

OVER 40 YEARS OF RESEARCH DATA AVAILABLE AT THE COLOMBIAN OCEANOGRAPHIC DATA CENTER

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ABSTRACT

With funding from the General Maritime Directorate (Dimar), the Colombian Oceanographic Data Center (NODC-Colombia, Latin America) was working for two years on publishing open data compatible with the international exchange: **9,000 salinity profiles**, **9,000 temperature profiles**, **1,000 annual time series of marine meteorology**, five historical time series of official country statistics and **1000 geographic positions** with measurements obtained by largest ocean observation network in the country (RedMpomm), in **127 oceanographic cruises since 1969** and scientific expeditions (including Colombian Scientific Expedition to Antarctica) and in **116 projects** in the Colombian Pacific and Caribbean.

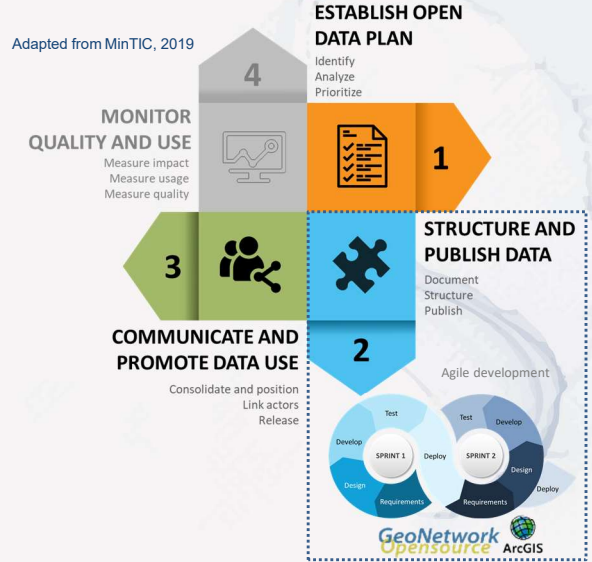
The main challenge was the integration of Cecoldo's capabilities with RedMpomm and **Colombian Maritime Spatial Data Infrastructure (MSDI)**, around a quality mission process called 'Oceanographic and marine meteorological information management', as well and get the resources to develop the Project due to the amount of data available to standardize and document.

The project was strategically supported on 'Dimar **Oceanographic and Marine Meteorology Open Data Plan (2022-2024)**' which is part of the country's public policy on disaster risk reduction and climate variability; on the other hand, the servers were modernized, the data policy was updated, the datasets was structured and documented using open file formats and applying good practices recommended by IODE, the **ArcMarine model** was implemented in a custom-developed geographic application, the metadata catalog tool was updated, **600 metadata** were published under an **ISO 19115 profile**, **450 DOIs** were assigned for citation and data quality control manuals were documented.

KEYWORDS

Open data. Oceanographic data. Meteorological data. Geographical information system. Databases

METODOLOGY



MAIN RESULTS

Conjunto de datos oceanográficos y de meteorología marina obtenidos en el Crucero Oceanográfico Pacífico I. Colombia. Marzo de 1970

El conjunto de datos físico-químicos y meteorológicos fue recopilado en el mes de marzo de 1970, durante el Crucero Oceanográfico Pacífico I a bordo del buque oceanográfico ARC-San Andrés, cubriendo 55 estaciones ubicadas a lo largo de la Cuenca Pacífica Colombiana (CPC).

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Referencia: Dirección General Marítima. (2022). Conjunto de datos oceanográficos y de meteorología marina obtenidos en el Crucero Oceanográfico Pacífico I. Colombia. Marzo de 1970. [Indique el subconjunto utilizado]. Centro Colombiano de Datos Oceanográficos <http://iso.registro.gov.co>

Associated resources

Perfiles de salinidad y temperatura de la columna de agua obtenidos en el Crucero Oceanográfico Pacífico I. Colombia. Marzo de 1970

Los perfiles de datos de salinidad y temperatura correspondientes

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co_dimar_OE_vento_direccion_pre_2018.csv

Download

Series of oceanographic and meteorological data

Conjunto de datos oceanográficos y de meteorología marina obtenidos en el Crucero Oceanográfico Pacífico I. Colombia. Marzo de 1970

Red Hidrográfica de Referencia Vertical

Download data

18,000
1,000
1,000
240+

<https://cecoldo.dimar.mil.co>

CONCLUSIONS

The Open Data Plan was an important tool and roadmap for access to public information. Within the framework of the data life cycle, the ecosystem of actors and the type and quality of data available were identified, the legal restrictions of the data were analyzed, and the publication of data was prioritized according to the requests made by the community.

The implementation of the Arc Marine model over Colombian Maritime Spatial Data Infrastructure, set opportunities for use different types of marine data, marine and coastal surveys, applications and analysis, among others.

The release of the system was live streaming on social networks and linked to the ecosystem of actors: academic, industrial, governmental and civil society. In the last quarter of 2022, 170,000 downloads were recorded (71% marine meteorology data and 28% physical oceanography data), thus initiating user monitoring.

Interoperability and joint work between specialized information management systems, such national ocean observing network, NODC and MSDI, is essential to achieve the goals of the Decade of Ocean Science for Sustainable Development (2021-2030). Creating, maintaining and providing free access channels to data, information and knowledge brings the community closer to science and provides tools for autonomous and informed decision-making.

In the coming years, the NODC remains committed to the Open Data Publication Plan and with implementation of the FAIR principles, especially to contribute to the global ocean digital ecosystem of the Ocean Decade.

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