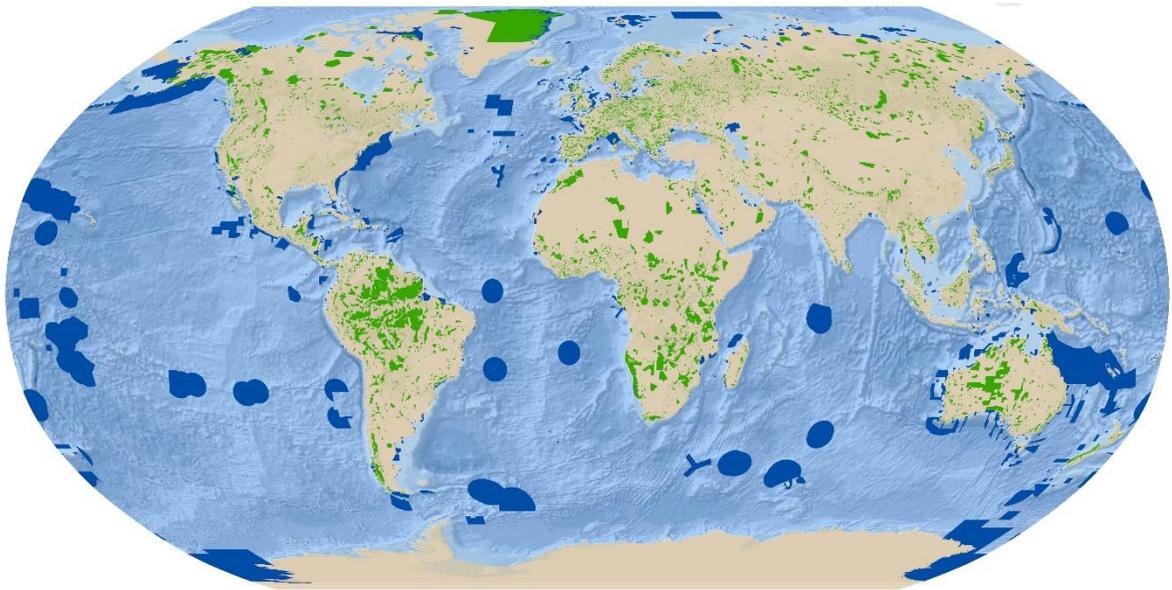


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User Manual for the World Database on Protected Areas and world database on other effective area- based conservation measures: 1.6

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User Manual for the World Database on Protected Areas and world database on other effective area-based conservation measures: 1.6

Authors

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Manual at a glance

The World Database on Protected Areas (WDPA) is the only global database of protected areas, and it is one of the component databases of the Protected Planet Initiative. Protected Planet® is a joint product of UNEP and IUCN, managed by UNEP-WCMC and the IUCN working with governments, communities and collaborating partners. The WDPA can be viewed and downloaded at www.protectedplanet.net, where it is integrated with other relevant information.

From 2019, Protected Planet also encompasses a database on 'other effective area-based conservation measures' (OECMs). The OECM database will be available on the Protected Planet website from late-2019, and while data will be added as and when it is provided to UNEP-WCMC it is expected that it will take several years for it to be globally comprehensive. Protected Planet includes, and links to, a number of other sources of data and information on area-based conservation (figure 0.1).

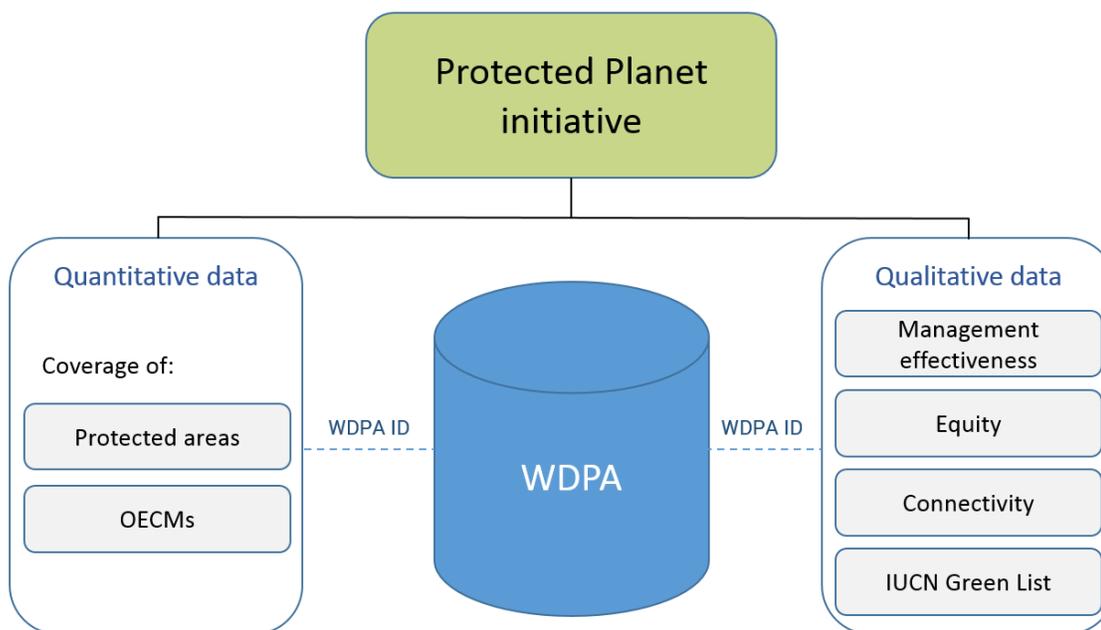


Figure 0.1. Links between quantitative and qualitative information within the Protected Planet initiative. Individual protected areas and OECMs are identified across the databases by a unique identifier, the WDPA ID.

This User Manual provides information and guidance about the data held within the WDPA, including the history of the database, how the data are collected, managed and distributed, and how they should be interpreted and used for analyses and research. The Manual has been prepared for WDPA data providers and users. Version 1.6 is the first to include information on the development of the OECM database, its relationship with the WDPA, and how OECM data are collected. The manual is structured in 5 sections and includes 6 appendices.

Section 1 is a brief introduction to the WDPA, its history and current structure, and its relation to IUCN Protected Area Management and Governance standards.

Section 2 is a brief introduction to OECMs and the OECM database, providing a short background on the term and the development of the OECM database.

Section 3 describes the Protected Planet Data Standards, which apply to both the WDPA and OECM database. These standards ensure that the data are supplied in a common format that is globally interoperable and useable.

Section 4 explains how the databases are compiled through a quality control process underpinned by the Protected Planet data standards.

Section 5 addresses the use of the WDPA including how it can be accessed, how it should be cited and interpreted, and some recommendations on its use.

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

Shortcuts

What is the WDPA and what sites are included? → [Go to section 1, page 7](#)

What are OECMs and what is the OECM database? → [Go to section 2, page 12](#)

What are the Protected Planet Data Standards? → [Go to section 3, page 13](#)

How is the WDPA compiled and how to submit data? → [Go to section 4, page 20](#)

How to access and cite the WDPA? → [Go to section 5, page 29](#)

What are the conditions of use? → [Go to section 5.2, page 30](#)

How do I use the WDPA for analyses? → [Go to section 5.5, page 31](#)

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1. What is the World Database on Protected Areas?

1.1. Background and History

The World Database on Protected Areas (WDPA) is a joint project of UNEP and the International Union for Conservation of Nature (IUCN). It is compiled and managed by the UN Environment Programme World Conservation Monitoring Centre (UNEP-WCMC), in collaboration with governments, non-governmental organisations, and other data-providers. The WDPA is the most comprehensive global database of marine and terrestrial protected areas, comprising both spatial data (i.e. boundaries and points) with associated attribute data (i.e. tabular information). It is made available online through Protected Planet (www.protectedplanet.net) where the data are both viewable and downloadable. A detailed examination of the history, uses, challenges and future directions of the WDPA can be found in Bingham et al. 2019.

The WDPA was established in 1981, but the mandate for the database dates from 1959 when the United Nations (UN) Economic and Social Council called for a list of national parks and equivalent reserves in recognition that they '*are valuable for economic and scientific reasons and also as areas for the future preservation of fauna and flora and geologic structures in their natural state*' Resolution 713 (XXVIII). The first UN List of Protected Areas, as it became known, was subsequently published in 1962.

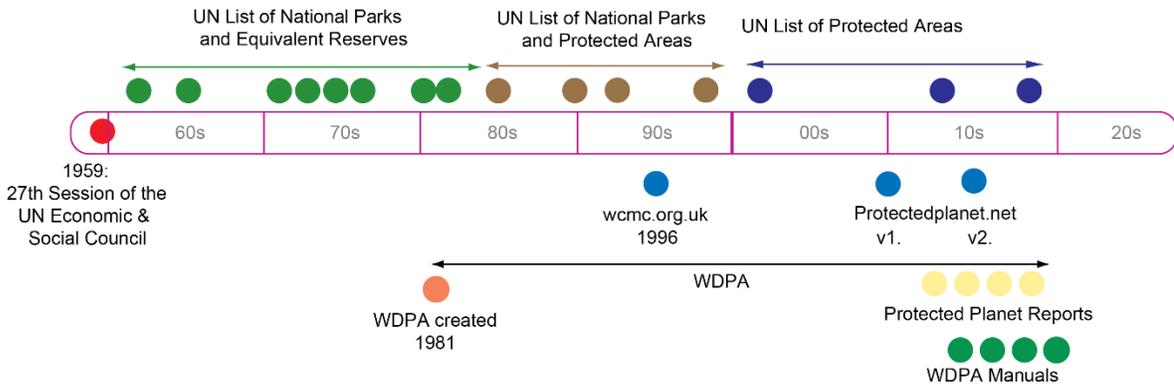


Figure 1.1 History of the World Database on Protected Areas

The online interface of the WDPA (www.protectedplanet.net) was launched in 2010 and upgraded in 2015. Also in 2015, the WDPA structure and protocols were updated to allow it to better incorporate information on protected areas under the governance of private entities, local communities, and indigenous peoples. In recent years, key products based on the WDPA have been released. These include the latest version of the UN List of Protected Areas (UNEP-WCMC 2018), and global Protected Planet Reports which were launched in 2012, 2014, 2016 and 2018 (Bertzky et al., 2014; Juffe-Bignoli et al. 2014a; UNEP-WCMC and IUCN 2016; UNEP-WCMC, IUCN and NGS 2018). These global reports have been supplemented by the first regional Asia Protected Planet Report (Juffe-

Bignoli et al. 2014b) and the Protected Planet National Technical Series for the Republic of Korea (UNEP-WCMC and KNPS 2016). In September 2016, Global Databases to Support ICCAs: A Manual for Indigenous Peoples and Local Communities was released (UNEP-WCMC 2016), providing specific guidance on contributing data on territories and areas conserved by indigenous peoples and local communities (ICCAs).

1.2. The WDPA today

The WDPA is compiled in collaboration with a wide range of governmental and non-governmental organizations which submit protected area data to UNEP-WCMC. These collaborators are referred to in this document as data providers. In order to be included in the database, the data delivered by data providers must comply with specific standards. The Protected Planet data standards are explained in detail in [section 2](#). [Section 3](#) of this manual describes how the data are collected, verified, and harmonised to be incorporated into the WDPA. The WDPA also has an extensive range of users spanning researchers, governments, and private sector organisations including NGOs and international institutions (See [section 4](#)).

A further key use of the WDPA is providing indicators on globally-agreed targets. In 2010, the countries of the world agreed on the Convention on Biological Diversity (CBD) Strategic Plan 2011 - 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, many of which are trackable using the WDPA: *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).*

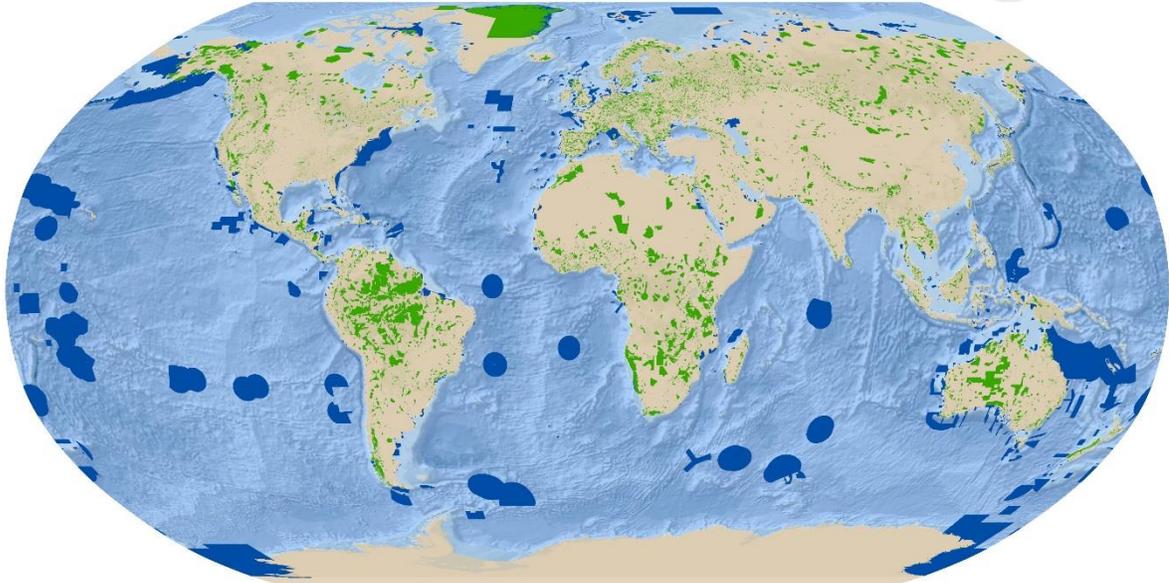


Figure 1.2 The World Database on Protected Areas as of May 2019.

1.2. Sites included in the WDPA

The WDPA accepts data on protected areas as defined by IUCN and the CBD. There is agreement between the CBD Secretariat and IUCN that both definitions have the same meaning (Lopoukhine and Dias 2012). **Although records should not be submitted to the WDPA if they do not meet the IUCN or CBD definition of a protected area, it cannot be guaranteed that data-providers consistently follow this standard. In part, this is because countries often have national definitions of protected areas that may not fully align with the IUCN or CBD definition. It should therefore not be assumed that all records in the WDPA meet the IUCN or CBD definition. However, the majority of these sites are reviewed via discussions with data providers periodically via data updates and tend to be removed before being entered into the WDPA.**

IUCN definition:

“A protected area is a clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long term conservation of nature with associated ecosystem services and cultural values.” (Dudley 2008)

CBD definition:

“A geographically defined area, which is designated or regulated and managed to achieve specific conservation objectives” (Article 2 of the Convention on Biological Diversity). This definition is further expanded upon under Article 8 of the same convention.

1.3. IUCN Standards in the WDPA

The IUCN Protected Area Management Categories help classify protected areas based on their primary management objectives (Dudley 2008), while the IUCN Governance Types classify protected areas according to who holds authority, responsibility and accountability for them (Borrini-Feyerabend et al. 2013). Protected areas exist under the authority of diverse governance actors, including indigenous peoples, local communities, private actors, governments, and combinations of these. The relationship between management categories and governance types is shown in Table 1.1. This relationship does not include ownership, which is often independent of governance and management structures.

Table 1.1. The IUCN Protected Area Management Category and Governance Type matrix Source: Borrini-Feyerabend et al. 2013

Governance types Protected area categories	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 management	Collaborative management (various forms of pluralist influence)	Joint management (pluralist management board)	Declared and run by individual land-owner	...by non-profit organizations (e.g., NGOs, universities, co-operatives)	...by for-profit organizations (e.g., individual or corporate landowners)	Indigenous peoples' conserved areas and territories – established and run by indigenous peoples	Community conserved areas – declared 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. Managed Resource Protected Area											

The WDPA stores both management categories and governance types as reported by the data provider. In May 2019, 66% of protected areas in the WDPA had an IUCN Management Category, and

88% had a governance type. UNEP-WCMC encourages the adoption of the IUCN standards but does not assign or review the application of the categories by countries.

While the use of the IUCN Protected Area Management Categories system is voluntary, it is widely accepted as a standard and used by many countries. Grouping protected areas under the IUCN categories assists in facilitating comparisons between countries for research purposes, and reduces confusion arising from the adoption of multiple terms and designations to describe similar protected areas in different parts of the world.

There are still many protected areas for which there is no IUCN Protected Area Management Category assigned. The absence of a management category does not in any way reduce the importance of a protected area, nor does it imply that the site is not being adequately managed or should be excluded from analyses.

The IUCN management categories are not intended to be hierarchical. They cannot be used to make assumptions about the biodiversity value, management effectiveness, or conservation performance of a protected area.

1.4. WDPA Data Structure

The WDPA is stored as a file geodatabase comprising two geospatial feature classes and one source table (Figure 1.3).

- **Two feature classes:** one with polygons and with points; both with associated tabular information of protected areas key attributes (See [section 2](#)). As of May 2019, the WDPA includes data on 242,784 protected areas of which 91% are polygons and 9% are points.
- **One source table:** the WDPA source table describes the source of geospatial and attribute data, containing information on the data provider, year of latest update, and other metadata (See [section 2](#)).

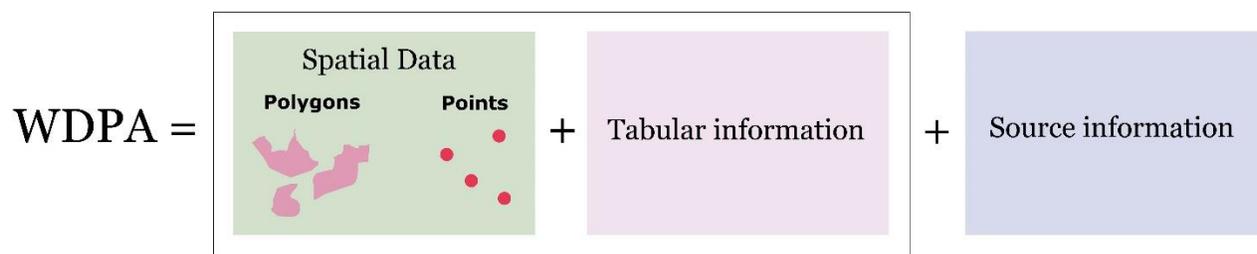


Figure 1.3 Structure of the World Database on Protected Areas

The WDPA ID is the globally unique identifier for each protected area in the WDPA. 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. If a protected area is degazetted, it is deleted from the

WDPA and its WDPA ID is not reused.

It is important to note that different designations of protected areas may occupy the same geographical space (Deguignet et al. 2017), in which case each will have a different WDPA ID. For example, Yellowstone National Park in the United States is a National Park, but this same location is also a natural World Heritage Site. The two designations have different WDPA IDs. For more information on the WDPA ID, see [section 3.2](#) and [Appendix 1](#). Since the WDPA ID is unique to a given protected area, if that protected area is made up of zones represented by multiple polygons, the zones will share the same WDPA ID. In these cases, each zone will have a unique WDPA Parcel ID (WDPA_PID). A detailed description of both attributes is available in [Appendix 1](#).

2. What is the OECM database?

2.1. Background

Like the WDPA, the OECM database is a joint product of UN Environment and IUCN, compiled and managed by UNEP-WCMC, in collaboration with governments, non-governmental organisations, and other data-providers. The database has been in development since 2019, in response to a request from parties to the CBD in November 2018 (CBD 2018).

2.2. What are OECMs?

The term 'other effective area-based conservation measure' (abbreviated to 'OECM') is derived from the wording of Aichi Biodiversity Target 11:

*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.*

Although Aichi Biodiversity Target 11 was adopted in 2010, OECMs were only formally defined in 2018. The CBD defines an 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.

Decision 14/8 of the CBD provides additional voluntary guidance on identifying OECMs. IUCN's World Commission on Protected Areas has also provided in-depth guidance, informed by a multi-year consultation process (IUCN WCPA, 2019).

2.3. What is the difference between a protected area and an OECM?

Protected areas and OECMs have many similarities, such as the requirement of a geographically-defined boundary and a long-term commitment. But while protected areas are places designated to achieve positive biodiversity outcomes, the term 'OECM' applies to areas designated for any purpose, where positive biodiversity outcomes occur regardless of the original management objectives. In a protected area, conservation must be the primary, or joint-primary, objective. In an OECM, it may be a secondary objective or not an explicit objective at all.

OECMs also encompass areas that meet the definition of a protected area, in cases where the governance authority prefers the area to be considered an OECM.

Data on protected areas are stored in the WDPA, and data on OECMs are stored in the OECM database.

2.4. How are the WDPA and OECM database linked?

The OECM database is closely based upon the structure of the WDPA, and the two databases are fully interoperable. The WDPA ID is used as the unique identifier in both databases, and is unique across both. Users can combine the databases or use them separately, depending on their needs. If the two databases are combined, the PA_DEF field can be used to differentiate protected areas (where the value in the field is '1') from OECMs (where the value is '0'). UNEP-WCMC uses the two databases in combination to assess progress towards Aichi Biodiversity Target 11.

3. Protected Planet Data Standards

Data in the WDPA and OECM database must meet the Protected Planet data standards. These were developed in 2010, regularly updated and subsequently revised in 2015 to ensure consistency in the way the WDPA is compiled, checked, managed, and presented. 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 3.1 summarises the four key requirements that need to be met to comply with the Protected Planet data standards. This section provides specific details for

each of these requirements. The Protected Planet data standards also encompass standards specific to other databases, such as the Global Database on Protected Area Management Effectiveness. These standards are not discussed in this manual.

Box 3.1. Four requirements to meet the Protected Planet data standards

1. All sites must meet the IUCN definition of a protected area or CBD definition of an 'other effective area-based conservation measure'
2. Spatial data from Geographic Information Systems (GIS) and an associated list of attributes must be provided
3. Source of information must be provided
4. The WDPA Data Contributor Agreement must be signed

In addition to these requirements, when reporting data on protected areas or OECMs under the governance of indigenous peoples, local communities, or private actors, data-providers are encouraged to do so with the consent of these stakeholders. This is in accordance with IUCN Resolutions [WCC-2016-Res-036](#) and [WCC-2016-Res-030](#), and principles of free, prior and informed consent.

3.1. Spatial data

The WDPA and OECM database are based on the Geographic Coordinate System: World Geodetic Survey (WGS) 1984. Each record is either represented as a polygon boundary, or if unavailable, a point location. This will depend on the nature of the data provided by the source. A maximum of two feature classes should be submitted – one containing all the polygon data and the other all the point data for any protected areas or OECMs without boundary data. A data submission will only be accepted if a geographic location is provided, preferably as a spatial boundary.

Polygon Data

Polygon data represent the boundary of the protected area or OECM as submitted by the data provider. A polygon may be single-part, or multi-part, where there are multiple non-connecting parts associated with the same protected area or OECM. Each part of a multi-part polygon will share the same WDPA ID in the attribute table (see Figure 3.1), but will have a different WDPA PID.

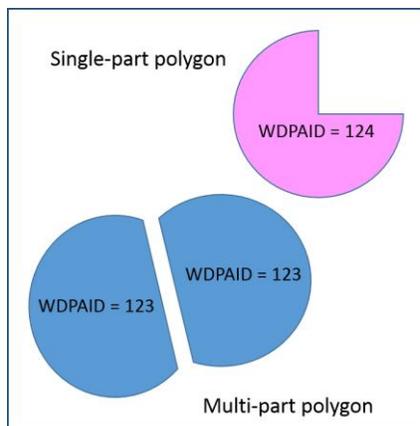


Figure 3.1. Single-part and multi-part polygons

Point Data

Where boundary data are unavailable, the latitude and longitude of the centremost point of the site is requested as a reference point for the protected area or OECM instead. However, it should not be assumed that all points in the WDPA represent a central point of a given site. If the protected area is made up of multiple parts, multi-points associated with the central locations of each part of the protected area may be stored instead (see Figure 3.2).

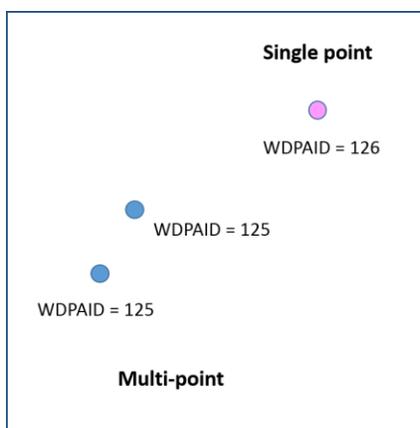


Figure 3.2. Single points and multi-points

3.2. Attribute Data

The WDPA stores up to 29 descriptors, referred to as data attributes, which describe each record in the WDPA. The OECM database stores 31. The attributes have been classified as *minimum* and *complete* attributes:

- A '*minimum*' attribute represents information that is mandatory for any protected area or OECM to be included in either database
- A '*complete*' attribute represents any information that is considered a priority for analysis and reporting on protected areas, but is not a mandatory requirement. The complete fields significantly improve the capacity to conduct thorough analysis on protected areas. **Data providers are encouraged to submit this information in addition to the minimum required attributes.**

The WDPA and OECM database attribute data are summarised in Table 3.1 and described in detail in [Appendix 1](#).

Table 3.1 Summarised description and allowed values for the WDPA and OECM database fields (Version 1.6). For detailed descriptions see [Appendix 1](#).

Requirement	Provided by	Field Name	Type	Length	WDPA accepted a values	OECM database accepted values
Minimum	UNEP-WCMC	WDPAID	Number (Double)	N/A	Assigned by UNEP-WCMC. Unique identifier for a protected Area.	Same as WDPA accepted values.
Minimum	UNEP-WCMC	WDPA_PID	Text (String)	52	Assigned by UNEP-WCMC. Unique identifier for parcels or zones within a protected area.	Same as WDPA accepted values.
Minimum	Data provider	PA_DEF	Text (String)	20	Allowed values: 1 (meets IUCN and CBD protected area definitions)	Allowed values: 0 (meets the CBD definition of an OECM)
Minimum	Data provider	NAME	Text (String)	254	Name of the protected area (PA) as provided by the data provider.	Same as WDPA accepted values.
Minimum	Data provider	ORIG_NAME	Text (String)	254	Name of the protected area in original language.	Same as WDPA accepted values.
Minimum	Data provider	DESIG	Text (String)	254	Name of designation.	Same as WDPA accepted values.
Complete	Data provider	DESIG_ENG	Text (String)	254	Designation in English. Allowed values for international-level designations: Ramsar Site, Wetland of International Importance; UNESCO-MAB Biosphere Reserve; World Heritage Site (natural or mixed). Allowed values for regional-level designations: Baltic Sea Protected Area (HELCOM); Specially Protected Area (Cartagena Convention); Marine Protected Area (CCAMLR); Marine Protected Area (OSPAR); Site of Community Importance (Habitats Directive); Special Protection Area (Birds Directive); Specially Protected Areas of Mediterranean Importance (Barcelona Convention). No fixed values for protected areas designated at a national level.	Designation in English. No fixed values.
Minimum	Data provider	DESIG_TYPE	Text (String)	20	Allowed values: National, Regional, International, Not Applicable	Same as WDPA accepted values.
Complete	Data provider	IUCN_CAT	Text (String)	20	Allowed values: Ia, Ib, II, III, IV, V, VI, Not Applicable, Not Assigned, Not Reported	Allowed values: Not Applicable
Minimum	UNEP-WCMC	INT_CRIT	Text (String)	100	Assigned by UNEP-WCMC. For World Heritage and Ramsar sites only.	Allowed values: Not Applicable
Minimum	UNEP-WCMC	MARINE	Text (String)	20	Allowed values: 0 (predominantly or entirely terrestrial), 1 (Coastal: marine and terrestrial), and 2 (predominantly or entirely marine). The value '1' is only used for polygons.	Same as WDPA accepted values.
Minimum	Data provider	REP_M_AREA	Number (Double)	N/A	Marine area in square kilometres.	Same as WDPA accepted values.
Minimum	UNEP-WCMC	GIS_M_AREA	Number (Double)	N/A	Assigned by UNEP-WCMC.	Same as WDPA accepted values.

Requirement	Provided by	Field Name	Type	Length	WDPA accepted a values	OECM database accepted values
Minimum	Data provider	REP_AREA	Number (Double)	N/A	Area in square kilometres.	Same as WDPA accepted values.
Minimum	UNEP-WCMC	GIS_AREA	Number (Double)	N/A	Assigned by UNEP-WCMC.	Same as WDPA accepted values.
Complete	Data provider	NO_TAKE	Text (String)	50	Allowed values: All, Part, None, Not Reported, Not Applicable (if no marine component).	Same as WDPA accepted values.
Complete	Data provider	NO_TK_AREA	Number (Double)	N/A	Area of the no-take area in square kilometres.	Same as WDPA accepted values.
Minimum	Data provider	STATUS	Text (String)	100	Allowed values: Proposed, Inscribed, Adopted, Designated, Established.	Same as WDPA accepted values.
Minimum	Data provider	STATUS_YR	Number (Long Integer)	12	Year of enactment of status (STATUS field).	Same as WDPA accepted values.
Complete	Data provider	GOV_TYPE	Text (String)	254	Allowed values: Federal or national ministry or agency, Sub-national ministry or agency, Government-delegated management, Transboundary governance, Collaborative governance, Joint governance, Individual landowners, Non-profit organisations, For-profit organisations, Indigenous peoples, Local communities, Not Reported.	Same as WDPA accepted values.
Complete	Data provider	OWN_TYPE	Text (String)	254	Allowed values: State, Communal, Individual landowners, For-profit organisations, Non-profit organisations, Joint ownership, Multiple ownership, Contested, Not Reported.	Same as WDPA accepted values.
Complete	Data provider	MANG_AUTH	Text (String)	254	Individual or group that manages the protected area.	Same as WDPA accepted values.
Complete	Data provider	MANG_PLAN	Text (String)	254	Link or reference to the protected area's management plan.	Same as WDPA accepted values.
Complete	Data provider	CONS_OBJ	Text (String)	100	N/A	Allowed values: Primary, Secondary, Ancillary.
Complete	Data provider	SUPP_INFO	Text (String)	254	N/A	Link or reference to supporting information on the OECM, such as details of how it fulfils each element of the OECM definition.
Minimum	UNEP-WCMC	VERIF	Text (String)	20	Assigned by UNEP-WCMC. Fixed values: State Verified, Expert Verified, Not Reported (for unverified data that was already in the WDPA prior to the inclusion of the 'Verification' field).	Same as WDPA accepted values.

Requirement	Provided by	Field Name	Type	Length	WDPA accepted a values	OECD database accepted values
Minimum	UNEP-WCMC	RESTRICT	Text (String)	20	Not publicly available, for UNEP-WCMC use only.	Same as WDPA accepted values.
Minimum	UNEP-WCMC	METADATAID	Number (Long Integer)	12	Assigned by UNEP-WCMC. Link to source table.	Same as WDPA accepted values.
Complete	Data provider	SUB_LOC	Text (String)	100	Allowed values: ISO 3166-2 sub-national code where the PA is located. Separated by a semi-colon if multiple.	Same as WDPA accepted values.
Minimum	Data provider	PARENT_ISO3	Text (String)	20	Allowed values: ISO 3166-1 Alpha-3 character code of country where the PA is located. Separated by a semi-colon if multiple.	Same as WDPA accepted values.
Minimum	Data provider	ISO3	Text (String)	20	Allowed values: ISO 3166-1 Alpha-3 character code of country or territory where the PA is located. Separated by a semi-colon if multiple.	Same as WDPA accepted values.

3.3. Source information

Both the WDPA and OECM database have a source table. Recording accurate source information in the WDPA and OECM database is important to ensure that ownership of the data is maintained and traceable. Source information includes details on the data provider and when the data were last updated. This information is stored in the WDPA and OECM database Source Tables, and linked to the attribute data by the 'Metadata ID'. **A data submission will only be accepted if the source information is provided.**

The Source Tables conform to the minimum geographic information and services standards for metadata as described by the International Organization for Standardization (ISO). Guidance and definitions on the source information requirements can be found in [Appendix 1](#). The source table also includes information on the party responsible for verifying the data, where relevant. This information is completed by UNEP-WCMC in collaboration with the data verifier.

3.4. Data Contributor Agreement

Data contributors who provide data for inclusion in either database are requested to sign the WDPA Data Contributor Agreement. This ensures that there is a written record of the data provider agreeing for their intellectual property (IP) to be included in the databases and the terms for which it is made available. The agreement specifically states how the data provided will be used and that redistribution or use of the data by third parties will be subject to the WDPA Terms of Use.

There are two versions of the data contributor agreement: one for government data-providers and one for all other data-providers. Templates for both are annexed to this manual. A data submission will only be accepted if the WDPA Data Contributor Agreement is signed.

4. How are the WDPA and OECM database compiled?

The WDPA and OECM database are compiled in collaboration with a wide range of governmental and non-governmental organizations which submit protected area data to UNEP-WCMC. All data included in the databases must meet the Protected Planet data standards. The process of formatting and validating the data to include them in the WDPA can take from a few days to several weeks, after which the WDPA is made available through Protected Planet: www.protectedplanet.net (Figure 4.1). Towards the end of 2019, the OECM database will be made available in the same way.

This section describes the different data providers, explains the frequency of data-requests, and describes the process for submitting and validating the data.

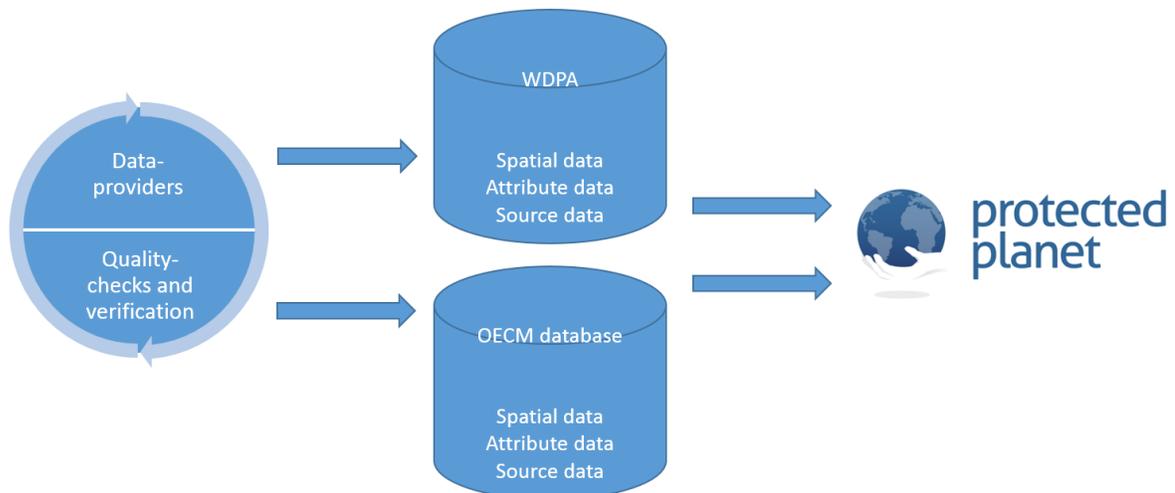


Figure 4.1. The WDPA and OECM database workflow.

4.1. Data providers

The WDPA is sourced from almost 500 data providers ranging from governments to individuals. All data are provided by the entity with the intellectual property (IP) rights in the data and this is not conferred to UNEP-WCMC, IUCN or any third-party user of the databases. All IP right holders are protected by the WDPA Terms of Use ([section 5.2](#)). There are currently five main source types for data included in the WDPA and OECM database:

1. **Governmental:** these include national governments and sub-national agencies that manage protected area data.

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 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 other actors that govern or manage protected areas, including indigenous peoples, local communities and private actors other than NGOs.

4.1.1 Benefits for countries of submitting data

In addition to the creation of the UN List of Protected areas, the WDPA is used to calculate indicators related to several international processes. This includes indicators for the Convention on Biological Diversity, Sustainable Development Goals and IPBES (See Box 4.1).

Moreover, there are several ways in which countries can benefit from providing data to the WDPA and OECM database:

- **Inventory of national data:** At the national level, protected areas and OECMs might be managed by different institutions and/or governmental agencies, including community groups and private actors. If data on these areas are not stored in a centralized national database, providing data to the WDPA and OECM database may provide countries with a clearer picture of their protected area network as a whole. Furthermore, the data can be viewed on a single map through www.protectedplanet.net and downloaded.
- **Capacity building:** Help is provided to countries through capacity building to ensure the accuracy and completeness of their protected areas data and information. Training can be provided by UNEP-WCMC to strengthen skills on database management, the basics of GIS, or in any other relevant areas if needed and requested by the data provider.
- **Contribute to scientific research/Highlight gaps:** Through the use of the WDPA in scientific research, gaps in protected area and OECM networks can be identified and highlighted. Using knowledge on the distribution of areas important for biodiversity and ecosystem services and threats to them, alongside spatial information on aspects of the national infrastructure such as roads, cities and planning zones, systematic conservation planning can be undertaken to identify the most suitable places for the establishment of new protected areas or OECMs in the country. This may enable countries to better implement certain important elements of Aichi Biodiversity Target 11 such as representativeness and connectivity.

- **Regional observatories: Improve provision of protected area information at the regional level**, through the creation of regional observatories, such as the ASEAN Centre for Biodiversity, the European Environment Agency and the BIOPAMA Regional Observatories in Africa, the Caribbean and the Pacific. This has the additional benefit of building partnerships between countries in a region and building capacity through knowledge transfer.

4.1.2. Process for requesting updates

While UNEP-WCMC aims to update all national datasets at a minimum every 5 years, data providers are welcome to provide updates at any time, and most datasets are updated much more frequently.

UNEP-WCMC prioritizes countries to contact for updates based on the following criteria:

- **Countries where the quality of data is poor:** of particular importance is obtaining boundary data for protected areas or OECMs where only point locations are currently known. The quality of data is also determined by the age of the dataset, and the extent to which minimum attributes have been completed (see [section 3.2](#)).
- **Countries that are identified as priorities** by UNEP-WCMC and its partners due to a recent expansion of their protected area or OECM system (e.g. designation of a number of Marine Protected Areas, or creation of a very large protected area or OECM).
- **Countries, protected areas and OECMs for which a formal agreement exists for UNEP-WCMC to regularly update their data:** formal agreements exist that cover, for example, all countries associated with the European Environment Agency.

4.1.3. Submitting data to the WDPA and/or OECM database

Data are often provided by the governance authority of a protected area or OECM, and this authority has priority over other potential data-providers. When the governance authority is not able to provide an update due to lack of capacity, lack of data or other prohibitive circumstance, they may suggest another provider to be contacted for an update. **Only one version of any protected area or OECM is stored in the databases.**

The process of providing data will vary depending on the type of data-provider and whether a relationship with the data provider already exists, but the steps that should be carried out by the data provider include:

1. Review the current data included in the Data Submission Pack provided to the prospective data provider; or review the data online at www.protectedplanet.net
2. Prepare a new dataset that complies with the Protected Planet Data Standards (see [section 3](#)). Data providers can use the WDPA/OECM database schemas and subset of data provided in the Data Submission Pack (see Box 4.1) to complete this step as well as adding any new or updated data to the schema in place of the old data.

3. Send the following data to protectedareas@unep-wcmc.org:
 - **Spatial data and associated attributes:** either a polygon boundary or the central latitude and longitude point for each protected area or OECM.
 - The **Source Table** must be completed to identify who provided the data, and any basic details on the quality and currency of the data at the time it was provided.
 - The **WDPA Data Contributor Agreement** must be signed.

Box 4.1 The Data Submission Pack

The Data Submission Pack is usually sent to first time data providers. It includes the following documents:

- Subset of protected areas data already stored in the WDPA and OECM database.
- User Manual.
- Blank WDPA and OECM database shapefile schema (see [Table 3.1](#)).
- Source Table (see [Appendix 1](#)).
- Terms of Use (See [section 5.2](#)).
- Data Contributor Agreement ([see Appendix 2](#)).

Please contact the Protected Planet team at protectedareas@unep-wcmc.org for further information on data submission and/or to receive a data submission pack.

It is best if a data provider shares a comprehensive GIS dataset, preferably as a file geodatabase, for the protected area or OECM network that they represent; e.g. National Parks or the country-wide protected area network. This should include the required spatial and attribute data.

Data-providers are strongly encouraged to provide data with the consent of the relevant governance actors, including indigenous peoples, local communities and private actors.

4.1.4. Differences between national statistics and statistics reported through Protected Planet

OECMs will not be included in statistics presented through the Protected Planet website until late 2019.

Statistics calculated from the WDPA and OECM database may differ from national statistics. Some of the reasons for this are:

- **Methods for digitizing spatial data on a protected area or OECM:** this includes differences in the scale, references to the administrative boundaries, resolution of the layer, coordinate

system or geographic projection; all of which will have an influence on the accuracy of the data. This might also explain differences in area measurements.

- **Methods to calculate protected area coverage:** National statistics and Protected Planet statistics might differ due to differences in the definitions and standards applied to protected areas and/or OECMs, the incorporation of transboundary or international designations, methods followed to calculate the area, and other datasets, such as underlying base maps, used to assess protected area coverage. The method used to calculate the statistics displayed on Protected Planet is described here: <https://protectedplanet.net/c/calculating-protected-area-coverage>
- **Accuracy of data in the WDPA and OECM database:** When data provided to the databases are not up-to-date, statistics calculated from the WDPA might be under- or over-representing the actual national coverage.
- **Gaps in protected area data:** In cases where information on protected areas and OECMs in a country is managed by multiple agencies, the statistics reported at national level may differ from those generated through the WDPA if there is a mismatch between the information communicated by the agencies to the different levels.
- **Non-government data providers:** in analyses of the WDPA, including data where the VERIF field = 'Expert Verified' may lead to differences with the national government's statistics. This is because the data has been reported to the WDPA by non-government sources. UNEP-WCMC may sometimes need to produce statistics on only those protected areas or OECMs reported by governments. In these cases, a subset containing only 'State Verified' data is used. See section 4.2.3 for more information on verification.

4.2. Data verification and formatting of the WDPA

When submission of new data has been completed, steps are taken to 1) Standardise the information to make it compatible with the Protected Planet Data Standards; 2) Ensure the data submitted are verified by an authoritative source (in cases of non-government data providers only). Once this is achieved the new data are integrated into the WDPA or OECM database.

4.2.1. Interactions with data providers

This phase involves liaising with the data provider and commencing interactions to obtain updated data on protected areas. This phase can take between a few weeks to months depending on the response rate of the data provider.

4.2.2. Quality checking and data formatting

All incoming data are subject to a series of quality checks and reformatting to ensure the data meet the Protected Planet Data Standards (see [section 3](#)). This phase can take between a few days and several weeks depending on the quality of the data received. The data first go through a list of

quality checks to ensure that the attributes have been completed correctly, source information has been provided, and spatial data are free of issues ([Appendix 3](#)). Subsequently, data are compared to the data already in the WDPA and cross-checked with the data provider prior to the finalization of the dataset.

The most efficient updates are those in which the format fits the WDPA/OECM database schema, and that contain at least the minimum required attributes and the information needed for the WDPA/OECM database Source Table.

Due to the inherent variability of data submitted by a wide range of data providers, with different capacity and resources to support the digitization of boundaries, issues with the accuracy of the WDPA and OECM database data should be expected. For more information about common issues with the data see [section 5](#): Using the WDPA and OECM database.

4.2.3. Verification process

All records in the WDPA and OECM database are verified by an authoritative source. An exception is some older records that were added before the verification processes were developed. Facilitating the verification of these records is a priority for UNEP-WCMC.

The WDPA/OECM database 'Verification' (VERIF) field allows three values: State Verified, Expert Verified, and Not Reported (for unverified data that was already in the WDPA prior to the inclusion of the 'Verification' field). The name and contact details of the verifier are stored in the WDPA source table, but only their affiliation is shared publicly. A detailed description of these fields is available in [Appendix 1](#).

The expert-verification process is rarely used but is intended to support the integration of data on protected areas and OECMs that are under the governance of indigenous peoples, local communities and private actors. If these governance actors choose to provide data directly, they can decide whether their data will be verified by experts or by the national government.

Non-government experts do not verify data on protected areas or OECMs under government governance - Instead, the national government is responsible for verifying these sites. However, non-government experts do occasionally flag potential errors in the data that UNEP-WCMC may refer to the national government for review.

The role of data verifiers is to confirm that, to the best of their knowledge, the data provider has submitted correct information. They will also be asked to raise any concerns they have relating to data accuracy and to the process by which the data have been collected (including issues of free, prior and informed consent).

The data verification process is relatively new and will be refined and further developed in the future. Basic principles for verification of the WDPA and OECM database data are summarized in Table 4.1.

Table 4.1 Basic principles for verification of the WDPa data.

Data submitted by governmental sources	The WDPa is underpinned by a United Nations mandate (Appendix 6) that invited state parties to provide information on protected areas. Similarly, the OECM database is underpinned by a CBD mandate, which invited state parties to provide information to UNEP-WCMC. Accordingly, data submitted by governmental sources are considered 'State Verified' and are included in the WDPa or OECM database after data formatting and quality control.
Data submitted by non-governmental sources	Incoming data from non-government data providers undergo a verification process before being added to the WDPa or OECM database. Data can be verified either by state verifiers or by expert verifiers, depending on the wishes of the data provider. The VERIF field differentiates between "State Verified" and "Expert Verified" data. If neither party can verify the data, they do not enter the WDPa or OECM database.
Resolution of conflicts	Where there is conflict between the opinions of the data provider and data verifier (for example, disputes over the correct boundary of a site), this is discussed with both parties in an attempt to reach a solution. Data providers are made aware of the verification process before submitting data, and are kept informed of its progress. In cases where no resolution can be found, data cannot enter the WDPa.
Frequency of data verification	Although updates are invited at any time, UNEP-WCMC aims to update data at least once every five years. During this process, the data provider is contacted and asked to confirm that the data remain accurate. If the data provider cannot be reached, the data verifier is contacted. If there is a negative response, or if no response is received within five years, then UNEP-WCMC reserves the right to remove the data from the WDPa or OECM database.

4.2.4. Integrating Data into the WDPa or OECM database

Once a dataset has been formatted, verified and conforms to all aspects of the Protected Planet Data Standards, it is integrated into the WDPa or OECM database, as appropriate. If there are records in either database that are not included in the update, UNEP-WCMC confirms with the data provider that these records should be removed before deleting them. This does not usually apply to data previously verified by sources other than the data provider.

The final dataset to be integrated into the WDPa/OECM database is sent to the data provider for final approval. **Data providers are encouraged to retain WDPa IDs in their own datasets as this significantly improves the frequency of future updates.**

4.3. Assessing the quality of the WDPA and OECM database before they are publicly released

A new version of the WDPA is released every month and made available through the Protected Planet webpage (<http://www.protectedplanet.net>). From late-2019, the OECM database will also be made available in this way. Each monthly release is accompanied by a dedicated webpage listing the countries or territories that have been updated, and the number of records added, removed or updated.

The Protected Planet team is always exploring better ways of assessing the quality of the data in the WDPA. Currently, four basic indicators are calculated for every WDPA monthly release (Figure 3.3).

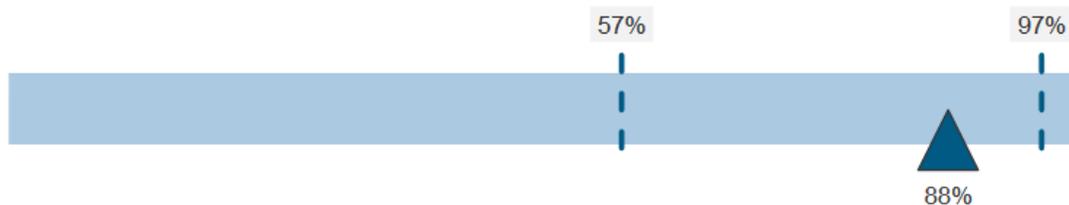
Indicator 1: Percentage of records with boundaries in polygon format

This indicator measures the number of records in the WDPA in polygon format in relation to the number of records that are in point format. Points do not accurately represent a protected area. Thus, the fewer points the dataset stores, the better the quality of the dataset.



Indicator 2: Percentage of data attributes reported

Each record in the WDPA has 29 fields for which descriptive data are requested. This indicator shows the weighted percentage of data fields which have been reported, for both the minimum and complete attributes. A dataset that has all its fields completed is considered a complete dataset which allows more comprehensive analyses.



Indicator 3: Percentage of records updated, or confirmed without change, by the data provider in the last 5 years

UNEP-WCMC sets a target to update each record in the WDPA at least every five years. This indicator shows the percentage of records updated in the last 5 years (since June 2014). Accurate and up to date data on protected areas are fundamental to inform decisions and research questions.



Indicator 4: Percentage of records where the area of the polygon is within 5% of the area reported

The area (km²) reported for a protected area may sometimes differ from the area of the boundary polygon provided, indicating a discrepancy within the information submitted. This indicator shows the percentage of records where the area of the polygon is within 5% of the area reported. The threshold allows for differences due to projections and software used for calculating the GIS area.

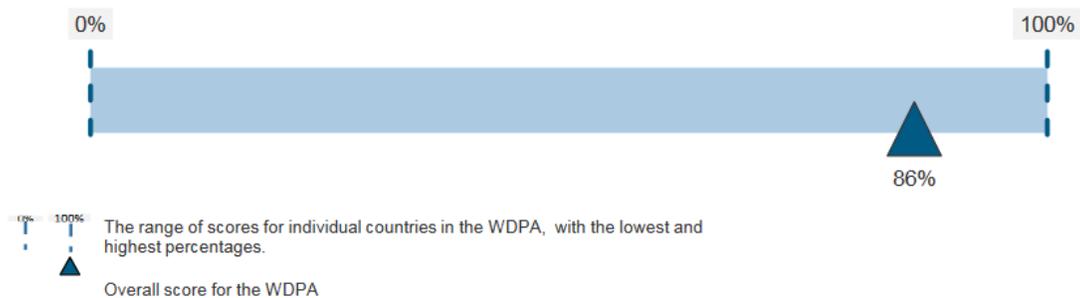


Figure 4.3. Data quality indicators for the June 2019 WDPA.

5. Using the WDPA and OECM database

Although the OECM database will not be publicly available until the end of 2019, its uses are likely to mirror those of the WDPA. The WDPA is used by a wide range of groups including scientists, NGOs, private sector organizations and international bodies. The WDPA is also fundamental for fulfilling several global reporting mechanisms, developing indicators and tracking progress towards protected area targets (Box 5.1). This is recognised through a number of policy mandates upon which the global community has agreed (see [Appendix 6](#)). This section provides guidance on how to access, cite and use the WDPA.

Box 5.1. Use of the WDPA for selected global reporting mechanisms and periodic reports

- The **UN List of Protected Areas** is the only global list of protected areas recognised by governments and mandated by the UN. It is produced by UNEP-WCMC in collaboration with governments and IUCN. The latest UN List of protected areas has an additional focus on management effectiveness, and is available online at: <https://protectedplanet.net/c/united-nations-list-of-protected-areas/united-nations-list-of-protected-areas-2018>
- **UN Sustainable Development Goals (SDGs)**: WDPA statistics are used to report on three targets under Goals 14 (Life below Water) and 15 (Life on Land) of the SDGs. More information is available at: <https://sustainabledevelopment.un.org/index.php?menu=1300>
- **CBD Global Biodiversity Outlook**: This is a summary of the status of biological diversity, and an analysis of the steps being taken by the global community to ensure that biodiversity is conserved and used sustainably. It is published by the CBD Secretariat and available at: www.cbd.int/gbo/
- **UN Environment Global Environment Outlook**: UNEP's flagship series of reports, the Global Environment Outlook (GEO), keeps the state, trends and outlook of the world's environment under review. <http://www.unep.org/geo/>
- **Protected Planet Reports**: The two-yearly global Protected Planet Report reviews progress towards the achievement of the protected area targets of the CBD, SDGs, and other relevant international agreements. Regional and national Protected Planet Reports are also included in the series. From 2018, the global Protected Planet Report is made available as a dynamic, online report, available at: <https://livereport.protectedplanet.net>
- The **Global Reporting Initiative (GRI)** has pioneered and developed a comprehensive Sustainability Reporting Framework for the private sector that is widely used around the world. The GRI recommends use of the WDPA by companies to report on environmental performance indicators G4-EN11, G4-EN12 and G4-EN13. More information at: www.globalreporting.org

5.1. Accessing the data

The WDPa is made available online through the Protected Planet website (www.protectedplanet.net), where data can be both viewed and downloaded for non-commercial use in different formats. A new version of the WDPa is uploaded to the website and made accessible to users during the first week of each month. From late 2019, the OECM database will also be made available in this way.

Occasionally, data providers request that their data are not shared beyond the WDPa's managers. As of June 2019, the countries and territories to which such restrictions apply are China, the Russian Federation, Estonia, and Saint Helena, Ascension and Tristan da Cunha. Users of the WDPa are encouraged to seek advice from UNEP-WCMC if they are working on these countries and territories, and to consider collaborating with UNEP-WCMC if the public version of the WDPa is not sufficient to meet their needs.

5.2. Terms of Use

The use of the WDPa and OECM database data is subject to strict Terms of Use which are available online at <http://www.protectedplanet.net/terms>.

The WDPa and OECM database are free for download and use for non-commercial purposes from www.protectedplanet.net. Requests for commercial use of the WDPa should be referred to www.ibat-alliance.org. The Terms of use also describe the conditions under which the WDPa and other Protected Planet materials can be reproduced by third parties and how the use of the WDPa should be cited and the sources acknowledged.

For the avoidance of doubt, UNEP-WCMC reserves the right to determine whether a particular use of the WDPa or OECM database constitutes a commercial use or otherwise.

5.3. Citing the WDPa or OECM database

In accordance with the WDPa Terms of use, UNEP and IUCN ask that copies of any published analyses that use the WDPa or OECM database are submitted to UNEP-WCMC (protectedareas@unep-wcmc.org). This allows the Protected Planet team to track the use of the dataset, identify any issues highlighted in analyses and note areas where the WDPa or OECM database could be improved. The Protected Planet team also appreciates being contacted when potentially incorrect or missing data are noted by users. Although the team does not edit, remove or add data without the approval of the relevant data provider, they will prioritise contacting the data provider to discuss likely errors.

The following citation should always be clearly reproduced in any publication, presentation or analysis involving the WDPa or OECM database:

UNEP-WCMC and IUCN (year), Protected Planet: [insert name of component database: The World Database on Protected Areas (WDPA)/OECM Database] [On-line], [insert month/year of the version downloaded], Cambridge, UK: UNEP-WCMC and IUCN. Available at: www.protectedplanet.net.

The Protected Planet team also produces global statistics that can be accessed at the Protected Planet website. The correct citation for the WDPA or OECM database online statistics is:

UNEP-WCMC (year), [insert name of component database: The World Database on Protected Areas (WDPA)/OECM Database] statistics. Cambridge, UK: UNEP- WCMC. Accessed on: [insert day/month/year when the webpage was accessed].

For a full metadata sheet on the WDPA and OECM database see [Appendix 5](#).

5.4. Take-Down Policy

UNEP-WCMC operates a 'take-down' policy, such that if notified of a potential breach of copyright, or other reasonable notice of a possible violation (including but not limited to copyright, patent, intellectual property, trademark, confidentiality, data protection, obscenity, terrorism, defamation or libel), the complete document or dataset or relevant portion will be removed as quickly as possible pending further investigation. Where the grounds for complaint are considered to be valid, the complete document or dataset or relevant portion will be permanently withdrawn. A decision on whether the material may be made available again may take some time if it is necessary for UNEP-WCMC to seek the advice necessary to resolve the complaint.

The take down policy also applies in cases where UNEP-WCMC is notified that a site under the governance of indigenous peoples or local communities has been included in the WDPA without the free, prior and informed consent of the relevant stakeholders and rights holders.

Full details on how this process is managed are available in [Appendix 4](#).

5.5. Using the WDPA and OECM database for analyses

Using the WDPA or OECM database for research, developing indicators, and reporting usually requires processing the data in various ways. There is a risk of making incorrect assumptions or omitting important information in the processing stages. The following section is based on the advice most frequently sought from the Protected Planet team, as well as errors that have been made by users of the data. In this section, we flag some common misconceptions and assumptions made by those using the WDPA for both research purposes and decision-making. We also review known caveats and limitations associated with the data, and provide recommendations on how to accurately interpret the data.

It is highly recommended that all parties interested in using the WDPA or OECM database read these guidelines prior to using either database for analyses that will inform scientific conclusions or

decision-making. For any queries regarding use or steps for processing of the databases please contact the Protected Planet team at protectedareas@unep-wcmc.org.

5.5.1. Getting started

What is the purpose of my analysis?

This is a fundamental question for anyone intending to use either database for analysis. The purpose of the analysis will influence how the data should be processed, which attributes should be used, and which can be disregarded. For example, if the purpose is to analyse records within the boundaries of a given country or territory, the use of the ISO3 (country or territory code) field is recommended. However, this method may exclude transboundary sites, which can be identified by the presence of multiple ISO3 codes, separated by semi-colons (;), in the ISO3 field. Where transboundary sites occur, the portion falling within the country of interest should be extracted and included in the analysis.

Another valid approach is to extract all protected areas that overlap with a base layer of the relevant country. If taking this approach, users should ensure they use a base layer that covers both the terrestrial and marine extent of the country to avoid excluding marine protected areas within the country's jurisdiction.

The presence of point data (i.e. records lacking a defined boundary) can have a major impact on the results of some analyses. For example, if the purpose is to conduct a gap analysis for a given species, users should be aware that the results may vary greatly depending on whether points are excluded or included in the form of buffered points. The extent of this problem is also dependent on the proxy used to represent species distribution. Finer proxies are more likely to exacerbate the problems caused by protected areas or OECMs that do not have boundary data. Since some countries have many point records and others have none, the geography of interest will influence whether point data will be an issue for a given analysis.

Recommendations: A clearly defined aim is fundamental to scoping any analysis as it will have a major influence on how data from the WDPA or OECM database are processed. Any assumptions and caveats should be clearly documented when reporting results.

Database Size

The size of the WDPA can cause analyses to run slowly or even crash, particularly if the full database is used with insufficient computational resources.

Recommendations: A useful solution is to split the database into smaller portions in order to speed up the analysis, or select the attributes to be used and extract them from the original database. This will again depend on the questions users are seeking to answer and the type of analyses required. If running global geoprocessing tasks, it is recommended that you have a computer with at least 16GB RAM and ~50GB free space on your C Drive.

Choosing a version of the WDPa or OECM database

The WDPa and OECM database are snapshots of protected areas and OECMs at the time of their release. The global protected area and OECM networks are constantly changing, with sites and their attributes being added, removed and changed on a frequent basis.

Because of the way in which the WDPa is compiled (see [section 4](#)), there is usually a lag between a protected area becoming designated or proposed and it appearing in the WDPa. For this reason, it is possible that recently designated or proposed protected areas have not been included in the WDPa yet, or that some protected area boundaries may contradict those made available by other sources.

Users should be aware that the OECM database is in development and is not likely to be comprehensive for several years. This is partly because OECMs were not defined prior to November 2018, and partly because, in many cases, OECMs are likely to be existing measures contributing to conservation that are not yet recognised. This means that it may take countries a considerable amount of time to identify, map, and report their OECMs to the OECM database.

Recommendations: As the WDPa is constantly being modified and improved, the most recent version should always be used and cited in accordance with the WDPa Terms of Use (see [section 5.2](#)). Any analysis using the WDPa should clearly identify the version used. The same will be true of the OECM database once it is made publicly available.

Map Projections

The WDPa and OECM database are supplied in a geographic coordinate system: WGS84. The Mollweide projection is used to calculate the “GIS Area” (GIS_AREA) and “marine GIS area” (GIS_M_AREA) fields in the attribute table. When carrying out analysis of the WDPa or OECM database with other datasets, users need to decide upon a map projection or geographic coordinate system to use. The decision will partly depend on the nature of the analysis to be undertaken and partly on what other datasets are also to be used alongside the WDPa or OECM database.

Recommendations: As a general rule, for global analyses in which areas or percentage coverage are being calculated, it is best to use an equal area projection such as Mollweide. For analysis of distance (proximity analysis), an equidistant projection may be preferable. Note that any calculations of irregular features (e.g. coastline) will be strongly influenced by the scale at which the data being used were digitised. For any analyses at finer scales than global (e.g. regional or national), the appropriate projections to use will vary on a case-by-case basis and users should research the best coordinate system to use for the area of interest and scale of the study.

Points and polygons

Protected area and OECM spatial data are collected in the form of boundaries (polygon) wherever they are available, or as a single latitude and longitude coordinate (point) where boundary data are not available. The central point of each protected area is usually requested but this is not always possible, so users should not assume that all points in the WDPa or OECM database represent the

central point of a given protected area or OECM. In both the WDPA and OECM database, the two data types, points and polygons, are held in a single geodatabase as separate feature classes.

Recommendations: It is important that both data types are used in analyses as far as possible and appropriate. Since point datasets accounted for 9% of all the records in the WDPA in May 2019, excluding them from analyses involving any geography in which they occur will likely underestimate the extent of protected areas. Using point data in analyses presents challenges which are discussed in [section 5.5.2](#).

Raster or Vector Analysis

The WDPA and OECM database are vector databases. Any transformation of the databases, and decisions on whether to use vector or raster analysis techniques, will depend on the nature of the data to be overlaid with them, the aim of the research and the resources (particularly computational power and time) available.

Recommendations: If most or all of the other datasets are in raster format then a raster analysis might be the preferred option. In such cases, care must be taken to consider the cell size used when converting the WDPA/OECM database data to raster data. When vector data are converted to raster data they are generalized to each grid cell (which will have a pre-defined size based on the scale and scope of the analyses). Therefore any derived results will differ from those that would have resulted from using the WDPA in vector format.

5.5.2. Known issues

Spatial Accuracy

A map is a two-dimensional representation of a three-dimensional feature. Spatial data are therefore not exact representations of features on the Earth. The data in the WDPA and OECM database come from a wide range of sources, often using different scales and techniques to generate their data. This results in variation in accuracy and resolution. Although the Protected Planet team works with data providers to improve the quality of the data submitted, issues with spatial accuracy are inevitable and should be expected.

The accuracy of the spatial data is also greatly influenced by the references used to map areas in relation to administrative boundaries, coastlines or landscape features (e.g. rivers or lakes). Issues may also arise when the coordinate systems, geographic projections, and underlying metadata of two datasets displayed in a GIS interface are different or one of them is unknown.

Recommendations: These issues should be considered by any user visualising the WDPA or OECM database, or using the databases for spatial analyses, acknowledging that, as with any spatial data, there is a difference between what is represented in the map and the reality. Users should consider

the effect of geographic transformations and projections, and underlying metadata of both the data and the base-map before conducting an overlay interrogation of data or spatial analysis, or before making assumptions about spatial and positional accuracy. Some implications of these issues for protected area coverage analyses are discussed in Visconti et al. (2013).

Overlapping Protected Areas

There are many overlapping protected areas in the WDPA (Deguignet et al. 2017). These can be overlapping areas with different IUCN management categories or overlaps between national protected areas and designations under regional or international conventions. For example, the same geographical space might be a national park under national legislation but also a World Heritage site or a Ramsar site under international agreements. The boundaries for these might not coincide exactly but the area of overlap may still be considerable. This feature is due to the fact that one geography can be subject to several different legal instruments which each create their own designated areas.

Although protected areas and OECMs should not overlap, there may be cases where records in the OECM database overlap with records in the WDPA. When UNEP-WCMC combines these databases to generate coverage statistics, areas of overlap are treated as protected areas only to avoid double counting.

Recommendations: When calculating coverage statistics using the WDPA or OECM database it is important to create a 'flat' layer which contains no overlaps to ensure that there is no double counting of protection. This can be done using a variety of GIS software tools. The parameters of the dissolve function will depend on the purpose of the analyses. During the dissolve process, attribute information will be lost.

Point Data

Wherever possible within the WDPA and OECM database, point data are being replaced with boundary (polygon) data through engagement with data providers. In some cases, points correspond to small protected areas or OECMs such as protected trees, nesting sites, rocks, cave entrances, tufa springs etc. In other cases the points are coordinates representing a larger area where for various reasons a polygon does not exist.

The use of points to conduct spatial analyses is problematic and carries a number of issues. The key issue is that there is no way of ascertaining the shape of a protected area or OECM based on a point location. Therefore the limitations of using points, including overlaying them with other datasets, should be accounted for and acknowledged when results are reported.

Recommendations: Where a spatial analysis is to be undertaken, any decision to use or not use point data needs to be clearly stated as it will influence the results. Exclusion of points from the analysis will likely result in underestimation of the area protected, while inclusion of points through a generalized spatial buffering approach is more likely to conserve the total area protected, but will introduce uncertainty in the spatial location of the areas protected. If the area of a point feature has

not been reported, it may be best to exclude it. To do this, users should remove points where the 'REP_AREA' is zero. The remaining points can be buffered by calculating the radius of a circle proportional to the reported area of the site using GIS tools. This is only one option however, and a case-specific approach should be taken. Another option, for example, is to apply a set buffer size to points with no reported area. To ensure accuracy, geodesic buffers should be used. A buffered point dataset can be combined with polygon data. For more information on the magnitude of inaccuracies caused by point data, see Visconti et al. (2013). Buffered points have been used in a number of publications, notably the 2018 Protected Planet Report (UNEP-WCMC, IUCN and NGS 2018) and recent scientific publications (e.g. Venter et al. 2014, Butchart et al. 2015).

Marine Protected Areas

The 'Marine' field provides an indication of whether a protected area or OECM is located entirely or partially in the marine environment. A value of '0' indicates that there is very little to no marine component, '1' indicates that the site has substantial marine and terrestrial components and '2' indicates that there is very little to no terrestrial component. These values are assigned by UNEP-WCMC using a geospatial analysis. Because the base layer used by UNEP-WCMC may not always match precisely with the GIS boundaries of protected areas and OECMs, percentage thresholds are used to assign the values. These percentages are derived from the GIS_AREA (total polygon area) and GIS_M_AREA (area of the polygon that overlaps with the marine part of the base layer) fields. Where 10% or less of a polygon's area overlaps with the marine part of the base layer, the protected area or OECM is considered to be predominantly terrestrial and assigned a value of '0'. If the overlap is more than 10% and less than 90%, the protected area or OECM is considered to be part marine and part terrestrial and assigned a value of '1'. Where the overlap is 90% or more, the protected area or OECM is considered to be predominantly marine and assigned a value of '2'.

Since this methodology has limitations, the MARINE field should be interpreted as indicative only. When working with the WDPA at national or sub-national level, users are encouraged to use base maps of an appropriate scale to determine whether a given site has a marine component.

For points, thresholds are not used, and values are assigned based on whether the point is located in the terrestrial or marine part of the base map. For this reason, the value '1' is not used for points.

The 'Marine Reported Area' (REP_M_AREA) field specifies the area of the marine component of the site as reported by the data provider. This field is the same value as the 'Reported Area' (REP_AREA) when the protected area is totally in the marine realm. The GIS Marine Area field (GIS_M_AREA) is calculated using a modified version of the world vector shoreline (Brooks et al. 2016a; Brooks et al. 2016b). However, the accuracy of this method is dependent upon the quality of the protected area or OECM boundary.

Recommendation: The Protected Planet team recommends using an intersection with a coastline, territorial sea, exclusive economic zone or other marine base layer of an appropriate scale in order to identify the marine area portions of protected areas that fall within the marine area of interest. For peer reviewed methodologies on how to calculate marine protected area coverage see Thomas

et al. (2014). For more information on the potential errors due to different resolution of marine biodiversity data and accuracy in protected area boundaries see Visconti et al. (2013).

Country boundaries and disputed territories

To identify the country in which a protected area or OECM is located, the PARENT_ISO3 field should be used. Dependent territories can be defined by their own ISO3 codes in the ISO3 field. There are a number of territories for which legal status is contested, not globally recognized, undergoing a process of recognition or simply unclear. These are known as disputed territories. Base layers may vary in the countries to which they assign disputed territories, so the base layer chosen for an analysis may affect its results.

It is important to note that the designations employed and the presentations of material on the Protected Planet website, and on the maps that are made available through it, do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations, UNEP, IUCN, WCMC or contributory organisations, editors or publishers concerning the legal status of any country, territory, city area or of its authorities, or concerning the delimitation of its frontiers or boundaries or the designation of its name, frontiers or boundaries.

Recommendations: When conducting any spatial analyses where coverage of the land and/or ocean is being assessed, whether administrative boundaries are used or not, the base layer used for the analyses should be cited. Results obtained when conducting spatial analyses may vary depending on which layers are used and which assumptions are made.

Transboundary Sites

Transboundary sites are those that cover multiple countries through transboundary agreements to establish a protected area under shared governance. Transboundary protected areas have multiple ISO3 codes in the ISO3 field, divided by semi colons (;). However, there may be other transboundary sites in the WDPA and OECM database that cannot be identified in this way. This may occur, for example, if neighbouring countries each provide boundaries for their portion of a site, but do not indicate that it is part of a large transboundary site.

Recommendations: Extracting data on a country of interest by querying the ISO3 field may exclude transboundary sites. Care should be taken to identify transboundary sites and include the relevant portions in the dataset being used. It is important to be aware that the area (REP_AREA or GIS_AREA) listed in the attribute table will be the total area of the transboundary site, rather than the area that falls within a given country. In order to count only the portion of a site which falls within a specific country, a clip or intersection can be carried out using a base layer containing national boundaries.

5.5.3. Using the attribute tables in the WDPA and OECM database

Attribute Completeness

Within both databases, information on the attributes of a record are given in a set of standard data fields. However, information gaps do exist, even among the minimum required attributes. This may happen for a number of reasons which include, but are not restricted to: information that has not been given by the data provider due to restrictions related to the dataset, old datasets that have not been updated in a long time due to lack of capacity or unresponsive data providers, or information is simply not known by the data provider.

Recommendations: If there is a need to use a field for selecting out only a subset of information it is important to check how well populated it is and its relevance to the analysis. The detailed description of the WDPA fields ([Appendix 1](#)) should be read carefully to understand the information stored in each field and what is required from data providers. [Table 3.1](#) offers a summary of these fields and their accepted values.

Difference between reported area and GIS area

There are five fields in the WDPA and OECM database that provide information on area in km². Three of these fields, REP_AREA (reported total area), REP_M_AREA (reported marine area) and NO_TK_AREA (no-take area), are populated by the data provider. The remaining two fields, GIS_AREA (total area) and GIS_M_AREA (marine area), are populated by UNEP-WCMC and are derived from calculations carried out using the Mollweide projection and GIS software (i.e. they are based on the area of the polygon provided by the data provider). GIS_AREA and GIS_M_AREA cannot be calculated for point data, and therefore these fields do not appear in the descriptive data associated with point records.

Although ideally the numbers in REP_AREA and GIS_AREA (and REP_M_AREA and GIS_M_AREA) should match, they may differ for a number of reasons. In some cases, there may be a lack of capacity to digitize a site's boundary in a way that fully aligns with its legally-defined borders. In other cases, the legally-defined boundaries and area may not match the reality on the ground.

Recommendations: Users should consider the purpose of their analysis in order to decide on whether to use the reported or GIS area fields. Use of reported areas instead of GIS areas may be appropriate if the user is interested in the area of a given site as defined by the data provider. For any purpose where the user is interested in the area of the spatial data, the GIS area will be most appropriate. Users should be aware that many sites overlap, and summing the values in any area field is almost never a suitable way of determining the collective area of a group of sites. Coverage calculations at any scale greater than a single site should be carried out after excluding overlaps.

IUCN Protected Area Management Categories

The WDPA stores the IUCN Protected Area Management Categories (recorded in field IUCN_CAT) for each of the protected areas where these categories are reported (these categories are not

applicable to the OECM database). Where an IUCN management category has been reported, it has been provided by the data provider, and is not assigned by the Protected Planet Team or IUCN. Approximately one third of sites do not have a reported IUCN management category. In the IUCN_CAT field, these sites have one of three values: 'Not Reported', 'Not Assigned' or 'Not Applicable'. The difference between these three values is explained in [Appendix 1](#).

As explained in [section 1.3](#), assigning IUCN management categories to protected areas, although recommended, is not a mandatory requirement for data providers. The IUCN management category cannot be used to identify the designation (e.g. National Park) of a given protected area. The DESIG or DESIG_ENG field should be consulted for this information. Instead, the IUCN management category refers to the management objectives of a site. Likewise, in cases where the IUCN management category has not been reported, it cannot be inferred from the designation listed.

If an IUCN management category has not been reported for a given protected area, this does not reveal any information on whether the site is well-managed, whether management objectives are in place, or whether the site is successful in producing positive outcomes for biodiversity. The absence of an IUCN management category also does not mean that the site does not meet the IUCN definition of a protected area.

Lastly, the categories are not intended to be hierarchical. For example, a category Ia protected area should not be assumed to be better managed, or have better outcomes for biodiversity, than a category VI protected area. The interpretation of IUCN Protected Area Management Categories might differ between countries and therefore comparisons between countries should be undertaken with caution. However, the use of IUCN management categories for comparisons across countries is likely to be more reliable than the use of designations.

Recommendations: When grouping data according to IUCN management category, users are advised not to exclude any categories unless there is a clear reason for doing so. Records where no IUCN management category has been provided (IUCN_CAT = 'Not Reported', 'Not Assigned' or 'Not Applicable') should be grouped into one or included in the analysis as three separate groups. If any subsets of the data are excluded, this should be clearly stated when the results are presented.

Status

The status field provides information on whether a site had been 'Designated' (legally/formally designated), 'Proposed' (proposed for legal/formal designation), or 'Established' (established through other effective means, e.g. customary law) at the time the data was last updated. This field also permits some additional values linked to particular international designations, for example 'Inscribed' for natural World Heritage Sites. The full list of values is provided in the attribute descriptions in [section 3.2](#) and [Appendix 1](#).

Recommendations: Users might want to decide to include legally-designated sites only in their analyses. In that case all sites where STATUS = 'Proposed', 'Established', and 'Not Reported' should be removed. It is important to note that the removal of proposed sites may exclude some sites that are delivering conservation on the ground. These might still be identified as proposed because of

the time lag between changes occurring and being reported to the databases, or because it may take several years for a proposed site to be legally-designated, even though it is operational. If users are interested in sites that meet the protected area or OECM definitions, regardless of legal status, they should not exclude 'Established' sites from their analyses.

Status Year

The 'Status Year' (STATUS_YR) field identifies the year in which a site's current status (STATUS field) came into effect. It does not refer to the year in which the data was updated in the WDPA or OECM database (this information is available in the Source Table).

If the Status is 'Proposed', the Status Year is the year the site was proposed. If the Status is 'Designated', the Status Year is the year the site was designated. Some geographies may have been under different forms of protection over time. It is important to note that the Status Year is only associated with the current designation and not the underlying geographic area. For example, if a Game Reserve designated in 1990 changed status to National Park in 2005, the status year for the National Park designation will be 2005 and the earlier Game Reserve will no longer be in the WDPA.

It is also important to note that not all records in the WDPA and OECM database have a status year defined. This occurs in old data that was submitted prior to the publication of the Protected Planet Data Standards, where the information is not available, or where the site predates any record of its establishment. This often occurs when an indigenous people or local community has been managing an area for generations or centuries.

Recommendations: The Status Year can be used to create graphs showing designation of protected areas or OECMs over time. It cannot be used to show historical change in protection over a geographic area, because degazetted sites are removed from the databases (Lewis et al. 2017). When the status year is not available, users can either exclude these records from analyses or treat them as a baseline, i.e. the first year of a temporal analysis (see UNEP-WCMC and IUCN 2016 for an example of the latter). Trends analysis is also possible by assigning a status year for a protected area based on pre-defined assumptions (see Butchart et al. 2015).

The Designation fields

There are three fields associated with a record's designation: Designation (DESIG), English Designation (DESIG_ENG), and Designation Type (DESIG_TYPE). These are defined in the field descriptions in [section 3.2](#) and [Appendix 1](#). The Designation and English Designation fields can be used to select particular designations in English or the original language (i.e. National Park or *Parque Nacional*). The DESIG_TYPE field can be used to distinguish between sites designated at a national level (e.g. national parks), under regional agreements (e.g. EU Nature Directives) and under international conventions and agreements (e.g. natural World Heritage sites). Sites where the DESIG_ENG is 'Not Applicable' are those where the site has been established through non-legal means (e.g. customary law) and is therefore not formally designated at any level. Depending on the purpose of the analysis, users may want to filter designations or designation types.

5.5.4. What the WDPA and OECM database can and cannot be used for

The WDPA and OECM database provides information on the location, area, designation type, and governance system of protected areas and OECMs of the world, among other associated tabular data. The dataset has proved to be important for multiple uses, including informing conservation planning exercises, and tracking progress towards international biodiversity targets.

However, unless combined with other types of data with ecological, physical, or social information, the WDPA and OECM database alone will not provide answers to some other important conservation questions. For example, the databases do not provide information on how well-managed sites are or whether biodiversity is being effectively protected (for OECMs, this information may be linked to from the SUPP_INFO field, but is not available in the database itself). The Global Database on Protected Area Management Effectiveness (GD-PAME) stores information on whether a protected area has been assessed for its management effectiveness. The GD-PAME is linked to the World Database on Protected Areas (WDPA) through the WDPA ID. Linking both databases provides some measure of progress toward meeting global targets for Protected Area Management Effectiveness (See UNEP-WCMC 2018; Coad et al. 2013).

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Appendix 1 WDPa and OECM database fields and source table description

This Appendix explains in detail each of the attributes used in the WDPa, OECM database, and associated source tables

Fields

1. WDPa ID

Field name: WDPa_ID

Level of requirement: Minimum

Provided by: UNEP-WCMC

Accepted Values	Description
<p><i>Number (Long Integer)</i></p> <p><i>12 characters</i></p> <p><i>The WDPa ID is generated by UNEP-WCMC.</i></p>	<p>The WDPa and OECM database use unique identification numbers to track protected areas and OECMs within the databases over time. UNEP-WCMC assigns a WDPa ID to each new protected area/OECM at its first listing. The WDPa ID is a unique, persistent, globally unique identifier. It is unique within and across the WDPa and OECM database (i.e. a site in the WDPa cannot have the same WDPa ID as a site in the OECM database). The WDPa ID is not unique to the geography occupied by a protected area or OECM, but to the designation currently occupying that area. There can be many overlapping forms of protection for any geographical area, and each designation will have a unique WDPa ID. The WDPa ID remains unchanged throughout the lifetime of a protected area or OECM. The WDPa may be shared by more than one polygon if they represent zones within the same protected area or OECM. In these cases, each polygon will have a different WDPa Parcel ID.</p> <p>Once a protected area or OECM has been assigned a WDPa ID, data providers should include the ID in all subsequent updates. For more information on WDPa IDs please contact protectedareas@unep-wcmc.org</p>

2. WDPa Parcel ID

Field name: WDPa_PID

Level of requirement: Minimum

Provided by: UNEP-WCMC

Accepted Values	Description
<p><i>Text (String)</i></p>	<p>Parcel IDs are used when a protected area or OECM has more than one zone (typically, zones are included in the WDPa when each has a different IUCN management</p>

Accepted Values	Description
<p>52 characters</p> <p>The WDPA_PID is generated by UNEP-WCMC.</p>	<p>category). All zones within a protected area or OECM will share a WDPA ID but will have a unique WDPA PID.</p> <p>The structure of the parcel ID is as follows: [WDPA_ID], [], Parcel Letter</p> <p>The parcel letters follow the English alphabet order. For example, the Mexican site Revillagigedo which has the WDPA_ID 555629385 has two parcels associated with it: parcel 555629385_A and parcel 555629385_B.</p>

3. Protected Area Definition

Field name: PA_DEF

Level of requirement: Minimum

Provided by: Data provider

This attribute indicates whether the site meets the IUCN definition of a protected area (WDPA only) or the CBD definition of an OECM (OECM database only).

Accepted Values	Description
1	WDPA only: the site meets the IUCN and CBD definitions of a protected area
0	OECM database only: The site meets the CBD definition of an 'other effective area-based conservation measure' (OECM)

4. Name

Field name: NAME

Level of requirement: Minimum

Provided by: Data provider

Accepted Values	Description
<p>Text (String)</p> <p>254 characters</p> <p>Legal name, or other name assigned by the</p>	<p>The name of a protected area or OECM is the name assigned to the site in legal texts or by its governance authority. The Name field is an open string field and any text is allowed, except for 'Unnamed', 'Unknown' or similar equivalents. Names do not have to be translated into English but text must be in Latin characters. Accented characters are accepted.</p>

Accepted Values	Description
<i>governance authority, in Latin characters</i>	

5. Original name

Field name: ORIG_NAME

Level of requirement: Minimum

Provided by: Data provider

Accepted Values	Description
<p><i>Text (String)</i></p> <p><i>254 characters</i></p> <p><i>Legal Names in Original Characters</i></p> <p><i>Examples:</i></p> <p>Great Barrier Reef; 小 苏干湖</p>	<p>The name of the protected area or OECM in any language supported by UTF 8 encoding. The Original Name field is an open string field and any text is allowed, except for 'Unnamed', 'Unknown' or similar equivalents.</p>

6. Designation

Field name: DESIG

Level of requirement: Minimum

Provided by: Data provider

Accepted Values	Description
<p><i>Text (String)</i></p> <p><i>254 characters</i></p> <p><i>Examples:</i></p> <p>Parque Nacional; Réserve Spéciale; Nature Reserve</p>	<p>The designation of the protected area or OECM in the native language (provided it is supported by UTF 8 encoding)</p>

7. English Designation

Field name: DESIG_ENG

Level of requirement: Complete

Provided by: Data provider

Accepted Values	Description
<i>Text field</i> <i>Examples:</i> National Park; Nature Reserve; Community Conserved Area	The designation of the protected area or OECM in English. This field contains the same value as the “DESIG” field where English is the original language.

8. Designation Type

Field name: DESIG_TYPE

Level of requirement: Minimum

Provided by: Data provider

Only one value can be stored in this field.

The designation type is the category or type of protected area as legally/officially designated or proposed. In cases where a protected area has not been legally/officially designated or proposed Not Applicable can be used.

Accepted Values	Description
National	Protected areas or OECMs designated or proposed at the national or sub-national level. <i>Example: for a legally-designated National Park, the DESIG_TYPE would be 'National'.</i>
Regional	Protected areas or OECMs designated or proposed at the regional level. <i>Example: for a site designated under the regional Natura 2000 convention, the DESIG_TYPE would be 'Regional'.</i>
International	Protected areas or OECMs designated or proposed through international conventions. <i>Example: for a World Heritage Site (natural or mixed), the DESIG_TYPE would be 'International'.</i>
Not Applicable	Any protected area or OECM that is not legally/officially designated or proposed, such as those established through customary law. This value can only be used if the value in the STATUS field is 'Established'.

9. IUCN Management Category

Field name: IUCN_CAT

Level of requirement: Complete

Provided by: Data provider

Only one value can be stored in this field.

Accepted Values	Description ¹
Ia	Description available here.
Ib	Description available here.
II	Description available here.
III	Description available here.
IV	Description available here.
V	Description available here.
VI	Description available here.
Not Reported	For protected areas where an IUCN management category is unknown and/or the data provider has not provided any related information.
Not Applicable	The IUCN Management Categories are considered to not be applicable to some designation types. In the WDPA, this currently applies only to World Heritage Sites and UNESCO MAB Reserves. In the OECM database, 'Not Applicable' is the only accepted value.
Not Assigned	The data provider has chosen not to use the IUCN Protected Area Management Categories.

10. International Criteria

Field name: INT_CRIT

Level of requirement: Minimum (for World Heritage Sites and Ramsar sites only)

Provided by: UNEP-WCMC

¹For a detailed description and application guidelines see Dudley (2008) with Stolton et al. (2013):
<https://portals.iucn.org/library/sites/library/files/documents/PAG-021.pdf>

Multiple values can be stored in this field.

Accepted Values	Description
<p><i>Text (String)</i></p> <p><i>20 characters</i></p>	<p>This field is only applied to UNESCO World Heritage Sites and Ramsar sites. It describes the criteria that qualify them for designation as either World Heritage or Ramsar sites.</p> <p>The World Heritage criteria are explained here.</p> <p>The Ramsar criteria are explained here.</p> <p>For all other sites, the value is 'Not Applicable'.</p>

11. Marine

Field name: MARINE

Level of requirement: Minimum

Provided by: UNEP-WCMC

This field describes whether a protected area or OECM falls totally or partially within the marine environment. See section [5.5.2](#) for details on how this field is calculated. Protected areas and OECMs encompassing brackish or tidal waters may be classified as marine or coastal, but freshwater areas are not classified as marine. Further information on marine protected areas can be found in the IUCN Marine Protected Area Guidelines².

Accepted Values	Description
0	The protected area or OECM is completely within the terrestrial and/or freshwater environments.
1	The protected area or OECM is partially within the marine environment and partially within the terrestrial (or freshwater) environments. This value is applicable to polygons only.
2	The protected area or OECM is completely within the marine environment.

²Day J., Dudley N., Hockings M., Holmes G., Laffoley D., Stolton S. & S. Wells, 2012. Guidelines for applying the IUCN Protected Area Management Categories to Marine Protected Areas. Gland, Switzerland: IUCN. 36pp.
http://www.iucn.org/about/work/programmes/gpap_home/gpap_capacity2/gpap_bpg/?11131/Guidelines-for-Appling-the-IUCN-Protected-Area-Management-Categories-to-Marine-Protected-Areas

12. Reported Marine Area (Km²)

Field name: REP_M_AREA

Level of requirement: Minimum

Provided by: Data provider

Accepted Values	Description
<i>Number (Double)</i>	The reported marine area provides the extent of the protected area or OECM that falls within the marine environment, in square kilometres. This information is supplied by the data provider. This can be as specified in the legal text for the site or if not specified this can be an estimate as reported by the data provider.

13. GIS Marine Area (Km²)

Field name: GIS_M_AREA

Level of requirement: Minimum

Provided by: UNEP-WCMC

Accepted Values	Description
<i>Number (Double)</i>	The marine extent of the protected area or OECM in square kilometres, calculated by UNEP-WCMC using the Mollweide projection. This field is not calculated for point data.

14. Reported Area (Km²)

Field name: REP_AREA

Level of requirement: Minimum

Provided by: Data provider

Accepted Values	Description
<i>Number (Long Integer)</i> <i>12 characters</i>	The Reported Area is the total protected area/OECM extent, including marine, freshwater and terrestrial areas, in square kilometres. This information is supplied by the data provider. It should always be greater than or equal to the Reported Marine Area field.

Accepted Values	Description
0	If the area is unknown, the value will be '0'.

15. GIS Area (Km²)

Field name: GIS_AREA

Level of requirement: Minimum

Provided by: UNEP-WCMC

Accepted Values	Description
<i>Number (Double)</i>	Protected area/OECM total extent, including marine, freshwater and terrestrial areas, in square kilometres. This field is calculated by UNEP-WCMC using the Mollweide projection. This field is not calculated for point data.

16. No Take

Field name: NO_TAKE

Level of requirement: Complete

Provided by: Data provider

Only one value can be stored in this field.

No-take means that the taking of living or dead natural resources, inclusive of all methods of fishing, extraction, dumping, dredging and construction, is strictly prohibited in all or part of a marine protected area or OECM. This is only applicable to protected areas or OECMs with a marine component. However, records where MARINE = 0 may have values other than 'Not Applicable' in the NO_TAKE field. Because a value of '0' in the MARINE field indicates that a protected area or OECM is entirely *or predominantly* terrestrial, some records with a value of '0' will have a proportionally small marine component, and therefore potentially a no-take area.

Accepted Values	Description
All	These values describe the extent of the marine protected area or OECM that is no-take. The accepted values are 'All', 'Part', or 'None'.
Part	
None	
Not Reported	For marine protected areas or OECMs where it is not known whether there is a no-take area, 'Not Reported' is listed.
Not Applicable	For terrestrial or freshwater protected areas and OECMs, 'Not Applicable' is listed.

17. No Take Area (Km²)

Field name: NO_TK_AREA

Level of requirement: Complete

Provided by: Data provider

The no-take area is the total extent of the protected area or OECM, in square kilometres, which is a no-take zone.

Accepted Values	Description
<i>Number (Double)</i>	The No Take Area is the area of the protected area or OECM, in square kilometres, that is within the marine environment and is a no-take zone. It is less than or equal to the Marine Reported Area field.
0	If the protected area or OECM is not marine, or if there is not a No Take Area, the value in this field will be '0'.

18. Status

Field name: STATUS

Level of requirement: Minimum

Provided by: Data provider

Only one value can be stored in this field.

The status year is the year that the current status of the protected area or OECM came into force, i.e. if the STATUS field reads 'Proposed', the STATUS_YR is the year in which it was proposed.

Accepted Values	Description
Proposed	The protected area or OECM is in the process of being legally/formally designated. It should be noted that sites may sometimes be functioning as protected areas or OECMs while proposed, as the legal processes of designation may take a long time.
Inscribed	Only applicable to protected areas designated under the World Heritage Convention.
Adopted	Only applicable to protected areas designated as Specially Protected Area of Marine Importance under the Barcelona Convention.
Designated	The protected area or OECM is recognized or dedicated through legal/formal means. Implies specific binding commitment to conservation in the long term.
Established	The protected area or OECM is recognized or dedicated through other effective means. Implies commitment to conservation outcomes in the long term, but not necessarily with legal or formal recognition.

19. Status Year

Field name: STATUS_YR

Level of requirement: Minimum

Provided by: Data provider

Only one value can be stored in this field.

Accepted Values	Description
<i>Number (Long Integer)</i> <i>12 characters</i>	The year in which the protected area or OECM was proposed, inscribed, adopted, designated or established, depending on the value in the STATUS field. The year cannot be in the future – it is always a year in the past or the current year.
0	If the status year has not been provided, a value of '0' is assigned. In some cases, '0' may indicate that the area has been functioning as a protected area since time immemorial, as is the case with some areas under the governance of indigenous peoples and local communities.

20. Governance Type

Field name: GOV_TYPE

Level of requirement: Complete

Provided by: Data provider

Only one value can be stored in this field.

The governance type describes the entity responsible and accountable for making decisions about how a protected area or OECM is managed. The accepted values in this field conform to the IUCN Governance types described in the IUCN Governance of Protected Areas guidelines³. IUCN distinguishes four broad protected area governance types, each with several sub-types. The 11 sub-types are the accepted values for this field.

Accepted Values	Description
Federal or national ministry or agency	Federal or national ministry or agency in charge.
Sub-national ministry or agency	Sub-national ministry or agency in charge
Government-delegated management	Management delegated to another organization (e.g. to a non-governmental organization)
Transboundary governance	Formal arrangements between one or more sovereign States or Territories.
Collaborative governance	When governance is through various ways in which diverse actors and institutions work together.
Joint governance	For example, pluralist board or other multi-party governing body.
Individual landowners	Under the governance of one person, family or trust.
Non-profit organisations	For example, non-governmental organizations or universities.
For-profit organisations	For example, corporate landowners.
Indigenous peoples	Under the governance of indigenous peoples
Local communities	Under the governance of local communities
Not Reported	Governance type is not known

³Borrini-Feyerabend et al. (2013). Governance of Protected Areas: From understanding to action. Best Practice Protected Area Guidelines Series No. 20, Gland, Switzerland: IUCN.
<https://portals.iucn.org/library/sites/library/files/documents/PAG-020.pdf>

21. Ownership Type

Field name: OWN_TYPE

Level of requirement: Complete

Provided by: Data provider

Only one value can be stored in this field.

Ownership type is often independent of governance and management structures. It is the individual, organization or group that holds legal ownership of the land or waters under management.

Accepted Values	Description
State	Owned by the state
Communal	Under communal ownership
Individual landowners	Owned by individual landowners
For-profit organisations	Owned by for-profit organisations
Non-profit organisations	Owned by non-profit organisations
Joint ownership	Under the joint ownership of more than one actor, representing more than one accepted value (e.g. non-profit organisations and for-profit organisations)
Multiple ownership	Different parts of the land and/or waters are owned by different actors, representing more than one accepted value
Contested	Ownership is contested
Not Reported	When ownership type is not known or given by the data provider

22. Management Authority

Field name: MANG_AUTH

Level of requirement: Complete

Provided by: Data provider

The management authority is the agency, organization, individual or group that manages the protected area or OECM. It is distinct from the governance type, which relates to who is responsible

for deciding on the activities of the management authority. This means that the governance type and management authority may not match. Both fields may also be different to the ownership type.

Accepted Values	Description
<p><i>Text (String)</i></p> <p><i>245 characters</i></p>	The Management Authority is an open string field and any text is allowed, except for 'Unnamed', 'Unknown' or similar equivalents – if unknown then 'Not Reported' should be listed instead.
Not Reported	If the Management Authority is not known or not given then this is listed as 'Not Reported'.

23. Management Plan

Field name: MANG_PLAN

Level of requirement: Complete

Provided by: Data provider

Accepted Values	Description
<p><i>Text (String)</i></p> <p><i>245 characters</i></p> <p><i>Examples:</i></p> <p>www.adias-uae.com/publications/Hawar-MP.pdf</p> <p>http://www.phoenixislands.org/pdf/2010-2014_FINAL_PIPA_Management_Plan.pdf</p>	If a site has a management plan or equivalent conservation planning mechanism in place, this information can be stored as a link (or reference) in this field.
Not Reported	If the Management Plan is not known or not given then this is listed as 'Not Reported'.

24. Supplementary Information (OECM database only)

Field name: SUPP_INFO

Level of requirement: Complete

Provided by: UNEP-WCMC

This field is present in the OECM database only, and not the WDPA. It provides a link or reference to information supporting the categorization of the site as an OECM.

Accepted Values	Description
<p><i>Text (String)</i></p> <p>245 characters</p>	If there is supporting information on the OECM, such as details of how it fulfils each element of the CBD OECM definition, this information can be stored as a link (or reference) in this field.
Not Reported	If supplementary information does not exist or is not provided, the value in this field will be 'Not Reported'.

25. Conservation objectives

Field name: CONS_OBJ

Level of requirement: Complete

Provided by: Data provider

This field is present in the OECM database only, and not the WDPA. It refers to the primacy of conservation objectives. The field provides an indication of whether an OECM is managed with biodiversity conservation as a primary objective, secondary objective, or without conservation as an explicit objective. It should not be considered binding, and the primacy of conservation objectives may change over time without affecting an OECM's status. A move to conservation as a primary objective may, however, coincide with an OECM being reclassified as a protected area, with the consent of the governance authority.

Accepted Values	Description
Primary	Biodiversity conservation is a primary management objective.
Secondary	Biodiversity conservation is a secondary management objective.
Ancillary	Biodiversity conservation is not a management objective, but is nevertheless a long-term and sustained outcome of management.

26. Verification

Field name: VERIF

Level of requirement: Minimum

Provided by: UNEP-WCMC

Accepted Values	Description
State Verified	The site has been verified by the country or territory's national government
Expert Verified	The site has been verified by an expert non-government source
Not Reported	Only applies to sites submitted to the WDPA before the introduction of this attribute. "Not Reported" indicates that the site has not been through a verification process.

27. Metadata ID

Field name: METADATAID

Level of requirement: Minimum

Provided by: UNEP-WCMC

Accepted Values	Description
<i>Number (Long Integer)</i> <i>12 characters</i>	The metadata ID is the number that links the WDPA/OECM database attribute table with the WDPA/OECM database source table.

28. Sub-national location

Field name: SUB_LOC

Level of requirement: Complete

Provided by: Data provider

Accepted Values	Description
<i>ISO 3166-2 sub-national code</i> <i>Examples:</i> AD-07; GB-CAM, GB-SFK	The Sub-National Location field is stored as an ISO 3166-2 sub-national code. A list of ISO 3166-2 codes is accessible here . If the protected area or OECM spans more than one sub-national location, multiple ISO-3166-2 codes can be separated by a semi-colon.
Not Reported	If the Sub-National Location is not given or not known then this is listed as 'Not Reported'.

29. Parent ISO3 code

Field name: PARENT_ISO3

Level of requirement: Minimum

Provided by: Data provider

Accepted Values	Description
<i>ISO 3166-1 Alpha-3 code</i> <i>Examples:</i> FRA ;; CHN ;; ARG	The Parent ISO3 code is the ISO 3166-1 Alpha-3 code of the country that the protected area/OECM jurisdictionally resides within. The ISO-3 character country code is defined by the International Organisation for Standardization (ISO). For more information on country codes see: https://www.iso.org/obp/ui

30. ISO3 Code

Field name: ISO3

Level of requirement: Minimum

Provided by: Data provider

Accepted Values	Description
<i>ISO 3166-1 Alpha-3 code</i> <i>Examples:</i> FRA ; CHN ; ARG; GUF	<p>The ISO3 field is the ISO 3166-1 Alpha-3 code of the country or territory that the protected area/OECM geographically resides within. The value in this field will only be different to that in the PARENT_ISO3 field if the protected area or OECM is located in a dependent territory of another country.</p> <p>For example the ISO3 code for French Guiana is GUF, and the Parent ISO3 code for GUF is FRA (France) as French Guiana is an overseas department and region of France.</p>

If the protected area is by designation a trans-boundary site (i.e. it is a collaborative designation by more than one country or territory) the PARENT_ISO3 and ISO3 fields will contain multiple ISO3 codes, separated by semi-colons (;) (e.g. "FRA;ESP" for a transboundary site that spans France and Spain).

WDPA Source Table

Both the WDPA and OECM database contain a source table. The format in both cases is as follows. Orange rows are removed from the source table before it is shared externally.

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 record in the WDPA or OECM database to the relevant source information in the Source Table.
2	Minimum	DATA_TITLE	Data Set Title	Text (string)	254	The title of the dataset e.g. Protected Areas of Ireland; OECMs of South Africa.
3	Minimum	RESP_PARTY	Responsible Party	Text (string)	254	The data provider, i.e. the organisation, national government, or other actor that claims ownership of the data or that is providing the data on behalf of their owner. 'Not Reported' is used when this information is not available (applies only to older data in need of update).
4	Minimum	RESP_EMAIL	Responsible Party Contact E-mail(s)	Text (string)	254	Contact e-mail address of the organisation listed as the responsible party which maintains the ownership of the data or that is providing the data on behalf of its owner. "Not Reported" is used when this information is not available (applies only to older data in need of update).
5	Minimum	VERIFIER	Verifying Party	Text (string)	254	The organisation, national government or other actor that has verified the data. For information submitted prior to the introduction of this attribute in March 2015 this field is assigned a value of 'None'.
6	Minimum	V_EMAIL	Verifying Party Contact Email(s)	Text (string)	254	Contact e-mail address of person(s) and organisation(s) responsible for verifying the data. For information submitted prior to the introduction of this attribute in March 2015 this field is assigned a value of 'None'.
7	Minimum	YEAR	Year	Text (string)	50	The year when the dataset was first submitted to the WDPA or OECM database. 'Not Reported' is used when these data are not available (applies only to older data in need of update).
8	Minimum	UPDATE_YR	Update Year	Text (string)	50	The year in which dataset was last updated in the WDPA or OECM database.

9	Minimum	LANGUAGE	Dataset Language	Text (string)	254	Language(s) used within the dataset. 'Not Reported' is used when these data are not available.
10	Minimum	CHAR_SET	Dataset Character Set	Text (string)	254	Full name of the character coding standard used in the dataset. 'Not Reported' is used when these data are not available.
11	Minimum	REF_SYSTEM	Coordinate System	Text (string)	254	Name and parameters of the coordinate system of the original dataset including, where applicable, datum, ellipsoid or projection. 'Not Reported' is used when these data are not available.
12	Complete	SCALE	Scale	Text (string)	254	The scale of the dataset used when the data was originally created (digitized, surveyed, etc.). The denominator of the representative fraction on a source map, for example on a scale of 1:150000 the denominator given should be 150000. 'Not Reported' is used when these data are not available.
13	Complete	LINEAGE	Lineage	Text (string)	254	Information about the creation, events, changes or transformations in the life of a dataset including the process used to create and maintain the dataset and associated dates. 'Not Reported' is used when these data are not available.
14	Complete	CITATION	Citation	Text (string)	254	Recommended text to be used when referencing the dataset 'Not Reported' is used when these data are not available.
15	Complete	DISCLAIMER	Disclaimer	Text (string)	254	Warnings/exceptions to use of the data. 'Not Reported' is used when these data are not available.

Appendix 2 WDPA/OECM database data contributor agreements

These documents are templates. The most up to date data contributor agreement (DCA) template is available from protectedareas@unep-wcmc.org.

Data Contributor Agreement for Governments

[Insert Ministry/Agency/Department

Address

Telephone Number

Email Address]

On behalf of *[insert Ministry/Agency/Department name]*, I/we the undersigned (the data provider) are providing the following dataset to UNEP-WCMC for integration into the World Database on Protected Areas (WDPA): *[insert name of dataset]*. This may include protected areas and/or other effective area-based conservation measures. The dataset includes spatial boundaries and attributes relating to *[insert name of country/region/etc.]*.

Brief description of the data (including the format of the data, number of polygons and points, and any other relevant information):

The WDPA is an aggregated dataset of the best available data from many sources. It is a joint product of UN Environment and IUCN, managed by UNEP-WCMC. It is used for multiple conservation purposes, as well as providing support to the Convention on Biological Diversity and the United Nations relating to environmental sustainability, and reporting on progress towards internationally-agreed environmental targets.

Unless otherwise stated, this dataset is being provided 'free of restrictions'¹. We, the undersigned, agree and understand that by providing data for inclusion in the WDPA it will be viewable and downloadable in accordance with the WDPA Terms and Conditions through websites operated by

UNEP-WCMC and IUCN, utilised for analyses, and re-distributed to third parties for use on other platforms⁴.

UNEP-WCMC will recognize and respect the intellectual property rights of the data provider and will maintain proper attribution to the Ministry/Agency/Department named above, and source information on the data as provided to UNEP-WCMC.

UNEP-WCMC will retain information on the name and contact details of the data provider (personal data) for the purposes of future correspondence, including queries relating to the data, and requests for updated data. UNEP-WCMC will not share personal data with third parties. UNEP-WCMC's privacy policy (<https://www.unep-wcmc.org/terms-and-conditions>) outlines in more detail how it implements relevant data protection legislation.

The designations of geographical entities in any dataset submitted to UNEP-WCMC or used by UNEP-WCMC 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.

I/we hereby give permission to UNEP-WCMC for the integration of these data into the WDPA.

Signature

Title and name

Date

⁴ UNEP-WCMC may accept data with restrictions. This includes data that is available for onward release but not for commercial use ("commercial use" means a) any use by, on behalf of, or to inform or assist the activities of, a commercial entity (an entity that operates 'for profit') or b) use by any individual or non-profit entity for the purposes of revenue generation), and data that is made available only to UNEP-WCMC, UN 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

Data Contributor Agreement for Non-government Entities

[Insert name of organisation/indigenous people/local community

Address

Telephone Number

Email Address]

On behalf of *[insert organisation/indigenous people/local community name]*, I/we the undersigned (the data provider) are providing the following dataset to UNEP-WCMC for integration into the World Database on Protected Areas (WDPA) and/or ICCA (territories and areas conserved by indigenous peoples and local communities) Registry: *[insert name of dataset]*. This may include protected areas and/or other effective area-based conservation measures, and/or ICCAs aligning with neither of these categories (included in the ICCA Registry only). The dataset includes spatial boundaries and attributes relating to *[insert name of country/region/etc.]*.

Brief description of the data (including the format of the data, number of polygons and points, and any other relevant information. Please also indicate whether data is being provided for the WDPA, ICCA Registry, or both):

The WDPA is an aggregated dataset of the best available data from many sources. It is a joint product of UN Environment and IUCN, managed by UNEP-WCMC. It is used for multiple conservation purposes, as well as providing support to the Convention on Biological Diversity and the United Nations relating to environmental sustainability, and reporting on progress towards internationally-agreed environmental targets. The database is supplemented by the ICCA Registry, which stores additional information on territories and areas conserved by indigenous peoples and local communities.

Unless otherwise stated, this dataset is being provided 'free of restrictions'⁵. We, the undersigned, agree and understand that by providing data for inclusion in the WDPA it will be viewable and

⁵ UNEP-WCMC may accept data with restrictions. This includes data that is available for onward release but not for commercial use ("commercial use" means a) any use by, on behalf of, or to inform or assist the activities of, a commercial entity (an entity that operates 'for profit') or b) use by any individual or non-profit entity for the purposes of revenue generation), and data that is made available only to UNEP-WCMC, UN

downloadable in accordance with the WDPA Terms and Conditions through websites operated by UNEP-WCMC and IUCN, utilised for analyses, and re-distributed to third parties for use on other platforms.

I/We confirm that I/we have the rights, permissions and authority to release this dataset to UNEP-WCMC.

The data provider has the permission of relevant stakeholders and rights-holders to share the dataset with UNEP-WCMC. Where relevant, the data provider shares the dataset with UNEP-WCMC with the free, prior and informed consent of communities and/or indigenous peoples involved in the management, governance or ownership of the sites described in the dataset. The data provider has made all reasonable efforts to ensure the accuracy of the dataset.

If the dataset is found to have been provided without the permission of the relevant stakeholders and rights-holders, it will be removed from the WDPA and/or ICCA Registry with immediate effect.

UNEP-WCMC will retain information on the name and contact details of the data provider (personal data) for the purposes of future correspondence, including queries relating to the data, and requests for updated data. UNEP-WCMC will not share personal data with third parties. UNEP-WCMC's privacy policy (<https://www.unep-wcmc.org/terms-and-conditions>) outlines in more detail how it implements relevant data protection legislation.

The designations of geographical entities in any dataset submitted to UNEP-WCMC or used by UNEP-WCMC 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.

UNEP-WCMC will recognize and respect the intellectual property rights of the data provider and will maintain proper attribution to the organisation/indigenous people/local community named above, and source information on the data as provided to UNEP-WCMC.

UNEP-WCMC reserves the right to seek verification of the dataset from its partners, and to remove or withhold from the WDPA and/or ICCA Registry any data that cannot be verified.

I/we hereby give permission to UNEP-WCMC for the integration of these data into the WDPA and/or ICCA Registry.

Signature
Title and name
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 Basic quality checks on the WDPA and OECM database

The Protected Planet team performs a series of basic quality checks on the datasets received from data providers. This is to ensure that datasets comply with the Protected Planet Data Standards described in [section 3](#) of this manual. The final dataset is shared with the data provider for their approval before being added to the WDPA/ OECM database.

DATASET DESCRIPTION:		
GENERAL QUALITY CHECKS		RESULTS
Check dataset and repair geometry.		
Transform dataset to WGS84.		
Check all sites are within the terrestrial and marine boundaries of the country/territory for which the dataset was sent.		
Check if there are sites within overseas territories.		
Make sure data provider confirms which sites meet the IUCN definition of protected areas or CBD definition of an OECM.		
Check if zones or parcels are correctly labelled.		
Check for polygons that should be merged.		
Check if WDPA IDs and WDPA PIDs are provided.		
Reconcile with previous WDPA IDs and WDPA PIDs.		
Match dataset to WDPA/OECM database schema.		
Check sites to be removed from WDPA. Check that no IUCN Green List sites, or sites from other data-providers, have been erroneously removed.		
Calculate GIS areas.		
Ensure dataset complies with Protected Planet Data Standards: Check all attributes are complete including all fixed values are correctly spelled. Do basic quality checks for all minimum and complete attributes (see below).		
Send final formatted dataset to data provider to get their final approval.		
Send dataset to staff in charge of merging all countries data into the WDPA and OECM database and performing final quality check before release.		
QUALITY CHECKS FOR ATTRIBUTES		RESULTS
WDPA PID	Check there are no points and polygons using the same WDPA PID.	
Protected Area Definition	Check a fixed value is assigned.	
Name: Name and Original Name	Check 'Name' is complete.	
	Check for duplicate names.	
	Check name is spelt out in full.	
	Check characters are not corrupted.	
Designation: designation and English designation	Check completeness.	
	Check for proper case.	
	Check it is not plural.	
	Check characters are not corrupted.	
Designation Type	Check a fixed value is assigned.	
IUCN Management Category	Check a fixed value is assigned.	

International Criteria	Check a fixed value is assigned.	
Marine	Check a fixed value is assigned.	
	Check if the value assigned is consistent with the data provided and geographic location.	
Reported Marine Area	Check area is in square kilometres.	
	Check not larger than Reported Area.	
Reported Area	Check area is in square kilometres.	
	Compare to GIS area.	
No Take	Check a fixed value is assigned.	
No Take Area	Check value is consistent with 'No take'.	
	Check area is in square kilometres.	
Status	Check a fixed value is assigned.	
Status Year	Check completeness.	
	Check displayed as year not date.	
Governance Type	Check a fixed value is assigned.	
Ownership type	Check a fixed value is assigned.	
Management authority	Check completeness.	
Management plan	Check either link or reference is provided.	
Country codes: ISO3, PARENT ISO3 and Sub-national location	Check ISO3 and PARENT ISO3 codes are correct and the protected area's location is consistent with the codes.	

Appendix 4 Take-down policy

UNEP-WCMC operates a 'take-down' policy, such that if notified of a potential breach of copyright, or other reasonable notice of a possible violation (including but not limited to copyright, patent, intellectual property, trademark, confidentiality, data protection, obscenity, terrorism, defamation or libel), the complete document or dataset or relevant portion will be removed as quickly as possible pending further investigation. Where the grounds for complaint are considered to be valid, the complete document or dataset or relevant portion will be permanently withdrawn. A decision on whether the material may be made available again may take some time if it is necessary for UNEP-WCMC to seek the advice necessary to resolve the complaint.

How to Notify UNEP-WCMC of a Take-Down Request:

If you have discovered material in the WDPA or OECM database to which any of the above violations apply, please contact protectedareas@unep-wcmc.org providing the following information:

- Your contact details.
- The details of the dataset or relevant portion of said dataset.
- The nature of your complaint or concern.
- An assertion that your complaint is made in good faith and is accurate.
- If you are complaining about breach of your own copyright or intellectual property, please state, under penalty of perjury, that you are the rights owner or are authorized to act for the rights owner.

The following Procedure will then be invoked:

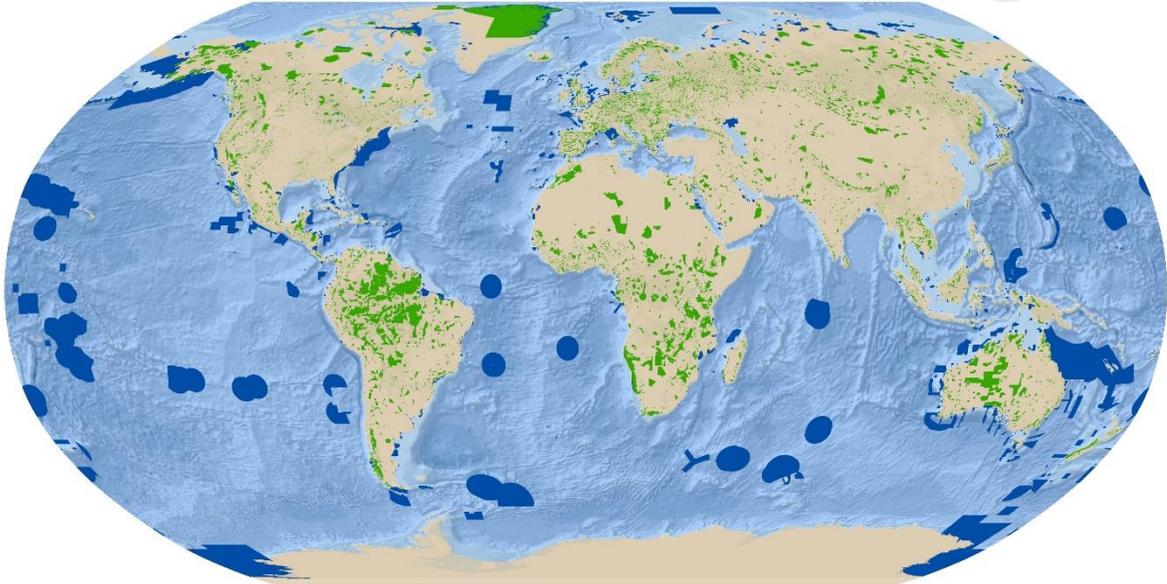
1. UNEP-WCMC will acknowledge receipt of your complaint by email or letter and will make an initial assessment of the validity and plausibility of the complaint, possibly taking legal advice.
2. In the first instance, take-down requests will be reviewed by UNEP-WCMC. If the initial assessment is found to be potentially valid and requiring further consideration or legal advice, the material will be temporarily removed from the WDPA, OECM database or associated web portal pending an agreed solution.
3. Where relevant the contributor will be notified that the material is subject to a complaint, under what allegations, and will be encouraged to assuage the complaints concerned.

Outcomes

On completion of the take-down procedure outlined above, one of three outcomes will result:

- If the complaint is not validated, the dataset or relevant portions will not be changed and the dataset will be reinstated in the WDPA or OECM database and through associated web portals.
- If the complaint is valid and an agreed upon solution results in changes/updates to the material in question, the material will be reinstated in the WDPA or OECM database and through associated web portals after the necessary changes/updates have been made.
- If the complaint is valid and an agreed upon solution cannot be reached the material will be permanently removed from the WDPA, OECM database, and associated web portals.

Appendix 5 WDPA and OECM database metadata



<p>Description:</p>	<p>The World Database on Protected Areas (WDPA) and other effective area-based conservation measures (OECM) database are joint products of UNEP and IUCN, managed by UNEP-WCMC and the IUCN working with governments, communities and collaborating partners.</p> <p>The databases store information on the global distribution of terrestrial and marine protected areas and OECMs.</p> <p>The databases contain protected areas and OECMs designated at the national level and under regional and international conventions and agreements, in addition to those not legally designated. International designations include those under the Ramsar Convention, the World Heritage Convention (United Nations Educational, Scientific and Cultural Organization, UNESCO), and sites under the UNESCO's Man and the Biosphere Programme (MAB). Regional agreements include sites under the Natura 2000 network (European), as well as Marine Protected Areas designated under regional conventions such as the Convention for the Protection of the marine Environment of the North-East Atlantic (OSPAR) and many others.</p>
<p>Citation(s):</p>	<p>UNEP-WCMC and IUCN (year), Protected Planet: [insert name of component database; The World Database on Protected Areas (WDPA)/Database on other effective area-based conservation measures] [On-line], [insert month/year of the version downloaded], Cambridge, UK: UNEP-WCMC and IUCN. Available at: www.protectedplanet.net.</p> <p>Other Cited References</p> <p>UNEP-WCMC (2019). 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</p>

	2018). UNEP-WCMC 2018 United Nations List of Protected Areas. Supplement on protected area management effectiveness. UNEP-WCMC: Cambridge (UK)
Temporal range:	<p>The WDPA was created for the first time in 1981. It stores data on protected areas around the world from their year of creation. This currently ranges from 1819 to 2019.</p> <p>The OECM database was created for the first time in 2019. It stores data on other effective area-based conservation measures around the world from their year of establishment. The database is in development.</p>
Geographical range:	Global: marine and terrestrial.
Supplementary information (e.g., attribute table):	<p>A User Manual (UNEP-WCMC 2019) is provided with the dataset which includes a data dictionary and guide to interpreting the WDPA and OECM database fields. The WDPA can be viewed at, and downloaded from, Protected Planet (www.protectedplanet.net). From late-2019, the OECM database will be made available in the same way.</p> <p>A factsheet providing background information relevant to protected areas can be found at http://biodiversitya-z.org/content/protected-areas. The methodology used to calculate protected area coverage is available here: https://protectedplanet.net/c/calculating-protected-area-coverage</p>
Purpose of creation:	<p>The WDPA has been in existence since 1981, and is the most comprehensive global database on terrestrial and marine protected areas, comprising both spatial data (i.e. boundaries) and attribute data (i.e. descriptive information). The mandate of the database dates from 1959 when the United Nations (UN) Economic and Social Council called for a list of national parks and equivalent reserves in recognition that they <i>'are valuable for economic and scientific reasons and also as areas for the future preservation of fauna and flora and geologic structures in their natural state'</i> Resolution 713 (XXVIII). The first UN List of Protected Areas, as it became known, was subsequently published in 1962, and subsequently evolved into the WDPA. The database is also used to generate indicators to track progress towards the Convention on Biological Diversity Aichi Biodiversity Target 11 and UN Sustainable Development Goals 14 and 15.</p> <p>The OECM database was created in 2019 in response to a Convention on Biological Diversity mandate (CBD/COP/DEC/14/8).</p>
Creation methodology:	Data for protected area records in the WDPA have been obtained from nearly 500 sources. Along with information on the data verifier, these sources are listed in the source table ("WDPA_Source_Table") that is included with each monthly release.

	<p>Data for protected areas designated under international agreements and conventions are often sourced from the relevant convention secretariats. Data for national-level protected areas have been sourced from national authorities wherever possible. Information may also be supplemented by data from other agencies, organisations or individuals. All data in the WDPA have been verified either by the national authorities or by non-government expert partners, with the exception of some data included before the verification process was established.</p> <p>The OECM database is in development and will be compiled in the same way as the WDPA.</p> <p>For detailed information on the WDPA and OECM database fields and verification processes the User Manual (UNEP-WCMC 2019) should be consulted.</p>
Lineage (versioning):	<p>Note that the map shown in the metadata sheet is using the May 2019 release. www.protectedplanet.net displays the latest version of the dataset.</p>
Category:	Protected Areas, other effective area-based conservation measures.
Keywords:	Protected Areas, Areas of Biodiversity Importance, other effective area-based conservation measures, OECMs
Similar datasets:	None
Quality, limitation(s), fitness for use:	<p>The WDPA dataset is not necessarily a complete representation of all the protected areas which have been designated globally; the quality of the WDPA depends on the accessibility of accurate, comprehensive, up-to-date protected areas information from data holders. Thus, mismatches between on the ground protected areas and protected areas in the WDPA may be due to a number of reasons that include but are not restricted to: new data being quality checked to fit the WDPA standards, data not submitted to the WDPA yet, new protected area boundaries not being accurately digitised or simply not yet being digitised. In many areas, several (up to eight) designations overlap; it is hence necessary to dissolve the dataset before any surface area calculations are carried out. Details on the common issues and quality limitations of the WDPA are described in detail in the User Manual (UNEP-WCMC 2019).</p> <p>The OECM database is in development and cannot yet be considered to be a comprehensive representation of OECMs globally. Populating the database will require a concerted effort and long-term collaborations with governments and other data-providers.</p>

Maintenance frequency:	Data are updated on a monthly basis.		
Main access/use constraint:	<p>UNEP-WCMC WDPA/OECM database Data License. No commercial use (“commercial use” means a) any use by, on behalf of, or to inform or assist the activities of, a commercial entity (an entity that operates ‘for profit’) or b) use by any individual or non-profit entity for the purposes of revenue generation), no sub-licensing or redistribution on WDPA/OECM database data. WDPA/OECM database Materials in whole or in part may be published, including on-line, providing (a) the WDPA/OECM database data are not downloadable and (b) the proper attribution is clearly visible. For full details see: http://www.protectedplanet.net/terms.</p> <p>Entities interested in commercial use should consult the IBAT website: https://www.ibat-alliance.org/</p>		
Other access/use constraints:	None		
Contact organisation:	UN Environment World Conservation Monitoring Centre		
Organisation type:	Custodian	Acronym:	UNEP-WCMC
Name	Marine Deguignet	Position:	Programme Officer: WDPA Manager
City:	Cambridge	Country:	United Kingdom
E-mail	protectedareas@unep-wcmc.org		
Web site:	www.unep-wcmc.org		
Main format:	File geodatabase (point, polygon; .fgdb)	Other format(s):	Keyhole Markup Language (.kmz); tabular – comma-separated values (.csv)
Distribution format:	File geodatabase (.fgdb), KML (.kmz), shapefile (.shp), tabular (.csv)	Dataset size (uncompressed):	WDPA: 1.44 Gb (file geodatabase)

Webpage and/or download:	http://www.protectedplanet.net/		
Other webpage:	Not applicable		
Web map service:	http://ec2-54-204-216-109.compute-1.amazonaws.com:6080/arcgis/rest/services/wdpa/wdpa/MapServer		
Resolution, scale:	Not applicable	Reference system:	WGS 1984
West bounding:	-180	East bounding:	180
South bounding:	-90	North bounding:	90
Factsheet:	Yes	Metadata standard:	UNEP-WCMC Specific

Appendix 6 List of selected policy references to the WDPA and OECM database

The WDPA is mentioned in many policy decisions as well as in IUCN Congress recommendations and resolutions. Below is a selected number of these references.

United Nations Economic and Social Council

713 (XXVII). Establishment by the Secretary-General of the United Nations of a list of national parks and equivalent reserves.

The Economic and Social Council,

Noting that national parks and equivalent reserves have been established in most countries which are Members of the United Nations or members of the specialized agencies, and that they contribute to the inspiration, culture and welfare of mankind,

Believing that these national parks are valuable for economic and scientific reasons and also as areas for the future preservation of fauna and flora and geologic structures in their natural state,

1. *Requests* the Secretary-General to establish, in co-operation with United Nations Educational, Scientific and Cultural Organization, the Food and Agriculture Organization of the United Nations, and other interested specialized agencies, a list of national parks and equivalent reserves, with a brief description of each, for consideration by the Council at its twenty-ninth session, together with his recommendations for maintaining and developing the list on a current basis and for its distribution;
2. *Invites* State Members of the United Nations or members of the specialized agencies to transmit to the Secretary-General a description of the areas they desire to have internationally registered as national parks or equivalent reserves;
3. *Furthermore invites* the International Union for Conservation of Nature and Natural Resources and other interested non-governmental organizations in consultative status with the Council to assist the Secretary-General, upon his request, in the preparation of the proposed list.

1063rd plenary meeting, 22 April 1959.

Decision 22/1/III of the UNEP Governing Council in February 2003 to update and renew the 1959 The Economic and Social Council (ECOSOC) resolution.

Specifically, the Council:

"[Agreed] that the United Nations Economic and Social Council resolution of 1959, subsequently endorsed by the General Assembly in 1962, needs to be renewed and updated."

Convention on Biological Diversity (CBD), selected decisions relevant to the WDPA and OECM database

CBD COP VII/28, 2004 “Invites the World Conservation Monitoring Centre of the United Nations Environment Programme, working with international organizations, to further develop the World Database on Protected Areas in order to assist the monitoring towards the overall objective of the decision on protected areas, and urges Parties, other Governments and relevant organizations to provide up-to-date information for the database.” [This is further elaborated in the annexed Programme of Work on Protected Areas].

COP VIII/24, 2006 “Notes the importance of the World Database on Protected Areas as a tool to assist the monitoring of progress towards achieving the targets of the Programme of Work on Protected Areas, and invites the World Conservation Monitoring Centre of the United Nations Environment Programme, the World Commission on Protected Areas of the International Union for Conservation of Nature, and their collaborators to further develop access to the database and information management including tools for data sharing and exchange.”

COP IX/18, 2008 “Encourages Parties to develop national or regional data networks in order to facilitate the exchange of, and access to information..., including providing information to the WDPA”

COP X/31, 2010 “Encourages Parties to share and update relevant information on their protected areas system with the World Database on Protected Areas”

COP X/31, 2010 “The COP... invites Parties, taking into account the target for goal 1.4 of the programme of work, which calls for all protected areas to have effective management in existence by 2012 using participatory and science-based site planning processes with full and effective participation of stakeholders, and noting that to assess the effectiveness of the management, specific indicators may also be needed to: (a) Continue to expand and institutionalize management effectiveness assessments to work towards assessing 60 per cent of the total area of protected areas by 2015 using various national and regional tools and report the results into the global database on management effectiveness maintained by the World Conservation Monitoring Centre of the United Nations Environment Programme (UNEP WCMC)”

COP XI/24, 2012 “Invites the UNEP World Conservation Monitoring Centre and its partners, including the World Commission on Protected Areas of the International Union for Conservation of Nature (IUCN), to continue to report progress towards achieving Aichi Biodiversity Target 11 and related targets through the Protected Planet Report”.

COP XIII/2, 2016: “Invites the International Union for Conservation of Nature and the World Conservation Monitoring Centre to work with Parties and other Governments to update the World Database on Protected Areas and also to contribute to the assessment of progress in the implementation of Aichi Biodiversity Target 11”.

COP XIV/8, 2018 “Encourages Parties and invites other Governments, relevant organizations, in collaboration with indigenous peoples and local communities, to apply the scientific and technical advice on other effective area-based conservation measures contained in annex III... including by... submitting data on other effective area-based conservation measures to the United Nations Environment Programme’s World Conservation Monitoring Centre for inclusion in the World Database on Protected Areas”.

COP XIV/8, 2018 “Invites the International Union for Conservation of Nature and the United Nations Environment Programme’s World Conservation Monitoring Centre to expand the World Database on Protected Areas by providing a section on other effective area-based conservation measures”.

IUCN World Conservation Congresses (WCC)

(3rd, Bangkok, Thailand, 2004)

- Resolutions
 - **3.012** Governance of natural resources for conservation and sustainable development [6d] “Requests the IUCN WCPA...to offer suggestions to UNEP-WCMC for more complete reporting of governance types in WDPA and UN List.
 - **3.049** Community Conserved Areas [1] Recognizes and affirms the conservation significance of CCAs....[3] Requests the WCPA to: (b) guide relevant bodies in the revisions to, or updating of, the WDPA, UN List, State of the World’s PAs and any other databases....

(4th, Barcelona, Spain 2008)

- Resolutions
 - **4.045** *Accelerating progress to establish marine protected areas and creating marine protected area networks [9] “Requests the Director General to: (b) establish, in consultation with WCPA and working with the World Database on Protected Areas and others, a regular and transparent process for tracking and reporting commitments and progress toward creating MPAs and MPA networks, as well as significant remaining gaps in MPA coverage; and...”*

(5th, Jeju, South Korea 2012)

- **WCC-2012-Res-035-EN** Facilitating conservation through the establishment of protected areas as a basis for achieving Target 11 of the Strategic Plan for Biodiversity 2011–2020. *“Recognizing IUCN’s responsibility to maintain the World Database on Protected Areas through its partnership with the United Nations Environment Programme World Conservation Monitoring Centre (UNEP-WCMC), and IUCN’s leadership role in setting conservation standards for determining sites of global biodiversity conservation significance to guide national gap analysis, protected area management categories, governance types and management effectiveness assessments;...”*
- **WCC-2012-Res-036-EN** Biodiversity, protected areas and Key Biodiversity Areas. *“Recognizing IUCN’s leadership role in guiding such responses through the establishment of conservation standards and maintenance of data systems that allow publication by the global conservation community of data meeting these standards, and specifically the roles of:...” [b] “...the IUCN World Commission on Protected Areas (WCPA) in facilitating documentation of protected area management objectives through the Guidelines for applying protected area management categories and publication of data, in partnership with the United Nations Environment Programme World Conservation Monitoring Centre (UNEPWCMC), through the World Database on Protected Areas, and further to Decision IX/18 of the Conference of the Parties (COP) of the Convention on Biological Diversity (CBD);...”*

(6th, Honolulu, Hawaii 2016)

- **WCC-2016-Res-030-EN** Recognising and respecting the territories and areas conserved by indigenous peoples and local communities (ICCAs) overlapped by protected areas. *“1. REQUESTS the Director General, Council, Commissions and Members, together with the ICCA Consortium and relevant partners, to:*

- e. encourage agencies and donors to promote recognition and respect of overlapped ICCAs and to assist their custodians in including them in the World Database on Protected Areas and the ICCA Registry with their free, prior and informed consent”
- **WCC-2016-Res-035-EN** Transboundary cooperation and protected areas. “2. CALLS upon the United Nations Environment Programme World Conservation Monitoring Centre (UNEP-WCMC) to develop and maintain a comprehensive global inventory of transboundary conservation areas, as a component of the World Database on Protected Areas”
- **WCC-2016-Res-036-EN Supporting privately protected areas.** “4. CALLS ON IUCN Members to include privately protected areas that meet the requirements of IUCN Protected Area Standards when reporting about protected area coverage and other related information, including to the World Database on Protected Areas (WDPA) and to the CBD, in collaboration and agreement with the owners of such areas”
- **WCC-2016-Res-036-EN** Supporting privately protected areas. “6. REQUESTS the United Nations Environment Programme’s World Conservation Monitoring Centre (UNEP-WCMC) to support governments and other data providers in the inclusion of information about privately protected areas within the WDPA”
- **WCC-2016-Res-073-EN** Investments of development finance institutions: socio-environmental impacts and respect for rights. “1. CALLS ON the Director General and Commissions to use available resources to:
 - d. continue to provide information based on IUCN standards and data sources such as the IUCN Red List, National Red Lists, Key Biodiversity Areas and Protected Planet in order to support DFIs in the application of standards and safeguards”

IUCN World Parks Congresses (WPC)

(5th, Durban, South Africa, 2003)

- Recommendations
 - **V.4:** Building Comprehensive and Effective PA Systems. “The WDPA is a vital tool for measuring the efforts of governments and civil society to build comprehensive PA networks.”
 - [7.] “Request the consortium of institutions responsible for maintaining and managing the WDPA to continually enhanced the quality and make it publicly available and accessible;”
 - [8] Urges the Parties to CBD to request all governments to provide annual updates of information to the WDPA;”
 - **V.17:** Recognising and Supporting a Diversity of Governance Types for Protected Areas
 - [5] “Encourage UNEP-WCMC to expand its data collection and dissemination programme to recognise all governance types, particularly...CCA’s and private protected areas;”
 - **V.18:** Management Effectiveness...Recommends that IUCN Members...[_g.] “Inclusion of management effectiveness tracking in global databases of protected areas;”
 - **V.19:** IUCN PA Management Categories [13] “Recommends that UNEP-WCMC reviews the format used in the UN List of PAs to depict clearly all PA Categories...”

(6th, Sydney, Australia, 2014)

- **The Promise of Sydney: Innovative approaches for change.** A strategy of innovative approaches and recommendation to reach conservation goals in the next decade. Available at: http://worldparkscongress.org/about/promise_of_sydney_innovative_approaches.html
 - *"The Congress noted important solutions to assist in the analysis and application of information, such as the UNEP-World Conservation Monitoring Centre and IUCN WCPA's Protected Planet collaboration, and other initiatives".*
 - *"UNEP-WCMC and IUCN's World Database on Protected Areas reports 15.4% of the terrestrial realm and 8.4% of coastal and marine waters are currently protected."*
 - [6] *"Countries fully report, taking into account all governance types, on their protected area systems (location, extent, management categories, management effectiveness, governance) into the UN List of Protected Areas through the UNEP World Conservation Monitoring Centre and IUCN WCPA".*