Structure of the GD-PAME

The WDPA ID is the globally unique identifier for each protected area in the WDPA and as such acts as the parent identifier of the WDPA. Thus, it is specific to a protected area in a specified geographical space, and does not change over time unless the designation for that protected area changes or the site disappears. Therefore the WDPA ID is also the primary key for including the assessment in the GD-PAME.

It is important to note that different designations of protected areas may occupy the same geographical space in which case each of these will have a different WDPA ID. For example, Yellowstone National Park in the United States is a National Park, but it is also a natural World Heritage site. Each designation will have a different WDPA ID. Assessments for each of these sites (with different designations) will be integrated with the appropriate WDPAID in the GD-PAME. In addition, if the same site has been subjected to multiple assessments, which may be the case over time, these assessments will be stored under the same WDPA ID but they will have a different

assessment ID (ASS_ID) and year (YR_ASS). For more information on the assessment ID, see section 2.2.

2. GD-PAME Data standards

Data in the GD-PAME must meet the GD-PAME data standards. These were developed in 2016, and will be reviewed regularly to ensure consistency in the way the assessments are compiled, managed, and presented, to facilitate reporting as well as to ensure consistency with information reported in the WDPA.

Standards are important to ensure all information is supplied in a common format that is interoperable and useful for a wide variety of reporting and analytical purposes. Box 2.1 summarizes the three key requirements that need to be met to comply with the GD-PAME data standards. This section provides specific details for each of these requirements.

Box 2.1. Three requirements to meet the GD-PAME data standards

1. The protected area assessed must be included in the WDPA and be assigned a WDPA_ID
2. The original source of information must be provided
3. The GD-PAME Data Contributor Agreement must be signed

2.1. Basic information

The new version of the GD-PAME that will be used by UNEP-WCMC from now on stores 7 descriptors, refered to as data attributes, which describe each record in the GD-PAME. The GD-PAME data attributes are the tabular fields associated to the PAME evaluations provided. All the current attributes have been classified as *minimum*, which mean that information for these attributes is mandatory for any PAME evaluation to be integrated in the GD-PAME. **A PAME evaluation submission will only be accepted if all minimum attributes are provided.**

The GD-PAME attribute data are summarised in Table 2.1 and described in detail in Appendix 1.

Table 2.1 Summarized description and allowed values for the GD-PAME attributes (Version 1.0). For detailed descriptions see Appendix 1 .

No	Requirement	Provided by	Field Name	Type	Length	Accepted values
1	Minimum	UNEP-WCMC	WDPAID	Number (Double)	N/A	Assigned by UNEP-WCMC. Unique identifier for a protected Area. Link to WDPA.
2	Minimum	UNEP-WCMC	ASS_ID	Number (Double)	N/A	Assigned by UNEP-WCMC. Unique identifier of the PAME assessment.
3	Minimum	Data provider	ISO3	Text (String)	20	**Allowed values:** ISO 3166-3 character code of country or territory where the PA is located.
4	Minimum	Data provider	METHOD	Text (String)	254	Name of the assessment methodology/ies
5	Minimum	Data provider	YR_ASS	Number (Long Integer)	12	Year the assessment was completed.
6	Minimum	Data provider	LINK_ASS	Text (String)	254	Link to raw assessment, Restricted use.
7	Minimum	UNEP-WCMC	METADATA ID	Number (Long Integer)	12	Assigned by UNEP-WCMC. Link to source table.

2.2. Source information

Similarly to the WDPA, recording accurate source information in the GD-PAME is important to ensure that ownership of the data (assessment) is maintained and traceable. Source information includes details on the assessment provider. This information is stored in the GD-PAME Source Table and linked to the GD-PAME by the 'Metadata ID'. **A data submission will only be accepted if the source information is provided.**

The GD-PAME Source Table includes information on the party responsible for providing the data. It is completed by UNEP-WCMC in collaboration with the assessment provider.

2.3. Raw assessment

The raw assessment(s) provided is/are stored in the GD-PAME. The assessment will be made available on the protected planet website if permission for sharing is given by the data provider, or alternatively maintained internally for archive and analytical purposes.

2.4. Data Contributor Agreement

Data contributors who provide PAME evaluations for inclusion in the GD-PAME are requested to sign the GD-PAME Data Contributor Agreement. This ensures that there is a written record of the

data provider agreeing for their data to be included in the GD-PAME and the terms under which it is made available. The agreement specifically states how the data provided will be used and that and redistribution or use of the data by third parties will be subject to the Protected Planet Terms of Use.

The data contributor agreement will be provided by UNEP-WCMC and should be signed before a new dataset is integrated in the database and published on the Protected Planet website. A PAME evaluation will only be accepted if the GD-PAME Data Contributor Agreement is signed. A template of the agreement is available in Appendix 2, or on request from protectedareas@unep-wcmc.org.

3. How is the GD-PAME compiled?

The GD-PAME is compiled in collaboration with a wide range of governmental and non-governmental organizations which submit PAME assessment evaluations to UNEP-WCMC. All the assessments included in the GD-PAME refer to a protected area included in the WDPA. All the data included in the GD-PAME must also meet with the GD-PAME data standards. Once the information is verified, formatted and integrated in the GD-PAME it is updated and made available on protected planet on a monthly basis: www.protectedplanet.net (Figure 3.1).

This section describes the different data providers, explains the frequency on which the data is requested, and describes the process for submitting and validating the data included in the GD-PAME.

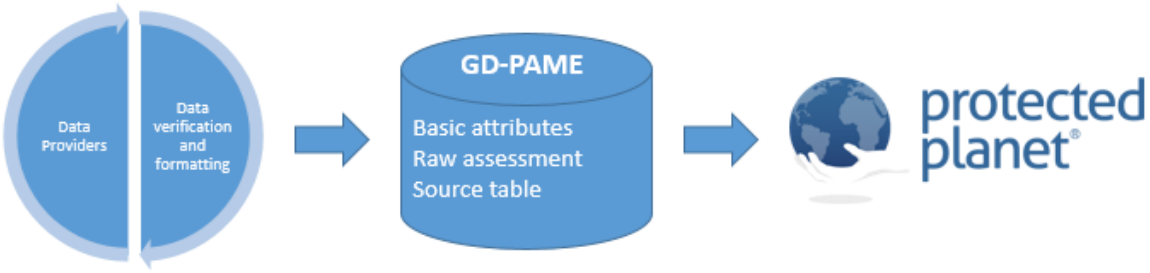

Figure 3.1 The GD-PAME workflow: UNEP-WCMC works with closely with data providers to ensure the PAME evaluations provided comply with the GD-PAME data standards. Data is then formatted and integrated into the GD-PAME and made available online through www.protectedplanet.net.

3.1. Data providers

The GD-PAME is sourced by a wide range of data providers from governments to individuals. All data is provided by the entity with the intellectual property (IP) rights in the data itself and this is not

conferred to UNEP-WCMC, IUCN or any third-party user of the GD-PAME. All IP right holders are protected by the GD-PAME Terms of Use (section 4.2). There are currently five main source types for data included in the GD-PAME:

1. **Governmental**: these include national governments and sub-national agencies that manage statutory protected area data and information.
2. **International secretariats:** secretariats from international conventions and agreements such as the Ramsar Convention, World Heritage Convention or UNESCO Man and the Biosphere Programme.
3. **Regional entities:** These include organizations that manage data and information on regional protected area networks such as the European Environment Agency who manage Europe's Natura 2000 database.
4. **NGOs:** these include data providers that manage protected areas designated by the NGO itself, or in collaboration with another governance type, such as a private landowner or government agency, where the NGO also maintains some or all of the intellectual property in the data.
5. **Other entities or individuals:** this category includes the range of data providers that govern or manage protected areas outside of the primary types listed above. This can include individual landowners managing their land in perpetuity for biodiversity conservation as a land trust or other private protected area type. This can also include protected areas data representing sites governed and managed by communities, indigenous groups and institutions outside of a statutory protected area network.

When a PAME evaluation is collected from any of these sources UNEP-WCMC asks that it be supplied using the GD-PAME data standards. All PAME evaluation included in the GD-PAME is approved by the data provider prior to any dissemination or use, by means of the Data Contributor Agreement.

3.1.1 Benefits for countries of submitting PAME evaluations

In addition to being a global data depository of national PAME evaluations, the GD-PAME is used to calculate indicators related to several international processes. This includes indicators for the Convention on Biological Diversity and the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) (See Box 4.1). Moreover, there are several ways in which countries can benefit from undertaking PAME evaluations and providing data to the GD-PAME:

- **Inventory of national data:** At the national level, protected areas (and protected area management effectiveness information) might be managed by different institutions and/or governmental agencies, including community groups and private conservancies. Providing PAME evaluations to the GD-PAME enables countries to have a clearer picture of how much of their protected areas network has been assessed, as all assessments will be located in one place. Furthermore, countries can access their PAME information on request by contacting protectedareas@unep-wcmc.org or through protected planet website

(www.protectedplanet.net). It is also beneficial for countries who do not have sufficient capacity and adequate structure to sustainably manage this information.

- **To inform adaptive management practices:** PAME information helps, for example, to determine which aspects of the management are most effective within a protected area.
- **To prioritize resource allocation:** Comparing the PAME evaluations for a site will help ensure the issues highlighted in the assessments are being responded to with adequate funding and will help prioritize protected areas that need more attention.
- **To report against conservation target:** The need for PAME information is recognized in conservation policy (Aichi Target 11 'effectively and adequately managed'). The CBD calls Parties to provide information into the GD-PAME. A comprehensive set of PAME information in the database which will generate more accurate reporting.

In addition to these benefits, the process of assessing management effectiveness can in itself also:

- Build community awareness and support for PAs,
- Promote accountability and transparency.

3.1.2. Frequency of requests to data providers and selection criteria

One of the key aims of the GD-PAME is to accurately reflect the coverage of protected areas within a country or region that have been assessed. For this reason UNEP-WCMC formally contacts data providers to request submission of PAME assessments.

Although data providers are welcome to submit PAME assessments when these are available; to keep consistency with the WDPA, UNEP-WCMC aims that PAME information for a particular country be updated every 5 years.

In addition, UNEP-WCMC also focuses its efforts on contacting **countries for which less than 5% of the PA network reported in the WDPA has PAME information in the GD-PAME**.

3.1.3. Submitting PAME evaluations to the GD-PAME

The process for a data provider to submit PAME evaluations to the GD-PAME will vary depending on whether the protected area assessed is already reported in the WDPA or not.

If the protected area is already reported in the WDPA:

The data provider can submit the PAME assessment(s) of the sites provided the GD-PAME standards are being complied with. The assessments and related compulsory information should be send to protectedareas@unep-wcmc.org.

These include:

- **GD-PAME basic information:** either information related to the 4 field attributes to be

provided by the data provider must be provided.

- **Raw assessment:** To be stored in the database. Indication on whether the assessment can be shared with third parties or whether it should only be kept for storage and use by UNEP-WCMC must be indicated in the GD-PAME data contributor agreement.
- **GD-PAME Source Table** must be completed to identify who provided the data.
- **GD-PAME Data Contributor Agreement** must be signed.

If the protected area is already reported in the WDPA:

The integration of the protected area in the WDPA is a requirement for the PAME evaluation to be added in the GD-PAME. If the protected area of the assessment to be integrated in the GD-PAME is not yet in the WPDA, the data provider should contact UN Environment-WCMC and provide the protected area boundary and related compulsory information for integration in the WDPA. Once the site is added in the WDPA, the PAME evaluation can be added in the GD-PAME. For more information on how to submit a site to the WDPA, refer to the WDPA User Manual (UNEP-WCMC 2016) or contact protectedareas@unep-wcmc.org.

3.2. Data verification and formatting of the GD-PAME

When submission of a PAME evaluation has been completed, the latter undertakes a number of quality checks aimed to: 1) Ensure the protected area assessed is included in the WDPA and that the information received by data providers comply with the GD-PAME data standards; 2) Ensure the data submitted is verified by an authoritative source. Once this is achieved the PAME evaluation is integrated into the GD-PAME.

3.2.1. Interactions with data provider

This phase involves liaising with the data provider(s) and commencing interactions to obtain updated data on protected areas (for both the WDPA and the GD-PAME). This phase can take between a few weeks to months depending on the response of data provider. UN Environment-WCMC maintains long term relationships with data providers through the data contributor agreements as explained in section 2.4.

3.2.2. Quality checking and data formatting

Compulsory information required with the submission of the PAME assessment is subject to a series of quality checks and reformatting to ensure they meet the GD-PAME data standards (see section 2). The verification that the site the assessment is provided for is in the WDPA is the first thing that is checked. The completeness of the information required in the GD-PAME table and in the source information are then verified. The submission of a signed DCA is also checked.

The effectiveness of management on a protected area is likely to be assessed more than once over time – and hence the year the assessment is completed is reported in the YR_ASS field of the GD-PAME. This helps identifying multiple assessments for a same protected area (reported under the same WDPA_ID), and to track change over time. It is also possible that the same protected area be

assessed (partly or entirely) in the same year, for different purposes, using different methods or by different organizations for example. These assessments will be assigned a different assessment ID that will help distinguish multiple assessments of a same protected area and undertaken in the same year.

3.2.4. Integrating Evaluations into the GD-PAME

Once the information submitted along with the PAME evaluation has been formatted, verified and conforms the GD-PAME Data Standards, it is integrated into the GD-PAME.

When a protected area is removed from the WDPA, the related PAME evaluation is left in the GD-PAME. This is useful in order to keep records of the historical information.

3.3. Assessing the quality of the GD-PAME

In the coming years, it is planned to release an updated version of the shareable information in the GD-PAME every six months. It will be made available through the Protected Planet webpage (http://www.protectedplanet.net). Each release will include a brief summary on the new additions (and removal if applicable) of PAME evaluations in the GD-PAME. New methodologies previously not reported in the GD-PAME will also be indicated. For each release, the countries' PAME coverage statistics, for which new data has been added, will also be updated.

The quality of the GD-PAME is assessed through the calculation of several indicators:

Indicator 1: Percentage of protected area records with PAME information

This indicator measures for each country, the number of protected areas with PAME information in the GD-PAME in relation to the total number of protected areas reported in the WDPA. The aim is to have PAME information for each site stored in the WDPA.

Indicator 2: Completeness of the basic information in the GD-PAME (percentage of data attributes reported)

For each record in the database, this indicator measures the percentage of data fields which have been reported based on the minimum and complete attributes.

Indicator 3: Percentage of records updated in the last five years

Similarly to the WDPA, UNEP-WCMC sets a target of updating PAME information in the GD-PAME at least once every five years. Accurate and up to date PAME information is fundamental to inform decisions.

4. Using the GD-PAME

It is planned that the GD-PAME will be used by a wide range of groups including scientists, NGOs, private sector and international bodies, as questions are raised on how well protected area are being managed after designation. The database is also fundamental for fulfilling several global reporting mechanisms, developing indicators and tracking progress towards protected areas targets (Box 4.1). This section provides guidance on how to access, cite and use the GD-PAME.

Box 4.1. Use of the GD-PAME for selected global reporting mechanisms and periodic reports

4.1.1 CBD Global Biodiversity Outlook : A summary status of biological diversity and an analysis of steps being taken by global community to ensure that biodiversity is conserved and used sustainably is published by the CBD and available at www.cbd.int/gbo/

4.1.2 Protected Planet Report: The Protected Planet Report reviews progress towards the achievement of the protected area targets of the Convention on Biological Diversity (CBD). More information at http://wcmc.io/Protected PlanetReport2016

4.1.3 IPBES: Information from the GD-PAME is used to report on the protected area management indicator in relation to AT11. http://www.ipbes.net/sites/default/files/factsheet_wcmc_protected_area_management_effectiveness.pdf

4.1. Accessing the data

Basic information stored in the database will be made available online through the Protected Planet website during the course of 2017 (www.protectedplanet.net). At present, the full database is still incomplete and must be used with caution and a full understanding of the caveats and fitness for use of the database. Raw assessments provided by countries will not be made available unless permission for sharing is given by the data provider.

4.2. Terms of Use

The use of the GD-PAME data is subject to strict Terms of Use which are available online at http://www.protectedplanet.net/terms.

4.3. Citing the GD-PAME

In accordance with the GD-PAME Terms of use, UN Environment and IUCN ask that copies of any published analyses that use the GD-PAME are submitted to UNEP-WCMC (protectedareas@unep-wcmc.org). This allows the GD-PAME team to track use of the dataset and identify any issues highlighted in analyses. The GD-PAME team also appreciates being contacted where omission of

valid data are noted by users, as they can then prioritize follow up with the protected areas authorities responsible for the omitted sites.

The following citation should always be clearly reproduced in any publication, presentation or analysis involving the GD-PAME:

IUCN and UNEP-WCMC (year), The Global Database on Protected Area Management Effectiveness (GD-PAME) [On-line], [insert month/year of the version downloaded]. Cambridge, UK: UNEP-WCMC. Available at: www.protectedplanet.net.

The WDPA/GD-PAME team also produces country and global statistics that can be accessed at protectedplanet.net. The correct citation for the GD-PAME online statistics is:

UNEP-WCMC (year), The Global Database on Protected Area Management Effectiveness (GD-PAME) statistics. Cambridge, UK: UNEP- WCMC. Accessed on: [insert day/month/year when the webpage was accessed].

References

Anthony & Shestackova (2015). Do Global Indicators of Protected Area Management Effectiveness Make Sense? A Case Study from Siberia. In: Environmental Management. DOI 10.1007/s00267-015-0495-z

Dudley, N. (Editor) (2008). Guidelines for Applying Protected Area Management Categories. Gland, Switzerland: IUCN. x + 86pp.

Ervin J. (2003). WWF: Rapid Assessment and Prioritization of Protected Area Management (RAPPAM) WWF. Gland, Switzerland

Hockings, M., Stolton S., Leverington, F., Dudley, N. and Courrau, J. (2006). Evaluating Effectiveness: a framework for assessing management effectiveness of protected areas. 2nd edition. IUCN, Gland Switzerland and Cambridge UK. Xiv + 105 pp.

Hockings et al. (2008). Enhancing our Heritage Toolkit. Assessing management effectiveness of natural World Heritage sites. World Heritage papers 23

Leverington, F., Hockings, M., Pavese, H., Lemos Costa, K. and Courrau, J. (2008) Management Effectiveness evaluation in protected areas – a global study. Supplementary Report No1: Overview of approaches and methodologies. The University of Queensland, Gatton, TNC, WWF, IUCN-WCPA, Australia

Leverington, F., Costa, K.L., Pavese, H. et al. Environmental Management (2010) 46: 685. doi:10.1007/s00267-010-9564-5

Stolton et al. (2007) Management Effectiveness Tracking Tool. WWF International.ISBN: 978-2-88085-281-8

UNEP-WCMC and IUCN (2016). Protected Planet Report 2016. UNEP-WCMC and IUCN: Cambridge UK and Gland Switzerland.

UNEP-WCMC (2016). World Database on Protected Areas User Manual 1.2. UNEP-WCMC: Cambridge UK. Available at: http://wcmc.io/WDPA_Manual

Appendix 1 GD-PAME attributes and source table description

This Appendix explains in detail each of the attributes used in the GD-PAME and in the GD-PAME source table.

GD-PAME attributes

1. WDPA ID

Field name: WDPA_ID

Level of requirement: Minimum

Provided by: UNEP-WCMC

Accepted Values	Description
Number (Long Integer) *12 characters* *The WDPA ID is generated by UNEP-WCMC.*	The WDPA uses unique identification numbers to accurately track protected areas within the database over time. UNEP-WCMC assigns a WDPA ID to each new protected area at its first listing in the WDPA. The WDPA ID is a unique, persistent, globally unique identifier that is associated with the entity itself, made possible by a decree, gazette or other formal means of establishment. The WDPA ID is not unique to the geography of a protected area but to the designation of the protected area. There can be many overlapping forms of protection for any geographical area, and therefore there can be overlapping protected areas with different WDPA IDs. However there can be no other protected area with the same identifier. The WDPA ID remains unchanged throughout the life time of the protected areas. Once a protected area has been assigned a WDPA ID, it should be provided with that ID in all subsequent updates to the WDPA for that protected area. For more information on WDPA IDs please contact protectedareas@unep-wcmc.org

2. Assessment ID

Field name: ASS_ID

Level of requirement: Minimum

Provided by: UNEP-WCMC

Accepted Values	Description
Number (Long Integer) *12 characters* *The ASS_ID is generated by UNEP-WCMC.*	The Assessment ID is a unique identification number assigned to each new assessment to be integrated in the GD-PAME. It helps differentiates assessments that have been done on the same site in the same year. For more information on Assessment ID please contact protectedareas@unep-wcmc.org

3. ISO3 Code

Field name: ISO3

Level of requirement: Minimum

Provided by: Data provider

Accepted Values	Description
ISO 3166-1 alpha-3 code *Examples:* The island of Martinique has a Parent ID code of FRA and an ISO3 code of MTQ.	The ISO3 field is used to define areas under the Parent ISO3 code and includes countries, territories or other administrative units of geographical interest that a protected area jurisdictionally resides within, as given by its ISO 3166-1 alpha-3 code. The ISO-3 character country code is defined by the International Organization for Standardization (ISO). For example the ISO 3166 code for French Guiana ISO3 is GUF, the Parent ISO3 code for GUF is FRA (France) as the French Guiana is an overseas department of France.

If the protected area is by designation a trans-boundary site (i.e., it is a collaborative designation by more than one country) the site record will contain the ISO3 codes for each of the portions of the protected area that lies within each country separated by ";" (e.g. "FRA;ESP" for a transboundary site that spans between France and Spain).

4. Methodology

Field name: METHOD

Level of requirement: Minimum

Provided by: Data provider

Accepted Values	Description
Text (String) *254 characters* *Examples:* *METT, RAPPAM*	The name of the methodology the site has been assessed with (provided in English). Only one methodology should be listed here. A list of main methodologies is provided in annex 4.

5. Year of assessment

Field name: YR_ASS

Level of requirement: Minimum

Provided by: Data provider

Accepted Values	Description
Text field	The year in which the assessment was completed. If the assessment was completed over several years, the year it was finalized should be reported.

6. Link to the raw assessment

Field name: LINK_ASS

Level of requirement: Minimum

Provided by: Data provider

Accepted Values	Description
254 characters	Accepted values: 'Only viewable', 'For storage only', 'link to assessment'. Depending on the sharing agreement restriction: If the site assessment can be view by the external users but not downloadable, 'Only viewable' is reported. If the site assessment is provided for storage only (and used to reported progress against international targets) and cannot be viewed by external users, 'For storage only' is reported. If the site assessment can be viewed and downloaded by the external users, a link to the assessment is provided and enables the view and download of the document.

7. Metadata ID

Field name: METADATAID

Level of requirement: Minimum

Provided by: UNEP-WCMC

Accepted Values	Description
Number (Long Integer) *12 characters*	The metadata ID is the number that links the WDPA attribute table with the WDPA Source table.

GD-PAME Source Table

No.	Requirement	Field Name	Full Name	Type	Length	Description
1	Assigned by UNEP-WCMC	METADATAID	Metadata ID	Number (double)	N/A	An ID assigned by UNEP-WCMC that is used to link each protected area record in the WDPA main attribute table to the relevant source information in the WDPA Source Table.
2	Minimum	DATA_TITLE	Data Set Title	Text (string)	254	The title of the dataset being provided as an update to the WDPA e.g. Protected Areas of Ireland.
3	Minimum	RESP_PARTY	Responsible Party	Text (string)	254	The organization, consultancy, national government, private company or other entity that claims ownership/authorship of the data or that is providing the data on behalf of the ownership/authorship entity'. Not Reported' is used when this data was not available.
4	Minimum	RESP_EMAIL	Responsible Party Contact E-mail(s)	Text (string)	254	Contact e-mail address of the organization listed as the responsible party which maintains the ownership/authorship of the data. ''Not Reported' is used when this data was not available.
5	Minimum	YEAR	Year	Text (string)	50	The reference date, as a four digit year, indicating the year when the dataset was first submitted to the GD-PAME. 'Not Reported' is used when this data was not available.
6	Minimum	LANGUAGE	Dataset Language	Text (string)	254	Language(s) used within the dataset. 'Not Reported' is used when this data was not available.

Appendix 2 GD-PAME data contributor agreements

This document is a template. The most up to date data contributor agreement (DCA) template is available by contacting from protectedareas@unep-wcmc.org.

Data Contributor Agreement

[Insert Name of Organization

Address

Telephone Number

Email Address]

1. On behalf of *[insert organization/agency name]*, I/we the undersigned are providing the following dataset to UNEP-WCMC for integration into the Global Database on Protected Area Management Effectiveness (GD-PAME): *[insert name of dataset]*. The dataset includes information on Protected Areas Management Effectiveness (PAME) relating to *[insert name of country/region/state etc.]*.

Dataset description (including information on the: study scale, methodology, number of assessments, data format etc.):

_____
_____
_____
_____
_____
_____
_____

The Global Database on Protected Area Management Effectiveness (GD-PAME) is a joint project between the UN Environment and the International Union for Conservation of Nature (IUCN). The GD-PAME was started as a research database at the University of Queensland in 2006 under a programme jointly funded by the World Wildlife Fund (WWF) and The Nature Conservancy (TNC) and is now managed and maintained by the UN Environment World Conservation Monitoring Centre (UNEP-WCMC), in collaboration with governments, non-governmental organizations, academia and industry. The GD-PAME is a global database, comprising many thousands of assessments of protected area management effective (PAME) collated from around the world, that provides a 'common reporting format' allowing the cross analysis of PAME information from a range of different assessment methodologies. The GD-PAME is fundamental for fulfilling several global reporting mechanisms, developing indicators and tracking progress towards protected area targets and through the unique World Database on Protected Area (WDPA) identifying code the GD-PAME can be linked to the WDPA which can be viewed and downloaded at: www.protectedplanet.net.

Unless otherwise stated, this dataset is being provided 'free of restrictions'[1]. We, the undersigned, agree and understand that by providing data for inclusion within the GD-PAME it will, in accordance with the

[1] UNEP-WCMC is happy to accept data with restrictions. This includes data that is available for onward release but not for use by or on behalf of a commercial entity, and data that is made available only to UNEP-WCMC, UN

terms of use available on http://www.protectedplanet.net/terms, be made viewable and downloadable online through websites operated by UNEP-WCMC and IUCN, be included within analyses, and be re-distributed to third parties for use on other platforms.

2. UNEP-WCMC will recognize and respect the intellectual property rights of the data provider and its partners and will maintain proper attribution and source information of the data as provided to UNEP-WCMC.

The designations of geographical entities in any dataset do not imply the expression of any view or opinion whatsoever on the part of UNEP-WCMC or the data provider concerning the legal status of any country, territory, or area, or of its authorities, or concerning the delimitation of its frontiers or boundaries.

If the dataset is found to have been provided without the permission of the relevant stakeholders and right holders, it will be removed from the GD-PAME with immediate effect.

UNEP-WCMC reserves the right to seek verification of the dataset from its partners, and to remove or withhold any information from the GD-PAME that cannot be verified.

I/We hereby give permission to UNEP-WCMC for the integration of this dataset into the GD-PAME.

Signature .....

Title .....

Date .....

Environment and IUCN, and is not for onward release. If you wish to place restrictions on data, or require further information, please contact protectedareas@unep-wcmc.org

Appendix 3 List of some common methodologies used around the world

Method Short Name	Method Long Name	Study Location
METT	Management Effectiveness Tracking Tool	Global
Birdlife IBA	Important Bird Area Monitoring	
RAPPAM	Rapid Assessment and Prioritisation of Protected Area Management	
WHA Outlook Report	World Heritage Outlook Assessments	
GOBI survey	Governance of Biodiversity Research Project	
MPA MEE	How is Your Marine Protected Area Doing?	
Enhancing our Heritage	Enhancing our Heritage	
Marine tracking tool	WWF-World Bank Marine Protected Area score card	
Wetland tracking tool	Wetland tracking tool	
PROARCA/CAPAS	Proyecto Ambiental Regional de Centroamerica (PROARCA)/ Central America Protected Area System (CAPAS)	Central America
PIP Site consolidation	Parks in Peril Site Consolidation Scorecard	Latin America & Caribbean
Parks profiles	Parks profiles	Latin America
European diploma	European diploma of Protected Areas	Europe
Stockholm BR Survey	Stockholm Biosphere Reserve Survey	Europe
PANPARKS	Protected Area Network (PAN) Parks Europe	Europe
Asean MEE	Association of South East Asian Nations Management Effectiveness Evaluation	South East Asia
Africa rainforest study	African Rainforest Study	Africa
West Indian Ocean MPA	West Indian Ocean Marine Protected Area toolkit	Caribbean
WWF/CATIE	WWF/CATIE Evaluation Methodology	Latin America
Netherlands quality test	Natuurmonumenten Quality Test, Netherlands	Netherlands
AEMAPPS	Análisis de Efectividad de Manejo de Areas Protegidas con Participación Social	Colombia
Belize MEE	Belize Management Effectiveness Evaluation	Belize
Venezuela Vision	Venezuela Vision	Venezuela (Bolivarian Republic of)
Brazil 1999	Protected Areas or Endangered Spaces? Brazil 1999 evaluation	Brazil
SIMEC	Sistema de Información, Monitoreo y Evaluación para la Conservación	Mexico
German Nature Parks	Nature Park Quality Campaign, Germany	Germany
Korea SOP	Korea State of Parks Management Effectiveness Evaluation	Republic of Korea
USA SOP	USA State of Parks	United States of America
MEMS	Metodología de Evaluación de Efectividad de Manejo (MEMS) del SNAP de Bolivia	Bolivia (Plurinational State of)
Valdiviana	Valdiviana Ecoregion Argentina	Argentina
MEE Indian	Indian Management Effectiveness Evaluation	India

Method Short Name	Method Long Name	Study Location
India Tiger Reserve Assessment	India Tiger Reserve Assessment	India
Korea METT	Korea survey on protected area management status	Republic of Korea
Ecuador MEE	Indicadores para el Monitoreo y Evaluación del Manejo de las Áreas Naturales Protegidas del Ecuador	Ecuador
METT-RAPPAM crossover	METT-RAPPAM crossover	Bahamas
Parks Canada	Parks Canada	Canada
Central African Republic	Status of protected areas of the Central African Republic	Central African Republic
Schrader German BR	German Biosphere Reserves evaluation	Germany
CI tracking tool	Conservation International Management Effectiveness Tracking Tool	Bolivia (Plurinational State of)
French National Parks	Contrat d'Objectifs (French National Parks)	France
NPAPA England	National Park Authority Performance Assessment (UK)	UK
PA Consolidation index	Índice de Consolidación de Áreas Protegidas	Bolivia (Plurinational State of)
European SCS	European Site Consolidation Scorecard	Austria
Italy quality park project	Italy quality park project	Italy
MARIPA-G	Monitoring and Assessment with Relevant Indicators of Protected Areas of the Guianas (MARIPA-G)	Guyana
NSW SOP	New South Wales (Australia) State of Parks	New South Wales, Australia
Victorian SOP	Victorian (Australia) State of Parks	Victoria, Australia
Qld Rapid Assessment	Queensland Rapid Assessment	Queensland, Australia
Catalonia MEE	Evaluation of the system of protected areas of Catalonia, Spain	Catalonia, Spain
Scenery matrix	Scenery matrix	Brazil
Scotland LNR	Evaluation of Local Nature Reserves in Scotland	Scotland, UK
NTMEE	Parks and Wildlife Northern Territory Management Effectiveness, Australia	Northern Territory, Australia
Padovan 2002	Padovan 2002	Brazil
Tasmanian WHA	Tasmanian World Heritage Management Effectiveness Evaluation	Tasmania, Australia
Galápagos MEE	Manual para la evaluación de la Eficiencia de Manejo del Parque Nacional Galápagos	Galapagos, Ecuador
GBRMPA outlook report	Great Barrier Reef (GBR) Outlook Report	GBR, Australia