



Convention on
Biological Diversity



Aichi Biodiversity Target 11 Country Dossier: PARAGUAY

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GLOSSARY

AZEs	Alliance for Zero Extinction sites
CEPF	Critical Ecosystem Partnership Fund
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
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
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



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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.

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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. 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

- **Status:** as of May 2021, terrestrial coverage in Paraguay is 57,473.4 km² (14.3%).
- **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

- **Status:** Paraguay contains 7 terrestrial ecoregions: the mean coverage by reported PAs and OECMs is 11.5%, while 2 terrestrial ecoregions have no coverage (both of which cover <0.1% of the country).
- **Opportunities for action:** there is opportunity for Paraguay to increase protection in terrestrial ecoregions that have lower levels of coverage by PAs or OECMs.

Areas Important for Biodiversity

- **Status:** Paraguay has 58 Key Biodiversity Areas (KBAs): the mean protected coverage of KBAs by reported PAs and OECMs is 36.3%, while 31 KBAs have no coverage by reported PAs and OECMs.



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- **Opportunities for action:** there is opportunity for Paraguay 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 Paraguay, 22.0% of aboveground biomass carbon, 20.2% of belowground biomass carbon and 14.2% of soil organic carbon is covered by PAs and OECMs.
- **Opportunities for action:** for carbon, there is opportunity for Paraguay to increase PA and OECM coverage 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 11.5%.
- **Opportunities for action:** there is opportunity for a general increase of PAs or OECMs 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 Paraguay is: 1.0% under Government (Federal or national ministry or agency).
- **Opportunities for action:** increase efforts to identify the governance types for the 99.0% of sites that do not have their governance type reported. If applicable, explore opportunities for governance types that have lower representation
- There is also opportunity for Paraguay 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).



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Protected Area Management Effectiveness

- **Status:** 17.0% of terrestrial PAs have completed Protected Area Management Effectiveness (PAME) assessments reported.
- **Opportunities for action:** the 60% target for completed management effectiveness assessments (per COP Decision X/31) **has not** been met for terrestrial PAs, therefore, there is opportunity to increase protected area management effectiveness (PAME) evaluations for terrestrial 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 Paraguay. Section I of the dossier presents data on the current status of Paraguay’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 Paraguay, in relation to each Target 11 element. The analyses present options for improving Paraguay’s area-based conservation network to achieve enhanced protection and benefits for livelihoods and climate change. Section II presents details on Paraguay’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.



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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.



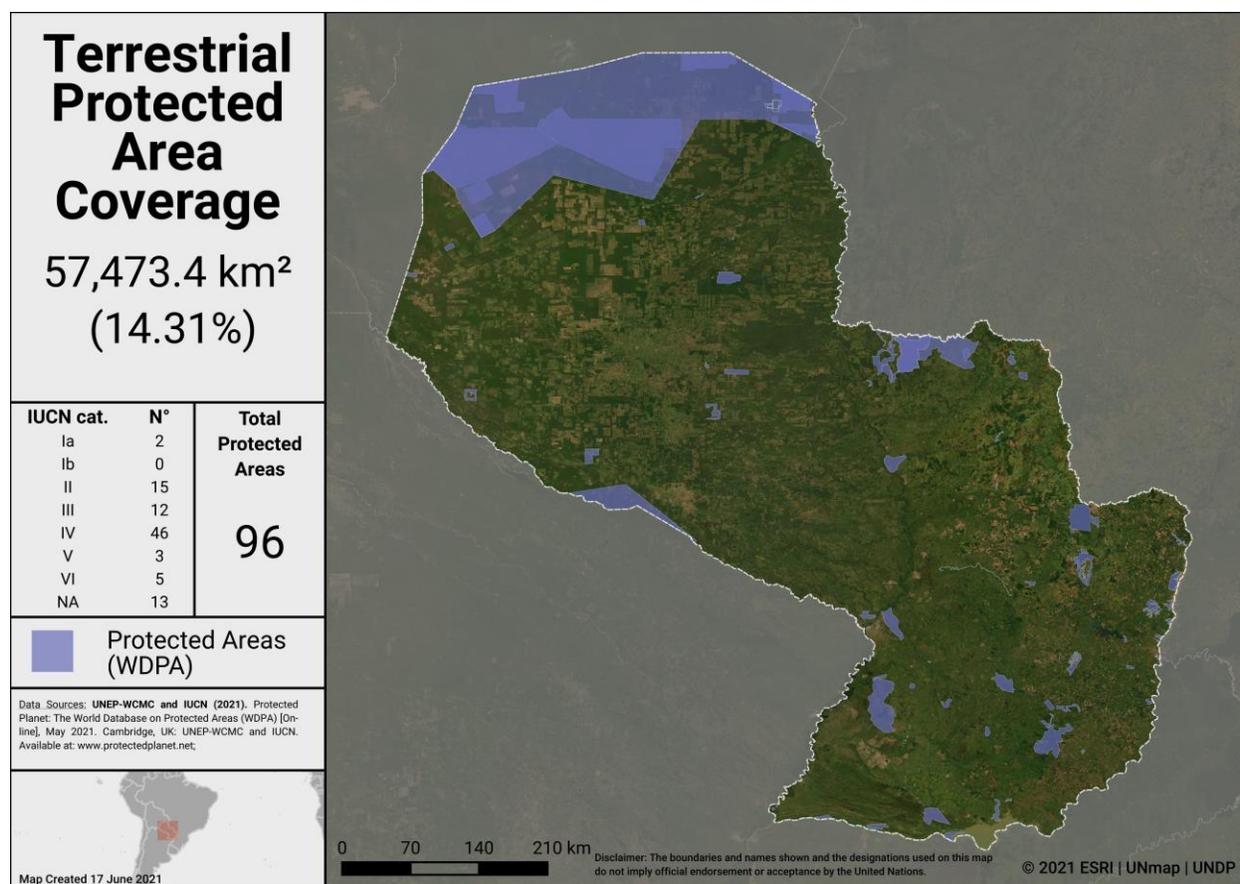
COVERAGE

As of May 2021, Paraguay has **98** protected areas reported in the World Database on Protected Areas (WDPA). 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, Paraguay has **0** OECMs reported in the world database on OECMs (WD-OECM).

Current coverage for Paraguay:

- 14.3% terrestrial (97 protected areas, 57,473.4 km²)



Terrestrial Protected Areas in Paraguay

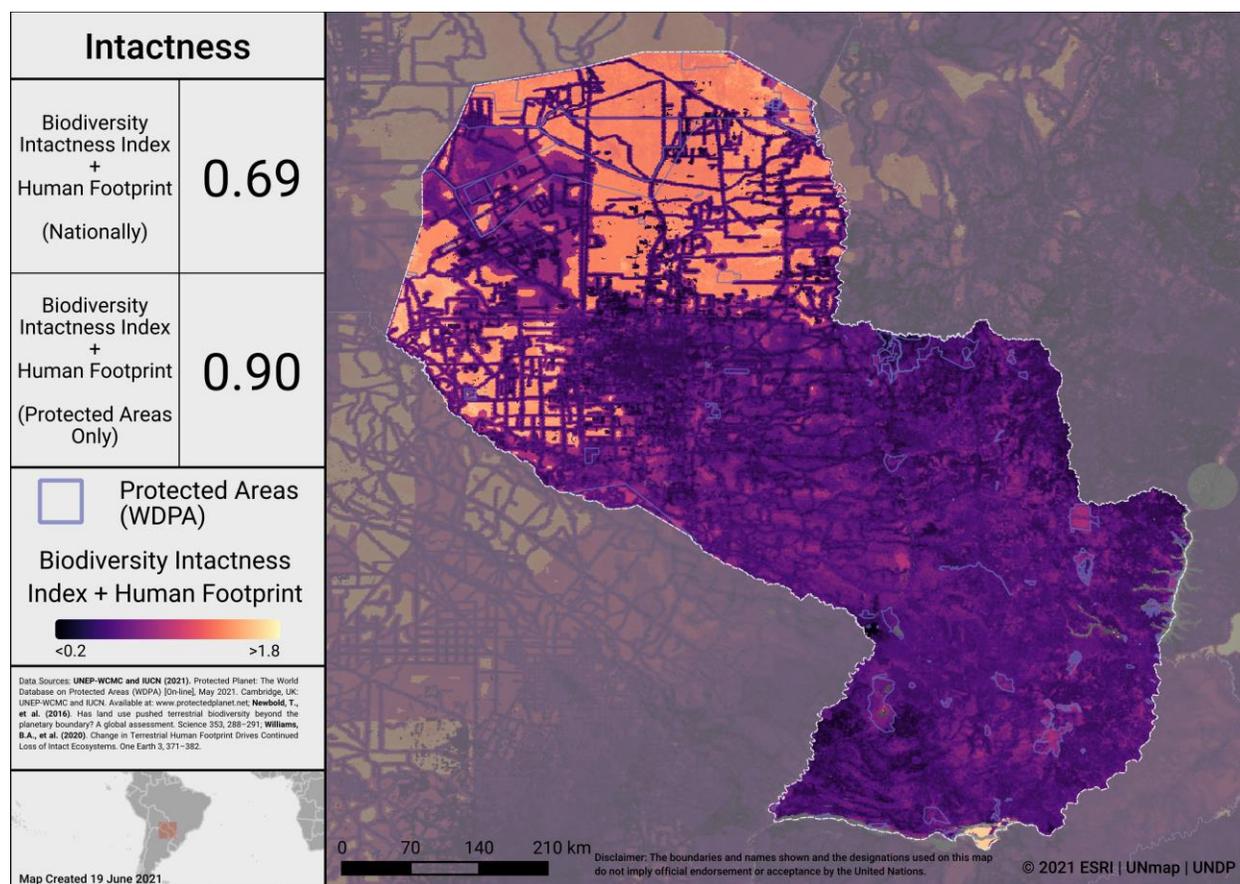
Potential OECMs

There are currently no potential OECM examples for Paraguay.

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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 Paraguay considers where to add new PAs and OECMs, the map below identifies areas in Paraguay where intact 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 Paraguay

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

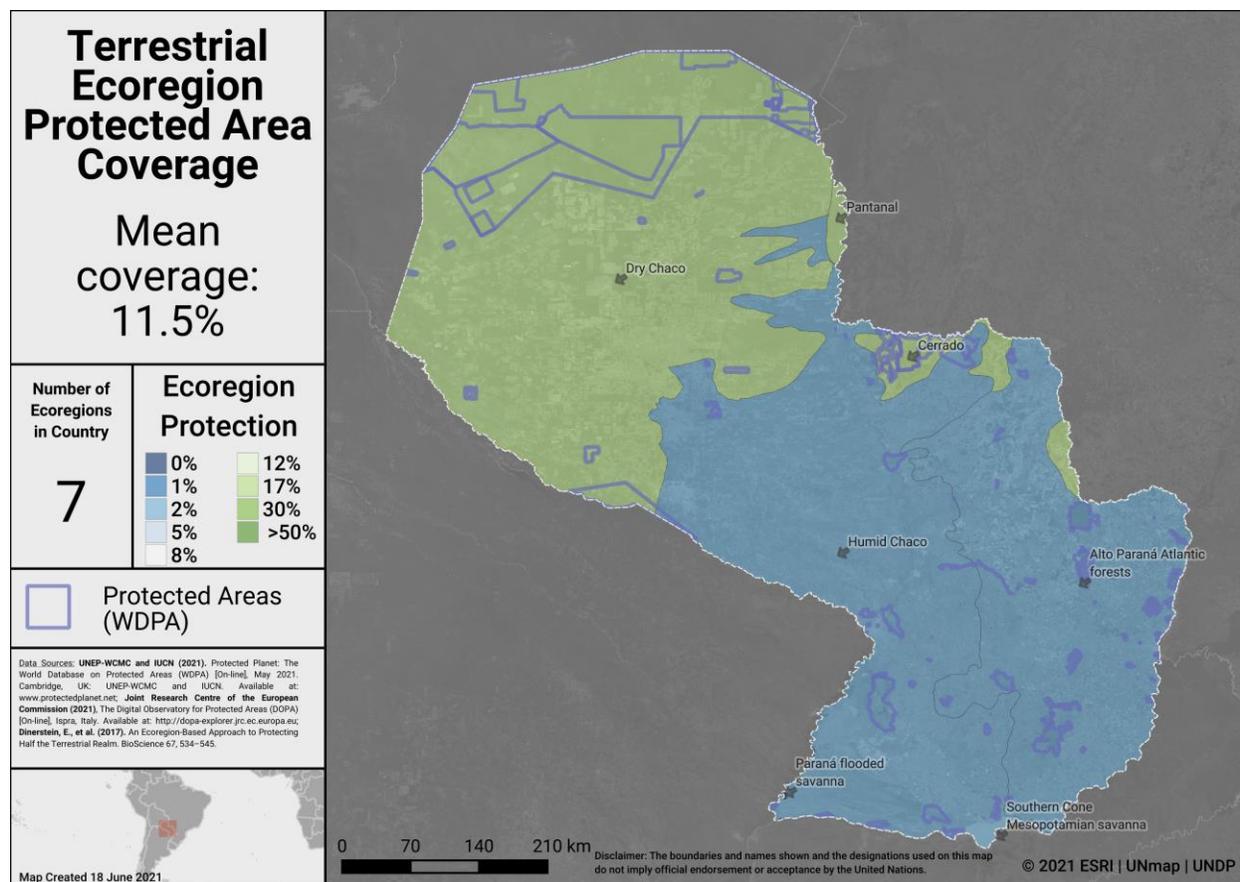
ECOLOGICAL REPRESENTATIVENESS

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).

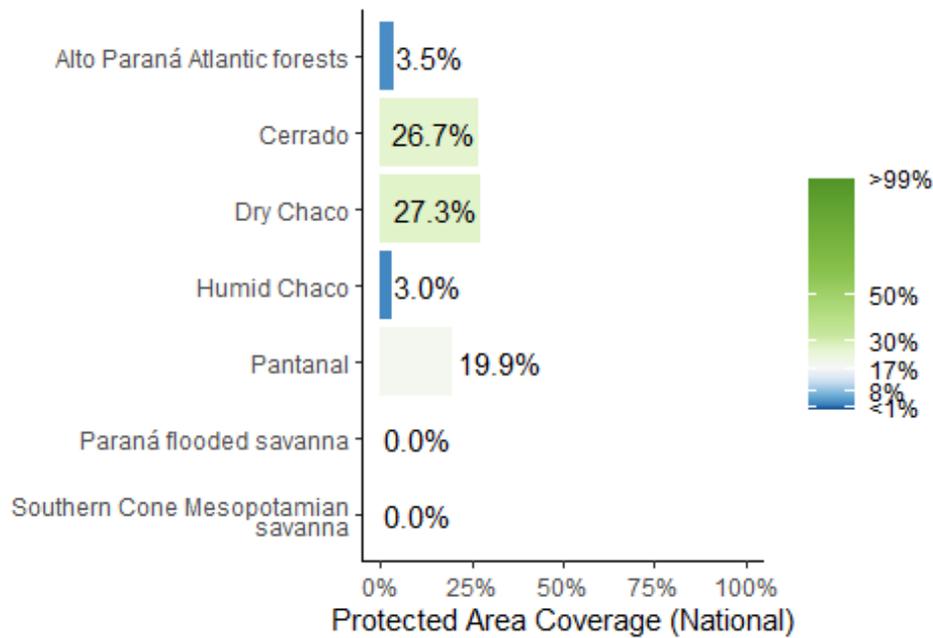
Paraguay has 7 **terrestrial** ecoregions. Out of these:

- 5 ecoregions have at least some coverage from PAs and OECMs.
 - The 2 remaining ecoregions cover <0.1% of the country
- 3 ecoregions have at least 17% protected within the country.
- The average coverage of ecoregions is 11.5%.

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



Terrestrial ecoregions in Paraguay



Terrestrial ecoregions of the World (TEOW) in Paraguay

Opportunities for action

There is opportunity for Paraguay to increase protection in terrestrial ecoregions that have lower levels of coverage by PAs or OECMs.

AREAS IMPORTANT FOR BIODIVERSITY

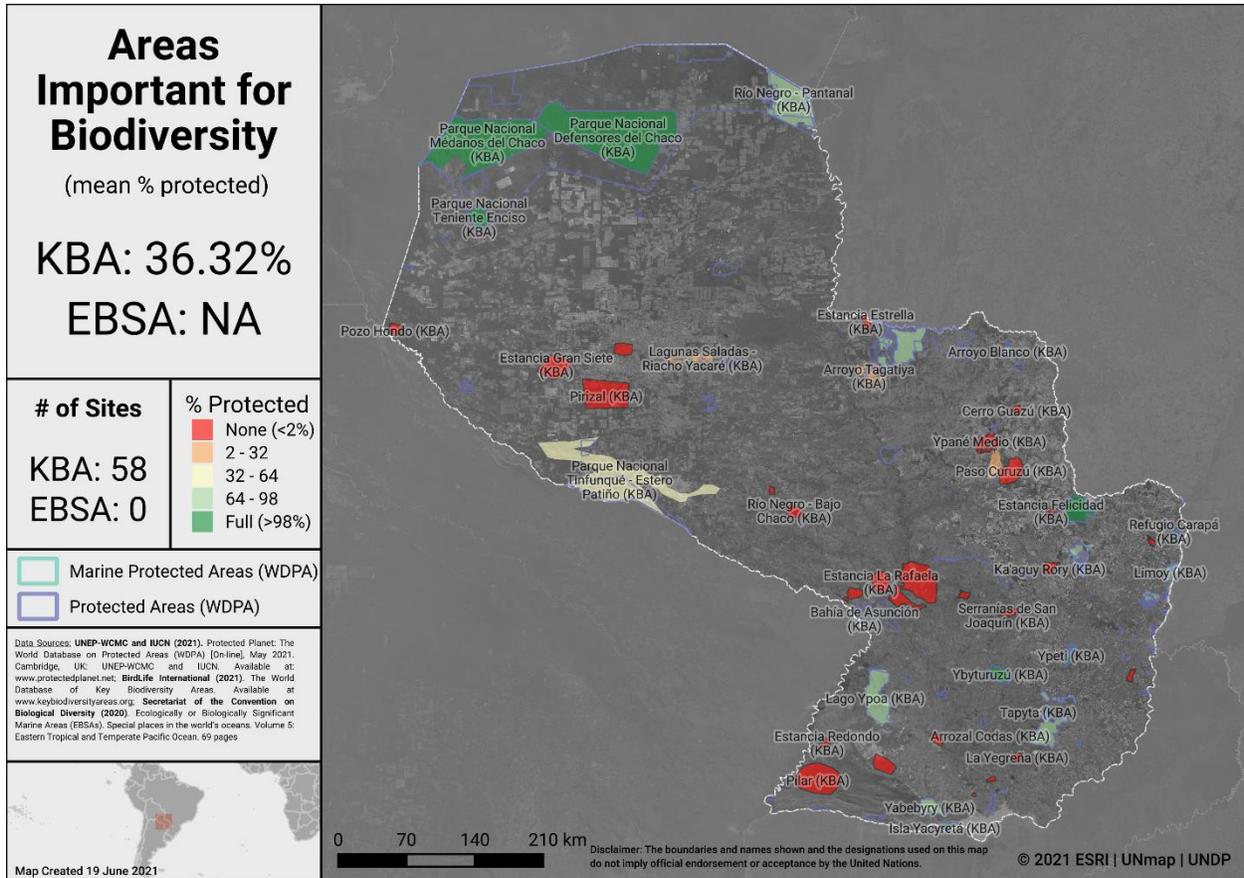
Key Biodiversity Areas (KBAs)

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.

Paraguay has **58** Key Biodiversity Areas (KBAs).

- Mean percent coverage of all KBAs by PAs and OECMs in Paraguay is **36.3%**.
- **10** KBAs have full (>98%) coverage by PAs and OECMs.
- **17** KBAs have partial coverage by PAs and OECMs.
- **31** KBAs have no (<2%) coverage by PAs and OECMs.



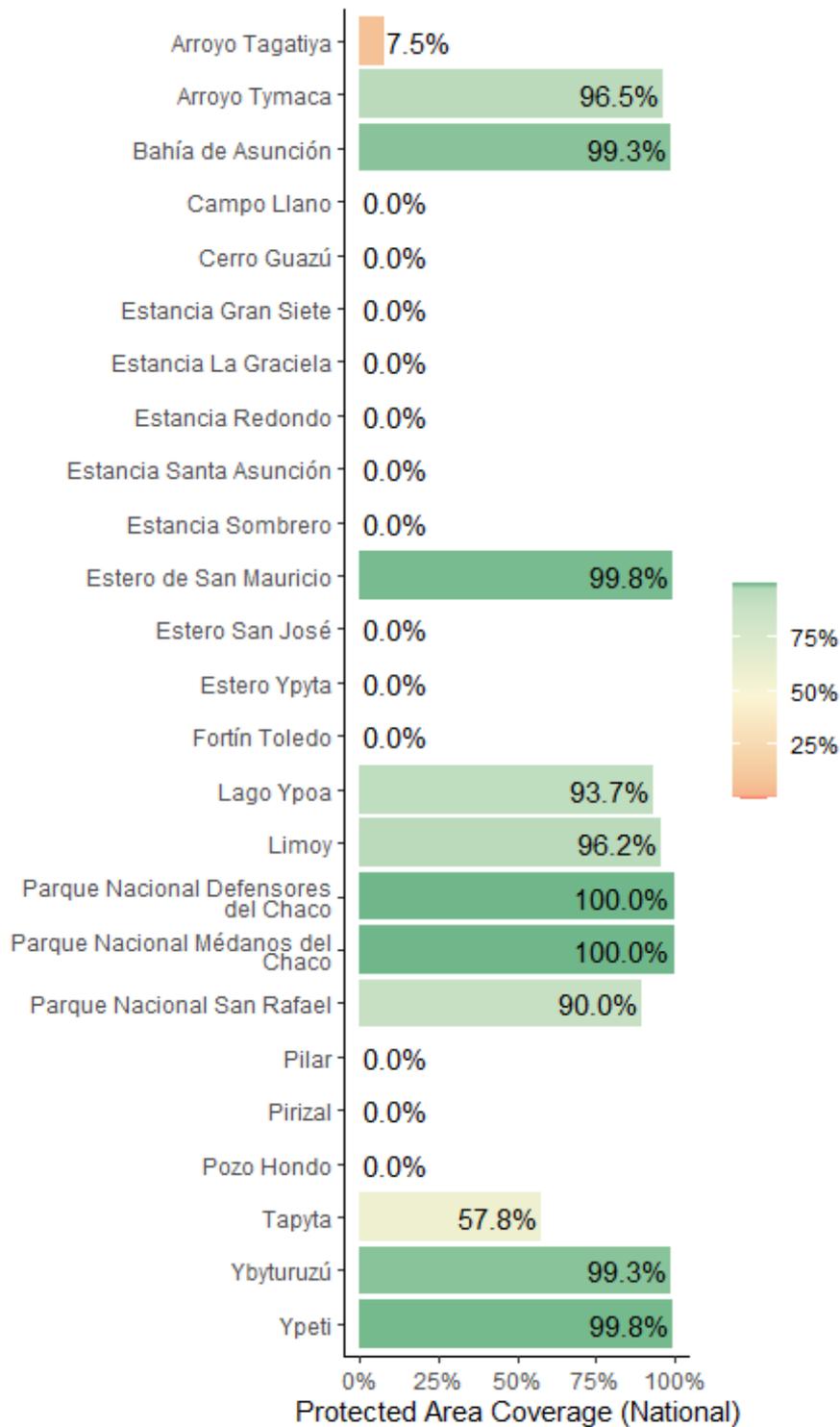


Map Created 19 June 2021

Areas Important for Biodiversity in Paraguay

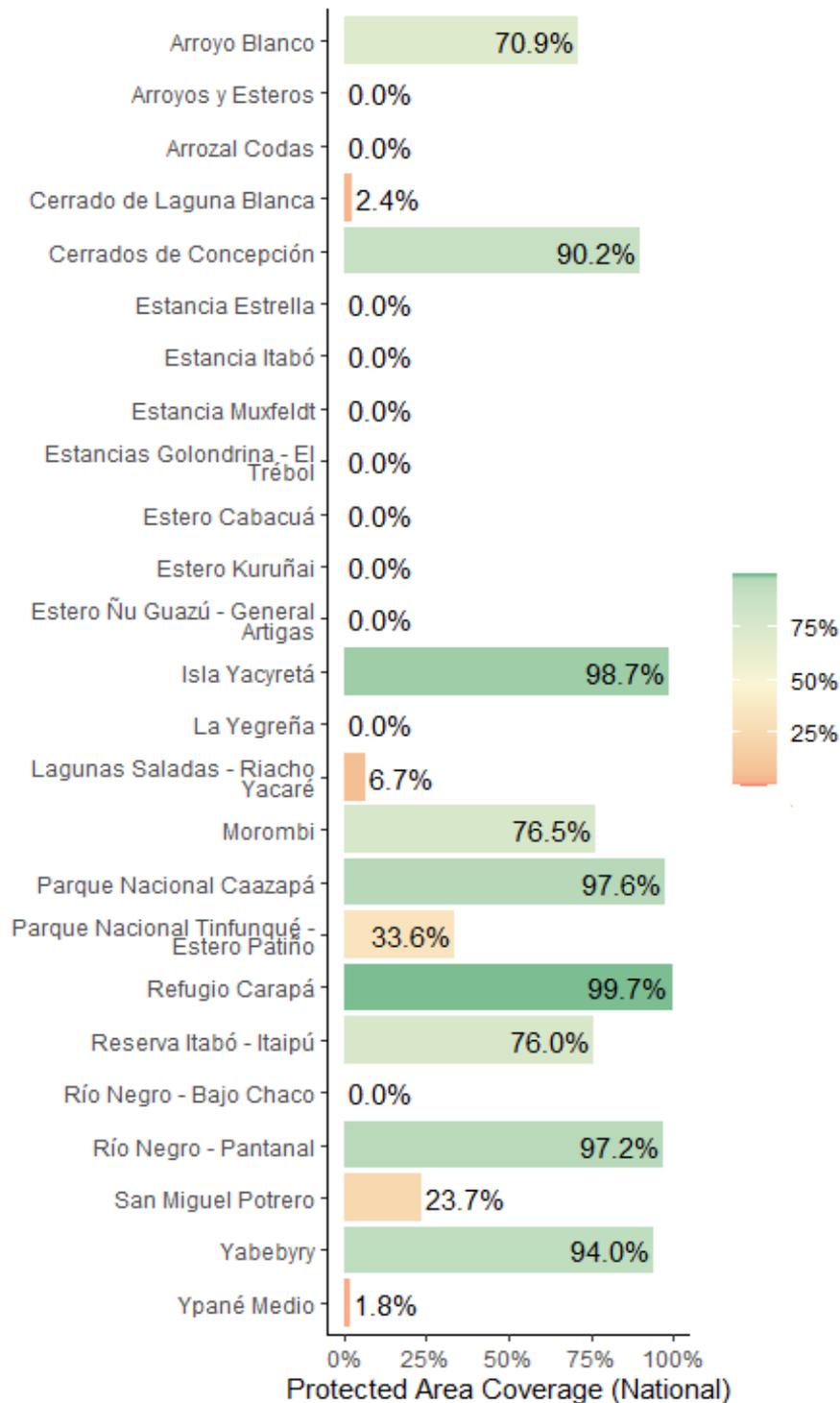


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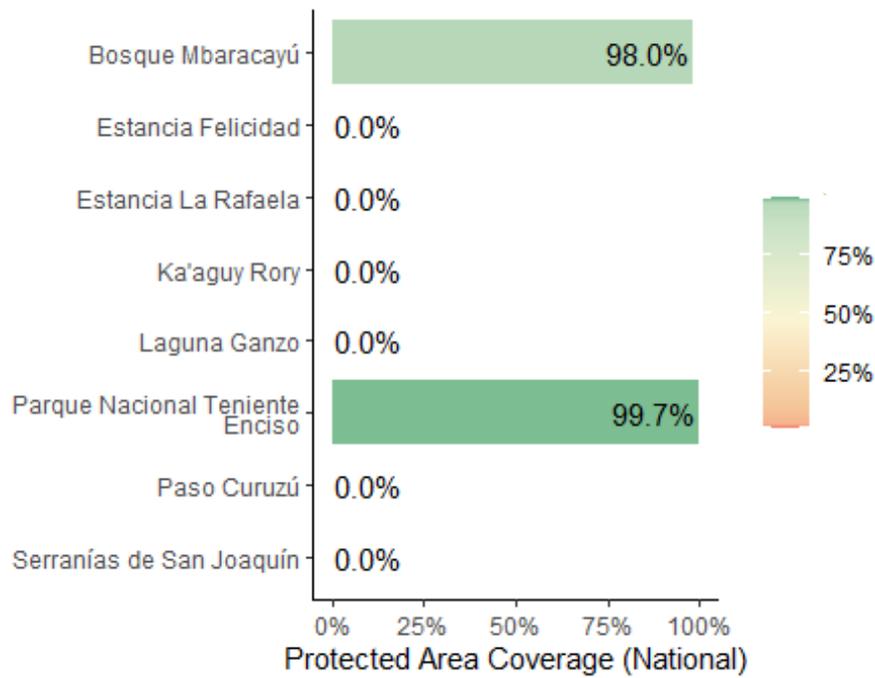


Key Biodiversity Area Coverage (KBA) in Paraguay

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Key Biodiversity Area Coverage (KBA) in Paraguay (continued)



Key Biodiversity Area Coverage (KBA) in Paraguay (continued)

Opportunities for action

There is opportunity for Paraguay 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.

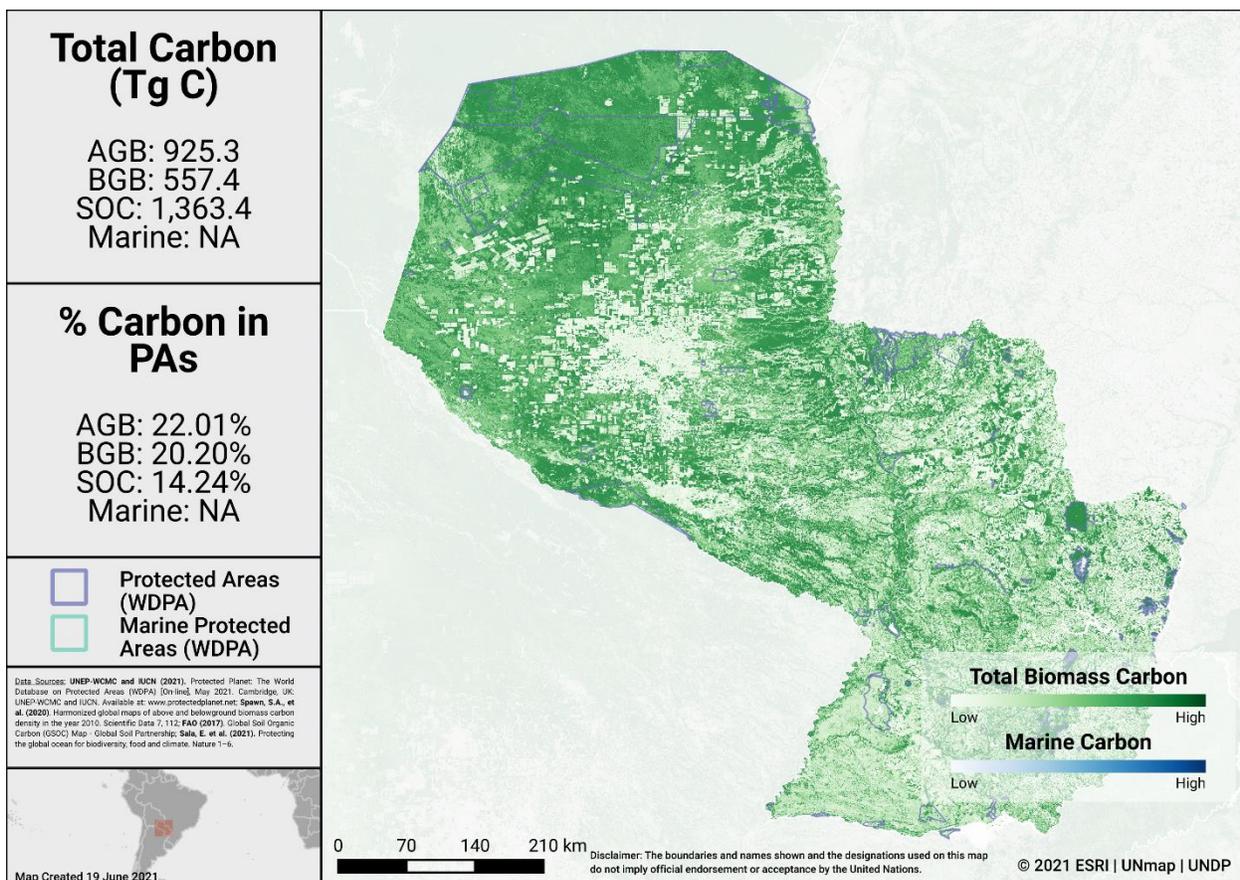
AREAS IMPORTANT FOR ECOSYSTEM SERVICES

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 for details).

The map below presents the total carbon stocks in Paraguay and the percent of carbon in protected areas. The total carbon stocks is 925.3 Tg C from aboveground biomass (AGB), with 22.0% in protected areas; 557.4 Tg C from below ground biomass (BGB), with 20.2% in protected areas and 1,363.4 Tg C from soil organic carbon (SOC), with 14.2% in protected areas.



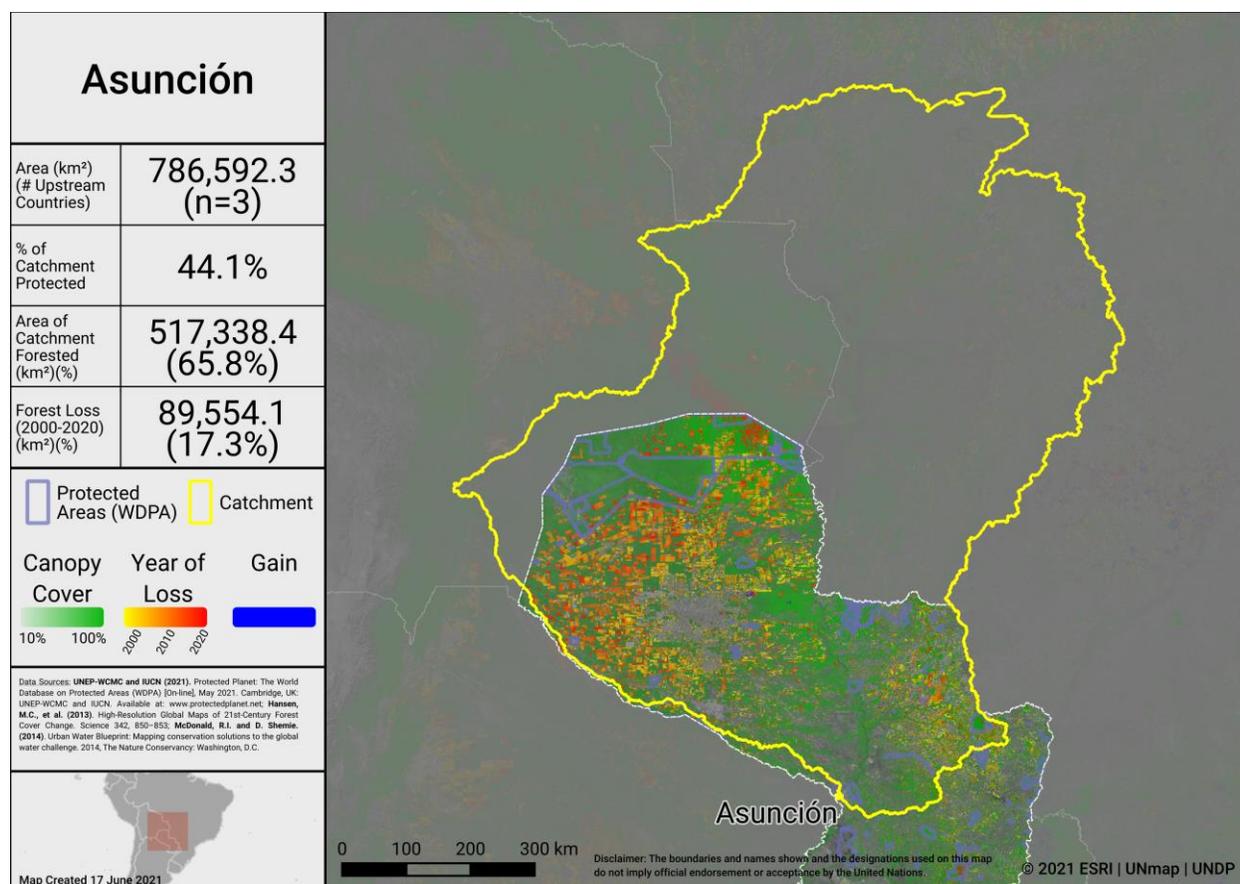
Carbon Stocks in Paraguay

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 Paraguay 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 Paraguay. Intact catchments can support more consistent water supply and improved water quality.



Water supply area for the city of Asunción

Opportunities for action

For carbon, there is opportunity for Paraguay to increase PA and OECM coverage 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).

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 Paraguay was 11.5%.

PARC-Connectedness Index

In 2019, as assessed using the PARC-Connectedness Index (values ranging from 0-1, indicating low to high connectivity), connectivity in Paraguay is 0.51. This represents a slight decrease from 0.52 in 2010.

Corridor case studies

There are no corridor case studies available for Paraguay (but see general details on conserving connectivity through ecological networks and corridors in Hilty et al 2020).

Opportunities for action

There is opportunity for a general increase of PAs or OECMs 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 PAs and OECMs.

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

- 1.0% are governed by **governments** (by federal or national ministry or agency)
- 0.0% are under **shared** governance
- 0.0% are under **private** governance
- 0.0% are under **IPLC** governance
 - 0.0% by Indigenous Peoples
 - 0.0% by local communities
- 99.0% **do not** report a governance type

OECMs

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

Privately Protected Areas (PPAs)

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

- As of August 2018, approximately 187,000 ha across 36 properties were under private conservation, with 12 additional properties in progress.
- PPAs **are** formally defined in PA legislation.
- PPAs **are** directly identified in Paraguay's recent NBSAP.
- PPAs **are** included as part of the current PA network.

See full details in Paraguay's [country profile](#) and summarized in Annex II.

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

There is currently no data available on ICCAs for Paraguay (see Kothari et al., 2012 and the [ICCA Registry](#) for further details).

Other Indigenous lands

Lands managed and/or controlled by Indigenous Peoples cover an area of 54,139.0 km², of which 42,817.0 km² falls outside of formal protected areas. Indigenous lands with a human footprint less than 4 (considered as 'natural landscapes') cover an area of 38,554.0 km² (for details on analysis see Garnett et al., 2018).

For Paraguay, 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:

Ayoreo groups: Unión de Nativos Ayoreo de Paraguay. Paraguay: the Case of the Ayoreo (Indigenous Work Group on Indigenous Affairs, 2010)

Aché in Guayaki: Piragi, P. Dynamiques identitaires anciennes et actuelles chez les Aché du Paraguay oriental: éléments de compréhension. J. Soc. Am. 97, 231–285 (2011)

Ache land in Finca 470: UNEP-WCMC and IUCN. Protected Planet: The World Database on Protected Areas (UNEP-WCMC and IUCN, Cambridge, 2016); and del Mar Zavala, M. in Digital (Alter) Natives with a Cause? Book 3 (eds Shah, N. & Jansen, F.) 46–53 (Centre for Internet and Society, 2011)

Mbaracayú Forest Nature Reserve: Moises Bertoni Foundation.
https://www.mbertoni.org.py/reserva_natural_mbaracayu.php (2017)

Land in the Chaco/Occidental region (buffered to each location to give a circular area of approx. 63 km² (714,634 ha / 113 points), and Land in Oriental region (buffered to each location to give a circular area of approx. 33 km² ((7360 ha-1182 ha)/185 points): Coordinadora de Derechos Humanos del Paraguay. Situación de los derechos a la tierra y al territorio de los pueblos indígenas en el Paraguay (Coordinadora de Derechos Humanos del Paraguay, 2013); and Zanardini, J. & Beidermann, W. Los indígenas del Paraguay. Asunción: Centro de Estudios Antropológicos de la Universidad Católica.
http://www.portalguarani.com/742_jose_zanardini/5170_los_indigenas_del_paraguay_2001_por_jose_zanardini_y_walter_biedermann.html (2001)

San Rafael Reserve and Defensores del Chaco: UNEP-WCMC and IUCN, 2016] Tobich Reserve and Chaco-Pantanal Reserve (Yshir people): [World Land Trust. Map: Guyra Paraguay Reserves (World Land Trust, 2017)]

Opportunities for action

Increase efforts to identify the governance types for the 99.0% of sites that do not have their governance type reported. If applicable, explore opportunities for governance types that have lower representation.

There is also opportunity for Paraguay 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. Information is also included regarding changes in forest cover nationally within PAs and OECMs.

Protected area management effectiveness (PAME) assessments

As of May 2021, Paraguay has 98 PAs reported in the WDPA; of these PAs, 12 (12.2%) have management effectiveness evaluations reported in the global database on protected area management effectiveness (GD-PAME).

- 2.4% (9,793 km²) of the terrestrial area of the country is covered by PAs with completed management effectiveness evaluations.
 - 17.0% of the area of terrestrial PAs have completed evaluations.

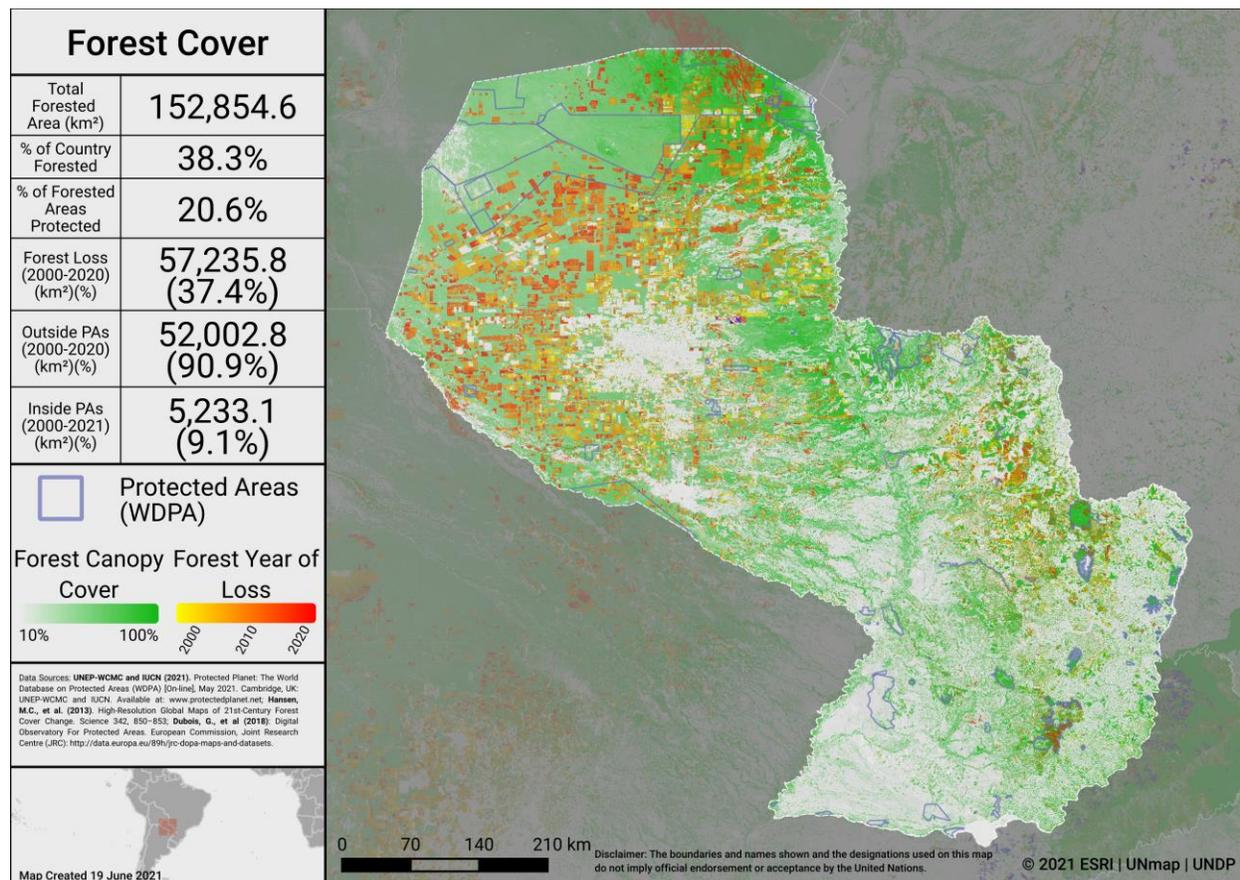
The 60% target for completed management effectiveness assessments (per COP Decision X/31) **has not** been met for terrestrial PAs.

As of May 2021, there are 0 OECMs in Paraguay 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 Paraguay cover approximately 38.3% of the country, an area of 152,854.6 km². Approximately 20.6% (31,528.6 km²) of this is within the protected area estate of Paraguay. Over the period 2000-2020 loss of forest cover amounted to over 57,235.8 km², or 14.3% of the country (37.4% of forest area), of which 5,233.1 km² (9.1% of forest loss) occurred within protected areas. The map below shows how forest cover has changed in Paraguay 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 Paraguay

Opportunities for action

The 60% target for completed management effectiveness assessments (per COP Decision X/31) **has not** been met for terrestrial PAs, therefore, there is opportunity to increase protected area management effectiveness (PAME) evaluations 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.

SECTION II: EXISTING PROTECTED AREA AND OECM COMMITMENTS

NATIONAL BIODIVERSITY STRATEGY AND ACTION PLANS (NBSAPs)

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

This NBSAP **did** include a quantitative target for **terrestrial** PAs or OECMs.

Specific Objective 1. Strengthen and update SINASIP with an ecosystemic vision, in order to effectively maintain at least 17% of the national territory under some category of management compatible with the conservation and sustainable use of biological diversity.

- As of May 2021 (based on the WDPA/WD-OECM) has the target been met: **NO**
- Accounting for other projects, actions and commitments, if this target is met, coverage in the country will increase by **10,781 km²**.

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

NBSAP Action number	Action (original language from NBSAP)	Action (English or clarified language)
4.1	Fortalecer y actualizar el SINASIP con una visión ecosistémica, de manera a mantener efectivamente al menos el 17% del territorio nacional bajo alguna categoría de manejo compatible con la conservación y el uso sostenible de la diversidad biológica	Strengthen and update SINASIP with an ecosystemic vision, in order to effectively maintain at least 17% of the national territory under a management category compatible with the conservation and sustainable use of biological diversity.
3.2	Consolidar una red nacional y departamental de Parques y áreas protegidas del país de manera que se garantice la existencia y la preservación de recursos de alto valor natural (Instituto de Desarrollo-STP. 2012).	Consolidate a national and departmental network of parks and protected areas in the country to guarantee the existence and preservation of resources of high natural value (Instituto de Desarrollo-STP. 2012).



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)	Qualitative elements potentially benefitting (based on keyword search of PIFs)
4860	No	N/A	Ecosystem services; 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
FP062	Cross-cutting	Forest and land use	Integration
FP121	Mitigation	Forest and land use	Effectively managed; Connectivity; Integration



OTHER ACTIONS/COMMITMENTS

Leaders' Pledge for Nature

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

Political leaders participating in the United Nations Summit on Biodiversity in September 2020, representing 84 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.



ANNEX I

FULL LIST OF ECOREGIONS

Ecoregion Name	Area (km ²)	% of Global Ecoregion in Country	% of Country in Ecoregion	Area Protected (km ²)	% Protected in Country
Alto Paraná Atlantic forests	85,943.4	17.8	21.5	2,992.9	3.5
Cerrado	8,139.1	0.4	2.0	2,172.6	26.7
Dry Chaco	174,827.0	22.2	43.8	47,740.7	27.3
Humid Chaco	128,230.7	44.0	32.1	3,784.6	3.0
Pantanal	1,997.1	1.2	0.5	397.4	19.9
Paraná flooded savanna	88.9	0.2	0.0	0.0	0.0
Southern Cone Mesopotamian savanna	6.4	0.0	0.0	0.0	0.0



ANNEX II

ADDITIONAL DETAILS ON PPAs

- Roughly 95 percent of Paraguay's land is privately owned.
- Private nature reserves have been included formally in the country's National System of Protected Areas (SINISAP) since it was formed in 1994, through Law 352/94
- The *Red Paraguaya de Conservación en Tierras Privadas* (The Paraguayan Network of Conservation in Private Lands) exists to promote and strengthen private conservation in Paraguay. Members of the network include owners of private conservation areas (Private Reserve, Environmental Servitude or other private conservation figure), NGOs that own or manage private conservation areas, and private landowners who do not have formal conservation area but adhere to the principles of the network. This entity keeps a database of existing and potential private land conservation projects.
- There are financial incentives for private land conservation, such as according to Law 352/94, areas designated as private nature reserves under the law are exempt from rural land taxes.
- Paraguay has developed legislation that further attempts to promote private lands conservation through the establishment of payments for ecosystem services
- Paraguay's NBSAP (2016), submitted to the Convention on Biological Diversity, includes private protected areas in the strategy to meet the Country's goal of protecting 17 percent of the terrestrial territory. The strategy also calls for those private areas that have already been declared to renew their term of conservation.
- As of August 2018, approximately 187,000 ha across 36 properties were under private conservation, with 12 additional properties in progress.
 - The WDPA currently lists 36 Natural Private Reserves (though governance type is not reported).

Case studies/best practices:

Ypetí Nature Reserve: 13,592 ha, in the Atlantic Forest of Alto Paraná, established as a model reserve to address threats to its vulnerability and threatened resources. There are a variety of management activities that take place, such as scientific investigation and tourism.

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



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