

International Symposium on Microbial Responses to Ocean Deoxygenation

Dates

December 02-05, 2016

Location

CSIR-National Institute of Oceanography, Goa
INDIA

Patrons

Dr Girish Sahni
Director General,
Council of Scientific and
Industrial Research, Secretary
DSIR

Dr M Rajeevan
Secretary,
Ministry of Earth Science
Government of India

Dr Vijay Raghavan
Secretary,
Department of Biotechnology
Government of India

International Advisory Board

Dr Bess Ward
Chair, SCOR WG144
Princeton University, USA

Dr Peter Burkill
President SCOR

Dr Ed Urban
Executive Secretary, SCOR

Dr SWA Naqvi
Director CSIR-NIO, India

Organizers

All SCOR WG 144 Members:
Bess Ward, Elsabe Julies, Klaus Juergens,
Matt Sullivan, Nagappa Ramaiah, Osvaldo
Ulloa, Phyllis Lam, Sean Crowe, Steven
Hallam, Veronique Garcon, Virginia
Edgcomb

Local Organizing Committee

SWA Naqvi (Chair), Aninda Mazumdar,
Damodar Shenoy, Judith Gonsalves, Kolla
Ramesh, Samir Damare, Siby Kurian,
N Ramaiah (Convenor)

Symposium Sessions

Biogeochemical Processes

- Causes and Consequences of Deoxygenation
- Denitrification
- Anammox
- Iron Reduction
- Sulfur Cycle
- Trace metals Chemistry
- Chemosynthesis

Microbial Ecology and

Communities

- Protistan
- Bacterial
- Archaeal
- Mycota
- Viruses

Omics of Deoxygenated

Waters

- Transcriptomics
- Metagenomics

Instrumentation and methods

for OMZ studies

Societal Impacts of Marine

Deoxygenation

- Larval Recruitments and Fisheries
- Trophodynamic alterations
- Blue-Economy



Many Consequences of Ocean Deoxygenation

Marine waters deficient of oxygen affect biogeochemical processes and fisheries of importance to humans. They are important sites of denitrification and anammox, the two key processes associated with the loss of fixed nitrogen from the world's oceans. Oxygen-deficient pelagic regimes also may be significant global sources of nitrous oxide (N₂O). Thus, these regions affect Earth's radiative budget and stratospheric chemistry. In a broader sense, ocean deoxygenation directly impacts marine ecosystem functions and services through changes in food web structure and biodiversity. Additionally, climate change induced water column stratification and anthropogenic discharges are believed to increase deoxygenation throughout the modern oceans. As oxygen levels decline, energy is increasingly diverted away from higher trophic levels into microbial community metabolism resulting in significant environmental changes to food web dynamics, and impacts on fixed nitrogen losses, possible accumulation of hydrogen sulfide, and production of climate active trace gases.

The Symposium:

To advance knowledge of oxygen deficient marine waters the SCOR Working Group 144, which was established in 2014, is now tasked to convene an International Symposium at the National Institute of Oceanography in Goa, India during December 2-5, 2016. At this Symposium, renowned global experts on marine microbial ecology and biogeochemistry of oxygen depleted water columns will present their seminal work. Papers from the conference will be compiled into a peer-reviewed monograph as an electronic book in the *Frontiers* or *PLoS* open access journals to ensure both visibility and long-term access. Collectively, these documents will synthesize available information on coastal and open-ocean waters to provide a unified conceptual microbial and biogeochemical model, and will direct future research through recommendations for the standardization of experimental approaches, data collection and dissemination.

List of Invited Speakers

Allan Devol
Amal Jayakumar
Andreas Oschlies
Aninda Mazumdar
Aurelian Paulmier
Bo Thamdrup
Damodar Shenoy
Curtish Deutsch
Donald Canfield
Frank Stewart
Gordon Taylor
Herman Bange
Judith Gonsalves
Karen Casciotti
Koji Hamsaki
Sudhakar Maratadu
Venkatesan Ramasamy
Wajih Naqvi

Early Career Scientists

Anand Jain
Andrew Babbin
Arvind Singh
Carolyn Buchwald
Caroline Löscher
Cathrine Sumathi
Laura Bristow
Mike Beman
Monica Beltran
Montserrat Aldunate
Parvathi Ammini
Samir Damare
Satya Prakash
Siby Kurain

SCOR WG 144 Members

Bess Ward (Chair)

Klaus Juergens
Matt Sullivan
Nagappa Ramaiah
Osvaldo Ulloa
Phyllis Lam
Sean Crowe
Steven Hallam
Veronique Garcon
Virginia Edgcomb

Time Lines

May 10, 2016	First Notice to all possible participants
May 25, 2016	Final list of Invitees attending Symposium
June 25, 2016	Names of all experts likely to attend are to be sent to the concerned Departments in India for issuance of visa etc
July 20, 2016	Submission of Abstracts
July 31, 2016	Notice of Session Schedules
Nov 15, 2016	Submission of manuscript drafts by invited experts and early career scientists
Feb 15, 2017	Complete manuscripts review

Poster Sessions Set **Exclusively for Indian Scientists and Research Students** on Registration for this Symposium.

Registration Fee:

Scientists: Rs 10000

Research Students: Rs 6000

Registration fee to be paid before October 31, 2016. Late Fee of Rs 2000 after Nov 1, 2016; No Spot-Registration