

## Caribbean Protected Areas Data Management Workshop



May 20 - 23, 2019  
UWI-CERMES, Barbados

Donors & Implementing Partners



[www.biopama.org](http://www.biopama.org)

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## Acronyms and Abbreviations

ACP	Africa, Caribbean and Pacific
BIOPAMA	Biodiversity and Protected Areas Management
CBD	Convention on Biological Diversity
CERMES	Centre for Resource Management and Environmental Studies
CREWs	Credible Reliable Energetic Willing country groups
EBM	Ecosystem-Based Management
EC-JRC	European Commission Joint Research Centre
EDF	European Development Fund
ESRI	Environmental Systems Research Institute
GBIF	Global Biodiversity Information Facility
GD-PAME	Global Database on Protected Areas Management Effectiveness
GIS	Geographic Information System
IUCN	International Union for the Conservation of Nature
OECD	Other Effective Area-Based Conservation Measures
ORMACC	IUCN's Regional Office for Mexico, Central America and the Caribbean
PA	Protected Area
QA/QC	Quality Assurance/Quality Control
TNC	The Nature Conservancy
UNEP	United Nations Environment Programme
UWI	University of the West Indies
WCMC	World Conservation Monitoring Centre
WDPA	World Database on Protected Areas

## Introduction

### BIOPAMA programme

The Biodiversity and Protected Areas Management ([BIOPAMA](#)) programme is an initiative of the African, Caribbean and Pacific ([ACP](#)) Group of States and is financially supported by the European Union's 11<sup>th</sup> European Development Fund ([EDF](#)). The programme is implemented by the International Union for the Conservation of Nature ([IUCN](#)) and the Joint Research Centre of the European Commission ([EC-JRC](#)). The programme aims to contribute to improving the long-term conservation and sustainable use of biodiversity and natural resources in ACP countries, within protected areas and surrounding communities, through better use and monitoring of information and capacity development on management and governance. By improving access to and availability of relevant data and information on biodiversity, climate, resource governance, livelihoods and other socioeconomic issues, BIOPAMA aims to enhance the management of national systems of terrestrial and marine protected areas.

### Caribbean Protected Areas Gateway

Within the Caribbean, the BIOPAMA programme is implemented via the [Caribbean Protected Areas Gateway](#), which is hosted by the University of the West Indies ([UWI](#)) and housed at the Centre for Resource Management and Environmental Studies ([CERMES](#)) which is a Department in the Faculty of Science and Technology at the Cave Hill Campus in Barbados. IUCN Regional Office for Mexico, Central America and the Caribbean ([IUCN-ORMACC](#)) is responsible for implementing BIOPAMA in the Caribbean, in partnership with the UWI and EC-JRC. The Caribbean Protected Areas Gateway provides relevant data and information to assist in exchanging knowledge for better PA planning and decision-making.

### UN Environment-World Conservation Monitoring Centre (UNEP-WCMC)

The UN Environment–World Conservation Monitoring Centre ([UNEP–WCMC](#)) works with scientists and policy makers worldwide to place biodiversity at the heart of environment and development decision-making to enable enlightened choices for people and the planet. UNEP-WCMC manages the World Database on Protected Areas ([WDPA](#)) and as such, the Caribbean Protected Areas Gateway works closely with them to improve the accuracy of data represented in the WDPA for the Caribbean ACP countries.

## Workshop Rationale and Objectives

The work undertaken by the Caribbean Protected Areas Gateway within the 15 Caribbean ACP countries is underpinned by the availability of accurate, up-to-date and pertinent data, information, tools and analyses. Based in Barbados, the Caribbean Protected Areas Gateway has established in-country groups (called CREWs) comprised of key persons and organisations pertaining to biodiversity and protected areas. Established CREWs therefore act as our ‘eyes and ears’ within country and are crucial in the mobilisation of critical data and information.

This regional data management workshop was held May 20–23, 2019 at UWI-CERMES, Barbados in collaboration with UNEP-WCMC. The key objectives of the workshop were to:

- improve design and functionality of the Caribbean Protected Areas Gateway
- improve quality and accuracy of protected area related data for the benefit of reporting and decision making in the BIOPAMA programme Caribbean countries
- build capacity with respect to PA related data provision and management
- establish and build relationships between the Caribbean Protected Areas Gateway, the UNEP-WCMC and national data providers

This report presents a summary of the workshop (see Appendix I for agenda) which was attended by a total of 26 persons representing various government, non-governmental and international organisations from 15 countries (see Appendix II for list of participants).

## Overviews/Introductions

Participants were given overviews of/introductions to the BIOPAMA programme, the Caribbean Protected Areas Gateway and UNEP-WCMC and the WDPA (see Appendix III for presentation slides). Key takeaways from these overviews/introductions are provided below.

### BIOPAMA programme:

- BIOPAMA is a six year programme (2017-2023) benefitting from a 60 million Euro investment from the European Union (11<sup>th</sup> EDF)

- The programme operates across 79 countries globally, 15 of which are located in the Caribbean\*
- The programme aims to reinforce the management and governance of protected and conserved areas through better use and monitoring of information and capacity development
- BIOPAMA provides unique and tailored support to protected area authorities in the ACP countries via Regional Observatories (Regional Reference Information Systems), with the Caribbean Protected Areas Gateway serving that purpose in the Caribbean
- BIOPAMA will support specific actions on the ground through a grant facility ([Action Component](#)) where 20 million Euros across the ACP will be assigned for small and medium grants for targeted conservation actions

#### Caribbean Protected Areas Gateway:

- The Caribbean Protected Areas Gateway is based on open source, free and secure software and tools
- The Caribbean Protected Areas Gateway engages with national and regional level agencies and institutions, along with protected area practitioners to enhance capacity, provide critical services and tools and align and complement with existing platforms and initiatives
- Key components of the Caribbean Protected Areas Gateway include its Regional Reference Information System (comprised of a user interface and a data/content management system[[GeoNode](#)]), a communications platform ([Yammer](#)) and the grant facility (Action Component)
- Data and information provided via the Caribbean Protected Areas Gateway comes from Global (e.g. WDPA), Regional (e.g. TNC) or National (e.g. governments) sources and cover areas such as ecological, geospatial, threats, socio-economic and governance
- Key services provided by the Caribbean Protected Areas Gateway include:
  - data hub/repository for biodiversity and protected area data
  - provision of tools and analyses
  - capacity building
  - assistance with the reporting associated with various Multilateral Environmental Agreements

\*Antigua and Barbuda, Belize, Bahamas, Barbados, Dominica, Dominican Republic, Grenada, Guyana, Haiti, Jamaica, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname and Trinidad and Tobago

- Funding
- data storage/backup
- Key benefits of working with the Caribbean Protected Areas Gateway include:
  - increased data mobilisation
  - better networking and communications
  - enhanced capacities
  - better reporting
  - funding opportunities

#### **UNEP-WCMC: WDPA:**

- the UNEP-WCMC, based in Cambridge , UK, is responsible for the management of the WDPA
- national data providers are the key sources of data, which is collected by UNEP-WCMC, fed into the WDPA and then harvested by platforms such as the Regional Reference Information Systems
- as is, the flow of data from countries could be more efficient and streamlined through the strengthening of regional networks to ensure more reliable and representative data
- UNEP-WCMC is working with the Caribbean Protected Areas Gateway (BIOPAMA programme) to achieve the above-mentioned for the Caribbean region

Following these overviews/introductions, an online demonstration of the Caribbean Protected Areas Gateway was given to highlight and orient participants to the current [online platform](#) (Regional Reference Information System), identify data and information gaps, highlight the planned redesign of the user interface and showcase a potential direction for redesign based on the updated central Reference Information System ([RIS 2.0](#)). The online demonstration highlighted the following regarding the platform:

- it features geospatial data/information, in the form of an interactive map, allowing users to visualise and analyse spatial data
- data/information is provided at three distinct levels (i.e. regional, national and site)

- it has been designed for interoperability, allowing it to communicate and harvest data from other platforms (e.g. WDPA and the Global Biodiversity Information Facility [GBIF])
- the core set of data/information being showcased for PAs is harvested from the WDPA (UNEP-WCMC) (see Appendix IV for WDPA attribute table)
- the intention is to provide a hub of data, information, tools and analyses relevant to biodiversity and PAs
- key areas to be addressed include inaccurate data being showcased, existing data gaps, the redesign of the platform to be more suited to the flavour and needs of the Caribbean region (thus highlighting the need for greater collaboration among countries/organisations/practitioners/stakeholders and the Caribbean Protected Areas Gateway)

### Practical Session 1 (Protected Areas Data)

As previously identified, the core set of data/information (see Appendix IV) being showcased for PAs by the Caribbean Protected Areas Gateway is harvested from the WDPA. An online demonstration of the [WDPA platform](#) was provided and highlighted the following:

- the complete database is provided in a number of formats (CSV, Shapefile, File Geodatabase, ESRI Web Service)
- smaller sections of the database (i.e. data/information at the country or PA level) are also provided in a number of formats (CSV, Shapefile, PDF)
- the database is updated every month
- there are inaccuracies and data gaps existing within the database (thus highlighting the need for greater collaboration among countries and UNEP-WCMC and the Caribbean Protected Areas Gateway)
- data are provided by countries to UNEP-WCMC (via a focal point and the use of a data sharing agreement), but in some instances country information have not been updated for some period of time and/or country focal points (i.e. the most suitable person to liaise with) are unknown
- country profiles are intended to be updated every five years

Following the online demonstration, participants were asked to download the information showcased for their respective countries (i.e. country profiles) as a CSV file

and through a number of exercises began the process of a country update. The attributes within each of the downloaded CSV files were identical to those provided in Appendix IV. Participants, via the guided exercises, identified errors within their respective country data set and provided supporting evidence (e.g. documents and shapefiles) where possible to support identified changes.

The concept of Other Effective Area-Based Conservation Measures (OECMs) was introduced to participants and is defined by the Convention on Biological Diversity (CBD) as:

“a geographically defined area other than a Protected Area, which is governed and managed in ways that achieve positive and sustained long-term outcomes for the in-situ conservation of biodiversity, with associated ecosystem functions and services and, where applicable, cultural, spiritual, socioeconomic, and other locally relevant values”.

It was highlighted that countries need to better understand OECMs, due to the fact that areas that do not meet the criteria to be considered a PA may very well fall under the category of OECM. Participants were asked to list potential OECMs within their respective countries.

## **Practical Session 2 (Introduction to GeoNode)**

The Caribbean Protected Areas Gateway provides a hub for biodiversity and PA related data and information, some of which are harvested from other online platforms (e.g. WDPA) and other sources (e.g. documents and geospatial) provided by organisations, practitioners etc. Data and information, such as documents (e.g. management plans) and geospatial data (e.g. shapefiles) are managed through a content management system (i.e. [GeoNode](#)). Participants were given an introduction to GeoNode (see Appendix III) and an online demonstration of the platform. Subsequent to the demonstration, participants were intended to work through uploading a document, a shapefile and the creation of a map. However, due to internet issues, participants were asked to do the latter on their own time. Key takeaways from this session regarding GeoNode include:

- it is an open-source, geospatial, content management system which serves as a data infrastructure, providing a framework for data, metadata, users and tools

- it provides easy to utilise mapping functionality, allowing users with no GIS knowledge or expertise the ability to create informative maps
- this open-source technology is currently being utilised by a number of countries (e.g. Dominica, Haiti, St. Lucia) and organisations (e.g. TNC – CaribNode and Caribbean Marine Atlas) to house, publish and share geospatial data/information
- Data published via GeoNode is visible to anyone, however, persons must have a user account for greater functionality (i.e. upload data of their own, download and utilise someone else’s data)
- a key component of uploaded data is the associated metadata (which is mandatory once any data is being uploaded)
- data uploaded into GeoNode are owned and managed by the data owner/custodian (i.e. owner get to set any restrictions, provide permissions and indicate the associated licences of the data uploaded)

### Data Management Platform Design Elements

Critical elements of any data management platform are its design and the elements which it contains, thus allowing it to be fit-for-purpose. Participants were given a brief history of the development and progression of the Caribbean Protected Areas Gateway platform in an attempt to orient them with where we are, and intentions for future development. Key points highlighted were:

- BIOPAMA programme established in 2011 and subsequently led to the development of a global platform for the ACP regions which was housed on a global server at JRC
- Caribbean Protected Areas Gateway established in 2015, with its platform simply being a cookie-cut of the global platform and also housed on a global server (JRC)
- development of the global platform, along with those for each region, was tasked to one person (i.e. Web Developer at JRC)
- in 2017, the Caribbean Protected Areas Gateway received its own server for the Caribbean region, however, issues at JRC led to lengthy set-backs regarding its set up and configuration
- in 2018, the global platform was redesigned ([RIS 2.0](#)), however, regional platforms were not

- the redesigned global platform (RIS 2.0) incorporates a focus on targets and indicators (i.e. what is to be achieved, and how to measure progress towards that objective) through the incorporation of a state-pressure-response framework
- in 2019, the Caribbean Protected Areas Gateway welcomed a Web Developer (based in Barbados) to the team, to work along and take over the tasks previously performed by the Web Developer at JRC
- the Caribbean Protected Areas Gateway, with its own server and Web Developer are now poised to redesign the online platform, based on vital inputs from the region, to make it more fit-for-purpose

Participants were introduced to various elements of protected area management which are going to be incorporated into the redesigned platform. These included the Global Database on Protected Area Management Effectiveness ([GD-PAME](#)), OECMs, Ecosystem-Based Management (EBM), the Global Socioeconomic Monitoring Initiative for Coastal Management (SocMon) Spatial and Marxan Web (Beta version being developed by JRC as a web application). Having been previously introduced to the Caribbean Protected Areas Gateway online platform, participants navigated the platform and provided valuable inputs regarding functionality, aesthetics, navigation, visualisations, languages, communications, services, tools etc. Key feedback provided is presented in Table 1.

**Table 1** Summary of feedback received regarding the current online platform

<b>Platform component</b>	<b>Feedback</b>
<b>Aesthetics</b>	The platform is not visually appealing or inviting. It could be improved with the inclusion of vibrant colours and stunning images of biodiversity (animals and plants) as well as the people working within and deriving benefits from these areas.
<b>Navigation</b>	The platform could be more intuitive to allow for easier navigation, especially when trying to retrace steps or navigate from one area to another (e.g. from one PA to another or from one country to another).
<b>Visualisations</b>	Data and information should be presented in a succinct manner which is easily understandable and useable in reports and documents.
<b>Languages</b>	The platform needs also to cater to non-English-speaking countries, with the translation of pages and other related data/information to other languages (namely French and Spanish).
<b>Communications</b>	The Yammer platform, along with CERMES' web site and Facebook page are good avenues for communication and

<b>Services</b>	dissemination of information. Communications should however not be limited to these, utilising other options where possible and available. Communications should not be a one-size-fits-all, but vary depending on the demographic being targeted. One key service would be the linking of Government and country platforms to country profiles. In many instances there is a lack of communication and sharing of data/information between and among organisations within countries, thus linking platforms to country profiles could allow for better information sharing*.
<b>Tools</b>	The inclusion of a project tracking tool would allow for an increased knowledge of what is being done and potentially increase the opportunity for collaborations and networking.

\*Participants were asked to share existing and pipeline data management platforms that they were aware of for their respective countries (see Appendix V for identified platforms)

## Data Management and Updates

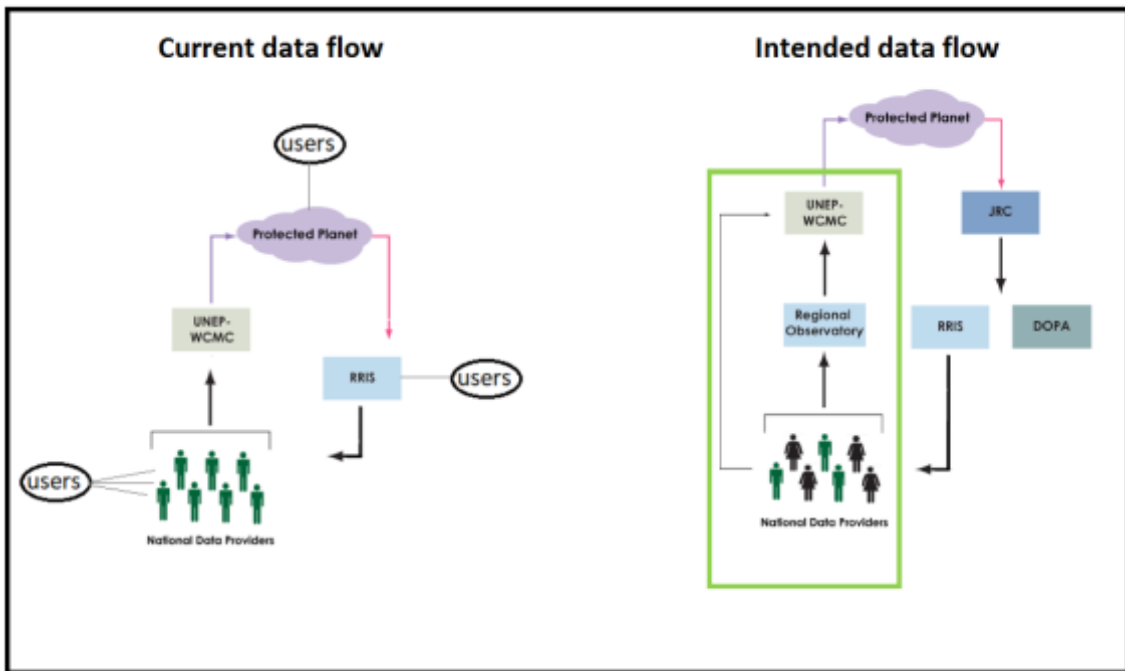
The Caribbean Protected Areas Gateway, despite working with the 15 Caribbean ACP countries (see footer on Page 3), has one office located at UWI-CERMES in Barbados. Providing accurate and up-to-date data as well as the necessary tools, analyses and services for each country requires close collaboration with key organisations, practitioners and stakeholders in each country. In an effort to achieve such, the Caribbean Protected Areas Gateway embarked on an initiative to establish county CREWs, comprised of persons who are Credible, Reliable, Energetic and Willing (CREW) from key organisations (both governmental and non-governmental) within each country. A presentation was provided to participants (see Appendix III) to provide greater detail on the rationale, process of establishment, expected functioning and perceived benefits of the CREWs. Key points presented were as follows:

- effective conservation of biodiversity requires pertinent, accurate, up-to-date data (which oftentimes reside in countries but is disaggregated among organisations, with little to no sharing)
- CREWs therefore represent a way to bring together key persons, organisations and data/information to allow for greater networking, collaboration and sharing
- in addition to the above, CREWs can lead to the better utilisation of limited resources and minimisation of the duplication of efforts, increased funding and capacity building opportunities, better representation of biodiversity and PA

data, easier fulfilment of Multilateral Environmental Agreements reporting obligations and ultimately better decision and policy making

- CREWs are completely voluntary and will utilise the Yammer platform as a virtual space for the sharing of data/information and networking among key persons and organisations within countries
- one of the key initial tasks of established country CREWs will be the updating of the core WDPA data set (Appendix IV)

Another avenue for improving data management and updates is the strengthening of the relationship between the Caribbean Protected Areas Gateway and UNEP-WCMC (responsible for managing the WDPA). To this end, both entities have embarked on an initiative to re-work the flow of data from countries to the WDPA. At present, the established data flow is from country (via a focal point) directly to UNEP-WCMC (Figure 1-left side). However, utilisation of this set-up has led to the duplication of efforts, wasting of resources, confusion, unreliable reporting, lengthy delays in updating and incorrect and out-of-date data being showcased in the WDPA and the Caribbean Protected Areas Gateway. With the establishment of country CREWs, the intended data flow will be from countries through the Caribbean Protected Areas Gateway and subsequently to UNEP-WCMC (Figure 1-right side). Such an approach would facilitate a more streamlined and efficient approach which supports the provision of targeted support where needed (capacity enhancement), shortens the updating time period and allows for more accurate and up-to-date data to be showcased in the WDPA and the Caribbean Protected Areas Gateway.



**Figure 1** Established and intended data flow between countries and UNEP-WCMC

Surrounding the sharing of data, one key concern among participants was that of data security. The Caribbean Protected Areas Gateway has developed a data management guideline and data sharing agreements, to be utilised with all organisations sharing data. Agreements are comprehensive and specifically speak to data ownership, rights, restrictions and Intellectual Property Rights. Any data shared remains that of the data owner or custodian and any restrictions, permissions and/or licences are strictly adhered to. Similarly, regarding data being published and managed via GeoNode, the data owner or custodian retains ownership of the data and upon upload sets any restrictions, permissions and licences associated with the data.

Regarding data, one component of critical importance to the Caribbean Protected Areas Gateway is that of data validation. Participants discussed the topic of data validation and the best way of achieving such for each country. Majority consensus indicated that the ‘higher up the chain’ the more likely it is to be validated data, however, for some countries no clear validation process exists. One suggestion put forward was the development of a validation work flow, especially for countries with no existing validation process.

## Way Forward and Next Steps

Based on the presentations made, practical sessions, fruitful discussions and valuable inputs and suggestions it was agreed that the way forward involves the continued engagement and involvement of all parties. As such, next steps for each involved party are provided below.

### UNEP-WCMC

- continued WDPA country profile updates, working with the Caribbean Protected Areas Gateway and countries
- development of data sharing agreement to fit the intended data flow which incorporates the Caribbean Protected Areas Gateway
- sharing of the QA\QC model currently utilised by UNEP-WCMC for data entering the WDPA

### Caribbean Protected Areas Gateway

- finalise server set up and migration of GeoNode Platform
- redesign the online platform based on input from this group and country CREWs
- identify capacity gaps with countries surrounding data collection and management via a developed survey
- establish data sharing agreements and validation process with countries
- standardize data profile and reporting
- effectively manage established country CREWs

### Workshop Participants and Country CREWs

- facilitate the in-country data sharing agreement process by identifying respective persons in country to approach
- actively participate in online CREW engagement (including on the Yammer platform)
- participate in the review of the platform redesign
- identify, document and share national and site level data/information
- identify areas for capacity enhancement

## **Workshop Conclusion**

The Caribbean Data Management workshop was a resounding success given the level of participation, engagement, discussions, inputs and general feedback within the workshop evaluation. Participants indicated that the workshop was a step up in understanding the importance of data collection and sharing and provided valuable insights into data management. A better understanding of the Caribbean Protected Areas Gateway was obtained by participants and the potential benefits of engagement. As a result of the workshop, the Caribbean Protected Areas Gateway has added to and strengthened its network of PA practitioners and also its relationship with UNEP-WCMC.

Additional elements of the workshop evaluation are provided in Appendix VI and workshop photos provided in Appendix VII.

## Useful Websites

- African, Caribbean, and Pacific (ACP) Group of States - <http://www.acp.int/>
- BIOPAMA programme - <https://biopama.org/>
- BIOPAMA Action Component - <https://action.biopama.org/>
- BIOPAMA GeoNode - <http://geonode-rris.biopama.org/>
- Caribbean Protected Areas Gateway - <http://caribbean-rris.biopama.org/>
- Global Central Reference Information System (RIS 2.0) - <https://rris.biopama.org/>
- Global Biodiversity Information Facility - <https://www.gbif.org/>
- GD-PAME - <https://pame.protectedplanet.net/>
- IUCN-ORMACC - <https://www.iucn.org/regions/mexico-central-america-and-caribbean>
- European Commission-Joint Research Centre - [https://ec.europa.eu/info/departments/joint-research-centre\\_en](https://ec.europa.eu/info/departments/joint-research-centre_en)
- UNEP-WCMC - <https://www.unep-wcmc.org/>
- University of the West Indies (UWI) - <http://www.uwi.edu/index.asp>
- UWI-CERMES - <https://www.cavehill.uwi.edu//cermes/home.aspx>
- WDPA - <https://www.protectedplanet.net/>
- Yammer - <https://www.yammer.com/biopama/>

## Appendices

### Appendix I – Workshop Agenda

#### Monday 20 May

Time	Activity	Who
08:30	Registration	All participants
09:00	Workshop Opening <ul style="list-style-type: none"> <li>• Welcome Remarks</li> <li>• Participant Introductions</li> </ul>	Hyacinth Armstrong-Vaughn (IUCN) Participants
09:15	Introductions <ul style="list-style-type: none"> <li>• BIOPAMA Programme</li> <li>• Caribbean Protected Areas Gateway</li> <li>• UNEP-WCMC and Protected Planet</li> </ul>	Hyacinth Armstrong-Vaughn Julian Walcott (UWI-CERMES) Edward Lewis
10:45	BREAK	
11:15	Demonstration: Caribbean Protected Areas Gateway	Julian Walcott/Anton Shepherd (UWI-CERMES)
	Group Photo	Justin Springer (IUCN)
12:30	LUNCH	
13:30	Protected Areas (PA) Data (practical session)	Julian Walcott/Edward Lewis All participants
15:00	BREAK	
15:20	Protected Areas (PA) Data (cont'd)	All participants
16:45	End of Day	

#### Tuesday 21 May

Time	Activity	Who
09:00	Protected Areas (PA) Data (cont'd)	All participants
10:30	BREAK	
10:50	Protected Areas (PA) Data (cont'd)	All participants
12:30	LUNCH	
13:30	Introduction to Geonode (practical session)	Julian Walcott All participants
15:00	BREAK	
15:20	Introduction to Geonode	Julian Walcott All participants
16:45	End of day	

**Wednesday 22 May**

Time	Activity	Who
09:00	Data Management Platform Design elements <ul style="list-style-type: none"> <li>• GDPAME</li> <li>• OECMS</li> <li>• EBM</li> <li>• SocMon</li> <li>• Marxan</li> </ul>	Julian Walcott/Ed Lewis/All participants
10:30	BREAK	
11:00	Data Management Platform Design elements (cont'd)	Julian Walcott/Ed Lewis/All
12:30	LUNCH	
13:30	Data Management and Update Process <ul style="list-style-type: none"> <li>• CREWs engagement review</li> <li>• Proposed workflow reminder</li> </ul>	Julian Walcott
15:00	BREAK	
15:20	Data Management and Update Process <ul style="list-style-type: none"> <li>• Country capacity/limitations</li> <li>• Licences, access, usage</li> <li>• Agreement types</li> </ul>	Plenary
16:45	End of day	

**Thursday 23 May**

Time	Activity	Who
09:00	Data Management and Update Process <ul style="list-style-type: none"> <li>• QA/QC</li> <li>• Data Validation</li> </ul>	Plenary
10:30	BREAK	
10:50	Way Forward and Next Steps	Plenary
12:30	LUNCH	
13:30	Workshop evaluation and general feedback Closing Remarks	Participants
15:00	Close of Workshop	

## Appendix II – List of Participants

No	Name	Organisation	Country
1	Shane Pinder	Department of Environment	Antigua & Barbuda
2	Tricia Lovell	Fisheries Division	Antigua & Barbuda
3	Sydnei Cartwright	Bahamas Environment, Science and Technology Commission	Bahamas
4	Lindy Knowles	Bahamas National Trust	Bahamas
5	Shonne Howell	Coastal Zone Management Unit	Barbados
6	Richard Suckoo	Coastal Zone Management Unit	Barbados
7	Hannah St-Luce-Martinez	Forestry Department	Belize
8	Alicia Nunez	Fisheries Department	Belize
9	Kurt Hilton	Fisheries Division	Dominica
10	Jacqueline Andre	Forestry, Wildlife & Parks Division	Dominica
11	Olando Harvey	Fisheries Division	Grenada
12	Steven Husbands	Protected Areas Commission	Guyana
13	Vanessa Benn	Iwokrama International Center for Rainforest Conservation and Development	Guyana
14	Prenor Coudo	Ministère de l'Environnement	Haiti
15	Ronald Cademus	Fondation pour la Protection de la Biodiversité Marine	Haiti
16	Suzanne Davis	Clearing House Mechanism, Natural History Museum of Jamaica	Jamaica
17	Mr. André Edwards	National Environment & Planning Agency	Jamaica
18	Charlie Prospere	Fisheries Division	St Lucia
19	Graeme Browne	Department of Environment	St Kitts & Nevis
20	Shemron Williams	National Parks	St Vincent & the Grenadines
21	Bradford Latham	Forestry Division	St Vincent & the Grenadines
22	Kaminie Tajib	Ministry of Spatial Planning, Land and Forest Management	Suriname
23	Ghauharali Seeraz-Ahmed	Nature Conservation Division	Suriname
24	Paul Nelson	Institute of Marine Affairs	Trinidad & Tobago
25	Valerie McNulty	TNC	USA
26	Ezra Campbell	TNC	Grenada

## Appendix III – Presentations

### BIOPAMA programme overview

**BIOPAMA Programme Overview**  
Caribbean Protected Areas Data Management  
Regional Workshop  
20-23 May 2019  
CERMES, The IWI, Barbados

Logos: ACP, EU, IUCN, BIOPAMA

**The programme: BIOPAMA (Biodiversity and Protected Areas Management)**

- An initiative of the African, Caribbean and Pacific (ACP) Group of States financed by the European Union (EU)'s 11<sup>th</sup> European Development Fund.
- A Global partnership: BIOPAMA combines
  - the protected areas and the biodiversity conservation expertise of the International Union for Conservation of Nature (IUCN) and
  - the scientific know-how of the Joint Research Centre of the European Commission (JRC).
- Implementation in close collaboration with the regional, national and local actors in Africa, the Caribbean and the Pacific countries
- A six year programme (2017-2023), continuing to build on the first programme phase.
- A 60 million Euro investment to improve the long-term conservation and sustainable use of biodiversity and natural resources.

Logos: ACP, EU, IUCN, BIOPAMA

**The locations: Africa, Caribbean and Pacific (ACP) countries**

79 developing countries (including Least Developed and Small Island States)  
More than 5 billion people whose livelihoods depend on the natural resources  
More than half of the world's 35 biodiversity hotspots  
More than 3,000 protected areas, terrestrial and marine

Logos: BIOPAMA

**The Caribbean countries**

- Antigua & Barbuda
- The Bahamas
- Barbados
- Belize
- Dominica
- Dominican Republic
- Grenada
- Guyana
- Haiti
- Jamaica
- St. Kitts & Nevis
- Saint Lucia
- St. Vincent & the Grenadines
- Suriname
- Trinidad and Tobago

**Where We Work**

Logos: BIOPAMA

**BIOPAMA Caribbean Phase 1**

Accomplishments included:

- Caribbean Protected Areas Gateway (Caribbean Gateway) established and hosted by the IWI
- Regional Reference Information System (RRIS) developed
- 200+ protected area staff involved in PA management, data and information training activities
- Successful partnerships forged with national agencies and regional institutions and initiatives

Logos: BIOPAMA

**BIOPAMA (2017-2023): the mission**

BIOPAMA aims to **reinforce the management and governance** of protected and conserved areas in the 79 African, Caribbean and Pacific (ACP) countries through better use and monitoring of **information and capacity development** on management and governance.

Logos: BIOPAMA

**The beneficiaries**

The direct beneficiaries of the BIOPAMA programme are the protected area actors at the regional, national and local levels, whose efforts will continue to be supported by the provision of tools, services, capacity development and the possibility to finance actions at the site level.

- Ministries of Environment and National agencies leading on biodiversity conservation
- Protected Area agencies
- Regional organizations
- Local communities living in and around protected areas and
- Civil society

Logos: BIOPAMA

**The partnerships**


Regional organisations, national and local conservation actors are key partners and beneficiaries.

- BIOPAMA aims to complement and align with existing platforms and initiatives.
- BIOPAMA is implemented at the regional level through the IUCN Regional Offices in Eastern and Southern Africa, West and Central Africa, Mexico Central America and the Caribbean, and Oceania.
- Key regional organizations are partners in the programme's implementation.


Logos: BIOPAMA

**The objectives: From Knowledge to Action for a Protected Planet**

BIOPAMA provides unique and tailored support to protected area authorities in the ACP countries to address their priorities for improved management and governance of biodiversity and natural resources.



- The Regional Observatories
- The Reference Information Systems
- The Action Component



**The Regional Observatories**

The Regional Observatories are the central pillar of BIOPAMA's work. They support data collection, analysis, monitoring and reporting, develop the capacities of staff and organisations to manage this information and provide policy guidance for better decision making on biodiversity conservation.

The Regional Observatories provide tools and services available for stakeholders:

- Data and information management and analysis (The Reference Information Systems)
- Planning and decision making support
- Assessment tools and support for their application including for reporting on MEAs
- Capacity development for institutions, managers and local communities.



**The Action Component – BIOPAMA Grant Making Facility**

BIOPAMA will support specific actions on the ground aimed at strengthening protected areas and natural resources management effectiveness and governance. The application of the BIOPAMA management and governance assessment tools and data/interaction from the Regional Observatories will help identify where management action is necessary.



- 20 million Euros across the ACP will be assigned for small and medium grants for targeted conservation actions.
- They will support activities on the ground, by enabling protected area agencies, NGOs, local communities, and other key actors to effectively implement their field projects.




**The Action Component – BIOPAMA Grant Making Facility**

Type of Grant	Max. Amount	Max. Duration	Scale
Swift Small Grants	≤ € 50 000	12 months	Local level
Small Grants	> € 50 000 and ≤ € 100 000	12-24 months	Local /National levels
Medium Grants	> € 100 000 and ≤ € 400 000	36 months	National/Regional levels

**Expected Results**



- Long-term conservation and sustainable use of biodiversity and natural resources in priority protected areas and surrounding communities is improved.
- Enhanced capacity of national PA agencies to use appropriate assessment tools (MET and MEAs, social and governance assessments) and use the results from those assessments for planning and decision making.
- Sustainable livelihoods of local communities, vulnerable peoples and indigenous communities are enabled through targeted field-action interventions.



**The Action Component – BIOPAMA Grant Making Facility**

**CURRENT ACTIVITIES**

- Defining regional, national and site level priorities to guide where funding requests should be focused
- 3 tiered approach is being used to define the priorities for action
- Defined priorities will be accessible during the call for proposals via the Action Component portal
- When a call is open, priorities cannot be changed or added

**The Action Component – BIOPAMA Grant Making Facility**

**CURRENT ACTIVITIES**

- Establishment of Regional Advisory Committees (RAC) – group of experts with regional experience that will assist in proposal review and recommendations for funding



Launch of action component portal <https://action.biopama.org/>



**Caribbean Region Activities 2018-2019**

- Inception Workshop – Jamaica, March 2018




- Regional training in MPA Management (collaboration with UNEP's CaMPAM Network and UWI-CERMES) – April 2018



**Caribbean Region Activities 2018-2019**

- Protected Areas Management Effectiveness
  - Green List Webinar – June 2018 Webinar
  - Regional Workshop – Saint Lucia, June 2018
  - METT Webinar – October 2018





**Caribbean Region Activities 2018-2019**

- Protected Areas Management Effectiveness
  - National Workshops



St. Vincent and the Grenadines – Nov & Mar 2018




Antigua and Barbuda – Nov 2018



**Caribbean Region Activities 2018-2019**

- Protected Areas Management Effectiveness
  - National Workshops



Belize – Mar 2018



Saint Lucia – Apr 2018



**Caribbean Region Report**

- State of Protected Areas Report Workshop – Barbados Sept 2018






- CBD 6NR Technical Support Workshop for the Caribbean Region – Barbados Jan 2019



**Caribbean Region Activities 2019-2020**

- 2019-2020 Work Plan
  - Caribbean Gateway re-design/customization to regional needs
  - Data collection, analysis, etc for supporting countries' reporting needs
  - SoPA Report development and production
  - Continued technical assistance to countries for advancing PAME
  - Action Component implementation

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From Knowledge to Action for a Protected Planet



The Caribbean Gateway to Protected Areas Management Programme (2017-2020) is a co-funded project with support from the European Union and the Government of Barbados.

# Introduction to the Caribbean Protected Areas Gateway

**Caribbean Protected Areas Gateway**  
Linking data to better decisions

**UWI** **BIOPAMA**

Caribbean PA Data Management  
Regional Workshop  
20 - 23 May 2015  
Barbados

Julian Walcott  
Technical Officer  
walcott.julian@gmail.com

McIntosh's Dockyard, Antigua & Barbuda

## Background

**BIOPAMA**

### Biological diversity (biodiversity) → Human well-being

- the number, variety & variability of living organisms
  - genetic, species, ecosystem
- cornerstone of earth's existence
  - 40% of the world's economy and 80% of the needs of the poor are derived from biological resources
  - Richer biodiversity:
    - increases resilience
    - greater opportunities for medical discoveries
    - economic development
    - adaptive responses to such new challenges as climate change

### Protected Areas

- a clearly defined geographical space
- recognised, dedicated and managed, through legal or other effective means
- to achieve the long term conservation of nature with associated ecosystem services and cultural values (IUCN Definition 2008)

#### Other Effective Area-based Conservation Measure

- a geographically defined area other than a Protected Area
- which is governed and managed in ways that achieve positive and sustained long-term outcomes
- for the in situ conservation of biodiversity with associated ecosystem functions and services
- and where applicable, cultural, spiritual, socio-economic, and other locally relevant values. (CBD 2010)

### Protected Areas (global)

> 230,000 PAs globally  
> 200 countries

Source: WDPA 2017

**Marine**  
(approx. 25 million km<sup>2</sup>)

**BIOPAMA**

### Protected Areas (global)

> 230,000 PAs globally  
> 200 countries

Source: WDPA 2017

**Terrestrial**  
(approx. 20 million km<sup>2</sup>)

**BIOPAMA**

### Current trends in biodiversity

Countries are protecting more area habitats, but biodiversity is still in stark decline.

Hill et al. 2015  
Hsu et al. 2016  
Diaz et al. 2019

### Current trends in biodiversity

#### ACP countries' challenges

The main challenges to ensure biodiversity conservation, sustainable livelihoods and effective protected area management and governance are linked to:

- Policy and legal frameworks
- Institutional capacities
- Ineffective law enforcement
- Inadequate assessments of impacts from infrastructure developments
- Lack of sustainable funding mechanisms

#### Consequences

- Biodiversity continue declining
- Ecosystems increasingly degraded
- Climate change impacts to nature and society
- Livelihoods, particularly of local communities, at risk

**BIOPAMA**

# Caribbean Protected Areas Gateway

Linking data to better decision

## Caribbean Protected Areas Gateway (Linking data to better decisions)

- hosted by the University of the West Indies (UWI)
- housed at the Centre for Resource Management and Environmental Studies (CERMES)
- launched in 2015
- funded through the 11<sup>th</sup> EDF

### The Caribbean countries (15)

- Antigua & Barbuda
- The Bahamas
- Barbados
- Belize
- Dominica
- Dominican Republic
- Grenada
- Guyana
- Haiti
- Jamaica
- St. Kitts & Nevis
- Saint Lucia
- St. Vincent & the Grenadines
- Suriname
- Trinidad and Tobago

### Where We Work

## Caribbean Protected Areas Gateway (Linking data to better decisions)

### Aim

- to improve the long-term conservation and sustainable use of natural resources in Caribbean ACP countries, via improved decision making
  - in protected areas and surrounding communities

### Objectives

- capacity building
- provide critical services and tools
- to complement and align with existing platforms and initiatives

## Caribbean Protected Areas Gateway

An initiative of the ACP Group of States financed by the European Union (EU)'s 11<sup>th</sup> European Development Fund

Implementing partner

the scientific know how of the (European Commission)

Host

Implementing partner

biodiversity conservation expertise of IUCN

engages primarily with:

- national and regional level agencies and institutions
- protected area practitioners

## Caribbean Protected Areas Gateway (Team)

IUCN	UWI – CERMES		JRC
 Hyacinth Armstrong-Vaughn Regional Coordinator	 Julian Watcott Technical Officer	 Anton Shepherd Web Developer	 Mariagrazia Graziano MFA Specialist
 Jose Courrau Sector Officer & Advisor	 Carmel Haynes Communications	 Diane Carbone Research Assistant	
 Justin Springer Technical Assistant			

# Technical Officer

## Caribbean Protected Areas Gateway (Technical Officer)

### Role


Intermediary between the end users and the Implementing agencies

### Functions

- collate with the other Regional TDCs
- develop relationships & networks
- manage the collection of data & information
  - management of a GeoNode
  - promote data sharing
- respond to request from stakeholders
- facilitate technical support and trainings
- report on advances and updates Caribbean Gateway
- develop communications products
  - newsletters and presentations
- facilitate the dissemination of information
  - lessons learned, best practices, case studies


# Caribbean Protected Areas Gateway

## Key Components



Caribbean Protected Areas Gateway (*Linking data to better decisions*)


1. Regional Reference Information System
  - user interface <http://caribbean-rris.biopama.org/>
  - data/content management system (GeoNode) <http://geonode-rris.biopama.org/>
2. Communications platform (Yammer) <https://www.yammer.com/biopama/>
3. Funding mechanism – Action Component <https://action.biopama.org/>
4. Server




Caribbean Protected Areas Gateway (*Linking data to better decisions*)

### Regional Reference Information System

- bring together the best available science and knowledge and make it easily accessible, at regional, country and site level:
  - the many knowledge products
  - projects
  - databases on protected areas
  - species
  - data uploaded, created and generated by the users themselves
- a tool which can be used to support decision making for planning, designating and managing protected areas



<http://caribbean-rris.biopama.org/>





### Data repository for biodiversity and protected areas (GeoNode)

- content management system
- platform for the management and publication of data
  - documents
  - geospatial data
- upload your own to share with others
- create useful maps



<http://geonode-rris.biopama.org/>



### Social Networking Platform (Yammer)

- enhance communications
- improve engagement
- build transparency (better informed)
- facilitates better networking
- create stronger communities
- share events, documents, ideas etc.




<https://www.yammer.com/biopama>



# Caribbean Protected Areas Gateway

## Services & Benefits



Caribbean Protected Areas Gateway (*Linking data to better decisions*)

### Key Services

- Data hub/repository for biodiversity & PA data
- Provision of tools and analyses
  - apps
- Capacity building
  - trainings
  - teaching
- Reporting
  - templates
  - NBSAPs
  - MEA reports
- Funding (Action Component)
- Data storage/backup



Caribbean Protected Areas Gateway (Linking data to better decisions)

**Why Share Data?**

- Exchange crucial networks and relationships
- Maximize distribution of energy and other
- Enable transparency and openness
- Allow for cross-related data collection
- Facilitate informed decisions
- Contribute to the realization of other key goals

**Who Benefits?**

- Research & policy makers
- PA managers and practitioners
- Government & non-governmental organizations
- Funding donors

BIOPAMA

Caribbean Protected Areas Gateway (Linking data to better decisions)

**Key Benefits**

- Increased data mobilisation
  - improved data availability and quality
  - more informed decisions
- Better networking and communications
  - increased transparency
  - increased collaboration
  - maximising of resources & reduction in duplication of efforts
  - lessons learned (case studies, information products etc.)
- Development of capacities
- Better reporting
- Funding opportunities

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Useful Links

- African, Caribbean, and Pacific (ACP) Group of States - <http://www.acp.int/>
- BIOPAMA programme - <https://biopama.org/>
- BIOPAMA GeoNode - <http://geonode-rris.biopama.org/>
- Caribbean Protected Areas Gateway - <http://caribbean-rris.biopama.org/>
- Central Reference Information System - <https://rris.biopama.org/>
- CERMES-UWI - <https://www.cavehill.uwi.edu/cermes/home.aspx>
- IUCN-ORMACC - <https://www.iucn.org/regions/mexico-central-america-and-caribbean>
- European Commission-Joint Research Centre - [https://ec.europa.eu/info/departments/joint-research-centre\\_en](https://ec.europa.eu/info/departments/joint-research-centre_en)
- University of the West Indies (UWI) - <http://www.uwi.edu/index.asp>
- Yammer - <https://www.yammer.com/biopama/>

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Thank you!

Questions?

BIOPAMA

Logo for 'PROTECTED AREAS GATEWAY' and logos for ACP, EU, and IUCN.

# Introduction to UNEP-WCMC



The UNEP-WCMC Office in Cambridge, UK



The core WDPA team and their BIOPAMA regions

 Jessica Stewart	East and Southern Africa	 Edward Lewis	Caribbean
 Maxine Desguizet	 Cristina Lazaro	 Heather Bligham	Pacific
	Central and West Africa		

## Objectives of this workshop:

To clarify:

1. Workflow
2. Roles
3. Responsibilities

What are the proposed workflows and platforms? Do we need to make changes to these?

Are we clear on the roles of the CREWS, Caribbean Gateway and UNEP-WCMC?

Who is responsible for what?

4. How to process the data that will come in through the Regional Resource Hub



## Who are we?

The UNEP-WCMC staff based in Cambridge, UK

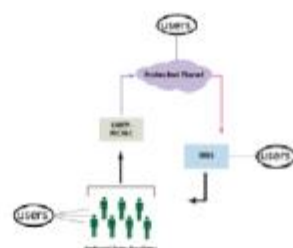


## What do we do? (broadly)

Strategy and Business Plan 2017-2021 – Thematic Priorities

- Intergovernmental Agreements
- Healthy Ocean
- Private Sector
- Area based planning
- Sustainable Development Goals
- Securing a future for wildlife

## Business as usual...



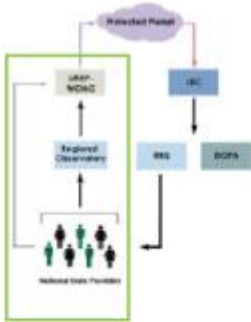
- Duplication of effort
- Wasted resources
- Confusion
- Unreliable reporting
- Unrepresentative

## What do we do in BIOPAMA?

Protected areas! <https://www.protectedplanet.net/>



## The solution!?



- More streamlined
- More efficient
- Aligning data and metrics
- Creating reliable data
- Providing targeted support where it is needed
- Ensuring more representative data
- Supporting strong regional networks

## What have we done so far?

### UNEP-WCMC BIOPAMA Update Caribbean

- Inception workshop: Jamaica March 2018
- Data sharing agreement draft – awaiting your opinions!
- Shared contacts
- Identified some initial countries we could focus on



2018/2019

THE WORLD DATA CENTER FOR BIOPAMA



### SoPA workshop – Nairobi, February 13<sup>th</sup> and 14<sup>th</sup>

#### Who attended?

- RCMRD, JRC, IUCN, UNEP-WCMC
- 8 government participants from Ethiopia, Somalia, Sudan, South Sudan, Tanzania and Uganda
- Technical partners

#### What has happened since?

- Updates for Ethiopia, Eswatini and Uganda

2018/2019

## What are/will we doing?

### UNEP-WCMC BIOPAMA Update

- Discuss data with you
- Discuss workflow (roles and responsibilities)
- Support countries undertake updates
- Start data updates...



THE WORLD DATA CENTER FOR BIOPAMA

# Introduction to GeoNode

**GeoNode**

**UWI**

**BIOPAMA**

Pigeon Island, St. Lucia

Plains Management Area, St. Lucia

Caribbean PA Data Management  
Regional Workshop  
20 - 23 May 2019  
Barbados

Julian Walcott  
Technical Officer  
walcott.julian@gmail.com

**GeoNode**

GeoNode is a content management system (storefront) of geospatial data:

- system for the management and publication of data
- it brings together various and often open source software under a consistent and easy to use interface
- allowing non-qualified users to share data and make interactive maps

data/information about the data

Data management tools built into GeoNode allow for:

- integrated creation of data, metadata, and map visualizations
- datasets in the system to be shared publicly or restricted to allow access to only specific users

**GeoNode**

a data infrastructure implementing a framework of geographic data, metadata, users and tools that are interactively connected in order to use spatial data in an efficient and flexible way.

**SDI**

Open Source Geospatial Content Management System

<http://geonode.org/>

**Regional GeoNodes**

Antigua GeoNode  
http://geonode.data.gov.ag/

St. Lucia Integrated National GeoNode  
http://sling.gosl.gov.lc/

Haiti data  
http://www.haitidata.org/

**GeoNode**

**Three distinct types of users:**

**For Users**

Browse and search for geospatial data and web services

Upload maps and data to your profile

Create and share interactive maps

Collaborate and interact with other users

log into a GeoNode website and use its functionality

**For Developers**

Developed with Django

Twitter Bootstrap and jQuery based

Implemented on

Built on OSGeo, which is open source geospatial projects

APIs for Customization and integration

Supporting many third party Databases

write code to add functionality, integrate with other systems, fix bugs, setup a server and deploy a GeoNode instance for production

**For Admins**

Reliable, scalable solution for displaying spatial data on web browsers

Complete framework for OGC compliant web services

Metadata management and aggregation APIs

Complete metadata security framework

Install and deploy GeoNode websites in production for their Users

**GeoNode**

**Layers**

describes geographic data in terms of points, that may be connected into lines and polygons.

**Geospatial data storage**

- vector data (currently only shapefiles)
- raster data (GeoTIFFs)

consists of a matrix of cells (or pixels) organized into rows and columns (or a grid) where each cell contains a value representing information

data mixing, maps creation

Once the data has been processed, GeoNode lets the user search for it, group with other data, download and create maps.

**GeoNode**

**Maps**

Maps are comprised of various layers and their styles

local layers in GeoNode

remote layers either served from other WMS servers or by web service layers such as Google or MapQuest

**Useful Links**

- African, Caribbean, and Pacific (ACP) Group of States - <http://www.acp.int/>
- Antigua GeoNode - <http://geonode.data.gov.ag/>
- BIOPAMA programme - <https://biopama.org/>
- BIOPAMA GeoNode - <http://geonode-ris.biopama.org/>
- Caribbean Marine Atlas - <https://www.caribbeanmarineatlas.net/>
- Caribbean Protected Areas Gateway - <http://caribbean-ris.biopama.org/>
- Central Reference Information System - <https://rris.biopama.org/>
- Dominica's GIS (DomiNode) - <http://dominode.dm/>
- Eastern Caribbean GeoNode (CaribNode) - <http://www.caribnode.org/>
- Haiti data - <http://www.haitidata.org/>
- St. Lucia Integrated National GeoNode - <https://sling.gosl.gov.lc/>

**BIOPAMA**

# Introduction to Country CREWs



### CREWs – Rationale

- Effective conservation/ management/ decision and policy making
- ▶ • pertinent and up-to-date data/information/knowledge
- reside within countries, but disaggregated
  - Government organisations
  - Non-Governmental Organisations (NGOs)
  - Community-Based Organisations (CBOs)
  - academic/research organisations
  - funding agencies
- such organisations rarely work together or even collaborate
  - to formulate the 'big picture' which is needed for effective conservation, management and decision making

### CREWs – Rationale

- Caribbean Protected Areas Gateway needs eyes and ears on the ground in country
- ▶ • Consisting of persons
  - Government organisations (including statistical offices)
  - Non-Governmental Organisations (NGOs)
  - Community-Based Organisations (CBOs)
  - Academic/research organisations (data collection agencies)
  - Funding agencies
  - Youth (CYEN)
  - National Focal Points (CBD, WOPA and PAME)
  - Regional Organisations (OECES)

### CREWs – Benefits

- ▶ • better networking, collaboration and sharing of data/information/knowledge within and across countries
- minimisation of duplications of efforts and better utilization of limited resources
- increased opportunities for accessing funding, trainings etc.
- better representation of protected area information (especially at local and national levels) on the Caribbean Gateway and WOPA
- development of tools and analyses needed to support improved natural resource management and governance
- easier tracking of progress made towards international, regional, national and even local conservation targets
- more informed decision and policy making
- easier fulfilment of Multilateral Environmental Agreement (MEA) reporting obligations (e.g. NBSAPs and National Reports)

### CREWs – Functioning

- completely voluntary
  - involvement in the biodiversity and protected areas arena
  - a sense of stewardship
  - the potential benefits to be had
- ▶ • provide accurate, up-to-date data (ecological, socioeconomic and governance) on protected areas and other recognised, managed conservation areas within a country (data profile)
- provide advice on the functionality and usefulness of the proposed re-design of the Caribbean Gateway interface/platform
- identify management capacity gaps and areas in which training and capacity building are needed
- identify tools and analyses currently utilised or in need of development
- periodically monitor the content published on the Caribbean Gateway to ensure information is indeed accurate and up-to-date
- identify success stories to be shared regionally
- BIOPAMA Yammer platform will be utilised to create a virtual space for members of country CREWs to be able to network, communicate, collaborate, share ideas etc.

### Process

- ToR created to share with key potential CREW members (key persons from a cross section of agencies)
- Key biodiversity and PA related organisations (contact persons within said organisations) as well as IUCN member organisations and CBD focal points identified
- ToR disseminated via email to key organisations and persons (October 2018 - March 2019)
- Country groups created on Yammer, to provide a virtual space, and persons expressing interest added.

### Process

- WOPA country data profiles downloaded, made electronic to be shared with country CREWs to be updated
- A more comprehensive PA data profile developed to capture pertinent information, data and documents from CREW members
- Comprehensive PA data profile filled in for countries to highlight what is currently being presented, gaps and discrepancies among data sources

### CREWs – Key initial tasks

- ▶ • completion of the data profile
  - national and site level
  - ecological
  - socioeconomics
  - governance and management
- redesign of the Caribbean Protected Areas Gateway platform to be fit-for-purpose
- contribution to the State of Protected Areas Report (SoPA)
- EBM self-assessments
- Investigate the decision making environment

## Appendix IV – WDPA attribute table

No	Requirement	Provided by	Field Name	Type	Length	Accepted values
1	Minimum	UNEP-WCMC	WDPAID	Number (Double)	N/A	Assigned by UNEP-WCMC. Unique identifier for a protected Area.
2	Minimum	UNEP-WCMC	WDPA_PID	Number (Double)	N/A	Assigned by UNEP-WCMC. Unique identifier for parcels or zones within a protected area.
3	Minimum	Data provider	PA_DEF	Text (String)	20	Allowed values: 1 (meets IUCN and/or CBD PA definition); 0 (does not meet IUCN and/or CBD PA definition (currently stored outside WDPA)).
4	Minimum	Data provider	NAME	Text (String)	254	Name of the protected area (PA) as provided by the data provider.
5	Minimum	Data provider	ORIG_NAME	Text (String)	254	Name of the protected area in original language.
6	Minimum	Data provider	DESIG	Text (String)	254	Name of designation.
7	Complete	Data provider	DESIG_ENG	Text (String)	254	Designation in English. Allowed values for international-level designations: Ramsar Site, Wetland of International Importance; UNESCO-MAB Biosphere Reserve; World Heritage Site. Allowed values for regional-level designations: Baltic Sea Protected Area (HELCOM); Specially Protected Area (Cartagena Convention); Marine Protected Area (CCAMLR); Marine Protected Area (OSPAR); Site of Community Importance (Habitats Directive); Special Protection Area (Birds Directive); Specially Protected Areas of Mediterranean Importance (Barcelona Convention). No fixed values for protected areas designated at a national level.
8	Minimum	Data provider	DESIG_TYPE	Text (String)	20	Allowed values: National, Regional, International, Not Applicable
9	Complete	Data provider	IUCN_CAT	Text (String)	20	Allowed values: Ia, Ib, II, III, IV, V, VI, Not Applicable, Not Assigned, Not Reported
10	Minimum	UNEP-WCMC	INT_CRIT	Text (String)	100	Assigned by UNEP-WCMC. For World Heritage and Ramsar sites only.
11	Minimum	Data provider	MARINE	Text (String)	20	Allowed values: 0 (100% Terrestrial PA), 1 (Coastal: marine and terrestrial PA), and 2 (100 % marine PA).
12	Minimum	Data provider	REP_M_AREA	Number (Double)	N/A	Marine area in square kilometers.
13	Minimum	UNEP-WCMC	GIS_M_AREA	Number (Double)	N/A	Assigned by UNEP-WCMC.
14	Minimum	Data provider	REP_AREA	Number (Double)	N/A	Area in square kilometers.
15	Minimum	UNEP-WCMC	GIS_AREA	Number (Double)	N/A	Assigned by UNEP-WCMC.

No	Requirement	Provided by	Field Name	Type	Length	Accepted values
16	Complete	Data provider	NO_TAKE	Text (String)	50	Allowed values: All, Part, None, Not Reported, Not Applicable (if Marine field = 0).
17	Complete	Data provider	NO_TK_AREA	Number (Double)	N/A	Area of the no-take area in square kilometers
18	Minimum	Data provider	STATUS	Text (String)	100	Allowed values: Proposed, Inscribed, Adopted, Designated, Established.
19	Minimum	Data provider	STATUS_YR	Number (Long Integer)	12	Year of enactment of status (STATUS field).
20	Complete	Data provider	GOV_TYPE	Text (String)	254	Allowed values: Federal or national ministry or agency, Sub-national ministry or agency, Government-delegated management, Transboundary governance, Collaborative governance, Joint governance, Individual landowners, Non-profit organisations, For-profit organisations, Indigenous peoples, Local communities, Not Reported.
21	Complete	Data provider	OWN_TYPE	Text (String)	254	Allowed values: State, Communal, Individual landowners, For-profit organisations, Non-profit organisations, Joint ownership, Multiple ownership, Contested, Not Reported.
22	Complete	Data provider	MANG_AUTH	Text (String)	254	Individual or group that manages the protected area.
23	Complete	Data provider	MANG_PLAN	Text (String)	254	Link or reference to the protected area's management plan.
24	Minimum	UNEP-WCMC	VERIF	Text (String)	20	Assigned by UNEP-WCMC. Fixed values: State Verified, Expert Verified, Not Reported (for unverified data that was already in the WDPA prior to the inclusion of the 'Verification' field).
25	Minimum	UNEP-WCMC	RESTRICT	Text (String)	20	Not publicly available, for UNEP-WCMC use only.
26	Minimum	UNEP-WCMC	METADATAID	Number (Long Integer)	12	Assigned by UNEP-WCMC. Link to source table.
27	Complete	Data provider	SUB_LOC	Text (String)	100	Allowed values: ISO 3166-2 sub-national code where the PA is located.
28	Minimum	Data provider	PARENT_ISO3	Text (String)	20	Allowed values: ISO 3166-3 character code of country where the PA is located.
29	Minimum	Data provider	ISO3	Text (String)	20	Allowed values: ISO 3166-3 character code of country or territory where the PA is located.

N.B. a 'minimum' attribute represents information that is mandatory for any spatial dataset to be integrated in the WDPA, while a 'complete' attribute is not mandatory for integration into the WDPA but is considered as crucial information for analysis and reporting on protected areas.

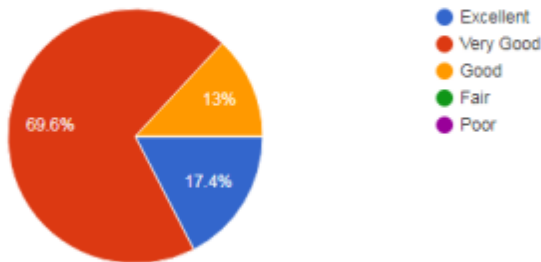
## Appendix V – Data management platforms within countries

Country	Data Management Platform
Antigua & Barbuda	<ul style="list-style-type: none"> <li>• Statistics Division (stores fisheries observed data)</li> <li>• Environmental Information Management &amp; Advisory System (EIMAS: storage of geospatial data combined with desktop GIS and analysis and visualisation)</li> </ul>
Bahamas	<ul style="list-style-type: none"> <li>• The Department of Statistics collates information from various agencies for their reporting purposes</li> <li>• The Bahamas National Geographic Information System (BNGIS) Centre is to be the government's central repository for spatial information (utilising The Bahamas Spatial Data Infrastructure Library)</li> <li>• the Government of Bahamas is seeking to establish a cross-platform for multi-agency use as well as introduce a cloud-based system</li> </ul>
Barbados	<ul style="list-style-type: none"> <li>• further investigation required by participants</li> </ul>
Belize	<ul style="list-style-type: none"> <li>• <a href="#">National Protected Areas System Platform</a></li> <li>• <a href="#">Biodiversity &amp; Environmental Resource Data System</a></li> <li>• Protected Area Conservation Trust</li> <li>• Forest Information System</li> <li>• UN Biodiversity Lab (Belize country project)</li> </ul>
Dominica	<ul style="list-style-type: none"> <li>• Fisheries Division store their data using local and cloud-based system. However, the data is only accessible internally.</li> <li>• Forestry Division house their data in-house.</li> </ul>
Dominican Republic	<ul style="list-style-type: none"> <li>• not present at workshop</li> </ul>
Grenada	<ul style="list-style-type: none"> <li>• Fisheries biological and MPA monitoring data are stored internally.</li> <li>• Coral reef data submitted to AGRRA database.</li> <li>• Data is also hosted on <a href="#">CaribNode</a> and <a href="#">CHARIM-Geonode</a>.</li> </ul>
Guyana	<ul style="list-style-type: none"> <li>• Guyana Forestry Commission and Guyana Geology and Mines Commission manage a GIS platform and EIMS</li> <li>• Protected Areas Commission manages a GIS database relevant for PA GIS data</li> <li>• Guyana Lands and Survey Commission manage GIS data (land coverage, forest cover etc.)</li> </ul>
Haiti	<ul style="list-style-type: none"> <li>• Agence nationale des Aires Protegees manage a PA database</li> <li>• UNEP-Haiti is working on a platform for environmental data management</li> </ul>
Jamaica	<ul style="list-style-type: none"> <li>• Management authorities collect and manage data and information for their designated areas</li> </ul>
St. Kitts & Nevis	<ul style="list-style-type: none"> <li>• The Department of Physical Planning is the unofficial central repository for all geospatial data</li> </ul>
St. Lucia	<ul style="list-style-type: none"> <li>• Each department houses a Government Information Service</li> </ul>
St. Vincent & the Grenadines	<ul style="list-style-type: none"> <li>• The Physical Planning Department is the primary custodian of BIOPAMA related data</li> <li>• The Statistical Unit also hosts a repository of PA related information</li> </ul>
Suriname	<ul style="list-style-type: none"> <li>• The Sub-Directorate Forest Management has an in-house data management division</li> <li>• GONINI geoportal which is the national land monitoring system of Suriname</li> </ul>
Trinidad & Tobago	<ul style="list-style-type: none"> <li>• The National Spatial Data Infrastructure (NSDI)</li> <li>• The Central Statistical Office</li> <li>• Institute of Maritime Affairs houses a repository for its data</li> </ul>

## Appendix VI – Workshop evaluation

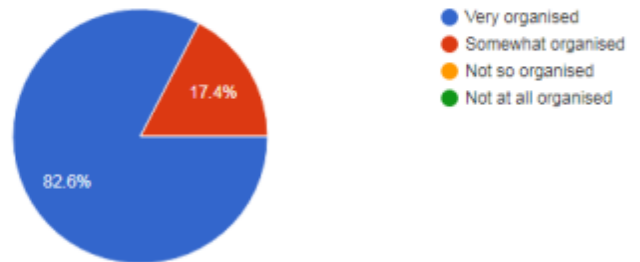
Overall, how would you rate the workshop?

23 responses



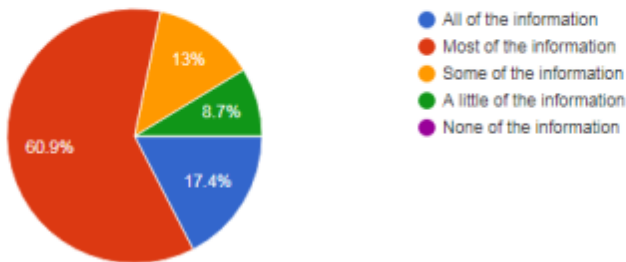
How organised was the workshop?

23 responses



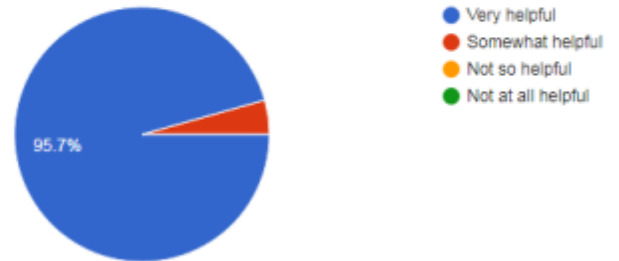
Prior to workshop, how much of the information that you needed did you get?

23 responses



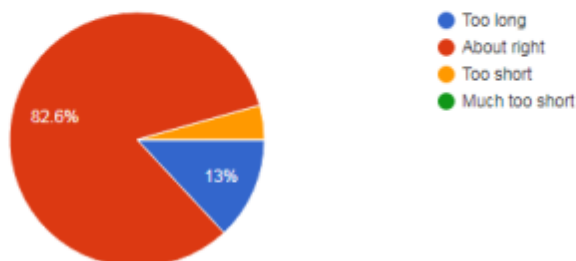
How helpful was the technical support team?

23 responses



Was the workshop length too long, too short or about right?

23 responses



Appendix VII – Workshop photos

