



Convention on
Biological Diversity



Aichi Biodiversity Target 11 Country Dossier: SPAIN

With generous support from:



DEUTSCHE ZUSAMMENARBEIT

giz Deutsche Gesellschaft
für Internationale
Zusammenarbeit (giz) GmbH



UK Government



WCMC



Global Partnership on
AICHI TARGET 11



TABLE OF CONTENTS

GLOSSARY	3
EXECUTIVE SUMMARY	5
<i>Aichi Biodiversity Target 11 Elements: Current status and opportunities for action</i>	5
INTRODUCTION	8
SECTION I: CURRENT STATUS	10
<i>COVERAGE - TERRESTRIAL & MARINE</i>	11
<i>ECOLOGICAL REPRESENTATIVENESS – TERRESTRIAL & MARINE</i>	15
<i>AREAS IMPORTANT FOR BIODIVERSITY</i>	20
<i>AREAS IMPORTANT FOR ECOSYSTEM SERVICES</i>	29
<i>CONNECTIVITY & INTEGRATION</i>	32
<i>GOVERNANCE DIVERSITY</i>	34
<i>PROTECTED AREA MANAGEMENT EFFECTIVENESS</i>	36
SECTION II: EXISTING PROTECTED AREA AND OECM COMMITMENTS	37
<i>NATIONAL BIODIVERSITY STRATEGY AND ACTION PLANS (NBSAPs)</i>	37
<i>OTHER ACTIONS/COMMITMENTS</i>	38
ANNEX I	39
<i>FULL LIST OF TERRESTRIAL ECOREGIONS</i>	39
ANNEX II	41
<i>KBA GRAPHS</i>	41
REFERENCES	54



GLOSSARY

AZEs	Alliance for Zero Extinction sites
CEPF	Critical Ecosystem Partnership Fund
EBSA	Ecologically or Biologically Significant Marine Area
EEZ	Exclusive Economic Zone
GCF	Green Climate Fund
GD-PAME	Global Database on Protected Area Management Effectiveness
GEF	Global Environment Facility
IBA	Important Bird and Biodiversity Area
ICCAs	Indigenous and Community Conserved Area Area (may also be referred to as territories and areas conserved by Indigenous peoples and local communities or “territories of life”)
IPLC	Indigenous Peoples and Local Communities
KBA	Key Biodiversity Area
MEOW	Marine Ecosystems of the World
MPA	Marine Protected Area
NBSAP	National Biodiversity Strategy and Action Plan
OECD	Other Effective Area-Based Conservation Measures
PA	Protected Area
PAME	Protected Area Management Effectiveness
PPA	Privately Protected Area
PPOW	Pelagic Provinces of the World
ProtConn	Protected Connected land indicator
SOC	Soil Organic Carbon
TEOW	Terrestrial Ecosystems of the World
WDPA	World Database on Protected Areas
WD-OECD	World Database on Other Effective Area-Based Conservation Measures



4 | Aichi Biodiversity Target 11 Country Dossier: SPAIN

Disclaimer

The designations employed and the presentation of material in this dossier do not imply the expression of any opinion whatsoever on the part of the Secretariat of the Convention on Biological Diversity (SCBD) or United Nations Development Programme (UNDP) concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. The information contained in this publication do not necessarily represent those of the SCBD or UNDP.

This country dossier is compiled by the UNDP and SCBD from publicly available information. It is prepared, within the overall work of the Global Partnership on Aichi Biodiversity Target 11, for the purpose of attracting the attention of the Party concerned and other national stakeholders to facilitate the verification, correcting, and updating of country data. The statistics might differ from those reported officially by the country due to differences in methodologies and datasets used to assess protected area coverage and differences in the base maps used to measure terrestrial and marine area of a country or territory. Furthermore, the suggestions from the UNDP and SCBD are based on analyses of global datasets, which may not necessarily be representative of national policy or criteria used at the national level. The analyses are also subject to the limits inherent in global indicators (precision, reliability, underlying assumptions, etc.). Therefore, they provide useful information but cannot replace analyses at a national level nor constitute a future benchmark for national policy or decision-making.

The preparation of this dossier was generously supported by: the Government of the Federal Republic of Germany, *Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH*; the European Commission; the Government of the United Kingdom of Great Britain and Northern Ireland; and the Government of Japan (Japan Biodiversity Fund). The dossier does not necessarily reflect their views.

This publication may be reproduced for educational or non-commercial purposes without special permission from the copyright holders, provided acknowledgement of the source is made. The SCBD and UNDP would appreciate receiving a copy of any publications that use this document as a source.



EXECUTIVE SUMMARY

This document provides information on the coverage of protected areas (PAs) and other effective area-based conservation measures (OECMs), as currently reported in global databases (the World Database on Protected Areas ([WDPA](#)) and World Database on Other Effective Area-Based Conservation Measures ([WD-OECM](#))). It also includes details on the status of the other qualifying elements of Aichi Biodiversity Target 11 based on this data. These statistics might differ from those reported officially by countries due to difference in methodologies and datasets used to assess protected area coverage, differences in the base maps used to measure terrestrial and marine area of a country or territory, or if global datasets differ from the criteria and indicators used at the national level. Where available, data from national statistics for the elements of Target 11 are included alongside records from these global databases. This dossier also provides a summary of commitments made under Aichi Biodiversity Target 11, and a summary of potential opportunities regarding elements of the target for future planning.

The dossier has been developed in consultation with the UN Environment Programme World Conservation Monitoring Centre (UNEP-WCMC), which manages the WDPA, WD-OECM and Global Database on Protected Area Management Effectiveness ([GD-PAME](#)). Parties to the CBD are requested to contact protectedareas@unep-wcmc.org with any updates to the information in these databases.

Aichi Biodiversity Target 11 Elements: Current status and opportunities for action

Coverage - Terrestrial & Marine

- **Status:** Spain's nation records show 36.2% terrestrial coverage (which includes Geoparks and Biosphere Reserves as PAs) and 12.3% marine coverage; per the May 2021 WDPA, terrestrial coverage in Spain is 142,573.5 km² (28.1%) and marine coverage is 128,316.5 km² (12.8%).
- **Opportunities for action:** opportunities for the near-term include updating the WDPA with any unreported PAs, including and the recognizing and reporting OECMs to the WD-OECM. In the future, focus on relatively intact areas, while addressing the elements in the following sections, could be considered when planning new PAs or OECMs.

Ecological Representativeness— Terrestrial & Marine

- **Status:** Spain contains 11 terrestrial ecoregions, and 5 marine ecoregions (all of which have at least partial coverage): the mean coverage by reported PAs and OECMs in these regions is 34.1% (terrestrial), and 41.2% (marine).
- **Opportunities for action:** there is opportunity for Spain to increase protection in ecoregions that have lower levels of coverage by PAs or OECMs, and to focus on effective management for PAs in ecoregions with higher levels of coverage.



6 | Aichi Biodiversity Target 11 Country Dossier: SPAIN

Areas Important for Biodiversity

- **Status:** Spain does not officially recognise KBAs, as they consider that the most relevant areas in terms of biodiversity were identified and protected along the process of consolidation of the Natura 2000 network in EU.
- **Opportunities for action:** there is opportunity for Spain to increase protection of important biodiversity areas that have lower levels of coverage by PAs and OECMs, and to focus on effective management for those that already have adequate coverage.

Areas Important for Ecosystem Services

- **Status:** coverage of areas important for ecosystem services: In Spain, 42.2% of aboveground biomass carbon, 42.1% of belowground biomass carbon, 30.6% of soil organic carbon, 15.0% of carbon stored in marine sediments is covered by PAs and OECMs.¹
- **Opportunities for action:** for carbon, there is opportunity for Spain to increase PA and OECM coverage in marine and areas with high carbon stocks, and to focus on effective management for PAs in terrestrial areas with high carbon stocks. Protecting areas with high carbon stocks secures the benefits of carbon sequestration in the area.
- For water, there is opportunity to increase the area of the water catchment under protection by PAs and OECMs, or in cases where there is high levels of protection, focus on effective management for these areas. Protecting the current area of forested land and potentially reforesting would have benefits for improving water security.

Connectivity and Integration

- **Status:** coverage of protected-connected lands is 18.4%.
- **Opportunities for action:** there is opportunity to focus on PA and OECM management for enhancing and maintaining connectivity. Improving connectivity increases the effectiveness of PAs and OECMs and reduces the impacts of fragmentation.
- As well, a range of suggested steps for enhancing and supporting integration are included in the voluntary guidance on the integration of PAs and OECMs into the wider land- and seascapes and mainstreaming across sectors to contribute, inter alia, to the SDGs (Annex I of COP Decision 14/8)

¹ Based on carbon data from Spawn et al., 2020 (for aboveground and belowground biomass); the Global Soil Organic Carbon Map (FAO, 2017), and Sala et al., 2021, and Atwood et al., 2020 (for global maps of marine sedimentary carbon stocks).

7 | Aichi Biodiversity Target 11 Country Dossier: SPAIN

Governance Diversity

- **Status:** the most common governance type(s) for reported PAs in Spain is: 98.1% under Government, primarily Regional governments (sub-national).
- **Opportunities for action:** explore opportunities for governance types that have lower representation, for Spain this could relate to shared governance, etc.
- There is also opportunity for Spain to complete governance and equity assessments, to establish baselines and identify relevant actions for improvement. As well, a range of suggested actions are included in the voluntary guidance on effective governance models for management of protected areas, including equity (Annex II of COP Decision 14/8).

Protected Area Management Effectiveness

- **Status:** 9.5% of terrestrial PAs and 0.5% of marine PAs have reported Protected Area Management Effectiveness (PAME) assessments to the Global Database on Protected Area Management Effectiveness (GD-PAME). Data in the GD-PAME is very likely incomplete, and therefore caution should be taken with any conclusions extracted from this data.
- **Opportunities for action:** These % are far away from the 60% target for completed management effectiveness assessments (per COP Decision X/31). There is opportunity to increase protected area management effectiveness (PAME) evaluations and reporting for both terrestrial and marine PAs to achieve the target.
- There is also opportunity to implement the results of completed PAME evaluations, to improve the quality of management for existing PAs and OECMs (e.g., through adaptive management and information sharing, increasing the number of sites reporting 'sound management') and to increase reporting of biodiversity outcomes in PAs and OECMs.



INTRODUCTION

The Strategic Plan for Biodiversity 2011-2020 was adopted at the tenth meeting of the Conference of the Parties (COP) to the Convention on Biological Diversity (CBD) held in Nagoya, Aichi Prefecture, Japan from 18-29 October 2010. The vision of the Strategic Plan is one of “Living in harmony with nature” where *“By 2050, biodiversity is valued, conserved, restored and wisely used, maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all people”* (CBD, 2010). In addition to this vision, the Strategic Plan is composed of 20 targets, under five strategic goals. Aichi Biodiversity Target 11 states that *“By 2020, at least 17 per cent of terrestrial and inland water, 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 landscapes and seascapes.”*

With the conclusion of the Aichi Biodiversity Targets in 2020, Target 11 on area-based conservation has seen success in the expansion of the global network of protected areas (PA) and other effective area-based conservation measures (OECMs). The negotiation of the post-2020 Global Biodiversity Framework (GBF) and its future targets provide an essential opportunity to further improve the coverage of PAs and OECMs, to improve other aspects of area-based conservation, to accelerate progress on biodiversity conservation more broadly, while also addressing climate change, and the Sustainable Development Goals. This next set of global biodiversity targets are to be adopted at the fifteenth meeting of the Conference of the Parties to the Convention on Biological Diversity. These new targets must aim to build upon lessons learned from the last decade of progress to deliver transformative change for the benefit of nature and people, to realize the 2050 Vision for biodiversity.

The United Nations Development Programme (UNDP) and the Secretariat of the Convention on Biological Diversity have developed the Aichi Biodiversity Target 11 Country Dossiers, which provide countries with an overview of the status of Target 11 elements, opportunities for action, and a summary of commitments made by Parties over the last decade. Each dossier can support countries in assessing their progress on key elements of Aichi Biodiversity Target 11 and identifying opportunities to prioritize new protected areas and OECMs.

This dossier provides an overview of area-based conservation in Spain. Section I of the dossier presents data on the current status of Spain’s PAs and OECMs. The data presented in Section I relates to each element of Target 11. Section I also presents the PA and OECM coverage for two critical ecosystem services: water security and carbon stocks. In addition, the dossier presents potential opportunities for action for Spain, in relation to each Target 11 element. The analyses present options for improving Spain’s area-based conservation network to achieve enhanced protection and benefits for livelihoods and climate change. Section II presents details on Spain’s existing PA and OECM commitments as a summary of existing efforts towards achieving Target 11. This gives focus not only to national policy and actions but also voluntary commitments to the UN. Furthermore, where data is

9 | Aichi Biodiversity Target 11 Country Dossier: SPAIN

available, this dossier provides information on potential OECMs, Indigenous and Community Conserved Areas (ICCAs; also often referred to as territories and areas conserved by Indigenous peoples and local communities or “territories of life”) and Privately Protected Areas (PPAs) and the potential contribution they will have in achieving the post-2020 targets.

The information on PAs and OECMs presented here is derived from the World Database on Protected Areas (WDPA) and World Database on Other Effective Area-Based Conservation Measures (WD-OECM). These databases are joint products of UNEP and IUCN, managed by UNEP-WCMC, and can be viewed and downloaded at www.protectedplanet.net. Parties are encouraged to provide data on their PAs and OECMs to UNEP-WCMC for incorporation into the databases (see e.g. Decisions 10/31 and 14/8). The significant efforts of Parties in updating their data in the build up to the publication of the Protected Planet Report 2020 (UNEP-WCMC and IUCN, 2021) were greatly appreciated. UNEP-WCMC welcomes further updates, following the data standards described here (www.wcmc.io/WDPA_Manual), and these should be directed to protectedareas@unep-wcmc.org. The statistics presented in this dossier are derived from the May 2021 WDPA and WD-OECM releases, unless explicitly stated otherwise. Readers should consult www.protectedplanet.net for the latest coverage statistics (updated monthly).

Some data from the WDPA and WD-OECM are not made publicly available at the request of the data-provider. This affects some statistics, maps, and figures presented in this dossier. Statistics provided by UNEP-WCMC (terrestrial and marine coverage) are based upon the full dataset, including restricted data. All other statistics, maps, and figures are based upon the subset of the data that is publicly available.

Where data is less readily available, such as for potential OECMs, ICCAs and PPAs, data has also been compiled from published reports and scientific literature to provide greater awareness of these less commonly recorded aspects. As these data are not officially available, alternative sources are mentioned here; however, it should be noted that these data do not represent the whole territory as they can have partial coverage or may not provide a comprehensive view of all the areas that could be included in these categories. These data are provided to highlight the need for comprehensive reporting on these areas to the WDPA and/or WD-OECM. Parties are invited to work with indigenous peoples, local communities and private actors to submit data under the governance of these actors, with their consent, to the WDPA and/or WD-OECM.

Overall, PAs and OECMs are essential instruments for biodiversity conservation and to sustain essential ecosystem services that support human well-being and sustainable development, including food, medicine, and water security, as well as climate change mitigation and adaptation and disaster risk reduction. The data in this dossier, therefore, aims to celebrate the current contributions of PAs and OECMs, whilst the gaps presented hope to encourage greater progress, not just for the benefit of biodiversity and the post-2020 GBF, but also to recognize the essential role of PAs and OECMs to the Sustainable Development Goals and for addressing the climate crisis.



SECTION I: CURRENT STATUS

Aichi Biodiversity Target 11 refers to both protected areas (PAs) and other effective area-based conservation measures (OECMs). This section provides the current status for all elements of Aichi Biodiversity Target 11 where indicators with global data are available. Statistics for all elements are presented using data on both PAs and OECMs (where this data is available and reported in global databases like the WDPA and WD-OECM). It is recognized that statistics reported in the WPDA and WD-OECM might differ from those reported officially by countries due to differences in methodologies and datasets used to assess protected area coverage and differences in the base maps used to measure terrestrial and marine area of a country or territory. Details on UNEP-WCMC's methods for calculating PA and OECM coverage area available [here](#). The global indicators adopted here for presenting the status of other elements of Target 11 may also differ from those in use nationally. Where available, results from national reporting are also included (for example, see MITECO, 2021, *Informe sobre el estado del Patrimonio Natural y de la Biodiversidad en España a 2020*).



COVERAGE - TERRESTRIAL & MARINE

As of May 2021, Spain has **4,086** protected areas reported in the World Database on Protected Areas (WDPA). 2 proposed PAs, and all UNESCO-MAB Biosphere Reserves² are not included in the following statistics (see details on UNWP-WCMC's methods for calculating PA and OECM coverage [here](#)). It should be noted that Spain disagrees with the decision of not including MAB Reserves as PAs or OECMs. Furthermore, it should be stated that some RAMSAR sites are not included in these statistics due to the lack of associated boundaries and areas within the RAMSAR Convention.

As of May 2021, Spain has **0** OECMs reported in the world database on OECMs (WD-OECM).

Current coverage for Spain (from the WDPA):

- 28.1% terrestrial (3850 protected areas, 142,573.5 km²)
- 12.8% marine (496 protected areas, 128,316.5 km²)

It should be noted that there is one SCI and one SPA missing in the statistics (which could be a single overlapping site), one SPAMI, more than 13 Biosphere Reserves, several Spanish Ramsar Sites, and 17 other PAs. Moreover, the WDPA includes some type of sites which are not considered according to the Spanish legislation (Law 42/2007), notably: 2 ICCAs and 2 “mixed” sites under the World Heritage List. In contrast, Biosphere Reserves (which account in total for 6,275,791 ha) are considered as protected areas under this legislation (Law 42/2007). Additionally, information is also lacking on Geoparks in the WDPA (which account for 2,470,248ha). These omissions, although partially accounted for in the dossier, do notably influence the statistics in the following sections.

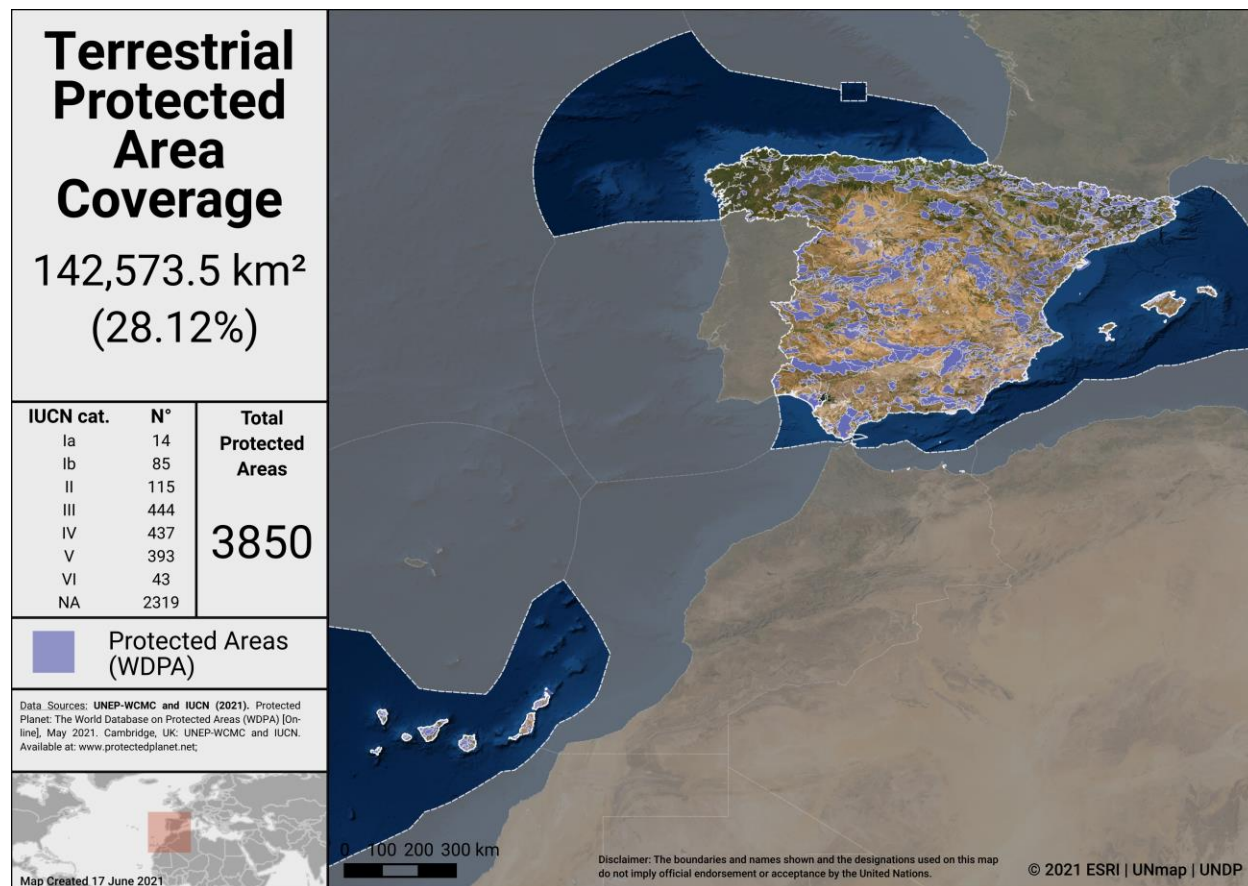
Coverage from Spain's National Reporting (see MITECO, 2021):

Terrestrial coverage is 36.2% (18,313,516 ha). The Spanish national law (Ley 42/2007) considers Geoparks and Biosphere Reserves as PAs. Furthermore, this includes the area of all RAMSAR sites in Spain, which are not always considered in the WDPA. This year Spain has updated the figures, as they have now included Geoparks.

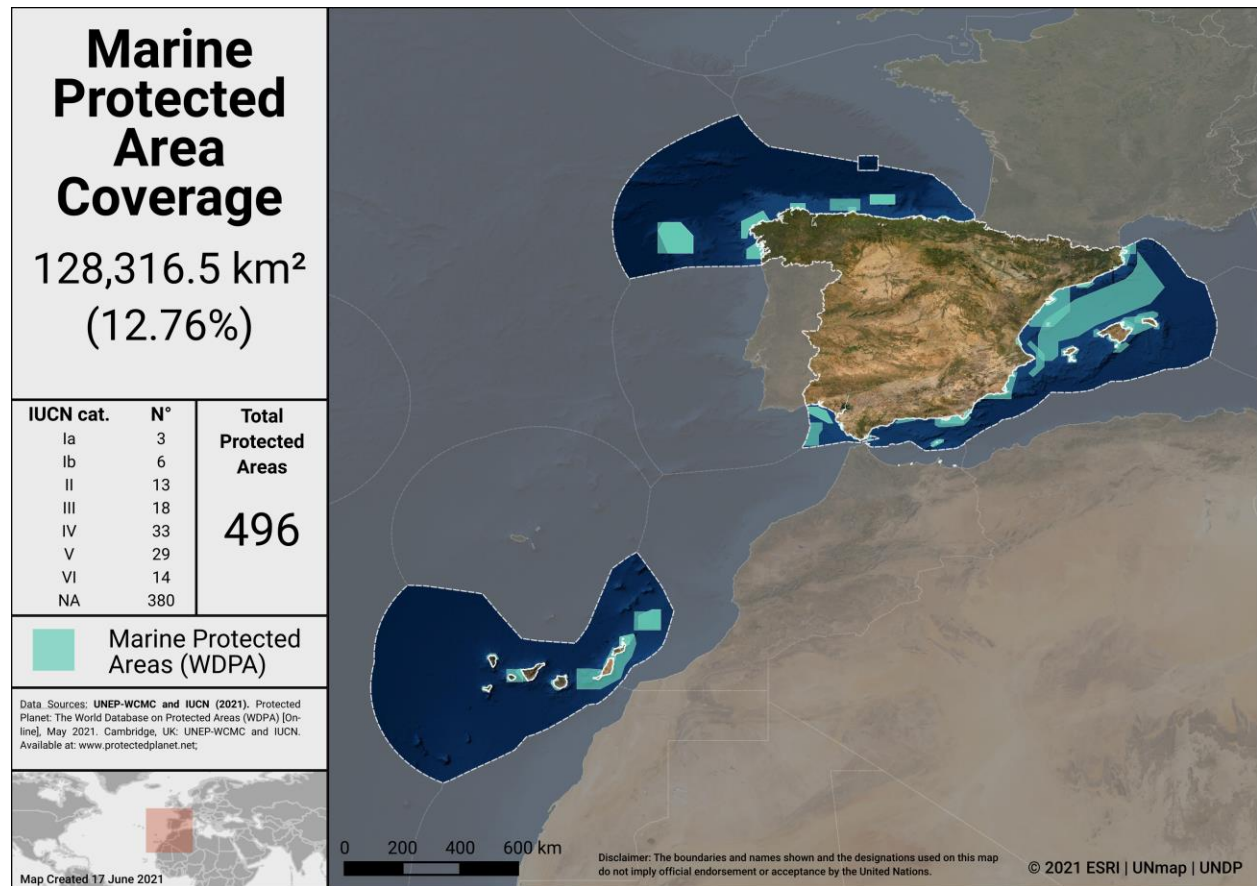
Marine coverage is 12.3% (13,178,938 ha) [differences may be due to the considered national waters]

The inclusion of Geoparks and Biosphere Reserves as PAs would impact the evaluation of terrestrial elements in the following sections (all based on WDPA records from May 2021).

² In Spain, there are currently 52 MAB Reserves, many of which do overlap with other types of PAs; there are currently 39 listed in the WDPA.



Terrestrial Protected Areas in Spain (*Information regarding IUCN categories in the WDPA may have some mistakes, as Spain reports 22 PAs, terrestrial and marine, with cat. Ia*)



Marine Protected Areas in Spain (Information regarding IUCN categories in the WDPA may have some mistakes, as Spain reports 22 PAs, terrestrial and marine, with cat. Ia)

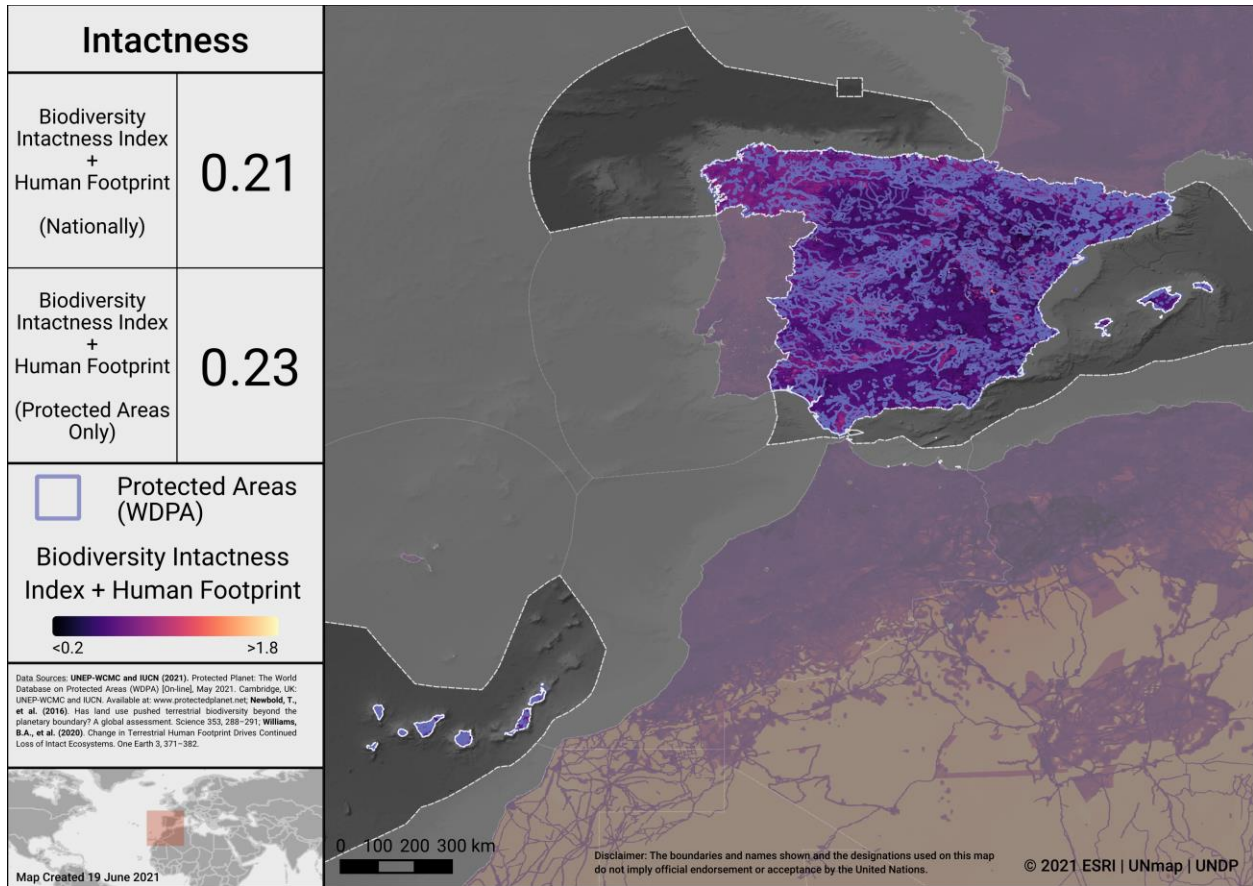
Potential OECMs

Spain is still discussing the national approach for the declaration of OECMs. The latest report of the IEPNB provides a first overview on OECMs. Although this information has not yet been reported to the WD-OECM, information is available in the 2020 IEPNB report. Additional relevant information is also available in the webpage on the IEPNB indicators: <https://www.miteco.gob.es/es/biodiversidad/temas/inventarios-nacionales/inventario-espanol-patrimonio-natural-biodiv/sistema-indicadores/default.aspx>.

Opportunities for action

Opportunities for the near-term include updating the WDPA with any unreported PAs, and the recognizing and reporting OECMs to the WD-OECM. In the future, as Spain considers where to add new PAs and OECMs, the map below identifies areas in Spain where intact terrestrial areas are not currently protected. Focus on relatively intact areas, while addressing the elements in the following sections, could be considered when planning new PAs or OECMs.

14 | Aichi Biodiversity Target 11 Country Dossier: SPAIN



Intactness in Spain

To explore more on intactness visit the UN Biodiversity Lab: map.unbiodiversitylab.org.

ECOLOGICAL REPRESENTATIVENESS – TERRESTRIAL & MARINE

Ecological representativeness is assessed based on the PAs and OECMs coverage of broad-scale biogeographic units. Globally, ecoregions have been described for terrestrial areas (Dinerstein et al, 2017), marine coastal and shelf ecosystems (to a depth of 200m; Spalding et al 2007) and surface pelagic waters (Spalding et al 2012).

Spain has 11 **terrestrial** ecoregions. Out of these:

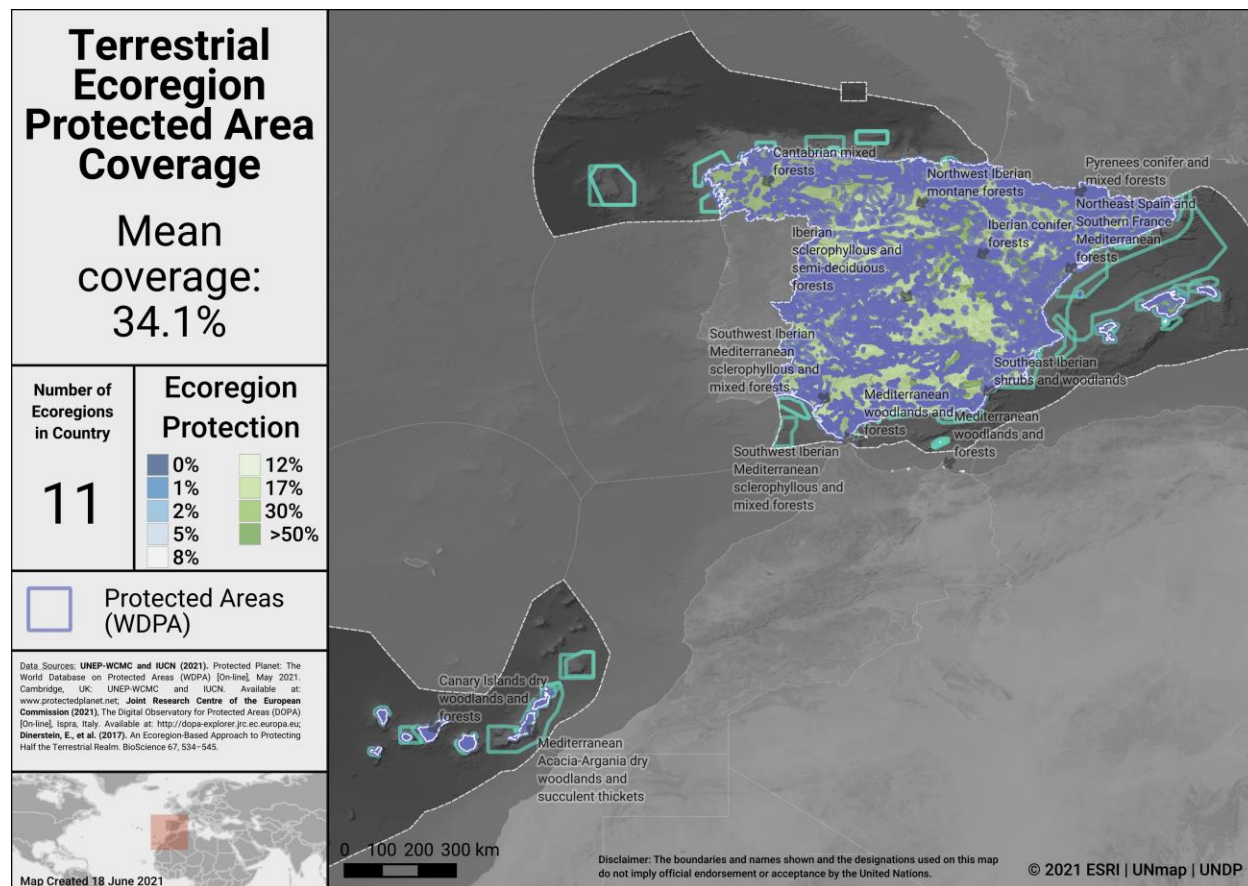
- All 11 ecoregions have at least some coverage from PAs and OECMs.
- 10 ecoregions have at least 17% protected within the country.
- The average coverage of terrestrial ecoregions is 34.1%.

Spain has 5 **marine** ecoregions. Out of these:

- All 5 marine ecoregions have at least some coverage from reported PAs and OECMs.
- 4 marine ecoregions have at least 10% protected within Spain's exclusive economic zone (EEZ).
- The average coverage of marine ecoregions is 41.2%.

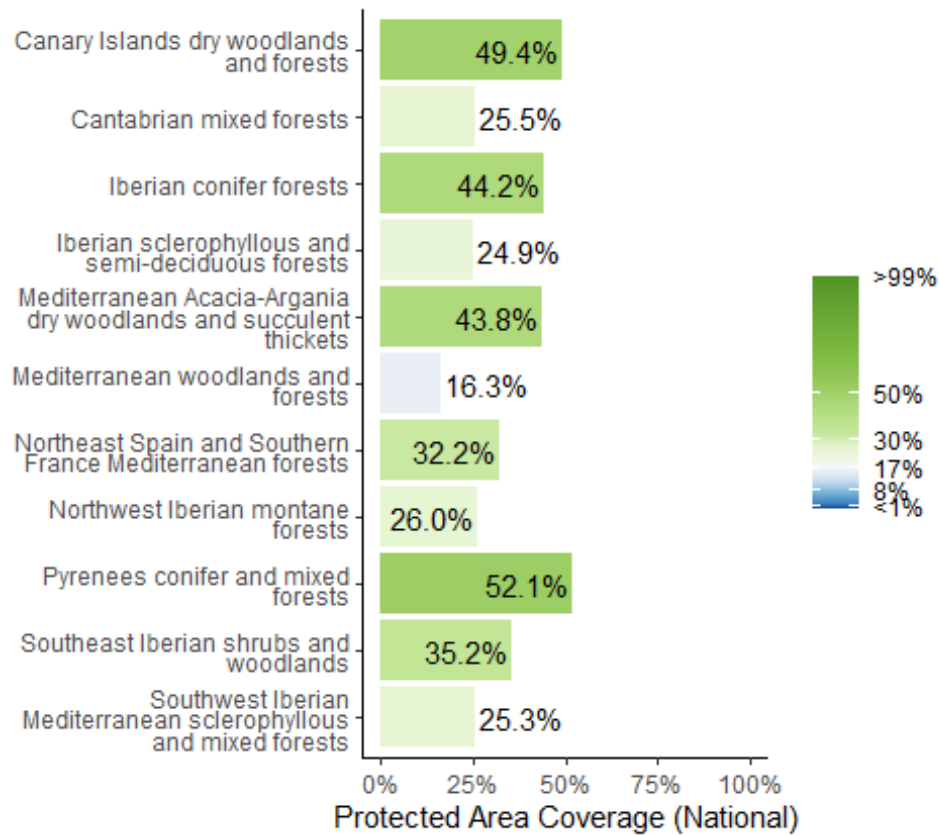
A full list of ecoregions in Spain is available in Annex I.





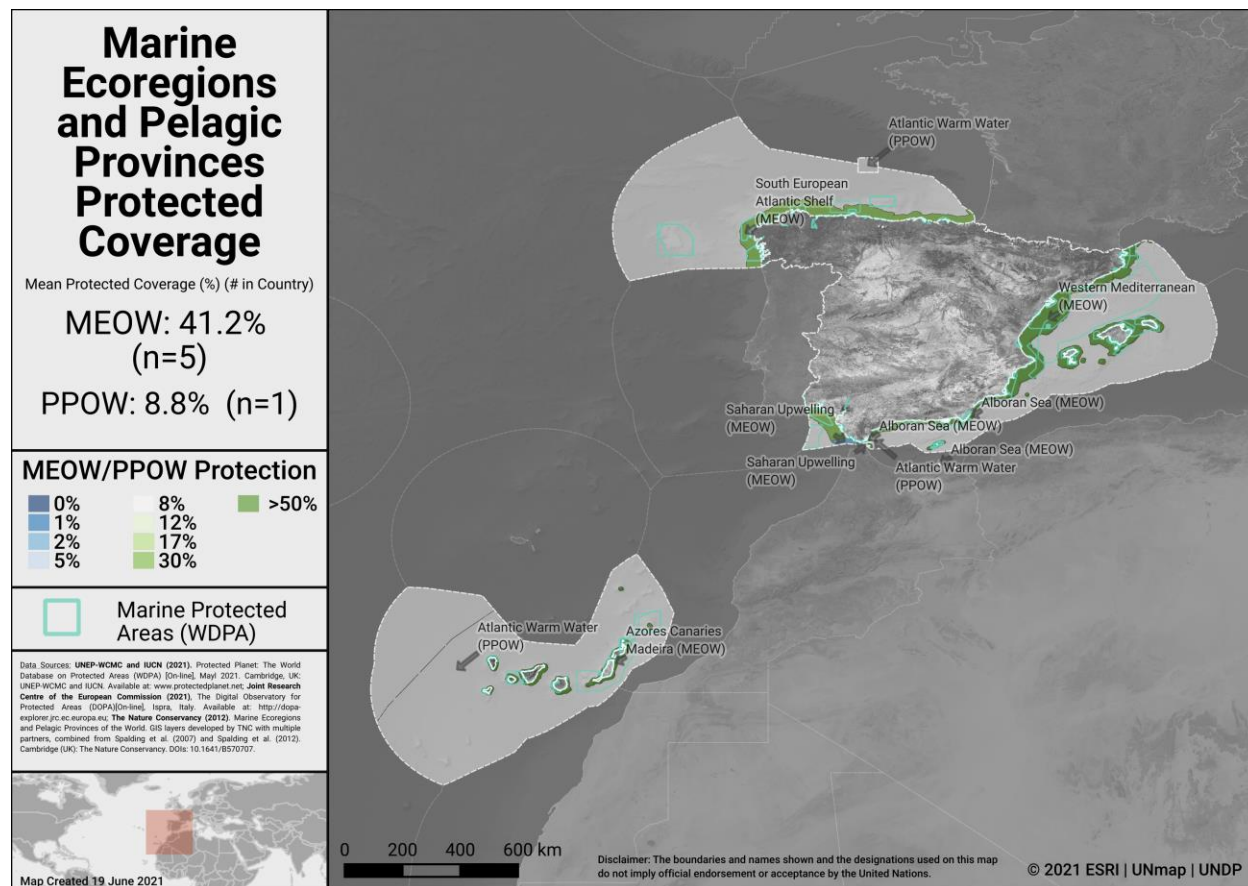
Terrestrial ecoregions in Spain



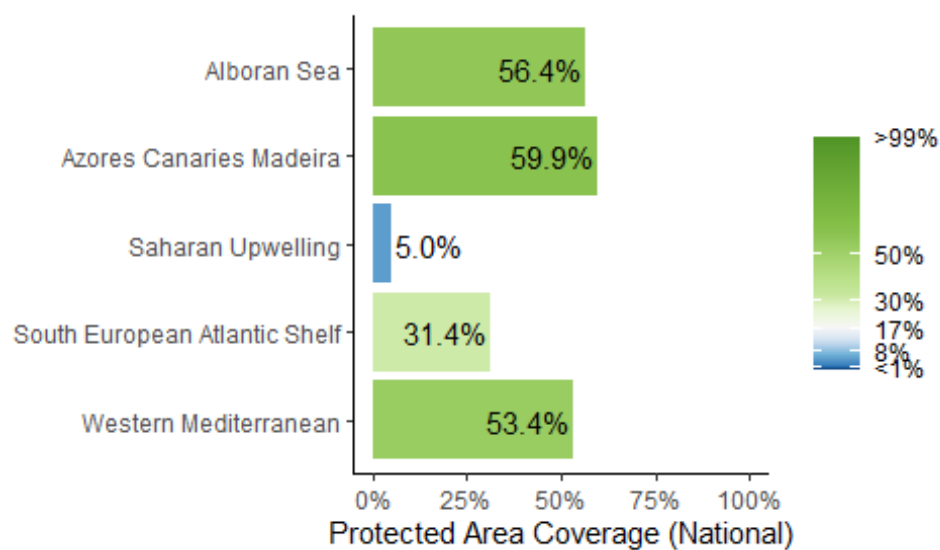


Terrestrial ecoregions of the World (TEOW) in Spain





Marine ecoregions and pelagic provinces



Marine Ecoregions of the World (MEOW) in Spain



Opportunities for action

There is opportunity for Spain to increase protection in ecoregions that have lower levels of coverage by PAs or OECMs, and to focus on effective management for PAs in ecoregions with higher levels of coverage.



AREAS IMPORTANT FOR BIODIVERSITY

Key Biodiversity Areas (KBAs)

Protected area and OECM coverage of Key Biodiversity Areas (KBAs) provide one proxy for assessing the conservation of areas important for biodiversity at national, regional and global scales. KBAs are sites that make significant contributions to the global persistence of biodiversity (IUCN, 2016). The KBA concept builds on four decades of efforts to identify important sites for biodiversity, including Important Bird and Biodiversity Areas, Alliance for Zero Extinction sites, and KBAs identified through Hotspot ecosystem profiles supported by the Critical Ecosystem Partnership Fund. Incorporating these sites, the dataset of internationally significant KBAs includes Global KBAs (sites shown to meet one or more of 11 criteria in the Global Standard for the Identification of KBAs, clustered into five categories: threatened biodiversity; geographically restricted biodiversity; ecological integrity; biological processes; and irreplaceability), Regional KBAs (sites identified using pre-existing criteria and thresholds, that do not meet the Global KBA criteria based on existing information), and KBAs whose Global/Regional status is Not yet determined, but which will be assessed against the global KBA criteria within 8-12 years. Regional KBAs are often of critical international policy relevance (e.g., in EU legislation and under the Ramsar Convention on Wetlands), and many are likely to qualify as Global KBAs in future once assessed for their biodiversity importance for other taxonomic groups and ecosystems. To date, nearly 16,000 KBAs have identified globally, and information on each of these is presented in the World Database of Key Biodiversity Areas: www.keybiodiversityareas.org.

Spain has **471** Key Biodiversity Areas (KBAs) identified through the KBA Partnership³.

- Mean percent coverage of all KBAs by PAs and OECMs in Spain is **59.5%**.
- **60** KBAs have full (>98%) coverage by PAs and OECMs.
- **361** KBAs have partial coverage by PAs and OECMs.
- **50** KBAs have no (<2%) coverage by PAs and OECMs.

Spain does not officially recognise KBAs as the most important sites for biodiversity conservation. Important sites for biodiversity were identified during the process of building the Natura 2000 Network of the EU.

Ecologically or Biologically Significant Marine Areas (EBSAs)

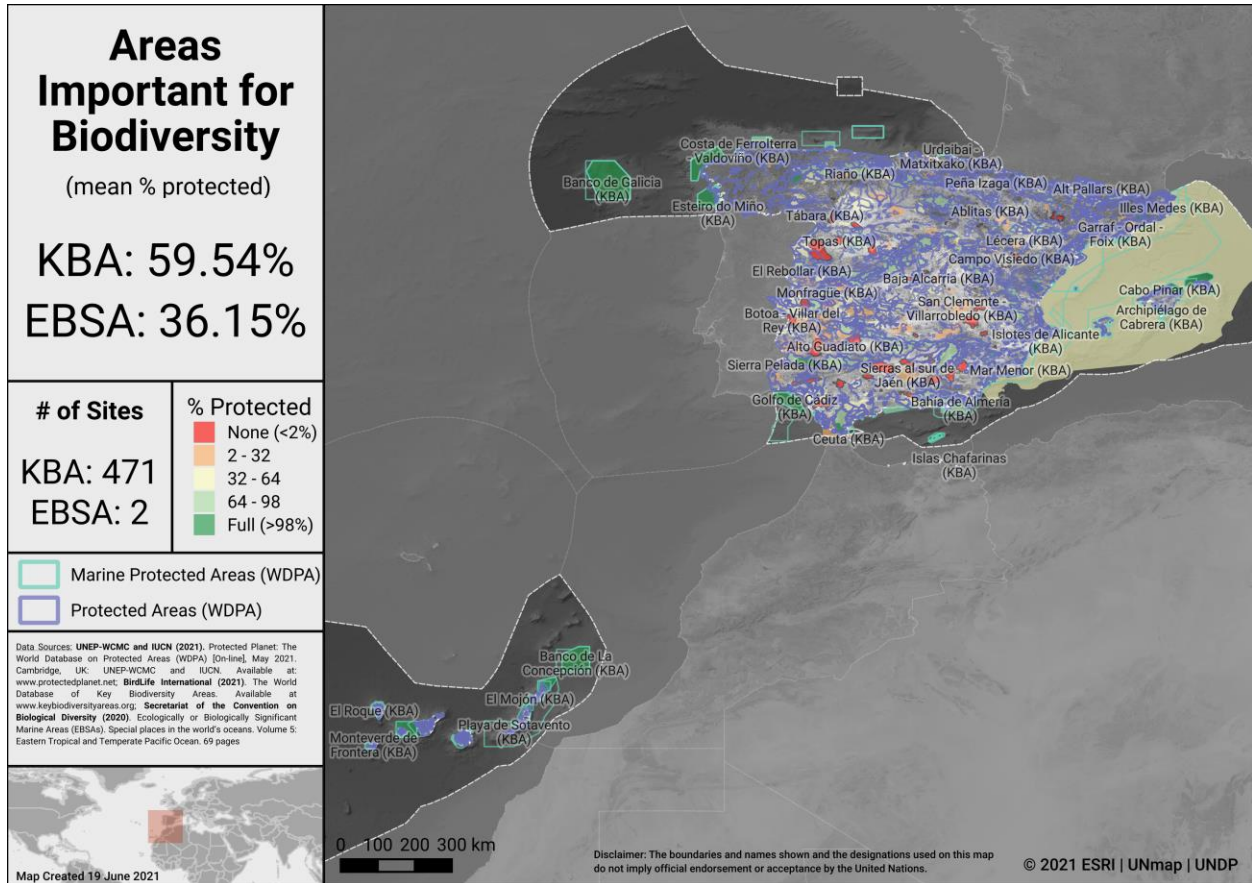
Other important areas for biodiversity may also include Ecologically or Biologically Significant Marine Areas (EBSAs), which were identified following the scientific criteria adopted at COP-9 (Decision IX/20; see more at: <https://www.cbd.int/ebsa/>). Sites that meet the EBSA criteria may require enhanced conservation and management measures;

³ Details for each individual site, including its identification, are available at: www.keybiodiversityareas.org

21 | Aichi Biodiversity Target 11 Country Dossier: SPAIN

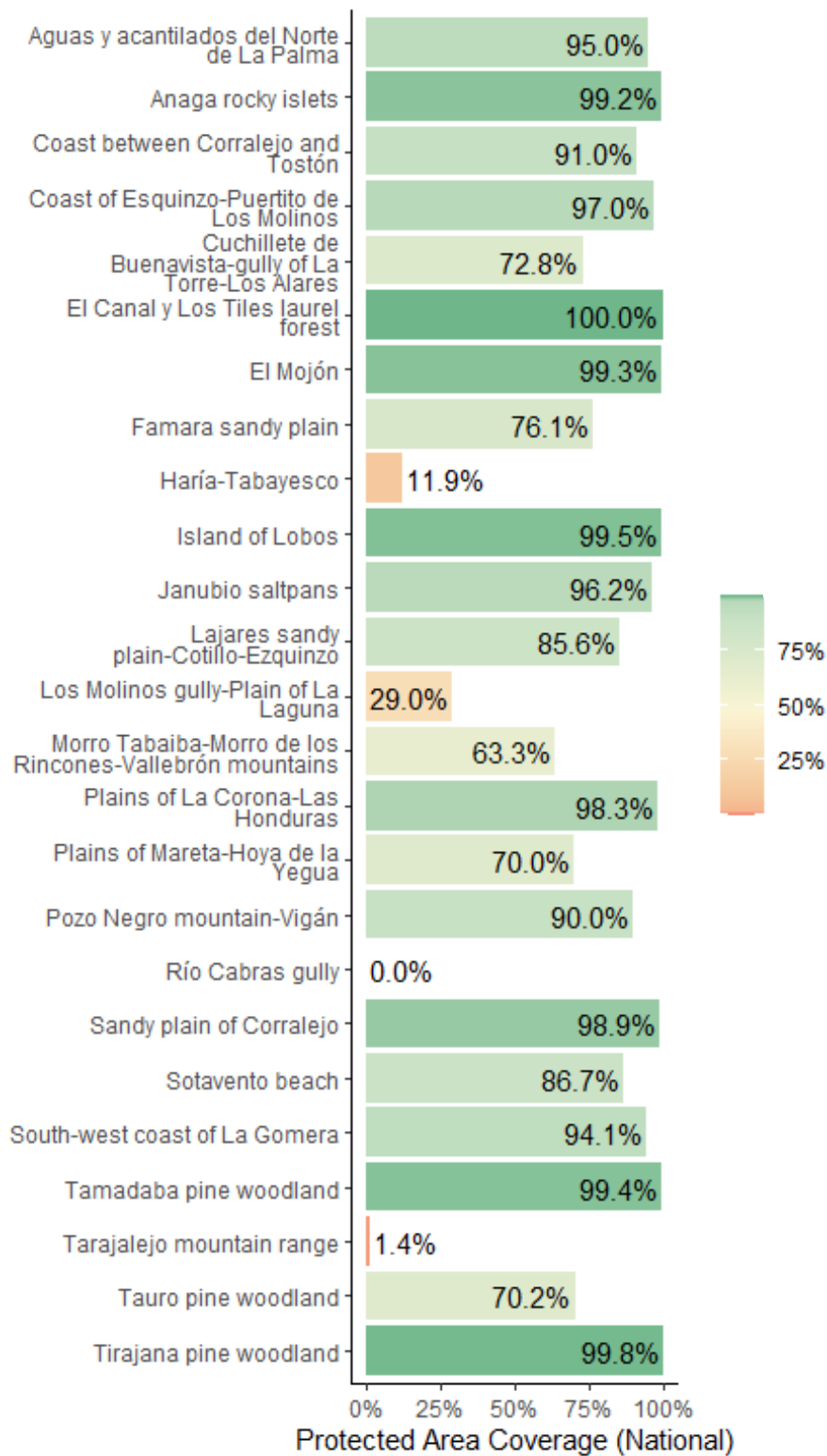
this could be achieved through means including MPAs, OECMs, marine spatial planning, and impact assessment.

There are 2 EBSAs with some portion of their extent within Spain's EEZ. All EBSAs have >30% coverage from PAs and OECMs.



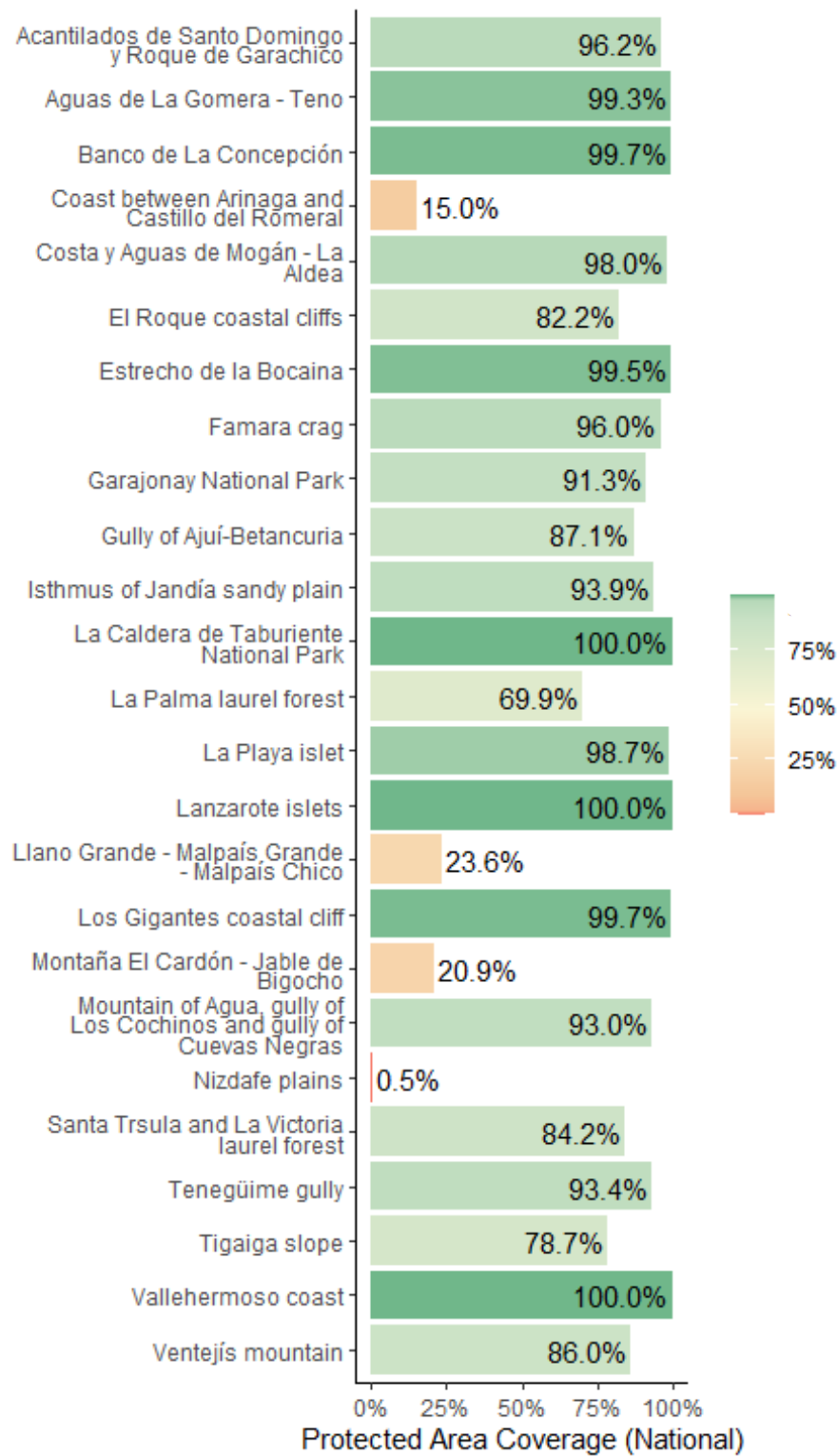
Areas Important for Biodiversity in Spain

22 | Aichi Biodiversity Target 11 Country Dossier: SPAIN

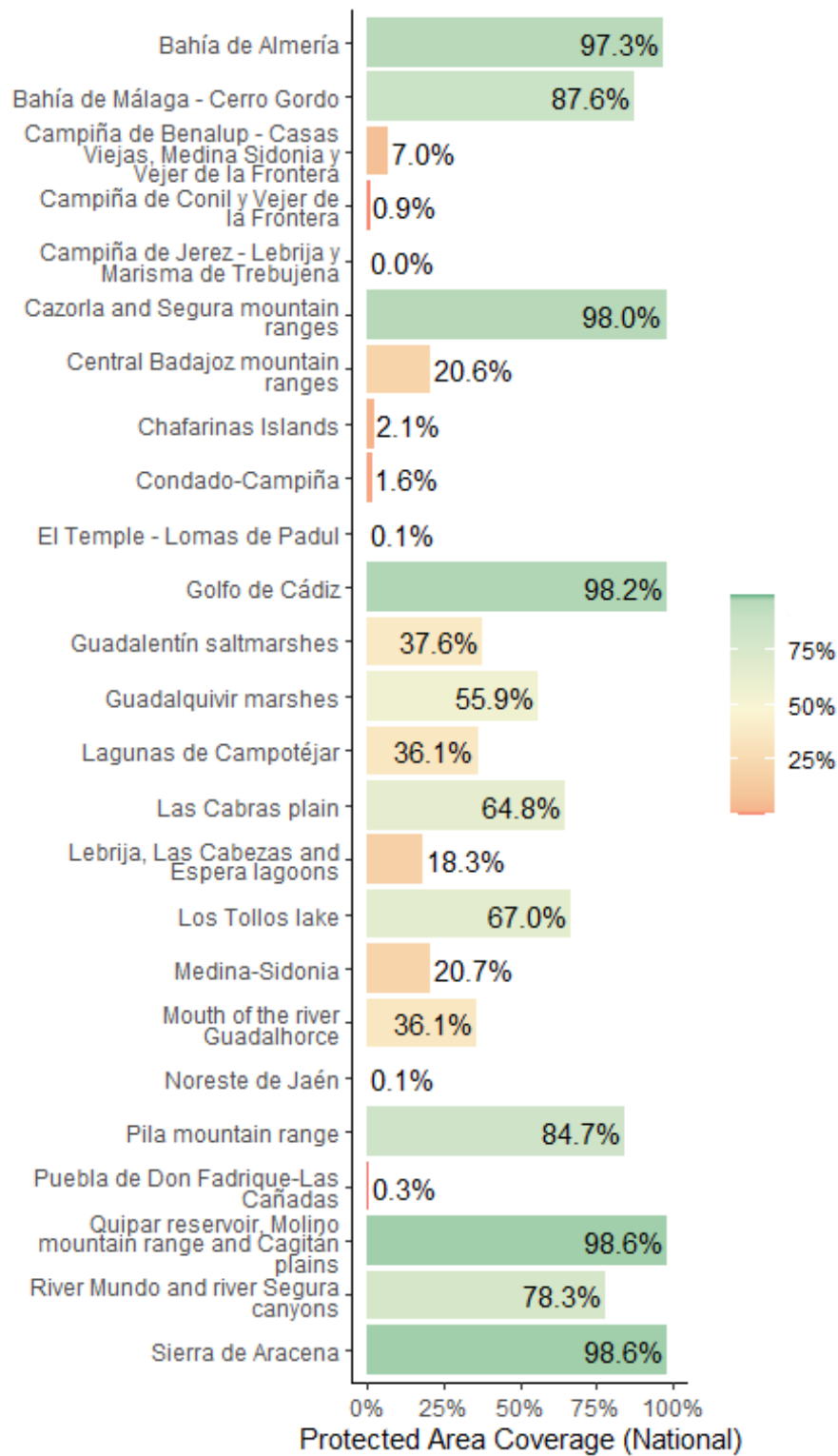


Key Biodiversity Area Coverage (KBA) in Spain

23 | Aichi Biodiversity Target 11 Country Dossier: SPAIN

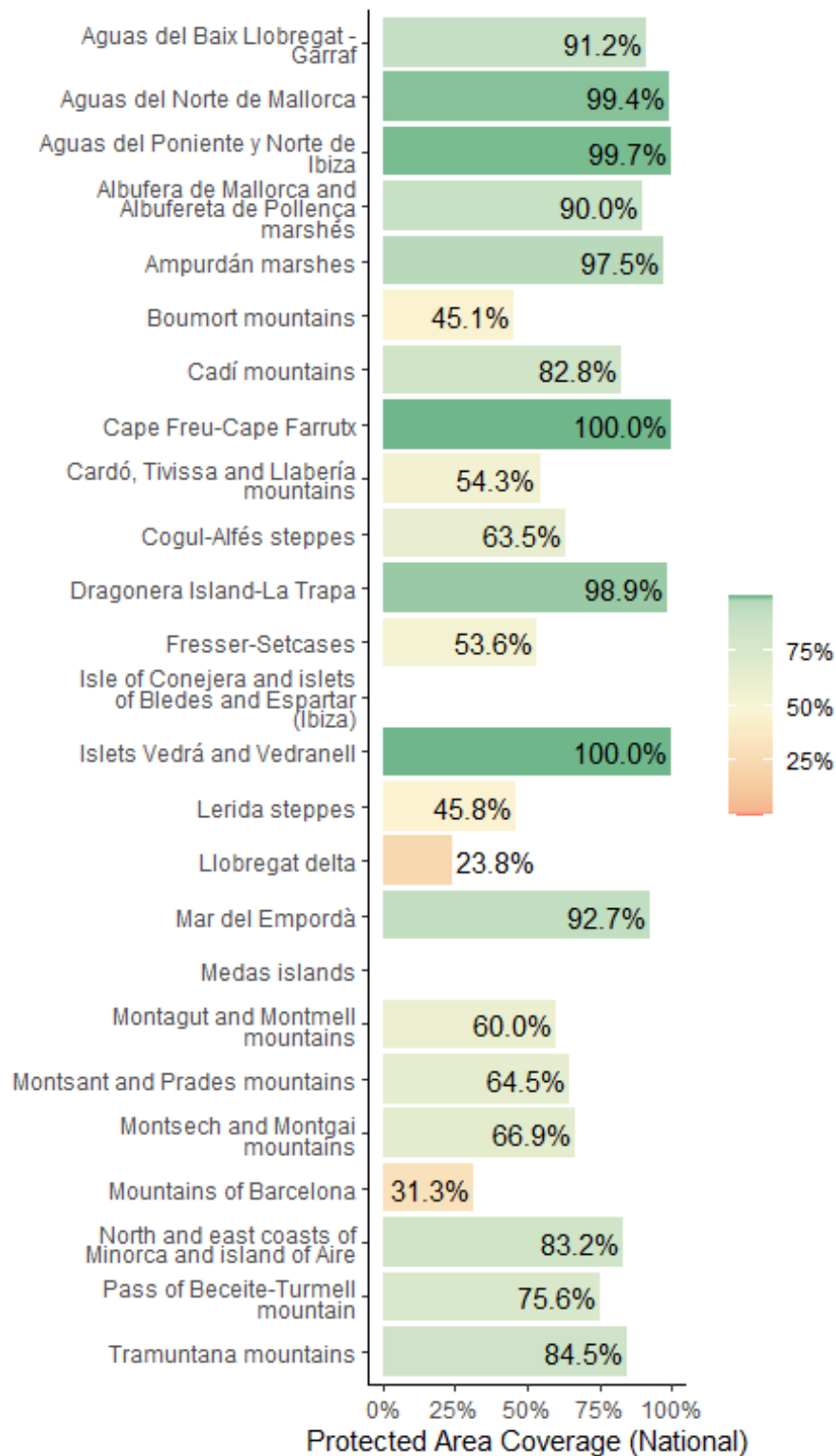


Key Biodiversity Area Coverage (KBA) in Spain

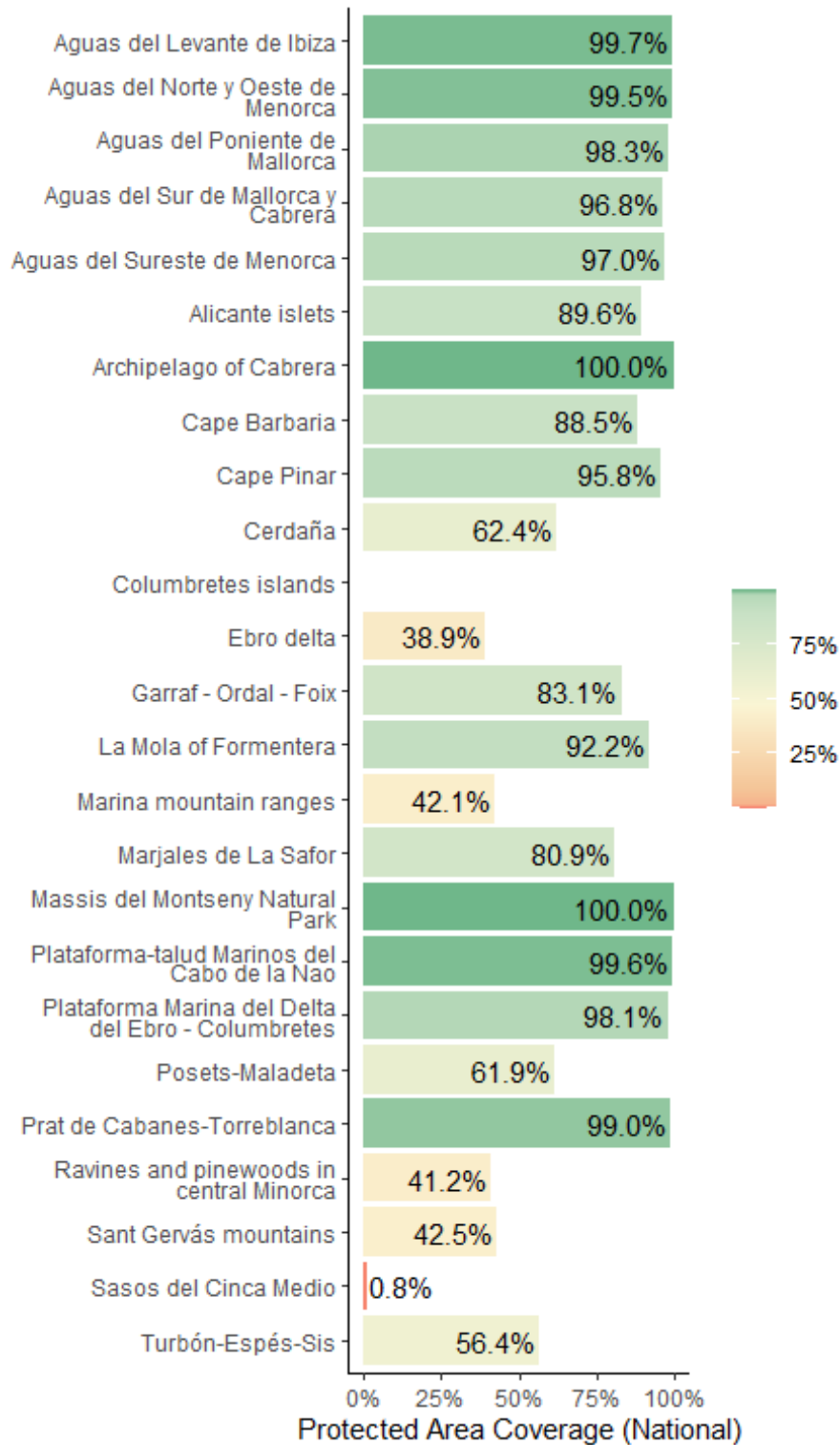


Key Biodiversity Area Coverage (KBA) in Spain

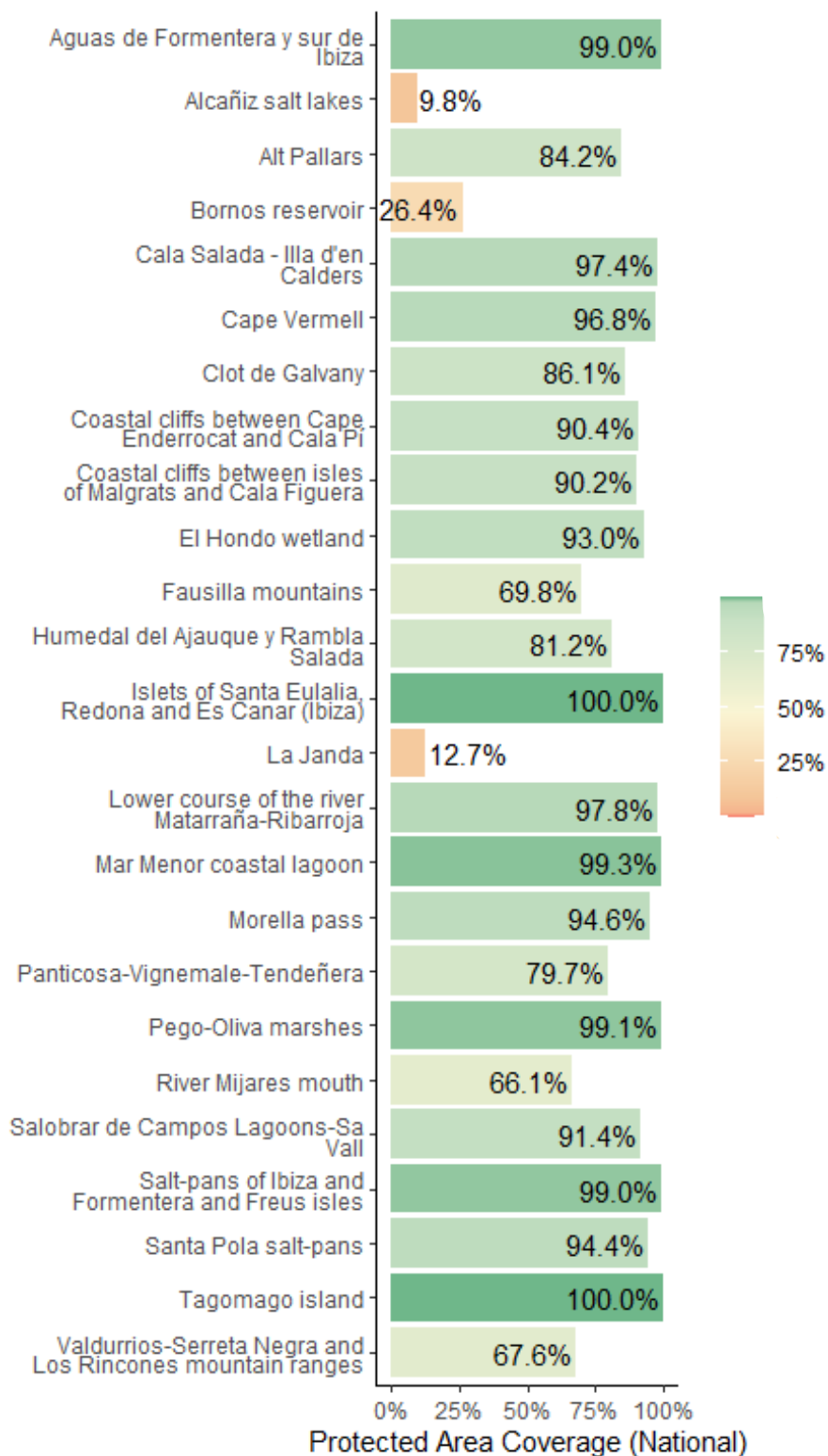
25 | Aichi Biodiversity Target 11 Country Dossier: SPAIN



Key Biodiversity Area Coverage (KBA) in Spain



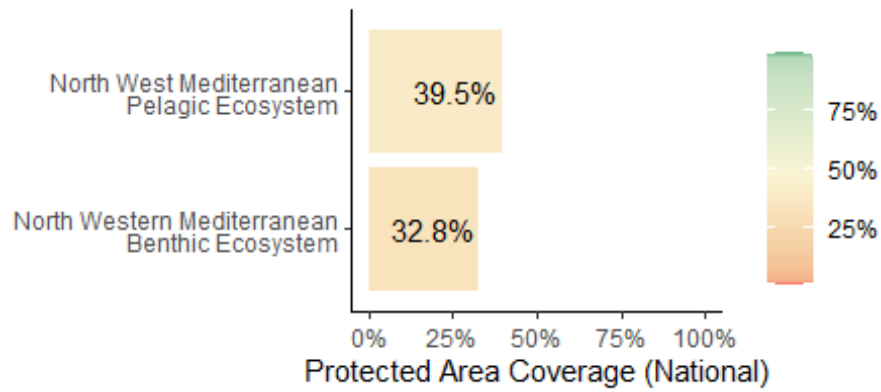
Key Biodiversity Area Coverage (KBA) in Spain



Key Biodiversity Area Coverage (KBA) in Spain



Coverage statistics for all remaining KBAs in Spain is continued in Annex II.



Ecologically or Biologically Significant Marine Areas (EBSAs) in Spain

Opportunities for action

There is opportunity for Spain to increase protection of KBAs that have lower levels of coverage. There is opportunity for Spain to increase protection of important biodiversity areas that have lower levels of coverage by PAs and OECMs, and to focus on effective management for those that already have adequate coverage.

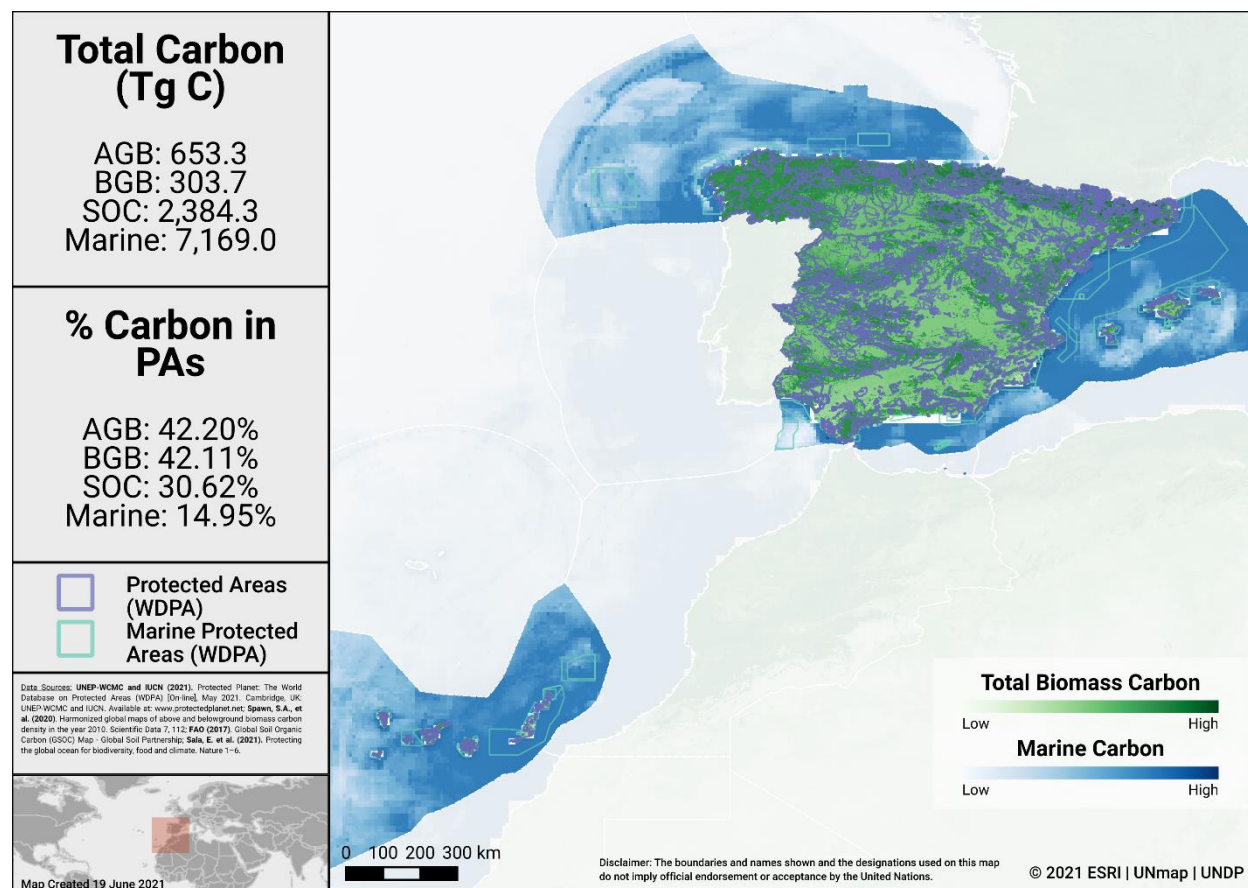
AREAS IMPORTANT FOR ECOSYSTEM SERVICES

There is no single indicator identified for assessing the conservation of areas important for ecosystem services. For simplicity, two services with available global datasets are assessed here (carbon and water). In future, other critical ecosystem services could be explored.

Carbon

Data for biomass carbon comes from temporally consistent and harmonized global maps of aboveground biomass and belowground biomass carbon density (at a 300-m spatial resolution); the maps integrate land-cover specific, remotely sensed data, and land-cover specific empirical models (see Spawn et al., 2020 for details on methodology). The Global Soil Organic Carbon Map present an estimation of SOC stock from 0 to 30 cm (see FAO, 2017). Data is also presented from global maps of marine sedimentary carbon stocks, standardized to a 1-meter depth (see Sala et al., 2021, and Atwood et al., 2020).

The map below presents the total carbon stocks in Spain and the percent of carbon in protected areas. The total carbon stocks is 653.3 Tg C from aboveground biomass (AGB), with 42.2% in protected areas; 303.7 Tg C from below ground biomass (BGB), with 42.1% in protected areas; 2,384.3 Tg C from soil organic carbon (SOC), with 30.6% in protected areas; and 7,169.0 Tg C from marine sediment carbon, with 15.0% in protected areas.



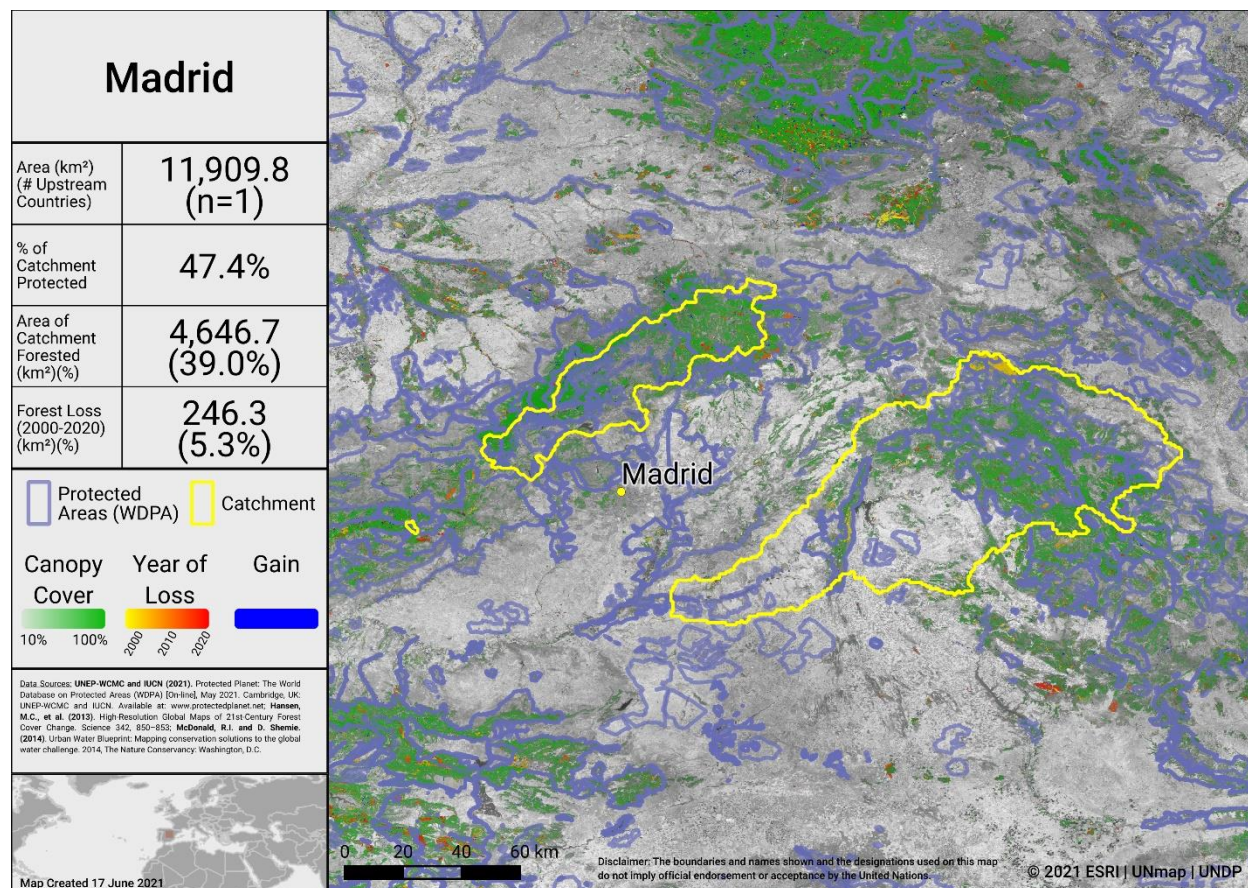
Carbon Stocks in Spain

Water

Information on the water sources for 534 cities is available via the City Water Map (CWM) and provides details on the catchment area of the watershed that supplies these cities (see McDonald et al., 2014 for details on methodology).

Forests support stormwater management and clean water availability, especially for large urban populations. Research that has examined the role of forests for city drinking water supplies shows that of the world’s 105 largest cities, more than 30% (33 cities) rely heavily on the local protected forests, which provide ecosystem services that underpin local drinking water availability and quality (Dudley & Stolton, 2003)

Drinking water supplies for cities in Spain may similarly depend on protected forest areas within and around water catchments. The map below shows the percentage forest and PA cover and the forest loss from 2000-2020 in the most heavily populated water catchment of Spain. Intact catchments can support more consistent water supply and improved water quality.



Water catchment in Madrid.

Opportunities for action

For carbon, there is opportunity for Spain to increase PA and OECM coverage in marine and areas with high carbon stocks, and to focus on effective management for PAs in terrestrial areas with high carbon stocks, as identified in the map above. Protecting areas with high carbon stocks secures the benefits of carbon sequestration in the area.

For water, there is opportunity to increase the area of the water catchment under protection by PAs and OECMs, or in cases where there is high levels of protection, focus on effective management for these areas. Protecting the current area of forested land and potentially reforesting would have benefits for improving water security.



CONNECTIVITY & INTEGRATION

Two global indicators, the Protected Connected land indicator (ProtConn; EC-JRC, 2021; Saura et al., 2018) and the PARC-Connectedness indicator (CSIRO, 2019), have been proposed for assessing the terrestrial connectivity of PA and OECM networks. To date there is no global indicator for assessing marine connectivity, though some recent developments include proposed guidance for the treatment of connectivity in the planning and management of MPAs (see Lausche et al., 2021).

Protected Connected Land Indicator (Prot-Conn)

As of January 2021, as reported in the Joint Research Centre of the European Commission's Digital Observatory for Protected Areas (DOPA) (JRC, 2021), the coverage of protected-connected lands (a measure of the connectivity of terrestrial protected area networks, assessed using the ProtConn indicator) in Spain was 18.4%.

PARC-Connectedness Index

In 2019, as assessed using the PARC-Connectedness Index (values ranging from 0-1, indicating low to high connectivity), connectivity in Spain is 0.43. This represents no significant change since 2010.

Corridors and integration into the wider landscape

Below are details from a case study on corridors and connectivity in Spain:

Case study title	Type of study region	Greatest threat to connectivity	Approaches to conserving ecological corridors
The Spanish National Network of Drover's Roads (Vías Pecuarias)	terrestrial, rural and urbanised	loss of extensive livestock farming and transhumance	<ul style="list-style-type: none"> • legal protection • ecological corridor demarcation • fostering of extensive livestock farming, encouragement of young people to transhumance and cattle farming • restoration • education • exploitation of multifunctionality

Further details are available in Hilty et al 2020.

Other case studies and reports on corridors and connectivity in Spain:

A recent report, *Wild Highways: WWF-Spain proposal for a Strategic Network of Ecological Corridors between Natura 2000 Network spaces* (see report, in Spanish, [here](#)), which identifies 12 ecological corridors to guarantee the connectivity of natural spaces and mobility of Iberian fauna and flora. The priority ecological corridors through which fauna move through the peninsula, specifically addressing forest mammals, as well as the critical points within these corridors that urgently need to be restored.



Another report (see full report, from the Spanish Ministry of Environment, [here](#)) on Connectivity of the landscape for zonal habitat types of community interest in Spain, aims to facilitate to the Spanish State with its obligation to periodically report on the coherence of the Natura 2000 Network in Spain, in terms of connectivity..

Opportunities for action

There is opportunity to focus on PA and OECM management for enhancing and maintaining connectivity. Improving connectivity increases the effectiveness of PAs and OECMs and reduces the impacts of fragmentation.

As well, a range of suggested steps for enhancing and supporting integration are included in the voluntary guidance on the integration of PAs and OECMs into the wider land- and seascapes and mainstreaming across sectors to contribute, inter alia, to the SDGs (Annex I of COP Decision 14/8).



GOVERNANCE DIVERSITY

There is a lack of comprehensive global data on governance quality and equity in PAs and OECMs. Here, we provide data on the diversity of governance types for reported PAs and OECMs.

As of May 2021, PAs in Spain reported in the WDPA have the following governance types:

- 98.1% are governed by **governments**
 - Reports of protected areas via CNTRYES or CDDA are centralised via the Ministry of Ecological Transition and Demographic Challenge, but governance of most of them is competence of Regional governments.
- 0.4% are under **shared** governance (by collaborative governance)
- 0.0% are under **private** governance
- 0.0% are under **IPLC** governance
 - 0.0% by Indigenous Peoples
 - 0.0% by local communities
- 1.5% **do not** report a governance type

OECMs

As of May 2021, there are **0** OECMs in Spain reported in the WD-OECM, therefore there is no data available on OECM governance types.

Privately Protected Areas (PPAs)

From Country reviews presented in Stolton et al (2014)

- 1336 PPAs have been established or recognized in Spain.
 - These PPAs cover **797.4 km²**.

Territories and areas conserved by Indigenous Peoples and local communities (ICCAs)

Examples of ICCAs in Spain include the *Santiago de Covelo* (common woodlands of the parish of Covelo), *Cáñar-Barjas* (community water management area on the western slopes of the Sierra Nevada), and *Mountain Forest Community of Teis* (montes veciñais en man común: MVMC), among others. See case study details for these and other ICCAs in the [ICCA Registry](#).

Other Indigenous lands

There is currently no data available on lands managed and/or controlled by Indigenous Peoples in Spain (see Garnett et al. 2018).

Opportunities for action

Explore opportunities for governance types that have lower representation, for Spain this could relate to shared governance, etc.



There is also opportunity for Spain to complete governance and equity assessments, to establish baselines and identify relevant actions for improvement. Examples of existing tools and methodologies include: Governance Assessment for Protected and Conserved Areas (Franks & Brooker, 2018), Social Assessment of Protected Areas (Franks et al 2018), and Site-level assessment of governance and equity (IIED, 2020). As well, a range of suggested actions are included in the voluntary guidance on effective governance models for management of protected areas, including equity (Annex II of COP Decision 14/8).



PROTECTED AREA MANAGEMENT EFFECTIVENESS

This section provides information on the coverage of PAs and OECMs with completed protected area management effectiveness (PAME) assessments as reported in the global database (GD-PAME). The proportion of terrestrial and marine PAs with completed PAME assessments is also calculated and compared with the 60% target agreed to in COP-10 Decision X/31.

Protected area management effectiveness (PAME) assessments

As of May 2021, Spain has 4,083 PAs reported in the WDPA; of these PAs, 218 (5.3%) have management effectiveness evaluations reported in the global database on protected area management effectiveness (GD-PAME).

- 2.7% (13,545 km²) of the terrestrial area of the country is covered by PAs with completed management effectiveness evaluations.
 - 9.5% of the area of terrestrial PAs have completed evaluations.
- 0.1% (657 km²) of the marine area of the country is covered by PAs with completed management effectiveness evaluations.
 - 0.5% of the area of marine PAs have completed evaluations.

The 60% target for completed management effectiveness assessments (per COP Decision X/31) cannot be measured, as the relevant data is not available in the GD-PAME for either terrestrial PAs or marine PAs. This data (in the GD-PAME) is very likely to be incomplete, and therefore caution should be taken with any conclusions to be extracted from such (voluntary and thus possibly incomplete) data. The lack of reporting to GD-PAME can not be interpreted as lack of management effectiveness assessments.

As of May 2021, there are 0 OECMs in Spain reported in the WD-OECM and no information available on the management effectiveness of potential OECMs.

Opportunities for action

The 60% target for completed management effectiveness assessments (per COP Decision X/31) cannot be measured effectively, as the relevant data is not available in the GD-PAME for either terrestrial or marine PAs. There is opportunity to increase protected area management effectiveness (PAME) evaluations and reporting for both terrestrial and marine PAs.

There is also opportunity to implement the results of completed PAME evaluations, to improve the quality of management for existing PAs and OECMs (e.g. through adaptive management and information sharing, increasing the number of sites reporting 'sound management') and to increase reporting of biodiversity outcomes in PAs and OECMs.



SECTION II: EXISTING PROTECTED AREA AND OECM COMMITMENTS

NATIONAL BIODIVERSITY STRATEGY AND ACTION PLANS (NBSAPs)

Spain has submitted an NBSAP during the Strategic Plan for Biodiversity 2011-2020 (most recent NBSAP is available at: <https://www.cbd.int/nbsap/search/>).

Goals and actions with relation to Target 11:

Objective 2.1 To plan and manage coherent networks of protected areas and promote the orderly use of natural resources.

- Actions include: Promote the complete development of the Natura 2000 Network in accordance with community requirements;
- develop the content of Law 42/2007 as regards relative to the Spanish Network of Biosphere Reserves and the characteristics of the biosphere reserves;
- etc.

Objective 2.2 Promote ecological restoration, environmental connectivity of the territory and landscape protection.

- Actions include: Prepare a national strategy for ecological restoration and ecosystem connectivity. The needs for mitigation and adaptation to climate change will be taken into account;
- Establish mechanisms for monitoring the ecological connectivity of the territory and the situation of habitat fragmentation;
- etc.

Objective 2.3 To contribute to the conservation and restoration of natural habitats and wild species.

- **Actions** include: Develop strategies for the conservation and restoration of habitats in danger of disappearing or harboring threatened species;
- etc.



OTHER ACTIONS/COMMITMENTS

Leaders' Pledge for Nature

Spain **has** signed onto the Leaders' Pledge for Nature.

Political leaders participating in the United Nations Summit on Biodiversity in September 2020, representing 88 countries from all regions and the European Union, have committed to reversing biodiversity loss by 2030. By doing so, these leaders are sending a united signal to step up global ambition and encourage others to match their collective ambition for nature, climate, and people with the scale of the crisis at hand.

Spain's statement at the 2020 UN Biodiversity Summit mentions PAs, OECMs or corridors:

We have been reaffirming many commitments, including the following, to ensure that at least 30% of our land and marine surfaces are protected areas by 2030.

High Ambition Coalition for Nature and People

Spain **has** joined the High Ambition Coalition for Nature and People.

The High Ambition Coalition for Nature and People (HAC) is an intergovernmental group, co-chaired by France and Costa Rica [currently including 65 countries and the European Commission]. Its objective is to support the adoption of a target aiming to protect 30% of the planet's land and 30% of its oceans by 2030 (30x30 target), within the future global framework of the Convention on Biological Diversity (CBD) for the protection of biodiversity, which is to be adopted at the next COP in China this autumn.

Global Ocean Alliance

Spain **has** joined the Global Ocean Alliance: 30by30 initiative.

The Global Ocean Alliance 30by30 is a UK led initiative [currently containing 53 countries as signatories]. Its aim is to protect at least 30% of the global ocean as Marine Protected Areas (MPAs) and Other Effective area-based Conservation Measures (OECMs) by 2030.



ANNEX I

FULL LIST OF TERRESTRIAL ECOREGIONS

Ecoregion Name	Area (km ²)	% of Global Ecoregion in Country	% of Country in Ecoregion	Area Protected (km ²)	% Protected in Country
Canary Islands dry woodlands and forests	4,966.9	100.0	1.0	2,452.5	49.4
Cantabrian mixed forests	61,787.7	64.2	12.2	15,746.8	25.5
Iberian conifer forests	34,461.0	100.0	6.8	15,231.6	44.2
Iberian sclerophyllous and semi-deciduous forests	278,296.2	93.4	55.0	69,404.6	24.9
Mediterranean Acacia-Argania dry woodlands and succulent thickets	2,579.3	2.6	0.5	1,129.7	43.8
Mediterranean woodlands and forests	37.5	0.0	0.0	6.1	16.3
Northeast Spain and Southern France Mediterranean forests	33,193.6	36.5	6.6	10,701.3	32.2
Northwest Iberian montane forests	44,819.9	78.1	8.9	11,665.6	26.0
Pyrenees conifer and mixed forests	13,272.4	51.2	2.6	6,913.5	52.1
Southeast Iberian shrubs and woodlands	2,867.9	100.0	0.6	1,010.9	35.2



Ecoregion Name	Area (km²)	% of Global Ecoregion in Country	% of Country in Ecoregion	Area Protected (km²)	% Protected in Country
Southwest Iberian Mediterranean sclerophyllous and mixed forests	29,764.1	41.8	5.9	7,532.2	25.3

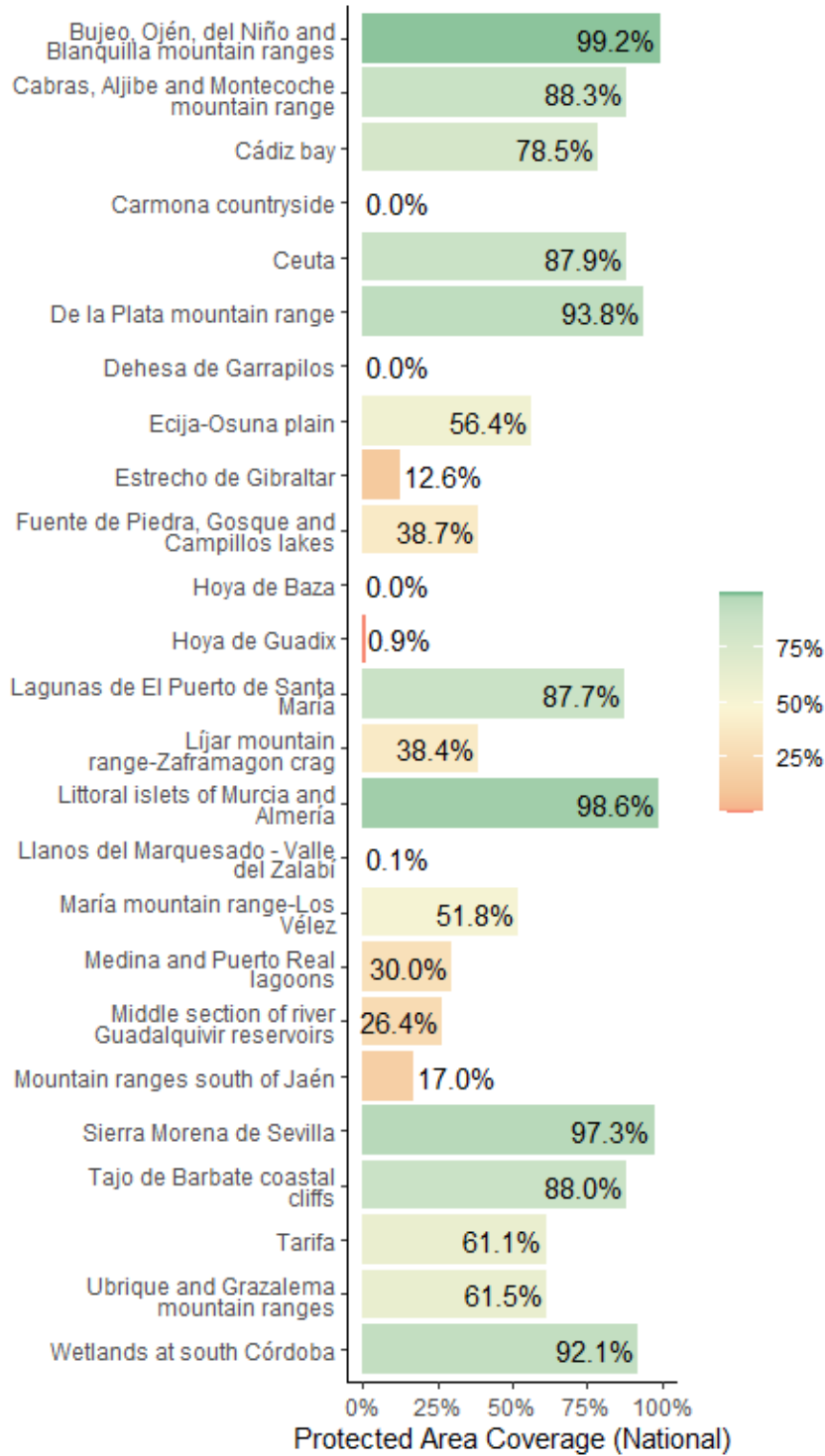
FULL LIST OF MARINE ECOREGIONS

Ecoregion Name	% of Global Ecoregion in Country	% Protected in Country
Alboran Sea	38.8	56.4
Azores Canaries Madeira	53.2	59.9
Saharan Upwelling	1.3	5.0
South European Atlantic Shelf	23.1	31.4
Western Mediterranean	28.7	53.4

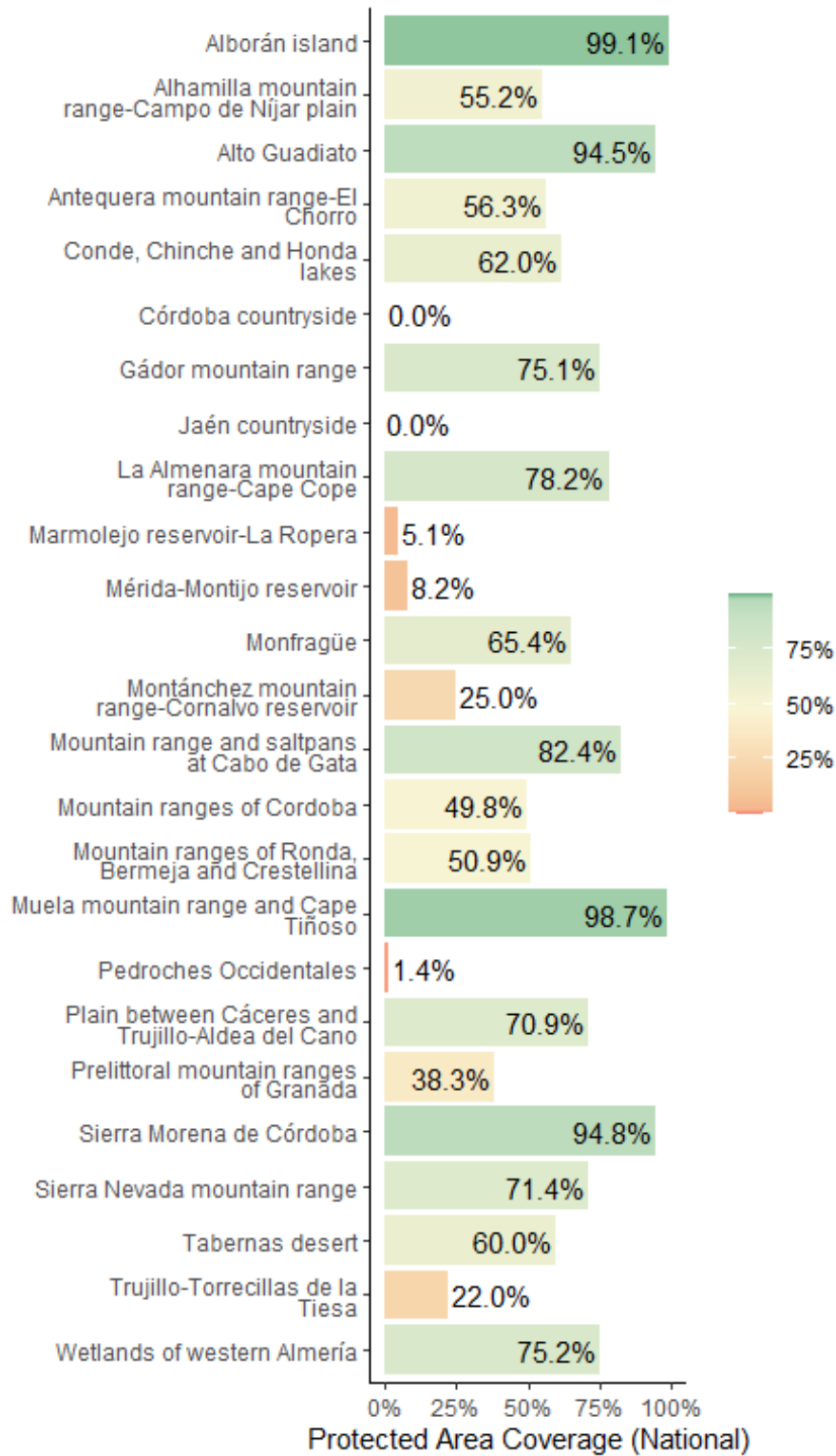


ANNEX II

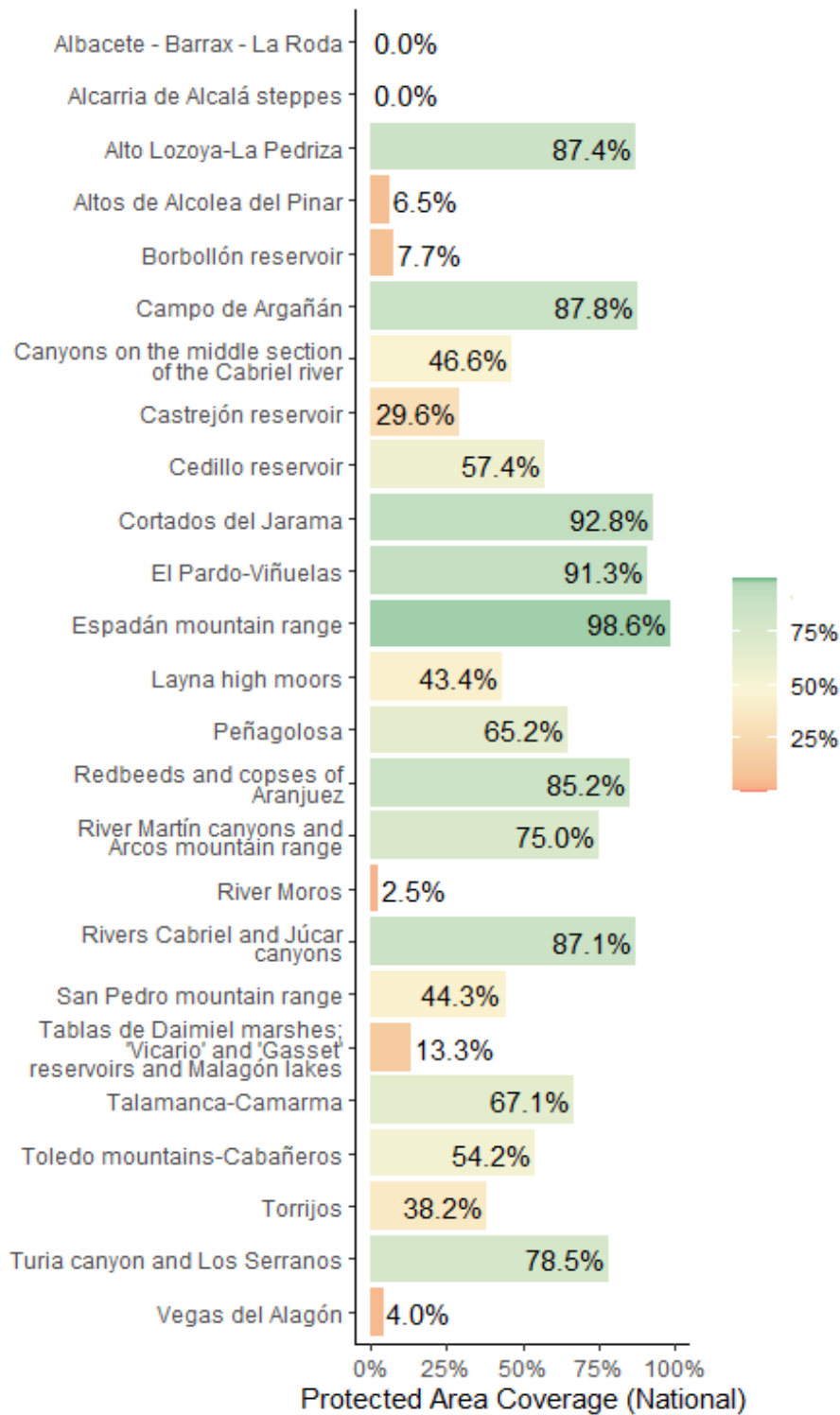
KBA GRAPHS



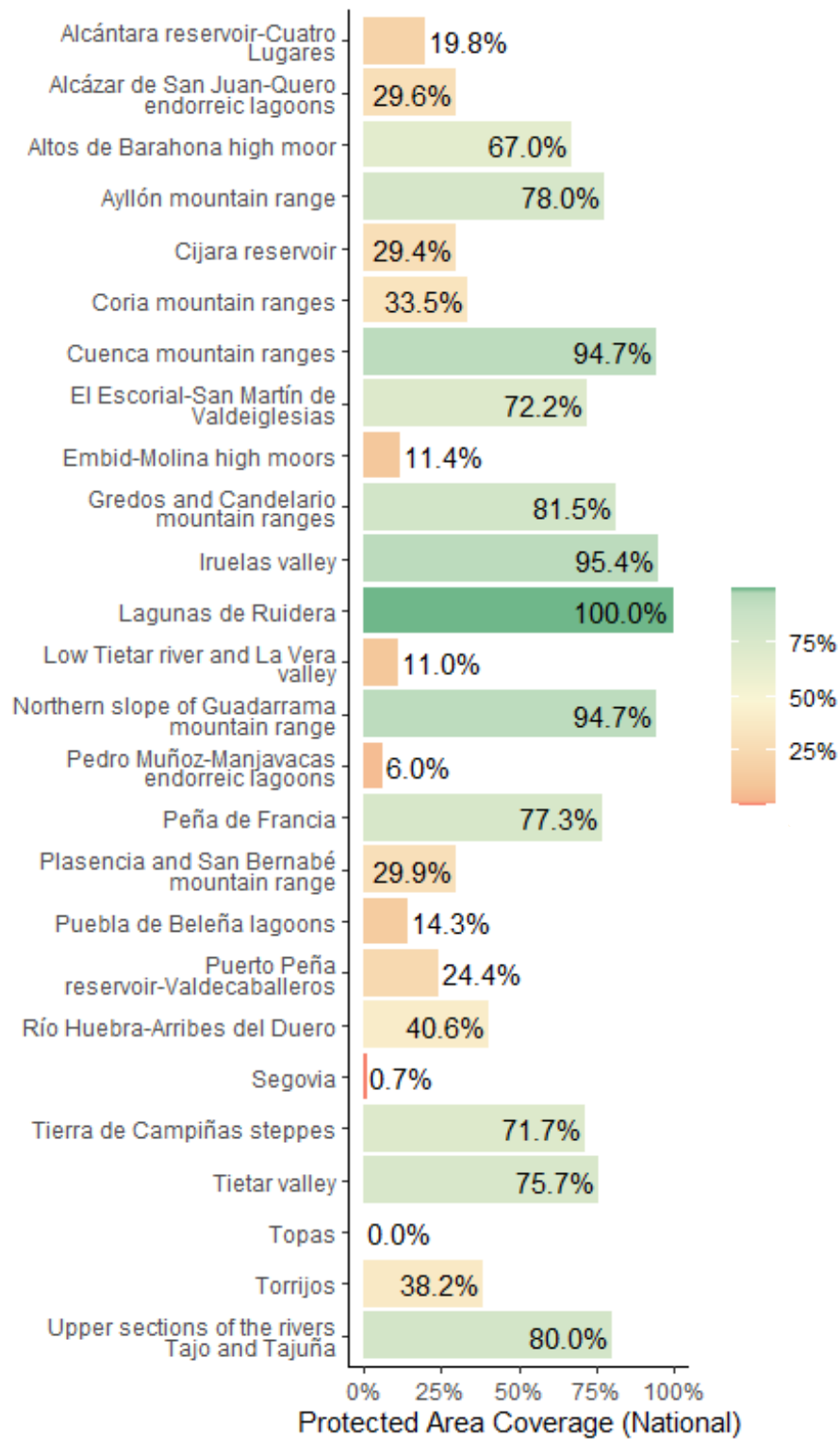
Key Biodiversity Area Coverage (KBA) in Spain



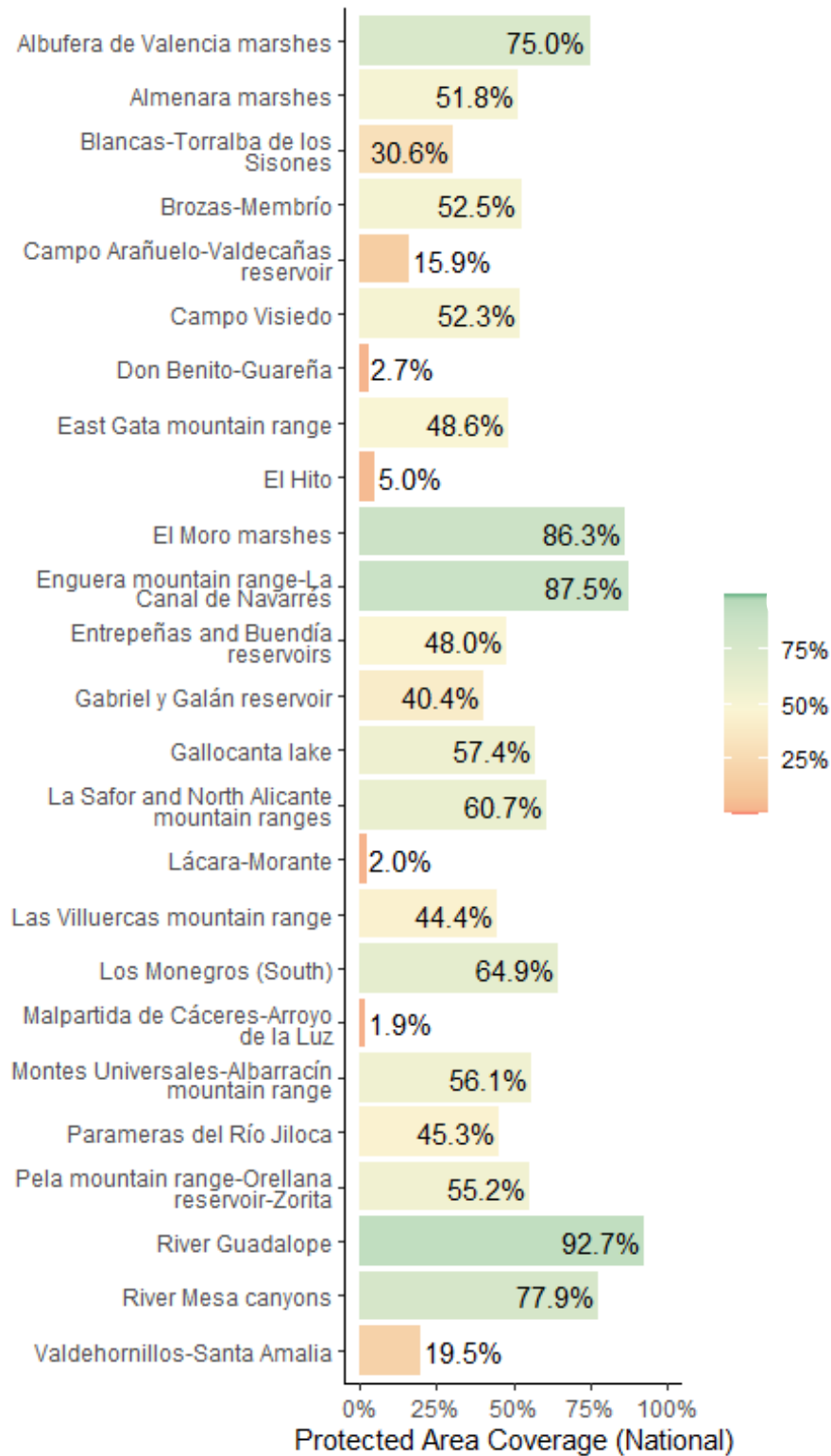
Key Biodiversity Area Coverage (KBA) in Spain



Key Biodiversity Area Coverage (KBA) in Spain

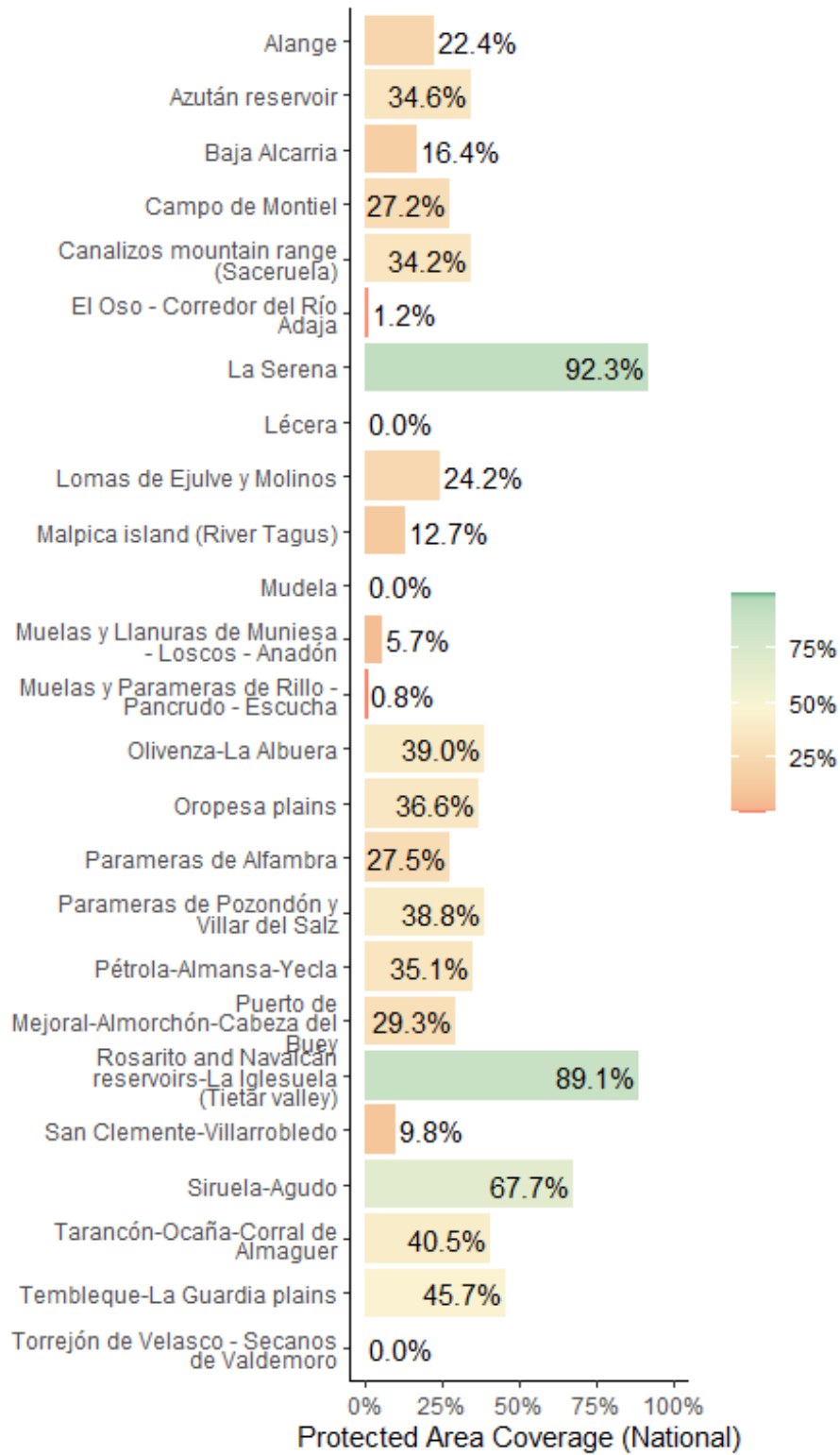


Key Biodiversity Area Coverage (KBA) in Spain

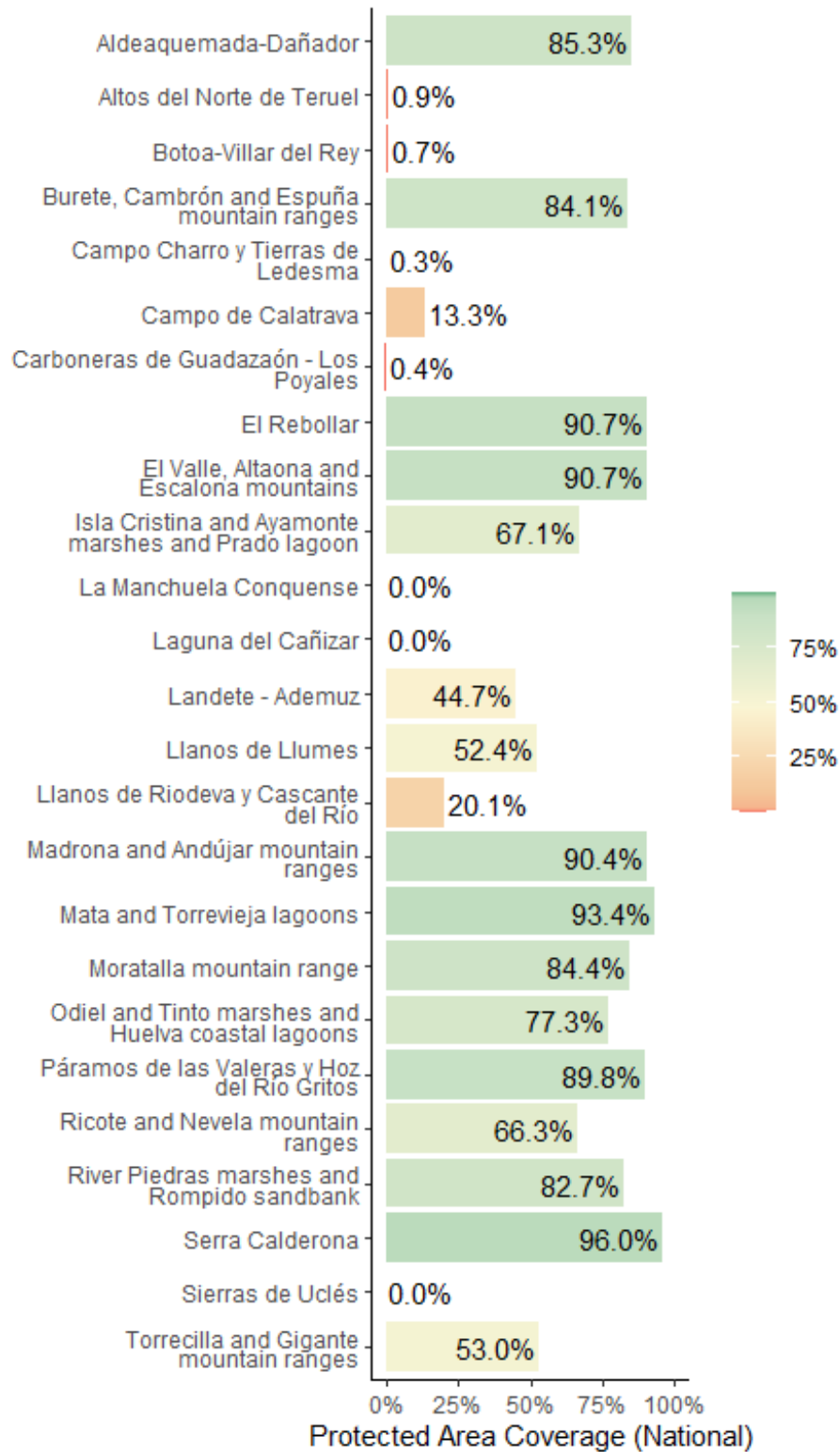


Key Biodiversity Area Coverage (KBA) in Spain

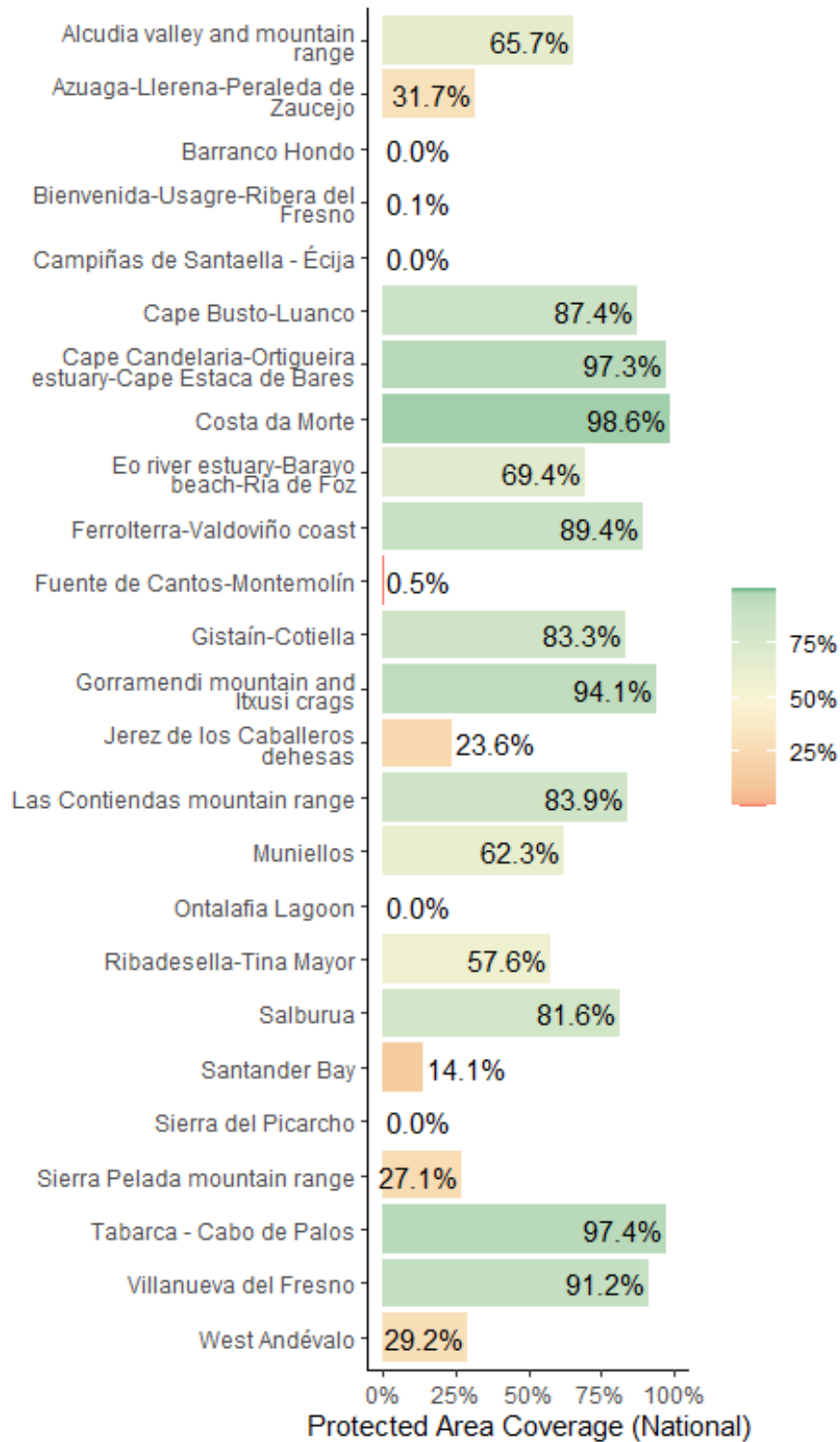




Key Biodiversity Area Coverage (KBA) in Spain

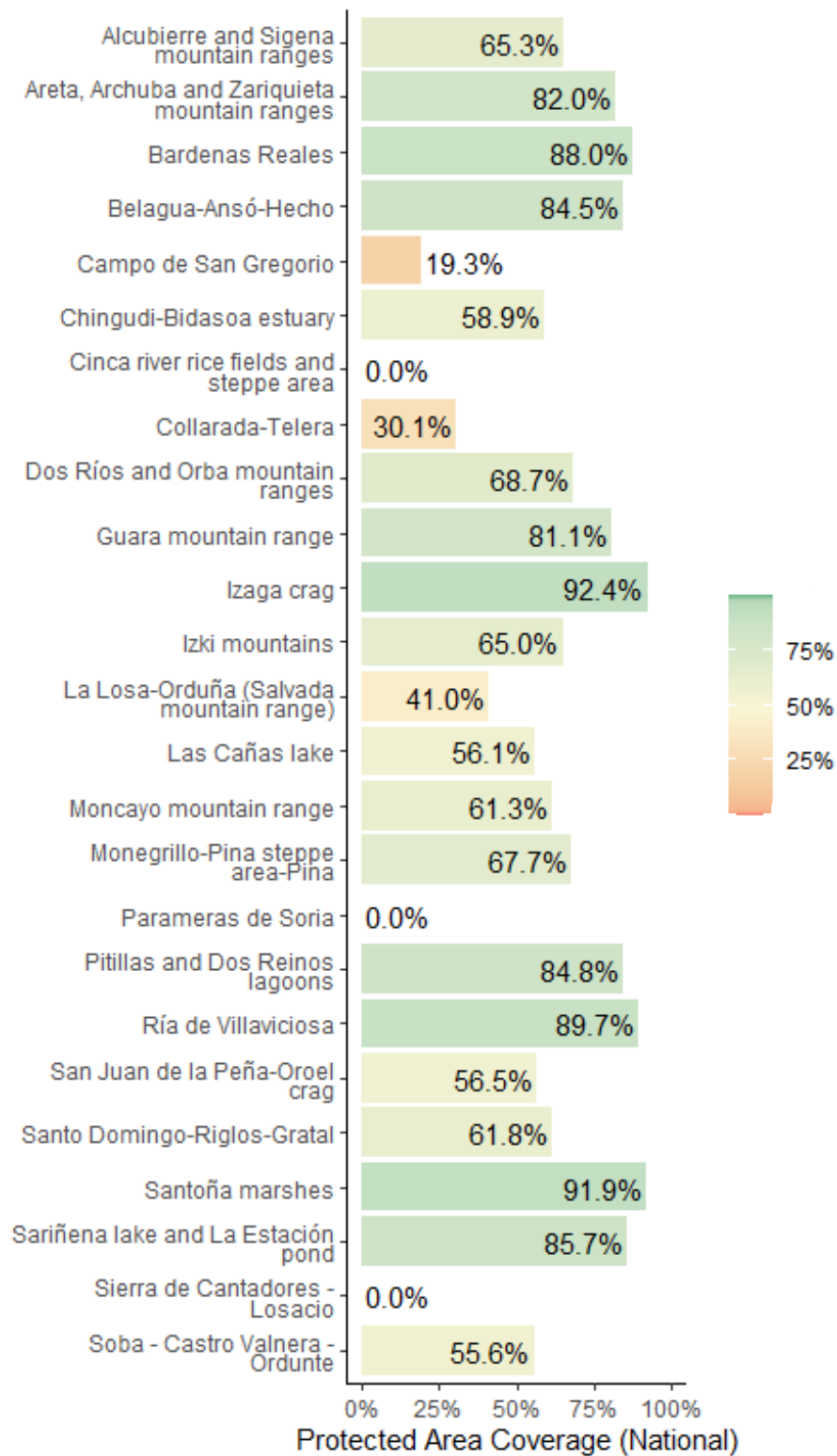


Key Biodiversity Area Coverage (KBA) in Spain

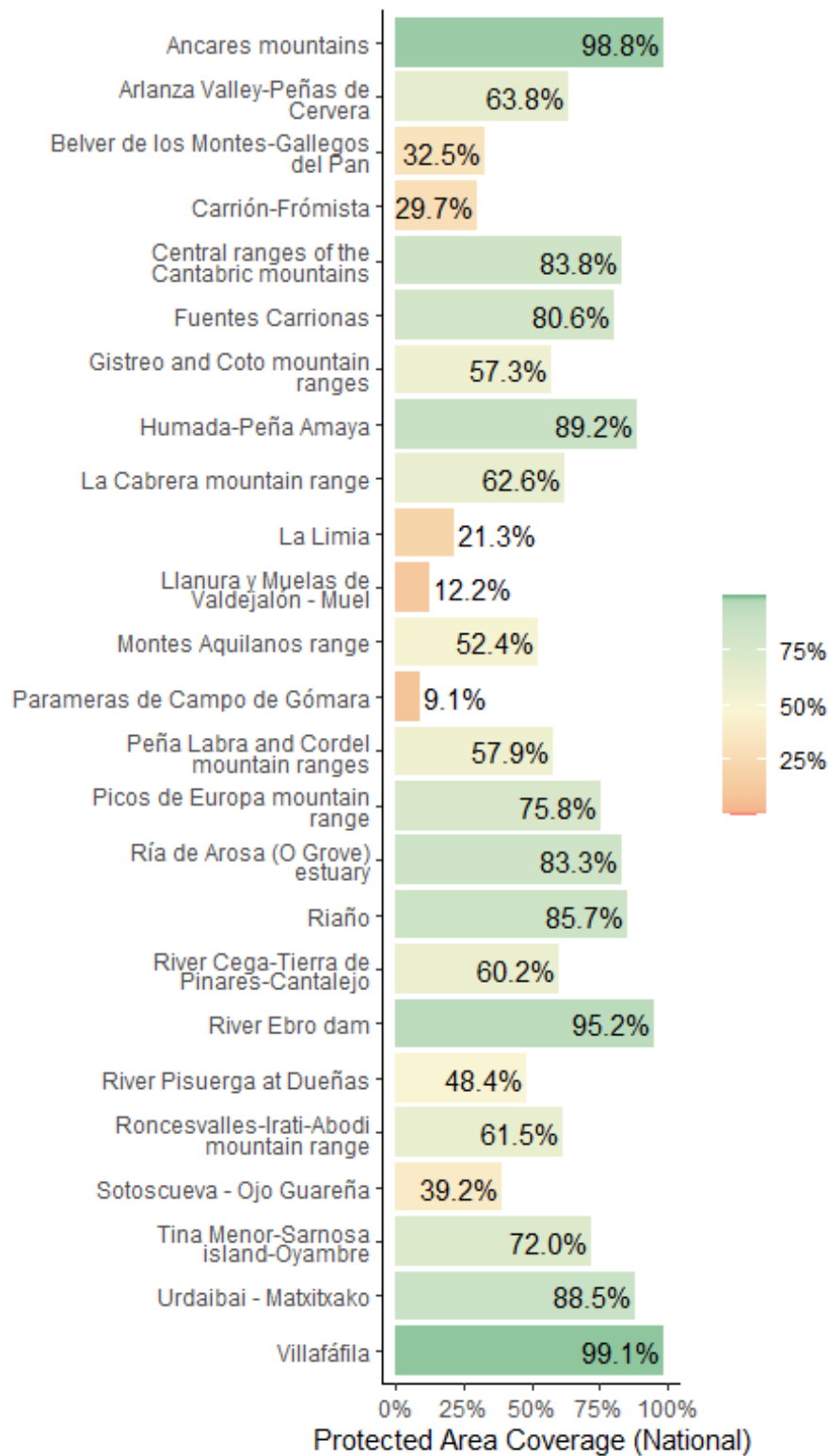


Key Biodiversity Area Coverage (KBA) in Spain

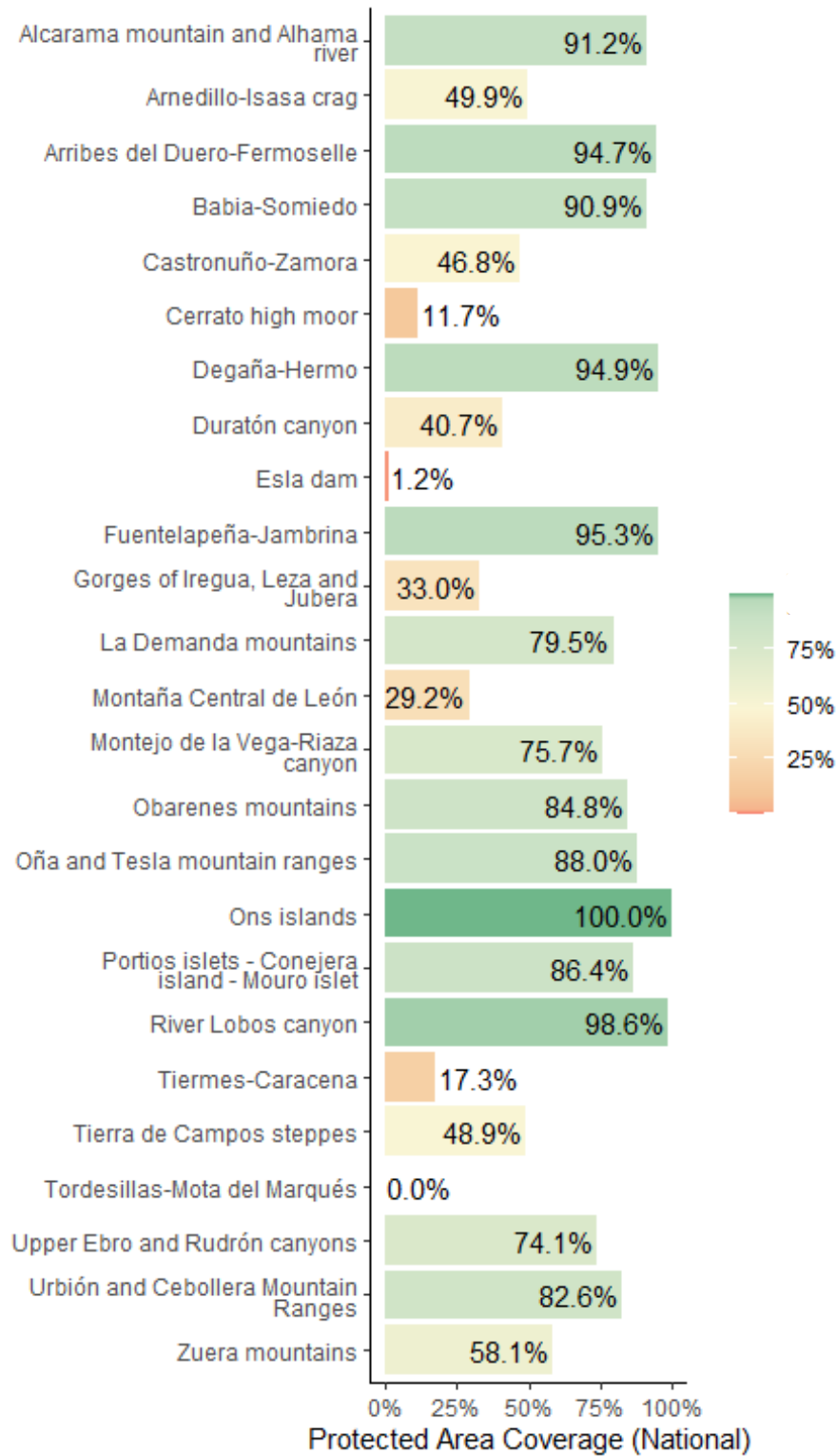
49 | Aichi Biodiversity Target 11 Country Dossier: SPAIN



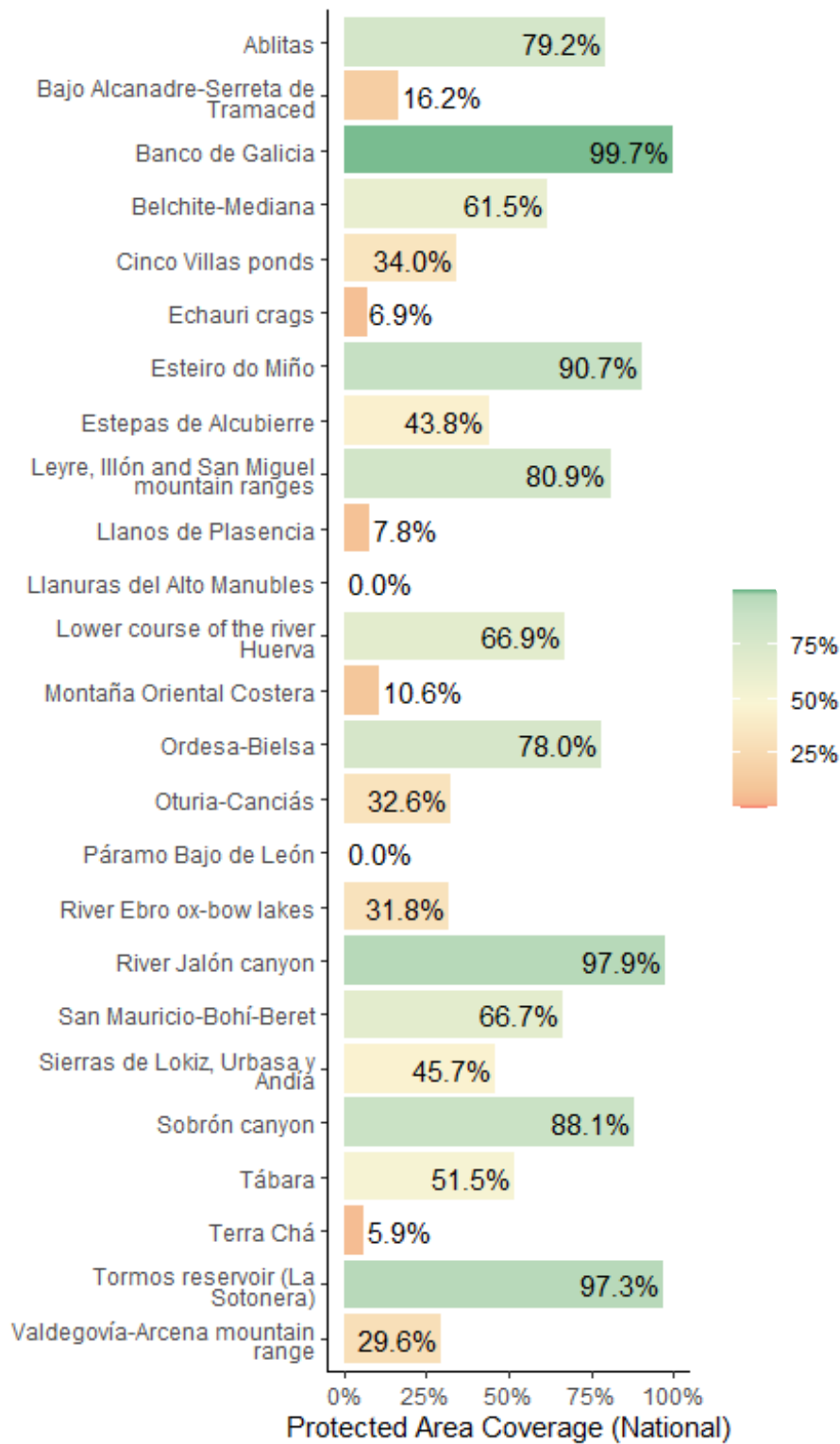
Key Biodiversity Area Coverage (KBA) in Spain



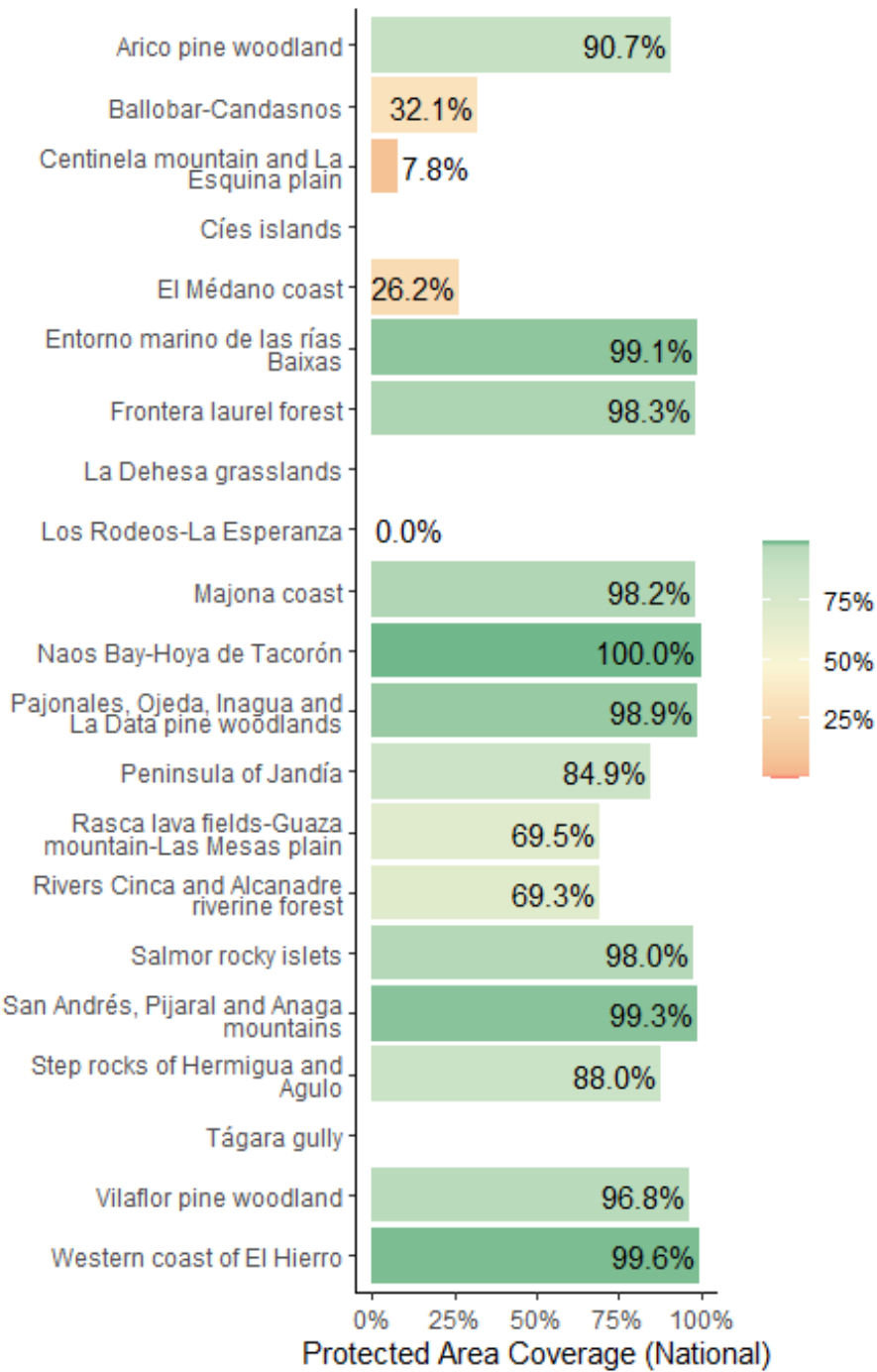
Key Biodiversity Area Coverage (KBA) in Spain



Key Biodiversity Area Coverage (KBA) in Spain



Key Biodiversity Area Coverage (KBA) in Spain



Key Biodiversity Area Coverage (KBA) in Spain

REFERENCES

- Atwood, TB, Witt, A, Mayorga, J, Hammill, E, & Sala, E. (2020). Global patterns in marine sediment carbon stocks. *Frontiers in Marine Science*.
<https://doi.org/10.3389/fmars.2020.00165>
- BirdLife International (2021). World Database of Key Biodiversity Areas. Available at:
<http://www.keybiodiversityareas.org>
- CBD (2010). Decision adopted by the Conference of the Parties to the Convention on Biological Diversity at its tenth meeting. Decision X/2. Strategic plan for biodiversity 2011–2020. Retrieved from <https://www.cbd.int/doc/decisions/cop-10/cop-10-dec02-en.pdf>.
- CSIRO (2019). Protected area connectedness index (PARCconnectedness).
<https://www.bipindicators.net/indicators/protected-area-connectedness-index-parconnectedness>
- Dinerstein, E., et al. (2017). An ecoregion-based approach to protecting half the terrestrial realm. *BioScience* 67(6), 534-545.
- Donald et al., 2019, The prevalence, characteristics and effectiveness of Aichi Target 11's "other effective area-based conservation measures" (OECMs) in Key Biodiversity Areas. *Conservation Letters*, 12(5).
- EC-JRC (2021). DOPA Indicator factsheets: <http://dopa.jrc.ec.europa.eu/en/factsheets>
- FAO (2017). Global Soil Organic Carbon (GSOC) Map - Global Soil Partnership [WWW Document]. URL <http://www.fao.org/global-soil-partnership/pillars-action/4-information-and-data/global-soil-organic-carbon-gsoc-map/en/>.
- Franks, P and Booker, F (2018). Governance Assessment for Protected and Conserved Areas (GAPA): Early experience of a multi-stakeholder methodology for enhancing equity and effectiveness. IIED Working Paper, IIED, London. <https://pubs.iied.org/17632IIED>
- Franks, P. et al. (2018). Social Assessment for Protected and Conserved Areas (SAPA). Methodology manual for SAPA facilitators. Second edition. IIED, London.
<https://pubs.iied.org/14659iied>
- Garnett et al. (2018). A spatial overview of the global importance of Indigenous lands for conservation. *Nature Sustainability*, 1(7), 369.
- Global Environment Facility (GEF-5 and GEF-6); all projects can be found online at:
<https://www.thegef.org/projects>
- Gloss, L. et al. (2019). International Outlook for Privately Protected Areas: Summary Report. International Land Conservation Network (a project of the Lincoln Institute of Land Policy) and United Nations Development Programme. Summary report, and individual country profiles, available at: <https://nbsapforum.net/knowledge-base/resource/international-outlook-privately-protected-areas-summary-report>

Hansen, M.C., Potapov, P.V., Moore, R., Hancher, M., Turubanova, S.A., Tyukavina, A., Thau, D., Stehman, S.V., Goetz, S.J., Loveland, T.R., Kommareddy, A., Egorov, A., Chini, L., Justice, C.O., Townshend, J.R.G., (2013). High-Resolution Global Maps of 21st-Century Forest Cover Change. *Science* 342, 850–853. <https://doi.org/10.1126/science.1244693>

Hilty, J et al. (2020). Guidelines for conserving connectivity through ecological networks and corridors. Best Practice Protected Area Guidelines Series No. 30. Gland, Switzerland: IUCN. <https://portals.iucn.org/library/sites/library/files/documents/PAG-030-En.pdf>

IIED 2020. Site-level assessment of governance and equity (SAGE) <https://www.iied.org/site-level-assessment-governance-equity-sage>.

IUCN (2016). A Global Standard for the Identification of Key Biodiversity Areas, Version 1.0. First edition. Gland, Switzerland: IUCN. <https://portals.iucn.org/library/sites/library/files/documents/2016-048.pdf>

IUCN-WCPA (2017). IUCN-WCPA Task Force on OECMs collation of case studies submitted 2016-2017. <https://www.iucn.org/commissions/world-commission-protected-areas/our-work/oecms/oecm-reports>

Joint Research Centre of the European Commission (JRC) (2021), The Digital Observatory for Protected Areas (DOPA) Explorer 4.1 [On-line], [Apr/2021], Ispra, Italy. Available at: <http://dopa-explorer.jrc.ec.europa.eu>

Kothari, A., et al. (Eds) (2012). Recognising and Supporting Territories and Areas Conserved By Indigenous Peoples And Local Communities: Global Overview and National Case Studies. Secretariat of the CBD, ICCA Consortium, Kalpavriksh, and Natural Justice, Montreal, Canada. Technical Series no. 64.

Lausche, B., Laur, A., Collins, M. (2021). *Marine Connectivity Conservation 'Rules of Thumb' for MPA and MPA Network Design*. Version 1.0. IUCN WCPA Connectivity Conservation Specialist Group's Marine Connectivity Working Group.

Márquez-Barraso, S., del Barrio, G., Ruiz, A., Simon, J.C., Sanjuán, M.E., Sánchez, E., & Hidalgo, R. (2015). *Conectividad del paisaje para tipos de hábitat zonales de interés comunitario en España*. Ministerio de Agricultura, Alimentación y Medio Ambiente. 356 pp

McDonald, R.I., Weber, K., Padowski, J., Flörke, M., Schneider, C., Green, P.A., Gleeson, T., Eckman, S., Lehner, B., Balk, D., Boucher, T., Grill, G., Montgomery, M., (2014). Water on an urban planet: Urbanization and the reach of urban water infrastructure. *Global Environmental Change* 27, 96–105. <https://doi.org/10.1016/j.gloenvcha.2014.04.022>

MITECO (2021). *Informe sobre el estado del Patrimonio Natural y de la Biodiversidad en España a 2020*. Madrid (Spain). Available at: https://www.miteco.gob.es/es/biodiversidad/temas/inventarios-nacionales/inventario-espanol-patrimonio-natural-biodiv/informe-anual/Informe_2020_IENB.asp

National Biodiversity Strategy and Action Plan (NBSAPs); most recent NBSAP is available at: <https://www.cbd.int/nbsap/search/>

Newbold, T., Hudson, L.N., Arnell, A.P., Contu, S., Palma, A.D., Ferrier, S., Hill, S.L.L., Hoskins, A.J., Lysenko, I., Phillips, H.R.P., Burton, V.J., Chng, C.W.T., Emerson, S., Gao, D., Pask-Hale, G., Hutton, J., Jung, M., Sanchez-Ortiz, K., Simmons, B.I., Whitmee, S., Zhang, H., Scharlemann, J.P.W., Purvis, A., (2016). Has land use pushed terrestrial biodiversity beyond the planetary boundary? A global assessment. *Science* 353, 288–291.

<https://doi.org/10.1126/science.aaf2201>

Sala, E. et al. (2021). Protecting the global ocean for biodiversity, food and climate. *Nature*, 592(7854), 397-402. <https://doi.org/10.1038/s41586-021-03496-1>

Saura, S. et al. (2018). Protected area connectivity: Shortfalls in global targets and country-level priorities. *Biological Conservation*, 219, 53-67.

Saura, S. et al (2017). Protected areas in the world's ecoregions: How well connected are they? *Ecological Indicators*, 76, 144-158.

Spalding, M.D., et al. (2012). Pelagic provinces of the world: a biogeographic classification of the world's surface pelagic waters. *Ocean & Coastal Management* 60, 19–30.

Spalding, M.D., et al. (2007). Marine ecoregions of the world: a bioregionalization of coastal and shelf areas. *BioScience* 57(7): 573–583.

Spawn, S.A., Sullivan, C.C., Lark, T.J., Gibbs, H.K., (2020). Harmonized global maps of above and belowground biomass carbon density in the year 2010. *Scientific Data* 7, 112.

<https://doi.org/10.1038/s41597-020-0444-4>

Stolton, S. et al. (2014). *The Futures of Privately Protected Areas*. Gland, Switzerland: IUCN.

UNEP-WCMC and IUCN (2021) *Protected Planet Report 2020*. UNEP-WCMC and IUCN: Cambridge UK; Gland, Switzerland.

UNEP-WCMC and IUCN (2021), *Protected Planet: The Global Database on Protected Area Management Effectiveness (GD-PAME)* [On-line], [May/2021], Cambridge, UK: UNEP-WCMC and IUCN. Available at: www.protectedplanet.net.

UNEP-WCMC and IUCN (2021), *Protected Planet: The World Database on Protected Areas (WDPA)* [On-line], [May/2021], Cambridge, UK: UNEP-WCMC and IUCN. Available at: www.protectedplanet.net.

UNEP-WCMC and IUCN (2021), *Protected Planet: The World Database on Other Effective Area-based Conservation Measures (WD-OECM)* [On-line], [May/2021], Cambridge, UK: UNEP-WCMC and IUCN. Available at: www.protectedplanet.net.

UN Ocean Conference Voluntary Commitments, available at:

<https://oceanconference.un.org/commitments/>

Williams, B.A., Venter, O., Allan, J.R., Atkinson, S.C., Rehbein, J.A., Ward, M., ... & Watson, J.E.M., (2020). Change in Terrestrial Human Footprint Drives Continued Loss of Intact Ecosystems. *One Earth* 3, 371–382. <https://doi.org/10.1016/j.oneear.2020.08.009>



This document was created using the knitr package with R version 4.0.5.

For any questions please contact support@unbiodiveristylab.org.

