



United Nations Educational, Scientific and Cultural Organization

> Organisation des Nations Unies pour l'éducation la science et la culture

Organización de las Naciones Unidas para la Educación la Ciencia y la Cultura

Организация Объединенных Наций по вопросам образования науки и культуры  Intergovernmental Oceanographic
 Commission

 Commission
 océanographique intergouvernementale

Comisión Oceanográfica Intergubernamental

Межправительственная океанографическая комиссия

#### Wendy Watson-Wright

Executive Secretary, IOC

#### **Albert Fischer**

Head, Ocean Observations and Services WCRP JSC-35, Heidelberg, Germany, 30 June 2014

## **IOC and WCRP**

# Intergovernmental Oceanographic Commission of UNESCO

- Focal point for ocean observations, science, services and data exchange
- Competent international organization for marine science (United Nations Convention on the Law of the Sea – UNCLOS)







## IOC Vision 2014-2021



### Vision

Strong scientific understanding and systematic observations of the changing world climate and ocean ecosystems shall underpin global governance for a healthy ocean, and global, regional and national management of risks and opportunities from the ocean

## **IOC** high-level objectives

- Healthy ocean ecosystems and sustained ecosystem services
- Effective early warning systems and preparedness for tsunamis and other ocean-related hazards
- Increased resiliency to climate change and variability and enhanced safety, efficiency and effectiveness of all ocean-based activities through scientifically-founded services, adaptation and mitigation strategies
- Enhanced knowledge of emerging ocean science issues







## Climate research and observations



# OceanObs'09: Framework for Ocean Observing **A simple system**









# Driven by requirements, negotiated with feasibility **Essential Ocean Variables**



- We cannot measure everything, nor do we need to
- basis for including new elements of the system, for expressing requirements at a high level
- Driven by requirements, negotiated with feasibility
- Allows for innovation in the observing system over time



Towards sustained system: requirements, observations, data management



# Framework for Ocean Observing Societal drivers next decade



GOOS Framework for Ocean Observing
Governance structure



### **GOOS Steering Committee**

(John Gunn and Eric Lindstrom, co-chairs; Peak Bodies, Sponsors, Observing Panel Chairs, Observing System leaders)



(focused on EOVs e.g. Physics through **OOPC**, Carbon/Biogeochemistry through **IOCCP**, new **Biology/Ecosystems panel**); Coordination for observing system elements

### **Technical Advisory Groups / Projects / GRAs**



(Observing technologies and networks,

Variable focus: data and products, synthesis, link to models)

## Developing 'GOOS Projects'

#### • A Deep Ocean Observing Strategy, ioc-goos.org/doos

- Eric Lindstrom lead
- across physical, biogeochemical, and biological observations
- including a strong element of discovery

#### • A Tropical Pacific Observing System for 2020, tpos2020.org

- Neville Smith and Billy Kessler, Scientific Committee co-chairs
- A transformative project 2014-2020 leaving the legacy of a more integrated and sustained observing system
- AtlantOS (H2020 proposal): strong EuroGOOS and IOC-UNESCO/GOOS involvement
- 'GOOS Project' definition, coordination, governance, and reporting will be a major topic for the GOOS Steering Committee (July 2014) – including intersection with WCRP/CLIVAR



## WCRP and IOC

- WCRP contributes to a key High-Level Objective and Function of the IOC Member States
  - Particular interest on global/regional sea level, extremes, intersection with vulnerability/adaptation, capacity development, climate services (IOC-27 Decision 5.4.1, 2013)
- IOC secretariat since 2011 has been working without the voluntary and assessed contributions from USA
  - For 2014-2015 operating with a 30% reduction in regular programme budget
  - IOC's Joint Climate Fund contribution will unfortunately be very limited in 2014-2015
  - IOC Member States remain committed to WCRP
- Working relationship with GOOS and GCOS through OOPC / CLIVAR is strong



# WCRP and IOC

- Climate is a cross-cutting issue for IOC
  - Oceans and the physical basis for climate variability and change

Sustainable

management

and governance

Capacity development Assessment

information

for policy

Observing

system / data

management

Improving

governance

Applying

knowledge

for societal

henefit

Building

scientific

knowledge

Early

warning and

Services

A

Ocean

research

- Carbon and ocean acidification
- Impact on ocean ecosystems from: temperature, sea level, acidification, deoxygenation
- Ocean-related climate services: seasonal forecasting, regional sea level rise
- Contributing to scientific assessments and informing policy
- Developing the capacity of all Member States to contribute to climate science and benefit from its knowledge
- WCRP can help build links across all the needed interfaces

