



सत्यमेव जयते

**Ministry of Earth Sciences**  
Government of India



**IIOSC-2022**

# **International Indian Ocean Science Conference**

14-18 March, 2022

## **Technical Programme**

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**Day 01**

**14th March 2022**  
**Inaugural Session**

**Venue: Auditorium**

Time	Events
10:00-10:05 IST 04:30-04:35 UTC	Welcome by Dr. Sunil Kumar Singh, Director, CSIR-NIO, Goa, India and Chairman, LOC
10:05-10:10 IST 04:35-04:40 UTC	Opening Remarks by Dr. T. Srinivasa Kumar, Director, INCOIS & Chair, IOGOOS
10:10-10:15 IST 04:40-04:45 UTC	Opening Remarks by Dr. Marie Alexandrine Sicre, SCOR President
10:15-10:30 IST 04:45-05:00 UTC	Opening Remarks and Plenary Talk by Dr. M. Ravichandran, Secretary, MoES
10:30-10:45 IST 05:00-05:15 UTC	Opening Remarks & Plenary Talk by Dr. Vladimir Ryabinin, IOC Executive Secretary & Co-Chair, IIOE-2 (Title of the Talk: The UN Decade of Ocean Science for Sustainable Development, 2021-2030)
10:45-11:00 IST 05:15-05:30 UTC	Inaugural address (Recorded) by Chief Guest: Dr Jitendra Singh Minister of State (Independent Charge) of the Ministry of Earth Sciences, Minister of State (Independent Charge) of Science & Technology, Minister of State in the Prime Minister's Office
11:00-11:05 IST 05:30-05:35 UTC	Vote of Thanks by Dr. Sanil Kumar, CSIR-NIO, Goa, India

## Plenary session & Panel Discussion: Blue economy and sustainable development

**Moderator: Dr Ben Milligan**

**Venue: Auditorium**

Time	Speaker	Title
12:15-12:20 IST 06:45-06:50 UTC	Dr Ben Milligan	Opening Remarks by Moderator
12:20-12:40 IST 06:50-07:10 UTC	Dr Shailesh Nayak	Towards Blue Economy: An Indian Perspective
12:40-13:00 IST 07:10-07:30 UTC	Dr (Cdr) Arnab Das	Underwater Domain Awareness Framework for a Safe, Secure, Sustainable Growth for all in the Indian Ocean Region (IOR)

13:00-13:20 IST 07:30-07:50 UTC	Prof Oliver Steeds	Nekton's Indian Ocean Mission 2018-2022
13:20-13:40 IST 07:50-08:10 UTC	Ken Findlay	Ocean Accounting: Integrating transdisciplinary ocean data to bridge the science-policy gap for ocean sustainable development
13:40-14:10 IST 08:10-08:40 UTC	Panel Discussion	1. How to optimize the role of the ocean in sustainably feeding the world's population? 2. What are the probable solutions for equitable and sustainable development of the ocean economy?
14:10-14:15 IST 08:40-08:45 UTC	Dr Ben Milligan	Closing Remarks by Moderator

Hall A			Hall B		
<b>Session 01: IIOE-2 contribution to sustainable development: toward the UN Decade of ocean science</b> Co-Chairs: Dr Ben Milligan & Dr M. Atmanand			<b>Session 12: Marginal seas of the Indian Ocean</b> Co-Chairs: Dr Joaquim Goes, Dr Behrooz Abtahi, Dr Faiza Yamani & Dr S R Shetye		
Time	Name	Abstract Title	Time	Name	Abstract Title
14:30-14:42 IST 09:00-09:12 UTC	Francis Mar-sac	The role of marine environmental sciences to inform management of tuna fisheries by the Indian Ocean Tuna Commission (IOTC)	14:30-14:45 IST 09:00-09:15 UTC	Dilmahamod Ahmad Fehmi	The South-East Madagascar Bloom - An observational and modeling perspective
14:42-14:54 IST 09:12-09:24 UTC	Tainã Gonçalves Loureiro	Unpacking the role of oceanographic data in marine ecosystem accounting and an ocean accounts framework	14:45-15:00 IST 09:15-09:30 UTC	Subhadeep Chowdhury	Diazotroph community and activity in the Southern Indian Ocean
14:54-15:06 IST 09:24-09:36 UTC	Sarma VVSS	Priming primary production for 'Blue Economy' in the Bay of Bengal: Prospects	15:00-15:15 IST 09:30-09:45 UTC	Mohammed Munzil P C	Application of Bio-Argo float in understanding denitrification in the northern Indian ocean
15:06-15:18 IST 09:36-09:48 UTC	Sudip Kumar Kundu	Technology-aided advisories to enhance the societal values of marine ecosystem services - a grass-roots level case study from Odisha	15:15-15:30 IST 09:45-10:00 UTC	Hashim Manjebraayakath	Observed dead zone in the western Bay of Bengal continental margin and its impact in the functional diversity and distribution of demersal fishes



15:18-15:30 IST 09:48-10:00 UTC	Prashant Srivastava	Blue Economy Policy of India			
Comfort Break					
<b>Session 04: Ocean observations and data in the Indian Ocean: toward an ocean data information system</b> Co-Chairs: Dr Shailesh Nayak & Dr Sidney Thurston			<b>Session 06: Ecology of the Indian Ocean: Understanding and Predictability</b> Co-Chairs: Dr Gregg Cowie, Dr Francis Marsac, Dr Zainal Arifin & Dr G V M Gupta		
15:30-15:45 IST 10:00-10:15 UTC	N Kiran Kumar	Web Based Applications and Infrastructure for the Second International Indian Ocean Expedition(IIOE-2)	15:30-15:45 IST 10:00-10:15 UTC	Dr. Haimanti Biswas	Revisiting India JGOFS track after two decades: update after two successful monsoon cruises
15:45-16:00 IST 10:15-10:30 UTC	Samiran Mandal	Flow Velocity Tidal Asymmetry in the Gulf of Khambhat, Arabian Sea using HF Radar Surface Currents	15:45-16:00 IST 10:15-10:30 UTC	Francis Marsac	Physical environment and ecological interactions at La Perouse Seamount
16:00-16:15 IST 10:30-10:45 UCT	Viviane Vasconcellos de Menezes	Pathways and Transit Times of the Red Sea Overflow Water in the Indian Ocean from Lagrangian Simulations	16:00-16:15 IST 10:30-10:45 UCT	Medhavi Pandey	The relative contribution of key diatom genera to export flux in the Western Indian shelf
16:15-16:30 IST 10:45-11:00 UTC	Hellen Joseph Kizenga	Variability of mackerel fish catch and remotely-sensed biophysical controls in the eastern Pemba Channel	16:15-16:30 IST 10:45-11:00 UTC	Deepa Yogi	Feeding niche of two co-existing juvenile catfishes from Caranzalem Bay, Goa
Comfort Break					
<b>Session 04: Ocean observations and data in the Indian Ocean: toward an ocean data information system</b> Co-Chairs: Dr Shailesh Nayak & Dr Sidney Thurston			<b>Session 06: Ecology of the Indian Ocean: Understanding and Predictability.</b> Co-Chairs: Dr Gregg Cowie, Dr Francis Marsac, Dr Zainal Arifin, Dr G V M Gupta		
16:45:17:00 IST 11:15-11:30 UTC	M. Kalyani	Seasonal and Cyclonic Wind- Wave Relationship from Moored Buoy Measurements in the South-East Arabian Sea Considering Local and Remote Wave Effects	16:45:17:00 IST 11:15-11:30 UTC	Claire Davies	Ocean temperature and copepod feeding strategies influence zooplankton assemblages along 110°E, Indian Ocean

17:00-17:15 IST 11:30-11:45 UTC	Rajesh Sikhakolli	Generation, Evaluation and Inter Annual Variability (1993-2020) Analysis of Satellite Derived Total (Geostrophic + Ekman) Ocean Surface Currents in the Tropical Indian Ocean	17:00-17:15 IST 11:30-11:45 UTC	Dr. Ashrenee Govender	Metabarcoding of zooplankton enhances analyses of connectivity in marine pelagic environments
17:15-17:30 IST 11:45-12:00 UTC	Ravi Kumar Jha	Smooth Approximation to Estimate Analyze Fields and Error Fields of Argo T/S data using Data Interpolating Variational Analysis	17:15-17:30 IST 11:45-12:00 UTC	Dr. Cisco Werner	Next steps in modeling climate and marine ecosystem variability on sub- seasonal to seasonal (S2S) time scales
17:30-17:45 IST 12:00-12:15 UTC	Ushnanshu Dutta	Which product is potentially more reliable among the heat flux products available over Indian ocean in daily to annual scale? A statistical and comparative study.	17:30-17:45 IST 12:00-12:15 UTC	Swarnali Majumder	Operational Forecast systems for Indian oil Sardine landing
17:45-18:30 IST 12:15-13:00 UTC	Interactive poster session of Session 1, 2 and 3 Venue- e-Poster Gallery				

## POSTERS of Sessions 1, 2 and 3

Name	Abstract Title
<b>Session 01: IIOE-2 contribution to sustainable development: toward the UN Decade of ocean science</b> Co-Chair: Dr Ben Milligan & Dr M. Atmanand	
Nimit Kumar	Status and roadmap towards data driven management of yellowfin tuna resource in the Indian seas
Zoe Jacobs	Ocean science in action: communicating cutting edge advances in marine research and technology via Massive Online Open Courses
Teresia Nyambura Wacira	Molecular characterization and antimicrobial activity of endophytic fungi from selected mangrove species along the Kenyan Coast

### **Session 02: Impacts of climate change on the Indian Ocean**

Co-Chair: Dr Fangli Qiao, Dr Helen Philips & Dr S. Rajan

Krushna Vudamala	Legacy organic pollutants (Organochlorine pesticides and Polychlorinated biphenyls) distribution in surface and depth profiles of the Southern sector of the Indian Ocean and coastal Antarctic waters
Dr. Remya P G	Evaluation of CMIP6 wind forcing for wave climate studies in the Indian ocean
Meenakshi Sreejith	Footprints of southern annular mode on Indian Ocean waves
Sreevidya E	Regional pteropod preservation records from the Indian Ocean: An overview
Arika Amasarao	Recent changes in the Arabian Sea warming-causes and implications
Jing Li	CLIVARs work in the Indian Ocean

### **Session 03: Circulation and Boundary currents in the Indian Ocean**

Co-Chair: Prof P. N Vinayachandran, Dr Yukio Masumoto & Dr Fabien Durand

Anup N	Two distinct thermocline domes in the Bay of Bengal
Tarron Lamont	Evaluation of the GLORYS ocean model for environmental monitoring in the Agulhas Current System
Nihar Paul	Eddy induced trapping and homogenization of freshwater in the Bay of Bengal
Siddhesh Ashok Tirodkar	Dynamics and energetics of regional domain in the Bay of Bengal using Modular Ocean Model
Yi Xu	The impact of inhomogeneous variability of oceanic properties on stratification and chlorophyll concentration in the southern Indian Ocean
Anoop Ashok Nayak	Transport and mixing of dissolved oxygen in the Bay of Bengal during the summer monsoon
Dr K Rajith	SW monsoon characteristics of sea state and surface currents in the North Indian Ocean deduced using X-Band Radar.
Midhila Varna V	Characteristics and Seasonality of eddies in the Eastern Arabian Sea
Venkata Ramu Cherukuri	Evolution of upwelling in the eastern boundary of Arabian Sea: Based on In-situ Observations
Sudip Jana	Sensitivity of the Bay of Bengal Upper Ocean to Precipitation and River Runoff
Noam Vogt-Vincent	Marine debris attribution for remote islands in the western Indian Ocean from global Lagrangian simulations

Day 02

15th March 2022

## Plenary session & Panel Discussion: Monsoon and climate variability

Moderator: Dr Marie-Alexandrine Sicre

Venue: Auditorium

Time	Speaker	Title
10:00-10:05 IST 04:30-04:35 UTC	Dr Marie-Alexandrine Sicre	Opening Remarks by Moderator
10:05-10:25 IST 04:35-04:55 UTC	Dr Michael McPhaden	Advances in Describing and Understanding Equatorial Indian Ocean Circulation
10:25-10:45 IST 04:55-05:15 UTC	Prof Sulochana Gadgil	Role of the Indian Ocean in the variability of the Indian Monsoon
10:45-11:05 IST 05:15-05:35 UTC	Dr Roxy Mathew	IndOOS-2: A Roadmap to Better Observations of the Rapidly Warming Indian Ocean
11:05-11:25 IST 05:35-05:55 UTC	Dr R. Krishnan	Monsoon Hydrological Cycle Response to Global Climate Change: Key messages from the IPCC AR6
11:25-11:55 IST 05:55-06:25 UTC	Panel Discussion	1. How to generating knowledge base to enhance understanding of the ocean-climate nexus? 2. What are the probable solutions to mitigate, adapt and build resilience to the effects of climate change?
11:55-12:00 IST 06:25-06:30 UTC	Dr Marie-Alexandrine Sicre	Closing Remarks by Moderator

Hall A			Hall B		
<b>Session 02: Impacts of climate change on the Indian Ocean.</b> Co-Chairs: Dr Fangli Qiao, Dr Helen Philips & Dr S. Rajan			<b>Session 07: Air-Sea interactions, exchange of trace gases and related processes</b> Co-Chairs: Dr Hermann Bange, Dr Vinu Valsala & Dr Kawser Ahmed		
Time	Name	Abstract Title	Time	Name	Abstract Title
12:15-12:30 IST 06:45-07:00 UTC	Dr. Arnab Mukherjee	Impact of IOD and ENSO on decadal variability of mixed layer depth in the Bay of Bengal	12:15-12:30 IST 06:45-07:00 UTC	K. Vijay Kumar	Inertial Dissipation Method for estimating turbulent heat fluxes from a research vessel



12:30-12:45 IST 07:00-07:15 UTC	Zoe Jacobs	Key climate change stressors of marine ecosystems along the path of the East African coastal current	12:30-12:45 IST 07:00-07:15 UTC	Amit Tandon	Influence of the Upper ocean structure on Monsoons in the Bay of Bengal
12:45-13:00 IST 07:15-07:30 UTC	Hari	Is climate change attributed to enigmatic gelatinous zooplankton blooms in the Arabian Sea	12:45-13:00 IST 07:15-07:30 UTC	Lokesh Kumar Sahu	Elevated levels of isoprene in the MBL of Arabian Sea during spring inter-monsoon season
13:00-13:15 IST 07:30-07:45 UTC	Roxy Mathew Koll	Indo-Pacific warming changes MJO and global rainfall patterns	13:00-13:15 IST 07:30-07:45 UTC	Trishneeta Bhattacharya	Differential response of surface ocean pCO <sub>2</sub> to tropical cyclones in the contrasting basins of northern Indian Ocean
13:15-13:30 IST 07:45-08:00 UTC	Paula Cartwright	Identifying metocean drivers of turbidity using two decades of MODIS satellite: Implications for marine habitats under climate change	13:15-13:30 IST 07:45-08:00 UTC	Mohammad Atif Khan	Dissolved trace gas dynamics in the coastal and open Arabian Sea during winter monsoon
13:30-13:45 IST 08:00-08:15 UTC	Lynnath Beckley	A synopsis of the 110°E voyage of the second International Indian Ocean Expedition	13:30-13:45 IST 08:00-08:15 UTC	Jofia Joseph	A study on diurnal variability cold pool activity in the Bay of Bengal during summer monsoon using moored buoy observation
13:45-14:00 IST 08:15-08:30 UTC	Saranya J S Kumar	Marine heatwaves over the tropical Indian Ocean and their interaction with the Indian summer monsoon	13:45-14:00 IST 08:15-08:30 UTC	Damodara Rao Valavala	Flux of Dimethyl sulfide from eastern Arabian sea during northeast monsoon; influence on cloud microphysics
14:00-14:15 IST 08:30-08:45 UTC	Gopika.S	Emergence time of regional climate signals in the tropical oceans in CMIP5/6 simulations	14:00-14:15 IST 08:30-08:45 UTC	Swaleha Inamdar	The sea-air flux of iodine species: An overview of current parameterisation technique

Comfort Break

**Session 04: Ocean observations and data in the Indian Ocean: toward an ocean data information system**

Co-Chairs: Dr Shailesh Nayak & Dr Sidney Thurston

**Session 06: Ecology of the Indian Ocean: Understanding and Predictability**

Co-Chairs: Dr Gregg Cowie, Dr Francis Marsac, Dr Zainal Arifin, Dr G V M Gupta

14:30-14:45 IST 09:00-09:15 UTC	Jagadish S Patil	Real-time assessment of phytoplankton photosynthetic activity using underway Fast repetition rate fluorometry (FRRf)	14:30-14:45 IST 09:00-09:15 UTC	Hari Praved P	Distribution and abundance of gelatinous zooplankton in south east arabian sea (seas)
14:45-15:00 IST 09:15-09:30 UTC	V. P. Thangaprakash	Quantification of various oceanic processes on the variability of sea surface temperature in the northern Bay of Bengal using seaglider and mooring observations	14:45-15:00 IST 09:15-09:30 UTC	Elizabeth Holmes	Improving short-term forecasts of Indian oil sardine ( <i>Sardinella longiceps</i> ) landings using environmental variables: tests using out-of-sample forecasts and Generalized Additive Models
15:00-15:15 IST 09:30-09:45 UTC	Amol Prakash	Evidence for wind-driven bottom current in the equatorial Indian Ocean	15:00-15:15 IST 09:30-09:45 UTC	Aswathy Vijaya Krishna	Comparative study of the phytoplankton pigment composition, community structure and diversity in the Seas around India during the pre-monsoon season
15:15-15:30 IST 09:45-10:00 UTC	Sherin V Raju	Seasonal variability of chlorophyll and nitrate in the northeastern Arabian Sea.	15:15-15:30 IST 09:45-10:00 UTC	Sean Fennessy	WIO-Benth A project to map benthic habitats and communities in the Western Indian Ocean
15:30-15:45 IST 10:00-10:15 UTC	Jofia Joseph	Mixed Layer heat budget in the North Eastern Arabian Sea during winter and spring and relative contribution of diapycnal heat flux	15:30-15:45 IST 10:00-10:15 UTC	Dr. Lidita Khandeparker	Dynamics and significance of metabolically active bacterioplankton in the frontal regions of the Northeastern Arabian Sea

15:45-16:00 IST 10:15-10:30 UTC	Biswajit Haldar	Analysis of subsurface temperature deviation in OMNI buoy system due to extreme mooring movement during super cyclonic storm Amphan	15:45-16:00 IST 10:15-10:30 UTC	Wuchang Zhang	Spatial distribution and diversity of planktonic ciliates in the Eastern Indian Ocean, with emphasis on tintinnids
16:00-16:15 IST 10:30-10:45 UCT	Aneesh	Meridional variability of subsurface light field from satellite data - Learning from first expedition of IIOE-2	16:00-16:15 IST 10:30-10:45 UCT	Prachi Sachchidanand Hatkar	The status of Dugong conservation in Gulf of Kutch, Gujarat
16:15-16:30 IST 10:45-11:00 UTC	Jithendra Raju N	Observations of the dynamical ocean state on a continental slope in the north-west Bay of Bengal	16:15-16:30 IST 10:45-11:00 UTC	Noam Vogt-Vincent	Predicting reef connectivity across the Southwestern Indian Ocean using a high-resolution multidecadal simulation
Comfort Break					
16:45:17:00 IST 11:15-11:30 UTC	Suprit K	Recent moored-buoy observations in the Northern Indian Ocean: A data management perspective	16:45:17:00 IST 11:15-11:30 UTC	Anima Tirkey	Phytoplankton diversity at surface and Deep Chlorophyll Maxima in Arabian Sea and Bay of Bengal during pre-monsoon season
17:00-17:15 IST 11:30-11:45 UTC	E. Pattabhi Rama Rao	Ocean Observations in the Indian Ocean and Data Services	17:00-17:15 IST 11:30-11:45 UTC	Jenny Ann Huggett	Microzooplankton communities associated with diverse oceanographic environments in the South West Indian Ocean
17:15-17:30 IST 11:45-12:00 UTC	Jim Costopulos	Proposal for a New Annual Indian Ocean Transect (AIOT) and Oceanographic Training Program	17:15-17:30 IST 11:45-12:00 UTC	Mishal Gudka	Assessing the threat status of coral reefs of the Western Indian Ocean using the Red List of Ecosystems framework

17:30-17:45 IST 12:00-12:15 UTC	Abhijit Shee	Seasonal Variability of the Mixed Layer Heat and Salt Budget in the Northern Bay of Bengal using Argo observations	17:30-17:45 IST 12:00-12:15 UTC	Michael R. Landry	Unexpected temperature trends in plankton growth and grazing along a 110°E transect in the eastern Indian Ocean
17:45-18:30 IST 12:15-13:00 UTC	Interactive poster session of Session 4, 6 and 7				

## POSTERS of Session 4, 6 and 7

Name	Abstract Title
<b>Session 04: Ocean observations and data in the Indian Ocean: toward an ocean data information system</b> Co-Chair: Dr Shailesh Nayak & Dr Sidney Thurston	
Samiran Mandal	Flow Velocity Tidal Asymmetry in the Gulf of Khambhat, Arabian Sea using HF Radar Surface Currents
Ashin Kuriakose	Estimation of vertical diffusivity at the base of mixed layer in the Bay of Bengal
Sourav Sil	Indian Coastal Radar Network (ICORN): A New-Age Monitoring System for Coastal Circulation Processes along the Indian Coast
Marufa Ishaque	Regional impacts of the IOD on barrier layer thickness in the Indian Ocean
Athulya K	Observed diurnal air-sea fluxes variability in the Northern Indian Ocean using moored-buoy data
Abhijith Raj	Eddy covariance observations in the Marine Boundary Layer from the Bay of Bengal.
Rohith B	Observation/characteristic of high-frequency coastal sea level variabilities along the Indian subcontinent using tide gauges
Prabha Kushwaha	Simulating the upper ocean characteristics of Arabian Sea using Regional Ocean Model System: impact of horizontal resolution
R U V N Satish	Do the data of grounded Argo floats validate bathymetry in the continental shelf?
<b>Session 06: Ecology of the Indian Ocean: Understanding and Predictability</b> Co-Chair: Dr Gregg Cowie, Dr Francis Marsac, Dr Zainal Arifin & Dr G V M Gupta	
Mintu Chowdhury	First report on living coccolithophore community from the north-western shelf waters of India during SW monsoon
Tanya Magdeleen Haupt-Schuter	Refining outputs from past iioe2 expeditions: the wio regional benthic imagery workshop



Soniya Bipinbhai Jethava	Does topography of rocky intertidal habitat affect aggregation of cerithiid gastropods and co-occurring macroinvertebrates?
Ranjana Yadav	Population of Cerithiid gastropod and their parasitic trematode on mudflats of Goa- India.
Greg Cowie	Organic matter cycling in evolving hypoxic environments: the roles of oxygen availability and benthic faunal communities
Zalak Ghanshyambhai Sabapara	Population Ecology and Distribution Pattern of Intertidal Sponges of Saurashtra Coast, Gujarat.
Sanofar Hanif Khokher	Role of dissolved oxygen in structuring the benthic meiofaunal community off Mumbai, North Eastern Arabian Sea (NEAS)
Sai Elangovan S	Dominance of heterotrophic dinoflagellates in the continental shelf waters of the Eastern Arabian Sea
Md. Shahin Hossain Shuva	Spatial and Temporal Distribution of Chlorophyll-a in Relation to Environmental Factors in the Bay of Bengal: A Remote Sensing Approach
Nipa Chongdar	Distribution and diversity of Carbon Monoxide Dehydrogenases in Marine Microorganisms
Sanjiba Kumar Baliarsingh	Long-term trend in high biomass algal bloom in the northern Arabian Sea
Niya Benny	Species composition and biodiversity assessment of microphytobenthos in the intertidal mangrove ecosystem along the southwest coast of India

**Session 07: Air-Sea interactions, exchange of trace gases and related processes**

Co-Chair: Dr Hermann Bange, Dr Vinu Valsala & Dr Kawser Ahmed

Bijan Kumar Das	Mixing and heat exchange in the Bay of Bengal: role of river fresh water and tidal forcing
Bhagyashri Ramesh Naik	Light stress induced DMS(P) production in <i>Skeletonema costatum</i> : An experimental approach and field observation
Nunna Kameshwari	Effect of systematic error correction to ship based wind speed observations on Air-sea fluxes across Tropical Indian Ocean
Rony Peter	Analyses of atmospheric CO <sub>2</sub> over the Indian Ocean using satellite measurements for the period 2002-2016
Surajit Das	Westward Propagating Quasi-Biweekly Oscillation in CAM5.1 with Aquaplanet-like Configuration
Shaikh Atiba Anis Ahmead	Intra seasonal variability of aerosols and its implication over the Indian sector of Southern Ocean

**Day 03**

**16th March 2022**

Hall A	Hall B
<p><b>Session 08: Atmospheric Chemistry and pollution</b> Co-Chairs: Prof Lokesh Kumar Sahu, Dr Paravadha Suntharalingam</p>	<p><b>Session 11: Inter-basin interactions in the Indian Ocean.</b> Co-Chairs: Dr Weidong Yu, Dr Juliet Hermes, Dr Michael McPhaden, Dr S S C Shenoi</p>

Time	Name	Abstract Title	Time	Name	Abstract Title
10:00-10:15 IST 04:30-04:45 UTC	Poonam Bikkina	Biomass burning derived organic aerosols over the Arabian Sea: insights from the molecular distributions and relative abundances of sugar compounds	10:00-10:15 IST 04:30-04:45 UTC	Vijay Pottapinjara	Simulation of interannual relationship between the Atlantic zonal mode and Indian summer monsoon in CFSv2
10:15-10:30 IST 04:45-05:00 UTC	Srinivas Bikkina	Source fingerprinting of atmospheric dust over the Arabian Sea using Sr and Nd isotopic systematics during the winter monsoon	10:15-10:30 IST 04:45-05:00 UTC	Soumya Mukhopadhyay	Prolonged La Niña events and the associated heat redistribution in the Tropical Indian Ocean
10:30-10:45 IST 05:00-05:15 UTC	Shani Tiwari	Interannual variation and trend of atmospheric aerosol over the Northern Indian Ocean	10:30-10:45 IST 05:00-05:15 UTC	B Rohith	Basin-wide sea level coherency in the tropical Indian Ocean driven by Madden-Julian Oscillation
10:45-11:00 IST 05:15-05:30 UTC	Suresh K	Geochemical characterization and provenance identification of dust from wet deposition over the Northeastern Arabian Sea	10:45-11:00 IST 05:15-05:30 UTC	Afroosa Balkies Bai M	A comprehensive study of the Indo-Pacific seesaw in the intraseasonal barotropic sea level
<b>Session 05: Biogeochemistry and Microbiology of the Indian Ocean: Recent advances.</b> Co-Chairs: Prof Raleigh Hood, Dr Lynnath Beckley, Dr Eric Reas & Dr V V S S Sarm			<b>Session 09: Coastal and estuarine processes: Anthropogenic impacts and vulnerabilities</b> Co-Chairs: Prof Sunil Kumar Singh, Dr Mike Roberts		
11:00-11:12 IST 05:30-05:42 UTC	Gupta GVM	Why is seasonal anoxia confined only to the central west coast of India? Upwelling vs anthropogenic effects	11:00-11:15 IST 05:30-05:45 UTC	Julian von Borries	A novel, highly efficient method for the separation of plastic particles in sediments of aquatic environments

11:12-11:24 IST 05:42-05:54 UTC	Henrike Schmidt	What causes the model-data misfit of the oxygen minimum zone in the Arabian Sea?	11:15-11:30 IST 05:45-06:00 UTC	Lynda-Uta Edet Okon	Linkages between sediment grain size variability and cross-shore morphodynamic behaviour - a case study of four tropical sandy beaches, Central West coast of India
11:24-11:36 IST 05:54-06:06 UTC	Zouhair Lachkar	Fast local warming is the main driver of recent deoxygenation in the northern Arabian Sea	11:30-11:45 IST 06:00-06:15 UTC	Tanisha Nag	Seasonal analysis of benthic fluxes of dissolved inorganic nitrogen (DIN) and nitrous oxide (N <sub>2</sub> O) in Pulicat lagoon
11:36-11:48 IST 06:06-06:18 UTC	Parvathi Valli-vattathillam	Climate change impact on the Arabian sea Oxygen Minimum Zone: Insights from downscaling experiments	11:45-12:00 IST 06:15-07:00 UTC	Dr. Lidita Khandeparker	Variation in bacterial community composition in a tropical monsoon influenced estuary: interplay of riverine discharge and tides
11:48-12:00 IST 06:18-06:30 UTC	Genevieve Lazarina Fernandes	Modern molecular techniques used to decipher bacterial communities in the oxygen minimum zone of the Indian Ocean			
Comfort Break					
12:15-12:27 IST 06:45-06:57 UTC	Samir Damare	Bacterial communities from the Oxygen Minimum Zones of the Arabian Sea and Bay of Bengal Basins	12:15-12:30 IST 06:45-07:00 UTC	Dattesh V Desai	Partitioning of economically important bivalves in a tropical estuary: significance of habitat characteristics
12:27-12:39 IST 06:57-07:09 UTC	Siby Kurian	Sources and nature of particulate matter in sediment traps: a comparison between the Arabian Sea and the Bay of Bengal	12:30-12:45 IST 07:00-07:15 UTC	Mani Murali R	Mudbanks observations of Southwest coast of India using Synthetic Aperture Radar (SAR)
12:39-12:51 IST 07:09-07:21 UTC	Saumya Silori	Variability in POC and DOC in the eastern and central Arabian Sea during southwest monsoon 2018	12:45-13:00 IST 07:15-07:30 UTC	Jubin K Thomas	Sub-inertial Oscillations and its impact on Flooding in the Tropical Estuary.

12:51-13:03 IST 07:21-07:33 UTC	Rupa Mukherjee	Natural isotopic composition of carbon and nitrogen in particulate organic matter in the Arabian Sea	13:00-13:15 IST 07:30-07:45 UTC	Dr. R. Prakash	Investigations on submarine groundwater discharge zones along south Goa, Central west coast of India
13:03-13:15 IST 07:33-07:45 UTC	Albertina Balbina Dias	Characterization of Colored Dissolved Organic Matter along the western continental shelf of India during the south west monsoon			
<b>Session 02: Impacts of climate change on the Indian Ocean</b> Co-Chairs: Dr Fangli Qiao, Dr Helen Philips & Dr S. Rajan			<b>Session 07: Impacts of climate change on the Indian Ocean</b> Co-Chairs: Dr Hermann Bange, Dr Vinu Valsala, Dr Kawser Ahmed		
13:15-13:30 IST 07:45-08:00 UTC	Sajidh CK	Regional downscale of projection of sea level rise in the Indian Ocean based on CMIP6 simulations	13:15-13:27 IST 07:45-07:57 UTC	K Jossia Joseph	Analysis of Wave Climate in Northern Bay of Bengal using Deep Ocean Wave Measurements
13:30-13:45 IST 08:00-08:15 UTC	Aditi Modi	Understanding biophysical interactions over the tropical Indian Ocean in a changing climate	13:27-13:39 IST 07:57-08:09 UTC	Shaheen Akhtar	Spatial and seasonal variation of pCO <sub>2</sub> and air-sea CO <sub>2</sub> flux in the Devi estuary, east coast of India
13:45-14:00 IST 08:15-08:30 UTC	Saran Rajendran	Indian Ocean Heat Transport in CMIP5 and CMIP6 models	13:39-13:51 IST 08:09-08:21 UTC	Nandhakumar S K	Climate forcing parameters on coastal region due to oceanic aerosols
14:00-14:15 IST 08:30-08:45 UTC	Bernardino S Malauene	Temperature gradients along the East African coast using 50 years of ship data	13:51-14:03 IST 08:21-08:33 UTC	J V S Raju	Direct near-surface eddy covariance measurements over the northern Bay of Bengal.
			14:03-14:15 IST 08:33-08:45 UTC	Sree Lekha Jarugula	Quasi-Biweekly Mode of the Asian Summer Monsoon Revealed in Bay of Bengal Surface Observations

Comfort Break



## Plenary session & Panel Discussion: Biogeochemistry and Ecology

Moderator: Prof Raleigh Hood

Venue: Auditorium

Time	Speaker	Title
14:30-14:35 IST 09:00-09:05 UTC	Prof Raleigh Hood	Opening Remarks by Moderator
14:35-14:55 IST 09:05-09:25 UTC	Dr Sunil Kumar Singh	New results from GEOTRACES India
14:55-15:15 IST 09:25-09:45 UTC	Dr Greg Cowie	What controls sedimentary carbon content? Insights from the contrasting margins of the Arabian Sea
15:15-15:35 IST 09:45-10:05 UTC	Dr. Mar Benavides	On the role of non-cyanobacterial diazotrophs as a source of nitrogen for the Southern Indian Ocean
15:35-15:55 IST 10:05-10:25 UTC	Dr. Amal Jayakumar	Distribution of Nitrogen fixing microbes in the Oxygen Minimum Zones
15:55-16:25 IST 10:25-10:55 UTC	Panel Discussion	1. How do we understand the sources of pollutants and their potential impacts on human health and ocean ecosystems? 2. What are the best possible solutions to monitor, protect, manage and restore ocean ecosystems and their biodiversity
16:25-16:30 IST 10:55-11:00 UTC	Prof Raleigh Hood	Closing Remarks by Moderator

Hall A			Hall B		
<b>Session 03: Circulation and Boundary currents in the Indian Ocean</b> Co-Chairs: Prof P. N Vinayachandran, Dr Yukio Masumoto & Dr Fabien Durand			<b>Session 10: Climate and monsoon variability: Lessons from paleo-climatic studies and links to polar regions</b> Co-Chairs: Prof Ravi S. Nanjundiah, Dr Birgit Gaye		
Time	Name	Abstract Title	Time	Name	Abstract Title
16:45-17:00 IST 11:15-11:30 UTC	Issufo Halo	Intrusion of the Antarctic Intermediate Waters inshore of the Agulhas Current along the Southeast Coast of South Africa: perspectives from GLORYS-12v1 model	16:45-16:57 IST 11:15-11:27 UTC	Nicole Burdanowitz	Signals of Holocene climate transition amplified by anthropogenic land-use changes in the westerly Indian monsoon realm

17:00-17:15 IST 11:30-11:45 UTC	Arnold L Gordon	The Indonesian Throughflow, its characteristics, drivers, and impact on the Indian Ocean	16:57-17:09 IST 11:27-11:39 UTC	Birgit Gaye	Reconstructing early diagenetic redox conditions by an amino acid based degradation indicator
17:15-17:30 IST 11:45-12:00 UTC	Michael McPhaden	Intraseasonal equatorial Kelvin waves in the Indian Ocean and their propagation into the Indonesian Seas	17:09-17:21 IST 11:39-11:51 UTC	Dr Thejasino Suokhrie	Contrasting trend in inorganic and organic carbon burial in the west-central Bay of Bengal, during the last glacial-interglacial interval
17:30-17:45 IST 12:00-12:15 UTC	Kelvin J Richards	Ocean response to atmospheric variability in the Eastern Indian Ocean	17:21-17:33 IST 11:51-12:03 UTC	Nagaraju Chilukoti	MJO-like Variability in the Eastern Pacific during the Pliocene
			17:33-17:45 IST 12:03-12:15 UTC	Mohd. Salman	Intrusion of Arabian Sea high salinity water and monsoon associated processes strongly modulate planktic foraminifera abundance in the southwestern Bay of Bengal
Workshop for Early-Career Scientists (by invitation only)					
17:45-18:30 IST 12:15-13:00 UTC	Interactive poster session of Session 5 and 8				

## POSTERS of Session 5 and 8

Name	Abstract Title
<b>Session 05: Biogeochemistry and Microbiology of the Indian Ocean: Recent advances</b> Co-Chair: Prof Raleigh Hood, Dr Lynnath Beckley, Dr Eric Reas & Dr V V S S Sarma	
Prasanth R	Characteristics of vertical distribution of chlorophyll-a in the Southern Bay of Bengal during the BoBBLE field program
Julian von Borries	AFISsys - an autonomous instrument for the preservation of water samples for microbial metatranscriptome analysis
Dr. Maushmi Kumar	Marine sponge associated bacteria exhibit protease inhibitory potential.

Pranoy Paul	Micro-phytoplankton communities from contrasting oceanographic conditions in the eastern Arabian Sea during the winter monsoon
Della Thomas	Determination of Bioaccumulation in marine ecosystem by Laser Induced Breakdown Spectroscopy
Sidhesh G. Borker	Monsoonal distribution of DMS, DMSP and DMSO in the eastern Arabian sea
Abhinav Gummalla	Generation of seamless Chlorophyll maps from satellite data in Indian Ocean
Tapas Kumar Mishra	Rare earth element Biogeochemistry of Porewater in the Indian Ocean
Nirmalya Malla	Biogeochemistry of Ni in the Arabian Sea
Adnan Shaikh	Iodine cycling in the oxygen minimum zones of the Northern Indian Ocean
Venkatesh Chinni	Distribution of dissolved zinc in the Indian Ocean: Implications to their sources, sinks and internal cycling
Chhaya Yadav	Geochemical behaviour of dissolved Rare Earth Elements in the Indian Ocean
Sujata K. Nilajkar	Seasonality in phytoplankton community structure in the surface and subsurface chlorophyll maxima layers in the southeastern Arabian Sea
Yichao Yang	Processes controlling the distributions and cycling of dissolved aluminium and manganese in the northeastern Indian Ocean
Dr. Anil L. Paropkari	Particle fluxes along central western margin of India
Kiran Kumar Reddy Shiligireddy	Removal of phosphate through adsorption on estuarine sediments in the Indian estuaries
Lakshmi Shenoy	What controls the initiation of algal bloom during the winter monsoon in the Arabian Sea??
B Bikram Reddy	Nutrient stoichiometry drives the phytoplankton community structure during the progression of upwelling along the eastern Arabian Sea
Pandi Sudarsanarao	In situ remote sensing reflectance band ratios-based FDOM quantification in the northwestern Bay of Bengal
Shruti Shah	16S Microbiome profiling of the water column from Polymetallic Nodularich region in the Central Indian Ocean Basin
Dr. Chinmay C. Shah	Dissolved Organic Carbon (DOC) and Dissolved Organic nitrogen (DON) distribution in the Northern Indian Ocean
<b>Session 08: Atmospheric Chemistry and pollution</b>	
Co-Chair: Prof Lokesh Kumar Sahu & Dr Paravatha Suntharalingam	
Garima Shukla	Aerosol pH estimation at a coastal location in the Eastern Arabian Sea
Ashwini Kumar	Composition and characteristics of atmospheric aerosols over North Indian Ocean and implication to surface ocean biogeochemical processes: A synthesis
Prema Piyusha Panda	Seasonal variability of trace metal composition of atmospheric aerosol over Northeast Arabian Sea
Ankush Kaushik	Seasonal variation in chemical composition of size-segregated aerosols over the Northeastern Arabian Sea

**Day 04**

**17th March 2022**

Hall A			Hall B		
Time	Name	Abstract Title	Time	Name	Abstract Title
10:00-10:15 IST 04:30-04:45 UTC	Aswini M A	Aeolian dust and sea-salt in marine aerosols over the Arabian Sea during the southwest monsoon: Sources and spatial variability.	10:00-10:15 IST 04:30-04:45 UTC	Arya Paul	MJO winds driven intraseasonal see-saw of ocean mass in the Indo-Pacific basin
10:15-10:30 IST 04:45-05:00 UTC	Rohit Srivastava	Investigation of black carbon over Indian Ocean in a regional climate model	10:15-10:30 IST 04:45-05:00 UTC	Vijay Pottapinjara	The asymmetric relation of the Atlantic Zonal Mode and with the ITCZ and its impact on the Indian summer monsoon
10:30-10:45 IST 05:00-05:15 UTC	Sudheesh Valliyodan	Massive Methane Loss During Seasonal Hypoxia/ Anoxia in the Nearshore Waters of Southeastern Arabian Sea	10:30-10:45 IST 05:00-05:15 UTC	Mintu Chowdhury	Summer monsoon induced changes in phytoplankton community structure in the central Arabian Sea (2017-2018): After two decades of JGOFS
10:45-11:00 IST 05:15-05:30 UTC	Mansi Gupta	Spatio-temporal variation of atmospheric DMS over the Bay of Bengal during the post-monsoon season and the role of biological productivity	10:45-11:00 IST 05:15-05:30 UTC	Juliet Fura-ha Karisa	Comparison of coral sizes under different habitats and management across three archipelagos in the Indian Ocean
<b>Session 05: Biogeochemistry and Microbiology of the Indian Ocean: Recent advances</b> Co-Chairs: Prof Raleigh Hood, Dr Lynnath Beckley, Dr Eric Reas & Dr V V S S Sarma			<b>Session 09: Coastal and estuarine processes: Anthropogenic impacts and vulnerabilities</b> Co-Chairs: Prof Sunil Kumar Singh, Dr Mike Roberts		



11:00-11:12 IST 05:30-05:42 UTC	Naroju Veera Harikrishnachari	Seasonality in the characteristics of fluorescent dissolved organic matter along the eastern Arabian Sea	11:00-11:15 IST 05:30-05:45 UTC	Sangeeta M. Naik	Seasonality in dissolved inorganic carbon dynamics from the major estuaries of western India
11:12-11:24 IST 05:42-05:54 UTC	Sunanda	Eddy mediated chlorophyll blooms in North Indian Ocean	11:15-11:30 IST 05:45-06:00 UTC	Anil P	Upwelling induced phytoplankton size-fractionated productivity and community responses in the Alappuzha mud banks and nearby waters
11:24-11:36 IST 05:54-06:06 UTC	Teesha Mathew	Observed variability of monsoon blooms in the north-central Arabian Sea and its implication to deeper water oxygen concentration: A Bio-Argo study	11:30-11:45 IST 06:00-06:15 UTC	Aneesh Lotliker	Water quality in response to semidiurnal tides in Mahanadi Estuary, East coast of India
11:36-11:48 IST 06:06-06:18 UTC	TVS Udaya Bhaskar	A BGC-Argo perspective of sub-surface chlorophyll variability in Arabian Sea and Bay of Bengal	11:45-12:00 IST 06:15-07:00 UTC	Pravakar Mishra	Current status of coastal water quality: A comprehensive assessment of Chennai metropolis region, India
11:48-12:00 IST 06:18-06:30 UTC	Sherin C.K.	Nitrogen limitation and excess phosphate linked to nutricline variability and their stoichiometry in the eastern Arabian Sea			
Comfort Break					
12:15-12:27 IST 06:45-06:57 UTC	Jayashree Ghosh	Modeling coastal upwelling dynamics and its influence on the pCO <sub>2</sub> variability in the southeastern Arabian Sea.	12:15-12:30 IST 06:45-07:00 UTC	Pravakar Mishra	Marine litter and microplastics in different coastal matrices of India- Abundance, sources, and management solutions

12:27-12:39 IST 06:57-07:09 UTC	GVM Gupta	Oxygen minimum zone along the eastern Arabian Sea: intra-annual variation and dynamics based on ship-borne studies	12:30-12:45 IST 07:00-07:15 UTC	Sk. Md. Equeenuddin	Redox processes in estuary: Rare earth element as a proxy
12:39-12:51 IST 07:09-07:21 UTC	Dr. Varada S. Damare	Association of marine fungal-like organisms the thraustochytrids with diatoms	12:45-13:00 IST 07:15-07:30 UTC	Jesbin George	Decadal fluctuations in longshore sediment transport rates along the eastern Arabian Sea driven by Pacific climate variability.
12:51-13:03 IST 07:21-07:33 UTC	Ruth Eriksen	Planktonic protist diversity and complexity along 110°E	13:00-13:15 IST 07:30-07:45 UTC	Santosh Gaikwad	The role of habitat distinctness in shaping functional and taxonomic diversity of zoobenthos of urbanized coastal ecosystem
13:03-13:15 IST 07:33-07:45 UTC	Naman Deep Singh	Dissolved aluminium cycling in the Indian Ocean: Implications to lithogenic matter transport, and regional circulation and scavenging			
<b>Session 03: Circulation and Boundary currents in the Indian Ocean</b> Co-Chairs: Prof P. N Vinayachandran, Dr Yukio Masumoto & Dr Fabien Durand			<b>Session 10: Climate and monsoon variability: Lessons from paleo-climatic studies and links to polar regions</b> Co-Chairs: Prof Ravi S. Nanjundiah & Dr Birgit Gaye		
13:15-13:30 IST 07:45-08:00 UTC	Xuhua Cheng	Dynamics of eddy generation in the central Bay of Bengal	13:15-13:27 IST 07:45-07:57 UTC	Sudhira Ranjan Bhadra	
13:30-13:45 IST 08:00-08:15 UTC	Soumya Mukhopadhyay	Observed variability of the East India Coastal Current on the continental slope and shelf	13:27-13:39 IST 07:57-08:09 UTC	Arvind Shukla	
13:45-14:00 IST 08:15-08:30 UTC	Takanori Horii	Coastal upwelling events along the southern coasts of Sumatra and Java and its relation to Indian Ocean Dipole	13:39-13:51 IST 08:09-08:21 UTC	Kumari Nisha	

14:00-14:15 IST 08:30-08:45 UTC	Abhisek Chatterjee	Annihilation of the Somali current upwelling system and its impact on the biogeochemistry during summer monsoon	13:51-14:03 IST 08:21-08:33 UTC	Nagaraju Chilukoti	
			14:03-14:15 IST 08:33-08:45 UTC	Dr. Rajeev Saraswat	Large salinity gradient and diagenetic changes obscure the limited temperature signal in Globigerinoides ruber d18O in the northern Indian Ocean
Comfort Break					

## Plenary session & Panel Discussion: Ocean value chain: Observations to services

Moderator: Dr Sidney Thurston

Venue: Auditorium

Time	Speaker	Title
14:30-14:35 IST 09:00-09:05 UTC	Dr Sidney Thurston	Opening Remarks by Moderator
14:35-14:55 IST 09:05-09:25 UTC	Dr M. Rajeevan	Role of Oceans on South Asian Monsoon
14:55-15:15 IST 09:25-09:45 UTC	Dr Fehmi Dilmahamod	The South-East Madagascar Bloom - An observational and modeling perspective
15:15-15:35 IST 09:45-10:05 UTC	Dr Juliet Hermes	Keeping the Agulhas current
15:35-15:55 IST 10:05-10:25 UTC	Dr Satheesh Shenoi	Ocean Services in India and their impacts on the end users
15:55-16:25 IST 10:25-10:55 UTC	Panel Discussion	1. What are the new developments towards sustainable ocean observing system? 2. How new age autonomous instrumentation such as gliders, drones, etc., can be used for sustained ocean observations? 3. What could be probable strategies to enhance the multi-hazard early warning services including predictions for the ocean, climate and weather?
16:25-16:30 IST 10:55-11:00 UTC	Dr Sidney Thurston	Closing Remarks by Moderator

Hall A			Hall B		
<b>Session 03: Circulation and Boundary currents in the Indian Ocean</b> Co-Chairs: Prof P. N Vinayachandran, Dr Yukio Masumoto & Dr Fabien Durand			<b>Session 10: Climate and monsoon variability: Lessons from paleo-climatic studies and links to polar regions</b> Co-Chairs: Prof Ravi S. Nanjundiah, Dr Birgit Gaye		
Time	Name	Abstract Title	Time	Name	Abstract Title
16:45-17:00 IST 11:15-11:30 UTC	Vineet Goswami	Spatial distribution of dissolved Nd concentrations and eNd in equatorial and southern Indian Ocean: Impact of water mass circulation and dust deposition	16:45-17:00 IST 11:15-11:30 UTC	Karishma Dahiya	The Indian summer monsoon variability during mid-Pliocene
17:00-17:15 IST 11:30-11:45 UTC	Kiran V G	Impact of Bay of Bengal SST Gradients on the Indian Summer Monsoon Rainfall	17:00-17:15 IST 11:30-11:45 UTC	Ramanand Yadav	Variation in carbonate burial in the equatorial Indian Ocean during late Glacial-Holocene: Implication to the deglacial rise of atmospheric CO <sub>2</sub>
17:15-17:30 IST 11:45-12:00 UTC	Anoop T R	Fate of Arabian Sea high-salinity core after the intrusion of low salinity water mass	17:15-17:30 IST 11:45-12:00 UTC	Muruganatham	Spatio-temporal variation of sedimentation rate in the south-eastern Arabian Sea over the last ~50 ka
17:30-17:45 IST 12:00-12:15 UTC	Sherin V Raju	Recent salinity intrusion in the Bengal delta: observations and possible causes	17:30-17:45 IST 12:00-12:15 UTC	Champougam Panmei	Indian Ocean SST records show decoupling of Southwest and Northeast Monsoon during abrupt climate shifts
17:45-18:30 IST 12:15-13:00 UTC	Interactive poster session of Session 9,10,11,13 and 14				



## POSTERS of Session 9,10,11,13 and 14

Name	Abstract Title
<b>Session 09: Coastal and estuarine processes: Anthropogenic impacts and vulnerabilities</b>	
Co-Chair: Prof Sunil Kumar Singh & Dr Mike Roberts	
Ashwini Dattaram Toraskar	Seasonal variations in the water quality and antibiotic resistance of microbial pollution indicators in the Mandovi and Zuari estuaries, Goa, India.
Vasudha Chandrakant Bhatawadekar	Isolation and screening of aromatic hydrocarbon-degrading bacteria from the coastline of Goa
JESSICA BARMAN	Critical Review on the Bioaccumulation of Microplastics in Marine Organisms of Indian Seas
Lamjahao Sitlhou	Anticipated Impact of Polymetallic Nodules Mining in Deep Sea
SHAMEENA M K	Survey on the succession of fouling organisms at Cochin estuary, Southwest coast of India Shameena M. K. and Kaladharan P.
Parvathy R	Spatio-temporal variation in the distribution of the ichthyoplankton community of Off Kochi coastal waters, southwest coast of India
JALPA KARANUBHA JADEJA	Identifying the impacts of anthropogenic activities on species diversity distribution of corals using geospatial techniques: A case study of Poshitra and Narara island of Gulf of Kachchh, Gujarat
Foram Jadeja	Estimation of Shoreline change detection over past three decades and future change prediction using DSAS tool: A case study of Kamboi to Dehgam cost, Gulf of Khambhat, Gujarat.
NEETHU K V	Toxicity effects of cadmium (Cd) on the fish <i>Etroplus suratensis</i> (Bloch, 1790), Cochin Estuarine System, Southwest Coast, India
Priyansha Gupta	Seasonal distribution and characterization of microplastics in the MandoviZuari estuarine system of Goa, west coast of India
Chayanika Rathore	Release of microplastics from an urban sewage wastewater as a subsequent pathway to marine environment
Akshata Naik	Microplastics in the surface waters along the River Ganga, India: A major conduiting route to the oceans
Dr Danja Hoehn-Adams	India-UK collaboration
<b>Session 10: Climate and monsoon variability: Lessons from paleo-climatic studies and links to polar regions</b>	
Co-Chair: Prof Ravi S. Nanjundiah & Dr Birgit Gaye	
Sarathchandraprasad T	Mid Pliocene- A period of extreme South Asian Monsoon?
<b>Session 11: Inter-basin interactions in the Indian Ocean</b>	
Co-Chair: Dr Weidong Yu, Dr Juliet Hermes, Dr Michael McPhaden & Dr S S C Shenoi	
K Annapurnaiah	Influence of temperature inversions and barrier layer depth on deepening of Sonic Layer Depth in the Bay of Bengal
Anjana S	Role of internal oceanic variability and atmospheric forcing in the generation of South Indian Ocean Dipole
Anila Sebastian	Coupled feedback between the Tropical and Subtropical Indian Ocean Dipoles

Rahul U Pai	Variability of the Indian Ocean Shallow Meridional Overturning Circulation during Boreal Winter and its Impact on Ocean Heat Content
<b>Session 13: Jerome Dymant Renat Shakirov Jyotiranjana S. Ray</b> Co-Chair: Geology, geophysics and seabed mapping of the Indian Ocean	
Maria Ana Desa	Integrated geophysical analysis along a transect southeast of Sri Lanka, Bay of Bengal
Harshad Kumar Srivastav	Anatomy of a submarine volcano near Narcondam Island using high-resolution seismic reflection data
Bijesh C. M.	Morphotectonics of the southwestern continental margin of India and the adjacent deep offshore regions
<b>Session 14: Extreme events and their impacts</b> Co-Chair: Dr Chari Pattiaratchi, Dr M. Mohapatra & Dr Juma-Al-Maskari	
Sandhya K G	An integrated SWAN+WAVEWATCH III modeling system for the Indian coast-development and validation
Jyothi Lingala	Surface and Sub-surface Ocean Response to Tropical Cyclone Phailin: Role of Pre-existing Oceanic Features
Athira P Ratnakaran	Impact of ocean warming in the genesis and rapid intensification of extremely severe cyclone Tauktae
Arun Kumar V H	Dynamical and Synoptic characteristics of four extreme heavy rainfall events that occurred during the last four years (2018-2021) in the state of Kerala.
Muhammad Shafeeque	Impact of Extreme Climatic Events on Chlorophyll-a in the South Eastern Arabian Sea

**Day 05**

18th March 2022

**Presentation by Commercial Exhibitors**  
**(10:00-11:00 IST / 04:30-05:30 UTC)**

Venue: Auditorium

Hall A			Hall B		
<b>Session 13: Geology, geophysics and seabed mapping of the Indian Ocean</b> Co-Chairs: Dr Jerome Dymant, Dr Renat Shakirov, Dr Jyotiranjana S. Ray			<b>Session 14: Extreme events and their impacts</b> Co-Chairs: Dr Chari Pattiaratchi, Dr M. Mohapatra, Dr Juma-Al-Maskari		
Time	Name	Abstract Title	Time	Name	Abstract Title
11:00-11:12 IST 05:30-05:42 UTC	Nitin Bhagwanrao Kadam	Magnetic tracking of source-to-sink processes	11:00-11:15 IST 05:30-05:45 UTC	Roxy Mathew Koll	Role of marine heatwaves in supercharging tropical cyclones and driving India-Pakistan heatwaves

11:12-11:24 IST 05:42-05:54 UTC	Subhashree Mishra	A review on enhance oil recovery through CO2 capture in deep-sea sediments	11:15-11:30 IST 05:45-06:00 UTC	Vineet Kumar Singh	Cyclone induced changes in the ocean and atmosphere in the north Indian Ocean
11:24-11:36 IST 05:54-06:06 UTC	Yatheesh Vadakkeyakath	Structure and tectonics of the Indian Ocean: current status of knowledge and some unresolved problems	11:30-11:45 IST 06:00-06:15 UTC	Daneeja Mawren	Marine heat waves and tropical cyclones - two devastating types of coastal hazard in South-eastern Africa
11:36-11:48 IST 06:06-06:18 UTC	Snehashis Alam	A Seismotectonic Analysis of Earthquake Swarm in Andaman and Nicobar Islands Region, India (1960 to 2020)	11:45-12:00 IST 06:15-07:00 UTC	Jyothi Lingala	Upper-ocean responses induced by Cyclone Ockhi (2017) at rapidly intensified and weakened regions: A Case Study
11:48-12:00 IST 06:18-06:30 UTC	Vicki Ferrini	Collaboratively Building a Seabed Map of the Indian Ocean			
Comfort Break					
12:15-12:27 IST 06:45-06:57 UTC	Sambhabana Lenka	Rock magnetic properties of short sediment cores from the Carlsberg Ridge.	12:15-12:30 IST 06:45-07:00 UTC	Simi Mathew	Anomalous Sea Surface Temperature Over Southeastern Arabian Sea during Indian Ocean Dipole years
12:27-12:39 IST 06:57-07:09 UTC	R. Dileep Kumar Reddy	Genesis and alteration of the Central Indian Ridge and Ocean Basin basalts: Implications on the mobility of elements during basalt alteration	12:30-12:45 IST 07:00-07:15 UTC	Chinmay Rajendra Khadke	The strongest ever Super Cyclonic Storm-Kyarr over the Arabian Sea in October 2019: A Satellite analysis based Case Study
12:39-12:51 IST 07:09-07:21 UTC	John Savio Jose	Geophysical investigation over the axial seamount chain in the Laxmi Basin, Eastern Arabian Sea	12:45-13:00 IST 07:15-07:30 UTC	Akhila Rajeev	Cyclone-induced rainfall in North Indian Ocean during the period 2000-2020
12:51-13:03 IST 07:21-07:33 UTC	Surbhi Natha	Detection of Faults and high amplitude reflections in Krishna Godavari basin using Machine learning	13:00-13:15 IST 07:30-07:45 UTC	J. Padmanabham	Spatial Decision support system and GIS for Storm Surge Early Warning Services

13:03-13:15 IST 07:33-07:45 UTC	Jerome Dymont	Remaining problems in the age and structure of the Indian Ocean: can we solve some of them with adequate transit data?			
13:15-13:27 IST 07:45-07:57 UTC	Shravan Kumar	Sediment thickness variations and effective elastic thickness beneath the Arabian Basin, north-west Indian Ocean	13:15-13:30 IST 07:45-08:00 UTC	Dr. N. Srinivasa Rao	Operational estimation of Radius of wind maximum (Rmax) during the Cyclone- Digital Image Processing Approach
13:27-13:39 IST 07:57-08:09 UTC	Jyotirnanjan S Ray	Formation and emplacement of ophiolite at the Andaman subduction zone	13:30-13:45 IST 08:00-08:15 UTC	Chinmay Rajendra Khadke	Rapid intensification of Tropical Cyclones: Case Study of Super Cyclone Amphan
13:39-13:51 IST 08:09-08:21 UTC	Maria Ana Desa	The Riddle of the 85°E Ridge	13:45-14:00 IST 08:15-08:30 UTC	B. Kesavakumar	Upper Ocean Response to Tropical Cyclones in Northern Indian Ocean using in-situ and satellite observations
13:51-14:03 IST 08:21-08:33 UTC	Aditya Sen	1D poroelastic full waveform inversion (FWI) for the estimation of pore fluid pressure distribution in KG basin, India.	14:00-14:15 IST 08:30-08:45 UTC	Diksha Sharma	Impacts of continental aerosol on a natural phytoplankton community under variable CO <sub>2</sub> levels from NE Arabian Sea
14:03-14:15 IST 08:33-08:45 UTC	Vaibhav Vijay Ingale	Hydroacoustic observations of seismic swarms along the Southwest Indian Ridge of the Indian Ocean			

Comfort Break

## Panel discussion on Contribution to United Nations Decade of Ocean Science for Sustainable Development (14:30-16:30 IST / 09:00-11:00 UTC)

Moderator: Dr. Vladimir Ryabinin

Venue: Auditorium

### Event Details

Time	Speaker	Title
Panel Discussion		Contribution towards UN Ocean Decade - What is done and road ahead
14:30-14:35 IST 09:00-09:05 UTC	Dr. Vladimir Ryabinin	Opening Remarks by Moderator
14:35-14:50 IST 09:05-09:20 UTC	Dr Ben Milligan	Learning from plenary session on Blue economy and sustainable development
14:50-15:05 IST 09:20-09:35 UTC	Dr Marie-Alexandrine Sicre	Learning from plenary session on Monsoon and climate variability
15:05-15:20 IST 09:35-09:50 UTC	Prof Raleigh Hood	Learning from plenary session on Biogeochemistry and Ecology
15:20-15:35 IST 09:50-10:05 UTC	Dr Sidney Thurston	Learning from plenary session on Ocean value chain: Observations to services
15:35-16:25 IST 10:05-10:55 UTC	Dr Shailesh Nayak Dr M Ravichandran Dr T Srinivasa Kumar Dr Hermann Bange Rear Admiral (Retd) Md Khurshed Alam Prof Sunil Kumar Singh Dr Arvind Singh	Panelist Panelist Panelist Panelist Panelist Panelist Panelist
16:25-16:30 IST 10:55-11:00 UTC	Dr. Vladimir Ryabinin	Closing Remarks by Moderator



18th March 2022

## Valedictory Session (16:45-18:30 IST / 11:15-13:00 UTC)

Venue: Auditorium

### Event Details

Sl#	Time	Events
1	16:45 – 16:50 IST 11:15 – 11:20 UTC	Welcome by Dr. Sunil Kumar Singh, Director, CSIR-NIO, Goa, India and Chairman, LOC
2	16:50 – 16:55 IST 11:20 – 11:25 UTC	Address by Dr. Harilal B Menon, Vice Chancellor, Goa University, India and Member LOC
3	16:55 – 17:00 IST 11:25 – 11:30 UTC	Address by Dr Mirza Javed Beg, Director, NCPOR, Goa India and Vice-Chairman, LOC
4	17:00 – 17:10 IST 11:30 – 11:40 UTC	Address by Dr. T. Srinivasa Kumar, Chair, ILOGOOS & Director, INCOIS and Convener, ISPC
5	17:10 – 17:25 IST 11:40 – 11:55 UTC	Address by Dr. M. Ravichandran, Secretary, MoES and Chair ISPC
6	17:25 – 17:40 IST 11:55 – 12:10 UTC	Address by Dr. Vladimir Ryabinin, IOC Executive Secretary & Vice Chair ISPC
7	17:40 – 17:45 IST 12:10 – 12:15 UTC	Vote of thanks by Dr. Aneesh A Lotliker, INCOIS and Member LOC