

WORLD METEOROLOGICAL ORGANIZATION

EC-WG-WIGOS-WIS/SG-WIGOS-1/Doc. 6.3

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EXECUTIVE COUNCIL WG ON WIGOS-WIS  
SUB-GROUP ON THE WMO INTEGRATED OBSERVING  
SYSTEMS (SG-WIGOS)

(27.10.2008)

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*First Session*

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## REVIEW OF INTEGRATION NEEDS AND POTENTIAL PROBLEMS OF WMO GLOBAL OBSERVING SYSTEM AND RELEVANT CO-SPONSORED OBSERVING SYSTEMS

### IOC/UNESCO Ocean and terrestrial observing systems

*(Submitted by Mr Keith Alverson (IOC/UNESCO))*

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#### Summary and Purpose of Document

This document contains the abstract of the presentation *An integrated, operational global ocean observing system* that will be conducted as well as the IOC Statement submitted at the first session of the EC WG on WIGOS and WIS (December 2007).

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#### **ACTION PROPOSED**

The session is invited to consider the submitted information when discussing integration needs and potential problems of WMO observing systems and relevant co-sponsored observing systems.

- References:**
1. Abridged final report of the EC-LX (WMO-No. 1032)
  2. Final report of the first session of the EC WG WIGOS-WIS

**An integrated, operational global ocean observing system**

*(Submitted by Keith Alverson)*

***Intergovernmental Oceanographic Commission of UNESCO  
Chief of Ocean Observations and Services***

The Global Ocean Observing System (GOOS) has been in existence for over a decade. During the first decade, GOOS was primarily engaged in planning observational strategies and developing the international governance structures required to facilitate multi-national ownership and development of the system. This work is done and the most important challenge now facing GOOS is to complete and sustain an integrated, global system with clear user benefits. Substantial progress has been made, with more than half of the in-situ open ocean observing system for climate already in the water, including buoys, moorings, floats, tide gauges and repeat hydrographic lines. Operational warnings for coastal hazards based on this GOOS observational backbone are widely available providing clear societal benefits. At the same time though, substantial challenges remain. GOOS needs to increase research community contribution to and benefit from the system. Another challenge is to improve accounting of governmental commitments to the system, and enhance them. Finally GOOS needs to fill geographic and thematic gaps for example in developing regional systems in the Arctic and Southern Oceans and by transitioning biological pilot projects into fully operational components of the system. This presentation will begin with a brief overview of the status of the global ocean observing system, then highlight milestones successfully achieved and conclude with some ideas on how to tackle some key future challenges.

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## **IOC Statement**

**by Mr Keith Alverson**

**Chief of Ocean Observations and Services  
IOC/UNESCO, Director, Global Ocean Observing System**

**(EC-WG/WIGOS-WIS-1, APPENDIX VII)**

1. Thank you for the opportunity to attend this meeting on the behalf of the Executive Secretary of IOC, as a representative of IOC's ocean observations and services section, and its co-sponsored programs including the Joint Commission for Oceanography and Marine Meteorology (JCOMM), International Oceanographic Data and Information Exchange (IODE) and Global Ocean Observing System (GOOS). The IOC is pleased to participate in this Working Group and intends to follow up with a written communication from IOC Executive Secretary Patricio Bernal to the Secretary General of WMO, Michel Jarraud formalizing some of the points in this intervention.

2. IOC is very positive about the proposed improvements that will become available through the development of the WMO Information System (WIS). The ocean observing system has long been a user and beneficiary of the GTS. Due to the rapidly increasing density of in-situ observation platforms as well as increasing need for near real time data transmission, the community has at times been frustrated with limited capacity for data transmission over the GTS and the lack of long term stewardship of and open access to data that goes out over the GTS. These weaknesses will be improved through the development of WIS and WIGOS. IOC also strongly supports the development of WIGOS, though with a small caveat regarding perception of ownership.

3. Developing a comprehensive ocean observing system is substantially more challenging than the analogous atmospheric problem, for both political and scientific reasons. On the political level, there is a relative lack of empowerment of national institutions analogous to national met services with a clear ocean-observing mandate. On a technical level, the opacity of seawater to electromagnetic radiation inhibits the effectiveness of both remote sensing from satellites and communications with and amongst in-situ observing system platforms, requiring maintenance of a diverse, remote and extensive array of satellites as well as Eulerian and Lagrangian in-situ monitoring platforms. Furthermore, the majority of observations continue to be funded and conceived in a hypothesis driven, process oriented, research funding driven mode with few truly operationally funded and operated observing system components. To help ameliorate these weaknesses, the oceanographic community stands to gain enormously from participating fully in the development of an integrated global observing system. This said, the IOC is somewhat concerned that the 'W' in WIGOS may be perceived as an assertion of ownership by WMO, either of the system or the underlying data. Such a perception may jeopardize a true sense participation, through community ownership, amongst the diverse oceanographic interests represented by the IOC. IOC thus encourages WMO to ensure a sense of broad community ownership of the integrated global observing system, and thereby also benefit from broad responsibility for ensuring its success.

4. Finally, with regard to the reorganization of the WMO secretariat IOC recognizes that this is an internal WMO matter. Nonetheless, IOC notes that joint activities of IOC and WMO – including but not limited to our joint sponsorship of GOOS, GCOS, WCRP and JCOMM and our joint participation in the Interagency Coordination and Planning Committee for Earth Observations (ICPC) - have benefited greatly over the past years from the existence of relatively high level clearly defined contact point(s) for ocean affairs in the WMO secretariat and we trust that this cooperation will not be hindered through potential multiplication of, downgrading of, or lack of clarity related to point(s) of contact for ocean affairs across future structures of the WMO secretariat in observations, services, climate and research.

5. Thank you again on behalf of the Executive Secretary of the IOC for the opportunity to participate in this Working Group.

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