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Revision of the **IOC** **OCEANOGRAPHIC** **DATA EXCHANGE** **POLICY (2003, 2019)**

Lotta Fyrberg – Co-Chair IODE
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IOC-32/4.4 Background

31st Session (June 2021) IOC Assembly, recognized that **a revision of the 20-year-old IOC Data Exchange Policy was timely**, and adopted Decision A-31/3.4.2 (IODE) including part III *Revision of the IOC Oceanographic Data Exchange Policy (2003, 2019)*.

- IODE agreed to build on a data policy like WMO's, to increase global cooperation, improve sharing and update of data using commonly agreed terms and better align with data policies at national, regional and international level reflecting on current international principles like FAIR.
- Established the IOC Intersessional Working Group (IWG-DATAPOLICY).



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- The revised IOC data exchange policy should also **serve and be applicable to the variety of data types and applications under the UN Decade of Ocean Science for Sustainable Development (2021-2030)**, and should consider the **increased interest from philanthropic and private or commercial enterprises in using the ocean data** collected by our Member States.



IOC-32/4.4 Preceding steps



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Process according to IOC Circular Letter No. 2864, Nov 2021

- 1: IOC/IODE secretariat made a desk study on existing policies (IOC/ UN, non-UN), [Document IOC/IWG-DATAPOLICY-I/5](#)
- 2: IOC global & regional programmes were invited to designate their representatives.
- 3: First meeting of IWG, [IOC/IWG-DATAPOLICY-I/3](#).
- 4: Online drafting by IWG. Result shared with 18 organizations for comments.
 - 4A: The revised text was shared with IWG members for further discussions.
- 5: An online information session was organized for all Member States and partners for commenting on the draft, October 2022. |
- 6: The IWG revised the first draft based on inputs received and shared it with the IODE Committee.
- 7: The IWG submitted the draft to the IODE-XXVII session as [Document IOC/IODE-XXVII/6.4](#)
- 8: IODE-27 adopted the draft version and submitted it as Recommendation IODE-XXVII/6.4 to the IOC 32nd Assembly.



IOC-32/4.4 IOC Data Policy and Terms of Use (2023):

Why do we need a new policy?

The Assembly,

1. Recalling that the IOC Oceanographic Data Exchange Policy was published in 2003 (IOC Resolution XXII-6, 2003) and since then has only had one minor change: Clause 5 revised in 2019 by Decision IOC-XXX/7.2.1(II) of the Assembly at its 30th session, Paris, 26 June–4 July 2019,

2. Recognizing that:

- i. the timely and unrestricted international exchange of oceanographic data is essential for the efficient acquisition, integration and use of ocean observations gathered by the countries of the world for a wide variety of purposes including the prediction of weather and climate, the operational forecasting of the marine environment, the preservation of life, the mitigation of human-induced changes in the marine and coastal environment, as well as for the advancement of scientific understanding that makes this possible,



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- ii. the global digital data, information, and knowledge ecosystem has radically changed since 2003,
- iii. rapidly advancing technologies have altered the Data Stewardship paradigm,
- iv. there is a need to improve interoperability and align the IOC data policy with those at national, regional, and international levels,
- v. more and more Public-Private Partnerships are being established. To allow the best use of the data in this context as well as in the context of using data in journals from private publishers, the IOC Data Policy should provide clear guidance for commercial use of data,



IOC-32/4.4 IOC Data Policy and Terms of Use (2023):

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3. Noting that partner and sister organizations are changing their data policies, which can serve as a model for updating the IOC Data Policy,

4. Noting also that principles of data sharing and licensing are becoming globally recognized and adopted, e.g., FAIR Principles and Creative Commons licences,

5. Decides to close the IOC Intersessional Working Group on the Revision of the IOC Oceanographic Data Exchange Policy (2003, 2019) (IWG-DATAPOLICY),

6. Adopts the IOC Data Policy and Terms of Use (2023) as detailed in Annex I to this Decision,

7. Decides to develop guidelines for the development of detailed data and metadata sharing guidelines by all IOC programmes and projects.



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IOC-32/4.4 Data Policy

Annex: IOC Data Policy and Terms of Use (2023)



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Section 1. Preamble

The timely, open and unrestricted international sharing, in both real-time and delayed mode of ocean metadata, data and products is essential for a wide variety of purposes and benefits including scientific research, innovation and decision making, the prediction of weather and climate, the operational forecasting of the marine environment, the preservation of life, economic welfare, safety and security of society, the mitigation of human-induced changes in the marine and coastal environment, as well as for the advancement of scientific understanding that makes this possible. Metadata, data and products should be accessible, interoperable and openly shared with minimum delay and minimum restrictions.

Section 2. Purpose

The purpose of this data policy is to outline the requirements with respect to sharing, access, preservation, and attribution to facilitate the broad use and reuse of metadata, data and products.



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Section 3. FAIR & CARE principles

To support knowledge discovery and innovation both by humans and machines and to acknowledge indigenous data governance, data should meet the FAIR Guiding Principles (Findable, Accessible, Interoperable and Reusable)[1] and in the case of indigenous data and information, data should meet the CARE principles (Collective Benefit, Authority to Control, Responsibility, Ethics)[2] to the greatest extent practicable.

Section 4. Conditions of use

Data should be licensed (respecting Section 8) under a minimally restrictive and voluntary common-use licence[3] that grants permission, ensures proper attribution (for example, citable using a persistent identifier) and allows others to copy, distribute and make use of the data.



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Section 5. Data Repositories and the IOC ocean data and information system (ODIS)

Data should be quality controlled (using community adopted and documented best practices or standards), accompanied by complete metadata and stored in an openly discoverable and accessible long-term data repository and made available through standards-based data services. Member States shall encourage convergence and interoperability and, where possible, use IODE data centres (National Oceanographic Data Centres or Associate Data Units) or other IOC programme related data centres that share metadata and data using the IOC Ocean Data and Information System (ODIS). ODIS is an interoperability layer and supporting technology, to allow existing and emerging ocean data and information systems to interoperate with one another.

Section 6: Secure long-term data archives

To support long-term and secure archival, data and associated metadata should be submitted, to the best practicable degree, to IODE's World Ocean Database (WOD), the Ocean Biodiversity Information System (OBIS), Global Sea Level Observing System (GLOSS), other IOC related global data archives, and data centres linked to the World Data System (WDS), their successors or other global data archives.



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Section 7. Access restrictions

Data and associated metadata should be made available with minimal restrictions on use unless there are valid reasons to restrict access. Legitimate reasons to restrict access to, and reuse of, data include, *inter alia*, privacy and confidentiality, protection of species, populations or habitats of concern, and national security.

Section 8. Data sharing policies of Member States

This Policy acknowledges the right of Member States and data owners to determine the terms of metadata, data and products sharing in a manner consistent with national jurisdictions, international conventions, and treaties, where applicable.

Section 9. Data and metadata sharing guidelines

IOC programmes, projects as well as other communities of practice should develop and/or apply, where applicable, detailed metadata, data and products sharing guidelines that are consistent with this IOC Data Policy and Terms of Use.



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Section 10. Definitions

‘Data’ is a set of values, symbols or signs (recorded on any type of medium) that represent one or more properties of an entity.

‘Metadata’ is 'data about data' describing the content, quality, condition, and other characteristics of data that allows their inventory, discovery, evaluation or use.

‘Timely’ in this context means the distribution of data and/or products, sufficiently rapidly to be of value for a given application.

‘Openly’ means data that can be freely used, re-used and redistributed by anyone - subject only, at most, to the requirement to attribute and share alike.

‘Product’ means a value-added enhancement of data applied to a particular use.



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Concluding remarks

It is important to note that the 'IOC Data Policy and Terms of Use (2023)' is an **“umbrella” policy** that provides **general guidelines agreed upon across all IOC programmes and projects.**

The IWG noted that IOC projects/programmes deal with a **wide variety of data types that require different timelines, conditions of sharing and use licences.**

It is therefore recommended that each of **these communities develop more detailed implementation guidelines** that respect the 'IOC Data Policy and Terms of Use (2023)' but take into account specific issues related to the data types they handle.

Similarly, these programmes/projects will need to consider that **data centres / data systems** that collect and disseminate data from a wide variety of data sources **may face substantial technical challenges if they need to deal with widely varying use licenses.** Specific agreements may be needed in such cases.



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