

# Proteus Highlights 2013

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This report describes the key activities and deliverables of the Proteus Partnership workplan in 2013.

With the renewal of Proteus at the beginning of 2013 for three years, the Partnership activities followed the newly agreed strategy of the new Phase.

## Improving information on Protected Areas

Objective 1): To improve significantly the accuracy, completeness and currency of information in the World Database on Protected Areas, focusing on data verification, quality assurance and enhancements in interoperability.

### Refining the World Database on Protected Areas

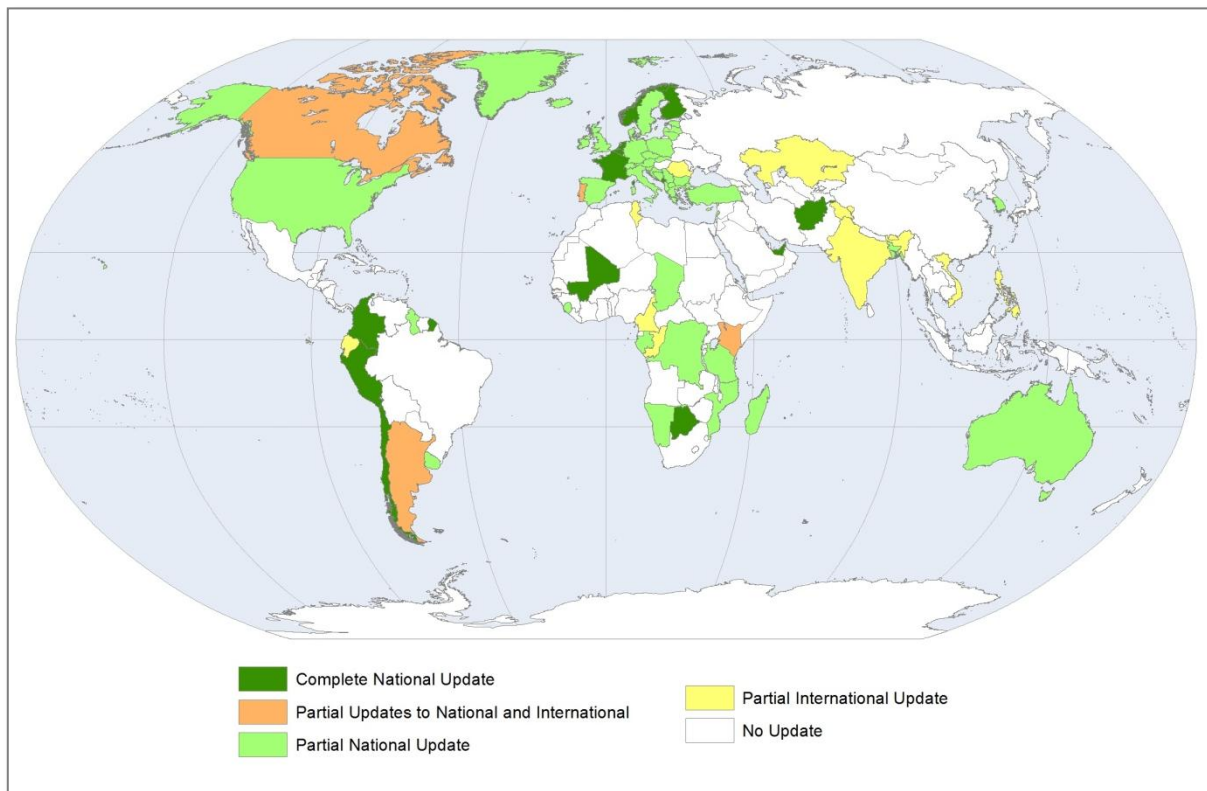
2013 was a year of refinement for the World Database on Protected Areas (WDPA). A total of 3,946 new protected area records were added to the database, but 17,097 were removed resulting in an overall 2.5% decrease in the total number of records. Removal of records took place after review and confirmation by data providers that the sites: (i) did not conform to the IUCN definition; (ii) were proposed sites which had not subsequently been designated; (iii) had been delisted; (iv) were an erroneous entry to the database, such as a duplicate.

Efforts to improve and update data continued, with 38,740 protected area records reviewed, validated or updated in 2013, equivalent to 20% of the database content. As of January 2014, the WDPA holds records for 191,705 protected areas worldwide. Alongside the refinement of the WDPA, one of the key measures of quality - the ratio of boundaries to points - improved to 92% boundaries.

### Updating countries of interest

Over the course of the year, UNEP-WCMC received new or updated data for protected areas across 87 political geographies. Direct correspondence with governments resulted in complete national updates or validation of protected areas for 20 countries. The status of those updates (whether they are for areas protected under national laws or international conventions and agreements, or both) is shown in Figure 1 below.

Figure 1: Map showing countries where data updates were made in 2013



## Updating Regional Data

**Natural and Mixed World Heritage sites.** These sites continued to be updated, with the five World Heritage Sites inscribed in 2013 added to the WDPA as polygons during the year. The WDPA continues to include data on all Natural and Mixed World Heritage sites. The new sites are:

- El Pinacate and Gran Desierto de Altar Biosphere Reserve (Mexico)
- Mount Etna (Italy)
- Namib Sand Sea (Namibia)
- Tajik National Park (Mountains of the Pamirs) (Tajikistan)
- Xinjiang Tianshan (China)

**Ramsar Wetlands of International Importance.** As part of the ongoing partnership with the Ramsar Convention, UNEP-WCMC continues to receive official updates via the Ramsar Secretariat according to a data sharing protocol. A partial update of Ramsar sites was received at the end of 2013 which will be included in the WDPA in 2014.

## Improving Data Contacts

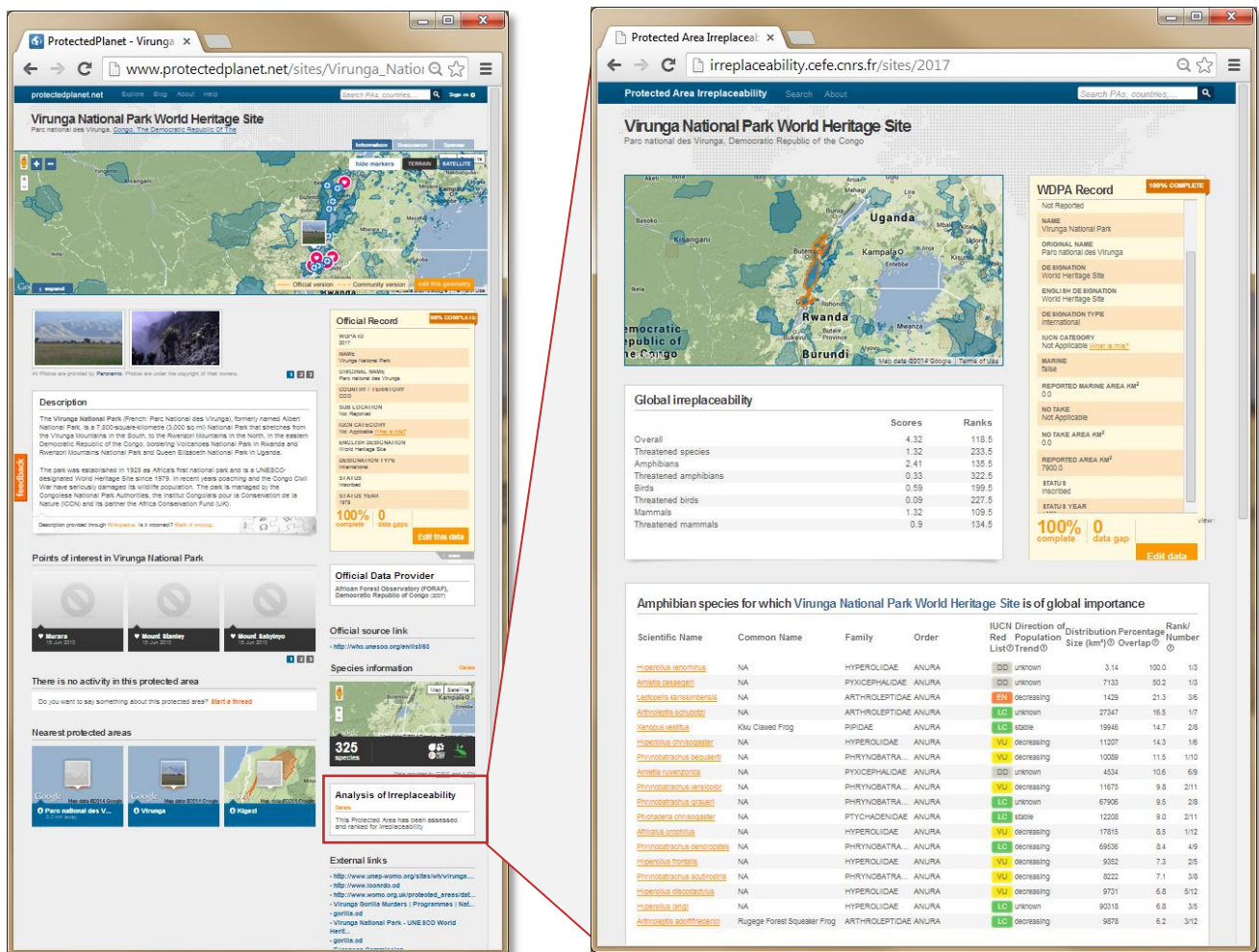
The WDPA team has continued to maintain and improve data contacts across the globe, particularly for priority countries nominated by Proteus Partners, or where UNEP-WCMC has not historically had good contacts to provide data. This work has led to improved data access in 2013. Of particular note are the examples below:

- During 2013 the WDPA team implemented an expert review of protected areas data in China, Japan and the Republic of Korea which will result in the delivery of improved datasets from these three countries in early 2014. During 2014 this work will be expanded to cover all Asia countries east of Iran. This review will involve a series of meetings with national representatives of each country. The main outcome of the review will be improved datasets from the participating countries.
- Through the UNEP-WCMC project ‘Protected Areas Resilient to Climate Change’ in West Africa, funded by the Global Environment Fund (GEF), the WDPA team is working with the focus countries (Gambia, Sierra Leone, Togo, Mali and Chad) to improve their protected areas data.
- The Biopama project, funded by IUCN and the European Commission, places emphasis on the Pacific, Caribbean and Sub-Saharan region of Africa. In 2014 this project will continue with in-country visits and focussed workshops which are intended to result in improved data for each country.

## Updating the ProtectedPlanet.net Interface

In 2013, to coincide with the publication of a landmark paper that identified the world's most irreplaceable protected areas, a page for each of these protected areas outlining the relevant information specific to those sites was added to [www.protectedplanet.net](http://www.protectedplanet.net). The link can be found on the individual protected area pages, below the sites species information (Figure 2).

Figure 2: Irreplacability analysis within ProtectedPlanet.net the link on the Protected Areas page (highlighted, left image) displays detailed results of the irreplacability analysis (right image) Example of Virunga National Park World Heritage Site: <http://irreplaceability.cefe.cnrs.fr/sites/2017>



# Providing integrated data and knowledge to Partners

Objective 2): To support integrated knowledge products that provide access to information on sites of global importance for biodiversity and increasingly feature sites that are considered national priorities.

## Presenting information on protected areas data

**Developing protected area country factsheets:** In January 2013 UNEP-WCMC began to create and distribute factsheets on the data contained within the WDPa at the country-level. These factsheets were initially envisaged as a tool to communicate the data available and the quality of data to Proteus Partners. However, following very positive feedback not only from Proteus Partners, but also the data providers themselves, a decision was taken to develop factsheets for every country/territory represented in the WDPa. These WDPa Data Factsheets have been used to communicate on the progress made with accessing new, improved and validated data for Proteus priority countries and to provide a new quality assessment of each country/territory. The 221 factsheets are now available on the Proteus Partner's website. <http://www.proteuspartners.org/shared-resources/tools-and-data/wdpa-data-status-reports/>

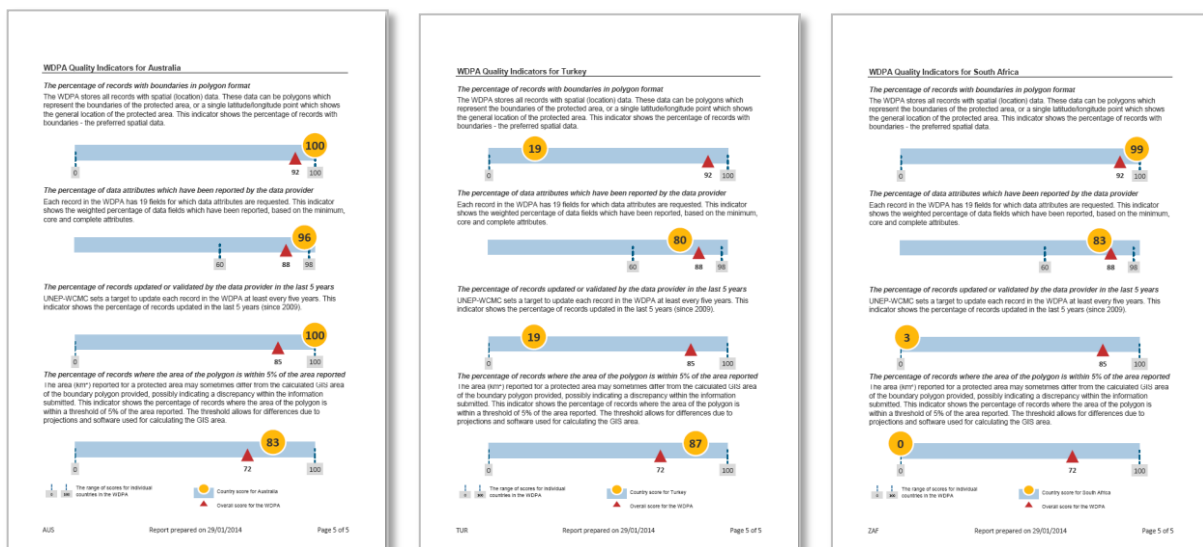
**Presenting information on the WDPa:** Aligned to the country factsheets, a factsheet and infographic are now made available for the whole dataset on a monthly basis (Figure 3). The factsheet is included with the monthly release to Partners, and made available on the Proteus Partners' website.

Figure 3: WDPa Infographic and Data Factsheet



**Assessing data quality in the WDPa:** Building on previous approaches used to assess the WDPa database quality and requests received at the 2013 Proteus Partner meeting for simple quality metrics, in 2013 UNEP-WCMC instituted a new approach to assess and communicate quality. This method has now been rolled out across the WDPa. The WDPa data factsheets now incorporate a visual representation of this assessment (Figure 4), allowing comparison of a country's data to the WDPa overall. The quality assessment for the WDPa as a whole is now communicated on a monthly basis along with the distribution of the WDPa monthly release.

Figure 4: Examples of the new WDPa data quality indicators for Australia, Turkey and South Africa



## Improving the Integrated Biodiversity Assessment Tool (IBAT)

**Reviewing IBAT:** In 2013, an independent review of the Integrated Biodiversity Assessment Tool initiative was undertaken by external consultants. The review was commissioned to provide a respected, authoritative and independent mechanism to help the IBAT Alliance plan the next four years of the IBAT initiative.

The review provided an opportunity for the IBAT Alliance Partners to take stock of the initiative's progress since the launch of the tool in 2008. The consultants contacted users of the tool (including Proteus Partners), and interviewed the members of the Alliance and other stakeholders. The recommendations of the review included validation of the existing mission and objectives of the initiative – to make a consistent and agreed view of important biodiversity data available. This includes a decision to retain the core datasets of IBAT as the central focus of the tool, and not to expand into other areas which might compromise the current clarity and purpose. Further recommendations were made to take advantage of the different perspectives offered by the IBAT data on key concepts, such as financial standards, reporting requirements and certification approaches. A summary report on the review was made available to respondents.

Key changes to be made include revisions to the subscription model to make IBAT accessible for smaller businesses and consultants; tailored report functions within IBAT to focus on IFC Performance Standard 6, the high Conservation Value approach and Global Reporting Initiative requirements; and new ways of accessing species information. As these changes are rolled out, UNEP-WCMC will communicate them to Proteus Partners.

UNEP-WCMC continues to work with various organisations, including BirdLife International, the European Union and the Secretariat of the Convention on Biological Diversity to expand the use of IBAT by governments in planning processes.

**Updating data in IBAT:** The main datasets in IBAT were updated during 2013, data for Key Biodiversity Areas and protected areas (from the WDPA) are current to July 2013, with species data current to August 2013. The updates have resulted in over 13,000 KBAs and over 195,000 protected areas being included in the tool, along with 15,899 species incorporated within the species grid. A further update of protected areas data is planned for February 2014, KBAs will be updated in March 2014 and species data will follow. The KBA update in 2013 was particularly important, introducing data for newly identified marine KBAs for the first time, including IBAs identified in the high seas.

## **Providing guidance on the way biodiversity data can inform the International Finance Corporation's Performance Standards**

UNEP-WCMC developed briefing notes for the Proteus Partners on how IFC's Performance Standard 6 (PS6) treats protected areas and how biodiversity designations align with critical habitat criteria. IFC's Policy and Performance Standards on Environmental and Social Sustainability are not only an integral part of IFC's approach to risk management but PS6 is becoming a benchmark for good practice relating to biodiversity management by business. Both reports will be made available in Q1 2014.

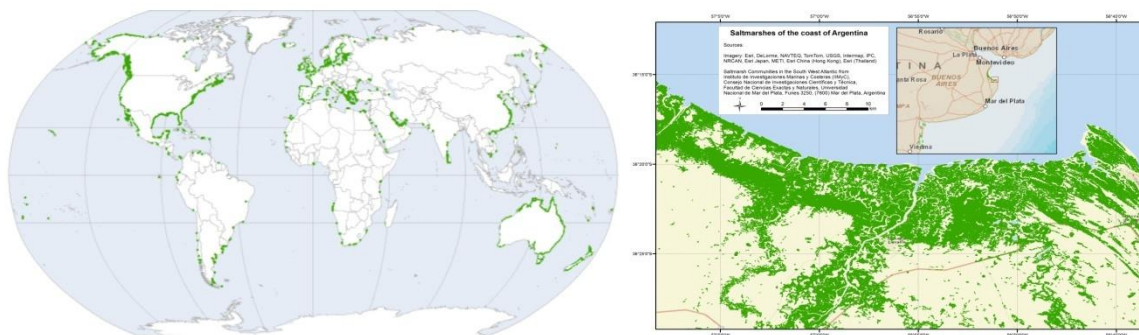
## Improving data and knowledge on the marine realm

Objective 3): To compile globally consistent, comprehensive and validated datasets for important coastal and marine ecosystems, and develop a business-relevant baseline of biodiversity priorities in the marine realm.

### Improving and generating new data layers

**Compiling a global saltmarsh layer.** In 2013, UNEP-WCMC collated a global saltmarsh layer that will be available to Proteus Partners in 2014. Coastal saltmarshes are found in the intertidal zone and are dominated by salt-tolerant grasses, herbs and low shrubs that are regularly flooded by the tides. Like mangroves, saltmarshes support fisheries and provide an important habitat for migratory bird species. They are also able to store and sequester large amounts of carbon from the air and help protect coastlines from erosion and storm damage. The global saltmarsh layer is a collation of point, line and polygon data from temperate, tundra subtropical, and tropical regions, covering nearly 60,000 square kilometres (Figure 5). Data was provided from a wide variety of national-level contributors.

Figure 5: Global distribution of salt marshes (left) and salt marshes of Argentina (right)



**Improving the global seagrass point and polygon datasets.** An agreement was made for UNEP-WCMC to take on the hosting of a global seagrass database. Seagrasses are hugely important but highly threatened ‘blue carbon’ ecosystems found circum-globally. The current seagrass dataset has been compiled by UNEP-WCMC in collaboration with Dr Frederick T. Short, who leads a global seagrass monitoring network called SeagrassNet (<http://www.seagrassnet.org/>). As a result of this agreement, UNEP-WCMC will now be responsible for hosting SeagrassNet.

UNEP-WCMC has also been working closely with the Blue Carbon Scientific Working Group ([www.thebluecarboninitiative.org](http://www.thebluecarboninitiative.org)) to bring together more current spatial data on seagrass extent. The most recent meeting in Paris in October of this year highlighted that remote sensing can only be able to detect about 60 - 70% of seagrass areas. Further on-the-ground assessments are therefore required to provide a better global picture of current extent and a baseline for monitoring future change.

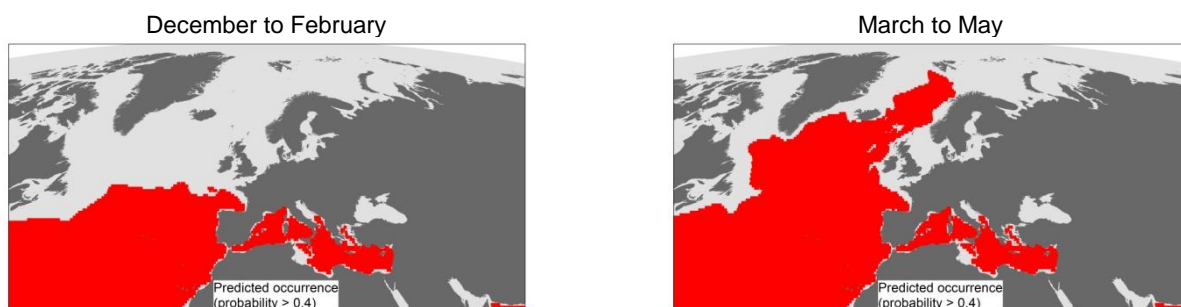
**Negotiating access to three spatial datasets of regional importance:** UNEP-WCMC worked to make a key regional dataset available to Proteus Partners. *Posidonia oceanica*, coralligenous formation, and maerl beds are key Mediterranean habitats in terms of biodiversity, and as such are protected under several national and international legislations. These spatial datasets are products from the European Commission funded MEDISEH project and are the first continuous maps for these habitats across this regional sea.

**Trialling an approach to mapping marine megafauna:** In 2013, a collaboration with marine mammal expert Kristin Kaschner (Aquamaps) was initiated. Through this, data layers on the spatial distributions of ten pinniped and cetacean species have been developed (Figure 6), including seasonal maps for two species (Sperm and Sei whales - Figure 7). The idea behind this collaboration was to go beyond traditional expert-derived range maps such as those provided by IUCN. Here, information on the probability of occurrence of animals is provided through numerical model outputs, which are also expert-validated. A selection of these maps will be available for viewing on the Ocean Data Viewer in 2014. Seasonal maps are available to Proteus Partners as a proof of concept, if there is sufficient interest from Partners, this work will be continued.

**Figure 6:** Marine mammal species for which spatial data layers were developed with Kristin Kaschner. Conservation status according to IUCN (CR: critically endangered; EN: endangered; VU: vulnerable; LC: least concern; DD: data deficient).

Group	Common name	Scientific name	IUCN status	Spatial data
Pinnipeds	Northern Fur seal	<i>Callorhinus ursinus</i>	VU	Annual map
	Hawaiian Monk seal	<i>Monachus schauinslandi</i>	CR	Annual map
	Grey seal	<i>Halichoerus grypus</i>	LC	Annual map
Cetaceans	Hector's dolphin	<i>Cephalorhynchus hectori</i>	EN	Annual map
	Northern Bottlenose whale	<i>Hyperoodon ampullatus</i>	DD	Annual map
	Sperm whale	<i>Physeter macrocephalus</i>	VU	Annual & seasonal maps
	Bowhead whale	<i>Balaena mysticetus</i>	LC	Annual map
	Sei whale	<i>Balaenoptera borealis</i>	EN	Annual & seasonal maps
	Atlantic Spotted dolphin	<i>Stenella frontalis</i>	DD	Annual map
	Melon-headed whale	<i>Peponocephala electra</i>	LC	Annual map

**Figure 7:** Seasonal distribution of Sperm whale



## Providing a greater understanding of marine data and its gaps

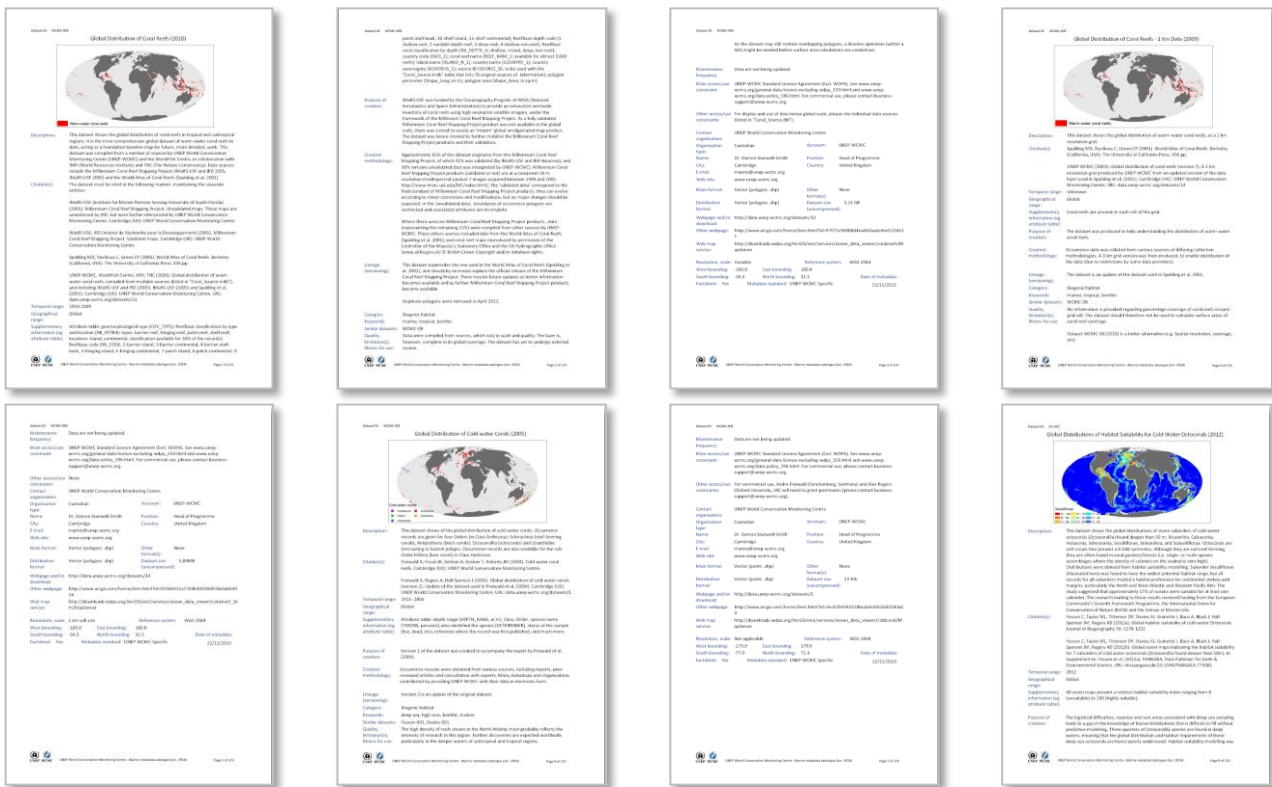
UNEP-WCMC reviewed, catalogued and documented marine and coastal datasets in 2013. Knowledge on marine and coastal datasets tends to be fragmented and difficult to access. This can be compounded by a lack of information on the biodiversity features about which datasets are available. The review identified 78 global and regional marine datasets of biodiversity importance. Further research resulted in a detailed catalogue of metadata for 45 of these and complementary ecological feature factsheets discussing the biodiversity feature, its value and ecological importance. A discussion on marine data gaps and the causes of these has been produced which provides an in-depth look at the issues of data in the marine realm and includes discussion around the reasons behind data gaps and the ways the scientific communities tries to address these issues. A list of the ecological feature factsheets is provided in Figure 8.

**Figure 8: Ecological feature factsheets developed or updated in 2013**

Category	Factsheet
Biogenic habitat	Warm-water coral reef
	Cold-water coral
	Coralligenous and maerl (Mediterranean)
	Mangrove
	Seagrass
Species habitat	Saltmarsh
Species habitat	Marine turtle (nesting and feeding sites)
Biodiversity metric	Biodiversity metric
Area of biodiversity importance	Protected area (marine subset)
	Key Biodiversity Areas (marine subset)
	Ecologically or Biologically Sensitive Area
	Vulnerable Marine Ecosystem
Biogeographic classification	Biogeographic classification
	Global 200 ecoregions (marine subset)
	Biogeographic classification (seamount)
	Biogeographic classification (hydrothermal vent)
Environment descriptor	Biogeographic classification (cold seep)
	Environment descriptor

The metadata sheets (Figure 9) provide key information about a given dataset, including what it displays, why it was created, how it can be used, its limitations, and access details. The full list of reviewed datasets, detailed metadata, ecological feature factsheets and marine data discussion is provided in a *“Manual of marine and coastal datasets of biodiversity importance”*

Figure 9: Standardised metadata sheets created in 2013



## Improving data access in the Ocean Data Viewer

The Ocean Data Viewer (ODV) has been improved to provide a better structuring of datasets by sorting them by ecosystem type and acquisition date. Further enhancements were made to functionality, including links to external websites and general user experience improvement. Five new datasets were added in 2013:

1. Global patterns of marine biodiversity (<http://data.unep-wcmc.org/datasets/28>)
2. Marine ecoregions of the world (<http://data.unep-wcmc.org/datasets/27>)
3. Pelagic provinces of the world (<http://data.unep-wcmc.org/datasets/26>)
4. The World Atlas of Mangroves (2011) has now been made available to download (<http://data.unep-wcmc.org/datasets/22>)
5. The Global Distribution of Cold Water Corals (2005) dataset has now also been included onto the ODV for viewing<sup>a</sup> (<http://data.unep-wcmc.org/datasets/1>).

All datasets on the ODV have associated “Web map service” links. There is now a UNEP-WCMC group available to facilitate access to these in ArcGIS Desktop and also in ArcGIS.com<sup>b</sup>

<sup>a</sup> Note that this dataset can be made available to Proteus partners upon request  
<sup>b</sup> <http://www.arcgis.com/home/group.html?owner=UNEP-WCMC-Global&title=UNEP-WCMC%20-%20Marine%20Assessment%20and%20Decision%20Support%20Programme>

## Keeping Partners informed on the Global Biodiversity Agenda

Objective 4): To share context and insights into the latest trends and developments in biodiversity and ecosystem policy, initiatives, data and tools of importance to business.

### Bringing Partners together for the annual meeting

The annual Proteus Partner Meeting was held in Houston Texas, hosted by ConocoPhillips. The meeting allowed UNEP-WCMC to provide an overview of progress in the Proteus workplan update partners on plans for the WDPA and provide information on IBAT developments and marine and coastal data.

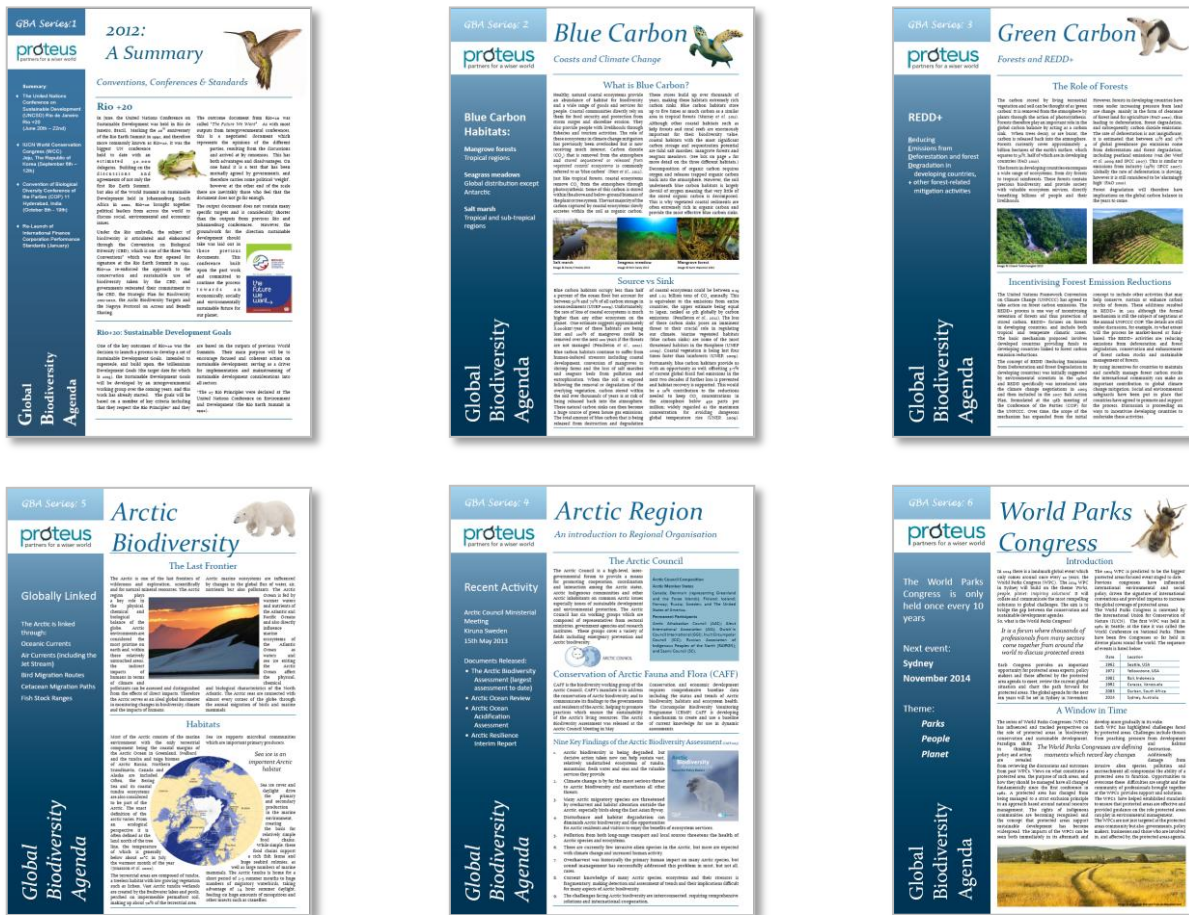
The meeting also presented a forum for the Partners to share presentations on their use of biodiversity data and tools, and allowed UNEP-WCMC to gather significant feedback on the way tools and data can be developed to serve the Partners' needs better.

The second day of the meeting included a workshop on the implementation of the newly revised International Finance Corporation Performance Standard 6 on Biodiversity Conservation and Sustainable Management of Living Natural Resources. This session looked at the key challenges of implementing PS6, existing processes linked to PS6 and sources for data and guidance when implementing the standard.

### Delivering information on biodiversity topics of relevance to the Partners

As part of the new objective of Proteus 2013-2015, UNEP-WCMC has provided new briefings on biodiversity science and policy. Following a consultation with Partners at the beginning of the year, topics covered reflected areas of interest, particularly highlighted by the Partners. Briefings have typically taken the form of short online videos, accompanied by a factsheet (Figure 10). These have been supplemented by short technical briefing notes addressing specific questions which are raised frequently.

Figure 10: Global Biodiversity Agenda Factsheets



In 2013, the Global Biodiversity Agenda series included:

- Highlights from 2012: A year which included the Rio +20 UN Conference on Sustainable Development, IUCN’s World Conservation Congress and the Convention on Biological Diversity Conference of the Parties
- Multi-coloured Carbon: Explaining the concepts of “Blue” and “Green” carbon
- Arctic Biodiversity: Describing biodiversity and governance in this sensitive region
- World Parks Congress 2014: Previewing this important, once in a decade event
- “National” vs “International” protected areas: a technical briefing note explaining these categories of protected areas and how they interact

All of these resources and factsheets are available on the Partner website: [www.proteuspartners.org/global-biodiversity-agenda/](http://www.proteuspartners.org/global-biodiversity-agenda/)

## Updates in the World Database on Protected Areas in 2013

Country	National	International	Update Type	Polygon records			Polygons replacing Points	Point records		
				New	Updated	Deleted		New	Updated	Deleted
Afghanistan	✓		Complete National Update		10	1		3	3	
Albania	✓		Partial National Update		48	9				
Australia	✓		Partial National Update	59						
Austria	✓		Partial National Update	610	736	501	585			
United Arab Emirates	✓		Complete National Update	1	7					
Argentina	✓	✓	Partial National and International Update		24		161			
Belgium	✓		Complete National Update	300	1,333	1,838				
Bangladesh	✓		Partial National Update		14			1		
Bulgaria	✓		Partial National Update	13	884	6	187		5	
Bosnia and Herzegovina	✓		Partial National Update		3		30		8	
St Barthelemy	✓		Partial National Update		4					
Bhutan		✓	Partial International Update					2		
Botswana	✓		Complete National Update		14	41	1	4	18	
Canada	✓	✓	Partial National and International Update	995	2,469					
Switzerland	✓		Partial National Update	1,434	4,447	1,445			34	
Chile	✓		Complete National Update	5	152	3			1	
Democratic Republic of the Congo	✓		Partial National Update	3	1					
Congo		✓	Partial International Update					3		
Colombia	✓		Complete National Update	353	99	2	1		6	

Country	National	International	Update Type	Polygon records			Polygons replacing Points	Point records		
				New	Updated	Deleted		New	Updated	Deleted
Cameroon		✓	Partial International Update					2		
Cyprus	✓		Partial National Update		17	4				26
Czech Republic	✓		Partial National Update	125	2,297	34				1,733
Germany	✓		Partial National Update	1,102	15,926	1,629				20
Denmark	✓		Partial National Update	12	1,905	35				2,127
Ecuador		✓	Partial International Update		1					
Spain	✓		Partial National Update	1454	178	2	53			
Estonia	✓		Partial National Update	696	7,474	5,216	4	6	964	117
Gabon	✓		Partial National Update		13					
Gambia		✓	Partial International Update				3			
United Kingdom	✓		Partial National Update	384	10,608					
Guadeloupe	✓		Complete National Update	10	67					
Greece	✓		Partial National Update	8	765					
Greenland	✓		Partial National Update		12					
French Guiana	✓		Complete National Update		26					
Guyana	✓		Partial National Update		5		2			
Finland	✓		Complete National Update	1,298	9,879	84				2
France	✓		Complete National Update	828	1878	237				
Croatia	✓		Partial National Update	57	273		143			
India		✓	Partial International Update					1		
Italy	✓		Partial National Update	5	867	18				
Ireland	✓		Partial National Update		155					
Iceland	✓		Partial National Update	9	106	1				

Country	National	International	Update Type	Polygon records			Polygons replacing Points	Point records		
				New	Updated	Deleted		New	Updated	Deleted
Kazakhstan		✓	Partial International Update					1		
Kenya	✓	✓	Partial National and International Update	42	18		6	1		12
South Korea	✓		Partial National Update	69	3					
Lebanon	✓		Partial National Update						1	
Liechtenstein	✓		Partial National Update	1	40					
Lithuania	✓		Partial National Update	21	331					
Luxembourg	✓		Partial National Update	104			25			
Latvia	✓		Partial National Update	46	658		35			
St Martin	✓		Complete National Update	15						
the former Yugoslav Republic of Macedonia	✓		Partial National Update	49	3		47			
Mali	✓		Complete National Update	19			3			1
Malta	✓		Partial National Update	200						
Madagascar	✓		Partial National Update			1				
Marshall Islands		✓	Partial International Update					1		
Montenegro	✓		Complete National Update		2		5			
Mozambique	✓		Partial National Update		2					
Martinique	✓		Complete National Update	2	41					
Mayotte	✓		Complete National Update	3	17					
Namibia	✓		Partial National Update	23	89	2				
Netherlands	✓		Complete National Update	465	1,41	1,756				22
Norway	✓		Complete National Update	226	2,616	28	183		183	49
Peru	✓		Complete National Update	157	68	5				

Country	National	International	Update Type	Polygon records			Polygons replacing Points	Point records		
				New	Updated	Deleted		New	Updated	Deleted
Philippines		✓	Partial International Update					1		
Poland	✓		Partial National Update	156	1,485		129			
Portugal	✓	✓	Partial National and International Update	59	164			2		
Réunion	✓		Complete National Update	2	26					
Romania		✓	Partial International Update	2	778		1	4		
Svalbard and Jan Mayen Islands	✓		Partial National Update	1	29					
Sierra Leone	✓		Partial National Update	1			1			1
Saint Pierre and Miquelon	✓		Complete National Update	1						
Serbia			Partial National Update				27			
Slovakia	✓		Partial National Update	64	1,063					
Slovenia	✓		Partial National Update	4	1,067		863			
Sweden	✓		Partial National Update	790	11,324		1,203			
Chad	✓		Partial National Update	2	5		1			
Turkey	✓		Partial National Update	21	1	1				1
Tunisia		✓	Partial International Update					2		
Tanzania	✓		Partial National Update	17	153	4				
Uruguay	✓		Partial National Update							1
USA	✓		Partial National Update	702		7				
Vietnam		✓	Partial International Update					1		
<b>Totals</b>	<b>70</b>	<b>16</b>		<b>13,025</b>	<b>82,821</b>	<b>12,910</b>	<b>3,699</b>	<b>27</b>	<b>1,156</b>	<b>4,187</b>