GBIF Global Biodiversity Information Facility

BID Biodiversity Information for Development

Lionfish (*Pterois volitans*), Curaçao. Photo by Laszlo Ilyes via Flickr, licensed under CC BY 2.0.

Tracking the red lionfish invasion in Barbados

Julian Walcott

April 4, 2018
THE BID PROGRAMME IS FUNDED BY THE EUROPEAN UNION

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INTRODUCTION

BID GBIF

BID & GBIF

BID: Biodiversity Information for Development programme

- four-year, €3.9 million programme
- funded by the European Union
- led by GBIF

GBIF: Global Biodiversity Information Facility

- an international network and research infrastructure
- funded by the world's governments
- aimed at providing anyone, anywhere, open access to data about all types of life on Earth

BID & GBIF

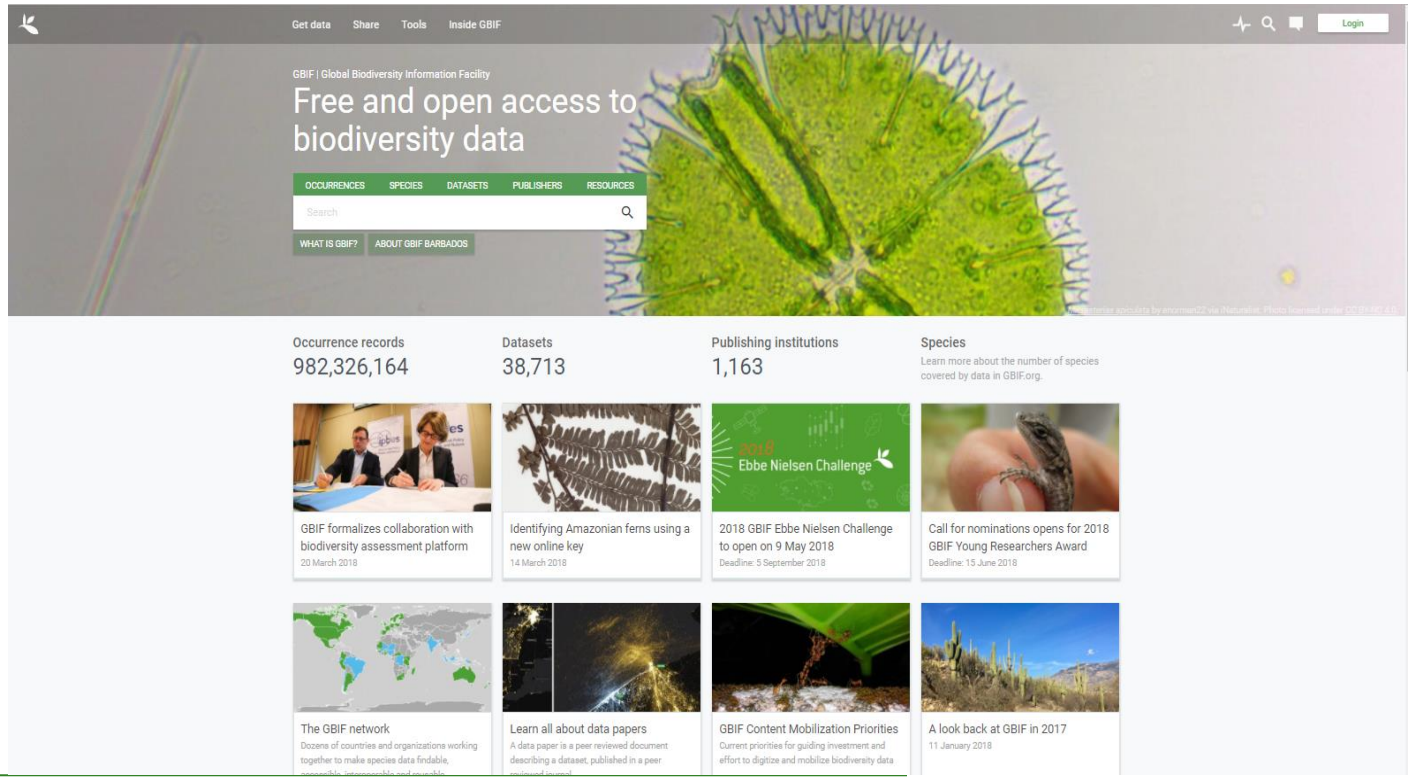
GBIF

- 1999 – it was recognised that an international mechanism was needed to make biodiversity data and information accessible worldwide

https://www.gbif.org

- 2001 – GBIF established

- Coordinated through its Secretariat in Copenhagen



BID & GBIF

Aim:

- increase the amount of biodiversity information available in the Africa, Caribbean and the Pacific (ACP) nations

NEWS | 10 FEBRUARY 2015

GBIF and EU to improve biodiversity information for developing countries

The European Union and GBIF have launched a four-year, €3.9 million project aimed at increasing the amount of biodiversity information available for developing countries.

The European Union (EU) and the Global Biodiversity Information Facility (GBIF) have launched a four-year €3.9 million project aimed at increasing the amount of biodiversity information available for developing countries.

GBIF's Biodiversity Information for Development (BID) will focus on enhancing capacity and mobilizing data from countries in Africa, the Caribbean and the Pacific. By gathering information relevant for policymakers, BID will enable those countries to meet key policy needs and commitments under intergovernmental processes like the Convention on Biological Diversity (CBD) and the Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES). BID will also help the European Union fulfil the commitments made to avert global biodiversity loss.

BID's objective is to improve the management of natural capital in these regions, enabling biodiversity information to be used as evidence for decisions and thus support human well-being.

The funding will support two specific areas of activity. First, GBIF will identify needs and priorities for biodiversity information for each target region through studies, workshops and assessment of existing capacity. Second, BID's individual projects will expand on existing biodiversity information networks and implement best practices in gathering and sharing policy-relevant biodiversity information in decision-making.

BID will initially focus on Africa, and the project's kick-off meeting is planned as part of a regional event in Cape Town in May. 'Africa Rising: Mobilising Biodiversity Data for Sustainable Development' will bring together policy makers and a range of experts from across Africa to accelerate regional understanding of the value of biodiversity data in decision making, and the opportunities that exist to strengthen capacity in mobilizing such data for universal access and use. BID will subsequently work with partners in the Caribbean and Pacific regions to develop priorities for biodiversity information and will issue calls for proposals at a later stage of the project.

Targeted Outcomes:

- enhanced capacity for effective mobilization and use of biodiversity information
- enhanced availability of information resources

BID GBIF

GBIF led - BID funded projects

Call for proposals

- 2015 - Sub-Saharan Africa
- 2016 - Caribbean & Pacific
- 2017 - Sub-Saharan Africa

NEWS | 7 SEPTEMBER 2016

GBIF opens BID calls for proposals from the Caribbean and the Pacific

GBIF invites the submission of proposals for funding from the Caribbean and the Pacific under for the EU-funded Biodiversity Information for Development programme.

Mangrove island, Caye Caulker, Belize. CC BY-NC-SA 2009; CameliaTWU.

GBIF invites the submission of proposals for funding from the Caribbean and the Pacific through the EU-funded Biodiversity Information for Development (BID) programme. The total potential funding assigned to these two calls is €1,000,000, or €500,000 for each region.

Grants:

1. Regional biodiversity data mobilization grants (€60,000)

   establish or strengthen international collaborations to increase the availability and use of biodiversity data

2. National biodiversity data mobilization grants (€60,000)

   establish or strengthen national biodiversity information facilities and to increase the biodiversity data available about the country to respond to national priorities

3. Small biodiversity data mobilization grants (€5,000)

   mobilize biodiversity data relevant for biodiversity conservation priorities

GBIF led - BID funded projects

Project types

- Mobilize biodiversity data relating to protected areas, threatened species, and invasive alien species
- Use and extend best practices for digitizing natural history collections and mobilizing other biodiversity data
- Apply biodiversity data in support of decision-making and research
- Develop lasting national, regional or thematic networks to support ongoing data sharing and reuse

GBIF led - BID funded projects

Application process

- consisted if a competitive two-stage process
- involved review by two panels of international experts with experience in the respective regions
- concept notes submitted for review (November 2016)
- based on the panels' recommendations selected applicants asked to prepare full proposals (February 2017)
- final review and selection process (March 2017)

2015 call for proposal in Sub-Saharan Africa:
143 initial proposals
23 projects (34 organizations from 20 African countries)

GBIF led - BID funded projects

2016 call for proposals in the Caribbean:

8 projects funded

Small grants

- Tracking the red lionfish invasion in Barbados
- Developing biodiversity informatics in Haiti for better conservation management
- Capacity building for biodiversity data sharing through the Caribbean Coastal Data Centre in Jamaica

National grants

- Advancing Jamaican biodiversity data products and information services
- Improve accessibility of Surinamese biodiversity data in through digitizing and partnerships
- Improving natural resources management in Belize by mobilizing biodiversity data
- Enhancing Guyana's national biodiversity information system database

Regional grant

- Improving biodiversity data accessibility in Trinidad & Tobago, Barbados and Suriname

PROJECT DETAILS

BID GBIF

Title: Tracking the red lionfish invasion in Barbados

Identifier: BID-CA2016-0013-SMA

Implementation period: April 2017 - April 2018

Reporting and evaluation period:

May - July 2018

Grant coordinator: CERMES, UWI

PROJECT | IN PROGRESS

Tracking the red lionfish invasion in Barbados

1 May 2017 - 1 Dec 2018 € 5,000

ABOUT NEWS & EVENTS DATASETS

Lionfish (*Pterois volitans*), Curaçao. Photo by Laszlo Ilyes via Flickr; licensed under CC BY 2.0.

This project aims to increase the amount of data available on the lionfish (*Pterois volitans*), an invasive alien in Barbados, thereby improving the evidence basis for conservation and management actions.

Expected outcomes include:

- Mobilization and aggregation of all available national data on the lionfish
- Creation of an open-access catalogue and database that can help to identify gaps in knowledge and action, leading to improved financial and human resource allocations
- Identification of policy- and decision-relevant data that can contribute to the development of the island country's invasive alien species legislation and policies

https://www.gbif.org/project/83254/tracking-the-red-lionfish-invasion-in-barbados#about

PROJECT DETAILS

BID GBIF

Main objective

- to increase the available biodiversity data on the invasive alien lionfish (*Pterois volitans*) for Barbados to facilitate data application in response to conservation

Aim

- to compile and mobilize all available data and information on the invasive lionfish in Barbados and make it freely accessible via a repository

Targeted outcomes

- creation of a freely and openly accessible catalogue and database

- identification of policy and decision relevant data which may contribute or feed into the development of invasive alien species legislation and policies for Barbados

Project Stakeholders

- Decision makers
  - national government authorities

- Data holders
  - scientists, field biologists, scientific researchers, private-sector practitioners and consultants, and citizen scientists

Project Deliverables

Deliverable	Activity short name	Activity description	Reporting criteria
Catalogue of data holdings, experts, literature etc.	Stakeholder survey	Administering of a survey to technical persons, agencies and stakeholders to assess, identify and collect data and information on data holdings, experts, research, literature, legislation and observations.	the creation of a stakeholder survey
	DSA creation	Creating/adapting of data sharing agreements, to facilitate sharing of datasets by data custodians.	the creation/adaptation of DSAs
	Data sources Database creation	Development of a spreadsheets-based database containing data and information on data holdings, experts, research, literature, legislation and observations.	the creation and population of the data sources database
	Publication of Data sources Database	The data gathered in the Data sources Database will be made available online through the CERMES website (http://www.cavehill.uwi.edu/cermes/home.aspx).	metrics and summary tables of the data available online as part of the website, as well as available downloadable files containing the database.

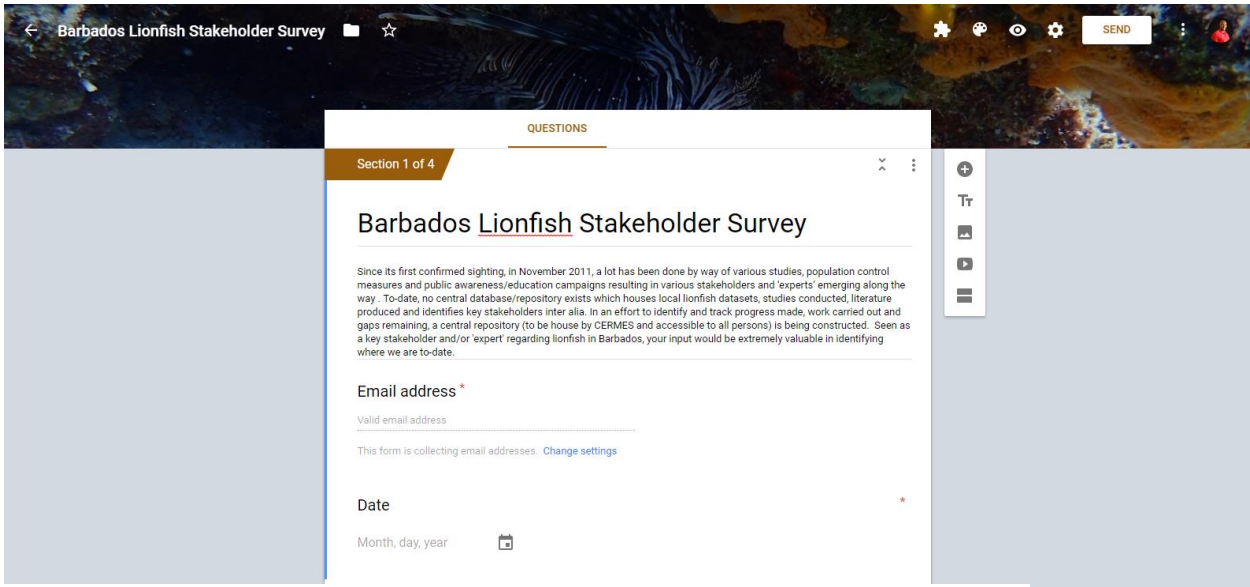
Project Deliverables

Data paper	Metadata catalogue development	Adapting of existing metadata catalogues (such as the GBIF metadata profile) to better fit the datasets mobilized. Publication of a data paper	the publication of a data paper
Occurrence Database	Occurrence Database creation	Based on the currently available data and on the surveys that will be performed with stakeholders, a spreadsheets-based database will be created, determining the fields needed according to data use by each provider and appending fields that are required for later publication through GBIF (first standardization).	the creation of the occurrence data database
	Data capture and standardization	Gather occurrence data from CERMES, ECCO and other stakeholders into a spreadsheets-based database. Standardize the content of the fields in the database as new data is ingested to the extent possible.	the population of the occurrence data database
Publication of data through GBIF	Data mobilization	Publication of occurrence-only and sampling-event data sets gathered into the Occurrence Database through GBIF	the availability of data through GBIF

PROJECT UPDATE

BID GBIF

Deliverable	Activity short name	Activity description	Reporting criteria	Status
Catalogue of data holdings, experts, literature etc.	Stakeholder survey	Administering of a survey to technical persons, agencies and stakeholders to assess, identify and collect data and information on data holdings, experts, research, literature, legislation and observations.	the creation of a stakeholder survey	completed
	DSA creation	Creating/adapting of data sharing agreements, to facilitate sharing of datasets by data custodians.	the creation/adaptation of DSAs	completed
	Data sources Database creation	Development of a spreadsheets-based database containing data and information on data holdings, experts, research, literature, legislation and observations.	the creation and population of the data sources database	completed
	Publication of Data sources Database	The data gathered in the Data sources Database will be made available online through the CERMES website (http://www.cavehill.uwi.edu/cermes/home.aspx).	metrics and summary tables of the data available online as part of the website, as well as available downloadable files containing the database.	ongoing



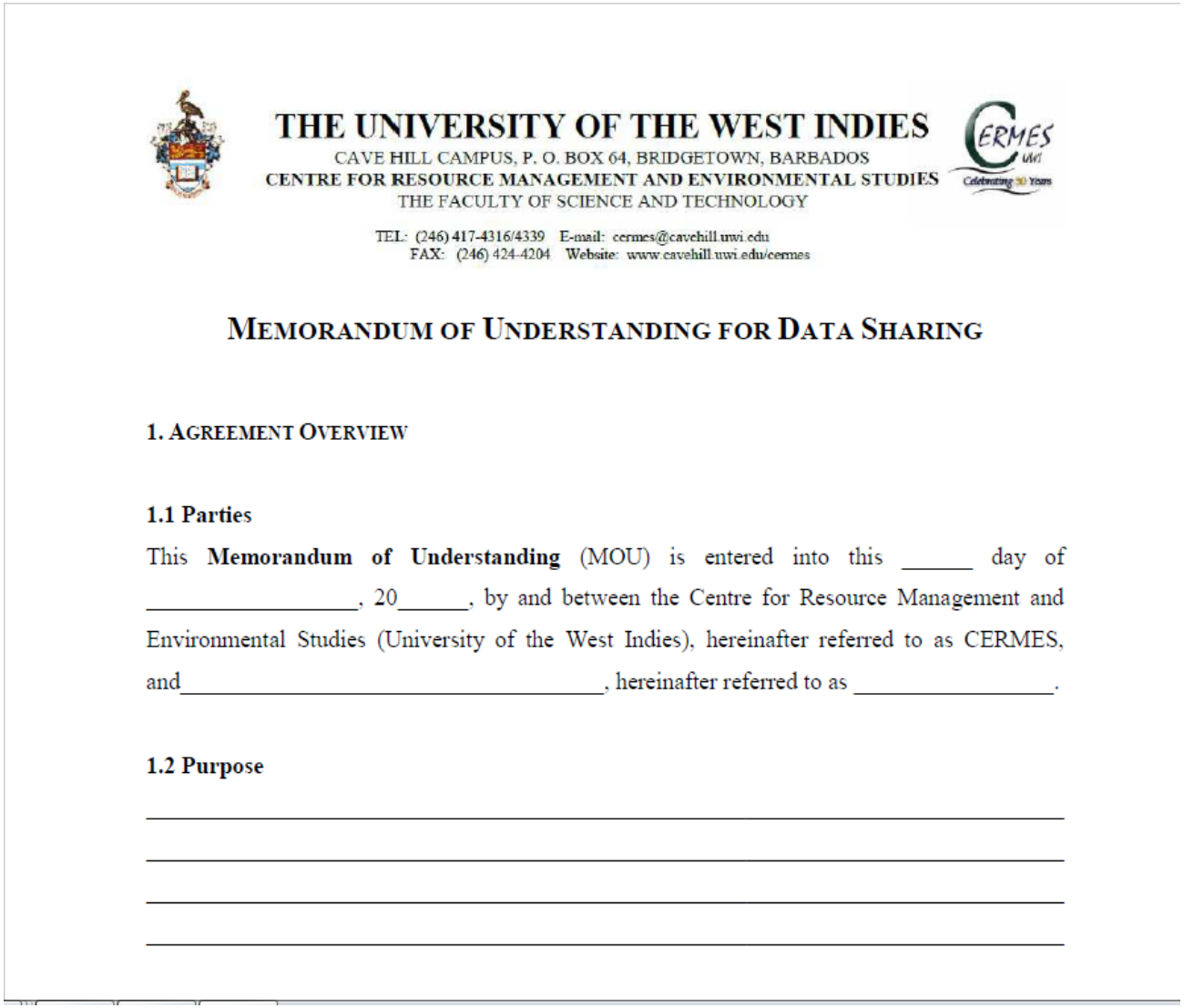
Persons surveyed

Name	Title	Organisation	Type	email
Chris Parker	Fisheries Biologist	Fisheries Division	Government	fishbarbados.fb@caribsurf.com
Greg Franklin	Data Collector	Fisheries Division	Government	gfranklin@agriculture.gov.bb
Richard Suckoo	Water Quality Analyst	Coastal Zone Management Unit (CZMU)	Government	rsuckoo@coastal.gov.bb
Henri Valles	Lecturer	Biology Department, University of the West Indies	Academic organisation	henri.valles@cavehill.uwi.edu
Hazel Oxenford	Senior Lecturer	Centre for Resource Management and Environmental Studies (CERMES)	Academic organisation	hazel.oxenford@cavehill.uwi.edu
Susan Mahon	Director	Bellairs Research Institute, McGill University	Academic organisation	susan.mahon@mcgill.ca
Shekira Sealy	Former lionfish reserch student		Academic	shekirasealy914@hotmail.com
Caroline Bissada	Director	East Coast Conservation Organisation Inc.	Non Governmental Organisation	eccoinc.bds@gmail.com
Jim Satterwaite	Member	Barbados Diving Association (BADASS'n)	Dive Association	jimbo100@sympatico.ca
Scott Clarke	Manager	Barbados SCUBA Divers & Instructors	Dive Association	barbadosscubadivers@gmail.com
Andrew Weston	Owner	Eco Dive Barbados	Dive Shop	dive@ecodivebarbados.com
Andre Miller	Owner	Barbados Blue Dive Shop	Dive Shop	info@divebarbadosblue.com
Robert Bourne	Dive Instructor	Barbados Blue Dive Shop	Dive Shop	bourne_robert@hotmail.com
Martyn norsworthy/Gavin Smith	Owner	Dive Hightide Water Sports	Dive Shop	info@divehightide.com
Alex Davis	Owner	Spearfishing Barbados	Citizen science	spearfishingbarbados@gmail.com

PROJECT UPDATE

BID GBIF

Project Deliverables



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MEMORANDUM OF UNDERSTANDING FOR DATA SHARING

1. AGREEMENT OVERVIEW

1.1 Parties

This **Memorandum of Understanding** (MOU) is entered into this _____ day of _____, 20_____, by and between the Centre for Resource Management and Environmental Studies (University of the West Indies), hereinafter referred to as CERMES, and _____, hereinafter referred to as _____.

1.2 Purpose

_____

_____

_____

_____

PROJECT UPDATE

Occurrence-only data

Other datasets published through GBIF.org have sufficiently consistent detail to contribute information about the location of individual organisms in time and space—that is, they offer evidence of the occurrence of a species (or other taxon) at a particular place on a specified date. Occurrence datasets make up the core of data published through GBIF.org, and examples can range from specimens and fossils in natural history collections, observations by field researchers and citizen scientists, and data gathered from camera traps or remote-sensing satellites.

Occurrence records in these datasets sometimes provide only general locality information, sometimes simply identifying the country, but in many cases more precise locations and geographic coordinates support fine-scale analysis and mapping of species distributions.

- Browse occurrence datasets
- DwC-A template for occurrence datasets\
- Data quality requirements for occurrences

Sampling-event data

Datasets sometimes provide greater detail, not only offering evidence that a species occurred at a given location and date, but also making it possible to assess community composition for broader taxonomic groups or even the abundance of species at multiple times and places. These quantitative or sampling-event datasets typically derive from standard protocols for measuring and monitoring biodiversity like vegetation transects, bird censuses and freshwater or marine sampling.

By indicating the methods, events and relative abundance of species recorded in a sample, these datasets improve comparisons with data collected using the same protocols at different times and places—in some cases, even leading researchers to infer the absence of particular species from particular sites.

Resources metadata

At its simplest level, GBIF.org allows institutions to create datasets describing undigitized resources like those in natural history and other collections. All three other dataset classes include this basic information, but this 'metadata-only' class offers researchers a valuable tool for discovering and learning about evidence not yet available online. They can also help assess the relative importance and value of undigitized collections and set priorities for future digitization. As with all datasets, GBIF ensures that each metadata dataset is associated with a unique Digital Object Identifier (DOI) to streamline data users' citation of these resources.

- Browse metadata-only datasets

Checklist data

Datasets can also provide a catalogue or list of named organisms, or taxa. While they may include additional details like local species names or specimen citations, these 'checklists' typically categorize information along taxonomic, geographic, and thematic lines, or some combination of the three. For example, a dataset that catalogues the Red Listed molluscs of Seychelles has distinct elements of taxonomy (the phylum Mollusca), geography (the island nation of Seychelles) and theme (species deemed imperiled by IUCN experts). Checklists function as a rapid summary or baseline inventory of taxa in a given context.

- Browse checklists
- DwC-A template for checklists
- Data quality requirements for checklists

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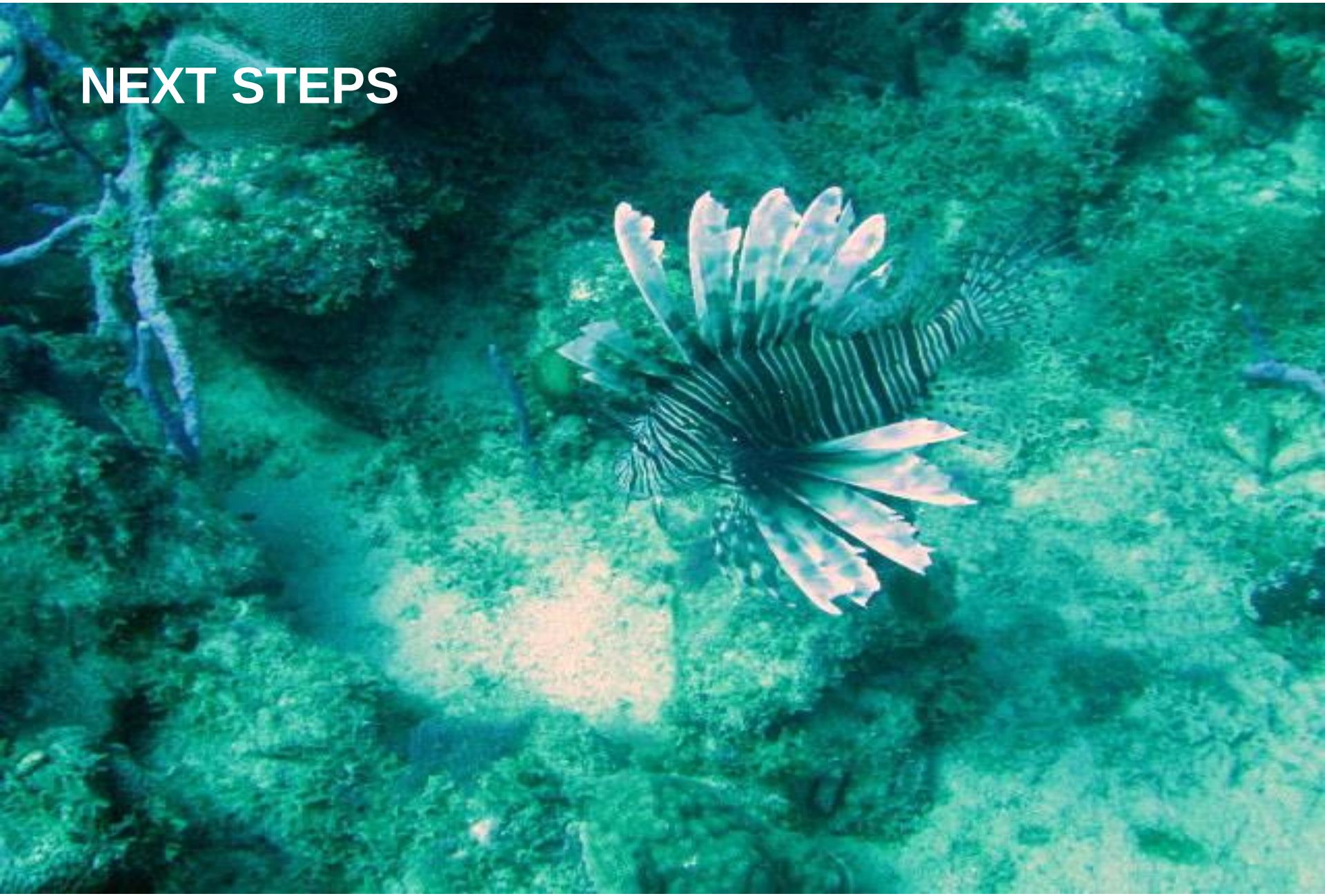
Metadata catalogue

Field	Description
title	The 'title' field provides a description of the resource that is being documented that is long enough to differentiate it from other similar resources
abstract	A brief overview describing the dataset
keyword	This field names a keyword or key phrase that concisely describes the resource or is related to the resource
purpose	A description of the purpose of the resource
geographicCoverage	Spatial information about a resource
temporalCoverage	Single point in time, multiple points in time, or a range of dates
taxonomicCoverage	Taxonomic information about a resource
owner	The legal entity possessing the rights to the resourse resulting from the act of creating the resourse
ownerContact	Contact information for the owner of the resource (the person or institution to contact with questions about the use, interpretation of a data set)
organizationName	The full name of the organization that is associated with the resource
custodian	The named resource from one of the Parties with responsibility for managing and maintaining the datasets (may or may not be the data owner)
custodianContact	Contact information for the custodian of the resource
pubDate	The date on which the resource was published
language	The language in which the resource (not the metadata document) is written
citation	A single citation for use when citing the dataset
resourceFormat	E.g. Microsoft Word, PDF, Excel, Access, Shapefile, JPEG etc.
intellectualRights	Contain a rights management statement for the resource, or reference a service providing such information
license	either a Creative Commons CC0 rights waiver or a CC BY Attribution license
metadataProvider	The party responsible for the creation of the metadata document
metadataContact	Contact information for the metadata provider
dateStamp	The date the metadata document was created or modified
maintenanceUpdateFrequency	E.g. continuously, annually, biannually, as needed, not planned, unknown
additionalInfo	Information regarding omissions, instructions or other annotations that resource managers may wish to include with a resource

The metadata catalogue utilises Ecological Metadata Language (EML) which is a metadata standard developed for the earth, environmental and ecological sciences.

BID GBIF

NEXT STEPS



- Revamping of the existing lionfish webpage on the CERMES website
- Publication of lionfish relevant information and data
- Creation and publishing of a data paper
- Greater investigation into legislation and policies
- Public awareness pertaining to the lionfish repository
- Continual updating of the repository

NEXT STEPS

GBIF Global Biodiversity Information Facility

BID Biodiversity Information for Development

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Questions?

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