

**INTERNATIONAL WORKSHOP
ON**

**APPLICATION OF OCEAN SCIENCE AND TECHNOLOGY
FOR THE PRACTICE OF SUSTAINABLE
“BLUE ECONOMY”
IN DEVELOPING COUNTRIES**

**8 - 9 NOVEMBER 2021
(VIRTUAL-MODE)**

Jointly Organised by

*Centre for Science and Technology of the Non-Aligned & Other
Developing Countries (NAM S&T Centre), New Delhi*

and

*Committee on Capacity Development of the Scientific Committee on
Oceanic Research (SCOR), Newark, Delaware (USA)*



INTRODUCTION

The ocean, with its huge water volume and covering 71% of Earth's surface, plays a major role in the life of humans, even those who live far from the coast. Humans benefit from products harvested from the ocean ("goods"), as well as "services" supplied by the ocean. Both goods and services from the ocean yield benefits that can be quantified in economic terms, although it is harder to quantify and track economic benefits from services. Recognition of the significance of economic benefits from the ocean for national economies led to the development of the term "**Blue Economy**" at UN Conference on Sustainable Development held in Rio de Janeiro, Brazil in 2012. A useful definition of *Blue Economy* is that used by the World Bank for a "Sustainable Ocean Economy": "*the sustainable use of ocean resources for economic growth, improved livelihoods and jobs while preserving the health of ocean ecosystems*"¹. At the same time, it has been recognized that risks to blue economies may arise when extraction of one ocean-derived good reduces the availability of another good or ocean-provided services. Advances of scientific knowledge through research and observations are needed to simultaneously maximize blue economic benefits from multiple goods and services in a sustainable manner.

Because of their economic potential, ocean resources have been recognized in recent years as important national assets, particularly in developing countries. This has led to the development of national strategies to harvest ocean resources to support national economies, formulated in the concept of blue economy. Blue economy is particularly important to island nations, in which the areas of their exclusive economic zones far surpass their land areas, and land-based resources are scarce. However, some nations with large land areas (e.g., Australia) also have developed blue economy plans, albeit

as a less substantial part of their overall economic development plans than for small island nations. Sustainability of resource use is a key to maintaining blue economies. Reaping benefits from the ocean while sustaining its health is at the core of Sustainable Development Goal 14 (SDG 14) of the UN Development Agenda 2030 "Conserve and sustainably use the oceans, seas and marine resources for sustainable development" (<https://sdgs.un.org/goals/goal14>).

Blue economy has increasingly attracted the attention of ocean scientists. The importance of sustainable use of ocean resources has recently been highlighted by the *High-Level Panel for a Sustainable Ocean Economy*,² also noting that "using science and data to drive decision-making" is an important building block for sustainable use of the ocean. Sustainable blue economies must acknowledge that the Earth and its ocean are changing in ways that complicate sustainable resource extraction and the resulting environmental consequences of global change may require more conservative resource extraction practices. Science is important in creating sustainable blue economies that mitigate threats to coastal ecosystems and societies.

Advances in Science and Technology allowed humans to better understand and locate ocean resources and then exploit these resources, often excessively. Available knowledge must be used in wise and responsible ways. Scientific understanding is important for sustaining blue economies in an unchanging world, but even more so as the ocean and coastal areas are constantly changing due to human forces. Blue economies must be adaptable to changes such as increasing ocean temperature, seawater acidity, hypoxia, frequency of harmful algal blooms, and coastal pollution. Each of these changes can reduce the availability of living coastal resources, such as fish, coral reefs,

¹World Bank and United Nations Department of Economic and Social Affairs. 2017 - The Potential of the Blue Economy: Increasing Long-term Benefits of the Sustainable Use of Marine Resources for Small Island Developing States and Coastal Least Developed Countries (World

Bank, Washington DC).

²Stuchtey, M. A. Vincent, A. Merkl, M. Bucher et al. 2020 - "Ocean Solutions that Benefit People, Nature and the Economy." Washington, DC: World Resources Institute. www.oceanpanel.org/ocean-solutions.

mangroves, and seagrasses. National management must develop and use scientific knowledge to respond to such changes using proactive approaches.

Although the value and need for development of scientific information about the ocean and its resources has become more apparent, science often does not receive enough funding to support wise management, particularly in many developing countries, which experience pressing economic pressures to meet basic human needs of their populations. However, ignoring science can lead to resource extraction that is not sustainable, damaging the resource, the natural environment, and human societies in ways that reduce the benefits available. To sustain blue economies, adequate observing systems must be deployed and capacity for science and observations must be built in countries that rely on blue economies.

Considering the importance of the subject, the *Centre for Science and Technology of the Non-Aligned & Other Developing Countries (NAM S&T Centre)*, New Delhi; and the *Committee on Capacity Development of the*

Scientific Committee on Oceanic Research (SCOR), Newark, Delaware (USA) jointly announce the organization of an ***International Workshop on Application of Ocean Science and Technology for the Practice of Sustainable “Blue Economy” in Developing Countries*** during ***8-9 November 2021***. The Workshop will be hosted by SCOR and organized in **Virtual Mode**.

This Workshop will provide insights into why Science, Technology and Innovation (STI) is necessary to form a foundation for blue economies, by detailing examples of how STI has stimulated blue economies and how ignoring STI can damage blue economies. This event is primarily structured as an Exposure Workshop for participants from developing countries. The objective is to bring together policy makers, researchers and academics active in promoting sustainable use of coastal marine resources.

The *Virtual-Mode Workshop* will have Sessions that will be repeated through hybrid sessions of live and recorded presentations, so that participants in different time zones will have the opportunity to benefit from the Workshop.

DATE	SESSIONS		
8 November 2021	08:00-9:15 UTC	09:15-12:30 UTC	13:30-16:00 UTC
	18:00-19:15 UTC	19:15-22:30 UTC	23:30-02:00 UTC (9 Nov.)
	Official Opening	Resources– I	Resources – II
9 November 2021	08:00-10:15 UTC	11:00-12:30 UTC	13:30-16:30 UTC
	18:00-20:15 UTC	21:00-22:30 UTC	23:30-02:30 UTC (10 Nov.)
	Threats – I	Threats – II	Observations Capacity Development

WORKSHOP OBJECTIVES

The overarching objective of the Workshop is to highlight the role of ocean science and technology in blue economic development. The Workshop will introduce current concepts in blue economy, followed by discussion of specific topics that include coastal marine resources of economic relevance, environmental threats that endanger blue economic goals, the importance of ocean observing systems and the need for capacity development. By illuminating the use and misuse of Science and Technology in blue economies, the Workshop aims to help establish the foundation of scientific knowledge and ocean observations to support sustainable ocean development.

TOPICS TO BE COVERED

Resources

- Coral Reefs
- Seagrasses and Mangroves
- Coastal Fisheries
- Coastal Freshwater
- Tourism
- Oil and Gas
- Minerals

Threats

- Coastal Pollution
- Harmful Algae
- Ocean Acidification
- Climate Change and Coastal Ocean

Observations

Role of Sustained Ocean Observations to the Society and Blue economy

Capacity Development

Building Capacity for Ocean Science and Technology

REGISTRATION AND IMPORTANT DATES

The Workshop will be open to any participant who registers here.

<http://events.constantcontact.com/register/event?llr=nmzjwjyab&oeidk=a07ehq0vh8t107a8f9f>.

The details about connection to the virtual platform that will be used for the Workshop will be sent to all the registered participants.

ACTIVITY	DATES
Registration Starts	9 Aug. 2021
Registration Ends	25 Oct. 2021
Issue Online Workshop Link to Participants	1 Nov. 2021
Workshop Dates	8 (Monday) - 9 (Tuesday) Nov. 2021

PROGRAMME OF THE WORKSHOP

Note: A detailed programme will be made available to participants before the Workshop.

TARGETED PARTICIPANTS

The Workshop will be open to ocean scientists, government officials, policy makers, and representatives from industry and non-government organizations from NAM and other developing countries, as well as developed countries. The interaction of participants from various countries will allow exchange of knowledge, ideas and experiences, as well as provide opportunities for global networking and collaborations.

CERTIFICATION

E-Certificates will be awarded to participants upon successful completion of the Workshop.

RESOURCE PERSONS

The resource persons for the Workshop will comprise eminent experts and professionals in the relevant fields from various countries.

ABOUT THE ORGANISERS

NAM S&T CENTRE



The Centre for Science and Technology of the Non-Aligned and Other Developing Countries (NAM S&T Centre), New Delhi is an Inter-governmental Organization with a

Membership of 47 countries spread over Asia, Africa, Middle East and Latin America. The Centre was set-up in 1989 in New Delhi, India in pursuance of the decisions of various NAM Summits with the objective of promoting mutually beneficial cooperation among the NAM and other developing countries for collective self-reliance.

The Centre undertakes a variety of programmes, including organization of International Workshops, Conferences and Training Courses, and implementation of Collaborative S&T Projects. It also offers short-term Research Fellowships to Scientists and Technologists from developing countries in association with the Centres of Excellence in various countries. The Centre also brings out books and other scientific publications in different subjects that are of interest to developing countries.

The Centre's activities provide opportunity for scientist-to-scientist contact and interactions, familiarizing participants on the latest developments and techniques in the subject areas, identification of the requirements of training and expert assistance, locating technologies for transfer between the Members and other developing countries, and dissemination of STI information etc. In addition, the Centre encourages *Academic-R&D-Industry Interactions* in the developing

countries through its NAM S&T-Industry Network.

SCIENTIFIC COMMITTEE ON OCEANIC RESEARCH

SCOR is an international non-governmental non-profit organization. SCOR activities focus on promoting international



cooperation in planning and conducting oceanographic research, and solving methodological and conceptual problems that hinder research. SCOR covers all areas of ocean science and cooperates with other organizations with common interests to conduct many SCOR activities. SCOR also conducts several different activities to build the capacity for ocean science in developing countries and every SCOR activity includes members from developing countries. Scientists from thirty-two nations have formed national SCOR Committees as a foundation for international SCOR. Approximately 250 scientists from 38 countries currently participate in SCOR activities.

SCOR's Committee on Capacity Development has overseen SCOR capacity-development activities since 2006. The activities include a program of travel support for developing country graduate students and scientists to attend ocean science meetings, summer schools convened by SCOR-supported research projects, the SCOR Visiting Scholar program, Research Discovery Camps at the University of Namibia, and a joint program with the Partnership for Observation of the Global Ocean for ocean observation fellowships.

SECRETARIAT AND ENQUIRIES

<p>NAM S&T CENTRE</p> <p>Dr. Amitava Bandopadhyay Director General</p> <p>Mr. Madhusudan Bandyopadhyay Senior Adviser</p> <p>Centre for Science & Technology of the Non-Aligned and other Developing (NAM S&T Centre) Zone-6A, 2nd Floor, India Habitat Centre, Lodhi Road New Delhi – 110003, India Tel: +91-11-24645134, 24644974; Fax: +91-11-24644973 E-mail: namstcentre@gmail.com Website: http://www.namstct.org</p>	<p>SCIENTIFIC COMMITTEE ON OCEANIC RESEARCH</p> <p>Dr. Ed Urban College of Earth, Ocean, and Environment University of Delaware Newark, DE 19716 USA E-mail: ed.urban@scor-int.org</p>
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