SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY

First field course on

"Intertidal Ecology and Climate Change (IECC 2019)"



Date: 11 – 13th December 2019



Organized by

Centre for Climate Change Studies Sathyabama Institute of Science and Technology Rajiv Gandhi Salai, Chennai 600119.

Course overview

This field course (first of its kind in India) consists of ~25 hours of rigorous training to learn anything and everything about intertidal ecology, and climate change. Through this course, we intended to introduce subjects including: dynamic intertidal ecosystem, its types, flora and fauna diversity and their identification, climate change and its consequences - ocean acidification, warming, sea level rise, etc. We will also provide demo as well as hands-on-training sessions on sampling strategies (transects, quadrats, sieve, and plankton net), physico-chemical parameter measurements, morphological and molecular identification of common organisms, guide to best practices for climate change experiments with intertidal organisms (including *in situ* and laboratory-based experiments using pH computers and thermostats).

Intended learning outcomes

By the end of the course, participants are able to:

- Use appropriate method to conduct surveys at intertidal zone.
- Understand the ecology of intertidal habitats and appreciate the rich biodiversity
- · Classify and identify organisms that lives in the dynamic intertidal ecosystem
- Able to discuss the climatic factors that are affecting the intertidal organisms
- Conduct in situ and lab based climate experiments to understand the physiology of intertidal organisms
- Understand other anthropogenic stressors affecting the ecosystems

Registration details

3000/- INR for students and **4,000/- INR** for postdocs and faculties (Cost includes course kit, field visit by bus, study materials, lunch, tea snacks for 3 days. Cost does not include accommodation, breakfast and dinner).

Participants are requested to arrange their own travel and accommodation. Networking dinner (Pizza night) will be organized on 2nd day at ONESTA at an additional cost (Rs. 350 for veg, Rs. 450 for non-veg unlimited pizzas).

Please fill the google form: https://forms.gle/6i99wAKn3dRVhfATA

After selection, participants are required to pay fee through on-line banking to A/c: **891734627** (Dean Publications and Conference, Sathyabama University), Indian Bank, IFSC IDIB000T020, Thousand Lights Branch, Chennai-600006. Please mention '**IECC 2019_yourname'** in the description box during transaction.

Who can attend

Students, research scholars and faculties who are interested to learn Marine Intertidal Ecology and Climate Change research (Limited to 25 participants). Selection will be based on the statement of purpose and relevance of application to the course.

About the Centre for Climate Change Studies (CCCS)

CCCS at Sathyabama Institute of Science and Technology (SIST) was established in the year 2011 located at the International Research Centre (IRC). The primary mandate is to investigate the impact of climate change on marine organisms that are associated with various ecosystems like Coral reefs, Seagrass meadows, Seaweeds, Intertidal zones and Mangrove ecosystems

Course instructors

The course will be taught by team of marine biologists

Dr. S. Prakash has completed M.Sc. in Marine Science from Bharathidasan University and Ph.D in Marine Biology from Annamalai University. He was a Fulbright-Nehru Postdoctoral Fellow at USA. With more than 9 years experience, his research focuses on understanding systematic diversity based on integrative taxonomy and physiology of coral reef dwelling marine crustacean decapods and fishes.





Dr. Amit Kumar has completed M.Sc in Marine Ecology from Madurai Kamaraj University and Ph.D. from Stazione Zoologica Anton Dohrn, Naples, Italy. He has been working in the field of climate change and marine ecology for more than 7 years and have published research findings in reputed peer reviewed journals. He has been trained at several European laboratories on guides to best practices for ocean acidification experiments.

Dr. D. Adhavan has completed M.Sc in Marine Studies from Madras University and PhD from Pondicherry University (Andaman Campus). He has nearly ~6 years of experience and extensively worked on capacity building and coastal resource management. Highly involved in the restoration and transplantation of coastal habitats such as coral reefs and sea grass in India and abroad.



A diverse team of experts will be invited to deliver a talk during the course.

Study site – Kovalam, Chennai

Kovalam is located around 20 km away from our university in the East Coast Road, Chennai. Kovalam is a fishing village that represent one of the few unique places where sandy and rocky habitats are available. Thus, making this site suitable to understand the intertidal ecology along with its remarkable biodiversity. Kovalam experiences semi diurnal tides (two high and two low tides everyday), but the tidal variations are less than <0.5 meters.



Biodiversity: Kovalam has a long history of documenting biodiversity from various researchers since 1900's. It possess astonishing diversity in terms of sea weeds, mollusks, decapod crustaceans and other meio- and macrofaunal organisms.



Threats: Intertidal ecosystems and associated organisms are highly vulnerable due to increasing temperature and ocean acidification. In addition to climate change, man-made stressors such as sedimentation, disposal of domestic waste, industrial waste, over fishing, pollution, plastic debris and tourism are challenging its sustainability. Therefore, understanding the intertidal ecosystem, associated diversity and its impact on changing environmental conditions are necessary to address the damages that are caused by anthropogenic pressures.



PATRONS

Dr. MARIAZEENA JOHNSON CHANCELLOR

Dr. MARIE JOHNSON PRESIDENT

Dr. SUNDAR MANOHARAN VICE CHANCELLOR

Organizing secretary: Dr. T. SASIPRABA, Pro Vice Chancellor Conveners: Dr. S. Prakash, Scientist Dr. Amit Kumar, Scientist Dr. D. Adhavan, Scientist

For further details write us at training.cccs@gmail.com, Or call us at: 94983 80513, 99940 86533, 94459 90266

Last date for submitting the application: <u>31st October 2019</u> Results will be announced by <u>2nd November 2019</u> through email