IODE Perspectives

Medium-Term Strategy

2022–2029

IOC HIGH-LEVEL OBJECTIVES AND PRIORITIES

Through international cooperation, IOC aspires to build and apply scientific knowledge to achieve the following High-Level Objectives (HLOs), with particular attention to ensuring that all Member States have the capacity to meet them:

1. Healthy ocean and sustained ocean ecosystem services;
2. Effective warning systems and preparedness for tsunamis and other ocean-related hazards;
3. Resilience to climate change and contribution to its mitigation;
4. Scientifically-founded services for the sustainable ocean economy; and
5. Foresight on emerging ocean science issues.

UNITED NATIONS DECADE OF OCEAN SCIENCE FOR SUSTAINABLE DEVELOPMENT (2021–2030)

- **a clean ocean** where sources of pollution are identified, reduced or removed;
- **a healthy** and **resilient** ocean where marine ecosystems are understood and managed;
- **a productive ocean** supporting sustainable food supply and a sustainable ocean economy;
- **a predicted ocean** where society understands and can respond to changing ocean conditions;
- **a safe ocean** where life and livelihoods are protected from ocean-related hazards;
- **an accessible ocean** with open and equitable access to data, information and technology, and innovation; and
- **an inspiring** and **engaging ocean** where society understands and values the ocean in relation to human wellbeing and sustainable development.

IOC Functions

A Foster research to strengthen knowledge of ocean and coastal processes and human impacts upon them *[Ocean research]*

B Maintain, strengthen and integrate global ocean observing, data, prediction and informationsystems *[Observingsystem / data management]*;

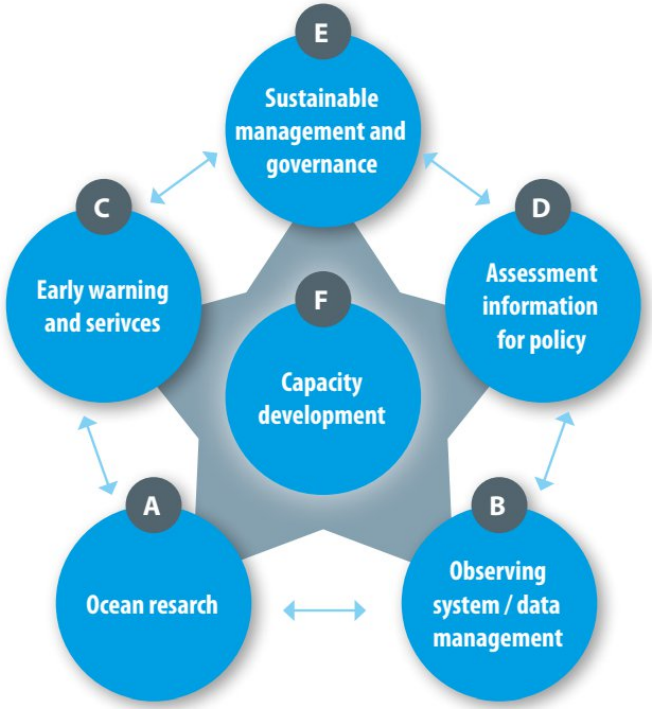
C Develop early warning systems, services, and preparedness for risks of tsunamis and ocean-related hazards *[Early warning and services]*;

D Support assessment and provision of information through the science-policy interface *[Assessment and Information for policy]*;

E Enhance ocean governance through a shared knowledge base and improved regional cooperation *[Sustainable management and governance]*; and

F Develop the institutional capacity in all of the functions above, as a cross-cutting function *[Capacity Development]*.

Value-chain of IOC



- strengthen the IODE data and information centres and networks including OBIS, ensuring resources and best practices are available to advance standardized collection of species and ecosystem data and development of data products and services contributing to the continuous monitoring of identified indicators of ecosystem state, as well as the long-term preservation and availability of high-quality ocean data and information;
- delivering fit-for-purpose data and information products and services through the Ocean Data and Information System and Ocean InfoHub including their regional nodes;
- The IODE Ocean InfoHub project will be the starting point for building the IOC future Ocean Data and Information System delivering interoperable local, regional and thematic data and information and connecting contributors and users with required resources

IOC Strategic Plan for Ocean Data and Information Management (2023–2029)

IOC Strategic Plan for D&IM

- **All programmes within IOC need a data and information management component, developed within the programme and implemented in close collaboration and consultation with the IOC/IODE Programme through its IODE Secretariat, IODE projects/activities and its network of data and information centres, so the considerable expertise available in-house and in these national/regional/thematic structures can be fully utilised.**

- **All programmes within IOC and the activities they implement should have a Data Management Plan that documents the data flow, used methodologies for the management of its data and information, how the data and information will be made available and use permissions, and long-term secure repository arrangements for the data and information. The Data Management Plan should be a "living document" and updated as necessary during the relevant programme or project.**

IOC Strategic Plan for D&IM (2)

- The **vision** of the IOC Strategic Plan for Data and Information Management (2023–2029) is to achieve:
- *"A comprehensive and integrated ocean data and information system, serving the broad and diverse needs of IOC Member States, for management, policy-making and scientific use".*
- This will contribute both to the mission and vision of the IOC. The latter is:
- *"To bring together governments and the science community in achieving the 'Ocean We Need for the Future We Want."*
- The **scope** of the IOC Strategic Plan for Ocean Data and Information Management is therefore intended to be **comprehensive and cover all disciplines within the mandate of IOC**.
- The **aim** is to ensure the establishment of ***a comprehensive and integrated ocean data and information ecosystem*** for all ocean activities. It is essential that the existing and operational national, regional, and international systems can connect to the integrated global system.

IOC Strategic Plan for D&IM (3)

- *The **objectives** of the Strategic Plan are to deliver:*
- *(i)interoperable, quality-controlled data on a diverse range of variables: (i) generated according to scientifically and operationally sound methods; and (ii) persistently archived in well-documented, globally applicable standards and formats;*

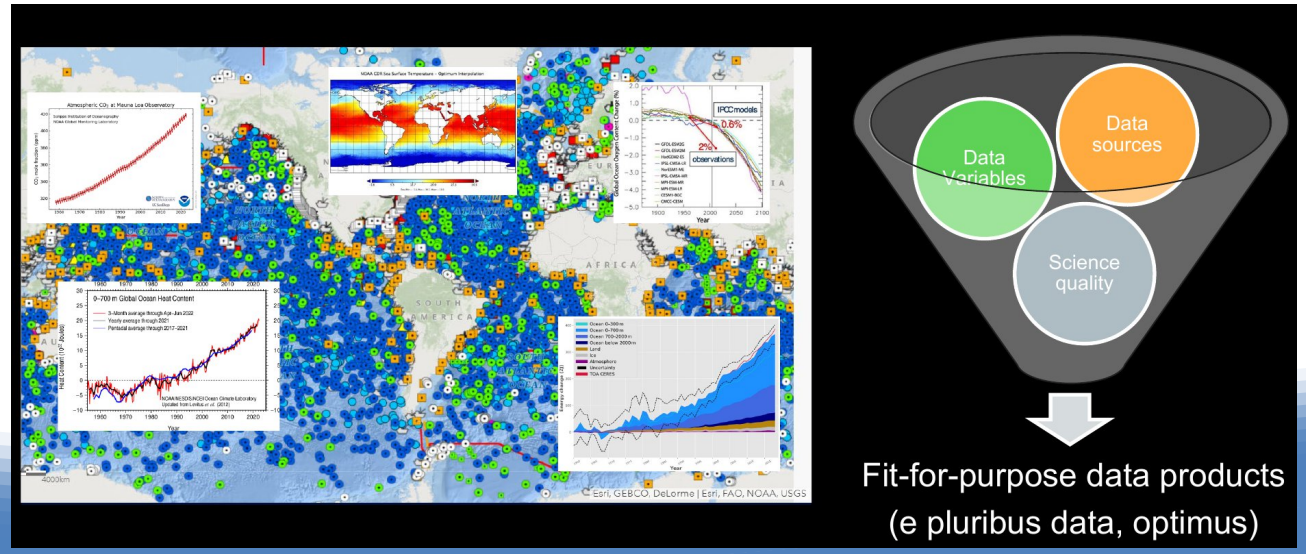
- *(ii)timely dissemination of data on a diverse range of variables (generated from observations and model outputs) both in real-time and delayed modes depending on the needs of user groups and their technical capabilities ("on demand" as well as automatically scheduled); and*

- *(iii) easy discovery and access to data and information about a diverse range of variables and derived products (including forecasts, alerts and warnings) in a way that is user friendly for a wide variety of users.*

IOC Strategic Plan for D&IM – expected outcome

- The expected outcome of the IOC Strategic Plan for Data and Information Management is to achieve significant enhancement of infrastructure, common approaches in ocean data and information management that enable interoperable data sharing and stewardship, and enhanced collaboration between data providers and users.

“digital ocean ecosystem”



Threarts and major risks

- ✓Critical underfunding
- ✓Lack of UN Decade implementation support on regional and national levels
- ✓D&IM miscoordination and fragmentation