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BIOPAMA INFORMATION SYSTEM GUIDELINES

From Data to Decision-making



From Knowledge to Action for a Protected Planet



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@Antonio Vecoli

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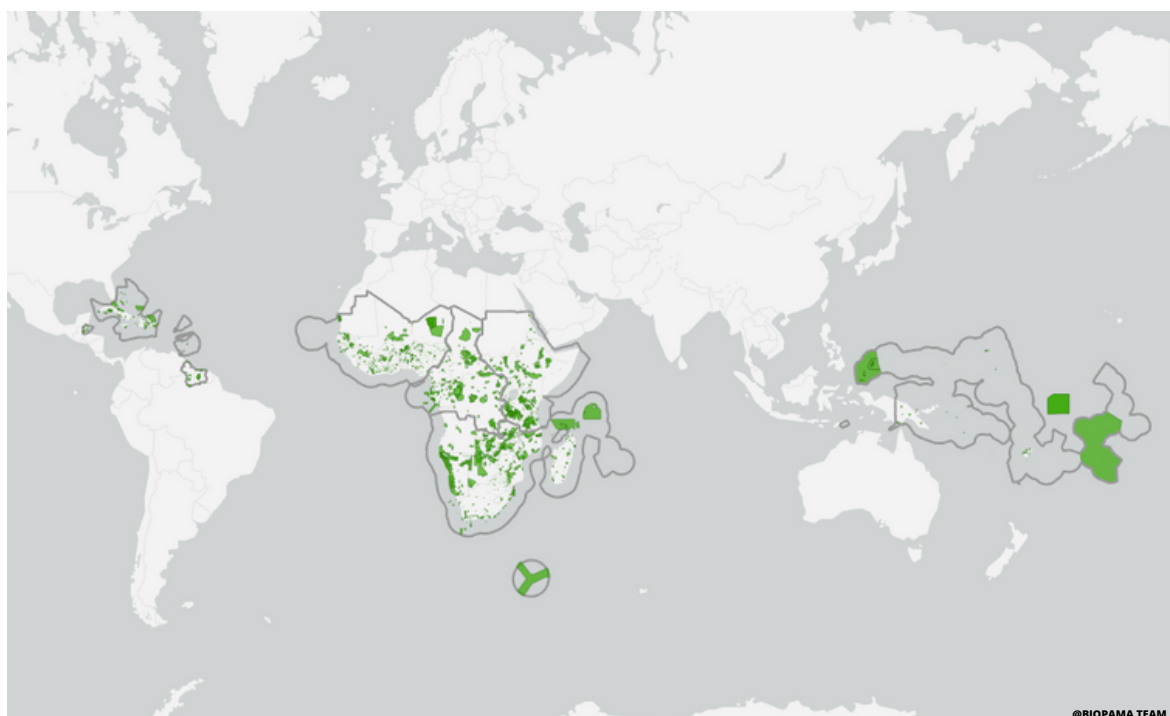
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INTRODUCTION

From Data to Decision-making: Supporting conservation strategies, improving protected areas management

Data and information on biodiversity state and trends are fundamental to monitor conservation status of the world's ecosystems and to tackle the biodiversity crisis we are facing. Complex scientific data need to be translated into clear, transparent and understandable information easy and ready to be used to make informed decisions.

The European Union (EU) policies acknowledge the importance of providing relevant data and scientific evidence to decision-makers in order to enhance their capacity to implement effective conservation policies and actions.

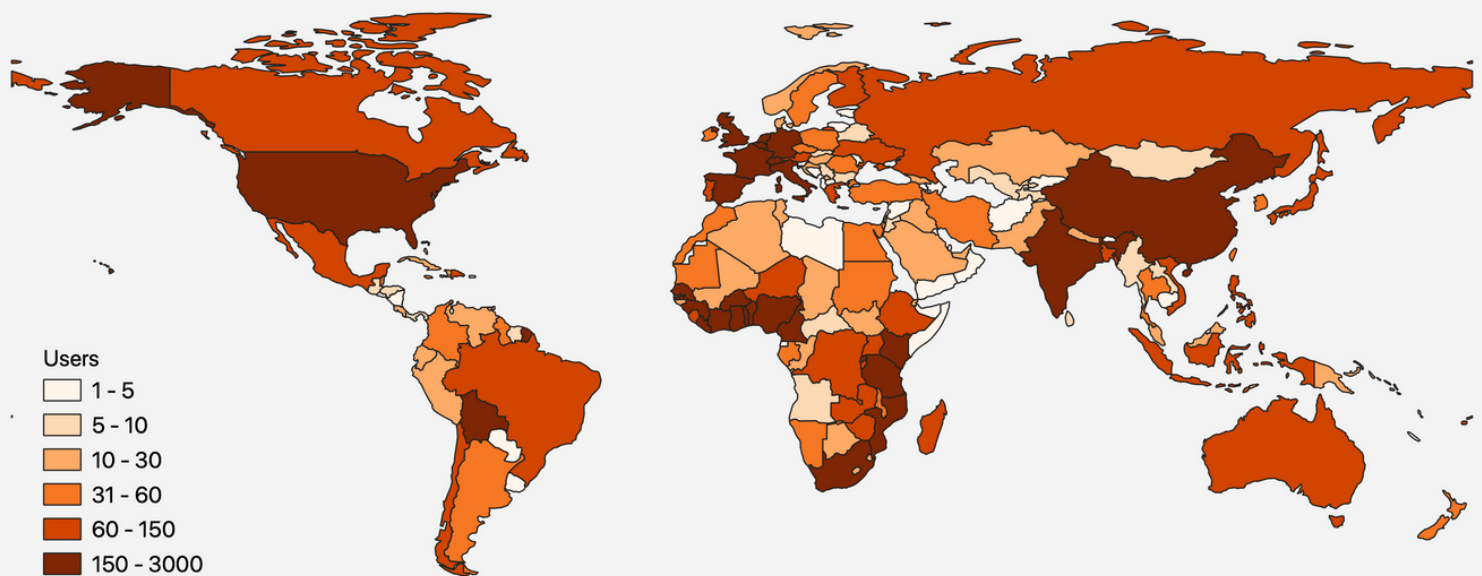
The EU is committed to enhance the availability and usability of the best scientific evidence to monitor progress toward biodiversity conservation targets and foster appropriate and country-specific policies and strategies to halt the loss of biodiversity

How do data and scientific information make a difference in biodiversity and protected areas management?

In July 2011 the European Commission launched the BIOPAMA (BIODiversity and Protected Areas Management) Project. BIOPAMA is an initiative of the Organisation of African, Caribbean and Pacific States (OACPS) financed by the European Union's 11th European Development Fund (EDF), jointly implemented by the International Union for Conservation of Nature (IUCN) and the Joint Research Centre of the European Commission (JRC) aims to improve the long-term conservation and sustainable use of natural resources in African, Caribbean and Pacific (ACP) countries, in protected areas and surrounding communities.

The programme second phase (2017-2024) aims to contribute to improving the long-term conservation and sustainable use of biodiversity and natural resources in protected areas and surrounding communities through better use and monitoring of information and capacity development on management and governance. BIOPAMA delivers tools and services for better biodiversity conservation, protected area management, and provides expertise in geospatial information systems and remote sensing.





©BIOPAMA TEAM

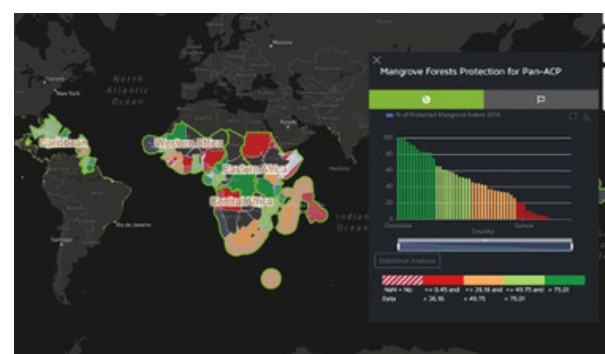
GLOBAL AND REGIONAL REFERENCE INFORMATION SYSTEMS

In order to enhance the availability and accessibility of data and knowledge on the state of biodiversity and to promote regional and national engagement to make policy-related data available, the Joint Research Centre (JRC), through the BIOPAMA Programme, has developed a publicly available online platform to share information and indicators at global, regional, national and local levels. This platform supports policy- and decision-makers to monitor the progress towards conservation goals and to set new targets.

The Reference Information System (RIS) for Protected Areas of African, Caribbean and Pacific Region is an online information system gathering in one place relevant information about pressure and threats on Protected Areas, biodiversity value and ecosystem services, to support decision-making for the protection and management of natural resources.

Biodiversity indicators are effective tools to track, communicate and report on progress on international and national policies. They are fundamental at different scales, from global level to local level.

E.g: Is it possible through the RIS to assess how much each of the ACP countries is contributing to the mangrove forests conservation?



The Reference Information System is composed of a suite of map-centric tools which aims at gathering all the best available scientific data on biodiversity conservation and management and at increasing the impact of biodiversity data in decision-making process.

The nine modules of the Reference Information Systems are the Dashboard, the Conservation Tracking Tool, PAME and PAGE, Geospatial Catalogue, Conservation Analyst, StoryMaps, WDPA Tracker and the documentation section. Though the modules can be used as stand-alone tools, they are interconnected, and it is possible to navigate from one to the others through hyperlinks





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HOW TO NAVIGATE INTO THE PLATFORM

Logging and Registering

Before you begin exploring the modules and BIOPAMA data, please register into our platform

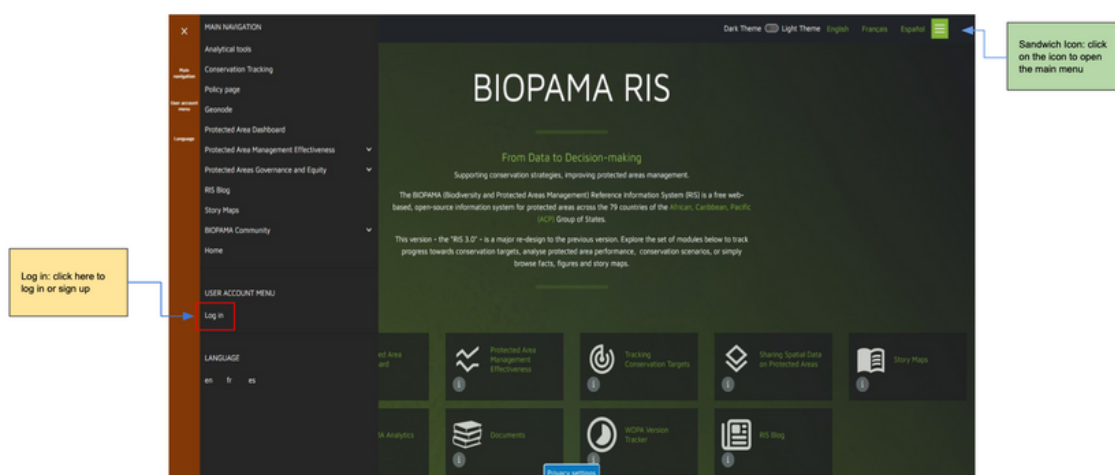
How do I register or log-in?

If you don't have an account yet, click the Sandwich Menu on the top left-hand corner to open the drop-down menu. Click the "Log In" button.

In the new window, click on 'sign up'. Enter your email and username to create an account.

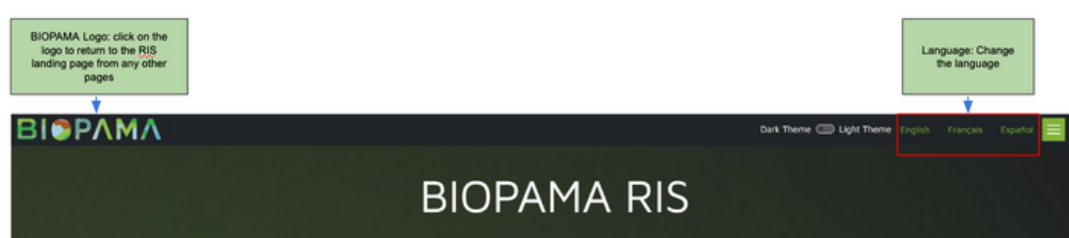
You will receive a welcome email within a few minutes. Please check in your SPAM box if you don't receive the email in a short time. This link can only be used once to log in and will lead you to a page where you can set your password. After setting your password, you will be able to log in at <https://rris.biopama.org/user>

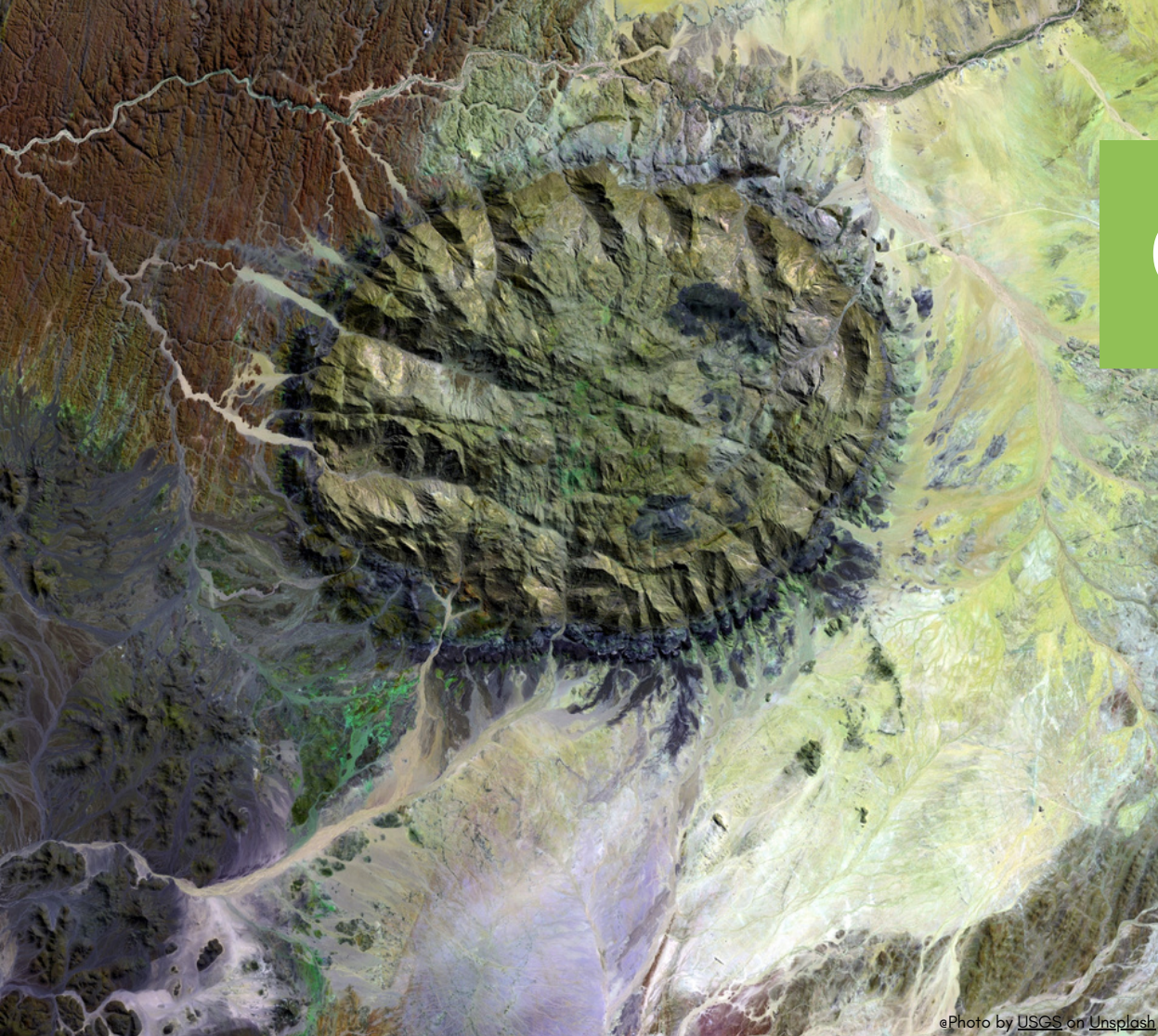
By logging-in users will get access to interactive functionalities, for example for uploading data and creating indicators



How do I change the language?

The BIOPAMA RIS Landing Page is available in English and French. To change the language, from the default one, click on the language name on the right-hand corner of the top banner. You can also change the language on each module. To return to the RIS landing page from any other pages, click the BIOPAMA logo on the left-hand corner of the top banner





PROTECTED AREAS DASHBOARD

Protected Areas Coverage Statistics by Region and Country

The Protected Area (PA) Dashboard of the BIOPAMA Reference Information System (RIS) provides easy access to the protection level statistics and additional information on protected area systems in the African, Caribbean and Pacific (ACP) regions and related countries

This module shows information on the protected areas included in the World Database of Protected Areas (IUCN and UNEP-WCMC) at regional and country levels. The protected area coverage by country (using GAUL, Global Administrative Unit Level, as spatial reference) is directly provided by Protected Planet through data services. Regional coverage is calculated every month using open-source software (QGIS) and scripts (Python) following the procedure available at Protected Planet.

Explore our statistics

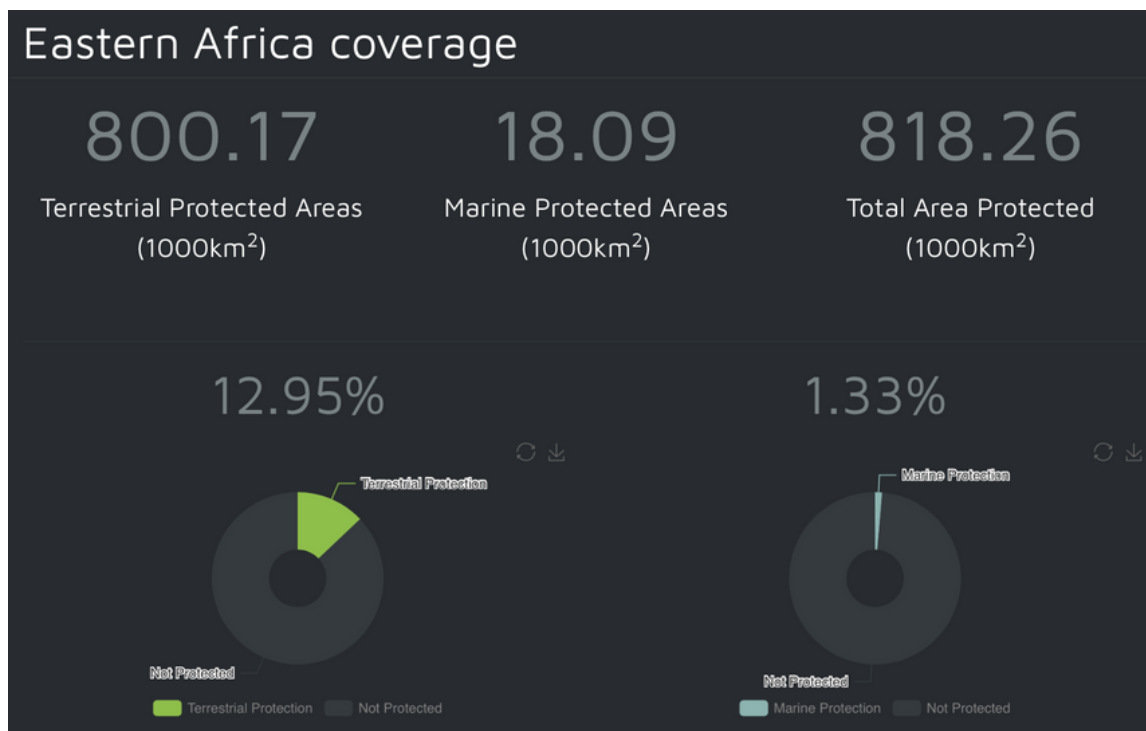
The Protected Areas Dashboard can be accessed from the Reference Information System Landing Page. Clicking on the module icon users will be addressed to a new page.

The PA Dashboard displays statistics on the terrestrial and marine protection coverage at ACP, Regional and Country levels.

Available metric included at ACP level:

| | | | |
|------------------|----------------------------------|----------------------|--|
| Terrestrial Area | number of terrestrial areas | the extent in sqkm | Coverage percentage on total land area |
| Marine Area | number of marine protected areas | the extent in sqkm | Coverage percentage on ACP EEZ area |
| Total Area | number of protected areas | total extent in sqkm | Coverage percentage on total land |

At regional level, users can explore statistics on the terrestrial and marine coverage, governance type, management and designation type according to IUCN classification. For each country of the region the dashboard provides the total number of protected areas and statistics about the terrestrial and marine coverage. By clicking the name of a country, users will be directed to the Country Statistics Page. (check the Country page section to know more)



To visualise the statistics related to governance type, management categories and designation type, click in the dedicated banner. Metrics and charts will be visualised



- **Download our statistics through BIOPAMA APIs**

The code is available at: Github – Protection Analyst. If you want to reuse our data please visit the API for protection level [BIOPAMA – API – protection level](#)

Please cite these data as: EC-JRC (2023). BIOPAMA RIS [On-line], Protection level statistics as of [month] 202[yr]. Available at: rris.biopama.org

- **Download metrics and charts from the module**

Metrics at regional and country levels can be also downloaded as csv or a pdf or be copied directly from the dashboard. Click on the csv/pdf icon in the left-hand top corner of the country list to export the regional data as in the figure below. Users can easily download donough charts a/s picture in the png format

Click here to download metric at country level

| COUNTRY | COUNTRY AREA | TOTAL NUMBER OF PAS | NUMBER OF TERRESTRIAL PAS | NUMBER OF MARINE PAS | NUMBER OF COSTAL PAS | TERRESTRIAL PROTECTION (BOG) | MARINE PROTECTION (BOG) | TERRESTRIAL PROTECTION (N) | MARINE PROTECTION (N) |
|--------------|-----------------------------|---------------------|---------------------------|----------------------|----------------------|------------------------------|----------------------------|----------------------------|-----------------------|
| Angola | 1247398.148 | 14 | 13 | 1 | None | 86855.739 | 25.893 | 6.963 | 0.005 |
| Botswana | 578032.179 | 22 | 22 | None | None | 168520.833 | None | 29.154 | None |
| Comoros | 1673.976 | 9 | 5 | None | 4 | 562.3 | 1188.605 | 33.591 | 0.714 |
| Lesotho | 30444.842 | 5 | 5 | None | None | 147.236 | None | 0.484 | None |
| Madagascar | 591606.217 | 171 | 121 | 28 | 22 | 44176.88 | 55234.84 | 7.467 | 3.018 |
| Mauritius | 2004.4 | 44 | 15 | 18 | 11 | 93.278 | 145.907 | 4.654 | 0.008 |
| Malawi | 118064.25 | 133 | 133 | None | None | 26804.059 | None | 22.703 | None |
| Mozambique | 787257.834 | 64 | 59 | 2 | 3 | 232140.213 | 13228.623 | 29.487 | 2.328 |
| Namibia | 824329.137 | 148 | 146 | 1 | 1 | 312020.768 | 9584.242 | 37.851 | 1.705 |
| Seychelles | 394.761 | 51 | 2 | 32 | 17 | 221.413 | 437824.534 | 56.088 | 32.649 |
| 14 countries | 6560.47 1000km ² | 3233 PAS | 2950 PAS | 150 PAS | 133 PAS | 1401.22 1000km ² | 745.37 1000km ² | 21.36 % | 8.83 % |

Showing 1 to 10 of 14 entries

CONSERVATION TRACKING TOOL

Linking policies, targets and indicators

In the core module of the RIS, the Tracking tool, data and indicators linked to biodiversity conservation targets and policies are processed and made available at different scale levels, from global to site-specific level to support decision making on conservation strategies and tracking PAs progress towards conservation targets

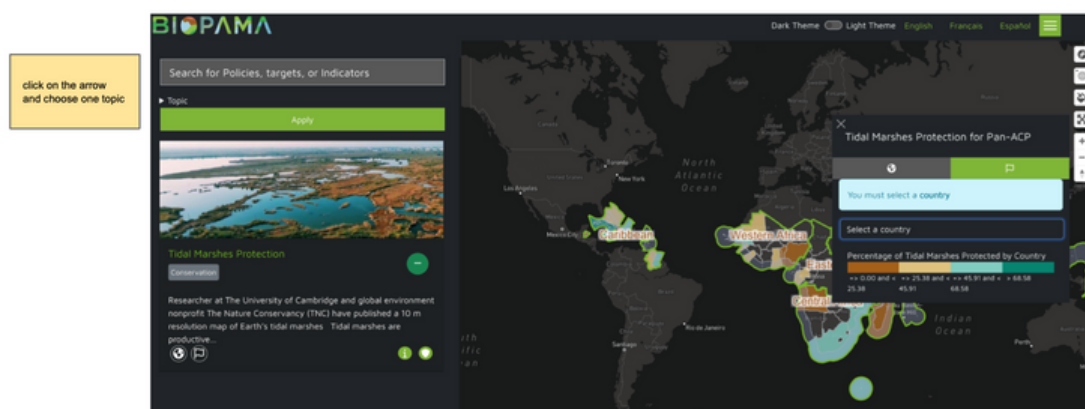
Exploring Biodiversity Statistics at Global, National and Local levels

How can we see at glance the progress each country or each protected area has made towards conservation policies and targets?

The Conservation Tracking Tool displays information through maps, graphs and indicators developed in line with global standards. It is organised for quick and user-friendly access. Accredited users will be able to add policies, targets and indicators and share their data that are crucial for biodiversity conservation activities and planning.

- ***Find layers by topic***

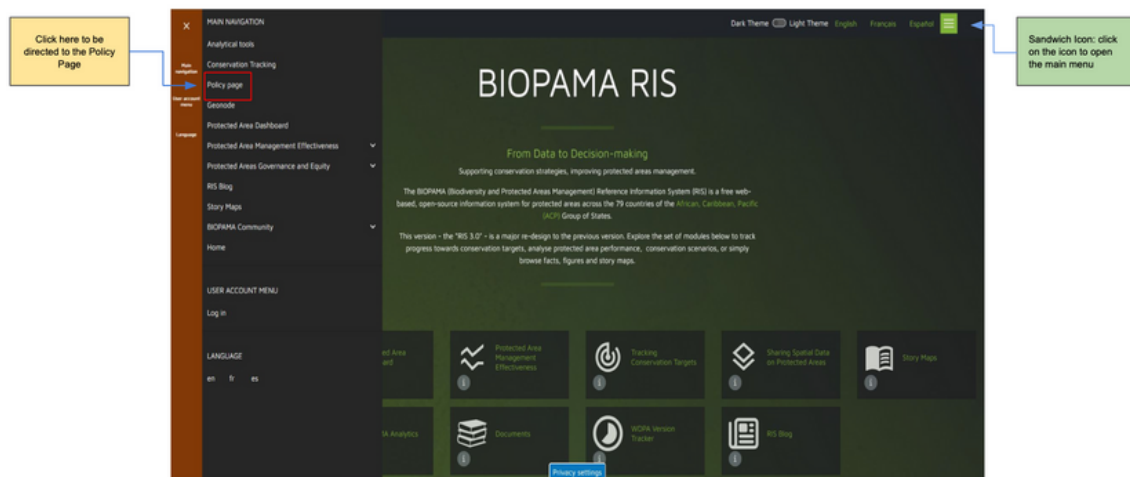
Click on the CTT card on the main RIS menu to explore layers available for the 79 African, Caribbean and Pacific States. To view the metrics on the Conservation tracking tool filtered by topic, click on the 'topic' arrow to open a drop down menu and select the subject you are interested in. Click on Apply and the layers related to the selected topics will be shown in the left-hand panel. Please scroll down the panel to explore all layers available. Layers can be searched by keywords. E.g. digiting 'Mangrove' in the search tab, all layers containing some information related to mangrove forests, will be listed in the left panel



- **Find layers by policy**

Click on the Sandwich Menu icon to open the panel menu, and select Policy Page title from the list.

Select the geographic scale (Global, Regional, National, Local) and check the list of policies available. Click on the 'Policy Targets' banner if you want to explore the list of targets and indicators available.



The Policy page provides a list of global, regional and national policies related to biodiversity conservation where users can track and explore country-level progress towards each of related targets and goals for which data is available. Clicking on the name of a specific target, available indicators will be shown under the related targets and goals. We will keep this page up-to-date over time as more data becomes available.

To check the list of indicators available for each policy target, click on the Target banner to show the drop-down menu.

Click here to explore policies at different scales

Click on Policy Targets to open the drop-down menu

Click on a specific target to check which data is available

Policy Page

[Global Policies](#)
[Regional Policies](#)
[National Policies](#)
[Local Policies](#)

Global Policies

Aichi Biodiversity Targets - Convention on Biological Diversity

The Aichi biodiversity targets were established by the UN Convention of Biological Diversity and consist of 5 Goals and 20 specific targets to address and mitigate biodiversity loss across the globe

[Policy Targets](#)

Aichi Biodiversity Targets - Convention on Biological Diversity

- ▶ Aichi Target 02 on Integrated Biodiversity Value
- ▶ Aichi Target 05 on Natural Habitats
- ▶ Aichi Target 10 on Vulnerable Ecosystems
- ▶ Aichi Target 11 on Protected Areas
- ▶ Aichi Target 12 on threatened species
- ▶ Aichi Target 14 on Ecosystem Services
- ▶ Aichi Target 15 on contribution to carbon stocks
- ▶ Aichi Target 17 on NBSAP
- ▶ Aichi Target 20 on financial resources

[+ Add a Target](#)

Convention on the Conservation of Migratory Species of Wild Animals

The Convention on the Conservation of Migratory Species of Wild Animals is an environmental treaty under the aegis of the United Nations Environment Programme. CMS provides a global platform for the conservation and sustainable use of migratory animals and their habitats. As the only global convention specializing in the conservation of migratory species, their habitats and migration routes, CMS complements and co-operates with a number of other international organizations, NGOs and partners in the media as well as in the corporate sector. Migratory species threatened with extinction are listed on Appendix I of the Convention. Migratory species that need or would significantly benefit from international co-operation are listed in Appendix II of the Convention.

[Policy Targets](#)

Click on layer cards to open the indicators in the Conservation Tracking Tool.

Click here to explore policies at different scales

Click on Policy Targets to open the drop-down menu

Click on a specific target to check which data is available

Global Policies


Aichi Biodiversity Targets - Convention on Biological Diversity

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[Policy Targets](#)

Aichi Biodiversity Targets - Convention on Biological Diversity


- ▶ Aichi Target 02 on Integrated Biodiversity Value
- ▶ Aichi Target 05 on Natural Habitats
- ▶ Aichi Target 10 on Vulnerable Ecosystems
- ▶ Aichi Target 11 on Protected Areas



Average protection of Key Biodiversity Areas

In which countries are the sites that most contribute to global biodiversity persistence...

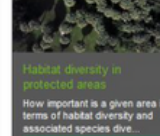
[View Average protection of Key Biodiversity Areas in the Conservation Tracking Tool](#)



Below ground carbon

Indicator unit: The belowground biomass carbon (BGC) is expressed in Mg (megagrams) or t...


[View Below ground carbon in the Conservation Tracking Tool](#)



Habitat diversity in protected areas

How important is a given area in terms of habitat diversity and associated species diversity...

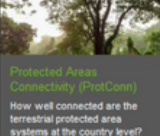
[View Habitat diversity in protected areas in the Conservation Tracking Tool](#)



Natural Areas Protection Levels

How well are different ecosystem types, as indicated by land cover, preserved and how s...


[View Natural Areas Protection Levels in the Conservation Tracking Tool](#)



Protected Areas Connectivity (ProtConn)

How well connected are the terrestrial protected area systems at the country level? Th...


[View Protected Areas Connectivity \(ProtConn\) in the Conservation Tracking Tool](#)



Protection Levels of Key Biodiversity Areas (KBAs) by country

In which countries are the sites that most contribute to global biodiversity persistence...

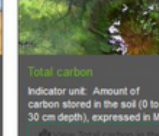
[View Protection Levels of Key Biodiversity Areas \(KBAs\) by country in the Conservation Tracking Tool](#)



Species Protection Index

Species Protection Index (SPI) evaluates the species-level ecological representativeness...

[View Species Protection Index in the Conservation Tracking Tool](#)



Total carbon

Indicator unit: Amount of carbon stored in the soil (0 to 30 cm depth), expressed in M...

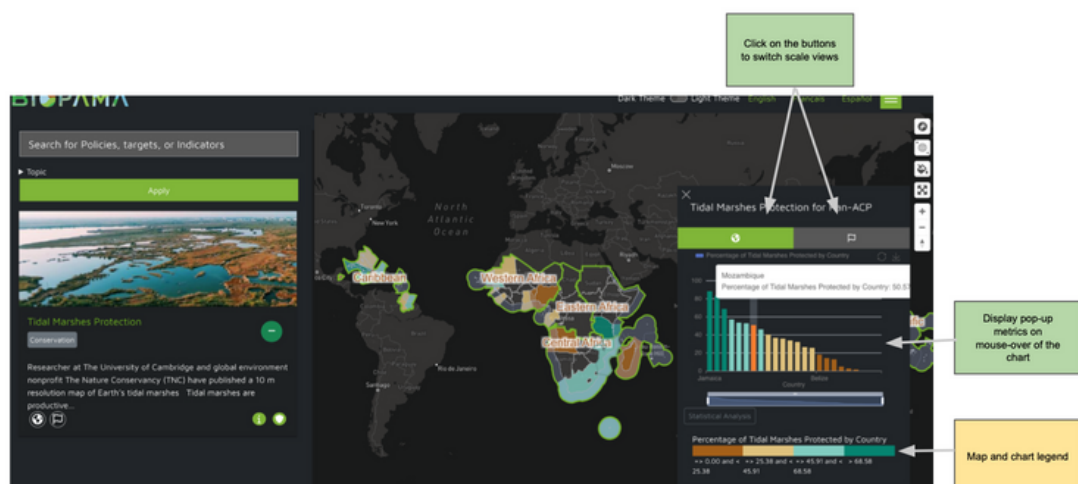
[View Total carbon in the Conservation Tracking Tool](#)

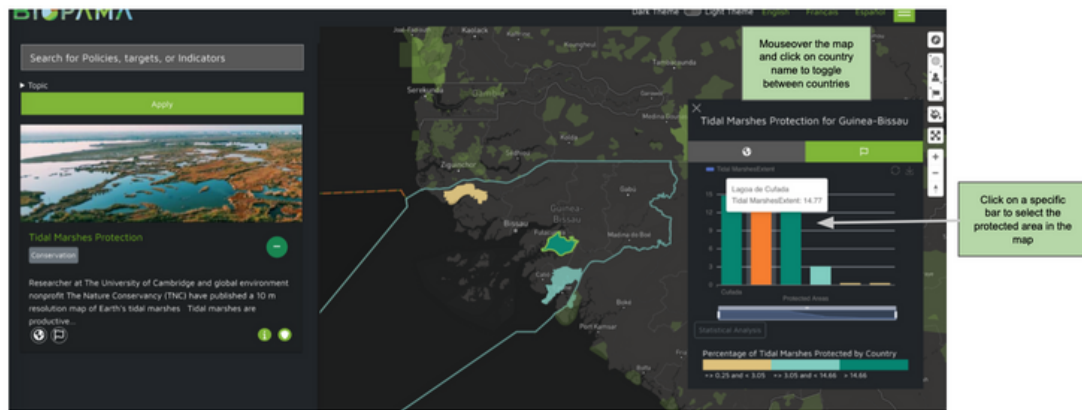
- **Visualise additional information for each layer**

To view the analysis on the Conservation tracking tool:

In the left-hand panel, users can scroll all available indicators. Click on PLUS icon in the left-hand bottom corner in each indicator card, to add the layer on the map. Click on the (i) icon to learn more about each data layer. This includes information on data source, data analysis and description of the layer. Click on icon to check the related policies of the selected indicator

Data in the TT may include information at Global, regional, national and local scale





Click on the arrow to download the chart as an image

- Download metrics through BIOPAMA APIs and GEONODE

To ensure full transparency and reusability of the indicators developed both at the global and ACP levels, BIOPAMA team has developed an API portal: <https://api.biopama.org/> to share and store data.

As an example, to retrieve information related to the tree cover loss in AC protected areas, the url below can be used:

https://api.biopama.org/api/forest/function/api_wdpa_country_tree_cover_loss_2001_2020

to retrieve that info for a country, please specify the country (ISO3) code:

https://api.biopama.org/api/forest/function/api_wdpa_country_tree_cover_loss_2001_2020/iso3=AGO

(AGO=ANGOLA in the example)

| Forest | | |
|--|----------|--|
| In this page you will find all the available APIs for Forest Ecosystems | | |
| Show | 10 | Copy CSV Excel PDF Print |
| entries | | |
| Api | Type | Comment |
| api_country_tree_cover_loss_protected_areas | function | Tree Cover_2000 and Tree Cover Loss 2001-2021 in protected and unprotected areas |
| api_cover_loss_gain_2021 | function | Forest Cover 2000, forest loss 2000-2021, forest gain 2000-2021 for acp countries |
| api_landscape_integrity_index | function | The Forest Landscape Integrity Index (FLII) is a composite index created to show the degree of forest integrity for 2019. The authors identified three Forest integrity categories: "high", "medium", and "low". Here it is presented the % of forested area with High integrity |

Click on the below buttons to download the data in different formats

Show 10 entries

Copy CSV Excel PDF Print

| Isa3_id | Country_cover_protected_areas_2000 | Country_cover_unprotected_areas_2000 | Country_loss_protected_areas_2000 | Country_loss_unprotected_areas_2000 |
|---------|------------------------------------|--------------------------------------|-----------------------------------|-------------------------------------|
| AGO | 11449.773 | 541738.538 | 502.216 | 30660.4 |
| BOI | 976.711 | 4425.992 | 17.25 | 277.749 |
| BEN | 572.532 | 1112.339 | 43.018 | 362.985 |
| BFA | 0.279 | 1.01 | 0.272 | 1.007 |
| BHS | 313.298 | 2571.805 | 18.001 | 221.708 |
| BRB | 1.287 | 50.238 | 0.036 | 3.885 |
| COK | 0.0 | 0.0 | 0.0 | 0.0 |
| COM | 479.443 | 823.425 | 21.057 | 34.214 |
| CPV | 5.772 | 56.663 | 0.044 | 0.826 |
| DJI | 0.0 | 0.001 | 0.0 | 0.0 |

Showing 1 to 10 of 50 entries

Use the API:

If functions' parameters are not compulsory try to call the function without arguments:
https://api.biopama.org/api/forest/function/api_country_tree_cover_loss_prot_unprot_2001_2020

If function parameters are compulsory, put them after the last slash separated by commas if more than one:
https://api.biopama.org/api/forest/function/api_country_tree_cover_loss_prot_unprot_2001_2020/isoa3_id=

Use these url to retrieve the data

The Conservation Tracking tool retrieves information both from BIOPAMA API and BIOPAMA Geonode Catalogue. In the indicator card info, users can find the right path to download row data. Please refer to GEONODE user guidelines to download data from this catalogue.

Click on map to display a pop-up with metrics and attributes

Click on those buttons users can download raw data or visualise abstract, analysis description and sources

Click on the name to know more on the author or contact her/him through the platform

Conserving and Protecting Intact Forest Landscapes

Download Layer
Metadata Detail
View Layer
Download Metadata

Legend
 0 - 10
 10 - 17
 17 - 30
 30 - 45
 45 - 100

Maps using this layer
 This layer is not currently used in any maps.

Styles
 The following styles are associated with this layer. Choose a style to view it in the preview map.
 (default style) [gaid_prot_unprot_2020](#)

About
 Responsible, Point of Contact, Metadata
 Author
 No Group

Title: Conserving and Protecting Intact Forest Landscapes
 License: Not Specified
 Abstract: An intact forest landscape (IFL) is a seamless mosaic of forest and naturally treeless ecosystems with no remotely detected signs of human activity and a minimum area of 500 km². (Pitsoav et al 2017) Intact forests are complex and diverse ecosystems that if lost, are irreplaceable. Research shows that designating intact forest landscapes as protected areas has proven effective at limiting their fragmentation. Since 2000, around 100 conserved and protected areas were created in intact forests areas in ACP countries, increasing the percentage of IFL protected from 11% in 2000 to 26% in 2020.
 Differences in countries in terms of IFL area reduction: Cuba has not experienced any reduction in IFLs and nowadays its intact forests are fully protected by PAs (54Mha). At the contrary Angola still not has any kind of protection for its IFLs and experienced a reduction of 99.83% of its IFL (1160 sqkm). In country the reduction of IFL area in ACP countries was higher outside PAs (19%) than within PAs (2%). Madagascar is the country where the reduction of IFL areas was very high inside protected areas (2420 sqkm). The IFL loss inside PAs has been more than 40% between 2000 and 2020. Central African Republic experienced 23% of reduction inside PAs (938,13 sqkm). This layer shows the percentage of IFLs protected by country.

| Country | IFL protected 2020 (sqkm) | IFL unprotected 2020 (sqkm) | Percentage of IFL protected 2020 | Percentage of IFL unprotected 2020 |
|--------------------------|---------------------------|-----------------------------|----------------------------------|------------------------------------|
| Angola | 0.00 | 1752.85 | 0.00 | 100.00 |
| Belize | 3330.17 | 208.36 | 91.99 | 8.01 |
| Cameroon | 19181.16 | 12787.52 | 60.00 | 40.00 |
| Central African Republic | 3070.21 | 856.90 | 82.37 | 17.62 |



Photo by Curioso Photography on Unsplash

COUNTRY PAGE

The Country page provides several data and information on biodiversity and on conservation strategies at country level, as well as on the biophysical context. It offers real-time information on various environmental factors. These include fires, floods, drought, temperature, precipitation, pressure, wind speed, and cloud coverage. The real-time data provides users with up-to-date insights into the current environmental conditions affecting the regions of interest. Importantly, all the information described above is querable/provided in real-time, ensuring that users have access to the most current and accurate data. The statistics and metrics are automatically updated as users browse the requested information, guaranteeing the retrieval of the most recent and relevant insights. Moreover, this page integrates the metrics available on the Conservation Tracking Tool.

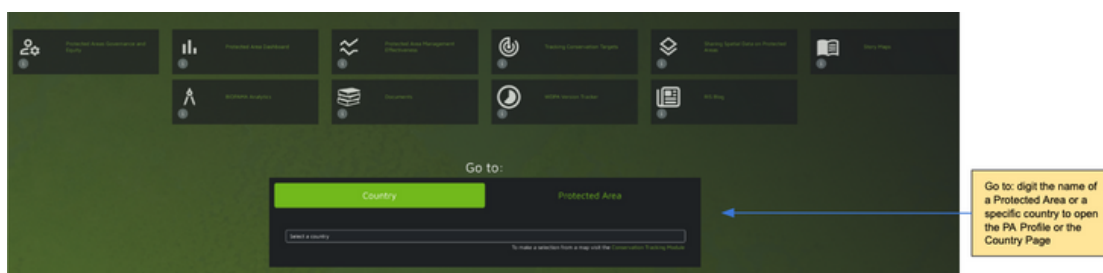
his integration allows users to analyse and compare metrics alongside underlying spatial datasets, facilitating a more in-depth understanding of conservation efforts.

The country indicators are meant to help national policy-makers evaluate priorities for their policy agendas, monitor progress, identify existing pressures, provide investors with information for prioritising their financial intervention and inform general stakeholders.

The Country Page and Protected Areas profiles are an important complement to the Conservation Tracking tool by including:

- Additional statistics from other data services
- A function to create a customised report
- Download of metric and charts from the module
- Download of metric through APIs

Users can reach the Country Page from the RIS landing Page by entering the name of the country in the search box

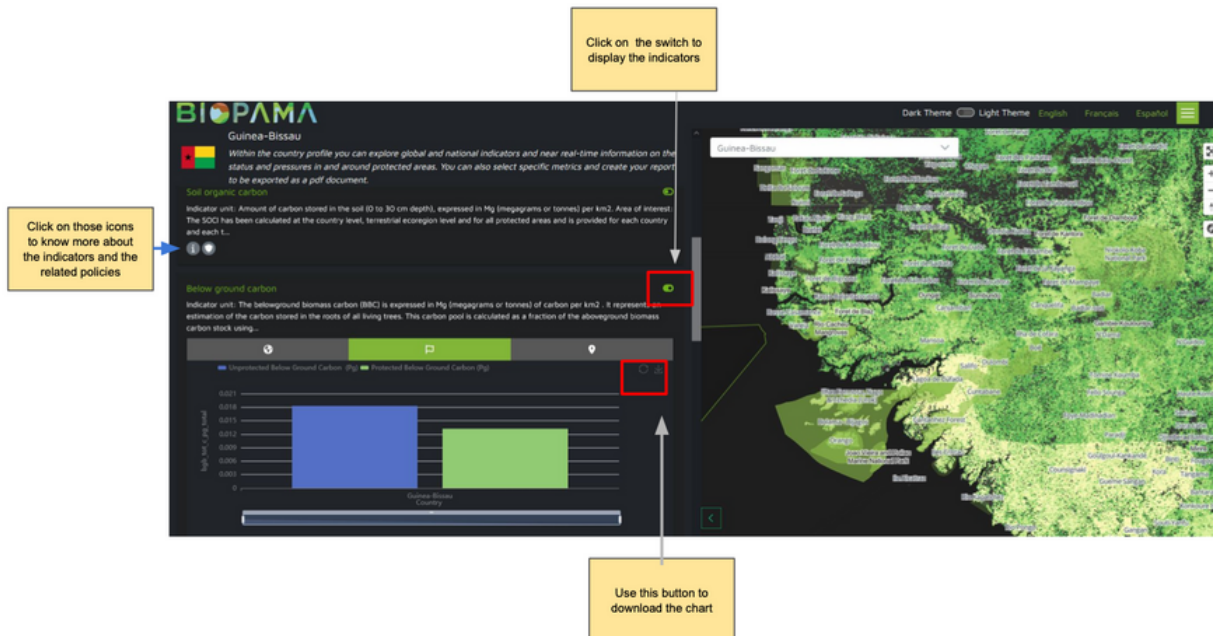
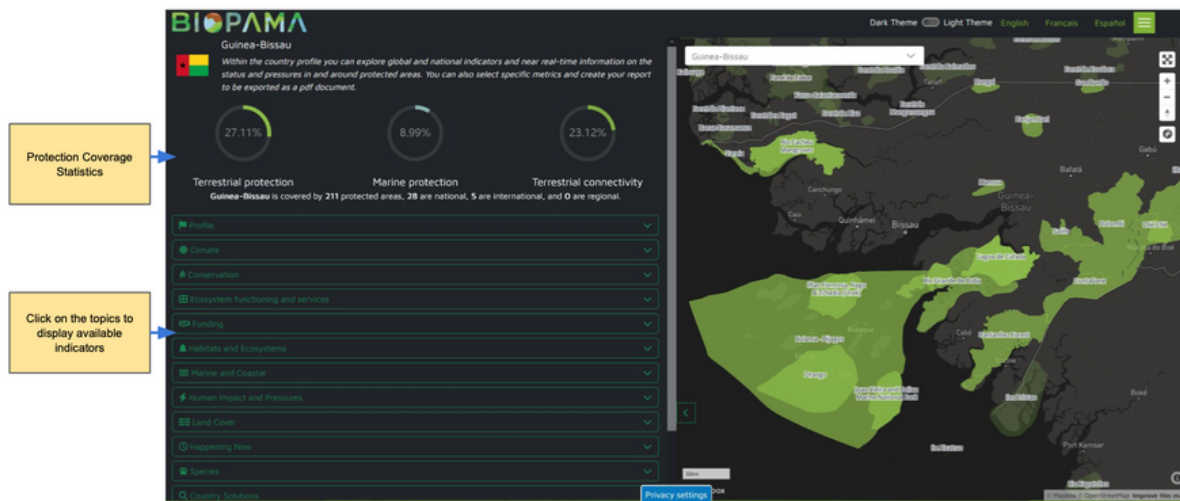


Otherwise users can click on the arrow below the country name on the map as follow:



The Country Page is a window to data and analysis at the country level. It includes:

| Topic | Description | Source |
|------------------------------------|---|--------------------------------|
| Protection | Terrestrial, marine and total protection | Protected planet |
| Profile | General environmental data from several services | UNstats, FAO, UNEP-WCMC etc |
| Climate | climate-related metrics | DOPA services, BIOPAMA APIs |
| Conservation | Indicators to measure conservation efforts at country level | DOPA services, BIOPAMA APIs |
| Ecosystem functioning and services | Indicators to measure the state of ecosystem functioning and service at country level | DOPA services, BIOPAMA APIs |
| Fundings | Conservation initiative funds and financial efforts | eConservation, BIOPAMA APIs |
| Habitats and ecosystems | Indicators to measure the state of habitat and ecosystems | DOPA services and BIOPAMA APIs |
| Marine and coastal | Indicators to measure the state of marine habitats and ecosystems | BIOPAMA APIs |
| Human impact and pressures | Indicators to measure pressures on biodiversity at country level | DOPA services and BIOPAMA APIs |
| Land cover | Land cover statistics | DOPA services, Copernicus |
| Happening now | Near real time data | |
| Species | Indicators to assess the state of species at country level | DOPA services, BIOPAMA APIs |
| Country solution | Case studies from PANORAMA solution | Panorama Solution website |
| Documents | Documents related to the specific country | Several services |



PROTECTED AREA PROFILE

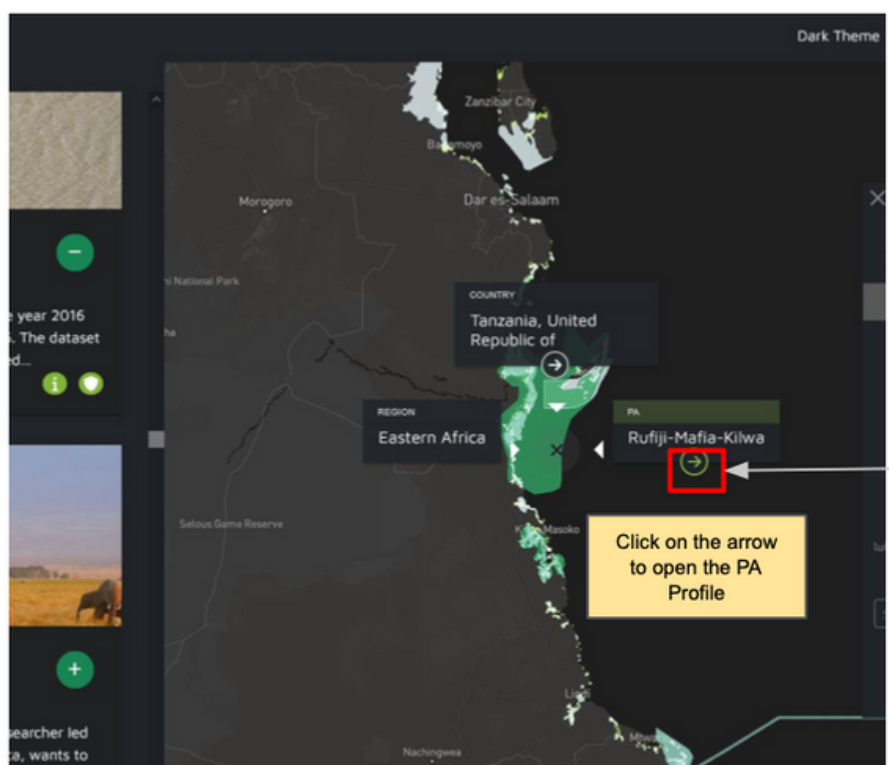
PA profile gives a first overview on relevant information about pressure and threats on Protected Areas and their biodiversity value and management efforts. It provides several indicators related to the same topics of the Country Page.

It also incorporates time-series information for key vegetation indicators such as the Normalized Difference Vegetation Index (NDVI), Leaf Area Index (LAI), and Fraction of Absorbed Photosynthetic Radiation (FAPAR).

Additionally, multi-year average precipitation data, fire data generated using NASA FIRMS, chlorophyll, primary production, and sea surface temperature (SST) have also been integrated. These time-series datasets are available at different temporal resolutions, including 10-day, monthly, or yearly basis, depending on the specific product obtained from eStation platform (please check this link to know more about eStation: <https://estation.jrc.ec.europa.eu/>). Moreover this page has integrated the metrics available on the Conservation Tracking Tool. This integration allows users to analyse and compare metrics alongside underlying spatial datasets, facilitating a more in-depth understanding of conservation efforts.

Users can reach the PA Profile from the RIS landing Page entering the name of the protected area in the search box as explained in the Fig ?

Otherwise users can click on the arrow below the protected areas on the map in the Conservation Tracking Module or Country page as follow:



The PA profile is an important complement to the Conservation Tracking tool

- Additional statistics from other services
- Create a customised report
- Download metric and charts from the module
- Download metric through APIs

Protected Area General Information

| WPA ID | DESIGNATION TYPE | YEAR | ACH CATEGORY | REPORTED AREA | CALCULATED AREA | TYPE |
|--------|------------------|------|--------------|---------------|-----------------|--------|
| 902412 | International | 2004 | Not Reported | 5969.08 | 5191.76 | Marine |

Rufiji-Mafia-Kilwa has been designated as Ramsar Site, Wetland of International Importance of International level in 2004. It covers 5191.76 km² and the management authority is not reported.

Click on the topics to display available indicators

- Climate
- Ecosystem functioning and services
- Funding
- Habitats and Ecosystems
- Marine and Coastal
- Human Impact and Pressures
- Land Cover
- Near Real-time
- Species
- Tourism
- Protected Area Solutions
- Documents

Click on the switch to display the indicators

Click on those icons to know more about the indicators and the related policies

Land Fragmentation

Indicator units: Natural (and semi-natural) land fragmentation refers to the reduction of area, the emergence of discontinuities and the isolation of natural land patches within a region of interest. Natural land spatial pattern is a relevant measure to capture changes in size, shape an...

Land Degradation

Humans need increasing amounts of plant biomass for producing food, fodder, fiber and energy. Being able to meet these demands in the long term requires a sustainable use of land and vegetation resources. A persistent reduction in biomass production or land productivity will directly an...

Land Productivity Dynamics

Increased biomass decline in productivity
Increased biomass decline in productivity
Biomass, but decreased productivity along intensive
Predicted biomass decline to productivity
Predicted biomass decline to productivity
No biomass

Use this button to download the chart

STORYMAPS

The StoryMap module promotes dynamic communication about the programme challenges, targets and outputs by immersing users in biodiversity stories. StoryMaps combine geospatial data with photos, video, audio and text to present interactive and engaging narratives that focus on a specific issue

BIOPAMA story maps tell stories on biodiversity conservation initiatives, help users to navigate into Global and Regional RIS, illustrate some case studies on the use of management effectiveness tools as IMET and promote the role of BIOPAMA regional observatories

Click on the StoryMpa card in the RIS landing page to open our storymaps catalogue



GEONODE

The BIOPAMA Geonode Module of the Reference Information System (RIS) aims to provide a data repository for collecting, interpreting, and sharing data on biodiversity and protected areas within Africa, Caribbean and Pacific (ACP) Group of States. Based on the Geonode platform, it allows users to share and download relevant data such as vector data (currently shapefiles, json, csv, kml and kmz) and raster data in a user-friendly way.

BIOPAMA Geonode catalogue focusses on the status and threats of natural resources in the ACP countries. It aims at fostering knowledge exchange among decision makers in the fields of biodiversity and conservation. Users can find data, maps and other information for analysing and tracking progress towards conservation outcomes at global, regional, national and local scale

BIOPAMA Geonode Catalogue give the possibility also to no-specialised users to download, upload and download geospatial data

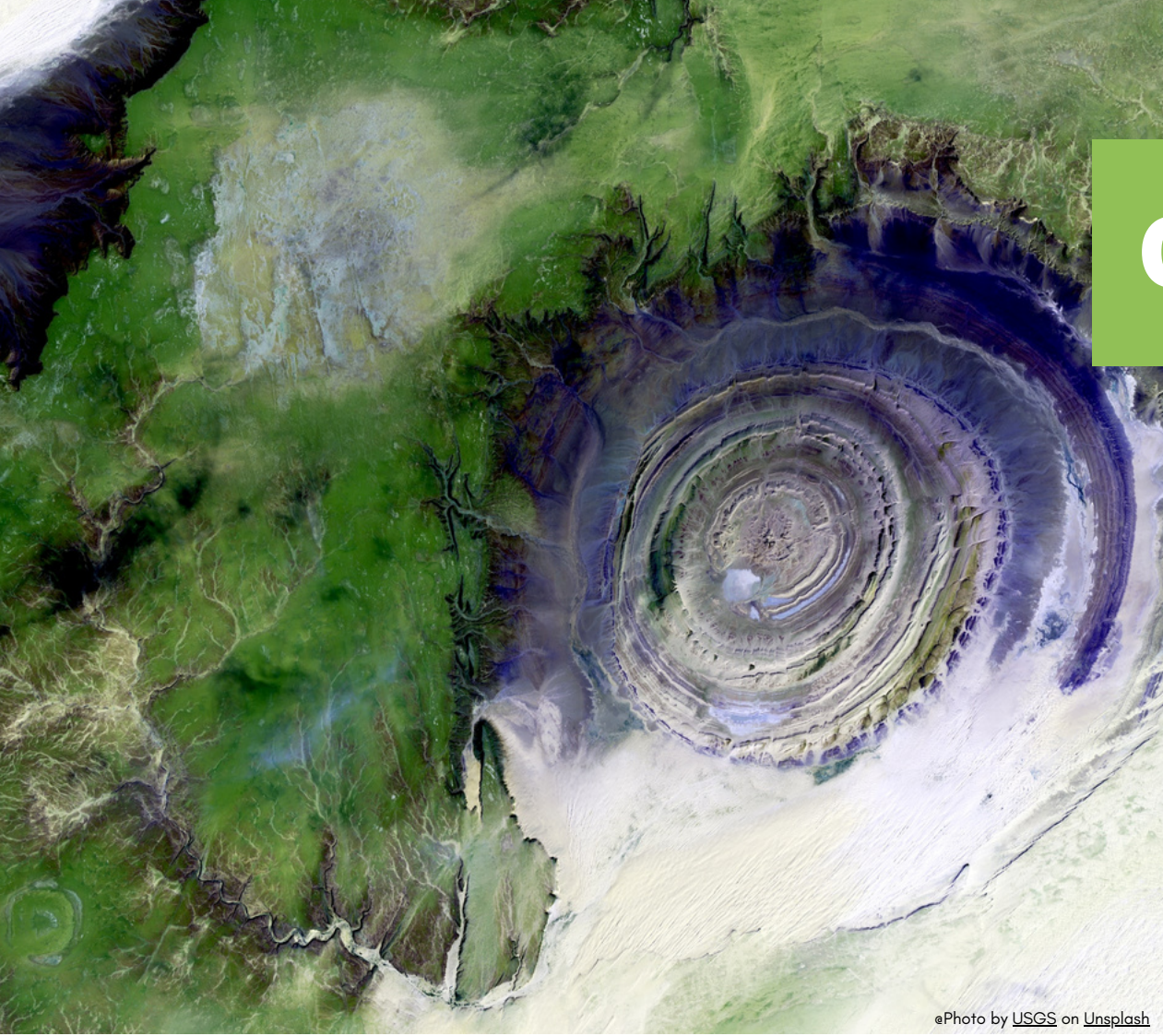
The screenshot shows a Geonode interface for a layer titled 'Conserving and Protecting Intact Forest Landscapes'. The interface includes a map, a metadata panel, and a table of data. Three callout boxes provide instructions:

- Click on map to display a pop-up with metrics and attributes**: Points to the map area.
- Click on those buttons users can download raw data or visualise abstract, analysis description and sources**: Points to the 'Download Layer', 'Metadata Detail', 'View Layer', and 'Download Metadata' buttons.
- Click on the name to know more on the author or contact her/him through the platform**: Points to the 'Author' link in the 'About' section.

Table: Percentage of IFL protected by country

| Country | IFL protected 2020 (sqkm) | IFL unprotected 2020 (sqkm) | Percentage of IFL protected 2020 | Percentage of IFL unprotected 2020 |
|--------------------------|---------------------------|-----------------------------|----------------------------------|------------------------------------|
| Angola | 0.00 | 1752.85 | 0.00 | 100.00 |
| Belize | 3330.17 | 288.36 | 91.99 | 8.01 |
| Cameroon | 19181.16 | 112787.52 | 60.00 | 40.00 |
| Central African Republic | 3070.21 | 656.90 | 82.37 | 17.62 |

● Check our user guide for our GEONODE catalogue to know how to enter in the platform, visualise layers and maps and upload/download geospatial data and information:
https://rris.biopama.org/sites/default/files/2022-10/user_guide_geonode_layout_1.pdf



CONSERVATION ANALYST

Advances in spatial biodiversity science and data availability have significantly improved our capabilities in terms of mapping and monitoring biodiversity variables and ecosystem services. The Conservation Analyst is a decision support platform that allows to analyse and spatially compare biodiversity related information and is designed to provide an easy-to-use and flexible environment that can contribute to conservation prioritisation efforts by weighting variables based on specific priorities that are applicable to conservation goals and help identify ways in which PA networks can be improved to conserve biodiversity

To learn more:



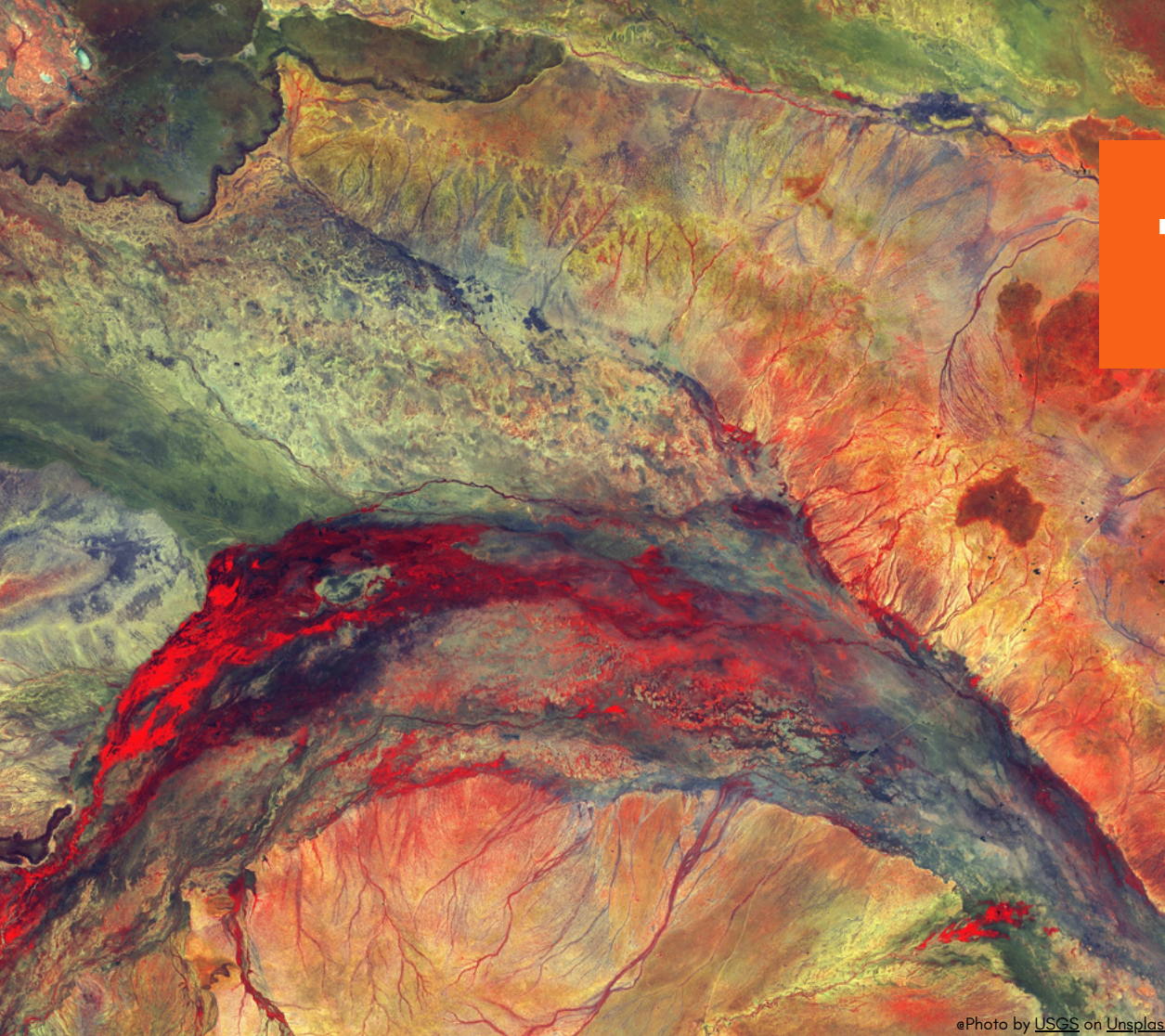
Photo by USGS on Unsplash

PAME MODULE

For monitoring and assessing the management effectiveness of PAs, in the last three decades, several methodologies have been developed. The Global Database for Protected Area Management Effectiveness (GD-PAME) is collecting assessment data from the whole globe. Protected Area Management Effectiveness (PAME) evaluations can be defined as: 'the assessment of how well protected areas are being managed – primarily the extent to which management is protecting values and achieving goals and objectives' (Hockings et al. 2006). Within the BIOPAMA Programme, the Protected Area Management Effectiveness (PAME) module aims to support PA managers and national agencies in improving protected areas management effectiveness to better achieve conservation outcomes.

The PAME module provides an overview of the most important PAME assessment tools and the many PAME assessments carried out in the ACP countries through the GD-PAME. The module also provides easy access to key PAME resources as well as PA management plans from the ACP countries. Registered users (when logged in) can contribute additional information and resources to the PAME Module. The modules support the BIOPAMA Regional Observatories, national ministries and agencies, PA managers and staff, and others

● Check our user guide for our PAME module-
link:<https://rris.biopama.org/sites/default/files/2022-10/PameModule.pdf>



PAGE MODULE

Assessing the social impacts, governance and equity of conservation

People are inextricably linked to natural resources and rely on most ecosystems on earth. It is fundamental to understand the impacts of conservation strategies and practices on the wellbeing of people living within and around protected areas. Social assessment for protected and conserved areas (SAPA) and Site-level assessment of governance and equity (SAGE) together with the Governance assessment for protected and conserved areas (GAPA) are tools for assessing the social impacts, governance and equity of conservation strategies in and around protected and conserved areas . SAPA and SAGE are methods led by the International Institute for Environment and Development

The PAGE module provides a one-stop shop for essential information and resources on PAGE with an overview of key PAGE concept

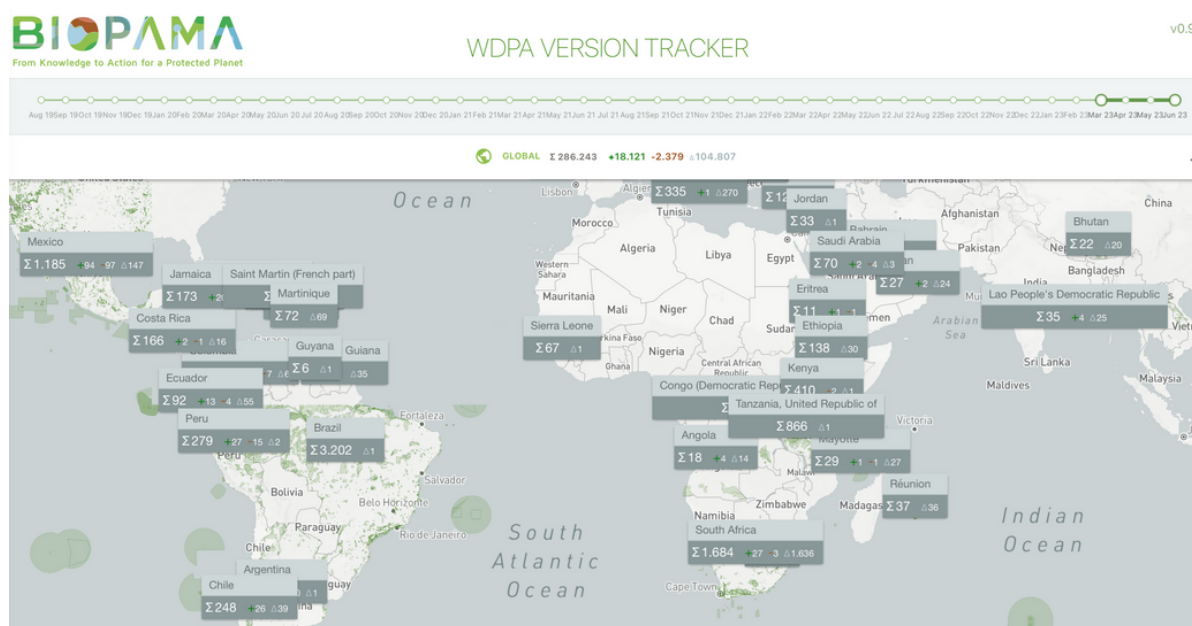
● [Check our user guide for our PAGE module-link](#)

WDPA TRACKER TOOL

The World Database on Protected Areas (WDPA) is the most comprehensive global database of marine and terrestrial protected areas. The WDPA is a joint project between UN Environment Programme and the International Union for Conservation of Nature (IUCN), and is managed by UN Environment Programme World Conservation Monitoring Centre (UNEP-WCMC). The WDPA is updated on a monthly basis, it is compiled in collaboration with a wide range of governmental and nongovernmental organisations which submit protected area data to UNEP-WCMC and it is available online through Protected Planet (www.protectedplanet.net) where the data is downloadable

There are several ways in which countries can benefit from providing data to the WDPA from the creation of the UN List of Protected areas, enabling countries to have a clearer picture of their protected areas network, to calculate indicators related to several international processes. One of the keys aims of the WDPA is to accurately reflect the coverage of protected areas within a country or region. For this reason, UNEP-WCMC formally contacts data providers to request updated data.

To highlight the evolution of WDPA and to measure the international commitments to the WDPA across countries, JRC has developed a specific tool, the WDPA dashboard tracker. Moreover, the dashboard gives an overview on protection dynamics for ACP countries.



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Lippi, S., Bertzky, B. (2022). BIOPAMA PAGE Module: Quick User Guide BIOPAMA Programme, European Commission Joint Research Centre (JRC), Ispra, Italy.

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