Unclassified **ENV/WKP(2017)13**

Organisation de Coopération et de Développement Économiques
Organisation for Economic Co-operation and Development

16-Nov-2017

English - Or. English

ENVIRONMENT DIRECTORATE

ENV/WKP(2017)13
Unclassified

INDICATORS ON TERRESTRIAL AND MARINE PROTECTED AREAS: METHODOLOGY AND RESULTS FOR OECD AND G20 COUNTRIES - ENVIRONMENT WORKING PAPER No. 126

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Authorised for publication by Anthony Cox, Acting Director.

JEL codes: Q24, Q28, Q57, Q58, R14, R52

Keywords: nature protection, nature conservation, protected areas, biodiversity, ecosystems

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ACKNOWLEDGEMENTS

This working paper was prepared by Alexander Mackie, Sarah Sentier, Ivan Haščič and Myriam Linster, under the supervision of Nathalie Girouard, Head of Environmental Performance and Information Division of the OECD Environment Directorate. The paper was reviewed by the OECD Environmental Policy Committee and its Working Party on Environmental Information. It also benefited from the comments received from country delegates to the Working Party on Biodiversity, Water and Ecosystems. We thank Brian MacSharry (UNEP-WCMC), Mette Palitzsch Lund and Sabine Roscher (EEA) and Katia Karousakis and Anthony Cox (OECD) for helpful comments on an earlier version of this paper.

FOREWORD

Indicators on protected areas are included in the OECD core set of environmental indicators to reflect biodiversity policy responses together with indicators on biodiversity-relevant financial flows. They are regularly published in OECD reports on environmental data and indicators, are used in OECD work on biodiversity, and support policy assessment in country Environmental Performance Reviews. Protected areas are also covered in the indicators that monitor the SDGs and in those that were used to monitor the MDGs.

The Millennium Development Goals (MDGs) Indicators database includes such indicators on protected areas. The data used to compile these indicators have been taken from the World Database on Protected Areas (WDPA), which records the location and basic attributes of protected areas globally. The indicators lack detail, have proved difficult to use and interpret, and were often contested when used in OECD Environmental Performance Reviews. In 2014, data on protected areas (broken down by IUCN management categories) were added to the OECD Annual Quality Assurance (AQA) of environmental reference data to enable countries to check and complement the data prefilled from the WDPA and the MDGs. This ad-hoc checking has, however, not been sufficient to produce reliable data.

To overcome these limitations and to help meet a demand for improved indicators, the OECD proposed drawing directly on data from the WDPA to develop an indicator of the extent of protected areas that provides a breakdown by management objectives (IUCN categories) and that is harmonised across countries. The WDPA is a geospatial database; therefore, the compilation of country-level indicators requires GIS analysis. This paper presents the methodology and results for OECD and G20 countries to be used in OECD work. The methodology improves existing OECD indicators on protected areas in a way that is harmonised across countries and over time, and that reflects the actual extent of protected areas without double-counting overlapping sites. Moreover, with reference to the source database, the OECD Secretariat is better able to identify and explain discrepancies between this indicator, national data or other sources. The WDPA is updated continuously, which means that updates to the indicator can be done more regularly (e.g. annually).

ABSTRACT

This paper details a methodology for calculating the extent of terrestrial and marine protected areas recorded in the World Database on Protected Areas by country, type and IUCN management categories. The method allows the data on protected areas to be summarised in a harmonised and more detailed way than is currently available, without requiring any additional reporting by countries. When used in combination with other information about protected areas, this new indicator can help better understand the extent and focus of countries' conservation efforts.

A wide variety of different approaches to establishing protected area networks can be discerned from the new indicator, particularly for marine protected areas. For example, some countries have designated relatively large amounts of their marine territory as protected areas, while others are yet to establish substantive marine protected area networks. In the terrestrial sphere, protected area networks are much more developed but management objectives vary greatly, with some countries predominantly using mixed-use 'protected landscape' type of designations, and others using protected areas primarily for the conservation of more pristine ecosystems.

The indicator described here helps fulfil a demand that is not met with available data. It provides additional detail about the extent of protected areas and what management objectives are pursued within and across countries. It does not, however, answer important and policy-relevant questions such as the extent to which protected areas are protecting national or global biodiversity or whether protected areas are effectively managed or enforced.[1]

JEL codes: Q24, Q28, Q57, Q58, R14, R52

Keywords: nature protection, nature conservation, protected areas, biodiversity, ecosystems

[1] Concerning disputed or shared areas, the methodology described in this paper is applied uniformly across all disputed or shared areas and all countries included in this report. Variations in protected area extent (as a share of EEZ) can arise, to some extent, due to changes in the measured EEZ.

RÉSUMÉ

Ce document décrit une méthodologie visant à calculer l'étendue des aires terrestres et marines protégées qui sont enregistrées dans la World Database on Protected Areas par pays, par type et par catégorie de gestion UICN. La méthode permet de synthétiser les données sur les aires protégées de façon harmonisée et plus détaillée sans demander d'informations supplémentaires aux pays. Une telle décomposition par catégorie UICN n'était jusqu'à présent pas disponible. Conjugué à d'autres informations sur les aires protégées, ce nouvel indicateur permet de mieux comprendre l'ampleur et la direction des efforts de conservation déployés par les pays.

Ce nouvel indicateur permet de distinguer une grande variété d'approches pour la création des réseaux d'aires protégées, en particulier dans l'espace marin. Par exemple, certains pays ont établi des aires protégées sur une part relativement importante de leur domaine maritime, tandis que d'autres doivent encore se doter de réseaux d'aires protégées dignes de ce nom. S'agissant de l'espace terrestre, les réseaux d'aires protégées sont bien plus développés, mais les objectifs de gestion varient de manière importante : certains pays utilisent majoritairement des désignations mixtes de type « paysage protégé » alors que d'autres utilisent les aires protégées avant tout pour assurer la conservation d'écosystèmes plus préservés.

L'indicateur dont il est question ici contribue à répondre à une demande jusqu'à présent insatisfaite. Il donne davantage de détails sur l'étendue des aires protégées et sur les objectifs de gestion poursuivis au plan national et international. En revanche, il ne répond pas à certaines questions importantes et utiles pour l'action politique, à savoir dans quelle mesure les aires protégées préservent la biodiversité nationale ou mondiale, ou de déterminer si leur gestion ou leur mise en œuvre est efficace.

Codes JEL : Q24, Q28, Q57, Q58, R14, R52

Mots clés : protection de la nature, conservation de la nature, aires protégées, biodiversité, écosystèmes

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1. INTRODUCTION

This paper details a methodology for calculating the extent of designated terrestrial and marine protected areas (PAs), by type and management categories, and by country, using the World Database on Protected Areas (WDPA) maintained by the International Union for Conservation of Nature and UNEP's World Conservation Monitoring Centre (IUCN and UNEP-WCMC, 2017).

The method allows the data on PAs to be summarised in a more detailed and harmonised way without requiring any additional reporting by countries. This can provide a general indication of countries' conservation efforts and can assist in monitoring progress towards the Aichi Targets of the Convention on Biological Diversity (CBD) and the UN Sustainable Development Goals (SDGs) (see Box 1 for details).

Box 1. Aichi Target and the SDG targets and indicators related to protected area extent and location

The Aichi 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.*

SDG target 14.5: *By 2020, conserve at least 10 per cent of coastal and marine areas, consistent with national and international law and based on the best available scientific information.*

> ***Indicator 14.5.1:*** *Coverage of protected areas in relation to marine areas.*

SDG Target 15.1: B*y 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements.*

> ***Indicator 15.1.2:*** *Proportion of important sites for terrestrial and freshwater biodiversity that are covered by protected areas, by ecosystem type.*

SDG Target 15.4: *By 2030, ensure the conservation of mountain ecosystems, including their biodiversity, in order to enhance their capacity to provide benefits that are essential for sustainable development.*

> ***Indicator 15.4.1:*** *Coverage by protected areas of important sites for mountain biodiversity.*

Source: CBD (2011); UN (2017)

Indicators on protected areas have been included in the OECD core set of environmental indicators and are regularly used in the OECD reports on environmental data and indicators (such as the *Key Environmental Indicators* and the *Environmental Performance Reviews*). Data used to compile these indicators are taken from the World Database on Protected Areas (WDPA), which provides detailed information on protected areas for all countries. The data in the WDPA do not allow direct compilation of country-level indicators without GIS analysis because protected areas overlap, and because intersection with terrestrial and marine boundary base layers is necessary to correctly identify in which country or exclusive economic zone (EEZ) a specific protected area (or part thereof) is located. The Millennium Development Goals (MDGs) Indicators database (among others) includes such indicators on protected areas (calculated by WCMC); however, they do not provide any breakdown by IUCN category or other type. These have proved difficult to use and interpret, and are often contested when used in *OECD Environmental Performance Reviews*.

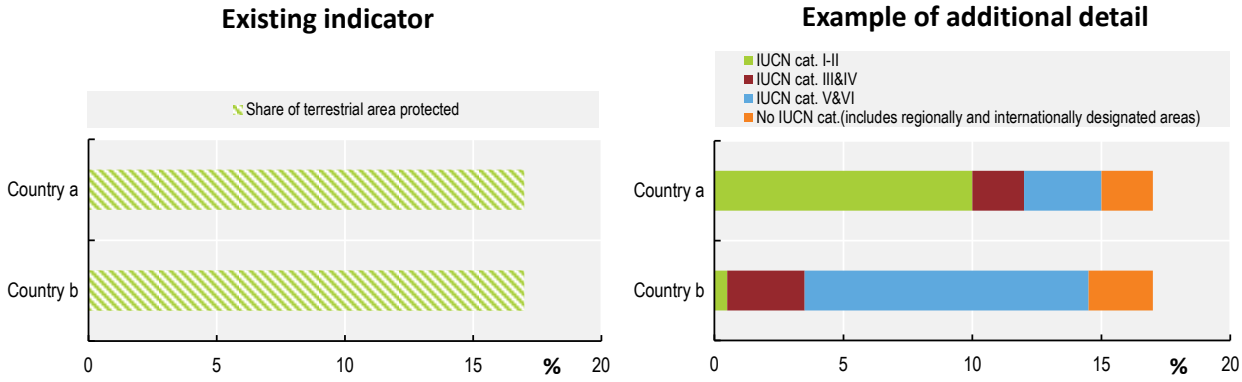
Available indicators provide little or no information about the management objective (e.g. IUCN management category, see Table 1 for an overview and Annex A for detailed definitions). The methodology described here, with some limitations, increases the level of detail of information about protected areas by including some information about the extent of different IUCN categories used.

Table 1. IUCN management categories

Category	*Name*
Ia.	Strict Nature Reserve
Ib.	Wilderness Area
II.	National Park
III.	Natural Monument or Feature
IV.	Habitat/Species Management Area
V.	Protected Landscape/ Seascape
VI.	Protected area with sustainable use of natural resources

Figure 1 provides a stylistic illustration of the additional detail that is potentially available. The example presents two countries with the same overall protected area coverage, however, their management objectives vary considerably. In this example, country *a* has designated a large area as strict nature reserves, wilderness areas and national parks that likely permit a narrow range of scientific, educational and recreational activities that protect areas that are in a mostly natural condition. In contrast, country *b*'s protected areas area are mostly designated at IUCN category V and VI, which are likely to be more permissive in the type and intensity of activity allowed within their boundaries and pursue a wide range of goals in addition to the conservation of nature (such as the conservation of cultural features and traditional human uses) and protect areas that are in a relatively less natural condition. The equivalence suggested by the total share protected indicator is potentially misleading because, in practice, these countries have implemented quite different types of protected area networks. This is not a normative indicator; in either case, the use of these designations may (or may not) be appropriate and a country cannot be said to be performing *better* or *worse* based on this information.

Figure 1. Illustrative example of existing information on protected areas, and the potential additional detail

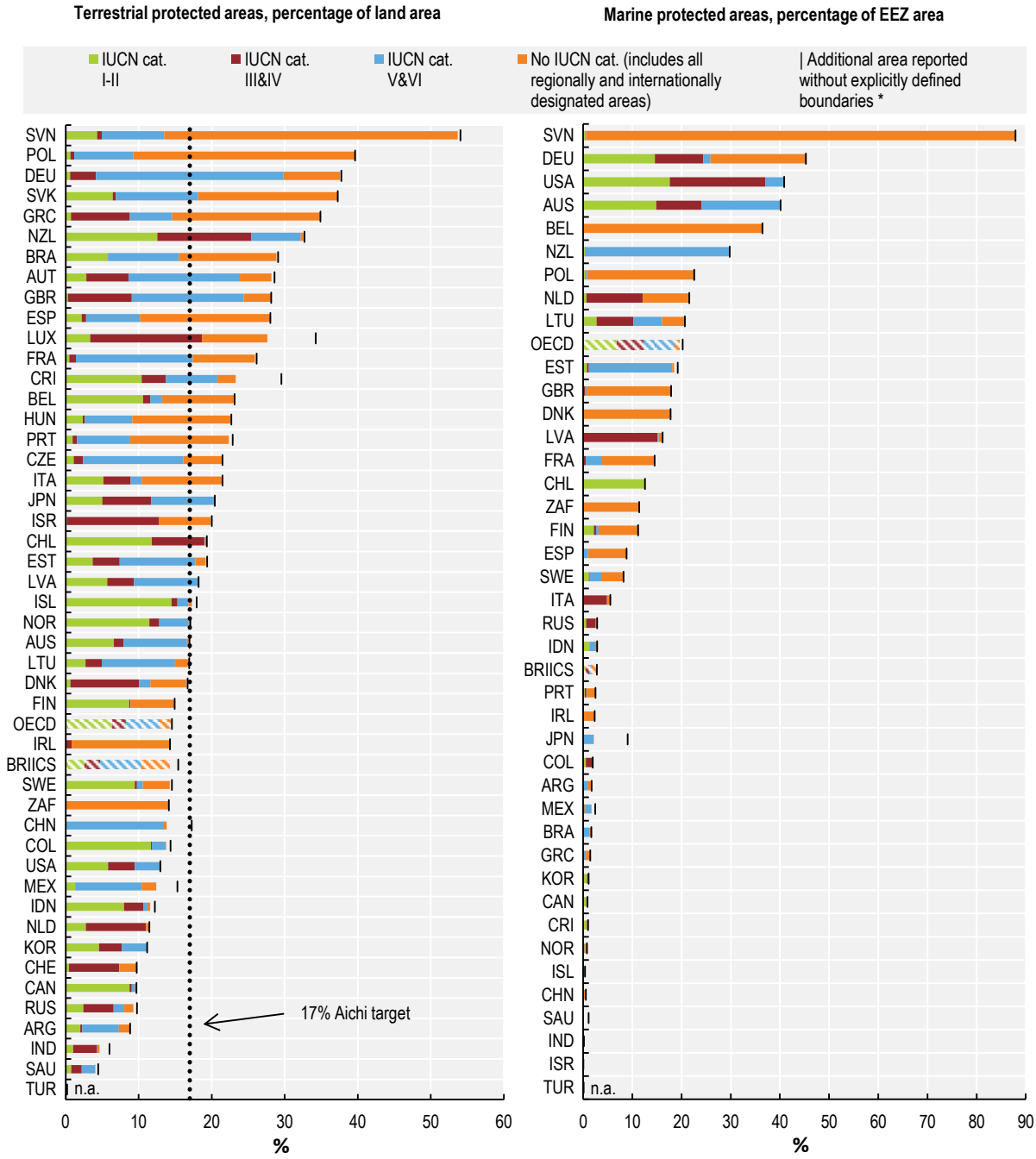


The indicator described in this paper helps fulfil demand that is not met with available data. It provides additional detail about the extent of protected areas, and which management objectives are pursued within and across countries. It does not, however, answer important and policy-relevant questions such as the extent to which protected areas are protecting national or global biodiversity or whether protected areas are effectively managed or enforced.

Key findings

Figure 2 shows results of the approach described in this paper. There is not only a lot of variation in the extent of protected areas (relative to country size), but management objectives can also vary considerably between countries. This is particularly noticeable for marine protected areas, where some countries have designated relatively large amounts of their marine territory as protected areas, while others are yet to establish substantive marine protected area networks. In the terrestrial sphere, protected area networks are much more developed but management objectives vary greatly, with some countries predominantly using mixed-use 'protected landscape' type of designations, and others using protected areas primarily for the conservation of more pristine ecosystems.

Figure 2. Marine and terrestrial protected areas in OECD and G20 countries, by type of designation and IUCN management category



Note: OECD calculations based on the January 2017 release of the WDPA. Data refer to metropolitan or mainland countries, overseas territories are not included. TUR: data not available in the WDPA; according to official national sources about 6% of the territory is protected. Landlocked countries are not shown in panel B.

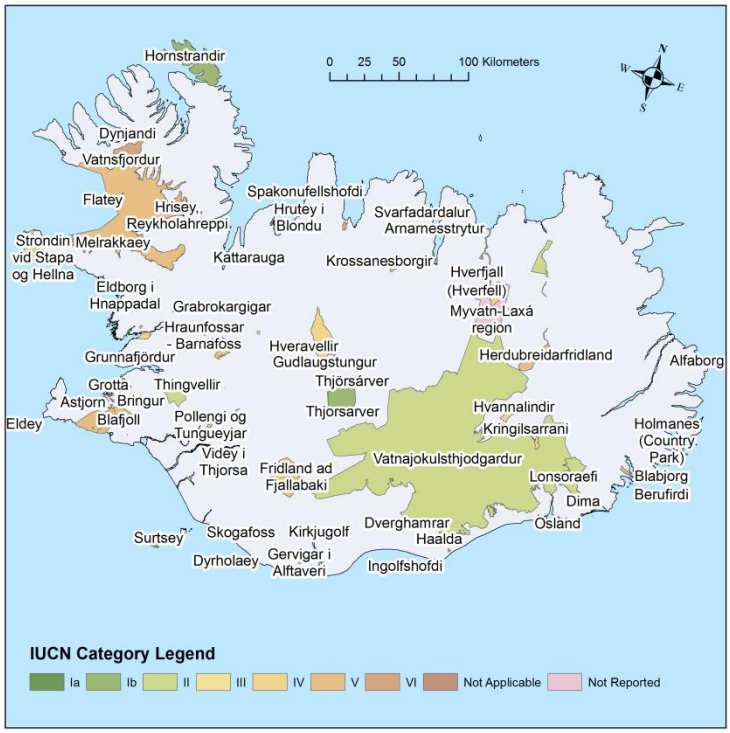
* These are shown cumulatively however in practice they *may* overlap areas that have already been accounted for in the other categories.

2. DATA AND METHODOLOGY

2.1. Underlying data on protected areas

The WDPA records protected areas globally. It is a geospatial database where each record is a protected area with its geometry stored either as polygons representing the area boundaries or as a point (where explicit boundary data is not available). In addition, 28 non-spatial attribute fields are recorded for each protected area. The database is curated by UNEP and WCMC from data submitted to them by more than 800 sources, including national and regional environmental agencies, NGOs, and the managers or owners of PAs. As of January 2017 the database contained approximately 213 000 polygon features (of which circa 180 000 are nationally designated) and 19 000 point features. For Europe, data on the nationally designated sites in the WDPA are sourced from the Common Database on Designated Areas (CDDA) maintained by the EEA.[2] As an example, Figure 3 illustrates the PAs recorded in the WDPA for Iceland.

Figure 3. Protected areas in Iceland as recorded in the WDPA



Source: WDPA (April 2016)

[2] Data on nationally designated protected areas for the following countries are submitted to the WDPA from the CDDA by the EEA: Albania, Austria, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Greece, Ireland, France, Germany, Iceland, Italy, Kosovo under UNSC Resolution 1244/99, Latvia, Liechtenstein, Lithuania, Luxembourg, Former Yugoslav Republic of Macedonia, the Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovak Republic, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

2.2. Existing indicators

The data in the WDPA do not allow direct compilation of country-level indicators without GIS analysis because protected areas overlap, and because intersection with terrestrial and marine boundary base layers is necessary to correctly identify in which country or EEZ a specific protected area (or part thereof) is located. Consequently, calculating indicators from the database is not trivial.

The WCMC is the main source of country-level indicators on protected area coverage. The UN published country-level indicators (produced by UNEP-WCMC from the WDPA) for monitoring progress towards the (superannuated) Millennium Development Goals[3]. These indicators included *proportion of terrestrial and marine areas protected;* however, they were last updated for 2014. The *proportion of marine areas protected* has been succeeded by an identical SDG indicator; however, the same does not apply to the indicator on *proportion of terrestrial areas protected* for which there is no equivalent SDG indicator (although there is an equivalent Aichi Target, under the Convention on Biological Diversity). This leaves a data gap at present. A range of country-level information automatically generated from the latest version of the WDPA is also available via WCMCs *Protected Planet* web application; however, these cannot be treated as an indicator dataset, as the content changes monthly and methodologies are not explicit.

A range of indicators on protected areas at the global scale are included in the biannual joint UNEP-WCMC and IUCN *Protected Planet* publication. WCMC use essentially the same method to calculate the global protected area coverage for this publication as elsewhere but without disaggregating by country. As of 2016, 14.7% of terrestrial area, 10.2% of marine area under national jurisdiction and 4.12% of all oceans were designated protected areas globally (UNEP-WCMC and IUCN, 2016). According to UNEP-WCMC the share of global oceans protected increased to 5.7% by July 2017.

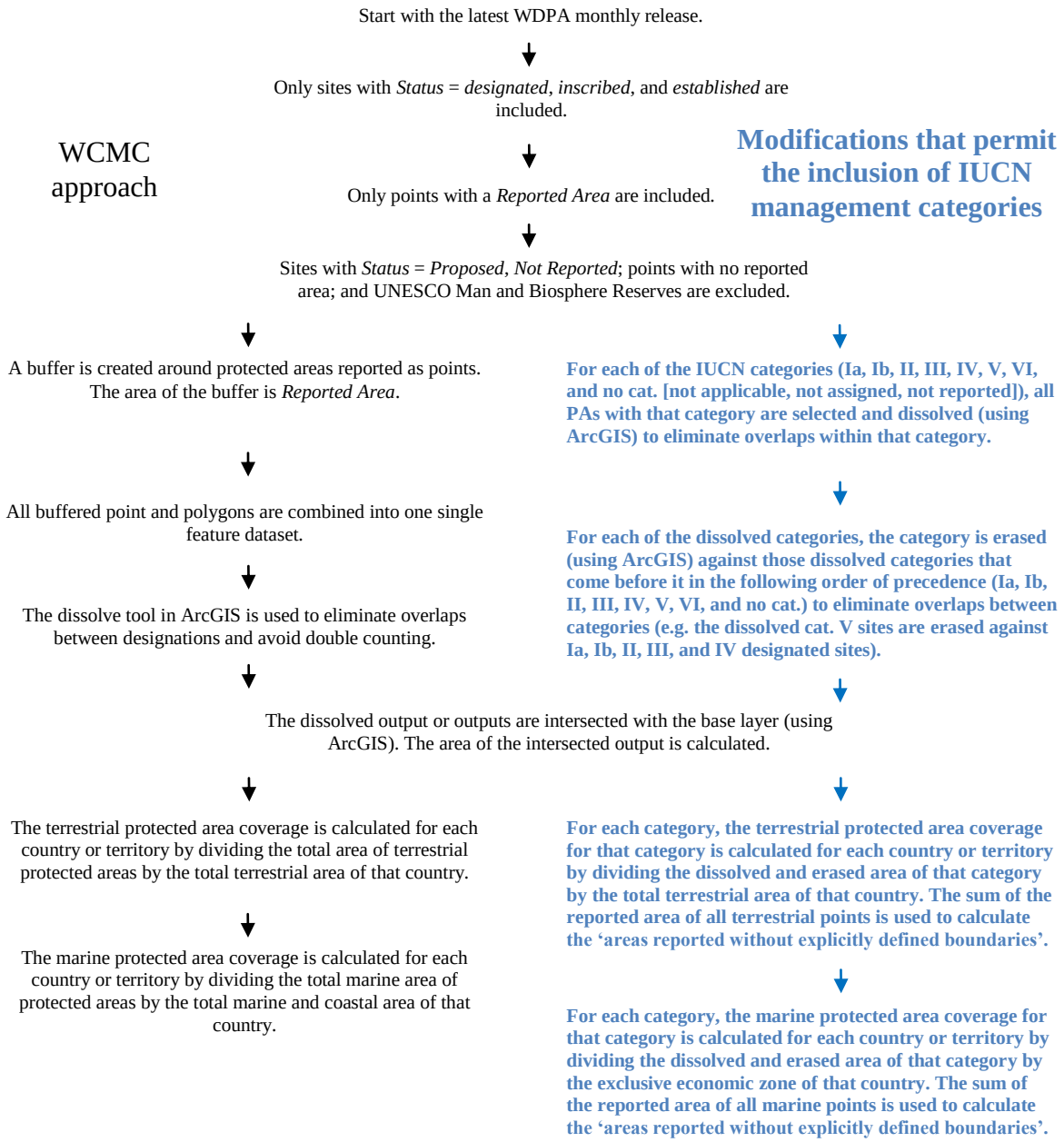
2.3. Calculating protected area coverage

The method adopted in this paper seeks to include additional information on IUCN management categories when summarising data on protected areas. Insofar as is possible, this method follows WCMC recommendations on calculating protected area coverage (as discussed in the user manual, see UNEP-WCMC, 2016). Figure 4 shows the WCMC approach, and describes the modifications required to include a breakdown by IUCN management category. The method is inspired by, and is conceptually the same as, that demonstrated by the Digital Observatory on Protected Areas (DOPA) in their 'Explorer' web application (Dubois et al., 2016).[4]

[3] http://mdgs.un.org/unsd/mdg/Data.aspx.

[4] The Digital Observatory on Protected Areas (DOPA), a Joint Research Centre (JRC) funded project, provides '*web services and applications that can be used primarily to assess, monitor, report and possibly forecast the state of and the pressure on protected areas at multiple scales'* (http://dopa.jrc.ec.europa.eu/en).

Figure 4. Calculation of indicators on protected areas (WCMC) and the modifications made to include IUCN management categories



Note: The method used by WCMC abridged here is detailed at https://www.protectedplanet.net/c/calculating-protected-area-coverage (accessed in April 2017).

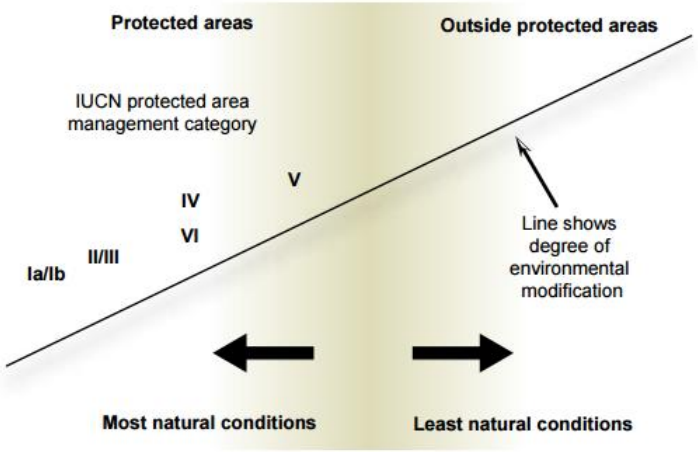
Note: The base layer currently used by WCMC is built from The Flanders Marine Institute's Maritime Boundaries Geodatabase, v8 and NOAA's Global Self-consistent, Hierarchical, High-resolution Shorelines. The latter is not currently available in an analysis-ready format that could be used for this purpose. Instead, the country baselines published by ESRI (2016) have been used here. This is a suitable long-term alternative as the Flanders Marine Institute EEZ dataset now uses the ESRI boundaries as country baselines, which will ensure agreement between the two in the future. Typically these datasets are updated every 1-2 years.

IUCN categories are not truly hierarchical; however, an order of precedence is implicit in the method outlined above. This order of precedence is a pragmatic choice based on the premise that sites designated at the 'higher' categories (I-II in particular) are very likely to be more restrictive in the sorts of activities that are permitted therein. For example: by their definitions, it could reasonably be expected that the management objectives and permitted activities of a category II designated site would take precedence over any of the goals of an overlapping category V designation.

To an extent, there is also a gradient in the degree of "naturalness" of the area designated under the different categories (see Figure 5). However this should be used carefully as the *degree of naturalness* approximate ordering breaks down for categories V and VI. For example, category VI areas generally must have large areas in natural condition, but this is not a requirement for category V areas, and there are situations where permitted activities in category VI sites are more restricted than for category V sites.[5]

There is no obvious 'best' way of aggregating the categories – the choice made in Figure 2 (aggregating I-II, III-IV, V-VI, and No Category sites separately) is a reasonable choice, however it is recommended that categories V and VI are always aggregated together for presentation purposes and not reported separately.

Figure 5. Degree of naturalness of areas typically protected by IUCN management categories



Source: Dudley (2008)

The method presented here is a parsimonious way to meet the demands for additional detail on IUCN management categories when summarising the extent of protected areas. More completely describing the extent of protected areas, their management categories, and their overlaps with each other, is neither practical nor useful (doing so comprehensively would require a very large number of variables).[6]

[5] Dudley (2008) provides a comprehensive guide to how the IUCN categories should be interpreted and applied.

[6] For instance, comprehensively summarising such detail with 8 categories would require 40 320 variables (=8!).

3. RESULTS [7]

3.1. Protected area totals without overlaps, excluding overseas territories

Table 2 shows results on terrestrial PAs. In countries like the UK, Germany, France and Mexico, the majority of nationally designated protected areas are mixed-use, 'protected landscape' type protected areas. In countries like New Zealand, Iceland or Chile, most PAs are managed in a more restrictive way at categories IV or higher, and are more focussed on the conservation of mostly pristine ecosystems (which are relatively more abundant in these countries). These different approaches are likely explained by varying national priorities but also by factors such as local geography, ecology and pre-existing patterns of human settlement.

Table 3 shows considerable variation among countries in the amount of marine area protected. Particularly striking is the variation that still exists in regard to marine protection, showing that several countries have yet to establish substantial marine protected area (MPAs) networks. As a proportion of EEZ area, there are minimal designated marine protected areas recorded in some countries including India, Saudi Arabia, China, Iceland and Norway. On the other hand, a large portion of EEZ area is designated as protected in Germany, United States and Australia. Variation between countries may be explained by the type and intensity of economic activity in the marine environment and subsequent pressures on biodiversity.[8]

[7] Results for the following 46 countries are presented (including 35 OECD members, 3 active accession candidates, and the 8 remaining G20 economies): Argentina, Australia, Austria, Belgium, Brazil, Canada, Chile, China, Colombia, Costa Rica, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, India, Indonesia, Ireland, Israel, Italy, Japan, Latvia, Lithuania, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, Russia, Saudi Arabia, Slovak Republic, Slovenia, South Africa, South Korea, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the United States

Results were also calculated for the following 48 overseas territories or affiliated countries of Australia, Denmark, France, the Netherlands, New Zealand, Norway, the United Kingdom and the United States: American Samoa, Anguilla, Aruba, Bermuda, Bonaire, (with Sint Eustatius), Bouvet Island, British Indian Ocean Territory, British Virgin Islands, Cayman Islands, Christmas Island, Cocos Islands, Cook Islands, Curacao, Falkland Islands, Faroe Islands, French Guiana, French Polynesia, French Southern Territories, Gibraltar, Greenland, Guadeloupe, Guernsey, Heard Island and McDonald Islands, Isle of Man, Jan Mayen and Svalbard, Jersey, Martinique, Mayotte, Montserrat, New Caledonia, Niue, Norfolk Island, Northern Mariana Islands and Guam, Pitcairn, Puerto Rico, Reunion, Saba, Saint Helena (including Ascension and Tristan da Cunha), Saint Martin and Saint Barthelemy, Saint Pierre and Miquelon, Sint Maarten, South Georgia and South Sandwich Islands, Tokelau, Turks and Caicos Islands, US Virgin Islands, United States Minor Outlying Islands (including Wake Island, Jarvis Island, Palmyra Atoll, Howland Island and Baker Island, and Johnston Atoll), and Wallis and Futuna.

In some cases, base-layer boundary data have obliged some ostensibly discrete countries to be treated as a single entity (such as Saint Martin and Saint Barthelemy or The Northern Mariana Islands and Guam) or vice-versa.

[8] See OECD (2017) for a discussion of the design and management aspects of MPAs.

Table 2. Terrestrial PAs: percentage of terrestrial area by IUCN category, not including overseas territories

	IUCN cat. I-II	IUCN cat. III & IV	IUCN cat. V & VI	No IUCN cat.	Reported as points*	Total (excluding points)
SVN	4.3	0.6	8.6	40.2	0.4	53.7
POL	0.6	0.5	8.1	30.4	0.0	39.6
DEU	0.6	3.5	25.7	7.7	0.2	37.6
SVK	6.4	0.4	11.2	19.1	0.0	37.2
GRC	0.7	8.1	5.8	20.3	0.0	34.9
NZL	12.6	12.9	6.7	0.4	0.2	32.6
BRA	5.8	0.1	9.7	13.4	0.2	28.9
AUT	2.8	5.8	15.2	4.3	0.4	28.2
GBR	0.3	8.7	15.3	3.8	0.0	28.1
ESP	2.2	0.6	7.4	17.8	0.0	28.0
LUX	3.4	15.3	0.0	9.0	6.6	27.6
FRA	0.5	0.9	16.0	8.5	0.2	25.9
CRI	10.4	3.3	7.1	2.5	6.3	23.3
BEL	10.6	1.0	1.6	10.0	0.0	23.1
HUN	2.3	0.3	6.5	13.5	0.1	22.6
PRT	0.9	0.6	7.3	13.5	0.5	22.4
CZE	1.1	1.3	13.7	5.4	0.0	21.5
ITA	5.2	3.7	1.5	11.1	0.0	21.5
JPN	5.0	6.7	8.6	0.0	0.1	20.4
ISR	0.2	12.6	0.0	7.1	0.2	19.8
CHL	11.8	7.2	0.1	0.3	0.0	19.3
EST	3.7	3.7	10.4	1.4	0.2	19.2
LVA	5.7	3.7	8.8	0.0	0.0	18.2
ISL	14.5	0.8	1.5	0.5	0.7	17.3
NOR	11.5	1.3	4.0	0.2	0.1	17.0
AUS	6.6	1.3	8.7	0.3	0.0	17.0
LTU	2.7	2.2	10.0	1.9	0.0	16.9
DNK	0.7	9.4	1.5	4.9	0.2	16.5
FIN	8.7	0.1	0.0	6.0	0.0	14.9
OECD	**6.4**	**1.9**	**4.6**	**1.5**	**0.2**	**14.4**
IRL	0.0	0.8	0.0	13.4	0.0	14.3
BRIICS	**2.7**	**2.1**	**5.7**	**3.8**	**1.2**	**14.3**
SWE	9.5	0.3	0.8	3.7	0.3	14.2
ZAF	0.0	0.0	0.0	14.1	0.0	14.1
CHN	0.0	0.0	13.4	0.4	3.4	13.8
COL	11.7	0.1	1.9	0.1	0.6	13.7
USA	5.8	3.7	3.5	0.0	0.0	13.0
MEX	1.3	0.0	9.1	2.0	2.9	12.4
IDN	8.0	2.7	0.5	0.4	0.6	11.6
NLD	2.8	8.2	0.0	0.4	0.0	11.4
KOR	4.6	3.1	3.5	0.0	0.0	11.2
CHE	0.4	6.9	0.0	2.4	0.0	9.7
CAN	8.7	0.3	0.5	0.2	0.0	9.7
RUS	2.4	4.1	1.5	1.2	0.5	9.3
ARG	2.0	0.2	5.0	1.6	0.0	8.8
IND	1.0	3.3	0.0	0.3	1.4	4.6
SAU	0.8	1.4	1.8	0.0	0.4	4.1
TUR	0.0	0.0	0.0	0.2	0.0	0.2

* Some or all of this area may be accounted for in the other categories.

Note: OECD calculations based on the January 2017 release of the WDPA. Further updates of this indicator will be available online at *OECD.Stat*.

Table 3. Marine PAs: percentage of EEZ by IUCN category, not including overseas territories

	IUCN cat. I-II	IUCN cat. III & IV	IUCN cat. V & VI	No IUCN cat.	Reported as points*	Total (excluding points)
SVN	0.4	0.1	0.1	87.3	0.0	87.9
DEU	14.6	9.8	1.5	19.4	0.0	45.3
USA	17.6	19.5	3.6	0.1	0.0	40.8
AUS	14.9	9.2	15.9	0.1	0.0	40.2
BEL	0.0	0.1	0.0	36.4	0.0	36.4
NZL	0.4	0.0	29.3	0.1	0.0	29.8
POL	0.4	0.0	0.3	21.8	0.0	22.6
NLD	0.7	11.5	0.0	9.4	0.0	21.5
LTU	2.7	7.5	5.8	4.6	0.0	20.7
OECD	**7.0**	**5.3**	**6.3**	**0.8**	**0.7**	**19.5**
EST	0.7	0.4	16.9	0.4	0.8	18.5
GBR	0.0	0.4	0.2	17.2	0.0	17.9
DNK	0.0	0.1	0.0	17.6	0.0	17.7
LVA	0.0	15.1	0.3	0.8	0.0	16.2
FRA	0.1	0.4	3.3	10.6	0.1	14.4
CHL	12.4	0.1	0.0	0.0	0.0	12.6
ZAF	0.0	0.0	0.0	11.4	0.0	11.4
FIN	2.2	0.5	0.5	8.0	0.0	11.2
ESP	0.1	0.0	0.9	7.8	0.0	8.8
SWE	1.1	0.2	2.3	4.5	0.0	8.2
ITA	0.2	4.7	0.0	0.7	0.0	5.5
RUS	0.6	2.0	0.1	0.2	0.0	2.8
IDN	1.3	0.0	1.3	0.2	0.0	2.8
BRIICS	**0.6**	**0.7**	**0.6**	**0.9**	**0.0**	**2.8**
PRT	0.3	0.3	0.1	1.8	0.0	2.5
IRL	0.0	0.0	0.0	2.3	0.0	2.3
JPN	0.1	0.0	2.0	0.0	6.9	2.1
COL	0.6	1.4	0.0	0.0	0.0	1.9
ARG	0.1	0.1	0.7	0.9	0.0	1.7
MEX	0.3	0.1	1.2	0.1	0.8	1.7
BRA	0.1	0.0	1.1	0.4	0.0	1.6
GRC	0.0	0.1	0.5	0.9	0.0	1.5
KOR	0.8	0.3	0.1	0.0	0.0	1.1
CAN	0.6	0.0	0.1	0.2	0.0	0.9
CRI	0.6	0.0	0.0	0.1	0.2	0.8
NOR	0.2	0.1	0.0	0.3	0.0	0.7
ISL	0.0	0.0	0.4	0.0	0.0	0.4
CHN	0.0	0.0	0.1	0.2	0.2	0.3
SAU	0.1	0.0	0.0	0.0	1.0	0.1
IND	0.1	0.0	0.0	0.0	0.1	0.1
TUR	0.0	0.0	0.0	0.1	0.0	0.1
ISR	0.0	0.0	0.0	0.0	0.0	0.0

* Some or all of this area may be accounted for in the other categories.

Note: OECD calculations based on the January 2017 release of the WDPA. Further updates of this indicator will be available online at *OECD.Stat*.

Table 4 shows the countries that have designated 'No-Take' marine protected areas. Australia and the United States have large no-take marine reserves. These totals are based on the reported no-take area attribute field of the WDPA (only part of a larger MPA might be designated as no-take, so it is not possible to calculate the area based on the recorded boundary) and therefore may be an overestimate or inconsistent with the total marine protected area (as is the case in NZL where the reported no-take area is greater than the total marine protected area).[9]

Table 4. Reported marine no-take areas

	Total (km^2)	As share of EEZ (%)
AUS	1 877 272	25.1
USA	1 521 594	17.7
NZL	1 381 320	33.7
CHL	300 016	8.2
IND	4 175	0.2
KOR	484	0.1
ZAF	264	0.0
MEX	41	0.0
JPN	27	0.0
ITA	16	0.0

Note: These are the current reported no-take areas in the WDPA. The data completeness may be quite poor, and the structure of the way this information is reported in the database makes it difficult to resolve overlaps or to reconcile the different areal measurement techniques used, therefore these figures should be used with caution.

3.2. Marine protected areas in overseas territories

There has been increasing interest in the designation of marine protected areas (MPAs) in the overseas territories of a number of countries. This is particularly important for countries such as the United States, France, Australia and the United Kingdom as these countries (with their overseas affiliated territories, which are generally small islands) account for large share of global EEZ area. In some cases, such overseas MPAs account for a greater share of the total MPAs for a country than those within the domestic EEZ. For example, for the United Kingdom and France (shown in more detail in Tables 5-6), overseas marine area is on average more extensively protected than the metropolitan marine area and there are several small-island territories where all or most of the marine area has been designated as a marine reserve. Typical examples of this approach to overseas marine protection are the recently designated *Pitcairn Island Marine Reserve*, or New Caledonia's *Natural Park of the Coral Sea*, two of the largest marine reserves in the world. See Annex C for further details on protected areas in overseas territories.

[9] 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. (See UNEP-WCMC (2016) and UK MPA Centre (2007) What is a No Take Zone? UK Marine Protected Areas Centre: Plymouth, UK, www.ukmpas.org/faq.html#whatisaNTZ).

Table 5. Marine protected area in the United Kingdom and affiliated territories, including MPAs recorded as points, 2017

	EEZ (km²)	MPA (km²)	MPA (%)
United Kingdom	725 226	129 546	17.9
Anguilla	92 175	57	0.1
Bermuda	450 344	148	0.0
British Indian Ocean Territory	638 566	637 248	99.8
British Virgin Islands	80 105	44	0.1
Cayman Islands	119 096	92	0.1
Falkland Islands	549 953	24 975	4.5
Gibraltar	426	177	41.4
Guernsey	8 682	17	0.2
Isle of Man	0	0	
Jersey	2 965	343	11.6
Montserrat	7 587	0	0.0
Pitcairn	836 110	836 086	100.0
Saint Helena, Ascension and Tristan Da Cunha	1 641 240	5 186	0.3
South Georgia and South Sandwich Islands	1 449 460	1 065 600	73.5
Turks and Caicos Islands	153 513	149	0.1
Total for country and affiliates	6 755 447	2 699 669	40.0

Note: Protected areas for overseas territories may be under-reported where there is no formal process for submitting data to the WDPA (i.e. zero values may not be true zeroes). These results may be outdated as MPA area totals change dramatically when extensive new marine reserves are designated.

Table 6. Marine protected area in France and affiliated territories, including MPAs recorded as points, 2017

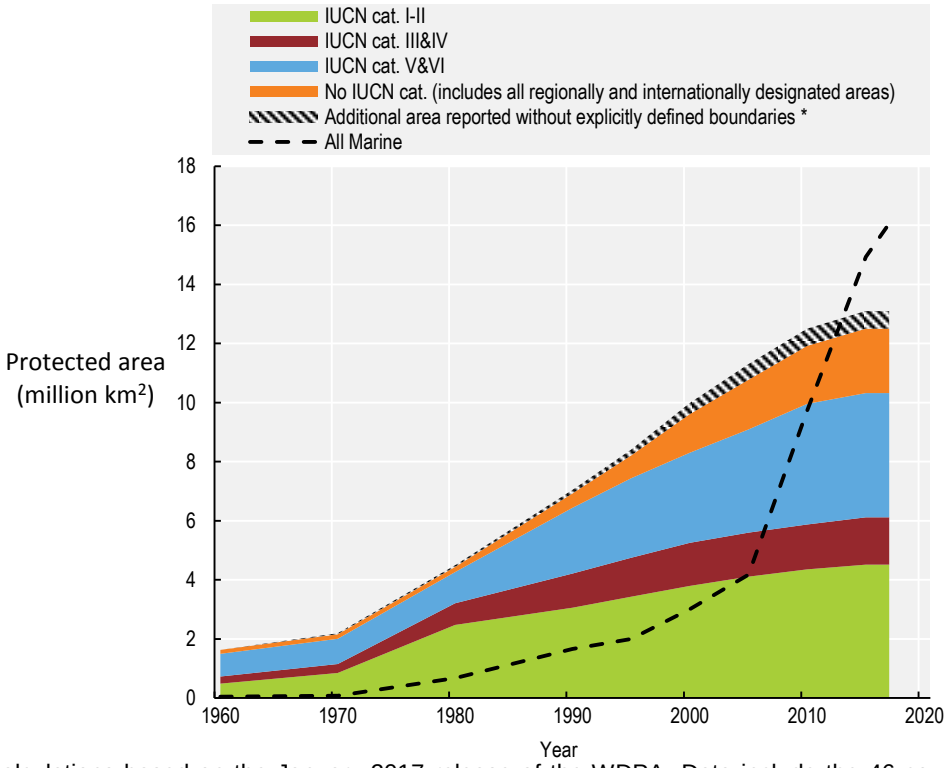
	EEZ (km²)	MPA (km²)	MPA (%)
France	343 889	50 003	14.5
Clipperton	431 275	0	0.0
French Guiana	135 560	1 539	1.1
French Polynesia	4 771 710	152	0.0
French Southern Territories	2 273 950	61 216	2.7
Guadeloupe	90 533	90 455	99.9
Martinique	47 366	47 301	99.9
Mayotte	62 982	62 900	99.9
New Caledonia	1 369 630	1 318 174	96.2
Reunion	315 071	50	0.0
Saint Martin and Saint Barthelemy	5 357	5 249	98.0
Saint Pierre and Miquelon	12 342	7	0.1
Wallis and Futuna	258 265	0	0.0
Total for country and affiliates	10 117 931	1 637 045	16.2

Note: Protected areas for overseas territories may be under-reported where there is no formal process for submitting data to the WDPA (i.e. zero values may not be true zeroes). These results may be outdated as MPA area totals change dramatically when extensive new marine reserves are designated.

3.3. Historical patterns of protected area designation

Figure 6 shows that the designation of protected areas has been an increasingly popular policy response for the conservation of biodiversity in OECD and G20 countries and affiliated territories. Between 1970 and 2010 new terrestrial PAs were designated at a high rate with around a six-fold increase in protected area over these 40 years. The designation of MPAs was slow until around 1995-2000, however, since then it has been extremely rapid and now exceeds the area of terrestrial PAs in the sample countries (for scale, 10 million square kilometres is approximately the land area of Canada).

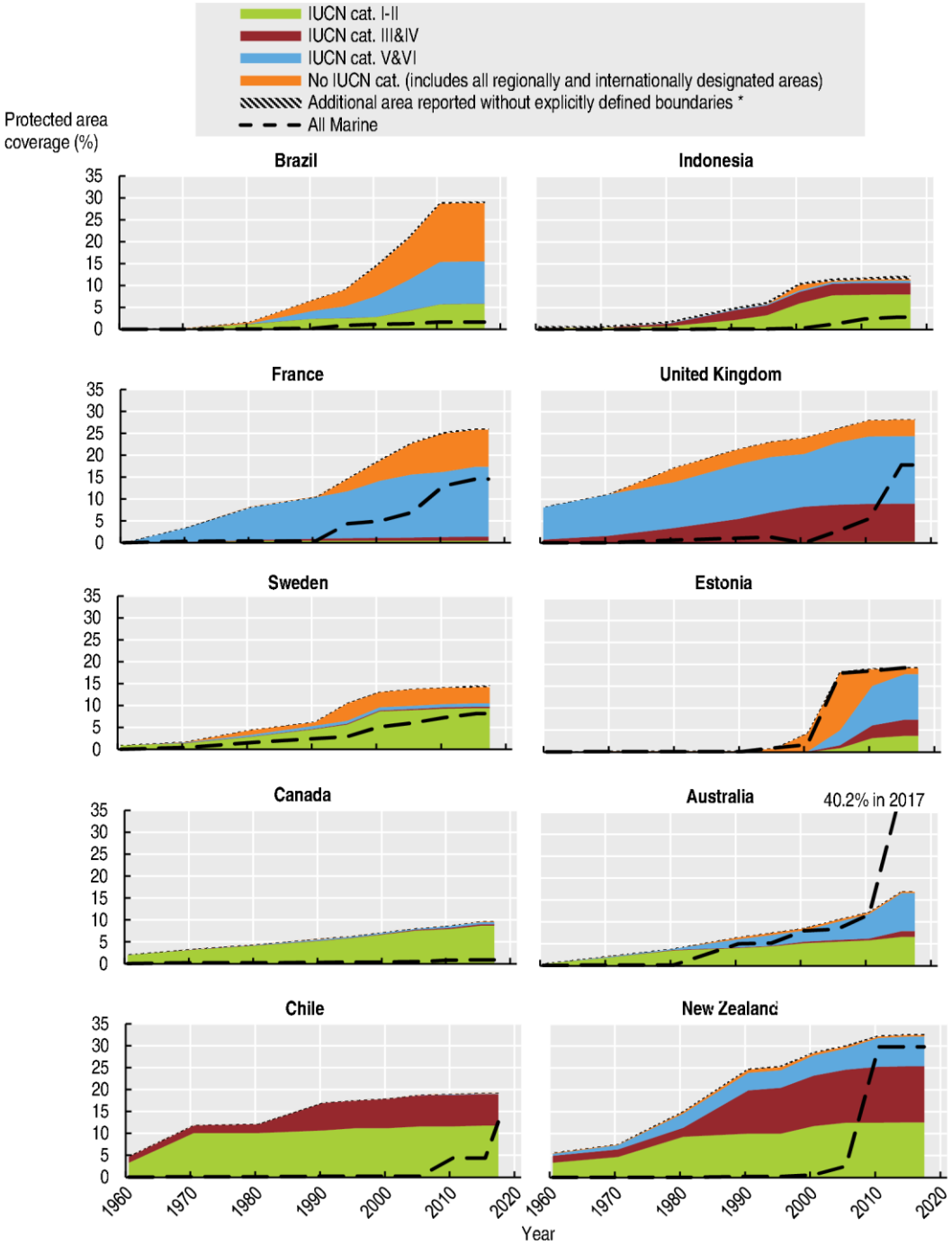
Figure 6. Marine and terrestrial protected areas: OECD and G20 countries and their overseas territories, total area by IUCN categories, 1960-2017



Note: OECD calculations based on the January 2017 release of the WDPA. Data include the 46 countries shown in Figure 2, plus further 48 affiliated overseas territories. PAs without a designation date are treated as though they have always existed (i.e. they are included in the baseline); therefore some pre-2017 PAs were in fact designated later than reported.

* Some or all of this area may be accounted for in the other categories.

Figure 7. Marine and terrestrial PAs: selected countries, 1960-2017, total area, by IUCN categories



Note: OECD calculations based on the January 2017 release of the WDPA. PAs without a designation date are treated as though they have always existed, therefore pre-2017 values may be overestimates.

* Some or all of this area may be accounted for in the other categories.

4. INTERPRETATION AND LIMITATIONS

This paper describes a method to generate a more detailed summary indicator of terrestrial and marine PAs for countries in a harmonised way, drawing on existing and freely available datasets. The indicator helps fulfil a demand that is not met with available data. It provides additional detail about the extent of protected areas, and which management objectives are pursued within and across countries.

There are a number of issues that need to be taken into account when using the indicator. First, it must be noted that protected areas are not necessarily sited optimally with respect to biodiversity conservation objectives (e.g. species type and abundance). Siting decisions often respond also to a host of other socio-economic factors, such as land use patterns, conservation budget, etc (see e.g. Albers et al. 2012; Kallio et al. 2008; Polasky et al. 2001). Neither the IUCN management category nor the size of a protected area is necessarily a good indication of the *conservation value* of the area. Consequently, the indicator presented here cannot answer important policy-relevant questions such as the extent to which protected areas are protecting national or global biodiversity. For instance, the SDG 15.1.2 metadata highlights that "*Such percentage area coverage statistics do not recognise the extreme variation of biodiversity importance over space… and so risk generating perverse outcomes through the protection of areas which are large at the expense of those which require protection*".[10] This is the limitation that SDG indicator 15.1.2 aims to help resolve (Proportion of important sites for terrestrial and freshwater biodiversity that are covered by protected areas, by ecosystem type).

Second, the indicator presented here does not provide any indication of whether protected areas are effectively managed or enforced.[11] These considerations are particularly important for measuring the parts of Aichi Target 11 that require PAs to be "effectively managed, ecologically representative, well connected and integrated into the wider landscape and seascape". Information gaps remain in these areas. The Secretariat will continue to monitor relevant ongoing work by UNEP-WCMC, IUCN and other partners in this area.

Third, the indicator presented here should be used carefully when comparing with other indicators using alternative definitions. Differences can arise from several issues including the definitions of terrestrial, coastal, and marine areas; the country baselines used; the definition of a country (e.g. which overseas territories are included); areal calculation technique used; time lag between national or regional data and updates to the WDPA; uncertainty about whether a particular type of protected area designation meets the definition of a protected area; and to which of the IUCN categories a protected area belongs. The WDPA also includes data from non-governmental data providers which may not be included in national databases. Where countries do not have a formal and timely process for submitting data to WCMC for inclusion in the database these results will be outdated, and on occasion it may not be possible to use the WDPA at all.[12]

In practice, some of the 'No Category' and the internationally and regionally designated PAs meet the definition of a specific IUCN category (e.g. Natura 2000 sites arguably meet the definition of IUCN

[10] https://unstats.un.org/sdgs/metadata/files/Metadata-15-01-02.pdf.

[11] See UNEP-WCMC Global Database on Protected Area Management Effectiveness (GD-PAME) www.protectedplanet.net/c/protected-areas-management-effectiveness-pame.

[12] For example, the EEA does not have permission to distribute the data on some or all sites reported by Austria, Bulgaria, Estonia, Ireland, Romania and Turkey, so some PAs may be missing from the WDPA for these countries.

cat. IV); however, they are not currently recorded as such in the WDPA database and therefore are included under 'No IUCN category'. In a similar manner, some countries have few or no areas with an IUCN category reported (e.g. South Africa has no nationally designated sites with an IUCN category recorded in the WDPA).

Finally, a decision was taken in this paper to report protected area coverage as points separately, as the uncertainty about the location and extent of these areas can be high. Most OECD countries have few areas reported as points. This reported area may in practice (but not necessarily) be accounted for in whole or in part already in the coverage figure derived from those sites recorded as polygons.

5. CONCLUDING REMARKS AND NEXT STEPS

The indicator developed in this paper helps to address a range of policy-relevant questions:

- The protected area coverage as % of terrestrial and marine territory addresses the question *how extensive are protected areas*? This comprises totals (excluding overlapping areas) and additional areas reported as point data, for completeness.
- The breakdown by IUCN category addresses the question *what management objectives are protected areas used to pursue*? This comprises both the indicator excluding overlaps (I-II, III-IV, V-VI and no category) as well as areas by the 'naive' totals of individual IUCN categories including overlaps (Ia, Ib, II, III, IV, V, VI, no category).

Further work on this issue could address a number of related issues:

- The protected area coverage by type of ecosystem and by land cover class (e.g. protected forest) could complement these indicators in the future (this has already been demonstrated to some extent by the DOPA project and others).
- The proportion of important sites for terrestrial and freshwater biodiversity that are covered by protected areas (SDG 15.1.2) addresses the question *are (terrestrial) protected areas well sited*? This includes the relevant indicators published by WCMC.
- Indicators need to be developed to address the question are protected areas *appropriately used, effectively managed and enforced*?
- Indicators on biodiversity-relevant policy instruments (e.g. biodiversity-relevant tax revenue as a proportion of total tax revenue) drawing on the OECD's PINE database (*http://oe.cd/pine*) will complement this set and can help assess the broader public policy framework directed at conservation and sustainable use of biodiversity and ecosystems.
- A wide range of information at regional and global levels produced to support the Global Environmental Outlook and the International Platform on Biodiversity and Ecosystem Services are available. These can provide a regional context to country-level indicators. Data at the regional level includes numbers of species occurring and percentages threatened; numbers of endemics and percentages threatened; Red List Indices for mammals, birds, and amphibians; numbers, mean sizes, and percentage coverages of biodiversity-important sites; percentage coverage of land and sea by protected areas; and trends in percentages of biodiversity important sites wholly covered by protected areas.[13]

[13] See Brooks et al. (2016).

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ANNEX A. IUCN PROTECTED AREA MANAGEMENT CATEGORIES

Ia. Strict Nature Reserve

Category Ia are strictly protected areas set aside to protect biodiversity and also possibly geological/geomorphic features, where human visitation, use and impacts are strictly controlled and limited to ensure protection of the conservation values. Such protected areas can serve as indispensable reference areas for scientific research and monitoring.

Ib. Wilderness Area

Category Ib protected areas are usually large unmodified or slightly modified areas, retaining their natural character and influence without permanent or significant human habitation, which are protected and managed so as to preserve their natural condition.

II. National Park

Category II protected areas are large natural or near natural areas set aside to protect large-scale ecological processes, along with the complement of species and ecosystems characteristic of the area, which also provide a foundation for environmentally and culturally compatible, spiritual, scientific, educational, recreational, and visitor opportunities.

III. Natural Monument or Feature

Category III protected areas are set aside to protect a specific natural monument, which can be a landform, sea mount, submarine cavern, geological feature such as a cave or even a living feature such as an ancient grove. They are generally quite small protected areas and often have high visitor value.

IV. Habitat/Species Management Area

Category IV protected areas aim to protect particular species or habitats and management reflects this priority. Many Category IV protected areas will need regular, active interventions to address the requirements of particular species or to maintain habitats, but this is not a requirement of the category.

V. Protected Landscape/ Seascape

A protected area where the interaction of people and nature over time has produced an area of distinct character with significant, ecological, biological, cultural and scenic value: and where safeguarding the integrity of this interaction is vital to protecting and sustaining the area and its associated nature conservation and other values.

VI. Protected area with sustainable use of natural resources

Category VI protected areas conserve ecosystems and habitats together with associated cultural values and traditional natural resource management systems. They are generally large, with most of the area in a natural condition, where a proportion is under sustainable natural resource management and where low-level non-industrial use of natural resources compatible with nature conservation is seen as one of the main aims of the area.

ANNEX B. EXCLUSIVE ECONOMIC ZONES

In general, under the 1982 *UN Convention on the Law of the Sea* the exclusive economic zone (EEZ) of a country extends 200 nautical miles from the coastline, or to the mid-point between coastlines where the EEZ of different countries would otherwise overlap. There are exceptions. This paper uses a global database of EEZs maintained by the Flanders Marine Institute (VLIZ) which attempts to record current EEZs according to the convention and subsequent decisions. The convention has not been ratified by all countries, and many boundaries are disputed or may simply be incorrect in the dataset. Where areas are recorded as disputed or shared in the VLIZ dataset then they are assigned to both countries for the purposes of the analysis.[14,15]

Figure 8. Annex Figure 1. Illustration of maritime zones

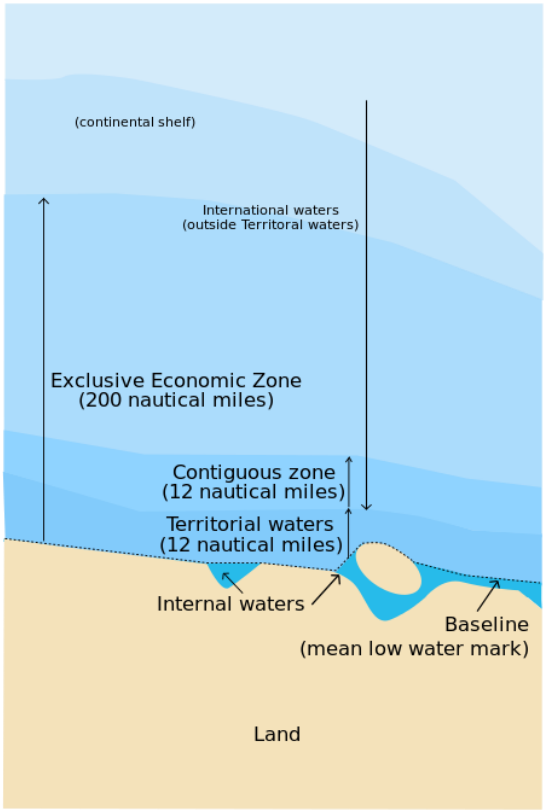


Figure source: Wikimedia (2006).

[14] This document, as well as any data and map included herein, are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.

[15] Concerning disputed or shared areas, the methodology described in this paper is applied uniformly across all disputed or shared areas and all countries included in this report. Variations in protected area extent (as a share of EEZ) can arise, to some extent, due to changes in the measured EEZ.

ANNEX C. PROTECTED AREAS IN OVERSEAS TERRITORIES

Annex Table 1. Terrestrial PAs in overseas territories: percentage of terrestrial area by IUCN category

	Affiliated country	IUCN cat. I-II	IUCN cat. III & IV	IUCN cat. V & VI	No IUCN cat.	Reported as points*	Total (excluding points)
Aruba	Netherlands	0.0	0.0	0.0	0.0	0.4	0.0
Anguilla	United Kingdom	0.0	0.0	0.0	0.0	13.8	0.0
American Samoa	United States	0.1	0.0	16.4	0.0	0.0	16.5
French Southern Territories	France	0.0	97.2	0.1	0.4	0.0	97.7
Bonaire	Netherlands	0.0	0.0	0.0	6.2	36.9	6.2
Bermuda	United Kingdom	2.7	1.3	0.1	0.9	0.3	5.1
Saba	Netherlands	94.3	0.0	0.0	0.0	0.0	94.3
Bouvet Island	Norway	0.0	0.0	0.0	0.0	114.4	0.0
Cocos Islands	Australia	13.6	0.0	0.0	0.0	0.0	13.6
Cook Islands	New Zealand	0.0	0.0	0.0	0.1	2.5	0.2
Clipperton	France	0.0	0.0	0.0	0.0	0.0	0.0
Curacao	Netherlands	5.0	0.0	0.0	11.4	0.0	16.4
Christmas Island	Australia	62.2	0.0	0.0	0.0	0.0	62.2
Cayman Islands	United Kingdom	7.7	1.5	0.0	0.0	0.0	9.2
Falkland Islands	United Kingdom	0.4	0.0	0.0	0.1	0.0	0.5
Faroe Islands	Denmark	0.0	0.0	0.0	2.2	0.0	2.2
Guernsey	United Kingdom	0.0	0.0	0.0	2.2	0.0	2.2
Gibraltar	United Kingdom	0.0	0.0	0.0	34.8	5.3	34.8
Guadeloupe	France	11.4	4.0	54.9	0.8	0.0	71.1
Greenland	Denmark	41.3	0.0	0.0	0.4	0.1	41.7
French Guiana	France	1.7	3.9	22.9	24.3	0.3	52.8
Heard Island and McDonald Islands	Australia	100.0	0.0	0.0	0.0	0.0	100.0
Isle of Man	United Kingdom	0.0	4.0	0.0	0.1	0.0	4.1
British Indian Ocean Territory	United Kingdom	9.0	0.0	23.7	67.3	0.0	100.0
Jersey	United Kingdom	0.0	0.0	9.4	0.0	0.0	9.4
Saint Martin and Saint Barthelemy	France	0.0	8.6	0.0	5.2	0.0	13.8
Northern Mariana Islands and Guam	United States	0.1	11.8	4.3	0.0	0.0	16.2
Montserrat	United Kingdom	0.0	0.0	11.1	0.0	0.0	11.1
Martinique	France	2.7	1.5	61.9	1.3	0.0	67.4
Mayotte	France	0.0	4.4	5.2	0.0	0.3	9.6
New Caledonia	France	0.9	1.5	0.0	14.6	109.3	17.0
Norfolk Island	Australia	16.8	0.1	5.5	0.0	0.0	22.4
Niue	New Zealand	0.0	0.0	0.0	0.0	22.6	0.0
Pitcairn	United Kingdom	0.0	0.0	0.0	55.3	0.0	55.3
Puerto Rico	United States	0.6	1.0	5.6	0.1	0.0	7.3
French Polynesia	France	0.0	0.0	0.0	0.0	2.9	0.0
Reunion	France	3.2	3.7	34.4	36.0	0.0	77.3
South Georgia and South Sandwich Islands	United Kingdom	0.0	0.0	100.0	0.0	0.0	100.0
Saint Helena, Ascension and Tristan Da Cunha	United Kingdom	0.0	2.1	2.4	19.7	845.4	24.2
Jan Mayen and Svalbard	Norway	65.5	0.0	0.0	0.0	11.4	65.6
Saint Pierre and Miquelon	France	0.0	1.9	0.0	0.0	0.0	1.9
Sint Maarten	Netherlands	0.0	0.0	0.0	0.8	0.0	0.8
Turks and Caicos Islands	United Kingdom	0.0	35.5	0.0	9.1	0.0	44.6
Tokelau	New Zealand	0.0	0.0	0.0	0.0	62.7	0.0
United States Minor Outlying Islands	United States	65.6	34.4	0.0	0.0	0.0	100.0
British Virgin Islands	United Kingdom	0.7	0.2	0.0	3.1	6.5	3.9
US Virgin Islands	United States	0.2	1.2	11.7	0.0	0.0	13.1
Wallis and Futuna	France	0.0	0.0	0.0	0.0	0.2	0.0

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***** Some or all of this area may be accounted for in the other categories. The numerator of this percentage is the reported area of protected areas recorded as a point located on land, the denominator is the terrestrial area. Although the protected area recorded as a point may be located on land, it may represent a protected area that includes coastal marine area, therefore totals greater than 100% can be reported.

Annex Table 2. Marine PAs in overseas territories: percentage of EEZ by IUCN category

	Affiliated country	IUCN cat. I-II	IUCN cat. III & IV	IUCN cat. V & VI	No IUCN cat.	Reported as points*	Total (excluding points)
Aruba	Netherlands	0.0	0.0	0.0	0.0	0.0	0.0
Anguilla	United Kingdom	0.0	0.0	0.0	0.0	0.1	0.0
American Samoa	United States	0.0	0.0	8.7	0.0	0.0	8.7
French Southern Territories	France	0.0	0.7	1.9	0.1	0.0	2.7
Bonaire	Netherlands	0.0	0.0	0.0	0.0	0.0	0.0
Bermuda	United Kingdom	0.0	0.0	0.0	0.0	0.0	0.0
Saba	Netherlands	0.1	0.0	0.0	0.0	0.0	0.1
Bouvet Island	Norway	0.0	0.0	0.0	0.0	0.0	0.0
Cocos Islands	Australia	0.0	0.0	0.0	0.0	0.0	0.0
Cook Islands	New Zealand	0.0	0.0	0.0	0.0	0.0	0.0
Clipperton	France	0.0	0.0	0.0	0.0	0.0	0.0
Curacao	Netherlands	0.0	0.0	0.0	0.0	0.0	0.0
Christmas Island	Australia	0.0	0.0	0.0	0.0	0.0	0.0
Cayman Islands	United Kingdom	0.0	0.1	0.0	0.0	0.0	0.1
Falkland Islands	United Kingdom	0.0	0.0	0.0	4.5	0.0	4.5
Faroe Islands	Denmark	0.0	0.0	0.0	0.0	0.0	0.0
Guernsey	United Kingdom	0.0	0.0	0.0	0.2	0.0	0.2
Gibraltar	United Kingdom	0.0	0.0	0.0	41.4	0.0	41.4
Guadeloupe	France	0.0	0.0	1.4	98.4	0.0	99.9
Greenland	Denmark	4.5	0.0	0.0	0.0	0.0	4.5
French Guiana	France	0.0	0.4	0.2	0.3	0.2	0.9
Heard Island and McDonald Islands	Australia	15.4	0.0	0.0	0.0	0.0	15.4
Isle of Man	United Kingdom						
British Indian Ocean Territory	United Kingdom	0.2	0.0	0.0	99.6	0.1	99.7
Jersey	United Kingdom	0.0	0.0	0.0	5.2	6.3	5.2
Saint Martin and Saint Barthelemy	France	0.0	0.7	0.0	97.2	0.0	98.0
Northern Mariana Islands and Guam	United States	0.0	21.1	5.2	0.0	0.0	26.4
Montserrat	United Kingdom	0.0	0.0	0.0	0.0	0.0	0.0
Martinique	France	0.0	0.0	0.1	99.8	0.0	99.9
Mayotte	France	0.0	0.0	99.9	0.0	0.0	99.9
New Caledonia	France	0.3	0.0	93.8	1.4	0.7	95.5
Norfolk Island	Australia	9.7	4.9	29.2	0.0	0.0	43.7
Niue	New Zealand	0.0	0.0	0.0	0.0	0.0	0.0
Pitcairn	United Kingdom	0.0	0.0	0.0	100.0	0.0	100.0
Puerto Rico	United States	0.1	0.2	1.6	0.0	0.0	1.8
French Polynesia	France	0.0	0.0	0.0	0.0	0.0	0.0
Reunion	France	0.0	0.0	0.0	0.0	0.0	0.0
South Georgia and South Sandwich Islands	United Kingdom	0.0	0.0	73.5	0.0	0.0	73.5
Saint Helena, Ascension and Tristan Da Cunha	United Kingdom	0.0	0.0	0.0	0.2	0.1	0.2
Jan Mayen and Svalbard	Norway	7.6	0.0	0.0	0.0	0.3	7.6
Saint Pierre and Miquelon	France	0.0	0.1	0.0	0.0	0.0	0.1
Sint Maarten	Netherlands	0.0	0.0	0.0	5.3	0.0	5.4
Turks and Caicos Islands	United Kingdom	0.0	0.0	0.0	0.1	0.0	0.1
Tokelau	New Zealand	0.0	0.0	0.0	0.0	0.0	0.0
United States Minor Outlying Islands	United States	0.6	0.1	64.2	0.0	0.1	64.9
British Virgin Islands	United Kingdom	0.0	0.0	0.0	0.0	0.1	0.0
US Virgin Islands	United States	0.4	0.4	0.2	0.0	0.0	1.0
Wallis and Futuna	France	0.0	0.0	0.0	0.0	0.0	0.0

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* Some or all of this area may be accounted for in the other categories.