Convention on Biological Diversity

UNDP

Aichi Biodiversity Target 11 Country Dossier: ECUADOR

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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
OECM	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-OECM	World Database on Other Effective Area-Based Conservation Measures

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.

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:** as of May 2021 (in the WDPA) terrestrial coverage in Ecuador is 57,706.1 km^2 (22.4%) and marine coverage is 144,122.8 km^2 (13.3%). Ecuador's national reporting shows 52,624.34 km^2 terrestrial and 131,767.07 km^2 marine PAs in the National System of Protected Areas (SNAP).

- **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, 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:** Ecuador contains 13 terrestrial ecoregions, 5 marine ecoregions, and 1 pelagic province: the mean protected coverage by reported PAs and OECMs is 31.5% (terrestrial), 66.3% (marine), and 11.5% (pelagic); 1 terrestrial ecoregion has no coverage by reported PAs and OECMs (but covers <5 km^2 of the country). Additionally, 78% of continental ecosystems are represented within the National System of PAs (SNAP)

- **Opportunities for action:** there is opportunity for Ecuador to increase protection in terrestrial and marine ecoregions and pelagic provinces that have lower levels of coverage by PAs or OECMs.

Areas Important for Biodiversity

- **Status:** Ecuador has 123 Key Biodiversity Areas (KBAs): the mean protected coverage of KBAs by reported PAs and OECMs is 31.9%, while 62 KBAs have no coverage by reported PAs and OECMs.

- **Opportunities for action:** there is opportunity for Ecuador to increase protection of KBAs that have lower levels of coverage by PAs and OECMs; priority could be given to those with no current coverage.

Areas Important for Ecosystem Services

- **Status:** coverage of areas important for ecosystem services: In Ecuador, 27.2% of aboveground biomass carbon, 25.9% of belowground biomass carbon, 25.9% of soil organic carbon, 13.1% of carbon stored in marine sediments is covered by PAs and OECMs.

- **Opportunities for action:** for carbon, there is opportunity for Ecuador to increase PA and OECM coverage in both marine and 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 13.0%. Ecuador has a formally recognized connectivity corridor: the Podocarpus Sangay Corridor.

- **Opportunities for action:** there is opportunity for a targeted designation of PAs or OECMs in strategic locations for connectivity and 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

- **Status:** the most common governance type(s) for reported PAs in Ecuador is: 93.5% under governance by Government (11.3% by subnational governments; 82.2% by National government State).

- **Opportunities for action:** explore opportunities for governance types that have lower representation, for Ecuador this could relate to shared governance and governance by Indigenous Peoples and/or local communities (IPLC), etc.

- There is also opportunity for Ecuador 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:** 75% of PAs in Ecuador's National System of Protected Areas complied with the management effectiveness evaluation process. The GD-PAME currently shows 79.0% of terrestrial PAs and 96.6% of marine PAs with completed Protected Area Management Effectiveness (PAME) assessments reported.

- **Opportunities for action:** update the GD-PAME to reflect all completed management effectiveness evaluation in the SNAP.

- 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 Ecuador. Section I of the dossier presents data on the current status of Ecuador'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 Ecuador, in relation to each Target 11 element. The analyses present options for improving Ecuador's area-based conservation network to achieve enhanced protection and benefits for livelihoods and climate change. Section II presents details on Ecuador'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 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. 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.

COVERAGE - TERRESTRIAL & MARINE

As of May 2021, Ecuador has **82** protected areas reported in the World Database on Protected Areas (WDPA) [60 under national and 20 under international designations].
1 UNESCO-MAB Biosphere Reserve is not included in the following statistics (see details on UNWP-WCMC's methods for calculating PA and OECM coverage **here**).

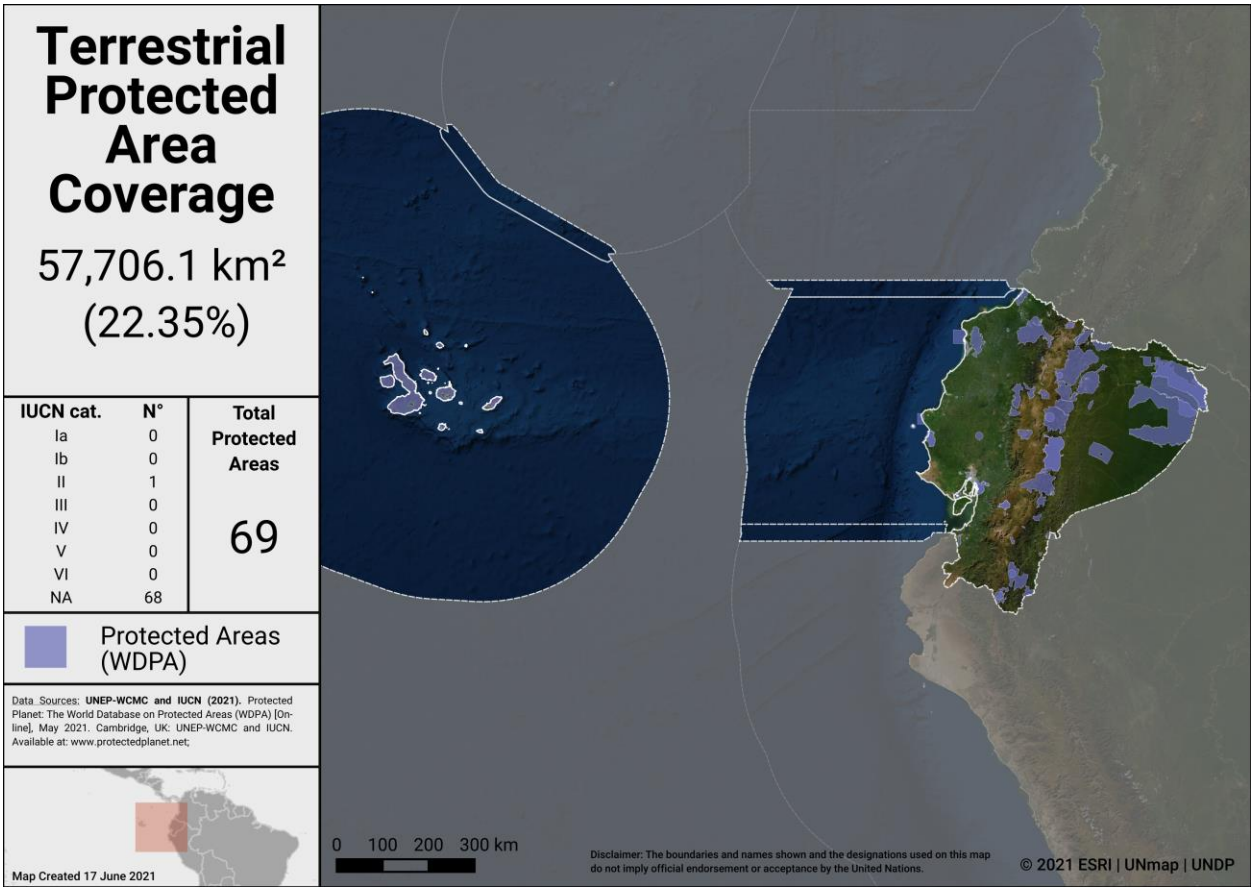
As of May 2021, Ecuador has 0 OECMs reported in the world database on OECMs (WD-OECM).

Current coverage (from the WDPA) for Ecuador:

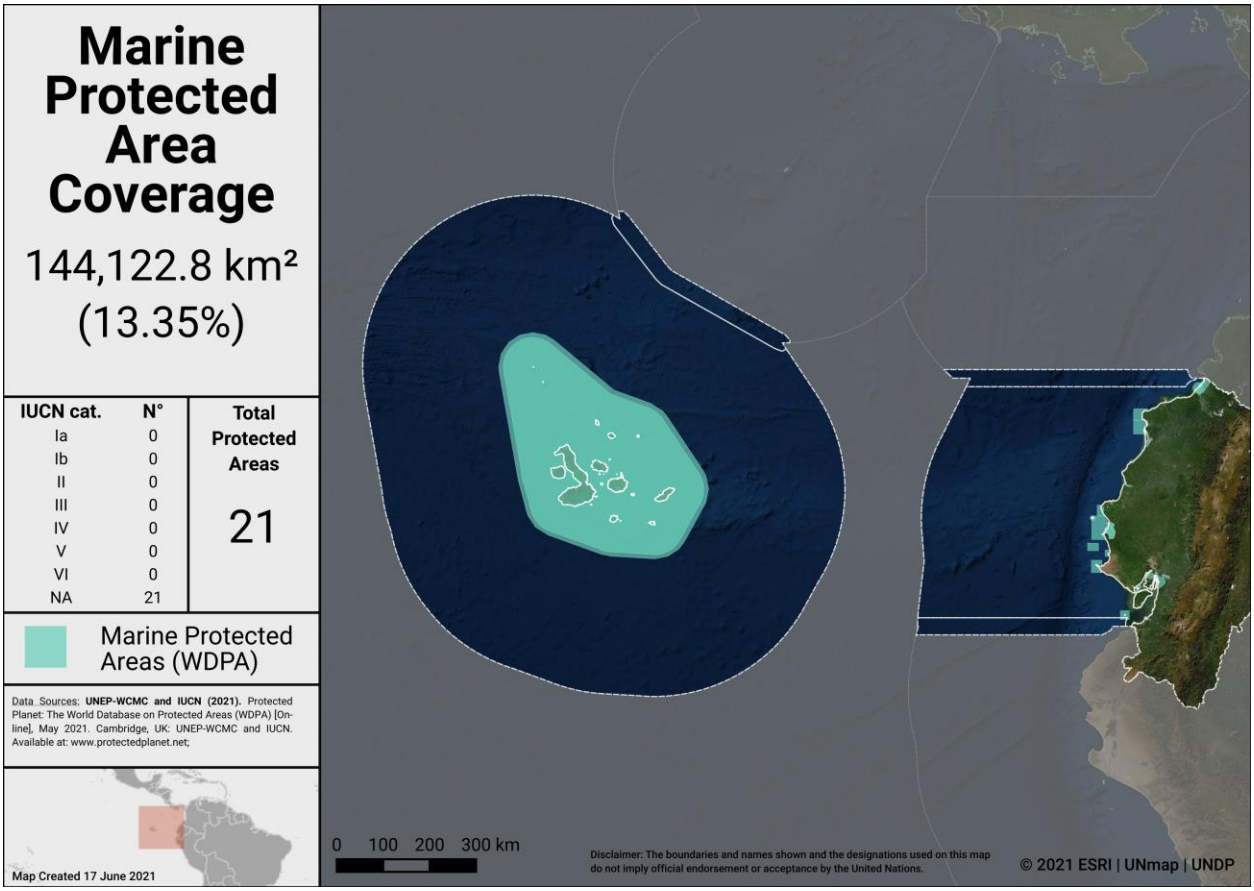
- 22.4% terrestrial (69 protected areas, 57,706.1 km^2)
- 13.3% marine (21 protected areas, 144,122.8 km^2)

From National reporting on Ecuador's National System of Protected Areas (SNAP), there are a total of 62 protected areas (between terrestrial and marine):

- 52,624.34 km^2 terrestrial coverage
- 131,767.07 km^2 marine coverage



Terrestrial Protected Areas in Ecuador



Marine Protected Areas in Ecuador

Potential OECMs

Potential OECMs in Ecuador include:

- Special areas for the conservation of biodiversity
- Protective Forests and Vegetation
- Conservation Areas and Sustainable Use

The National Environmental Authority (AAN) must promote the creation of OECMs in territorial jurisdictions where the Decentralized Autonomous Governments (GAD) have constitutionally and legally assigned powers, and that are concurrent with the purpose of guaranteeing the conservation of biodiversity and genetic heritage, as a strategic resource of the Ecuadorian State.

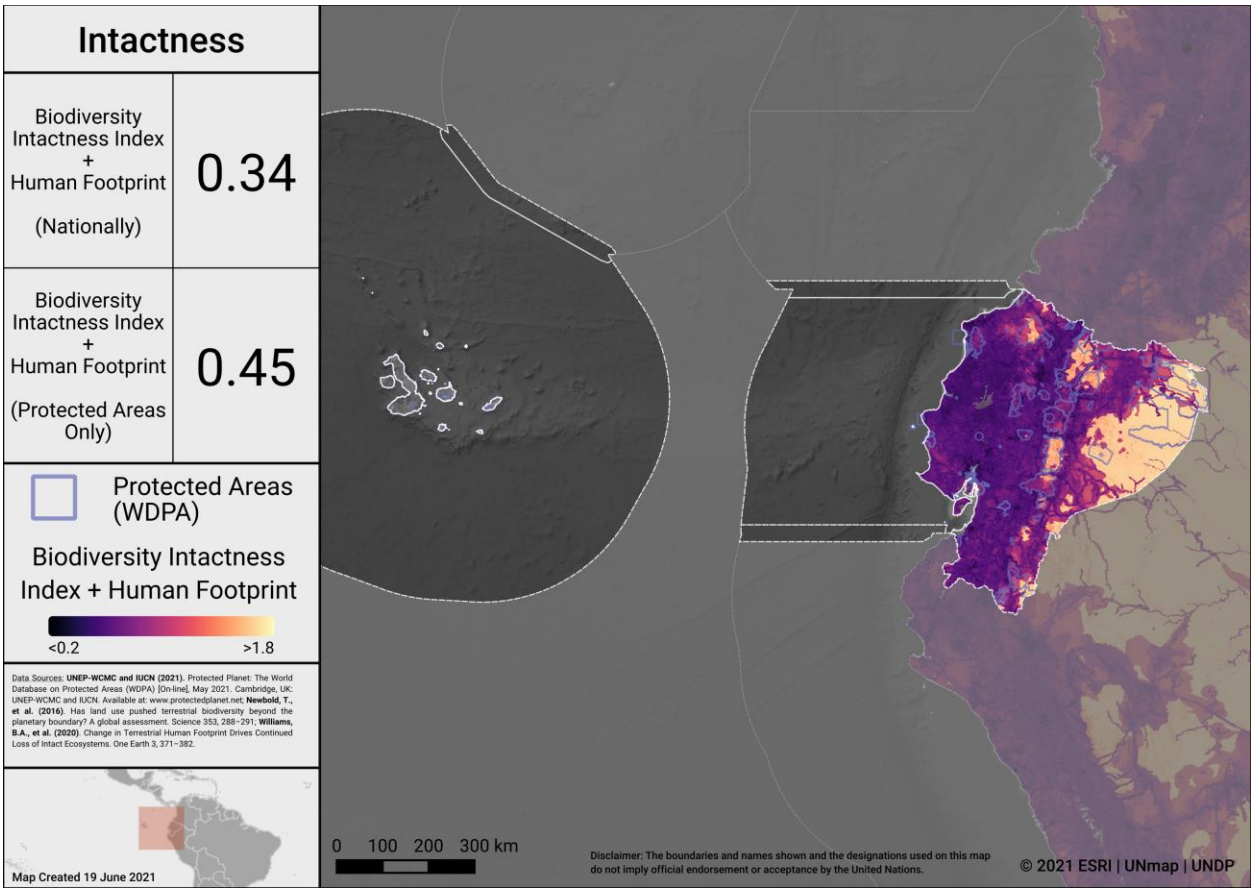
In addition, to the extent that the GADs have the responsibility to promote sustainable development and guarantee the well-being of the population, it is the responsibility of the

AAN to provide guidelines that allow subnational governments to direct their own dynamics of territorial management and conservation of natural heritage.

There are also **91** unprotected Key Biodiversity Areas (KBAs) in Ecuador managed in a way consistent with the OECM definition (see Donald et al 2019 for further details, including a full list of sites).

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 Ecuador considers where to add new PAs and OECMs, the map below identifies areas in Ecuador 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.



Intactness in Ecuador

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).

Ecuador has 13 **terrestrial** ecoregions. Out of these:

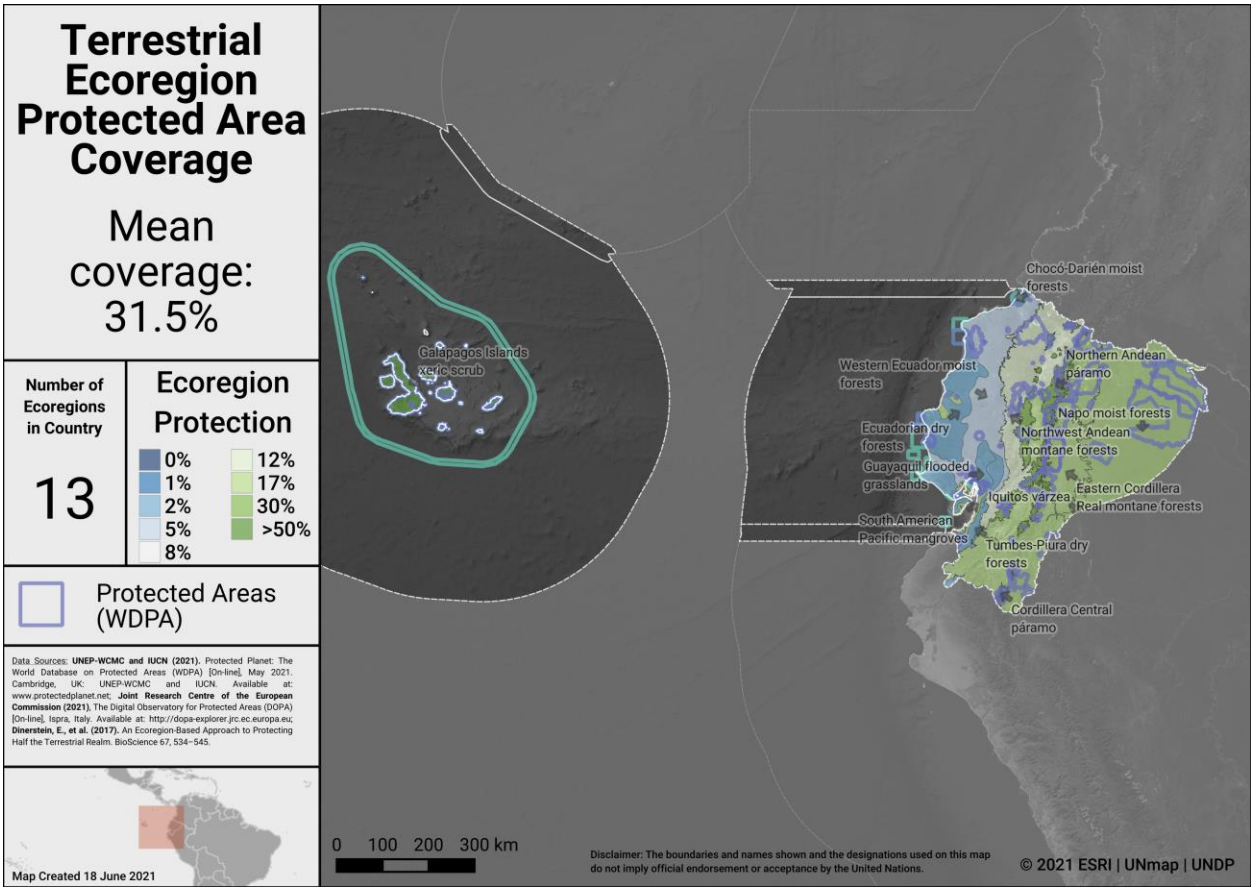
- 12 ecoregions have at least some coverage from PAs and OECMs.
  - The 1 remaining ecoregion has <5km^2 within Ecuador
- 7 ecoregions have at least 17% protected within the country.
- The average terrestrial coverage of ecoregions is 31.5%.

Ecuador has 5 **marine** ecoregions and 1 **pelagic province**. Out of these:

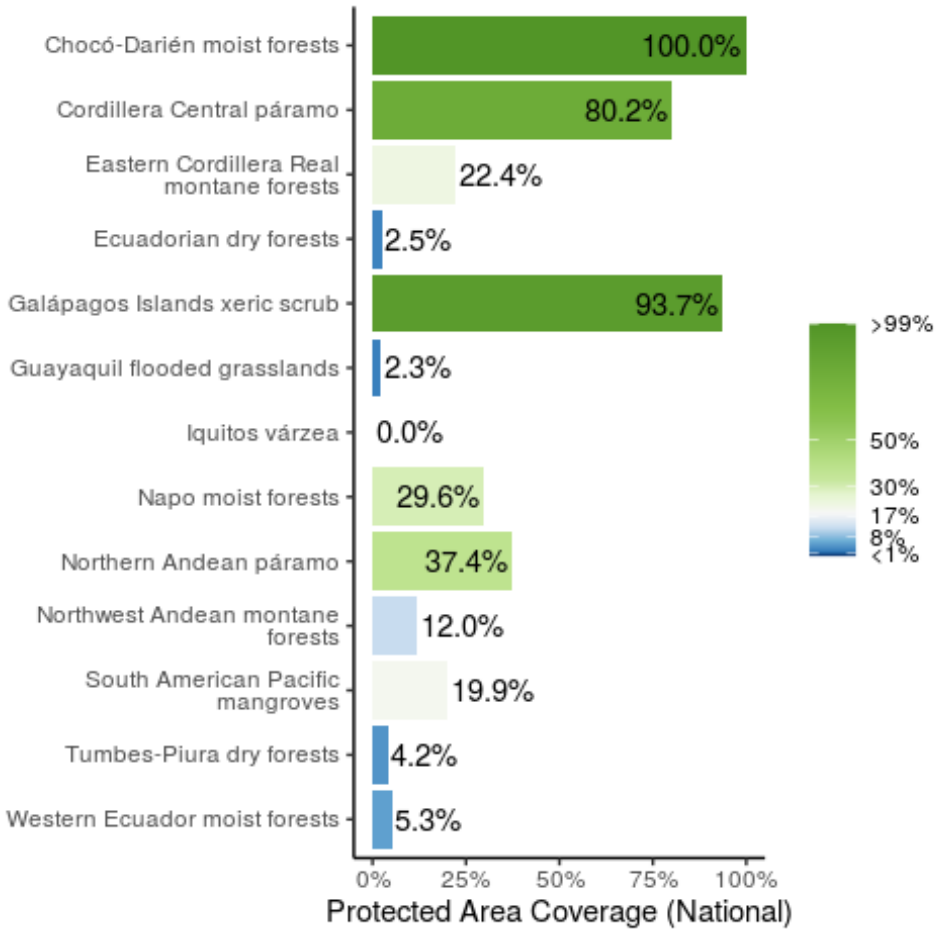
- All 5 marine ecoregions and 1 pelagic province have at least 10% protected within Ecuador's exclusive economic zone (EEZ).
- The average protected area coverage of marine ecoregions is 66.3% and the average protected area coverage of Pelagic Provinces is 11.5%.

A full list of terrestrial ecoregions in Ecuador is available in Annex I.

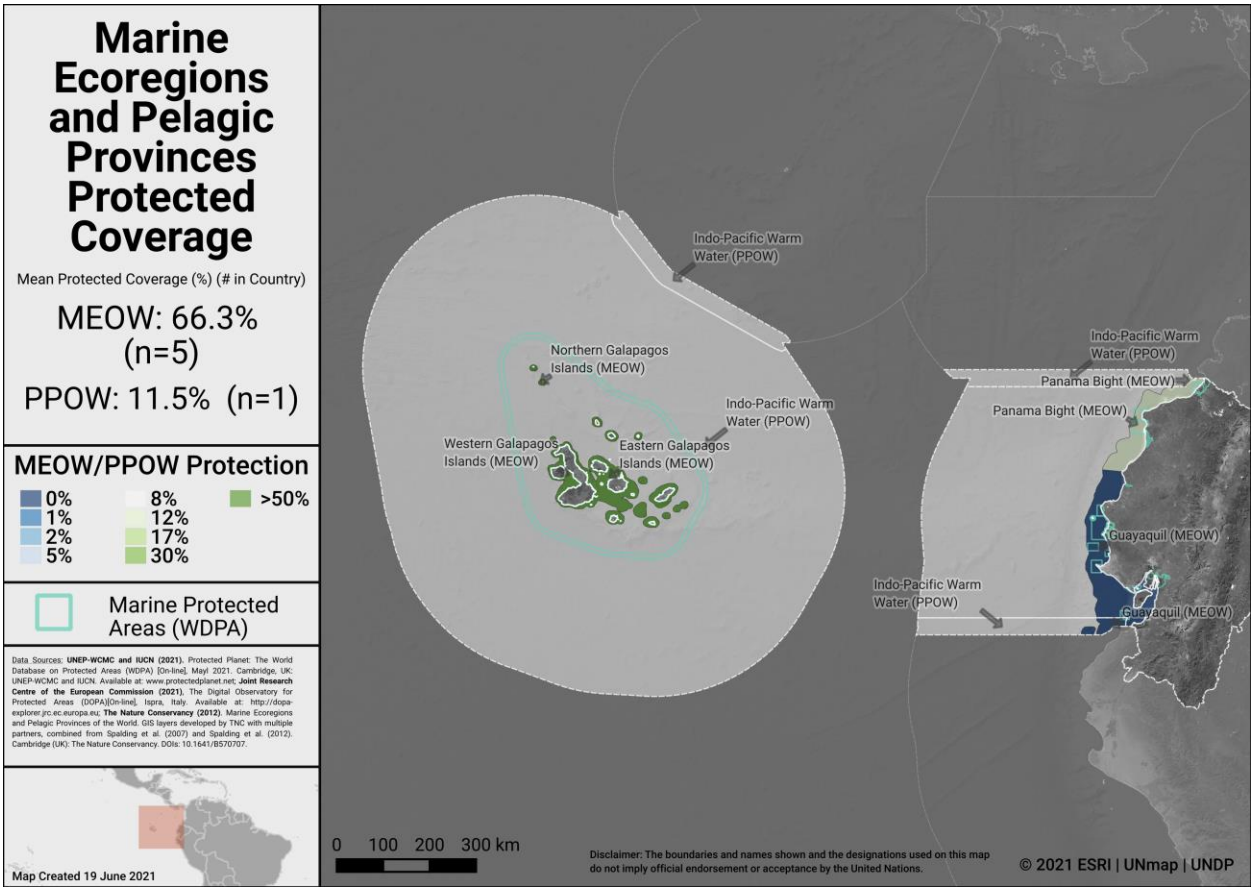
In Ecuador, 69 out of the 91 continental ecosystems (78%) are represented within the National System of Protected Areas (SNAP).



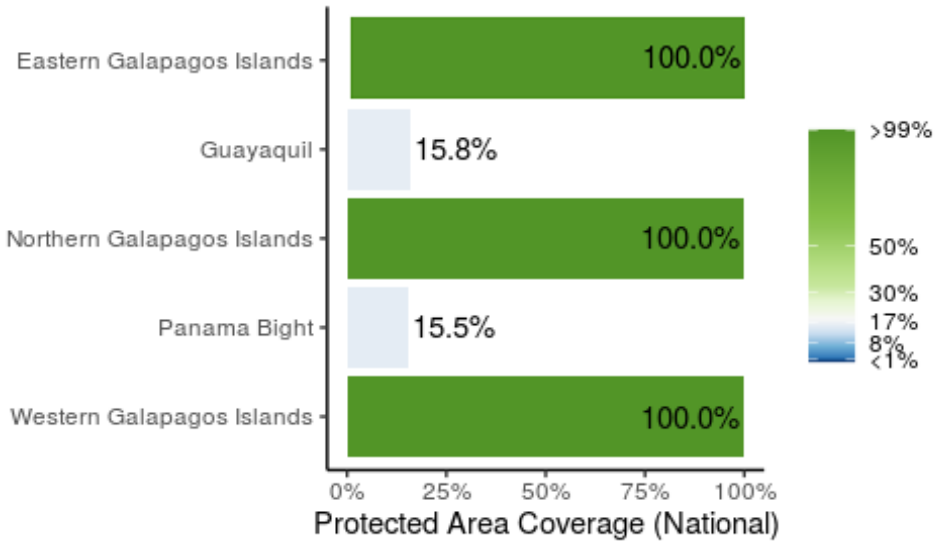
Terrestrial ecoregions in Ecuador



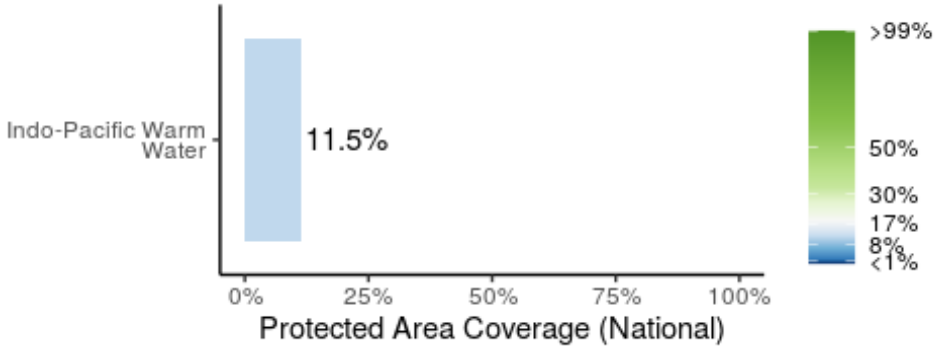
Terrestrial ecoregions of the World (TEOW) in Ecuador



Marine ecoregions and pelagic provinces



Marine Ecoregions of the World (MEOW) in Ecuador:



Pelagic Provinces of the World (PPOW) in Ecuador

Opportunities for action

There is opportunity for Ecuador to increase protection in terrestrial and marine ecoregions and pelagic provinces that have lower levels of coverage by PAs or OECMs.

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.

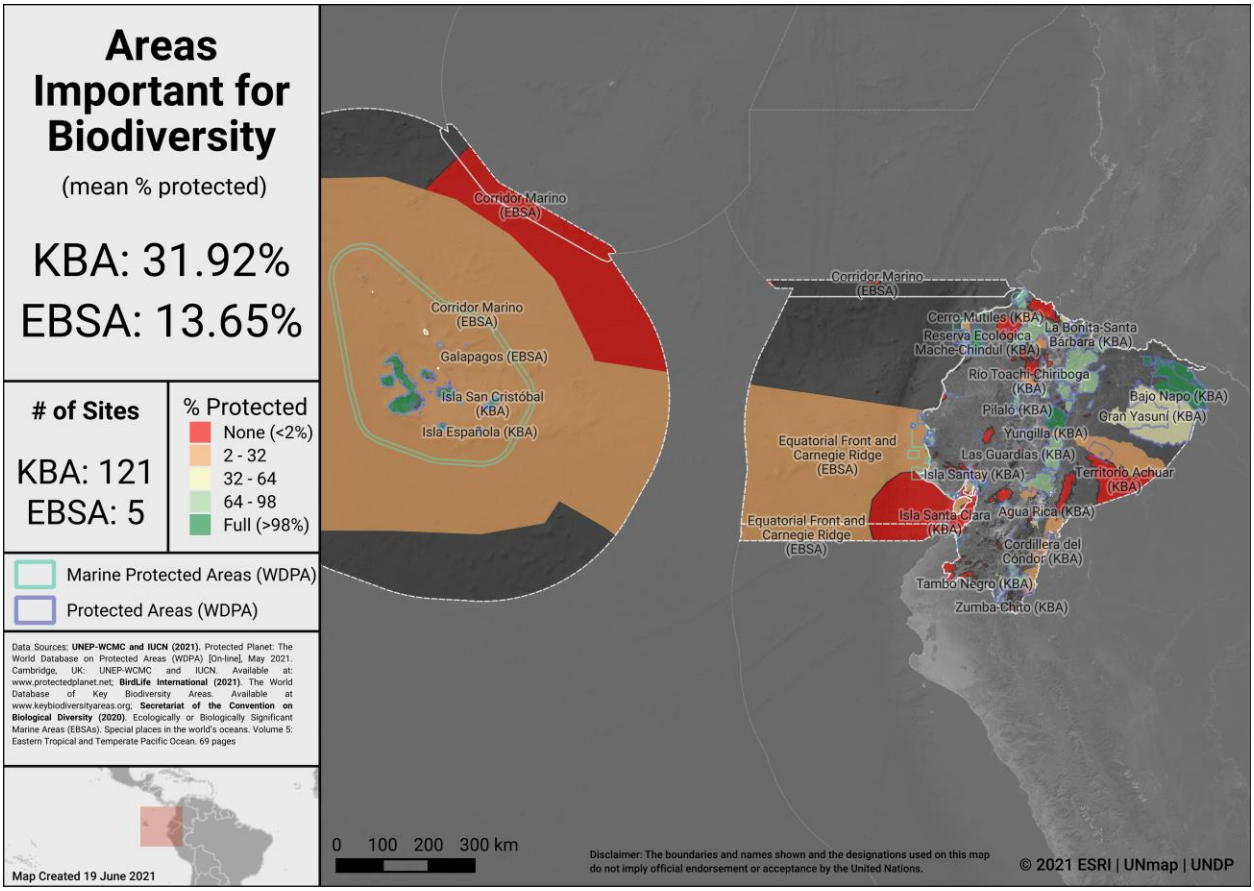
Ecuador has 123 Key Biodiversity Areas (KBAs).

- Mean percent coverage of all KBAs by PAs and OECMs in Ecuador is **31.9%**.
- **17** KBAs have full (>98%) coverage by PAs and OECMs.
- **44** KBAs have partial coverage by PAs and OECMs.
- **62** KBAs have no (<2%) coverage by PAs and OECMs.

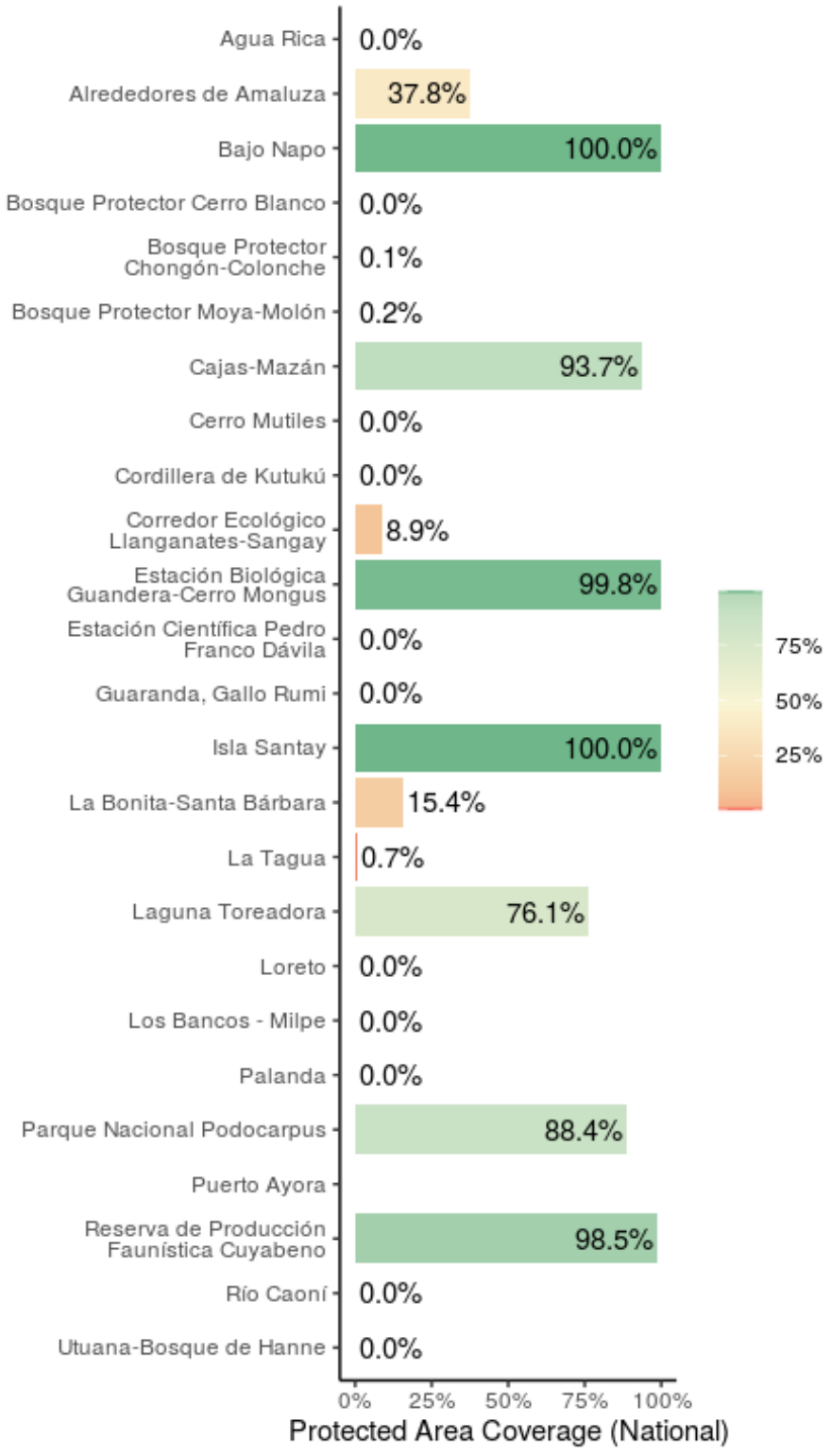
Ecologically or Biologically Significant Marine Areas (EBSAs)

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

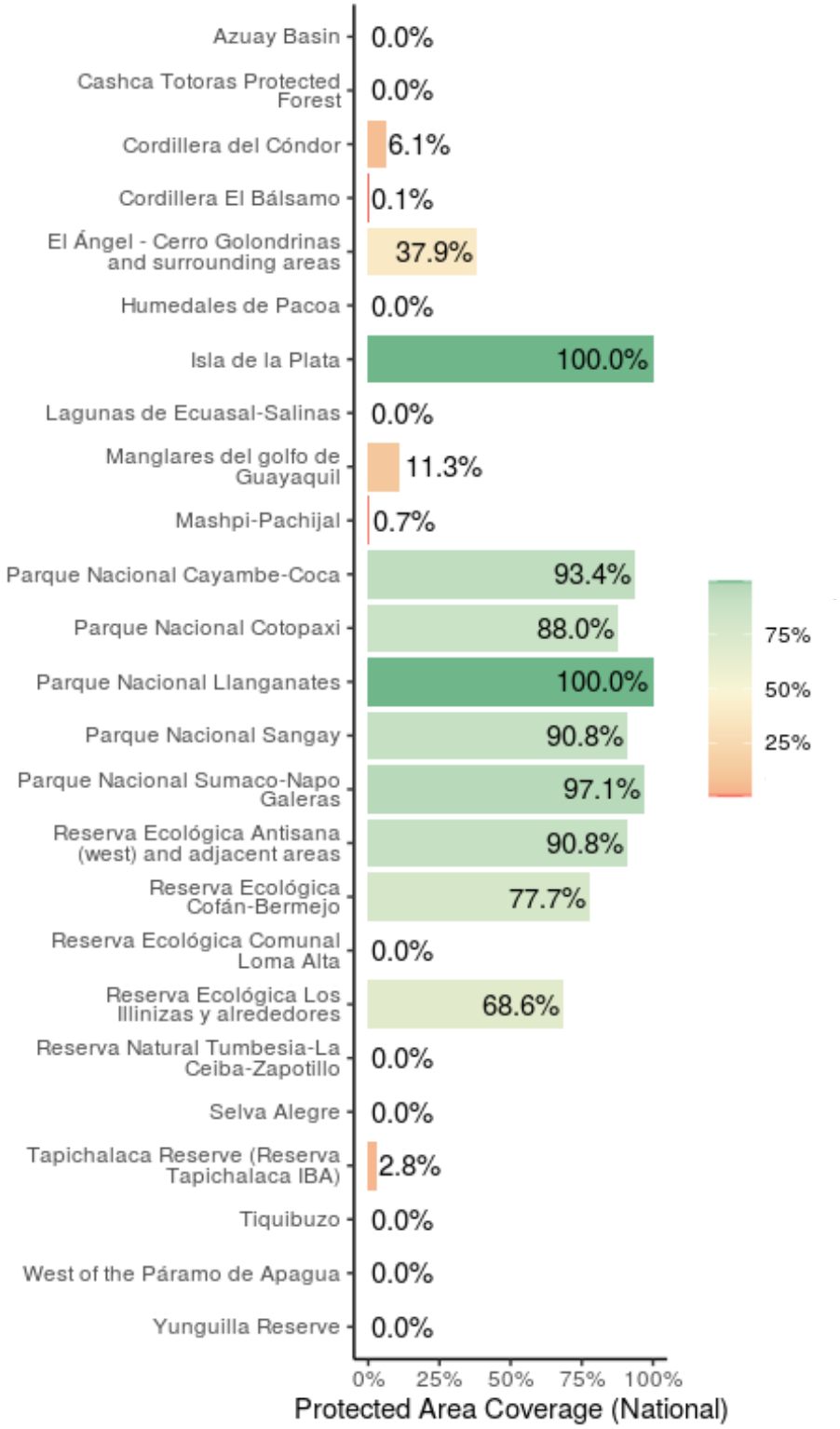
There are 5 EBSAs with some portion of their extent within Ecuador's EEZ, of which 1 EBSA has no coverage from reported PAs or OECMs.



Areas Important for Biodiversity in Ecuador



Key Biodiversity Area Coverage (KBA) in Ecuador



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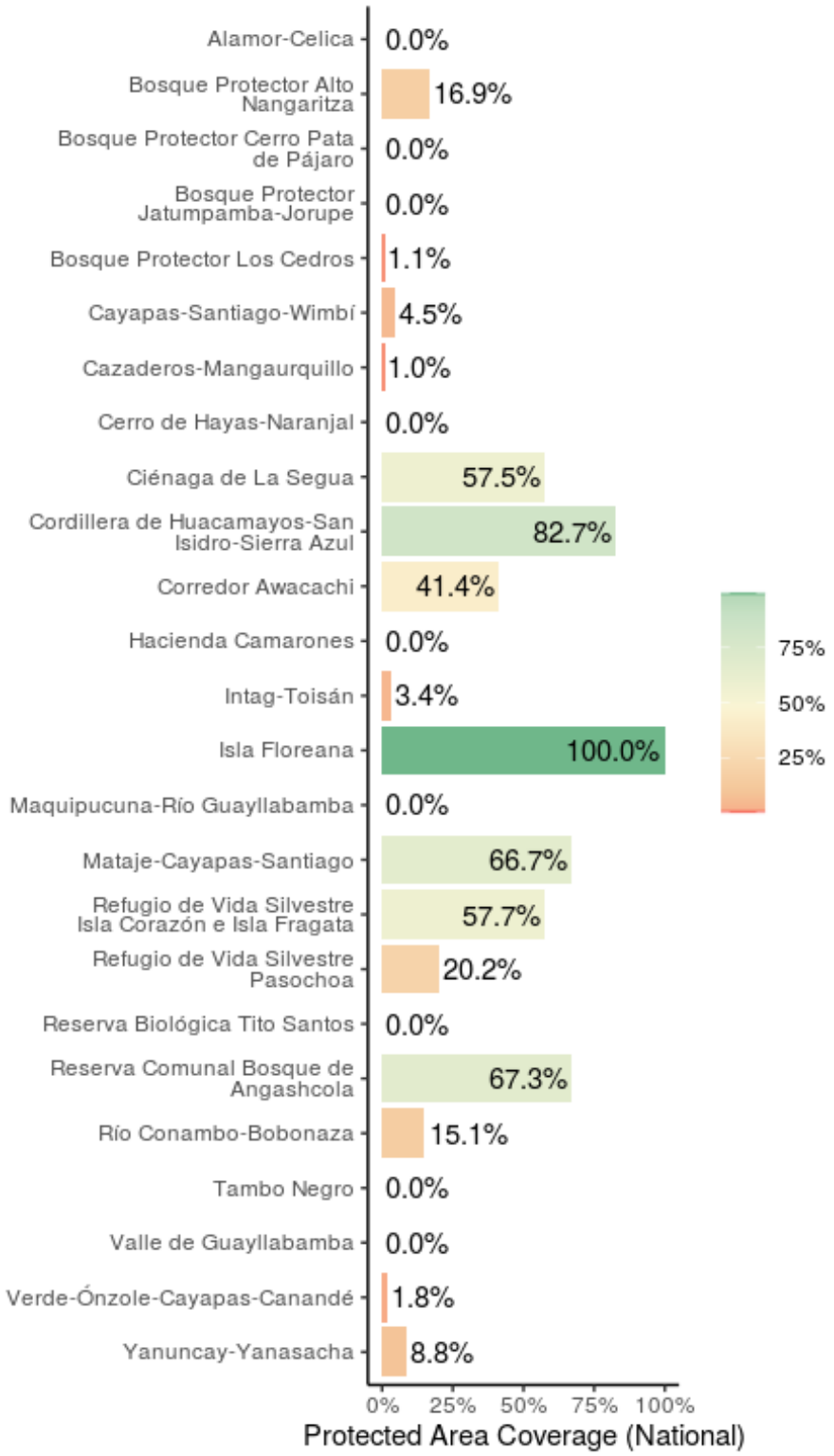
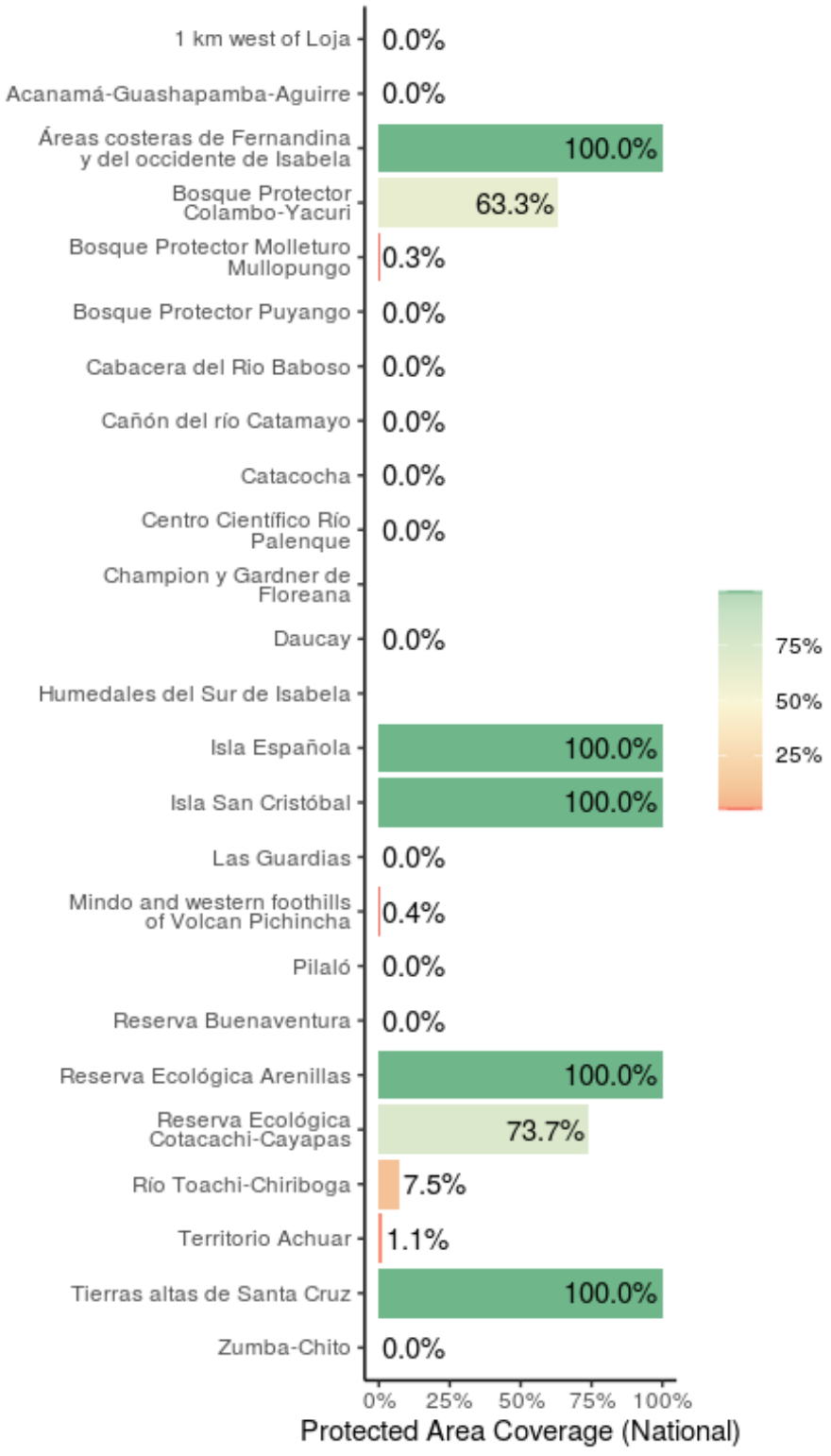
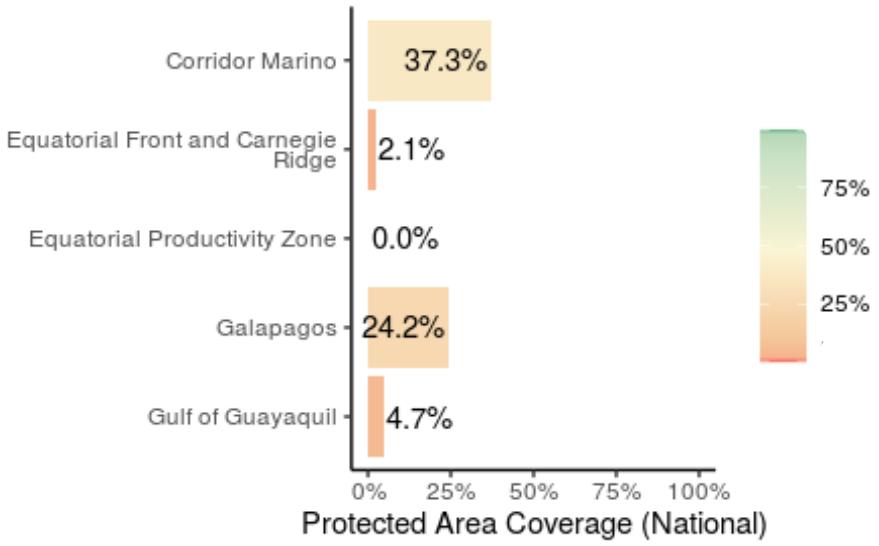


Key Biodiversity Area Coverage (KBA) in Ecuador



Key Biodiversity Area Coverage (KBA) in Ecuador



Ecologically or Biologically Significant Marine Areas (EBSAs) in Ecuador

Opportunities for action

There is opportunity for Ecuador to increase protection of KBAs that have lower levels of coverage by PAs and OECMs; priority could be given to those with no current coverage

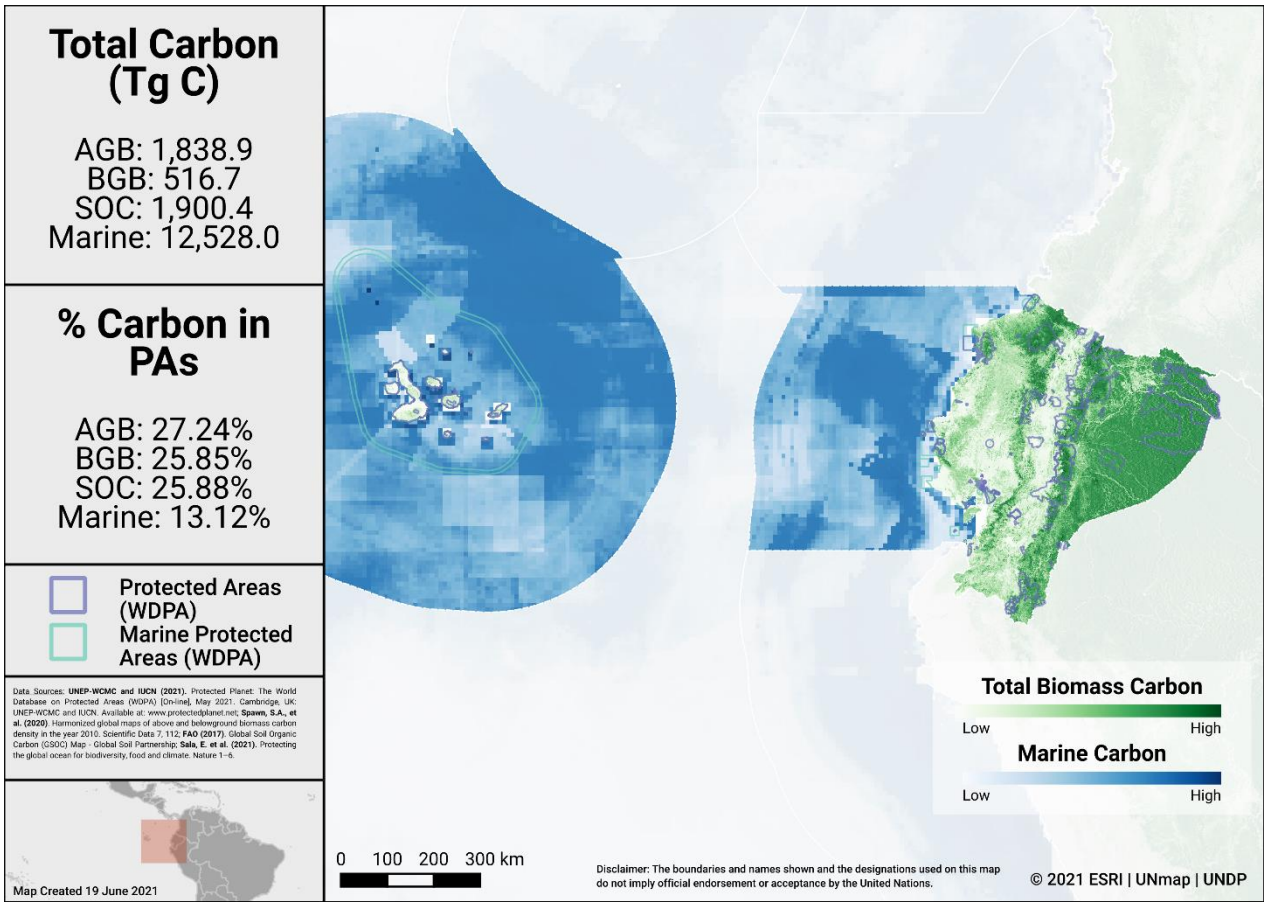
AREAS IMPORTANT FOR ECOSYSTEM SERVICES

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 Ecuador and the percent of carbon in protected areas. The total carbon stocks is 1,838.9 Tg C from aboveground biomass (AGB), with 27.2% in protected areas; 516.7 Tg C from below ground biomass (BGB), with 25.9% in protected areas; 1,900.4 Tg C from soil organic carbon (SOC), with 25.9% in protected areas; and 12,528.0 Tg C from marine sediment carbon, with 13.1% in protected areas.



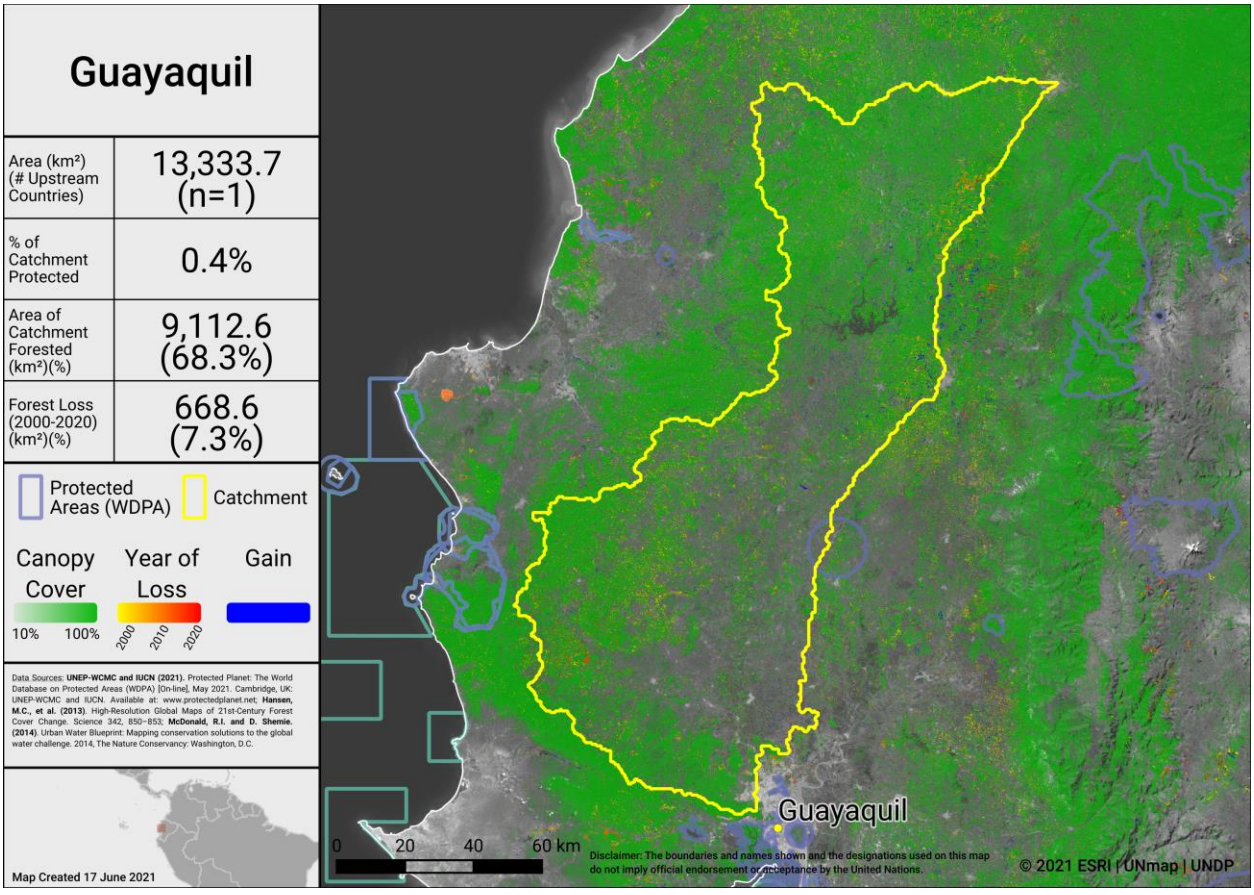
Carbon Stocks in Ecuador

Water

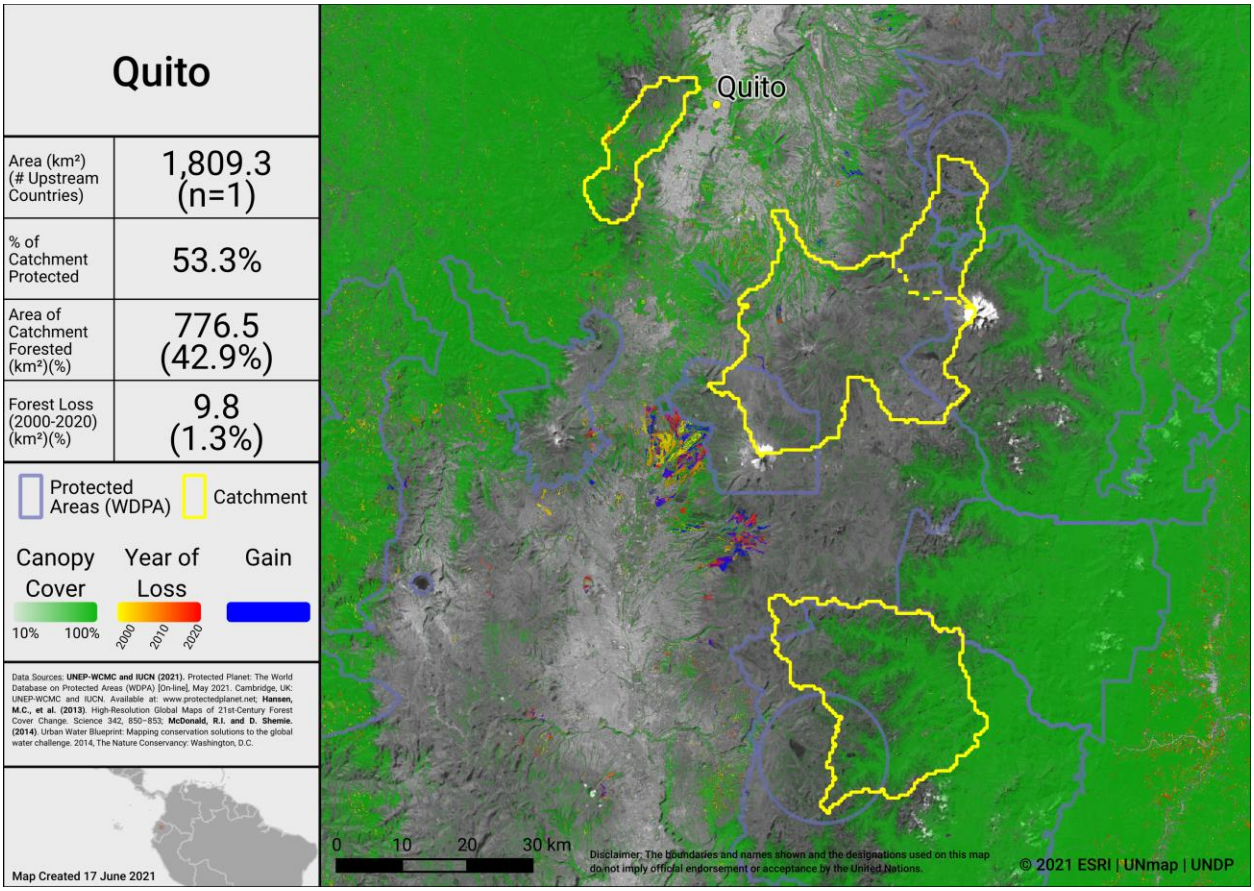
Information on the water sources for 534 cities is available via the City Water Map (CWM) and provides details on the catchment area of the watershed that supplies these cities (see McDonald et al., 2014 for details on methodology).

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 Ecuador may similarly depend on protected forest areas within and around water catchments. The maps below show the percentage forest cover and the forest loss from 2000-2020 in the most heavily populated water catchments of Ecuador. Intact catchments can support more consistent water supply and improved water quality.



Water supply area for the city of Guayaquil



Water supply area for the city of Quito

Opportunities for action

For carbon, there is opportunity for Ecuador to increase PA and OECM coverage in both marine and 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 Ecuador was 13.0%.

PARC-Connectedness Index

In 2019, as assessed using the PARC-Connectedness Index (values ranging from 0-1, indicating low to high connectivity), connectivity in Ecuador is 0.48. This represents an increase from 0.46 in 2010.

Corridor case studies

Ecuador has a formally recognized connectivity corridor: the **Podocarpus Sangay Corridor**.

Opportunities for action

There is opportunity for a targeted designation of PAs or OECMs in strategic locations for connectivity and 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 sites.

Of the 62 protected areas of the SNAP:

- 2 PAs (3.2%) correspond to private governance
- 2 PAs (3.2%) correspond to community governance
- 58 PAs (93.5%) are governed by **governments**
  - 7 PAs (11.3%) are administered by subnational governments (2 of them are State protected areas delegated to a decentralized autonomous government)
  - 51 PAs (82.2%) are under State governance

As of May 2021, PAs in Ecuador reported in the WDPA have the following governance types (which may need to be updated to reflect data from SNAP):

- 73.2% are governed by **governments** (by federal or national ministry or agency)
- 1.2% are under **shared** governance (by collaborative governance)
- 0.0% are under **private** governance
- 1.2% are under **IPLC** governance (by Indigenous Peoples)
- 24.4% **do not** report a governance type
  - (All of which are international designations)

OECMs

As of May 2021, there are **0** OECMs in Ecuador reported in the WD-OECM, however, for 119 potential OECMs overlapping unprotected KBAs (See full details in Donald et al., 2019):

- 7 are governed by **governments**
- 31 are under **IPLC** governance (12 by Indigenous groups; 19 by Local communities)
- 37 are under private governance (2 managed by Business/corporate interests, 22 by NGOs, 13 under other private governance)
- 16 listed as 'Other'

Privately Protected Areas (PPAs)

From Gloss et al. (2019), a UNDP study on PPA data for Ecuador:

- There are ~191,000 ha protected as private forest reserves (*bosques protectores*).
- PPAs **are** formally defined in PA legislation.
- PPAs **are** directly identified in Ecuador's recent NBSAP.
- PPAs **are** included as part of the current PA network.

See additional full details in Ecuador's country profile and summarized in Annex II.

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

From Kothari et al. (2012), potential ICCAs (or similar designations) in Ecuador include:

- 133 areas conserved by Indigenous, Metis (mestizos) and Afro-Ecuadorian (afro-ecuatorianos) communities under the *socio bosque programme*
- Combined, these cover **9,883.0 km²**.

Examples of ICCAs in Ecuador include the *Pueblo Originario Kichwa de Sarayaku* and the *Territorio Ancestral Waorani 'Ome'* among others. See full case study details for these and other ICCAs in the **ICCA Registry**.

Other Indigenous lands

Lands managed and/or controlled by Indigenous Peoples cover an area of 74,806.0 km², of which 60,016.0 km² falls outside of formal protected areas. Indigenous lands with a human footprint less than 4 (considered as 'natural landscapes') cover an area of 53,785.0 km² (for details on analysis see Garnett et al., 2018).

For Ecuador evidence for the presence of Indigenous Peoples comes from: Indigenous Work Group on Indigenous Affairs. Indigenous World 2017 (Indigenous Working Group on Indigenous Affairs, 2017).

Boundaries of the lands Indigenous Peoples manage or have tenure rights over come from: Amazônia Socioambiental. Rede Amazônica de Informação Socioambiental Georreferenciada. https://www.amazoniasocioambiental.org/mapas/ (2017); EcoCiencia (José Luis Aragón pers. comm.).

Opportunities for action

Explore opportunities for governance types that have lower representation, for Ecuador this could relate to shared governance and governance by Indigenous Peoples and/or local communities (IPLC), etc.

There is also opportunity for Ecuador 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).

Equator Prize Projects

The Equator Initiative brings together the United Nations, governments, civil society, businesses and grassroots organizations to recognize and advance local sustainable development solutions for people, nature and resilient communities.

The Equator Prize projects provide examples of unique and locally based governance of natural resources. Ecuador has the following Equator Prize winners that showcase examples of local, sustainable community action:

Organization	Year	Project Description
Asociación de Mujeres Waorani de la Amazonía Ecuatoriana – AMWAE	2014	Developed in response to the uncontrolled poaching of wildlife in the Yasuní Biosphere Reserve, Asociación de Mujeres Waorani de la Amazonia Ecuatoriana (AMWAE, or in English, Association of Waorani Women of the Ecuadorian Amazon) is promoting organic cacao cultivation as a wildlife protection measure and a pathway to local sustainable development. The association has created a land management plan that emphasizes zero deforestation, organic cacao certification as a primary economic development strategy, and the management of subsistence hunting activities to protect threatened and vulnerable wildlife species. Community cacao is processed into organic-certified chocolate, creating local access to new markets and more lucrative revenue streams. The association has been so successful at reorienting the local economy that the bushmeat market, which fueled wildlife poaching across the region, has been closed down. Women lead both organic farming and business management activities. Organic cacao cultivation is complemented by activities in fish farming, fruit tree cultivation, and the operation of tree nurseries, which support both food security and reforestation needs. Revenues from the cacao business have been invested into local education, health, and infrastructure projects.
Alianza Ceibo	2017	Alianza Ceibo unites four Indigenous Peoples in their struggle to counter environmental degradation to protect over 20,000 square kilometers of primary rainforest across four provinces and 70 communities in the Ecuadorian Amazon. In one of the world's most biodiverse ecosystems, this Indigenous-led alliance provides alternatives to extractive industries, ranching, and large-scale monocultures. Alianza Ceibo's activities provide clean water to over 6,000 people, connect remote communities to solar power, and support women entrepreneurs. The alliance's advocacy and ongoing legal accompaniment have led to the revocation of mine and oil concessions in Indigenous territories. Participatory community mapping processes document the stewardship of Kofán, Siona, Secoya and Waorani peoples over their lands, and have initiated legal claims for community land title. Community patrols and monitoring trace illegal incursions into their territories, while Indigenous youth train in documentary filmmaking and storytelling. Alianza Ceibo's wide range of gender-responsive solutions is inspired by Indigenous wisdom and traditional practice, aligning conservation and sustainable development in a significant carbon sink

.

Organization	Year	Project Description
Organización para la Defensa y Conservación Ecológica de Intag (DECOIN)	2017	Founded to confront a large-scale mining project threatening communities and environment in the Intag Valley, DECOIN promotes conservation measures and alternative livelihoods to advance the conservation of the area's Andean biodiversity. Over the past 22 years, the organization has created community-based forest reserves to protect watersheds in 38 communities, totaling 12,000 hectares. Sustainable agricultural activities such as smallholder organic coffee production, aquaculture, poultry farming, and egg production, as well as ecotourism ventures, provide additional income to struggling families and viable alternatives to mining, which remains a strong pressure in the area.
Asociación Comunitaria Bolívar Tello Cano	2014	Asociación Comunitaria "Bolívar Tello Cano" is reducing deforestation by providing a sustainable income-generation activity for local Indigenous communities that does not require cutting down trees. The association has worked with researchers to pioneer a technique to extract the essential oils from the seeds of the Palo Santo tree. The oil has commercial value for use in perfumes and food flavoring, and is being harvested and marketed by a community-owned company. Association activities have created jobs, improved local livelihoods and reduced pressure on surrounding forests. A 4,500-hectare protected area has been created for sustainable harvesting activities, which has substantially reduced illegal logging. The association is a leading example of a community-driven partnership between Indigenous communities, government and the private sector.

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. Information is also included regarding changes in forest cover nationally within PAs and OECMs.

Protected area management effectiveness (PAME) assessments

Of the 56 PAs of the SNAP (National System of Protected Areas) that existed in 2018 (latest management effectiveness evaluation report), **42** PAs (75%) complied with the management effectiveness evaluation process.

The information in the GD-PAME needs to be updated.

As of May 2021, the global database on protected area management effectiveness (GD-PAME) lists 25 PAs with completed management effectiveness evaluations.

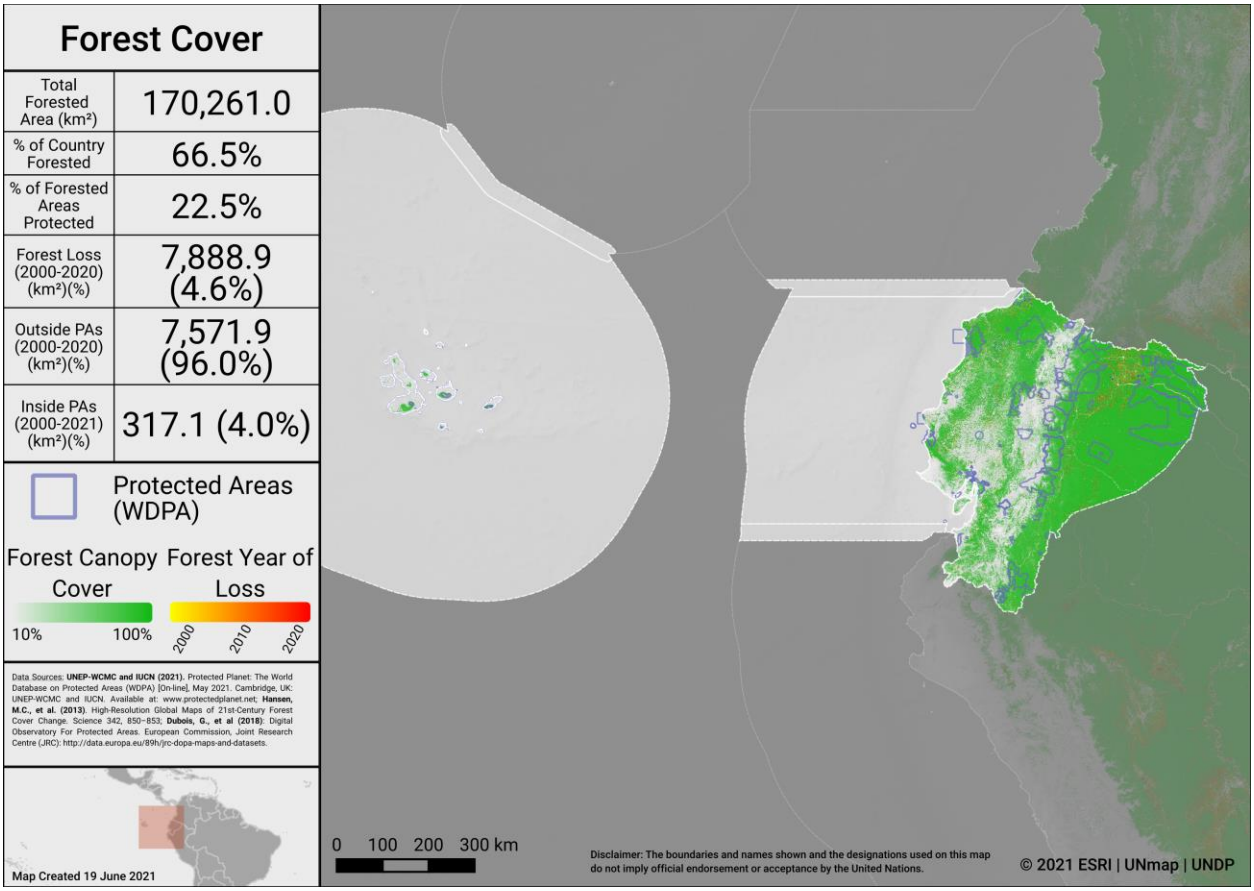
- 79.0% of the area of terrestrial PAs (45,579 km^2) have completed evaluations.
- 96.6% of the area of marine PAs (139,291 km^2) have completed evaluations.

The 60% target for completed management effectiveness assessments (per COP Decision X/31) **has** been met for terrestrial PAs and **has** been met for marine PAs.

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

Changes in forest cover in protected areas and OECMs

Forested areas in Ecuador cover approximately 66.5% of the country, an area of 170,261.0 km^2. Approximately 22.5% (38,379.7 km^2) of this is within the protected area estate of Ecuador. Over the period 2000-2020 loss of forest cover amounted to over 7,888.9 km^2, or 3.1% of the country (22.5% of forest area), of which 317.1 km^2 (4.0% of forest loss) occurred within protected areas. The map below shows how forest cover has changed in Ecuador from 2000-2020 both inside and outside of PAs. This can indicate how effective PAs are in reducing forest cover loss



Forest Cover and Forest Loss in Ecuador

Opportunities for action

The 60% target for completed management effectiveness assessments (per COP Decision X/31) **has** been met for terrestrial PAs and **has** been met for marine PAs. There is further opportunity to update the GD-PAME to reflect all completed management effectiveness evaluation in the SNAP.

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

PRIORITY ACTIONS FROM 2015-2016 REGIONAL WORKSHOPS

National priority actions for Aichi Biodiversity Target 11 were provided by Parties following a series of regional workshops in 2015 and 2016. The Capacity-building workshop for Latin America and the Caribbean on achieving Aichi Biodiversity Targets 11 and 12 took place 28 September - 1 October 2015 in Curitiba, Paraná, Brazil. Progress towards the quantitative targets for marine and terrestrial coverage has been assessed based on data reported in the WDPA and WD-OECM as of 2021. For more information, see the workshop report at: https://www.cbd.int/meetings/

The following actions were identified during the workshops:

Terrestrial and marine coverage: Enhance ecosystem representation through the incorporation of protected areas of other subsystems (private, decentralized autonomous governments -GAD's-, community) to the National System of Protected Areas (SNAP).

Ecological representation: Enhance ecosystem representation through the incorporation of protected areas of other subsystems (private, decentralized autonomous governments -GAD's-, community) to the National System of Protected Areas (SNAP).

Areas Important for biodiversity and ecosystem services:

1) Enhance ecosystem representation through the incorporation of protected areas of other subsystems (private, decentralized autonomous governments -GAD's-, community) to the National System of Protected Areas (SNAP).

2) Implement mechanisms for financial sustainability of SNAP.

Connectivity: Integrating PAs and MPAs through other measures including corridors.

Management effectiveness: Strengthen the action plan for implementing the recommendations in the audit process or control bodies of management to the National System of Protected Areas - SNAP.

Governance and Equity: Strengthening participation mechanisms for management of protected areas of the National System of Protected Areas - SNAP, through the assessment of governance in protected areas and create subsystems of governance for SNAP.

Integration: Integrate terrestrial and marine protected areas through other forms of conservation (connectivity corridors).

OECMs: Update the Strategic Plan of the National System of PAs.

NATIONAL BIODIVERSITY STRATEGY AND ACTION PLANS (NBSAPs)

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

Result 13: Ecuador conserves its natural patrimony through the integral and participative management of the SNAP and of other mechanisms and tools of conservation of terrestrial, aquatic and marine landscapes
Target 13.1: By 2017, Ecuador has increased the proportion of the continental territory under conservation or environmental management to 35.9%.
Target 13.2: By 2017, (will have) increased the area of the continental marine-coastal territory under conservation or environmental management to 817,000 hectares

Actions from the NBSAP will address other elements of Aichi Biodiversity Target 11:

NBSAP Action number	Action (original language from NBSAP)	Action (English translation)
1.1	Promover la protección de la naturaleza, tierras y territorios ancestrales para garantizar el cuidado del medioambiente, el auto-sustento y la identidad cultural de las nacionalidades y pueblos, evitando contaminaciones innecesarias y desperdicio de sus productos.	Promote the protection of nature, ancestral lands and territories to guarantee the care of the environment, self-sustainability and the cultural identity of nationalities and peoples, avoiding unnecessary contamination and waste of their products.
1.2	Promover la investigación de los saberes y conocimientos ancestrales, en el área de la biodiversidad, ecosistemas, tierras, agua y formas de cuidado de la naturaleza, para su recuperación, reconocimiento y práctica.	Promote research on ancestral knowledge and wisdom in the area of biodiversity, ecosystems, land, water and ways of caring for nature, for its recovery, recognition and practice.

Update on progress

Maintenance of the surface under conservation in protected areas of the SNAP. Progress:

- In recent years, protected areas of the Subsystems of Decentralized Autonomous Governments (5), Community (2) and Private (2) have been declared

APPROVED GEF-5, GEF-6, & GCF PROTECTED AREA PROJECTS

Approved GEF-5 and GEF-6 PA-related biodiversity projects

This includes biodiversity projects from the fifth and sixth replenishment of the Global Environment Facility (GEF-5 and GEF-6) with a clear impact of the quantity or quality of PAs; also including some projects occurring within the wider landscapes/seascapes around PAs. Only those with a status of 'project approved' or 'concept approved' as of June 2019 were considered. The qualifying elements likely benefiting from each GEF project is assessed based on a keyword search of Project Identification Forms (PIF). Where spatial data for the proposed PAs was available, further details (based on an analysis by UNDP) regarding their impacts for ecological representation, coverage of KBAs, and coverage of areas important for carbon storage is included.

GEF ID	PA increase?	Area to be added (km^2)	Type of new protected area	Qualitative elements potentially benefitting (based on keyword search of PIFs)
4375	No	N/A	N/A	All except Areas important for biodiversity and Ecosystem services
4731	No	N/A	N/A	All except Ecologically representative and Ecosystem services
4770	Yes	150	Marine	All except Ecosystem services and Connectivity
4774	No	N/A	N/A	All Qualitative Elements
5534	No	N/A	N/A	Ecologically representative; Areas important for biodiversity; Equitably managed; Integration
9055	No	N/A	N/A	Ecosystem services; Effectively managed; Equitably managed; Integration
9282	No	N/A	N/A	Effectively managed
9369	No	N/A	N/A	All except Ecologically representative and Ecosystem services
9460	No	N/A	N/A	Equitably managed; Connectivity; Integration

Approved Green Climate Fund (GCF) Protected Area-related biodiversity projects

The Green Climate Fund's investments listed as approved projects as of May 2021 were considered. The GCF supports paradigm shifts in both climate change mitigation and adaptation that may impact quality of PAs or contribute to better integration within the wider land- and seascapes around PAs. Only projects with result areas for either or both *Forest and Land Use and Ecosystems and Ecosystem Services result areas* were included.

GCF ID	Project theme	Result area	Target 11 element
FP019	Mitigation	Forest and land use	Integration; Effectively managed
FP110	Mitigation	Forest and land use	Integration; Effectively managed

UN OCEAN CONFERENCE VOLUNTARY COMMITMENTS

Voluntary commitments for the UN Ocean Conference are initiatives voluntarily undertaken by governments, the UN system, non-governmental organizations, among other actors—individually or in partnership—that aim to contribute to the implementation of SDG 14 (here we focus in particular on SDG 14.5). The registry of commitments was opened in February 2017, in the lead up to the first UN Ocean Conference (5 to 9 June 2017).

Ocean Actions improving MPA or OECM coverage:

#OceanAction21032: Estrategias para la biodiversidad marina, by Ministerio de Ambiente (Government).

- Area to be added: **No area given** .
- Progress report: No progress report submitted (as of March 2021).
- Further details available at: https://oceanconference.un.org/commitments/?id=21032.

OTHER ACTIONS/COMMITMENTS

High Ambition Coalition for Nature and People

Ecuador **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

Ecuador **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
Chocó-Darién moist forests	14.5	0.0	0.0	14.5	100.0
Cordillera Central páramo	448.1	3.7	0.2	359.4	80.2
Eastern Cordillera Real montane forests	65,379.0	64.1	25.5	14,623.4	22.4
Ecuadorian dry forests	21,187.1	100.0	8.3	541.1	2.6
Galápagos Islands xeric scrub	7,978.2	100.0	3.1	7,476.2	93.7
Guayaquil flooded grasslands	2,923.9	100.0	1.1	68.1	2.3
Iquitos várzea	3.5	0.0	0.0	0.0	0.0
Napo moist forests	70,616.4	28.2	27.5	20,932.6	29.6
Northern Andean páramo	15,318.4	51.4	6.0	5,729.2	37.4
Northwest Andean montane forests	32,112.1	39.7	12.5	3,867.8	12.0
South American Pacific mangroves	5,315.1	39.5	2.1	1,056.4	19.9
Tumbes-Piura dry forests	3,025.7	7.4	1.2	126.2	4.2
Western Ecuador moist forests	31,618.1	93.1	12.3	1,664.5	5.3

ANNEX II

ADDITIONAL DETAILS ON PPAs

- Ecuador recognizes seven types of land tenure: public, private, communal, state, associative (belonging to local associations), cooperative (belonging to cooperatives), and mixed-economy
- 60% of protected forests and vegetation lands are publicly owned, 32% mix of public-private lands, 8% privately owned, and 7% communal or local associations' lands • Article 37 (of the Organic Environmental Code) specifically includes privately protected areas within Ecuador's National System of Protected Areas (SNAP).
- Four primary methods of private land conservation: private forest reserves (including protection forests), conservation easements, land trusts, and land sales including a conservation clause
- Financial incentives geared towards encouraging the establishment of PPAs and other forms of private land management, include the Socio Bosque program, various tax incentives, ecotourism, water funds, and the UN-REDD Programme
- In Ecuador's NBSAP, SNAP was directed to establish subsystems to better integrate conservation interests from a variety of actors. For private landowners, they were to create a Subsistema de Áreas Protegidas Privadas (APP). Both actions occurred with the enactment of the Organic Environmental Code in 2017.
- ~191,000 ha are protected privately as private forest reserves (bosques protectores)
    - No private lands are currently included in the WDPA (there is 1 site listed as a "Private Protected Area" but its governance is reported as Federal or national ministry or agency).

Case studies/best practices:

• *Chongón Colonche Protected Forest*: covers 77,694 ha of protected mountainous forest under the administration of an NGO, part of an alliance between private companies; 16 families living received title to the land through an award granted by the Ministry of the Environment; it makes up an important portion of the Chongón Colonche connectivity corridor

• *Fundación Jocotoco Reserves*: by purchasing lands and managing them as ecological reserves, a network of 12 reserves was established in 1998, protecting ~20,000 ha; Fundación Jocotoco started an ecotourism arm which manages lodges in some reserves, with money collected from tourists used to support conservation projects.

See additional info in country profile (http://nbsapforum.net/knowledge-base/resource/ecuador-country-profile-international-outlook-privately-protected-areas).

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