Convention on Biological Diversity

UNDP

Aichi Biodiversity Target 11 Country Dossier: SERBIA

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UNBiodiversity Lab

TABLE OF CONTENTS

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

Disclaimer

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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.

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.

It is noted that Aichi Target 11 should be considered together with Aichi Target 12 (or the relevant similar targets in the post-2020 framework), since protection of species is executed also through protection of their habitats.

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

Coverage

- **Status:** as of May 2021 (per the WDPA), terrestrial coverage in Serbia is 6,766.1 km^2 (7.6%); Serbia's national reporting indicates current PA coverage of **7.81%** (**691,434 ha**).
- **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:** Serbia contains 5 terrestrial ecoregions: the mean coverage by reported PAs and OECMs is 26.2%; 1 terrestrial ecoregion has no coverage by reported PAs and OECMs. Note that Serbia has not defined terrestrial ecoregions in the UN context.
- **Opportunities for action:** there is opportunity for Serbia to increase protection in terrestrial ecoregions that have lower levels of coverage by PAs or OECMs.

Ecoregions which currently have no coverage by PAs or OECMs are key areas for action.

Areas Important for Biodiversity

- **Status:** Serbia has 43 Key Biodiversity Areas (KBAs): the mean coverage of KBAs by reported PAs and OECMs is 29.2%, while 12 KBAs have no coverage by reported PAs and OECMs.
- **Opportunities for action:** there is opportunity for Serbia 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 Serbia, 13.7% of aboveground biomass carbon, 13.6% of belowground biomass carbon and 9.4% of soil organic carbon is covered by PAs and OECMs.
- **Opportunities for action:** for carbon, there is opportunity for Serbia 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 2.8%.
- **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 Serbia is: 97.1% under Government (Federal or national ministry or agency).
- **Opportunities for action:** explore opportunities for governance types that have lower representation, for Serbia this could relate to shared governance, etc.
- There is also opportunity for Serbia 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:** 60.2% of terrestrial PAs have completed Protected Area Management Effectiveness (PAME) assessments reported. According to the Law on Nature Protection, management for the whole Ecological network is not completed, as well as management effectiveness, except in parts where it overlaps with protected areas

- **Opportunities for action:** the 60% target for completed management effectiveness assessments (per COP Decision X/31) **has** been met for terrestrial PAs. Further increasing this percentage would be beneficial overall for understanding how well protected areas are being managed

- 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. It is noted that Aichi Target 11 should be considered together with Aichi Target 12 (or the relevant similar targets in the post-2020 framework), since protection of species is executed also through protection of their habitats. In the future, work could be taken to examine these targets together.

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

Section II presents details on Serbia's existing PA and OECMs 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.

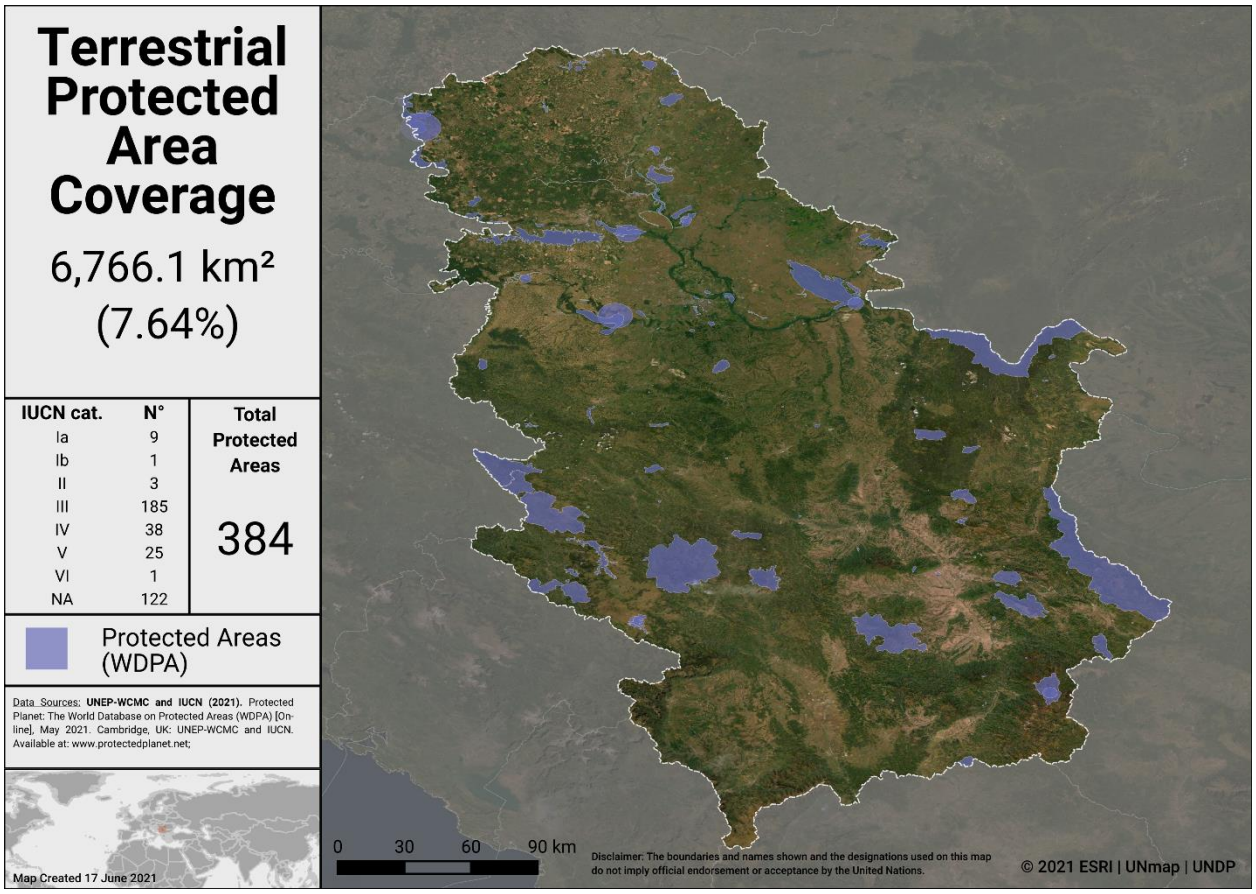
COVERAGE

As of May 2021, Serbia has **385** protected areas reported in the World Database on Protected Areas (WDPA). 1 UNESCO-MAB Biosphere Reserve[1] 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, Serbia has **0** OECMs reported in the world database on OECMs (WD-OECM).

Current coverage for Serbia (per the WDPA):

- 7.6% terrestrial (384 protected areas, 6,766.1 km^2)

Serbia's national reporting indicates current PA coverage of **7.81%** of the country territory,[2] (**472** PAs covering **691,434 ha**).



Terrestrial Protected Areas in Serbia (from the May 2021 WDPA)

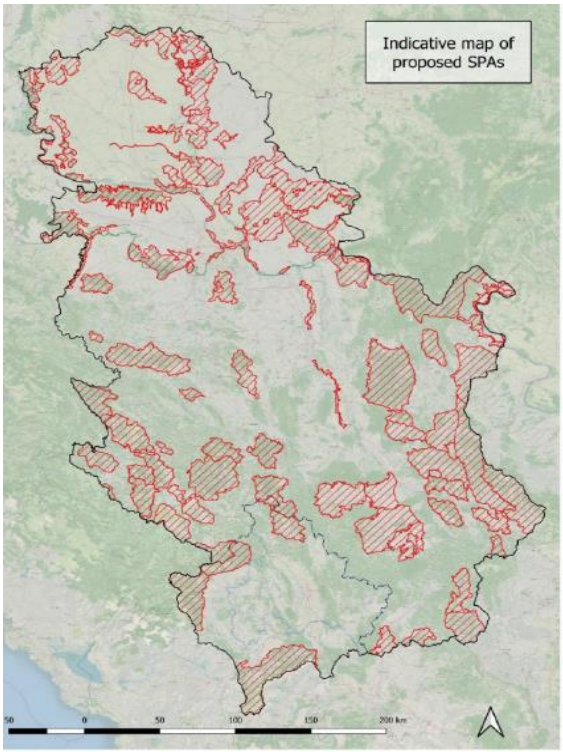
[1] Data may need to be updated. Serbia currently has the following UNESCO-MAB Biosphere Reserves: Golija Studenica (2001), Backo Podunavlje (2017) and pentalateral (five countries) Mura-Drava- Danube (proclaimed in 2021).
[2] Total surface of Serbia is 88,361 km^2 (source: www.srbija.gov.rs) including UN Resolution 1244

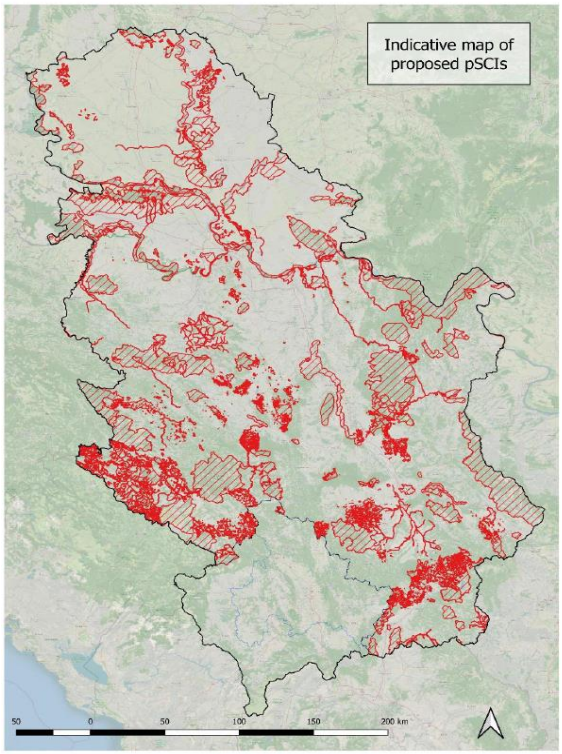
Potential OECMs

Potential OECM examples for Serbia include:

- Ecological Network, which includes IBAs (BirdLife), ecologically important sites for habitats and species excluding birds; coverage of the Ecological Network accounts for almost **20.93%** of the country's territory (source Programe for Nature Protection of the Republic of Serbia Official Gazzete No. 53/21)
- Potential sites of EU Natura 2000 in Serbia including 277 pSCI and 85 SPA (based on 79 official IBA and former 43 SPA defined by the Decree on the Ecological Network), covering more than **30%** of the country's territory;

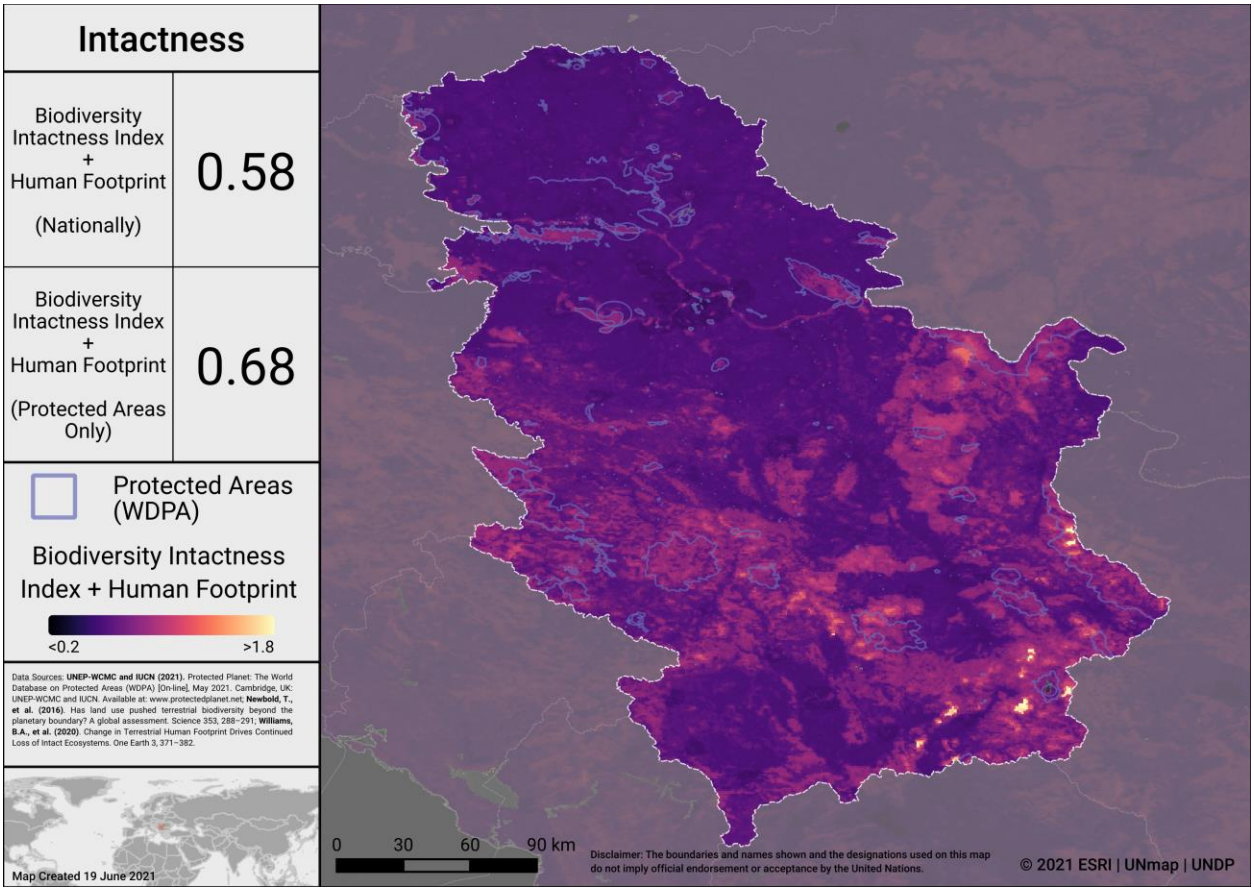
Indicative Map of terrestrial areas: Potential pSCIs and potential SPA areas of EU Natura 2000.





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

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

ECOLOGICAL REPRESENTATIVENESS

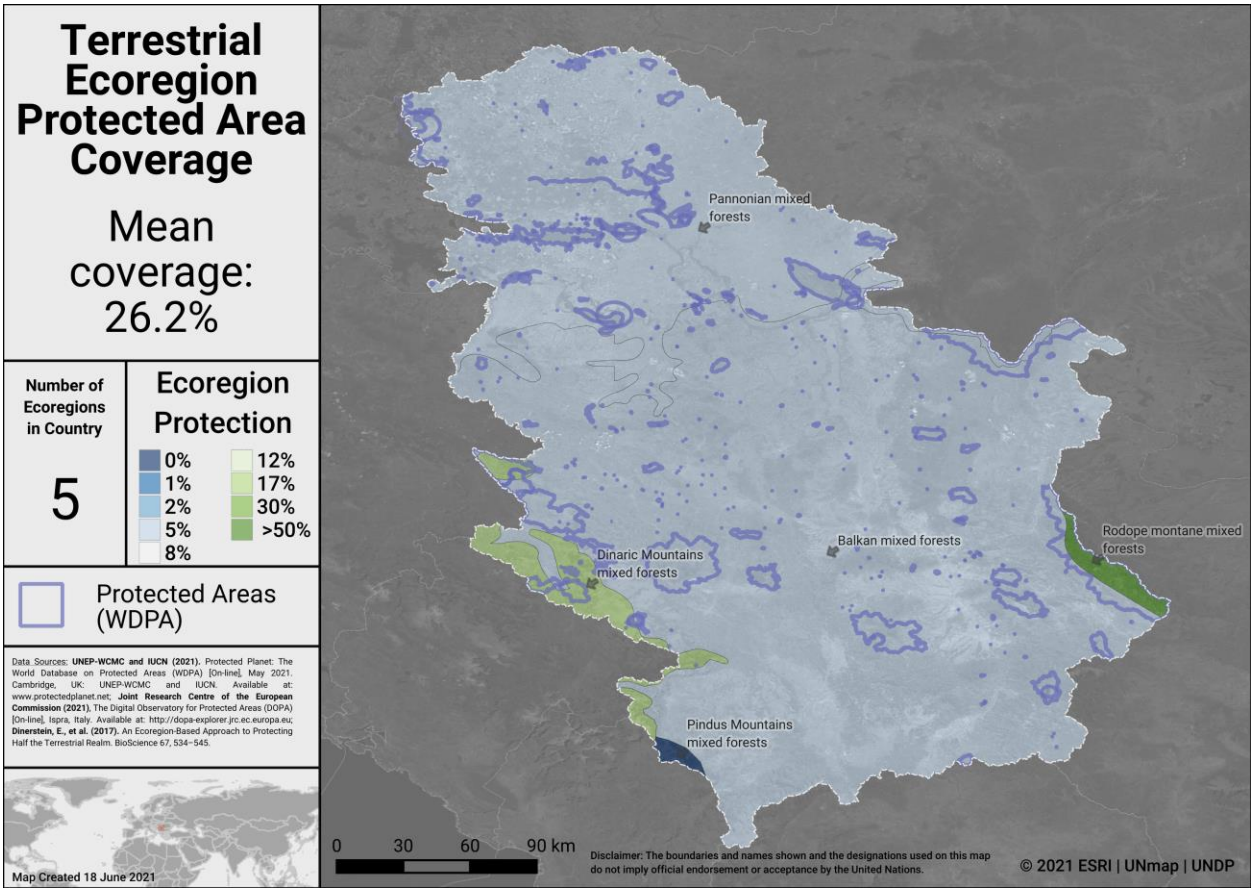
Ecological representativeness is assessed based on the PAs and OECMs coverage of broad-scale biogeographic units. Globally, ecoregions have been described for terrestrial areas (Dinerstein et al, 2017), marine coastal and shelf ecosystems (to a depth of 200m; Spalding et al 2007) and surface pelagic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

Serbia has 5 **terrestrial** ecoregions. Out of these:

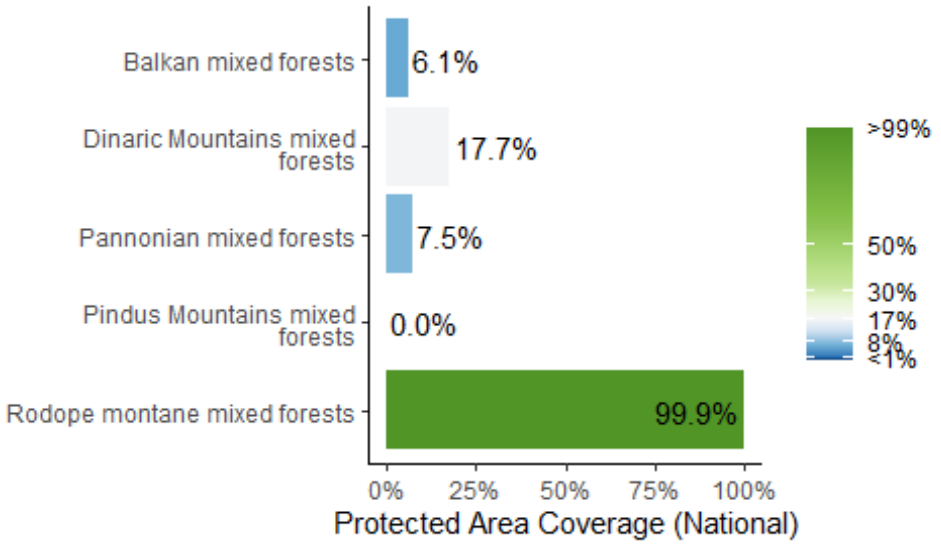
- 4 ecoregions have at least some coverage from PAs and OECMs.
- 2 ecoregions have at least 17% protected within the country.
- The average terrestrial coverage of ecoregions is 26.2%.

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

Note that Serbia has not defined terrestrial ecoregions in the UN context.



Terrestrial ecoregions in Serbia



Terrestrial ecoregions of the World (TEOW) in Serbia

Opportunities for action

There is opportunity for Serbia to increase protection in terrestrial ecoregions that have lower levels of coverage by PAs or OECMs. Ecoregions which currently have no coverage by PAs or OECMs are key areas for action.

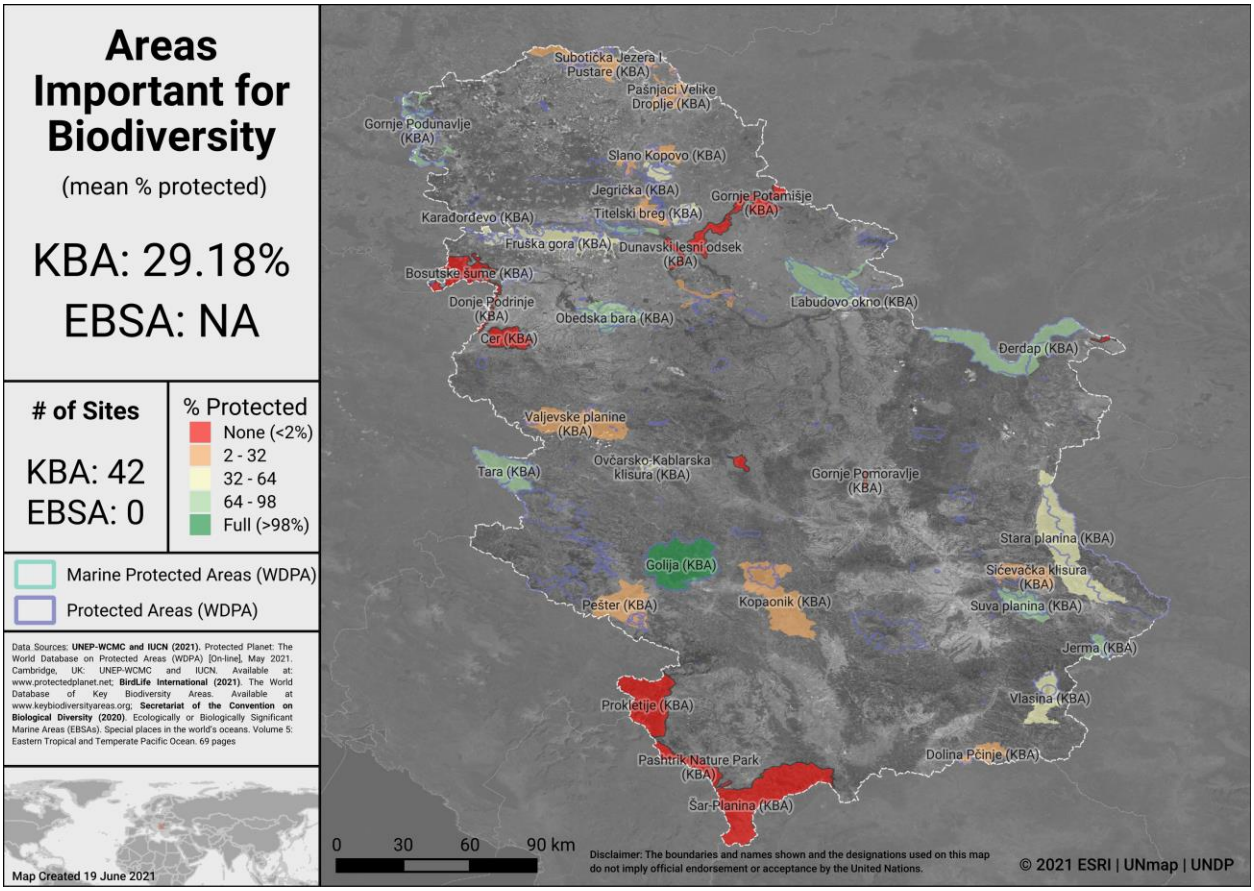
AREAS IMPORTANT FOR BIODIVERSITY

Key Biodiversity Areas (KBAs)

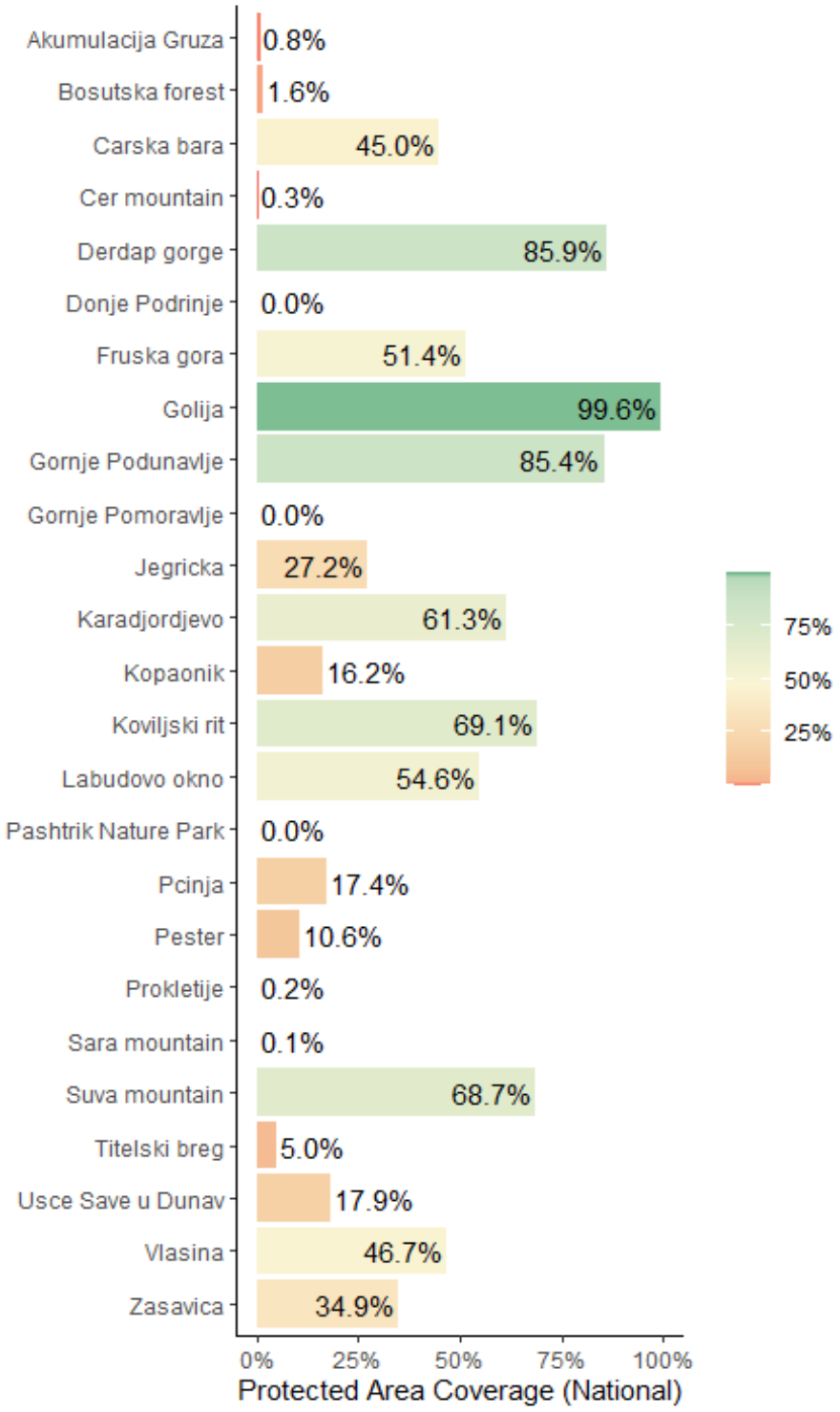
Protected area and OECM coverage of Key Biodiversity Areas (KBAs) provide one proxy for assessing the conservation of areas important for biodiversity at national, regional and global scales. KBAs are sites that make significant contributions to the global persistence of biodiversity (IUCN, 2016). The 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.

Serbia has **43** Key Biodiversity Areas (KBAs).

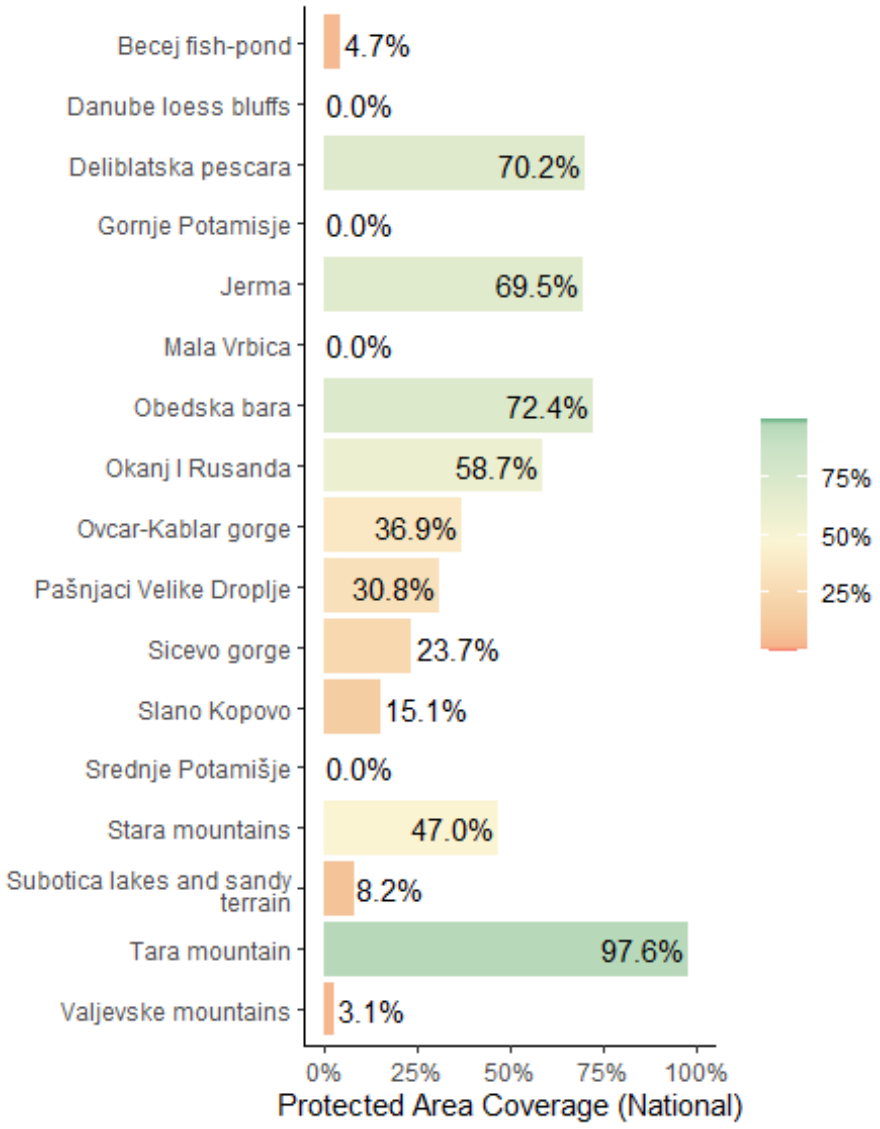
- Mean percent coverage of all KBAs by PAs and OECMs in Serbia is **29.2%**.
- **1** KBA has full (>98%) coverage by PAs and OECMs.
- **30** KBAs have partial coverage by PAs and OECMs.
- **12** KBAs have no (<2%) coverage by PAs and OECMs.



Areas Important for Biodiversity in Serbia



Key Biodiversity Area Coverage (KBA) in Serbia



Key Biodiversity Area Coverage (KBA) in Serbia

Opportunities for action

There is opportunity for Serbia 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.

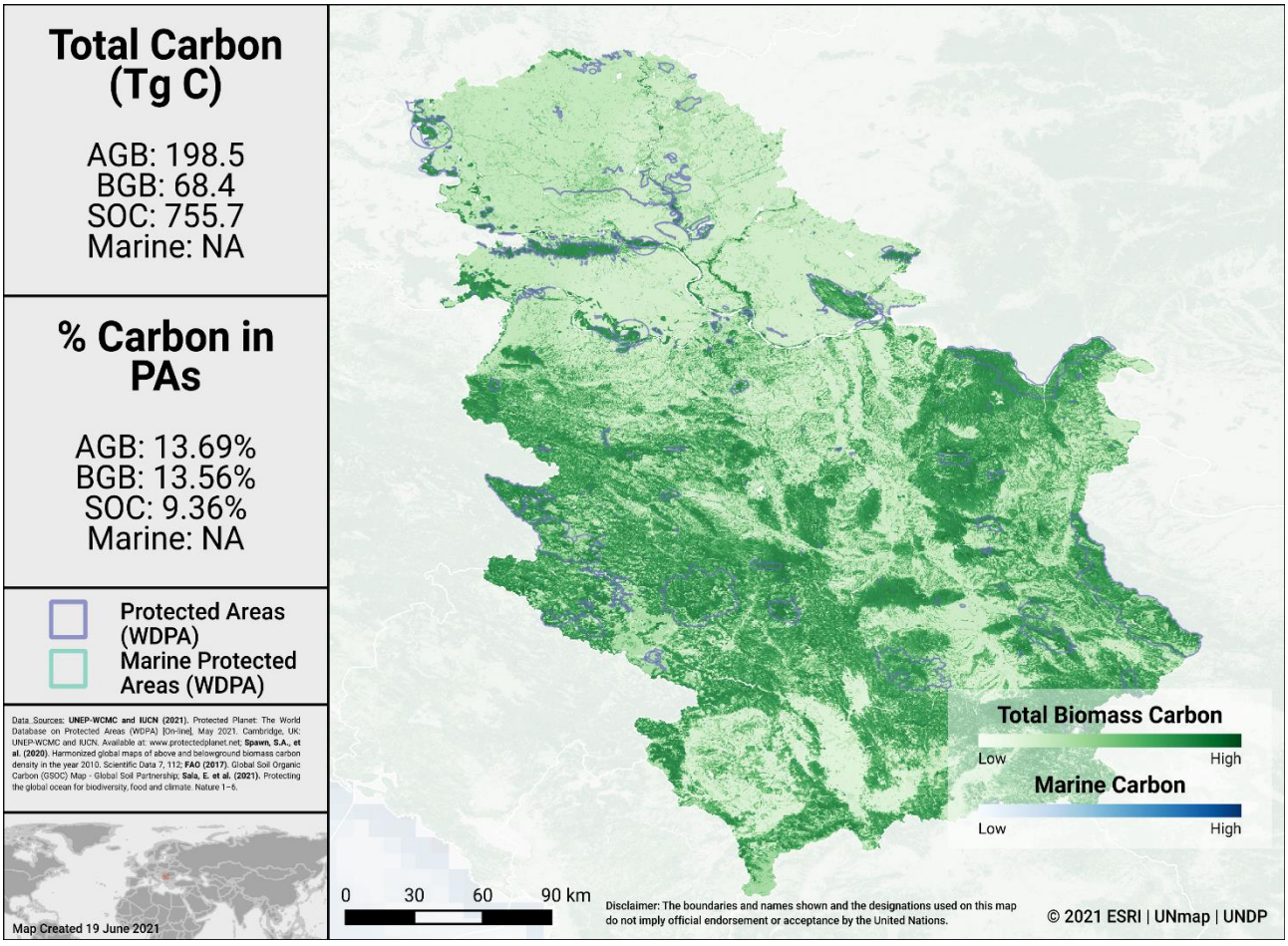
AREAS IMPORTANT FOR ECOSYSTEM SERVICES

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 Serbia and the percent of carbon in protected areas. The total carbon stocks is 198.5 Tg C from aboveground biomass (AGB), with 13.7% in PAs; 68.4 Tg C from below ground biomass (BGB), with 13.6% in PAs and 755.7 Tg C from soil organic carbon (SOC), with 9.4% in PAs.



Carbon Stocks in Serbia

Water

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 Serbia may similarly depend on protected forest areas within and around water catchments. Intact catchments can support more consistent water supply and improved water quality.

Opportunities for action

For carbon, there is opportunity for Serbia 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 Serbia was 2.8%.

PARC-Connectedness Index

In 2019, as assessed using the PARC-Connectedness Index (values ranging from 0-1, indicating low to high connectivity), connectivity in Serbia is 0.31. This represents an increase from 0.29 in 2010.

Corridor case studies

Below is a list of case studies on corridors and connectivity in Serbia:

Case study title	Type of study region	Greatest threat to connectivity	Approaches to conserving ecological corridors
The ecological corridor Mura-Drava Danube and future five-country biosphere reserve	freshwater, rural	human land-use changes	• transboundary cooperation for harmonised conservation, integrated management and restoration • establishment of a transboundary biosphere reserve

Further details are available in Hilty et al 2020.

UNESCO-MAB Biosphere Reserves: Golija Studenica (2001), Backo Podunavlje (2017) and pentalateral (five countries) Mura-Drava- Danube (proclaimed in 2021).

Important ecological connectivity in Serbia is provided by:

- the Ecological Network, which includes IBAs (BirdLife), ecologically important sites for habitats and species excluding birds, coverage of Ecological Network almost 20,93% of country territory
- potential sites of EU Natura 2000 in Serbia, including 277 pSCI and 85 SPA (based on 79 official IBA and former 43 SPA defined by the Decree on the Ecological Network), covering more than 30 % of country territory, provide

- for an indicative map of the terrestrial areas, see section above

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 Serbia reported in the WDPA have the following governance types:

- 97.1% are governed by **governments**
  - 97.1% by federal or national ministry or agency
  - 0.0% by sub-national ministry or agency
  - 0.0% by government-delegated management
- 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
- 2.9% **do not** report a governance type
  - (all of which are international designations)

OECMs

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

Privately Protected Areas (PPAs)

There is currently no data available for PPAs in Serbia.

Other Indigenous lands

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

Opportunities for action

Explore opportunities for governance types that have lower representation, for Serbia this could relate to shared governance, etc. There is also opportunity for Serbia 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, Serbia has 385 PAs reported in the WDPA; of these PAs, 27 (7.0%) have management effectiveness evaluations reported in the global database on protected area management effectiveness (GD-PAME).

- 4.6% (4,074 km^2) of the terrestrial area of the country is covered by PAs with completed management effectiveness evaluations.
  - 60.2% of the area of terrestrial PAs have completed evaluations.

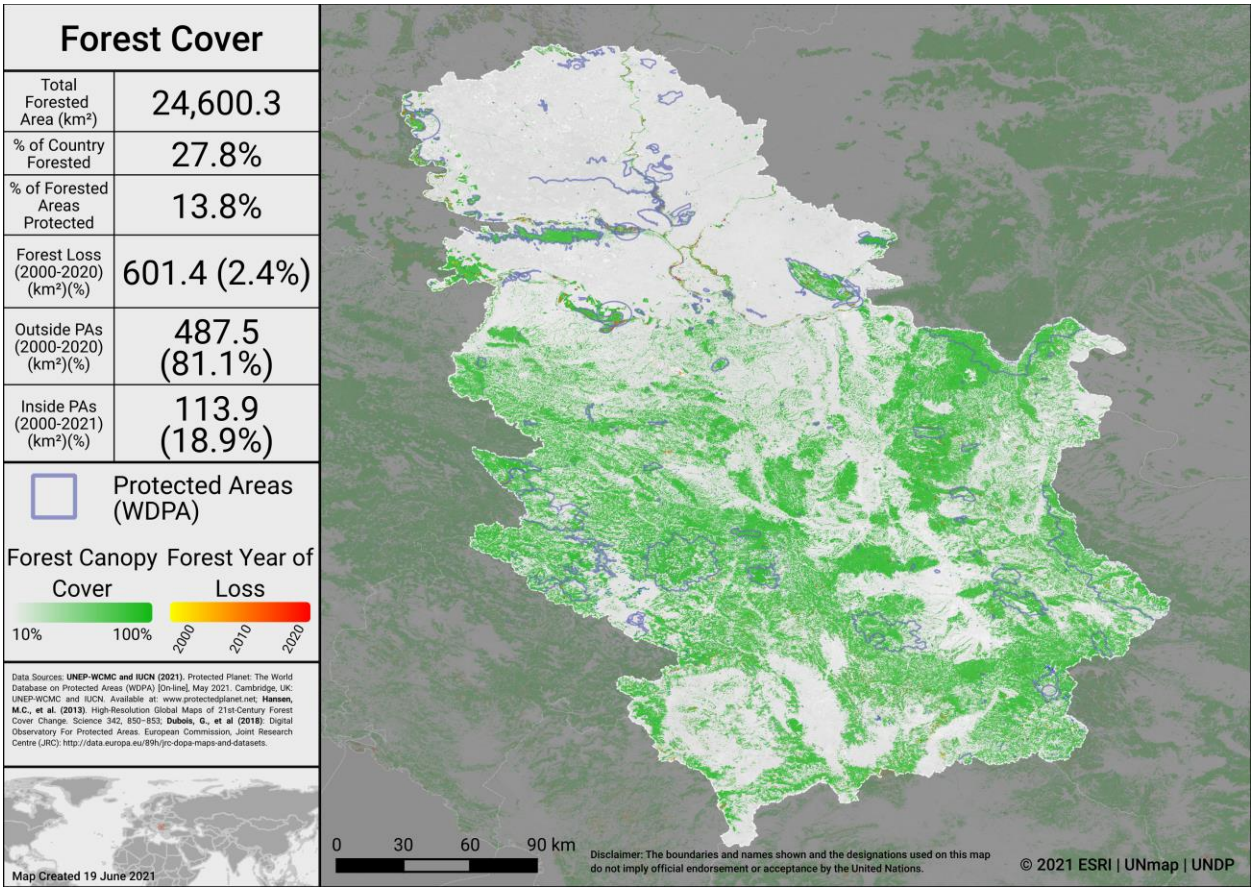
The 60% target for completed management effectiveness assessments (per COP Decision X/31) **has** been met for terrestrial PAs.

Additionally, according to the *Law on Nature Protection*, management for the whole Ecological network is not completed as well as management effectiveness, except in parts where it overlaps with protected areas.

As of May 2021, there are 0 OECMs in Serbia 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 Serbia cover approximately 27.8% of the country, an area of 24,600.3 km^2. Approximately 13.8% (3,406.8 km^2) of this is within the protected area estate of Serbia. Over the period 2000-2020 loss of forest cover amounted to over 601.4 km^2, or 0.7% of the country (2.4% of forest area), of which 113.9 km^2 (18.9% of forest los%) occurred within protected areas. The map below shows how forest cover has changed in Serbia 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 Serbia

Opportunities for action

The 60% target for completed management effectiveness assessments (per COP Decision X/31) **has** been met for terrestrial PAs. Further increasing this percentage would be beneficial overall for understanding how well protected areas are being managed.

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 Central and Eastern Europe on achieving Aichi Biodiversity Targets 11 and 12 took place 14 - 17 June 2016 in Minsk, Belarus. 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/

Summary from the workshop:

Priority actions and identified opportunities, if completed as proposed, will provide benefits for the qualifying elements of Aichi Biodiversity Target 11.

The following actions were identified during the workshops:

Terrestrial coverage:

1) To conduct financial analyses and establish a system for tracking the financing of PAs and Action Plan on PoWPA/CBD
2) IUCN categorization will be implemented.

Ecological representation:

1) To improve ecological network in the Republic of Serbia
2) To ensure that scientific knowledge contributes to the establishment and effectiveness of protected areas and protected area systems.

Areas Important for biodiversity and ecosystem services:

1) To improve criteria for establishing the ecological network
2) To collect distribution data on habitats and species
3) To evaluate ecologically important areas of national and international importance
4) Progress in assessing the contribution of protected areas to local and national economies
5) ES valuation and including in national planning documents and processes of the relevant sectors.

Connectivity:

1) To improve criteria for establishing the ecological network
2) To collect distribution data on habitats and species
3) To evaluate ecologically important areas of national and international importance.

Management effectiveness:

1) To build capacity for the planning, establishment and management of protected areas
2) To ensure financial sustainability of protected areas and national and regional systems of protected areas
3) To evaluate and improve the effectiveness of protected areas management.

Governance and Equity:

1) To promote equity and benefit-sharing
2) Progress in assessing protected area governance
3) To build capacity for the planning, establishment and management of protected areas
4) Development Guide or Criteria for effective governance.

Integration: To integrate protected areas into broader land- and seascapes and sectors so as to maintain ecological structure and function.

OECMs: Legislative and institutional framework is established.

NATIONAL BIODIVERSITY STRATEGY AND ACTION PLANS (NBSAPs)

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

The Nature Protection Programme of the Republic of Serbia for the period 2021-2023 was prepared in accordance with the Law on the Planning System of the Republic of Serbia and the relevant by-laws and was adopted in May 2021. This Programe is prepared based on a revision of the first Biodiversity Strategy of the Republic of Serbia for the period 2011-2018, in accordance with the Law on the Planning System of the Republic of Serbia, the Strategic Plan of the UN Convention on Biological Diversity 20211-202, the Aichi Biodiversity Targets, and decisions made in regular sessions of the Conferences of members of this convention and other confirmed international agreements for nature conservation, biodiversity conservation and climate change.

General objective 1: Improvement of the nature protection system and biodiversity conservation						
Institution responsible for the monitoring and control of implementation: Ministry of Environmental Protection						
Indicator (i) at the level of the general objective (impact indicator)	Unit measure	Source of verification	Initial value	Base year	Target value in the last year of AP	Last year of AP validity
The share of the ecological network in the Republic of Serbia	(%)	INCS central database	20,93	2018	23	2023
The share of the protected territory of the Republic of Serbia, plus the area which is in the procedure, in relation to the total territory	(%)	INCS central database	8.82	2018	11,0	2023
The share of conifer species without defoliation	(%)	FI	70	2018	73	2023
The share of deciduous species without defoliation	(%)	FI	82	2018	85	2023

Measure 1.2.1: Enlarging the territory of protected areas and management effectiveness							
Institution responsible for the monitoring and control of implementation: MEP							
Implementation period: 2021-2023			Type of measure: I (incentive)				
Indicator(s) at the level of the measure (result indicator)	Unit measure	Source of verification	Initial value	Base year	Target values in 2021	Target value in 2022	Target value in 2023
The share of the protected area territory in relation to the total territory of the Republic of Serbia	(%)	INDC central database	7.56	2018	8.0	8.3	9.0

Activity:	Authority conducting the activity	Authorities-partners in conducting the activity	Time limit for the completion of the activity
1.2.1.1 Proclamation of new and the revision of existing protected areas	MEP	INCS, PINC, LSU	2023
1.2.1.2 Improvement of the system of financing protected areas	MEP		Q4 2021
1.2.1.3 Strengthening the capacity of protected areas management (training of management, beneficiaries and owners of land and resources within the ecological network)	MEP	ALA	Q4 2023
1.2.1.4 Improvement of professional supervision in protected areas	INCS, (in cooperation with PINC)	ALA	Q4 2021
1.2.1.5 Improvement and/or revision of the nature conservation legal framework	MEP		Q4 2021
1.2.1.6 Improvement of standards for the drafting of documents on protected area management by making amendments to the Regulation on the ecological network, proclamation act and nature conservation conditions	MEP	INCS	Q4 2023
1.2.1.7 Analysis of the work of the established Councils of beneficiaries of protected areas for the purpose of establishing Councils in other protected areas	MEP	NPM	Q3 2021

Measure 1.2.2: Establishment and development of a functional ecological network of the Republic of Serbia							
Authority responsible for the implementation (coordination of the implementation) of the measure: MEP							
Implementation period: 2021-2023			Type of measure: IMO (institutional management organisational)				
Indicator(s) at the level of the measure (result indicator)	Unit measure	Source of verification	Initial value	Base year	Target value in 2021	Target value in 2022	Target value in 2023
The share of the territory of ecologically significant areas of international and national importance in relation to the territory of the Republic of Serbia	%	INCS, PINC	20.93	2018	20.93	21.5	22

Activity:	Authority conducting the activity	Authorities-partners in conducting the activity	Time limit for the completion of the activity
1.2.2.1 Establishment of a reference list for ecological network species and habitats and enlarging the territory of the ecological network in GIS	MEP	PAC, EPA, PINC	Q4 2022
1.2.2.2 Development of 2 pilot plans for managing parts of the ecological network	MEP	PAC, PINC	Q4 2022
1.2.2.3 Establishment and development of eligibility assessment of the ecological network and integration of this procedure in the process of strategic assessment and environmental impact assessment	MEP		Q4 2021
1.2.2.4 Identification of European Natura 2000 network in the Republic of Serbia	MEP	PAC, PINC	Q4 2022
1.2.2.5 Establishment of the ecological network of the Republic of Serbia	MEP	PAC, PINC	Q4 2023

APPROVED GEF-5 and GEF-6 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).

GEF ID	PA increase?	Area to be added (km^2)	Qualitative elements potentially benefitting (based on keyword search of PIFs)
9089	No	N/A	Ecosystem services; Effectively managed; Integration

OTHER ACTIONS/COMMITMENTS

Commitments for PAs and OECMs from Other National Policies

Policy document	Ecosystem	Policy text
Nationally Determined Contribution	Wetland ecosystems	Avoided peat impacts: 0.13 Mt CO2e/yr
National Sustainable Development Strategy	Forest ecosystems	Protect and promote the environment and achieve rational use of natural resources, preserve and enhance the system of environmental protection, reduce pollution and environmental pressure, use natural resources in a manner ensuring their availability for the future generations
National Sustainable Development Strategy	Forest ecosystems	Protection and preservation of biodiversity
National Sustainable Development Strategy	Forest ecosystems	Establishing a system of protection and sustainable use of natural values or resources (air, water, mineral resources, forests, fish, wild flora and fauna)
Energy Sector Development Strategy of the Republic of Serbia	Forest ecosystems	Conservation of wild birds
National Biodiversity Strategy Action Plan	Forest ecosystems	Establish threat status for endangered ecological communities and develop monitoring indicators and protection measures
National Biodiversity Strategy Action Plan	Forest ecosystems	Ex-Situ Conservation
National Biodiversity Strategy Action Plan	Forest ecosystems	Protected Areas System
Water Management Strategy 2010	Wetland ecosystems	Protection and conservation of water resources
Water Management Strategy 2010	Wetland ecosystems	Water pollution control (water protection)
Water Management Strategy 2010	Grasslands & Agricultural systems	Efficient water use ensured by appropriate irrigation depths by crop type

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
Balkan mixed forests	60,112.6	26.7	68.0	3,679.8	6.1
Dinaric Mountains mixed forests	2,461.7	4.2	2.8	435.9	17.7
Pannonian mixed forests	24,965.8	8.1	28.2	1,873.8	7.5
Pindus Mountains mixed forests	222.8	0.6	0.3	0.0	0.0
Rodope montane mixed forests	693.4	2.2	0.8	692.4	99.9

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