INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION
COMMISSION OCÉANOGRAPHIQUE INTERGOUVERNEMENTALE
COMISIÓN OCEANOGRÁFICA INTERGUBERNAMENTAL
МЕЖПРАВИТЕЛЬСТВЕННАЯ ОКЕАНОГРАФИЧЕСКАЯ КОМИССИЯ
اللجنة الدولية الحكومية لعلوم المحيطات
政府间海洋学委员会

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IOC Circular Letter No 2845
(Also available in French, Spanish and Russian)

IOC/VR/AF/DCS/
26 April 2021

To: National Coordinating Bodies for Liaison with IOC
Permanent Delegations/Observer Missions to UNESCO, and
National Commissions for UNESCO of IOC Member States
GOOS Regional Alliance Leads
GOOS National Focal Points

Cc: World Meteorological Organization (WMO)
United Nations Environmental Programme (UNEP)
International Science Council

Subject: Nomination of experts for Online Training Courses on Operational Ocean Monitoring and Forecasting Systems, 14–16 June 2021 and 22–24 June 2021

Through this circular letter, the IOC-WMO-UNEP-ISC Global Ocean Observing System (GOOS) is inviting countries to nominate experts to participate in:

(i) an open online training courses on Understanding the Benefits of Operational Ocean and Forecasting Systems, 14-16 June 2021 ('Awareness Workshop'); and

(ii) a more practical, interactive training course on Implementing an Operational Ocean Monitoring and Forecasting Systems, 22–24 June 2021 ('Hands-on Workshop'), where participation numbers are limited and applicants will be considered based on their qualifications.

Applications

Online applications (with selection option for either the 'Awareness Workshop' or the 'Hands-on Workshop' or both) are available at https://otga.wufoo.com/forms/xs2oyn60iumikh/. The nomination period opens on 21 April and will close on 16 May 2021. Only online applications will be considered.

OOFS Summary Booklet and Video

The OOFS summary booklet available here is a summary of the comprehensive Technical Guide on Operational Ocean Forecasting Systems and has been prepared to help promote the two online training courses among interested experts. The Technical Guide will be published by the end of

2021.The Guide together with the present summary are jointly released by the IOC-UNESCO and the WMO. A short video of OOFS is also available here.

Background

Every single country in the world with a coastline is likely to engage in marine activities for national security, environmental protection and maritime economic development. Such activities require the monitoring and forecasting of the physical, biogeochemical and sea ice state of the ocean on a daily basis. Operational Ocean Monitoring and Forecasting relies on expertise and brings the relevant ocean data for monitoring.

At its Fifth Session, the Joint WMO-IOC Technical Commission for Oceanography and Marine Meteorology (JCOMM-5, Geneva, 25–29 October 2017) recalled the recommendation at JCOMM-3 to develop a Guide on Operational Ocean Forecasting Systems, with the objective of documenting the current practices for ocean forecasting, in order to: (i) provide existing centres with alternative approaches to promote discussion on the best practice; and (ii) serve as an aid for developing centres (Decision 38). JCOMM-5 also noted that significant progress had been achieved by the Expert Team on Operational Ocean Forecast Systems (ETOOFS) with the technical support of an expert consultant in developing a Guide, and decided that the Guide on Operational Ocean Forecasting Systems is of priority and requested the Management Committee, Secretariats and the new ETOOFS members to complete the activity as a priority.

Following JCOMM-5 session, the newly appointed members of the ETOOFS in 2018 met for the first time on 3-4 February 2020 (Paris, UNESCO Headquarters) to discuss the way forward in the advancement of a Guide on Operational Ocean Monitoring and Forecasting Systems. At the meeting, the experts also discussed about the opportunities for training and capacity building on ocean monitoring and forecasting systems.

The Online Courses

IOC, GOOS/ ETOOFS Mercator Océan International and the Ocean Teacher Global Academy (OTGA) are co-organizing the online training courses. The aim of the training course on Understanding the Benefits of Operational Ocean and Forecasting Systems (‘Awareness Workshop’), 14–16 June 2021 is to give the attendees a general understanding on Operational Ocean Monitoring and Forecasting Systems (OOFS). It will demonstrate the current practices for ocean monitoring and forecasting systems and serve to strengthen the implementation of new OOFS.

The objectives of the training course on Implementing an Operational Ocean Monitoring and Forecasting Systems (‘Hands-on Workshop’), 22–24 June 2021 is to: (i) give the attendees the vision of the entire value chain of a centre operating an Operational Ocean Monitoring and Forecasting Systems (OOFS), from the system to the interface with users; (ii) to share experience around practical exercises on important choices linked to the implementation of an OOFS (data assimilation, choice in modelling configuration).

The training will target experts from both the oceanographic and meteorological communities. Attendees for the ‘Hands-on Workshop’ will be selected based on their interest and background. The entire training will be conducted in English. Further information regarding the training workshops is provided in the enclosed Training Course Descriptions.

The deadline to submit the application closes 16 May 2021 (midnight CET). Do not leave for last minute application since the system will close automatically. In case you have any questions please contact the organisers (email: d.chang-seng@unesco.org or ioc.training@unesco.org well in advance). Successful candidates will be notified by 3 June 2021. Training participants will be requested to submit an online feedback of the training in English describing the activities they participated in, what they learned, and how they will use their training to improve the implementation

of operational ocean monitoring and forecasting system in their countries. Training attendance certificates will be provided to participants.

With the assurances of my highest consideration, I remain,

Yours sincerely,

[signed]

Vladimir Ryabinin
Executive Secretary

Enclosure (1): Training Course Description

Training Course Description

Understanding the Benefits of Operational Ocean and Forecasting Systems ('Awareness Workshop')

Mercator Ocean and IOC/GOOS/OTGA Online Training Course

14–16 June 2021

Summary

This online workshop will provide an overview of Ocean Monitoring and Forecasting Systems. Three main topics will be addressed:

- the international context and motivations,
- modelling the ocean and operating systems,
- disseminating ocean information.

Aims and Objectives

The aim of the training is to give the attendees a general understanding about Operational Ocean Monitoring and Forecasting Systems (OOFS). It will demonstrate the current practices for ocean monitoring and forecasting systems and serve to strengthen the implementation of new OOFS.

Expected Learning Outcomes

At the end of this training course, the participant will:

- Understand the international standards and best-practices necessary for setting up an operational oceanography and forecasting systems service;
- be able to describe the architecture of an operational ocean monitoring and forecasting system;
- Understand the modelling of the ocean from the collection of ocean observations to final ocean forecasts;
- Understand user-driven services, how they relate to the routine supplies and relevant products and information to users along with relevant services driven by user requirements;

Target audience and prerequisite

No specific technical pre-requisites needed. However, participants should have a clear link/ responsibility related to operational ocean forecasting systems in their country, including its implementation. Participants need to have a good working level of the English language.

Content

- Rational and international context:
  - Building an OOFS in an international context
  - Advantage of building an OOFS for economy, society and environment
- Modeling the ocean and operating systems:
  - The architecture of an OOFS
  - Systems operations (collecting data, modeling, validation)
  - Modeling the ocean (circulation, waves, sea level and biogeochemistry)
- Disseminating the information:
  - Presentation of outreach tools and disseminating catalogues,
  - Downstream applications.

Instructors

- D.Chang Seng
- E.Alvarez
- P.Bahurel
- S.Ciliberti
- A. Mehra
- A. Repucci
- J. Siddorn
- M. Drevillon
- Fujiang Yu
- Lotfi Aouf
- Elodie Gutcknecht
- L. Crosnier
- K. Von Schuckman
- others to be confirmed

Workshop Format

Online asynchronous phase (1–13 June 2021): background reading material and videos will be made available on the OT e-Learning platform for preparation for the synchronous sessions. Participants are expected to go through these contents before the live event. This should take 5-6 hours;

Online synchronous phase (14–16 June 2021): 2,5-hour long workshops each day; 2 similar sessions will be organised each day:

- 08:00 - 10:30 CEST
- 17:00 - 19:30 CEST

Participants are expected to attend one of the above sessions for each of the 3 days of the live workshop.

No tuition fees apply.

Information on how to apply will be published 26 April 2021. Applications will close on 16 May 2021.

For questions, please contact:

- IOC/GOOS: d.chang-seng@unesco.org
- IOC/OTGA Secretariat: ioc.training@unesco.org

Applications

On line two in one applications (with selection option) are available at

https://otga.wufoo.com/forms/xs2oyn60iumikh/

Training Website Platform

https://classroom.oceanteacher.org/course/view.php?id=706

The online training courses platforms / e-learning platforms will be accessible throughout the month of June and will contain the videos provided by the guide's authors and additional interesting information on each of the final guide's chapters, reading lists, quizzes and forums to ask questions.

An update of the Training Training Course Description is available here.

Training Course Description

Implementing an Operational Ocean Monitoring and Forecasting System 'Hands-on Workshop'

Mercator Ocean and IOC/GOOS/OTGA Online Training Course

22–24 June 2021

Implementing an operational ocean monitoring and forecasting system is guided by multiple scientific, technical and outreach choices.

This hands-on workshop will provide examples of these choices through an overview of the products from an operational oceanography and forecasting systems (via the Copernicus Marine Service portfolio) and a demonstration on graphical user interfaces and command line interfaces to visualize these data. Practical sessions will be proposed on Assimilation & Validation and Downscaling.

Aims and Objectives

The aim of the training is to:

- give the attendees the vision of the entire value chain of a centre operating an Operational Ocean Monitoring and Forecasting Systems (OOFS), from the system to the interface with users;
- To share experience around practical exercises on important choices linked to the implementation of an OOFS (data assimilation, choice in modelling configuration…)

Learning Outcomes

- Understand the choices which have to be made to configure an operational oceanography and forecasting system and be aware of the impacts of these choices;
- Understand the role of the observations in the assimilation and the validation processes.
- Discover an example on how to showcase and made your products accessible for your users communities.

Contents

- CMEMS portfolio
- Demo on Panoply with physical products
- Demo on Jupyter Notebook with wave products
- Demo Rstudio with Bio Products

Target audience and prerequisite

- The audience will be a technical one: participants need to have background knowledge on operational oceanography and interest on or previous experience using marine data and some notions on coding (Python/R)
- Participants need to have a good working level of the English language.

Instructors :

- D.Chang Seng
- E.Alvarez
- P.Bahurel
- S.Ciliberti
- A. Mehra
- A. Repucci
- J. Siddorn
- M. Drevillon
- Fujiang Yu
- Lotfi Aouf
- Elodie Gutcknecht
- L. Crosnier
- K. Von Schuckman
- others to be confirmed

Note: participants selected to attend this hands-on workshop need to also attend the **Understanding the Benefits of Operational Ocean and Forecasting Systems (OOFS) Awareness workshop** to take place on 14–16 June 2021.

Workshop Format

Online asynchronous phase (8–21 June 2021): background reading material and videos will be made available on the e-Learning platform for preparation for the synchronous sessions. Participants are expected to go through these contents before the live event. This should take 5-6 hours;

Online synchronous phase (22-24 June 2021): 2,5-hour long workshops each day; 2 similar sessions will be organised each day:

- 08:00 - 10:30 CEST
- 17:00 - 19:30 CEST

Participants are expected to attend one of the above sessions for each of the 3 days of the live workshop.

No tuition fees apply.

Information on how to apply will be published 26 April 2021. Applications will close on 16 May 2021.

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