

Rescuing the knowledge base of Venezuela's marine biodiversity

Programme:BID **Project ID:** BID-CA2020-025-NAC **Project lead organization:**Fundacion Caribe Sur **Project implementation period:**5/7/2021 - 30/9/2022 **Report approved:** 23/2/2022

Narrative Midterm report

Executive Summary

Six months since the project's implementation started, we have achieved to publish 27,024 records of marine species in 36 datasets, training 10 people on the use of Darwin Core Standards to mobilise Biodiversity data using GBIF and OBIS and providing basic introductory knowledge to 20 participants through a workshop held in December 2021.

All of the national institutions working with marine biodiversity were contacted and confirmed their participation, unfortunately upon starting activities one institution (FLASA) notified us they would not participate in the Project due to other priorities.

The project's progress has been monitored by means of fortnight meetings with regional/institutional coordinators and the core management team and keeping track of agreed indicators for training and publication of datasets.

In 2021, the Project suffered the unfortunate loss of two Team members due to Covid-19. Both were data providers. Still, the Project has managed to comply with the expected outcomes in terms of most of the deliverables.

Other issues have still to be worked on, such as the digitization of material kept in the institutional libraries, which have been delayed partly due to inconveniences in the delivery of the scanners and portable hard drives purchased and in part to the pandemic situation which has kept the libraries closed and without access to its documents and archives.

Progress against milestones

Has your project published at least one dataset through GBIF.org?: Yes

Dataset published:

Dataset	DOI
Zooplancton del Parque Nacional Morrocoy 2000-2002	10.15468/jsb82y
Diversidad de Foraminiferos en Venezuela	10.15468/k78gtj
Records of the vertical distribution of planktonic copepods in the Southern Caribbean	10.15468/jzyssw
Biodiversidad de Moluscos de la isla de Margarita	10.15468/xka6nf
IOV Fitoplancton del Saco del Golfo de Cariaco, Venezuela	10.15468/ghqmyp

Has at least one member of your project team received certification following the BID capacity enhancement workshop?: Yes

Name of the workshop participant: Francoise Cavada

Certification obtained: Advanced Badge

Report on Activities

Activity progress summary

While a predictable rather slow start of the Project was expected due to the difficult situation of the national institutions, most of the activities have been achieved and the Project has managed to comply with the expected outcomes in terms of most of the deliverables.

All Team members have received capacity on OBIS and GBIF networks. A Training Workshop on data mobilisation with GBIF and OBIS has been delivered with 20 participants selected among 43 applicants. Two more workshops are planned to be held in April and August 2022.

Nation-wide COVID restrictions have restricted access to universities and their libraries since the beginning of the project. This has impeded any progress on the digitizing of theses, reports and historic issues of national scientific journals in order to contribute to the Ocean Information from Venezuela. We were finally able to buy the scanners and are currently waiting for their delivery to begin.

The inventory of non-digitized biodiversity data is partially completed. We have completed an inventory of the datasets the project will be publishing on top of the 36 already published. Regional coordinators are now in the process of inventorying the literature that will be digitized as universities reopen. We expect that this could be completed by April 2022.

A webinar to promote adoption of DwC standards and use of OBIS/GBIF is planned in April 2022 to showcase the datasets that have been published.

A first meeting to coordinate the production of a data paper was held in January. The publishing of a research article from the datasets produced in the project is expected to be completed by June 2022.

Completed activities

Activity: Assess number of undigitised data sources for prioritisation and preparation of final data mobilisation plan

Description: An inventory of all data sources available at national institutions was completed in order to prioritize data mobilization efforts. Each institutional coordinator prepared a curated list of datasets by institution, prioritising those whose raw data were semi-digitised or which data providers were easily accessible to answer any query during digitisation. A total of 27 datasets were identified in September 2021. These lists were used to monitor the progress in the workflow established for the publication of datasets.

Start Date - End Date: 5/7/2021 - 15/9/2021 **Verification Sources:** Inventory of partially digitised datasets

Activity: Build capacity in team members and data holders for data mobilisation

Description: All institutional or regional coordinators and other researchers from different national organizations completed a 4-week long course on Biodiversity Data Mobilization. They are all actively working getting datasets in the workflow for publication, with 36 datasets already published. Training of

regional coordinators was delayed by almost 5 weeks due to OBIS trainers changing the starting date of the workshop. This affected the planned dates for the delivery of datasets, as coordinators were able to effectively start working on digitising the inventoried datasets by the end of September 2021.

From October we have been hosting fortnightly online Helpdesk Session for the regional coordinators and various researchers who are also digitizing datasets and have been capacitated within the overall activities of the project. These sessions are recorded and available to all participants through the CaribeSur YouTube channel.

We have also completed the design and delivery of the first online workshop training: Introduction to GBIF and OBIS to mobilize biodiversity data. The training started on December 11th 2021. A total of 43 researchers and students submitted applications and 20 were accepted based on the capacity of our team members trained on the BID Capacity enhancement workshop. The training included six modules with practical exercises and a final submission of a user case scheduled for the end of January 2022. We have shared the training program with learning objectives and activities with our partners from PROVITA who are also organizing a workshop, focused on terrestrial biodiversity within their BID Institutional project. Two other training workshops are planned to start on June and August 2022.

Start Date - End Date: 17/8/2021 - 30/1/2022

Verification Sources: CaribeSur Team Members Meeting Webminar 18-08-2021 > https://youtu.be/4P4AiT7PSHk

IOC-OTGA-INVEMAR Training Evaluation Webminar 13-10-2021 https://youtu.be/HMz3i6iNfpc

- 12-11-2021 OBIS HelpDesk Webminar > https://youtu.be/p7G05MDkgxQ
- 24-11-2021 OBIS HelpDesk Webminar > https://youtu.be/kDC8AZwq9Ow
- 20-12-2021 OBIS HelpDesk Webminar > https://youtu.be/ckqwBAfGsu0
- Introduction to Biodiversity Data Mobilization Workshop Google Classroom:
- https://classroom.google.com/c/NDIyNTk5NzA3MzYy Code: lq7tqei
- First Q&A Session: 06 Dec 2021: Modules 1,2,3 https://youtu.be/g_W1AJCVVGI
- Second Q&A Session 10 Dec 2021: Workshop Modules 4,5 https://youtu.be/jZW8Xvoquu4
- Third Q&A Session: 13 Dec 2021 Workshop Module 6 https://youtu.be/KOvUabbL_ls

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Activity: Implement pipeline for preparation and publication of datasets

Description: Using the inventories of datasets by institution/region, the national coordinator has held fortnight meetings individually with each coordinator to track progress. Project documentation is kept in a Google Drive account from the Universidad Simon Bolivar where coordinators and partners can access them. Once the core and extensions are ready and revised, regional coordinators complete the metadata on a training IPT set up and managed by the OBIS Caribbean node and informs the node representative who conducts a final check before moving the dataset to the OBIS IPT. We set up a dedicated WhatsApp group to provide support and discuss issues that arise during the digitization and data cleaning stage of the pipeline, as well as fortnight help desk session led by OBIS Caribbean node.

Start Date - End Date: 18/8/2021 - 7/1/2022

Verification Sources: OBIS HelpDesk Webminars:

- 12-11-2021 OBIS HelpDesk Webminar
- 24-11-2021 OBIS HelpDesk Webminar
- 20-12-2021 OBIS HelpDesk Webminar

These are available through links in Caribe Sur YouTube channel

Activity: Integrate digitised products (dataset and literature) to host databases and repositories

Description: A total of 36 datasets with 27,024 records have been moved from the training IPT to OBIS. 24 core files are uploaded to the training IPT and are in the process of completing the metadata and publication process.

Currently three scanners have been purchased in order to digitize literature kept in the institutional libraries, this action has been delayed partly due to inconveniences in the delivery of the scanners and portable hard drives purchased and in part to the pandemic situation which has kept the libraries closed and without access to its documents and archives.

Verification Sources: See Project Page https://www.gbif.org/project/BID-CA2020-025-NAC/rescuing-the-knowledge-base-of-venezuelas-marine-biodiversity#datasets

Activity: Prepare and submit midterm report

Description: on going activity **Start Date - End Date:** 1/12/2021 - 31/1/2022 **Verification Sources:** Nothing to report on this

Activity: Produce datasets on marine biodiversity

Description: Up to this date a total of 36 datasets with 27,024 records for marine species have been published in OBIS and are also accessible through GBIF. This represents 33 % more of the total number of datasets planned for the project to deliver.

COVID restrictions have restricted access to universities' libraries since the beginning of the project. This has impeded any progress on digitizing literature to upload to OceanDocs and limited progressing with the following datasets:

1. Marine biodiversity of La Restinga National Park *

- 2. Ichthyoplankton of the northeastern Venezuelan coast *
- 3. Phytoplankton of the Northeastern Venezuelan coast *
- 4. Zooplankton of the Northeastern Venezuelan coast *
- 5. Seagrass-associated molluscs from the northeastern coast of Venezuela *
- 6. Decapods of Margarita Island *
- 7. Crustacea Decapoda of Zulia, Venezuela *

These represent 25% of the datasets originally planned to be delivered. However, the impact on this deliverable is reduced by the increased number of datasets identified on the national inventory made by the institutional coordinators.

Start Date - End Date: 30/9/2021 - 31/7/2022

Verification Sources: See Inventario Datasets docs

Activity: BID Capacity enhancement workshop certification obtained

Description: Two Project Team members, Jeannette Perez, an institutional coordinator and Francoise Cavada, a volunteer researcher, completed the online training and submitted the user case for evaluation. They are currently waiting the certification outcome.

Start Date - End Date: 1/8/2021 - 31/12/2021

Verification Sources: Advance badge received by one of the participants. Currently waiting the certification outcome for the second participant

Activity: Contact and engage relevant stakeholders to increase participation in GBIF network and geographic coverage within OBIS datasets

Description: We have been in contact with our Project partners from PROVITA and are participating in a meeting with the Director of the National Office of Biodiversity, Mrs Carliz Diaz. This meeting has been constantly postponed on her end and we still do not have a date for it.

As part of our planning for the webinars we will engage with University Department heads and students' associations to also publicize the trainings. However, the restriction to access universities has proven a difficult barrier to mobilize university staff and students.

Start Date - End Date: 1/8/2021 - 31/7/2022

Verification Sources: No report attachmets

Report on Deliverables

Deliverables progress summary

To date, a total of 36 datasets with 27,024 records for marine species have been published in OBIS and are also accessible through GBIF. This represents 33 % more than the total number of datasets planned for the project to deliver.

COVID restrictions nationwide have impeded access to universities' libraries since the beginning of the project. This has hindered progress on digitizing literature to upload to OceanDocs and limited progressing with the following datasets:

Marine biodiversity of La Restinga National Park *

Ichthyoplankton of the northeastern Venezuelan coast *

Phytoplankton of the Northeastern Venezuelan coast *

Zooplankton of the Northeastern Venezuelan coast *

Seagrass-associated molluscs from the northeastern coast of Venezuela *

Decapods of Margarita Island *

Crustacea Decapoda of Zulia, Venezuela *

These represent 25% of the 27 datasets originally planned to be delivered. However, the impact on the project is reduced by the increased number of datasets identified on the national inventory made by the institutional coordinators of which 36 datasets are already published.

Progress towards deliverables

Dataset deliverables

Marine biodiversity of La Restinga National Park

Dataset type: Occurrences Dataset scope: National Number of records: 1,000 Data holder: ECAM-UDO Data host institution: ECAM-UDO % complete: 0% Status update: Delayed due to COVID restrictions DOI: Expected date of publication: 2022-05-31

The fish of Nueva Esparta coastal lagoons

Dataset type: Occurrences Dataset scope: National Number of records: 473 Data holder: ECAM-UDO Data host institution: ECAM-UDO % complete: 100% Status update: Completed DOI: 10.15468/j3b7q8 Expected date of publication:

The Molluscs of Nueva Esparta

Dataset type: Occurrences

Dataset scope: National Number of records: 2,000 Data holder: ECAM-UDO Data host institution: ECAM-UDO % complete: 0% Status update: Delayed due to COVID restrictions DOI: Expected date of publication: 2022-05-31

Ichthyoplankton of the northeastern Venezuelan coast

Dataset type: Occurrences Dataset scope: National Number of records: 300 Data holder: IOV-UDO Data host institution: IOV-UDO % complete: 0% Status update: Delayed due to COVID DOI: Expected date of publication: 2022-08-31

Phytoplankton of the Northeastern Venezuelan coast

Dataset type: Occurrences Dataset scope: National Number of records: 500 Data holder: ECAM-UDO Data host institution: ECAM-UDO % complete: 0% Status update: Delayed due to COVID restrictions DOI: Expected date of publication: 2022-08-31

Zooplankton of the Northeastern Venezuelan coast/

Dataset type: Occurrences Dataset scope: NAtional Number of records: 300 Data holder: IOV-UDO Data host institution: IOV-UDO % complete: 0% Status update: Delayed due to COVID DOI: Expected date of publication: 2022-08-31

Seagrass-associated molluscs from the northeastern coast of Venezuela

Dataset type: Occurrences Dataset scope: National Number of records: 100 Data holder: ECAM-UDO Data host institution: ECAM-UDO % complete: 0% Status update: Delayed due to COVID restrictions DOI:

Expected date of publication: 2022-05-31

Decapods of Margarita Island

Dataset type: Occurrences Dataset scope: National Number of records: 300 Data holder: ECAM-UDO Data host institution: ECAM-UDO % complete: 0% Status update: Delayed due to COVID restrictions DOI: Expected date of publication: 2022-05-31

Crustacea Decapoda of el Zulia, Venezuela

Dataset type: Occurrences Dataset scope: National Number of records: 150 Data holder: IVIC Data host institution: IVIC % complete: 0% Status update: Delayed due to COVID restrictions DOI: Expected date of publication: 2022-05-31

Population status of the blue crab Callinectes spp. in Cuare Wildlife Refuge

Dataset type: Occurrences Dataset scope: National Number of records: 124 Data holder: IVIC Data host institution: IVIC % complete: 100% Status update: Completed DOI: 10.15468/6mdxdk Expected date of publication:

Littoral brachyuran crabs (Crustacea: Decapoda) from Falcon, Venezuela

Dataset type: Occurrences Dataset scope: National Number of records: 200 Data holder: IVIC Data host institution: IVIC % complete: 0% Status update: data digitization DOI: Expected date of publication: 2022-05-31

Local distribution and abundance of swimming crabs (Callinectes spp. and Arenaeus cribrarius) in Venezuela

Dataset type: Occurrences Dataset scope: National Number of records: Data holder: IVIC Data host institution: IVIC % complete: 0% Status update: Data digitization DOI: Expected date of publication: 2022-05-31

Spatial distribution, density, and relative growth of Microphrys bicornutus (Latreille, 1826) (Brachyura: Majidae) in five biotopes in a Thalassia complex

Dataset type: Occurrences Dataset scope: National Number of records: Data holder: IVIC Data host institution: IVIC % complete: 0% Status update: Data digitization DOI: Expected date of publication:

Differences between Mithraculus spp. in Thalassia beds within Morrocoy National Park

Dataset type: Sampling Event Dataset scope: National Number of records: 1,076 Data holder: IVIC Data host institution: IVIC % complete: 0% Status update: Data digitization DOI: Expected date of publication: 2022-05-31

Benthic coral reefs assemblages in Los Roques National Park

Dataset type: Sampling Event Dataset scope: National Number of records: 150 Data holder: SVE Data host institution: SVE % complete: 0% Status update: Data digitalization DOI: Expected date of publication: 2022-04-30

Reef fish assemblages in Los Roques National Park

Dataset type: Sampling Event **Dataset scope:** National **Number of records:** 60 **Data holder:** SVE **Data host institution:** SVE % complete: 0% **Status update:** Data digitization **DOI: Expected date of publication:** 2022-05-31

Size structure and abundance of the threatened pillar coral Dendrogyra cylindrus in Los Roques National Park

Dataset type: Sampling Event Dataset scope: National Number of records: 90 Data holder: SVE Data host institution: SVE % complete: 0% Status update: Data digitization DOI: Expected date of publication: 2022-05-31

Microphytobenthos from the mucopolysaccharide layer of Scleractinia corals in Los Frailes Archipelago, Venezuela

Dataset type: Sampling Event Dataset scope: National Number of records: 450 Data holder: SVE Data host institution: SVE % complete: 0% Status update: Data digitization DOI: Expected date of publication: 2022-05-31

Microalgae associated with reef-building corals in upwelling and non-upwelling reef patches

Dataset type: Sampling Event Dataset scope: National Number of records: 210 Data holder: SVE Data host institution: SVE % complete: 0% Status update: Data digitization DOI: Expected date of publication: 2022-05-31

Mollusks and polychaeta in seagrass beds of San Esteban National Park, Venezuela

Dataset type: Sampling Event Dataset scope: National Number of records: 150 Data holder: SVE Data host institution: SVE % complete: 0% Status update: Data digitization DOI: Expected date of publication: 2022-05-31

The Coral reefs of San Esteban National Park, Venezuela

Dataset type: Occurrences Dataset scope: National Number of records: 60 Data holder: UC Data host institution: UC % complete: 0% Status update: Data digitization DOI: Expected date of publication: 2022-05-31

The marine fish of Venezuela

Dataset type: Occurrences Dataset scope: National Number of records: 1,500 Data holder: FLASA Data host institution: FLASA % complete: 0% Status update: FLASA decided not to participate in the Project because of other priorities DOI: Expected date of publication:

Megabenthos from the Paraguana Peninsula

Dataset type: Sampling Event Dataset scope: National Number of records: 1,800 Data holder: USB Data host institution: USB % complete: 0% Status update: Data digitization DOI: Expected date of publication: 2022-05-31

Foraminifera of Venezuela

Dataset type: Occurrences Dataset scope: National Number of records: 4,200 Data holder: USB Data host institution: USB % complete: 0% Status update: Data digitization DOI: 10.15468/k78gtj Expected date of publication: 2022-05-31

Polychaeta from the Gulf of Venezuela

Dataset type: Sampling Event **Dataset scope:** National **Number of records:** 3,600 **Data holder:** USB **Data host institution:** USB % complete: 0% Status update: Data digitization DOI: Expected date of publication: 2022-05-31

Agenda Morrocoy (corales y manglares)

Dataset type: Occurrences Dataset scope: National Number of records: 2,500 Data holder: IZET-UCV Data host institution: IZET-UCV % complete: 0% Status update: Data digitization DOI: Expected date of publication: 2022-05-31

Sponges species associated R. mangle roots, National Park Morrocoy

Dataset type: Occurrences Dataset scope: National Number of records: 1,301 Data holder: IZET-UCV Data host institution: IZET-UCV % complete: 100% Status update: Completed DOI: 10.15468/tgjd5p Expected date of publication:

Other deliverables

Events

Introduction to Biodiversity Data Mobilization Workshop

Dates: 2021-12-01 - 2021-12-10 Organizing institution: CaribeSur Country: Venezuela Number of participants: 20 Comments: Website or sources of verification: https://classroom.google.com/c/NDIyNTk5NzA3MzYy

Communications and visibility

Main communications and visibility of the Project has been shared by means of CaribeSur's Blog http://caribesur.blogspot.com and social media, Twitter and Instagram. Links to an event has been added to the Project's page.

Twitter: https://twitter.com/CaribeSurOrg/status/1436019852016328705?s=20 https://twitter.com/CaribeSurOrg/status/1452645954042146829?s=20 https://twitter.com/CaribeSurOrg/status/1462561872373288965?s=20 https://twitter.com/CaribeSurOrg/status/1458971598023802884?s=20 https://twitter.com/CaribeSurOrg/status/1463629808227823622?s=20 https://twitter.com/CaribeSurOrg/status/1460033233481670664?s=20 https://twitter.com/CaribeSurOrg/status/1470923081065668610?s=20 https://twitter.com/CaribeSurOrg/status/1470401822003458050?s=20 https://twitter.com/CaribeSurOrg/status/1471227352822784013?s=20 https://twitter.com/CaribeSurOrg/status/1481652154347638787?s=20 https://twitter.com/CaribeSurOrg/status/1481652160160927748?s=20 https://twitter.com/CaribeSurOrg/status/1481652167341604864?s=20 https://twitter.com/CaribeSurOrg/status/1481652167341604864?s=20

Instagram:

https://www.instagram.com/p/CT78E71J-j0/?utm_medium=copy_link https://www.instagram.com/p/CWe4bcUs2_Q/?utm_medium=copy_link https://www.instagram.com/caribesurorg/p/CW_b_7up6a3/?utm_medium=copy_link https://www.instagram.com/p/CXi5B9vupQv/?utm_medium=copy_link

Monitoring and evaluation

Monitoring and evaluation findings

Our monitoring and evaluation plan has been supported on sub-national KPI through the number of datasets published by coordinators relative to those identified at the start of the project on the inventory. Digitisation of literature and 25% of planned datasets has been delayed due to COVID restrictions and the death of a data provider and a team member. Totalling all published datasets, the project progress is at 70%.

Trainings like the IOC-OTGA-INVEMAR Workshop took a lot of time, reducing productivity in terms of datasets production for publication. However, the number of participants in training workshops is a positive feedback. 10 people were trained at the OBIS Workshop, 2 in GBIF Data Mobilization and 20 more are currently engaged in completing our first online training workshop, for which 43 people applied. The contribution of GBIF Consultant Leonardo Buitrago is highly appreciated.

3 HelpDesks conducted by OBIS Caribbean node instructors have been of great aid to the team. Considering the local difficulties in internet connection and constant power outages, the recording of sessions and subsequent access through the YouTube channel has resulted to be a good dynamic.

The national coordinator has kept constant meetings with the institutional coordinators and it is important to highlight the positive feedback received from participants, enabling a very cooperative working dynamic among Team members and Project's allies, which will set up the basis for establishing a national network for data mobilisation of marine biodiversity records.

During the remaining period, efforts will be carried out with partner organization Provita in order to promote Venezuela's GBIF membership.

Impact of COVID-19 pandemic on project implementation

The Project suffered the unfortunate loss of two participants due to COVID-19, IOV-UDO Coordinator Dr. Baumar Marin and Dr. Carlos Rivero-Blanco, country focal point from our partner institution IUCN-WCPA. COVID also has restricted access to universities and libraries, delaying any progress on digitizing literature and limiting advances with some datasets. However, shortly we will be able to start using the scanners and portable hard drives purchased to start digitizing literature.

GBIF leads the Biodiversity Information for Development (BID), a programme funded by the European Union. The programme provides supplementary support for activities addressing the needs of regional researchers and policymakers through mobilization and use of biodiversity data.

