IMA: Marine Biodiversity Hub

Summary of the introductory meeting with government partners

The Institute of Marine Affairs (IMA) hosted multiple meetings over a period of three weeks to connect with government partners for the purpose of introducing the EU (GBIF-BID programme) funded project: **The Institute of Marine Affairs, Marine Biodiversity Hub (MBH)**. The aim of the meetings was to introduce and highlight how this internal geospatial database will streamline IMA's marine data sharing capabilities with government partners for collaborations and with the wider stakeholders via the Trinidad and Tobago Biodiversity Information System (TTBIS). The centralization and standardization of IMA's marine data onto the geospatial MBH with functionalities to visualize data across research fields within the IMA will drive more integrated research. This will also propel project interests with partners and government institutions that the IMA works closely with. The process will also highlight important data gaps and give research and programme direction.

There were 29 attendees across nine partner government institutions:
- Environmental Management Authority (3),
- Environmental Policy Planning Division, Ministry of Planning and Development (5)
- The National Library and Information System, Trinidad and Tobago (2)
- Fisheries Division, Ministry of Agriculture, Land and Fisheries (6)
- Forestry Division (wildlife section), Ministry of Agriculture, Land and Fisheries (4)
- Ministry of Energy and Energy Industries (2)
- Zoological Museum, The University of the West Indies (1)
- Department of Life Sciences, The University of the West Indies (2)
- Coastal Engineering Department, The University of the West Indies (1)
- Division of Food Production, Forestry and Fisheries, Tobago House of Assembly (2)
- Maritime Services Division, Ministry of Works and Transport (1)

Attendance by the IMA's presentation team:
- Anjani Ganase, Research Officer- Coral Reef Ecology
- Alana Jute, Research officer – Marine Reference Collection
- Hannah Lochan – Research Assistant, Marine Ecology
- Nikia Gooding - Geospatial Research Fellow
- Paul Nelson – Data Officer
- Lester Doodnath – Project Manager
- Hamish Asmath - GIS Officer *(absent)*

A pdf version of the presentation can be found here. Important links to the video demonstrations provided during the presentation:

1. Video introduction about GBIF: https://youtu.be/40yPnJdeM_A
2. Video introduction to TTBIS: https://drive.google.com/file/d/1zzjn_vuW3PxVCy5G-UBoz6EN0jYC01xB/view?usp=sharing

<u>Frequently asked questions about the Marine Biodiversity Hub:</u>

Q. Would external partners (government or otherwise) be able to upload and store data on the hub?

A: In the short term, the upload and storage of marine data on the hub by external partners will be primarily for collaborative projects with IMA. In the medium to long term, we hope to expand the functionality of the hub to build the capacity to have general storage of marine data by external partners for the purpose of centralization and sharing on TTBIS.

Q: Does the MBH have a separate access site to TTBIS, or does access to IMA data have to happen through TTBIS?

A: TTBIS would be the primary access point for the discovery of IMA's marine data. For collaborations, the MBH will be accessed using a different platform.

Q: Would oil spill data be accessible on the MBH?

A: Historical and current marine data in relation to oil spills, once it is owned by the IMA and approved for sharing, would be made available.

Q: Is there a potential for integrative management programmes, such as the Turtle Task Force, to use the MBH as a centralized location for the compilation and visualisation of marine turtle data?

A: Yes, projects, such as the Turtle Task Force, are perfect examples of the use of the MBH for collaborative purposes.

Q: How soon may we start to work to input and share data?

A: There are multiple ways in which the data can be shared. By July 2022, the MBH will be in its testing phase. Collaborators will be able to input and share data with the IMA at this point and during the workshop phase. Government partners may be able to share their data directly on TTBIS, and the IMA can also assist you in the upload of data on to TTBIS.

Q: Will there be other non-marine related dataset on the MBH?

A: While the MBH focuses on marine data, we will have environmental/ geographical/ socioeconomic data for land areas that influence neighbouring marine ecosystems for different geographical areas around Trinidad and Tobago.

General Feedback Comments:

1. There is a need for spatial data to be located centrally, as opposed to data silos across the government ministries with the relevant credits to the agencies involved in the projects/ data collection. – *Ms Nerissa Lucky, Fisheries Division*

2. A good initiative to share data/information and foster collaboration with stakeholders. The Forestry Division had data relating to turtles that is valuable, and other governments agencies/ ministries and the wider environmental stakeholders did not have easy access to this data. Additionally, other environmental bodies had data silos and this initiative would aid in sharing data – *Mr David Mahabir, Forestry Division*

Government Partner Data-Use Survey Summary

The survey summary is based on the answers of the attendees of the introductory meetings and are not representative of the whole institution they work for. Based on the survey, most of the attendees were *moderately* and *very* clear in their understanding of the MBH (Figure 1) and *somewhat* clear on the types of marine data that exists at the IMA. For the few that were unclear, IMA will ensure that the uncertainties will be addressed during the workshop phase where partners will get the opportunity to gain hands-on experience about how the MBH will work.
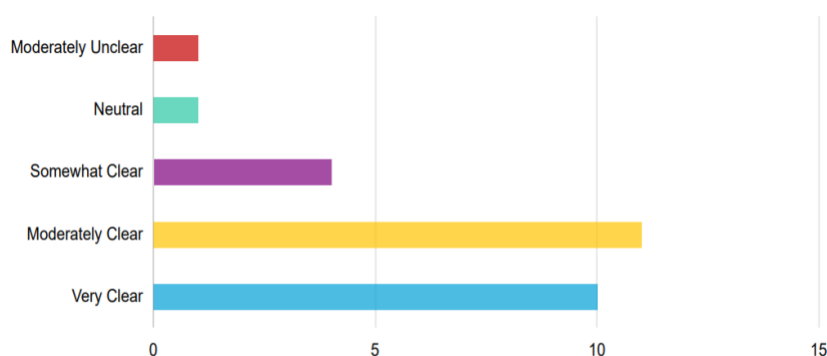
Figure 1 Counts of your understanding of the Marine Biodiversity Hub

About 75 % of the meeting attendees request data from the IMA and 52 % also share data with the IMA. This reflects a history of data sharing, and the MBH would hopefully streamline the process. The type of data that most attendees generate largely includes biodiversity data (70 %) followed by fisheries & aquaculture data (44 %). The remainder fall in a wide array of environmental themes, such as climate change (41 %), marine policy (41 %) and pollution (37 %) (Figure 2).
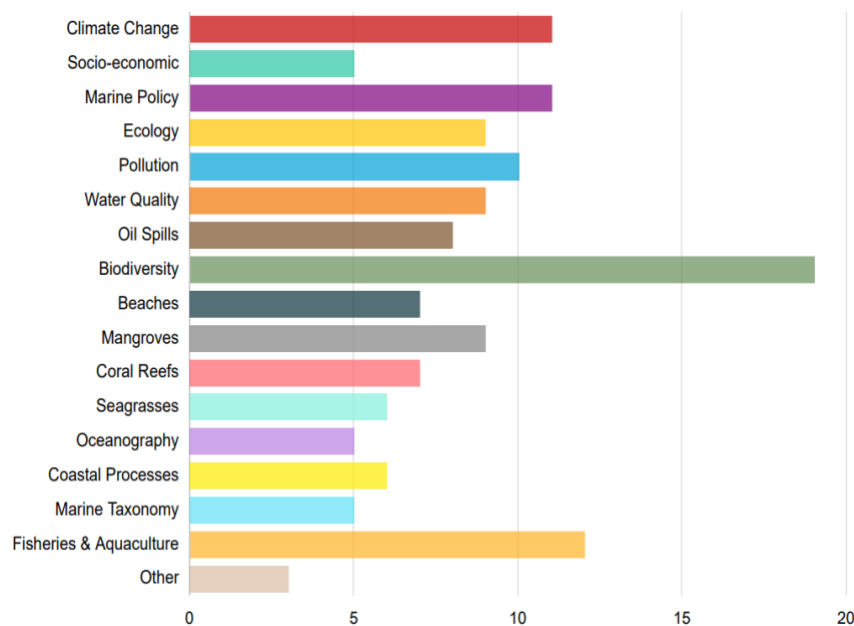
Figure 2 The thematic areas that your data or information is most related to.

IMA data requests by the government partners also fall into a similarly wide array of data themes, including geospatial data, biodiversity, and ecological data, and on average these requests may come to the IMA between 1 – 3 times a year. More commonly requested data types should be prioritized for uploading to TTBIS. Examples include geospatial data of protected and designated areas, oceanographic data and water quality, as well as ecological data - sea turtle, mangrove and fish data. Data requests are used mostly for ministerial reporting outputs, research, education and awareness, and to inform new research projects or on-going monitoring procedures and assessment reports. Overall, government partners are interested in having data sharing via the MBH for all data themes and covers the full spectrum of IMA's research fields and ecosystems (Figure 3).
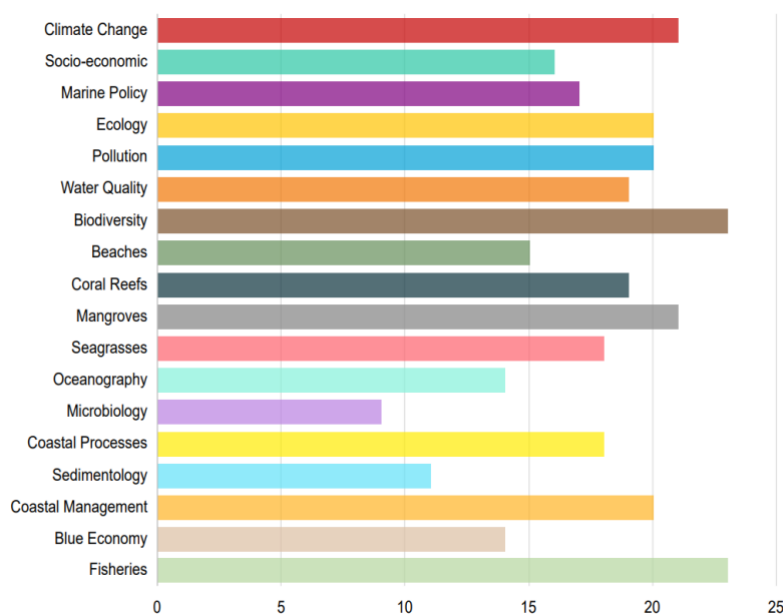

Figure 3 Types of marine data you would like to use from the MBH/ TTBIS

Shared interests among government partners include biodiversity data for Ecological Sensitive Areas (ESAs) and other marine ecosystems, ecological changes in ecosystems because of environmental disturbances, water quality and climate change related data (Figure 4). It is preferred that the data is shared in an excel format, geospatial format (shp file), or even word and pdf formats.

Figure 4 Word cloud specific dataset(s) would be useful to you in your research/tasks

If you believe that the data of your colleagues or organisation was not represented in the survey summary, we urge you share the survey link so that the survey becomes more comprehensive and representative. Please share the following link: https://arcg.is/1qq1SX1