

**STATEMENT AT THE OPENING OF THE WCRP WORKSHOP
*UNDERSTANDING SEA-LEVEL RISE AND VARIABILITY***

by

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DR PATRICIO BERNAL, ASSISTANT DIRECTOR GENERAL OF UNESCO AND EXECUTIVE SECRETARY OF THE INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION (IOC),

PROF. THOMAS ROSSWALL, EXECUTIVE DIRECTOR OF THE INTERNATIONAL COUNCIL FOR SCIENCE (ICSU),

CO-CHAIRS OF THE STEERING COMMITTEE FOR THE WORKSHOP,

DEAR COLLEAGUES AND GUESTS,

LADIES AND GENTLEMEN,

It is a pleasure for me to address the opening of the World Climate Research Programme (WCRP) Workshop *Understanding Sea-level Rise and Variability*, through Dr Ann Henderson-Sellers, Director of WCRP, who has kindly accepted to represent me on this auspicious occasion. I regret that long-standing commitments for the period have not permitted me to be present at this ceremony. However, on behalf of the World Meteorological Organization (WMO), the international meteorological community and my own, I would like to welcome all workshop participants and to express our appreciation for their interest and their commitment with the issues involved.

I wish to thank UNESCO, through Dr Patricio Bernal, Assistant Director General of UNESCO and Executive Secretary of its Intergovernmental Oceanographic Commission (IOC), for hosting this meeting in Paris. I also would like to thank Prof. Thomas Rosswall, Executive Director of the International Council for Science (ICSU), for ICSU's support to WCRP. In this respect, I recall that WCRP was established in 1980, under the joint sponsorship of the ICSU and WMO, and that since 1993 it has also been sponsored by UNESCO's IOC.

Moreover, I wish to thank the four co-chairs of the Joint Scientific Committee of WCRP, Doctors Thorkild Aarup, John Church, Stan Wilson and Philip Woodworth, for their dedication to the implementation of the programme.

DEAR COLLEAGUES, LADIES AND GENTLEMEN,

One of the fundamental objectives of WCRP is to develop the scientific understanding of the physical climate system and the processes that determine the extent of climate predictability and of human influence on climate. WCRP studies are therefore specifically directed to provide scientifically founded quantitative answers to the questions being raised on climate and the range of natural climate variability, as well as to establish the basis for predictions of global and regional climatic variations and their potential impacts on the frequency and severity of extreme events.

As you are aware, the WMO co-sponsored IPCC's Third Assessment Report provides us with a wide range of values for the possible sea level rise towards the end of the twenty-first century, extending from 9 cm to 88 cm, depending on the chosen greenhouse gases emission scenario. However, a recent study led by one of the co-chairs of this workshop and chair of the WCRP Joint Scientific Committee, Dr John Church, which was published very recently, has arrived at a sea level trend estimate based on historical data. This study has indicated an average sea level rise of 19.5 cm between 1870 and 2004, with accelerating rates since the 1950s, and offered a smaller range of estimates for the expected sea level rise by the end of the 21st century: from 28 to 34 cm.

Why is it so important to further reduce the uncertainties in these estimates? While there is still debate on the concept of "*environmental refugee*" as well as on the multiple socioeconomic and environmental factors leading to migration, decisions are already being made to evacuate islanders from some atolls in the Pacific Ocean, on account of the sea-level rise and variability. For example, it has been decided to relocate islanders from Papua New Guinea's Carteret Island, over a period of one to two years, to the larger Bougainville Island. Carteret would then be abandoned and might soon disappear underwater, much like the two Kiribati islands of Tebua Tarawa and Abanuea did in 1999. The situation is also extremely critical on the coral atoll nation of Tuvalu.

The workshop will therefore contribute to the delivery of useful warnings to decision makers, provide information on climate risk services, support the task of the United Nation Framework Convention on Climate Change (UNFCCC), inform the public and governments on the need for further research on climate change and improve the understanding and modeling of contributing processes. I also wish to note that this workshop is being conducted in support of the Global Earth Observation System of Systems (GEOSS) 10-Year Implementation Plan and, as such, that it should contribute significantly in developing the international consensus for the observational requirements needed to address sea-level rise and its variability.

DEAR COLLEAGUES, LADIES AND GENTLEMEN,

WMO has been pleased to co-sponsor WCRP with IOC and ICSU, and wishes to pay tribute to all those who have contributed to its success over the past twenty-six years. WMO considers WCRP as a major component of its multifaceted climate activities and is fully committed to assisting WCRP in maintaining its high scientific standing and credibility, and to facilitate the multidisciplinary involvement of scientists

from all parts of the world with a particular effort required to increase the participation of developing countries.

I therefore look forward to your report, in particular with respect to the evaluation of the current state of the science and the future research requirements for improving our understanding of sea-level rise and variability. I wish you a very productive workshop.

Thank you.
