

**Minutes of the 1st Session of the Executive Committee (EC) of the
WCRP-IOC Task Group (TG) on of Sea-Level Variability and Change
24 March 2010, Bern, Switzerland
(International Space Science Institute, Bern, Switzerland)**

Present:

John Church
Konrad Steffen
Anny Cazenave
Philip Woodworth
Thorkild Aarup – IOC Secretariat
Vladimir Ryabinin – JPS for WCRP
Ghassem Asrar – Director, WCRP

Were unable to come due to the short notice:

Jonathan Gregory
Stanley Wilson

Background for the TG

Prof. Steffen made a short introduction to the TG.

The Joint Scientific Committee (JSC) for WCRP held its 30th Session in April 2009 in College Park, USA decided to develop a joint WCRP - IOC sponsored Task Group on *Assessment of Sea-Level Variability and Change* and actively engage the WCRP core Projects in its activities. Prof. Konrad Steffen and the former WCRP JSC Chair Dr. John Church agreed to co-chair the group. The Task Group was established with a view of facilitating fundamental research on sea-level variations including their geographical distribution and at the same time producing tangible practical outcomes for IOC Member States.

The proposal was discussed at IOC-25, June 2009, Paris. The Group name was slightly revised. Other decisions/comments were as follows:

1. Some Member States stated that IOC support to the WCRP–IOC Task Force on Assessment of Sea Level Variability and Change should not jeopardize core support to WCRP, and that the specific IOC role should be clarified.
2. The Assembly ...instructed the Executive Secretary to ... (b) work with the WCRP on the establishment of a WCRP - IOC Task Force on Sea Level Variability and Change, to improve the ability to monitor, explain, and predict global and regional sea level, with the continuing sponsorship of IOC, subject to review of progress at the 26th Session of the Assembly.

Scope of future work, ToRs

The EC was of the opinion that ToRs for the TG were largely appropriate but still require some minor editing. The ToRS in the Annex take into account comments by EC members. The Co-Chairs agreed to consider the need and if required, further update the ToRs (**Action**).

A key task for the TG would be to develop a process to address uncertainties of sea-level rise uncertainties and other issues associated with the statistical models of sea-level rise outlooks.

There is a need to increase the work force for sea-level research and systematically work with young scientists. An efficient way of doing so would be new summer schools or extension of the existing and known summer schools to include issues related to sea-level. Participation of students from regions affected by sea-level rise should be encouraged.

Commitment of EC members to look after the items in ToRs, need for more members, identification of individuals and groups to address the identified work items

The EC felt that its expertise was appropriate for the initial stage of work and that in the future it would be desirable to acquire expertise in the areas of 1) Earth deformation, geodetics and 2) paleo/historical perspective.

The EC was of opinion that it should lead the work of TG and act as its “core” while other experts should be invited to participate or various working bodies of TG should be formed on a need-to-be basis. A list of experts that may be invited to contribute to various aspects of the future work of TG should be compiled.

Future activities / events / publications: scope and schedule

The EC noted two workshops relevant for its ToRs, in which some of the EC were participating. They are

- The IPCC Workshop “Sea-level Rise and Ice Sheet Instabilities”, Kuala-Lumpur, 21-25 June
- The “Deltas in times of climate change” Conference, cosponsored by WCRP, 29 Sep-1 Oct 2010, Rotterdam, The Netherlands

The EC agreed that there is a need to organize a workshop to address the lack of a coordinated approach to understanding and projecting the regional distribution of sea-level rise. Such a workshop would be relatively small (~50 people) and that optimum timing for such a workshop would be after the 2011 IUGG meeting in Melbourne (27 June to 8 July 2011) and before the WCRP Open Science Conference in Denver (24-28 October 2011). The focus would include the current status of the science, research priorities and future challenges. A suitable location would be at UNESCO in Paris where the previous sea-level workshop was held. Co-Chairs agreed to try to identify Co-Chairs of the Workshop and ask them to form a Scientific Organizing Committee (**Action**).

Data products to be facilitated by TG

The EC exchanged views on the required data and information products on sea-level that various communities would need. Among such products the following were listed:

- Regular updates on sea-level rise budget and its components
- Maps of regional sea level and its change with time

WMO Annual Statements on the state of the climate system would be an appropriate source for publication of sea-level rise updates. Dr Ryabinin agreed to discuss with the WMO Secretariat the WMO process of preparing updates on climate state and how sea-level rise updates could be included and used (**Action**). IOC (Dr. Aarup) will explore the optimal means of issuing IOC updates (**Action**). A possibility of publishing an update on sea-level rise in The BAMS was also noted.

The EC also exchanged views on the finalization and distribution of the sea-level monograph by Dr Church et al., which resulted from the WCRP 2006 Sea-Level Workshop.

Required support (i.e. website, resources, secretariat, etc.)

Prof. Steffen will review a possibility of arranging a website for the TG including an option of making relevant data synthesis and ensuring data access (**Action**). This new website will have links to other WCRP and IOC websites and web-pages. Regular (once in 2 months) telecons of the EC should be organized. Dr Aarup will serve as the contact point for IOC on the EC. Dr. Ryabinin will serve as the contact point for WCRP on the EC.

To enable future meetings of the EC and may be TG, Drs Aarup and Ryabinin will discuss with SCOR a possibility of SCOR sponsorship of the TG, in any form.

ToRs of the TG:

The Task Group will address issues relevant to sea-level rise, both its global average and also its variability in space and time. The overall goal of the group will be to improve our ability to monitor, explain, predict global and regional sea level and all environmental factors related to it, and use this information for informed decision making.

Specifically, the Task Group will:

- Review the state of knowledge and corresponding research on sea-level rise, identify gaps and research needs across WCRP, other Programmes and relevant parties.
- Stimulate and facilitate the development of observation and modelling techniques and scientific understanding necessary to assess and predict global and regional sea-level evolution.
- Facilitate periodic updates and creation of products on the rate of sea-level rise and the processes contributing to it.
- Advise on the development of in-situ and satellite observing systems required to improve our understanding and projections of sea-level rise and recommend transition into sustained operation of those systematic sea-level-related observing systems that are sufficiently mature and provide a rationale for their prioritization.
- Facilitate development of a basis for quantification of future regional extreme sea levels due to superposition of mean sea-level rise, high tides and storm surges.
- Facilitate the use of improved observations, understanding and projections of sea level rise by various groups assessing the impacts of sea-level rise and the associated risks.

The group will primarily work via email, telephone hook-ups and face-to-face meetings during (or immediately adjacent to) other conferences/meetings. The group may convene broader community workshops. The TG is expected to report to WCRP annually at meetings of JSC for WCRP and to IOC Assembly in 2011.