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Item 8 of the provisional agenda*

THE WORLD DATABASE ON PROTECTED AREAS

Note by the Executive Secretary

INTRODUCTION

1.   The Executive Secretary is circulating herewith, for the information of participants in the twentieth meeting of the Subsidiary, Body on Scientific, Technical and Technological Advice (SBSTTA), a report prepared by the United Nations Environment Programme, World Conservation Monitoring Centre (UNEP-WCMC).

2.   The report is present in the form and language in which it was received by the Secretariat.

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* UNEP/CBD/SBSTTA/20/1/Rev.1.

The World Database on Protected Areas

Information document for 20th meeting of the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA 20)

Contents

1. Introduction

1.1. What is the WDPA?

The World Database on Protected Areas (WDPA), is the most comprehensive global database of marine and terrestrial protected areas, incorporating the official UN List of Protected Areas. It is a joint initiative between the United Nations Environment Programme (UNEP) and the International Union for Conservation of Nature (IUCN). It is compiled and managed by the UNEP World Conservation Monitoring Centre (UNEP-WCMC), in collaboration with IUCN's Global Protected Areas Programme, the IUCN's World Commission on Protected Areas and protected area data providers that include mainly government agencies and non-governmental organisations.

The WDPA was established in 1981, but the mandate for the database dates back to 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.

In its current format, the database comprises both spatial data (i.e. boundaries and points) with associated attribute data (i.e. tabular information) (Figure 1). The CBD and IUCN definitions of a protected area[1] are the primary criterion for inclusion of a site in the database.
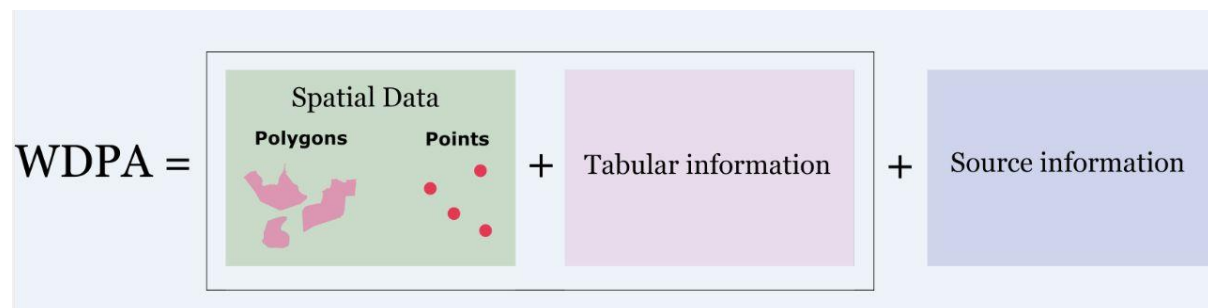
Figure 1 Structure of the World Database on Protected Areas (WDPA)[2]

The WDPA is made available online through Protected Planet where the data is both viewable and downloadable (www.protectedplanet.net/) (Figure 2). The WDPA attributes are explained in more detail in Section 3.2 and in Annex 2. Extensive information on the WDPA how it is compiled, used and disseminated is available in the WDPA User Manual[2].

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[1] Lopoukhine, N. and de Souza Dias, B. (2012). What does target 11 really mean? *PARKS* Volume **18:1**.
[2] UNEP-WCMC (2015), World Database on Protected Areas User Manual 1.2. UNEP-WCMC: Cambridge, UK, http://wcmc.io/WDPA_Manual
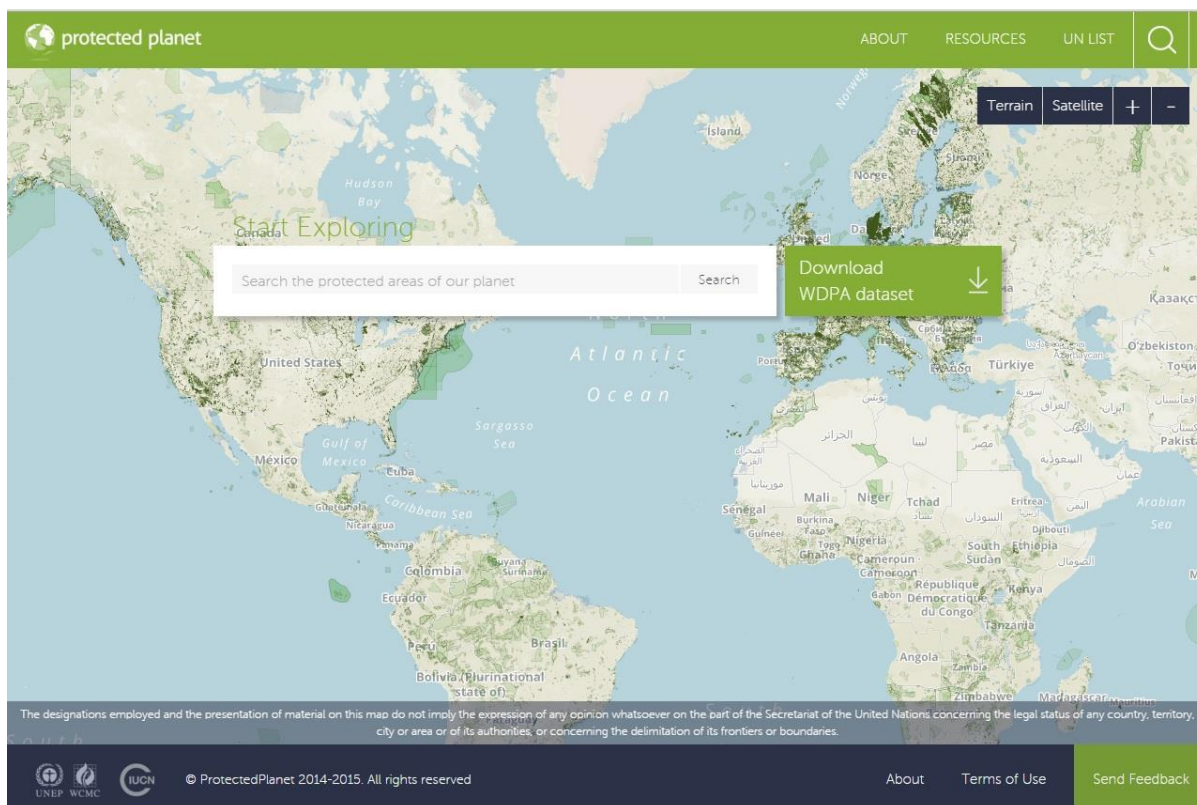
Figure 2 Interface of the Protected Planet website, the online home of the WDPA (www.protectedplanet.net)

1.2. Uses of the WDPA

The primary objective of the WDPA is to compile an inventory of all protected areas in the world. The database is an evolution of the first UN List compilations of 'national parks and equivalent reserves' and its current format reflects progress made both in the expansion of countries' protected area networks and also in the amount of information shared.

The WDPA is used by a wide range of groups including scientists, NGO's, private sector and international bodies. In addition, the WDPA is also fundamental for fulfilling several global reporting mechanisms, developing indicators and tracking progress towards protected areas targets (Box 1). This is recognised through a number of policy mandates upon which the global community has agreed (see Appendix 1).

The WDPA has underpinned the production of the Protected Planet Report Series[3],[4] widely accepted among the global conservation community as a key reference document on protected areas status, and extensively cited in both scientific literature and biodiversity related policy. Both the Convention on Biological Diversity and IUCN have recognised its important contribution to assess progress towards global targets for protected areas.

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[3] Bertzky et al. (2012). Protected Planet Report 2012: Tracking progress towards global targets for protected areas. IUCN, Gland, Switzerland and UNEP-WCMC, Cambridge, UK.
[4] Juffe Bignoli et al. (2014). Protected Planet Report 2014. UNEP-WCMC, Cambridge, UK.

> **Box 1: Use of the WDPA for selected global reporting mechanisms and periodic reports**
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> - **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 is available online at http://blog.protectedplanet.net/post/102481051829/2014-united-nations-list-of-protected-areas
> - **CBD Global Biodiversity Outlook:** 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 is published by the CBD and available at www.cbd.int/gbo/
> - **UNEP Global Environment Outlook:** UNEP's flagship publication Global Environment Outlook (GEO) report series keeps the state, trends and outlook of the global environment under review. http://www.unep.org/geo/
> - **Protected Planet Report:** The Protected Planet Report reviews progress towards the achievement of the protected area targets of the Convention on Biological Diversity (CBD). More information at http://blog.protectedplanet.net/post/102485175019/2014-protected-planet-report
> - **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
> - **UN Millennium Development Goals (MDGs):** WDPA statistics were used to report on progress towards the MDG goals, specifically goal 7 which aimed at ensuring environmental sustainability at a global level. More information at www.un.org/millenniumgoals/reports.shtml and http://mdgs.un.org/unsd/mdg
> - **UN Sustainable Development Goals (SDGs):** WDPA statistics will be used to report on several targets under Goal 14 and 15 of the new SDG goals. More information is available at: https://sustainabledevelopment.un.org/index.php?menu=1300

1.3. Benefits for countries of submitting data

There are several ways in which countries can benefit from providing data to the WDPA:

- **Inventory of national data:** At the national level, protected areas might be managed by different institutions and/or governmental agencies, including community groups and private conservancies. Providing data to the WDPA enables countries to have a clearer picture of their protected areas' network as a whole, through compiling within one single database multiple datasets. Furthermore, countries can access their protected areas data which 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 protected database management, the basics of GIS, or in any other relevant areas if needed and as requested by the data provider.

- **Contribute to scientific research/Highlight gaps:** Through the use of the WDPA in scientific research, gaps in protected area 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 in the country, to better achieve other important elements of Aichi Biodiversity Target 11 such as representativity and connectivity.
- **Standardization of the information:** Through providing systematic information to the WDPA, countries are guaranteed to hold a minimum amount of information for all of their sites designated as protected areas, in a standardized and usable way, and increases the quality of their PA datasets.
- **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.

1.4. Future plans

The schema of the database was expanded in 2015 to allow that areas that don't meet the IUCN definition of a protected area be included in the future. This could potentially include sites referred to as "Other Effective Areas Based Conservation Measures" (OECMs) in Aichi Biodiversity Target 11. An IUCN-WCPA task force has been convened to provide guidance on what they should include. Once a clear definition of OECMs is adopted and information on such areas becomes available it will be incorporated alongside the WDPA to improve reporting on all aspects on Aichi Target 11.

The WDPA is limited in so far as it does not gather other important information on protected areas. For example, the WDPA does not include information on the effectiveness of management, or benefits to biodiversity, of protected areas but it is closely linked to the Global Database on Protected Areas Management Effectiveness (GD-PAME). Much attention is now focused on compiling this dataset for all sites listed in the WDPA. Similarly, projects are underway to compile information on aspects of equitable governance and management in protected areas[5], as well as connectivity[6].

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[5] Franks, P. and Schreckenberg, K. (2016). Advancing in equity in protected area conservation. IIED (http://pubs.iied.org/17344IIED.html)
[6] Taking connectivity conservation to scale: Strengthening resilience at landscape and seascape levels. Project summary. UNEP-WCMC

2. Current situation

2.1. Key numbers

As of January 2016, the WDPA contained information on protected areas from 244 countries and territories, and covering a variety of designations and governance types from government managed protected areas to co-managed, community and privately protected areas (Figure 3). It includes information on sites designated at the national and regional levels, and those designated by countries under international conventions and agreements. In total, there are 217,955 sites, 18,963 (8.70%) recorded as point records and 198,992 (91.30%) as polygon records (meaning an accurate outline boundary of the site is available, and hence the area can be calculated).

Terrestrial protected areas
Marine and coastal protected areas
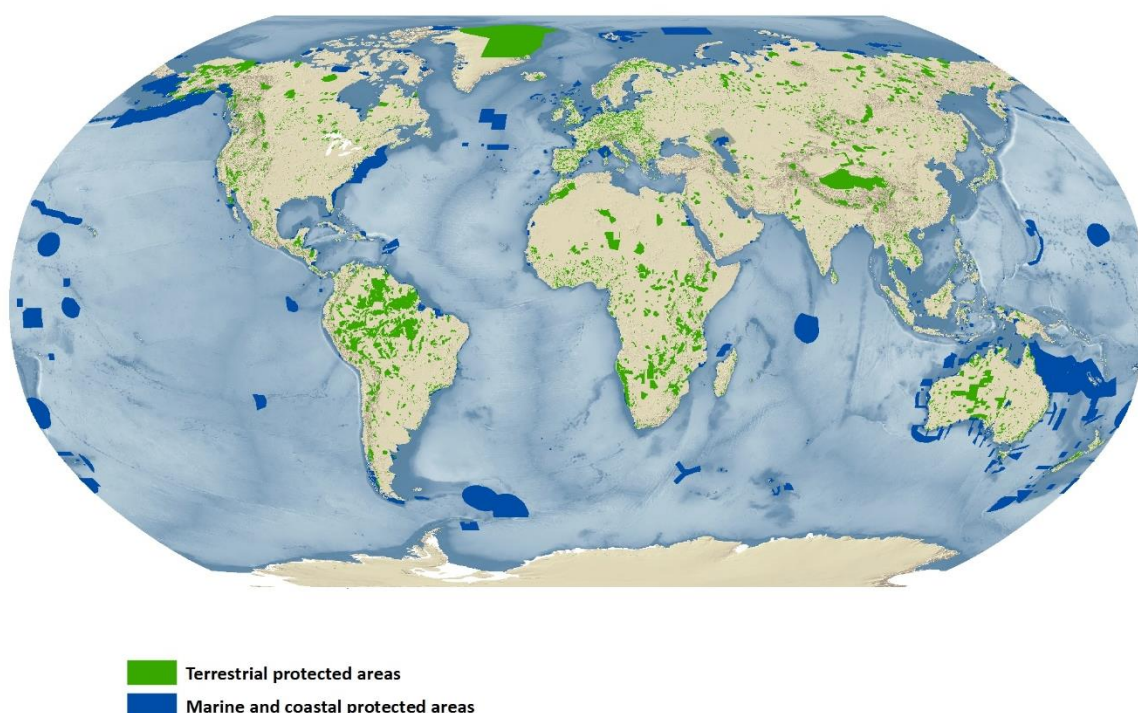
Figure 3 All terrestrial and marine protected areas in the WDPA as of January 2016.

2.2. Accuracy of the WDPA

The WDPA is updated on a monthly basis. Data providers can provide an update of their protected areas at any time, but UNEP-WCMC aims that data for a particular country should be updated every 5 years. 85% of the data has been updated since 2014. Submissions are welcome by contacting protectedareas@unep-wcmc.org.

Prior to being integrated in the WDPA, a series of quality checks are undertaken to ensure datasets are standardized and compatible with the WDPA standards. There are two types of information required for submitting data to the WDPA: 'minimum' and 'complete'. Information classified as 'minimum' is mandatory for any site to be included in the database. Information classified as 'complete' is considered as a priority for analysis and reporting on protected areas as they significantly improve the capacity for conducting thorough analyses on protected areas

distribution, coverage and context. Although data providers are encouraged to provide this information, only information classified as 'minimum' is a condition for the integration of a site in the WDPA.

For a detailed information of the quality checks performed on a dataset before being integrated in the WPDA, see Appendix 3 of the WDPA User Manual [2].

The WDPA is not necessarily a complete representation of all protected areas in a country. The quality of the WDPA depends on the accessibility of accurate, comprehensive, up-to-date protected areas information from data holders and the methods used by these to digitise protected areas boundaries. Some reasons for gaps in the information include:
- **Incomplete information:** Countries submit partially updated information, not including either spatial information (i.e. boundaries of protected areas) or descriptive information on management and governance;
- **No response:** Countries do not respond to UNEP-WCMC's request to provide updated information, hence some information for the country stored in the WDPA may become out-of-date and incomplete;
- **Unknown areas:** Some sites do not have an area or boundary reported, thus under-representing the coverage of the country's actual network;
- **Technical capacity:** Some countries do not have the technical capacity to digitise all their protected area information and build a digital database to submit to the WDPA.

2.3. Difference between national statistics and statistics reported through the WDPA

Statistics calculated from the WDPA may differ from national statistics. Different reasons for this include:
- **Difference in the methods used for digitizing a protected area:** 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 a great influence on the accuracy of the data. This might also explain differences in area measurements.
- **Difference in methodologies to calculate protected area coverage:** National statistics and WDPA statistics might differ due to difference in what is considered as protected areas, methods followed to calculate the area, and datasets used to assess protected area coverage.
- **Accuracy of data in the WDPA:** When data provided to the WPDA are not up-to-date, statistics calculated from the WDPA might be under- or mis-representing the real national coverage.
- **Gaps in protected area data:** In cases where information on protected areas from a country are managed by multiple agencies, the information reported through nationally or WDPA generated statistics might be different due to communication gaps between the different parties.

3. What to report?

3.1. Need for systematic and regular reporting

It is very important that countries ensure their protected area data in the WDPA is up-to-date and that an ongoing communication exists between protected area focal points in each country and UNEP-WCMC staff. Information contained in the WDPA is used to calculate a wide range of relevant statistics (see Box 1) that should reflect the reality of each country. Outdated datasets might provide an imprecise picture of the protected area network and therefore conflicting results when assessing the status of the global protected areas network. In addition, submitting data to the WDPA provides numerous benefits for countries (see Section 1.3 *Benefits for countries of submitting data*).

3.2. Requirements for submitting data to the WDPA

Data included in the WDPA must meet the WDPA data standards[2]. These were developed in 2010 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 (see Box 1). There are four key requirements to submit data to the WDPA (Box 2).

Box 2: Key requirements that need to be met to comply with the WDPA data standards

1. All sites must meet the CBD or IUCN definition of a protected area;
2. Sites must be provided with spatial data that can be incorporated into a Geographic Information System (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.

Each site is the WDPA is described through 29 attribute fields.

- **Spatial data:** The WDPA is based on the Geographic Coordinate System: World Geodetic Survey (WGS) 1984. Each protected area in the WDPA 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 without boundary data. A data submission will only be accepted if a geographic location is provided, preferably as a spatial boundary.
- **Attribute Data:** The WDPA stores up to 29 descriptors, referred to as data attributes, which describe each record in the WDPA. The WDPA data attributes are the tabular fields associated to the WDPA point and polygon features. The attributes have been classified as *minimum* and *complete* attributes: A 'minimum' attribute represents information that is mandatory for any spatial dataset to be integrated in the WDPA; a 'complete' attribute represents any information that is considered a priority for analysis

and reporting on protected areas, and therefore are a priority for integrating in the WDPA. The complete fields significantly improve the capacity to conduct thorough analysis on protected areas.

- **Source information:** Source information is required for any data provided. It includes details on the data provider and currency of the data at the time it was provided. This information is stored in the WDPA Source Table and linked to the WDPA by the 'Metadata ID'.

A summarised description and allowed values for the WDPA attributes is provided in Annex 2. For detailed descriptions see Annex 1 of the WDPA User Manual[2].

Annex 1. Selected policy references to the WDPA

Source: UNEP-WCMC (2015), World Database on Protected Areas User Manual 1.2. UNEP-WCMC: Cambridge, UK, http://wcmc.io/WDPA_Manual

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

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 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".

Annex 2. Summarized description of the WDPA field attributes.

A detailed description of each of these fields is provided in UNEP-WCMC (2015), World Database on Protected Areas User Manual 1.2. UNEP-WCMC: Cambridge, UK, http://wcmc.io/WDPA_Manual. (PA: protected area).

No	Requirement	Provided by	Field Name	Type	Length	Accepted values
1	Minimum	UNEP-WCMC	WDPAID	Number (Double)	N/A	Assigned by UNEP-WCMC. Unique identifier for a protected Area.
2	Minimum	UNEP-WCMC	WDPA_PID	Number (Double)	N/A	Assigned by UNEP-WCMC. Unique identifier for parcels or zones within a protected area.
3	Minimum	Data provider	PA_DEF	Text (String)	20	**Allowed values:** 1 (meets IUCN and/or CBD PA definition); 0 (does not meet IUCN and/or CBD PA definition (currently stored outside WDPA)).
4	Minimum	Data provider	NAME	Text (String)	254	Name of the protected area (PA) as provided by the data provider.
5	Minimum	Data provider	ORIG_NAME	Text (String)	254	Name of the protected area in original language.
6	Minimum	Data provider	DESIG	Text (String)	254	Name of designation.
7	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. **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.
8	Minimum	Data provider	DESIG_TYPE	Text (String)	20	**Allowed values:** National, Regional, International, Not Applicable
9	Complete	Data provider	IUCN_CAT	Text (String)	20	**Allowed values:** Ia, Ib, II, III, IV, V, VI, Not Applicable, Not Assigned, Not Reported
10	Minimum	UNEP-WCMC	INT_CRIT	Text (String)	100	Assigned by UNEP-WCMC. For World Heritage and Ramsar sites only.
11	Minimum	Data provider	MARINE	Text (String)	20	**Allowed values:** 0 (100% Terrestrial PA), 1 (Coastal: marine and terrestrial PA), and 2 (100 % marine PA).
12	Minimum	Data provider	REP_M__AREA	Number (Double)	N/A	Marine area in square kilometers.
13	Minimum	UNEP-WCMC	GIS_M_AREA	Number (Double)	N/A	Assigned by UNEP-WCMC.
14	Minimum	Data provider	REP_AREA	Number (Double)	N/A	Area in square kilometers.
15	Minimum	UNEP-WCMC	GIS_AREA	Number (Double)	N/A	Assigned by UNEP-WCMC.

No	Requirement	Provided by	Field Name	Type	Length	Accepted values
16	Complete	Data provider	NO_TAKE	Text (String)	50	**Allowed values:** All, Part, None, Not Reported, Not Applicable (if Marine field = 0).
17	Complete	Data provider	NO_TK_AREA	Number (Double)	N/A	Area of the no-take area in square kilometers
18	Minimum	Data provider	STATUS	Text (String)	100	**Allowed values:** Proposed, Inscribed, Adopted, Designated, Established.
19	Minimum	Data provider	STATUS_YR	Number (Long Integer)	12	Year of enactment of status (STATUS field).
20	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.
21	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.
22	Complete	Data provider	MANG_AUTH	Text (String)	254	Individual or group that manages the protected area.
23	Complete	Data provider	MANG_PLAN	Text (String)	254	Link or reference to the protected area's management plan.
24	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).
25	Minimum	UNEP-WCMC	RESTRICT	Text (String)	20	Not publicly available, for UNEP-WCMC use only.
26	Minimum	UNEP-WCMC	METADATAID	Number (Long Integer)	12	Assigned by UNEP-WCMC. Link to source table.
27	Complete	Data provider	SUB_LOC	Text (String)	100	**Allowed values:** ISO 3166-2 sub-national code where the PA is located.
28	Minimum	Data provider	PARENT_ISO3	Text (String)	20	**Allowed values:** ISO 3166-3 character code of country where the PA is located.
29	Minimum	Data provider	ISO3	Text (String)	20	**Allowed values:** ISO 3166-3 character code of country or territory where the PA is located.