



U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
OAR Laboratories

Pacific Marine Environmental Laboratory
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October 23, 2013 R/PMEL

Dr. Ed Urban
Executive Officer
Scientific Committee on Oceanic Research (SCOR)
College of Earth, Ocean, and Environment
Robinson Hall
University of Delaware
Newark, DE 19716 US

RE: SCOR WG Proposal on Climate and Tsunami science with green repeaters on submarine cable systems

Dear Ed:

I am writing in support of the proposal submitted for review by SCOR next month on "Climate and tsunami science with green repeaters on submarine cable systems" in my role as Engineering Chair of the WMO-ITU-UNESCO IOC Joint Task Force and as Director of Engineering of the Pacific Marine Environmental Lab that has been involved in tsunami and climate research for over 30 years.

The JTF was established jointly by three UN agencies in 2012, namely the International Telecommunications Union (ITU), UNESCO Intergovernmental Oceanographic Commission (UNESCO IOC) and the World Meteorological Organization (WMO). The JTF is tasked with developing a strategy and roadmap that could lead to enabling the availability of submarine cable repeaters equipped with scientific sensors for climate monitoring and disaster risk reduction (tsunamis, slope failures, meteo-tsunamis).

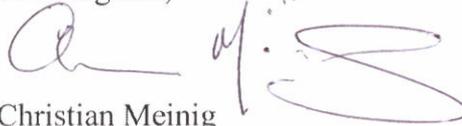
NOAA-PMEL has been investigating the 'dual-use' of commercial telecom cables as a long term replacement or enhancement of the present DART (Deep-ocean Assessment and Reporting of Tsunamis) buoy array. While the data from DART moorings have enabled accurate tsunami forecasts, they are subject to vandalism and have relatively high operation and maintenance costs. Similar or higher frequency measurements from 'dual-use' telecom cables have the potential for much longer deployment life and are less likely to be vandalized. Additionally, high accuracy temperature sensors in the poorly sampled abyssal ocean also have great potential for scientific advancements. These measurements are certainly worthy of independent scientific investigation.

I highly recommend the establishment of a small number of science specialists as a SCOR Working Group to consider and provide scientific analysis, advice and publications on the wider scientific implications of this revolutionary concept for a global network of sensors integrated on trans-ocean and regional telecommunication cables. The acquisition of such decadal real time



data represents a profound contribution to understanding changes in deep ocean temperature and circulation as well as adding vast scope to the present tsunami networks for hazard mitigation and tsunami research.

With regards,

A handwritten signature in purple ink, consisting of a stylized 'C' followed by a vertical line and a large, loopy flourish.

Christian Meinig
Chair, Engineering Committee, Joint Task Force