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| **World Meteorological Organization &**  **Intergovernmental Oceanographic Commission (of UNESCO)**  **GLOBAL OCEAN OBSERVING SYSTEM/OBSERVATIONS COORDINATION GEORP**  **Ship Observations Team Eleventh Session**  Virtual Session, 13-16 September 2021 | Image result for ioc logo unesco  **SOT-11/Doc. 0.0.0** |
| Submitted by: Emma Heslop  14.09.2021  **DRAFT 1** |

**AGENDA ITEM 0: IOC Secretariat Report**

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# SUMMARY

A brief summary of issues relevant to SOT from The Thirty First Intergovernmental Oceanographic Commission (IOC-31), Tenth GOOS Steering Committee Meeting (GOOS SC-10) and the GOOS Observation Coordination Group Twelfth Session (OCG-12), from the perspective of the IOC Secretariat.

1. **SUMMARY (Draft text for inclusion in the final report):**

The following 5 areas are highlighted; Ocean Decade, GOOS Implementation Plan, GOOS Governance, Value of Ocean Observations, OCG Foci and Actions, WMO-GOOS Connections.

UN Decade of Ocean Science for Sustainable Development

* First UN Ocean Decade Programmes have been endorsed, including the 3 GOOS Ocean Decade Programmes
* The Ocean Decade Implementation Plan is approved and work will begin on the collaborative centres, programme funding, project calls and further endorsements etc.
* New call for projects in Oct 2021 and every 6 months
* The Ocean Decade has visibility, national and UN level, and is a great opportunity for ambitious ideas across the observing system.
* Encourage SOT to think of about what it could do, e.g., ‘citizen science’ observations from different vessels.

GOOS in the Ocean Decade

The three GOOS Ocean Decade Programmes have been endorsed by the Ocean Deacde – Ocean Observing Co-Design, Observing Together and CoastPredict:

* **Ocean Observing Co-design**: Ocean Observing Co-Design will create a system co-designed with observing, modelling and key user stakeholders that will evolve ocean observing and give us the ocean we need for the future we want. *Leads: Sabrina Speich, David Legler,  Emma Heslop*
* **Observing Together**: Observing Together will transform ocean data access and availability by connecting ocean observers and the communities they serve through enhanced support to both new and existing community-scale projects. *Leads: Kim Currie and Molly Powers*
* **CoastPredict**: CoastPredict will redefine the science of observing and predicting the Global Coastal Ocean to help the Ocean Decade succeed in its aims and give us the ocean we need for the future we want. *Leads: Nadia Pinardi, Villy Kourafalou, Joaquín Tintoré*. ***coastpredict.org***

They will initiate the governance structures and organise to work with partners and GOOS in the broadest sense, including SOT. Expect the work for these three innovative programmes to be a part of the landscape moving forward.

GOOS Implementation Plan

* Development the GOOS Implementation Plan
* Key OCG and OceanOPS workplan actions, for example Best Practices, data and metadata, metrics, the Report Card, are part of the Implementation Plan.
* OCG is leading initiatives in some areas
* GOOS will need to find additional resource to support the Implementation Plan, including for OCG.

GOOS Governance:

* GOOS commissioned study and survey of support structures for ocean observing (Neville Smith, survey/interviews with 60+ stakeholders)
* Recommendation: renovate and rejuvenate the current hub-and-spoke arrangement
* GOOS SC-10 Action - Improving governing and support structures
  1. Design a process of change with stakeholders
  2. Assess internal architecture aligned with key functions
  3. Ask co-sponsors (IOC, WMO, UNEP, ISC) to prepare for governance change

**Value of ocean observing**

* Ocean information increasingly finds uses in a wide range of public policy arenas and in supporting commercial activities, bringing new efficiencies, productivity gains, or cost avoidances **BUT** knowledge of the economic value of the services it enables is scattered and not well defined.
* OECD, GOOS, MEDIN conducted a survey to the MEDIN user base in 2020
* Paper: Value Chains of Public Marine Data: A UK Case Study
* https://www.oecd.org/fr/numerique/value-chains-in-public-marine-data-d8bbdcfa-en.htm
* Mapping from role to sector to action – first steps in a novel value chain approach
* Step towards understanding ocean data flow and value in economies.

**OCG-12**

**WMO – GOOS Connections**

Joint WMO-IOC Collaborative Board

* IOC Decision A-31/3.5.5 - Adoption of a WMO-IOC Collaborative Strategy and Report on the establishment of the Joint WMO-IOC Collaborative Board
* This strategic body should now go on to advise IOC and WMO on actions or projects to support the Collaborative Strategy
* Work across the value chain research, observations, data management, services etc.

The Study Group on Ocean Observations and Infrastructure Systems (SG-OOIS)

* Established by INFCOM, reports to the INFCOM Management Group.
* General goal to propose *optimal functional connections between the WMO and IOC-GOOS bodies, programs and systems to ensure the objectives defined by WMO Members*.
* Post-JCOMM, this group is developing a comprehensive view of the functional and strategic connections between WMO and GOOS structures, including the networks.
* The synthesis of the work has not been completed yet, however when done this should provide recommendations to WMO and by extension GOOS on optimal connections – for effective partnership

### B. ACTIONS/DECISIONS/RECOMMENDATIONS REQUIRED:

[No decisions required this is an information document]

(a) Adopt draft Action/Decision[[1]](#footnote-1) [0.0.0/1](#_Draft_Decision_X.X.X(X)/1) — Action/Decision *title.*

(b) Adopt draft Recommendation[[2]](#footnote-2) [0.0.0/1](#_Title_of_the_1) *— Recommendation title.*

# BACKGROUND INFORMATION (not to be included in the session report):

From IOC-31 there were three decisions and one resolution of interest:

1)

**IOC Decision A-31/3.4.2 III – Revision of the IOC Oceanographic Data Exchange Policy (2003, 2019)**

…

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

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

Decides to establish the IOC inter-sessional working group on the Revision of the IOC Oceanographic Data Exchange Policy (2003, 2019) with terms of reference as included in Annex 3 to this decision;

**Significance >>** IOC will be revising its Data Exchange Policy, alignment with new WMO Data Policy will be part of the input to this.

**2)**

**IOC Decision A-31/3.5.2 I - Global Ocean Observing System Work Plan**

Having examined IOC/A-31/3.5.2.Doc, the *Executive Summary of the GOOS Implementation Plan,*

…

Thanks the GOOS Steering Committee for the identification of proposed strategic actions in the implementation plan;

Expresses its appreciation for the planning for contributions to the Ocean Decade with the GOOS *Ocean Observing Co-Design* and *Observing Together* Programmes (detailed as IOC registered actions in Resolution A-31/1), as well as the *CoastPredict* Programme;

…

Adopts the *Executive Summary of the GOOS Implementation Plan* (IOC/A-31/3.5.2.Doc) as the GOOS work plan for 2022–2023;

Notes the broad ambition of this implementation plan, its identified resource implications – which if all levels of priority are addressed, would imply a more than doubling of human resources in the medium term – as well as the need to reinforce partnerships and support structures;

Expresses its appreciation for Member States and organizations that have provided direct and in-kind contributions for the distributed GOOS Office;

…

Urges Member States to work with the GOOS Office to identify how they can help with implementation and what their contributions will enable us to achieve together;

Agrees that the regular budget for these activities will be identified as part of the Resolution on Governance, Programming and Budgeting Matters of the Commission (IOC Resolution A-31/2).

**Significance >>** The work within and across the networks supported by OCG and OceanOPS, for example in Best Practices, data and metadata, metrics, the Ocean Observing System Report Card, are now visible within a GOOS wide Implementation Plan. The OCG are leading initiatives in some areas of the GOOS Implementation Plan. GOOS will need to find additional resource to support this Plan, including for OCG.

3)

**IOC Decision A-31/3.5.5 - Adoption of a WMO-IOC Collaborative Strategy and Report   
on the establishment of the Joint WMO-IOC Collaborative Board**

….

Adopts the WMO-IOC Collaborative Strategy, subject to its parallel adoption by the WMO Executive Council at its 73rd Session (14–25 June 2021) and as amended in IOC/A-31/3.5.5.Doc(1) Rev.;

Adopts the Rules of Procedure of the Joint WMO-IOC collaborative Board as proposed in IOC/A-31/3.5.5.Doc(2), subject to its parallel adoption by the WMO Executive Council at its 73rd Session, and agrees to keep these rules of procedure under regular review, jointly with WMO governing bodies;

Requests the JCB to continue work across IOC and WMO to identify and promote priority implementation actions in support of the WMO-IOC Collaborative Strategy;

**Significance >>** The WMO-IOC Collaborative Strategy from the Joint WMO-IOC Collaborative Board (JCB) is adopted. This strategic body should now go onto advise IOC and WMO on actions or projects to support the joint vision / Collaborative Strategy.

4)

# IOC Resolution A-31/1: Implementation of the United Nations Decade of Ocean Science for Sustainable Development (2021–2030)

**Significance >>** After the first call for Programmes September 2020 (closed January 2021), the first UN Ocean Decade Programmes have been endorsed (including the three GOOS Ocean Decade Programmes[[3]](#footnote-3) – Ocean Observing Co-Design, Observing Together and CoastPredict – with the modelling community). The Ocean Decade Implementation Plan is approved and work will begin on the collaborative centres, programme funding, project calls and endorsements etc. The Ocean Decade has visibility at national and UN level and is a great opportunity for ambitious ideas across the observing system that will make a step change difference to the outcomes for the ocean, society and our relationship with the ocean. Encourage SOT to think of what it would like to do/gain support for in support of GOOS Ocean Decade Programmes and/or other projects, e.g., ‘citizen science’ type observations from vessels could be important for CoastPredict.

From GOOS SC-10 there were three decisions of interest.

**Decision 1: Ocean Decade**

1. Thanked the programme proposal leads for their work in engaging partners and designing compelling programmes.
2. Agrees to advance with the joint branding and positioning of the three GOOS Ocean Decade programmes for potential supporters and contributors.
3. Asks the three programmes to convene their management structures by October 2021.
4. Agrees to use a portion of GOOS Covid-19 savings at IOC (from lack of meetings in 2020-21) to support a consultant to help organize the three programmes and broader GOOS Ocean Decade coordination with input from programme leads on initial work, and a fundraising consultant to work on GOOS resources across the programmes and the GOOS Implementation Plan

Significance: The three GOOS Ocean Decade Programmes – Ocean Observing Co-Design, Observing Together and CoastPredict will initiate the governance structures and organise to work with partners and GOOS in the broadest sense, including SOT. Expect the work for these three innovative programmes to be a part of the landscape moving forward.

**Ocean Observing Co-design**: Ocean Observing Co-Design will create a system co-designed with observing, modelling and key user stakeholders that will evolve ocean observing and give us the ocean we need for the future we want. *Leads: Sabrina Speich, David Legler,  Emma Heslop*

**Observing Together**: Observing Together will transform ocean data access and availability by connecting ocean observers and the communities they serve through enhanced support to both new and existing community-scale projects. *Leads: Kim Currie and Molly Powers*

**CoastPredict**: CoastPredict will redefine the science of observing and predicting the Global Coastal Ocean to help the Ocean Decade succeed in its aims and give us the ocean we need for the future we want. *Leads: Nadia Pinardi, Villy Kourafalou, Joaquín Tintoré*. ***coastpredict.org***

**Decision 2: Governance and Structure**

GOOS core team elements at present cover observations, the interface to and from data systems, and operational ocean forecasting systems. The GOOS SC **reaffirmed** the importance of integration of this value chain infrastructure, and also **recognizes** that each of those areas requires focused hubs of activity for coordination and partnership.

The SC **decided** to advance on three tracks:

* Lead the formation of a small team among stakeholders and SC members to **guide the initial steps in a process of governance change**
* Then, re-start a *task team on Evolution of the GOOS Core Team*…
* Request the co-sponsors IOC, WMO, UNEP, and ISC, define their sponsorship commitment, and to design individual or joint ways of examining and evolving their GOOS governance that would lead to improved advice and operational support to the co-sponsors, be inclusive of additional stakeholders, and be open to receiving the recommendations of the process of change designed by the group in item 1 above.

**Significance >>** GOOS SC has committed to evolve its governance structure through an open process with stakeholders. The first step will be for a Task Team involving GOOS and non-GOOS members to guide the set-up of a process for this governance change. The third track is around the co-sponsors role and is a call for the sponsors, including WMO, to engage in this process. Experience suggests these things do not happen overnight, however this is a GOOS commitment to move towards a more inclusive and transparent governance system.

**Decision 5: Implementation Planning**

The GOOS SC **decided** to advance with the Implementation Planning Process.

>> Significance is as above for **IOC Decision A-31/3.5.2 I - Global Ocean Observing System Work Plan.**

**Decision 6: value of ocean observing data**

The Steering Committee **enthusiastically supported** the collaborative work with OECD, and its foreseen expansion into a second stage focused on economic valuation best practices (which should be identified in the OBPS). It also **supported** the joint initiatives between the OCG and MTS, Ocean Frontiers Institute, and Kongsberg Maritime to explore developing and improving science/industry/operations interfaces.

Significance >> work at the GOOS level to understand the value of ocean observations

**Observations Coordination Group**

The OCG has 8 strategic foci on which it places strong emphasis, they were adopted at OCG-10 (2019):

* Requirements
* Observing Advances
* Standards and Best Practices
* Data Management
* OceanOPS
* Metrics
* Environmental Stewardship
* Capacity Development

From OCG-12 there are a number of actions, noted below are the priority actions. At this level we are getting to the interface with SOT work, as noted:

* Advancing integrated global ocean observing design (increase focus around EOVs and ECVs), identify opportunities/support GOOS initiatives in this space - ***One action is for DBCP and SOT (Henry Kleta) to interface to GBON and report back on engagement of OCG.***
* Best practice development in networks and GOOS best practice ‘endorsement’ process: - ***Amongst some of the developments SOOP involved and reaching out to ASAP.***
* OCG Data Management:Data Strategy, Open GTS with WMO WIS 2.0 Pilot, connections with IODE/WMO, Data mapping
  + Complete data mapping
  + OCG Data Strategy pilot with AniBOS
  + Open-GTS WIS 2.0 pilot for NetCDF data distribution
  + Open-GTS ship AIS met data pilot
* **Data and Metadata:** Develop regular OCG Data and Metadata Meetings/Workshop – meet every quarter year (beginning of an OCG Data Committee?), continue current work with the existing network and address new topics as raised. Initial areas identified – ***SOT data and metadata contacts involved in this***
* **EOV views of ocean observing:** OceanOPS work with WMO (INFCOM – Lars Peter) to provide EOV / ECV views of ocean GBON – OBON *–* ***see this would have connection with the SOT KPI work***
* **OCG revised ToRs adopted.** Action to have this confirmed through governance structure. ***These are under review by the GOOS SC now***
* **OCG, GOOS, networks and the Ocean Decade:** Convene a special session on GOOS and network Ocean Decade Programmes, projects, look at the landscape and perhaps develop some self-organisation, looking at links, working together, support, connections etc.
* **Developing new components of the observing system (addressing gaps)**
* **Boundary Currents[[4]](#footnote-4)**: Ask the workshop team to look at whether there is interest from the workshop group to work on regional pilot/s - scoping needs with stakeholders/modelling, looking at from EOV perspective, working on optimal design / trade-offs. Connect to OOPC and report back to OCG at a roundtable in 6 months, with progress, questions, assistance required. SOOP lead Tammy Morris undertaking this.

**Study Group on Ocean Observations and Infrastructure Systems**

Finally, a WMO initiative in which the IOC secretariat is involved, with SOT and DBCP network members. The Study Group on Ocean Observations and Infrastructure Systems (SG-OOIS) was established by the *Commission for Observation, Infrastructure and Information Systems (INFCOM)* at its First Sessionfor the first intersessional period. As from its Terms of Reference in Annex 1, the SG-OOIS general goal is **to propose optimal functional connections between the WMO and IOC-GOOS bodies, programs and systems to ensure the objectives defined by WMO Members**. SG-OOIS reports directly to the *INFCOM Management Group (INFCOM-MG)*.

>> Post-JCOMM, this group is developing a comprehensive view of the functional and strategic connections between WMO and GOOS structures, including the networks. The synthesis of the work has not really been undertaken yet, however when done this should provide recommendations to WMO and by extension GOOS.

### References (if any):

1. *[Link to the full report on the website]*

2. ...........

### Introduction

[Comment: Main points and arguments leading to formulation of draft decision presented in this document]

**ANNEX XX**

1. An Action/Decision is an item directly related to SOT and on which SOT can action or decide directly. Details on rational for the action/decision should be included in the Background section. [↑](#footnote-ref-1)
2. A Recommendation involves proposed action(s)on another body outside of SOT (e.g. DBCP, JCOMM, WMO, IOC, CBS etc.). Rational for the Recommendation should be included in the Draft Recommendation. [↑](#footnote-ref-2)
3. https://www.goosocean.org/index.php?option=com\_content&view=article&id=297&Itemid=428) [↑](#footnote-ref-3)
4. A medium priority action but relevant to SOOP [↑](#footnote-ref-4)