



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

Advancing Marine Science for Coastal and Ocean Governance in the West Pacific

Vo Si Tuan & Wenxi Zhu

*WESTPAC of Intergovernmental Oceanographic Commission
United Nations Educational, Scientific and Cultural Organization*

***EAS Congress 2015 - Workshop 1.3: Coastal and Ocean Governance
in the Seas of East Asia: from Nation to Region***

A dynamic photograph of a large ocean wave curling over, creating a tunnel-like structure. The water is a vibrant turquoise blue, and the sky above is a clear, bright blue with some white clouds. The overall scene conveys a sense of natural power and the interconnectedness of the elements.

**One planet, one ocean
All the cycles of life**

Climate

Water

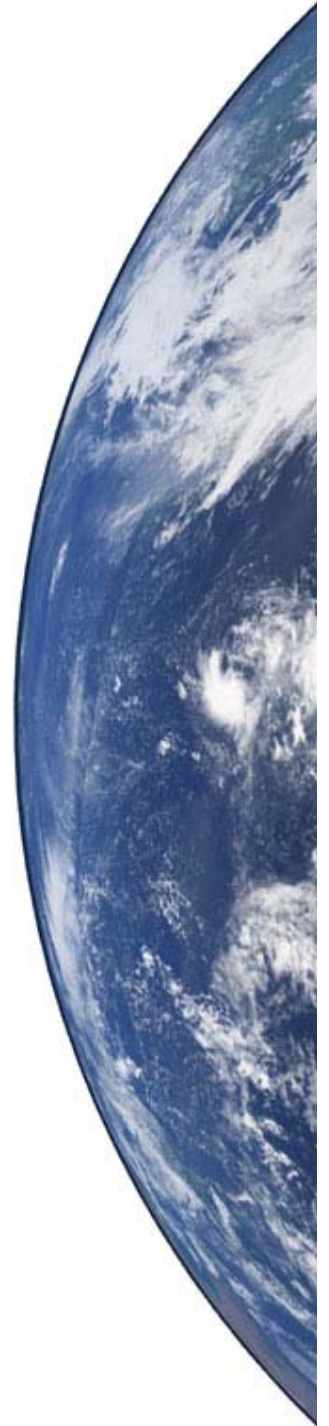
Oxygen

Nitrogen

Carbon

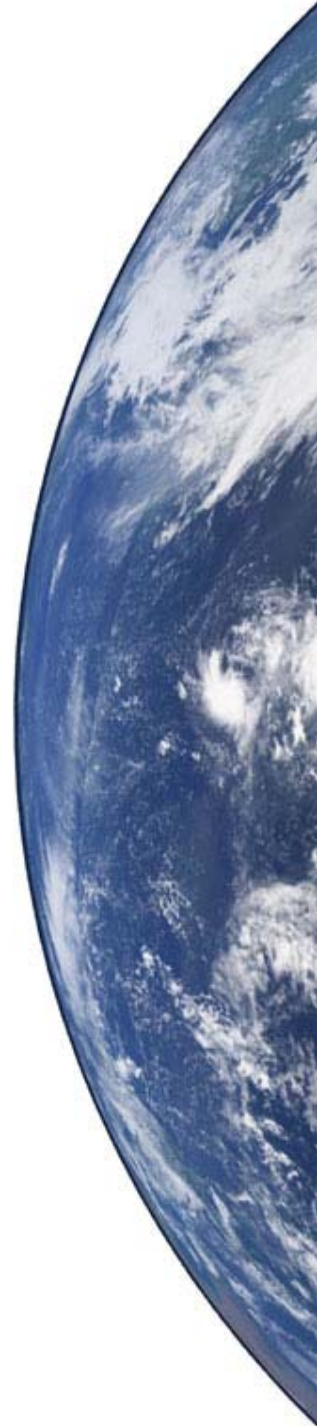
What does science concern for Management and Stewardship?

- What are the limits of the natural system?
- How can we reduce our vulnerability?
- How do we move toward sustainable development?



What does science can do for Management and Stewardship

- Research
- Observations
- Data management
- Forecasting
- Information for societal benefit



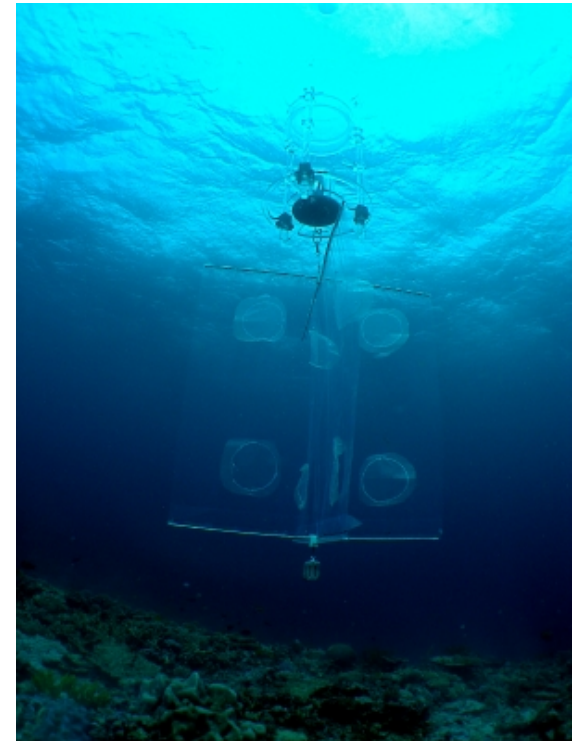
The IOC of UNESCO:

Building knowledge and capacity for sustainable ocean management

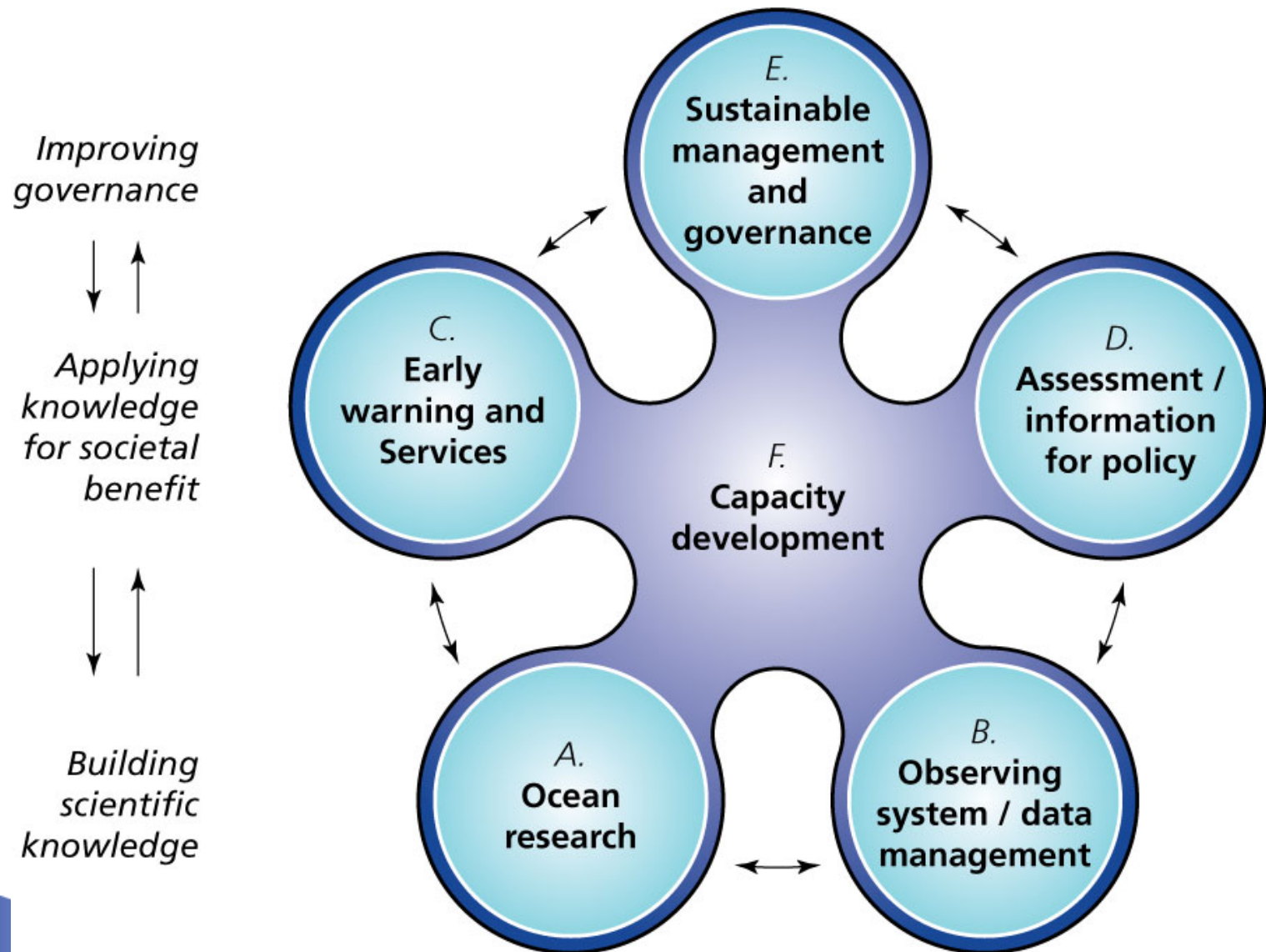
- UN Focal point for ocean observations, science, services and data exchange
- Competent international organization for marine science (UNCLOS)

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



From vision to execution



Fostering cooperation among scientists, institutes and countries in the Western Pacific and adjacent regions in the study of the ocean, in order to assist countries in sustainably managing their ocean and coastal biodiversity and resources, protecting coastal populations, and maintaining ecosystem services in line with their own priorities and needs.



Programmatic Areas and Priorities

Ocean Observations and Services



Marine Science and Applications



Capacity Development



Ocean processes and Climate
Ensuring Marine Biodiversity and Sea Food Security
Health of Ocean Ecosystems



WESTPAC

Structure

MAY 2015 – MAY 2017

WESTPAC International Scientific Symposia

WESTPAC Session

WESTPAC Office, Bangkok

WESTPAC Advisory Group

Ocean Observations & Services

NEAR-GOOS

SEAGOOS

Air-Sea Interaction in
the Kuroshio
Extension

Upwelling Studies

IPOVAI

IPON

Marine Science & Applications

Marine & Coastal Biodiversity
and Conservation

Coral Reef under Climate &
Anthropogenic Perturb.

DNA Taxonomy &
Recruitment Monitoring of
Coral Reef Marine Organisms

Marine Toxins & Seafood
Safety

Harmful Algal Blooms

Ocean Remote Sensing

Marine Endangered
Species

SCS Fluvial Sediments

Capacity Development

Training &
Research Centers

Specific trainings under
projects

WESTPAC Best Young
Scientist Award

WESTPAC Young
Scientist Travel Grant

IOC RTRC on ODC

Ocean Forecasting
System

MOMSEI

Ocean Acidification

Working Groups

WG 003: Mapping the
Harmful Jellyfishes

WG 004: Marine Renewable
Energy Technology

May 2012 – May 2015:

2150 participants
1 International symposium
2 intergovernmental
sessions
4 joint cruises
17 trainings/summer
schools
38 regional science
workshops



Capacity Development



WESTPAC Approach to Capacity Development in Marine Science

*"If you want to go fast, go alone;
if you want to go far, go together"*

Guiding Principles

- ❑ Prioritize the **inclusion** of capacity development as one of key components in WESTPAC Programmes-leading to the attainment of their goals;
- ❑ Focus on **user needs** at the regional and national level;
- ❑ Foster **north-south and south-south collaboration** among individuals, institutes, universities and competent governmental agencies;

Bolster Institutional Capacity for Sound Management and Governance

IOC Regional Network of Training and Research Centers



The Pari Island,
Indonesian
Institute of



Bachok Marine Research
Station, IOES, Malaysia



Phuket Marine
Biological Center,
Thailand



Marine Station @ St. John's Island,
Singapore



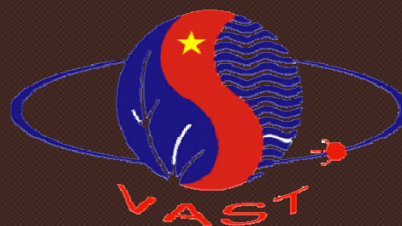
Institute of Oceanography,
Vietnam

IOC Regional Training and Research Centre on Ocean Dynamics and Climate (RTRC-ODC)



**Advocate marine
science, and strengthen
science-policy interface
for ocean governance**





IOC/WESTPAC

9th International Scientific Symposium

“A Healthy Ocean for Prosperity in the Western Pacific: Scientific Challenges and Possible Solutions”

22-25 April 2014

Sheraton Hotel, Nha Trang, Khanh Hoa, Vietnam

14 Sessions and 9 Workshops





WESTPAC Outstanding Scientists Award



WESTPAC Best Young Scientists Award



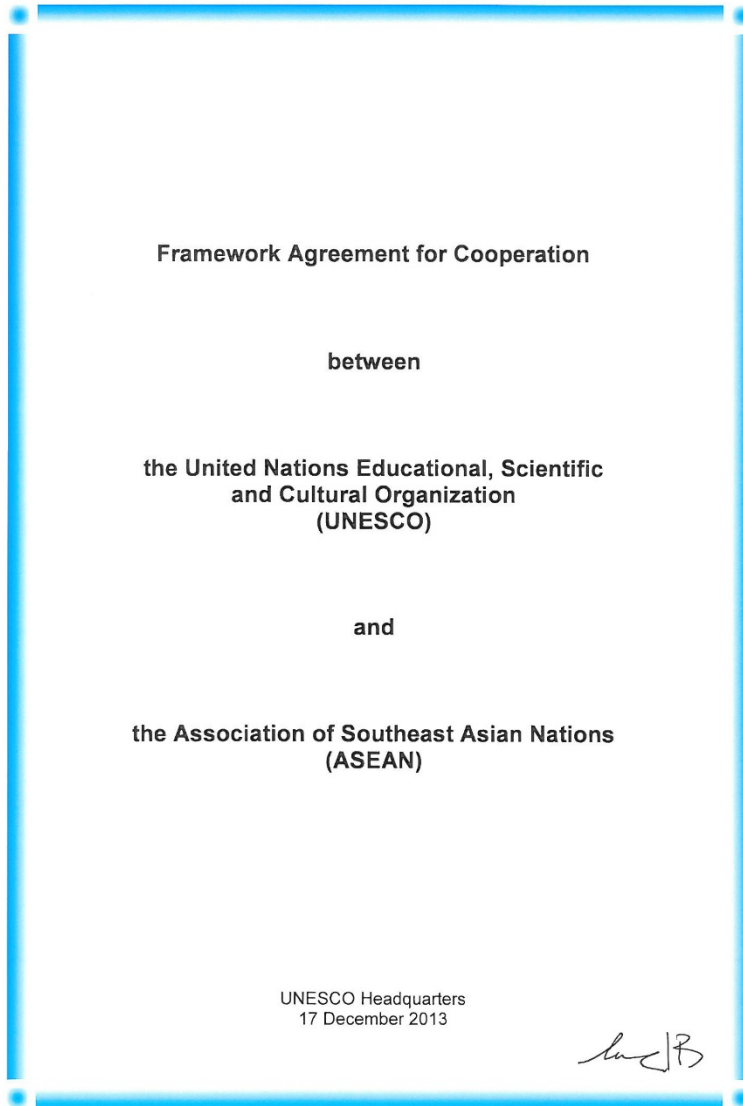
UNESCO-ASEAN Cooperation Agreement

Programme Area: Health of the coasts and ocean

Objective: To protect, restore and sustain the health and productivity of the coasts and ocean for prosperity in the ASEAN region

Action:

1. Promote regional cooperation on **marine scientific research, observations (the South East Asian --Global Ocean Observing System), data management and services and capacity building** to underpin ASEAN's efforts in the protection, restoration and sustainability of the coasts and ocean;
2. Deploy efforts to **better understand the effects of climate change, including ocean acidification, on the vulnerable marine ecosystems**, particularly coral reefs and mangroves;
3. Strengthen general **science-based knowledge for ocean management**, including marine spatial planning;
4. Promote **integrated and sustained monitoring and warning systems** for natural hazards, particularly coastal and oceanic natural hazards in close coordination with other relevant organizations, using enhanced coastal and ocean networks, including education and training activities;
5. Support the development of the **global integrated assessment** of the state of the marine environment including socio-economic aspects by 2014;
6. Assist in the **capacity development of ASEAN Member States** on marine science, observations and services, through the **"UNESCO/IOC Regional Network of Training and Research Centers (RTRCs) on Marine Science"** and other available resources, to empower ASEAN Member States in the protection, and sustainable development of their coasts and ocean.



Limitations to be overcome

- Appropriate awareness on the importance of marine science as driven factors for sustainable development - at local, national levels & also regional initiatives/programmes
- Gap between scientists and policy makers – commitment, truth, flexibility required
- Systematic and multidisciplinary approach to the program development in order to address the requirement of conventions, instruments and emerging initiatives
- Limited dedicated and capable international experts



WESTPAC Research Directors Forum

***THANKS FOR YOUR
ATTENTION***