



**80<sup>th</sup> Anniversary Celebrations of  
School of Marine Sciences  
Cochin University of Science and Technology, Kerala**

INTERNATIONAL CONFERENCE ON  
FRONTIERS IN MARINE SCIENCE  
CHALLENGES AND PROSPECTS

**MARICON 2019**

**16 - 20, December 2019**

**ABSTRACTS VOLUME**



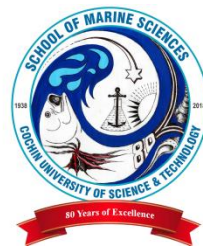
On the occasion of  
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FRONTIERS IN MARINE SCIENCE  
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Organized by  
School of Marine Sciences  
Cochin University of Science and Technology



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## Preface

MARICON2019 is the realization of long cherished dream of the academic community of School of Marine Sciences (SMS), Cochin University of Science and Technology (CUSAT). Since its inception in 1938 as Oceanographic Laboratory of erstwhile Travancore University, the visionary directors at different stages of its development took it to one of its kinds of marine sciences school in the country with all branches of marine sciences such as marine biology, marine geology & geophysics, physical oceanography, chemical oceanography and atmospheric sciences under the same school. This has resulted in the overall growth of school of marine sciences which has carved a niche in the realm of marine sciences in the country. Many of the alumni are now decorating high offices in the marine science institutions in the country and abroad.

It is in this backdrop the academic community of SMS, CUSAT has decided to organize MARICON2019 with the primary objective of bringing the alumni spread across India and abroad to the Lakeside Campus and rejoices. The response was tremendous with special sessions being organized passionately by alumni located at far and wide destinations such as UK, UAE, Japan, Pune, Goa, Mangalore, and Cochin. The alumni had also developed a commendable network of international researchers and were able to bring many of them to SMS, CUSAT for the benefit of academic community in marine sciences.

The tremendous response to the call for participation in MARICON2019 is reflected in more than 600 registered participants, 450 plus abstracts spread across 24 different sessions. Marine sciences being highly interdisciplinary science, the sessions ranging from marine biodiversity and conservation to air-sea interactions and regional climate modeling; tropical marine ecosystems to polar oceans; offshore geo-marine resources to lithospheric studies and geodynamics, ocean observation systems to monsoon prediction and predictability; coastal processes and estuarine dynamics to submarine ground discharge and mapping; advancements in aquaculture to aquatic animal health and management; marine bioprospecting and drugs from the sea etc. to mention a few. It was a tedious task to categorize the large number of abstracts spreading across wide ranging subject areas. Thanks to the tireless effort of the organizing teams at remote destinations and the in-house researchers of SMS, CUSAT, a meticulous categorization and organization of the large number of abstracts has been carried out which has resulted in a highly organized compilation of this fairly big abstract volume. We hope this abstract compilation will be extremely useful to the academic community in marine science, especially to the upcoming researchers and students in this field.

The abstract volume also includes the collection of abstracts of plenary and keynote speakers, which we hope would be invaluable to all those in the field of marine sciences. It could also act as a source of reference for the upcoming and established researchers in marine sciences to identify prospective research institutions, leading research teams in various areas of marine sciences besides potential networking opportunities. We take this opportunity to thank the whole hearted support of everyone involved in this humble effort of bringing this Compendium of Abstract of MARICON2019 a reality.

**(Editorial Board)**

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## PRESENT STATUS OF MANGROVE DIVERSITY AROUND NETTOOR REGION ADJACENT TO VEMBANAD LAKE- A PRELIMINARY ASSESSMENT

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Nettoor region (study area) is almost two kilometre from Sacred Heart College Campus, Thevara which is situated on the banks of Vembanad Lake and is near to Thirunettur Railway Station (9°55'37.2"N, 76°18'36"E). Presently the site is drastically affected by land filling for house constructions, road and rail expansion. As a result backwater connection channels and creeks to the mangrove habitat are now hindered by the land filling activity and water bodies are completely dried off. In this context, a study on the present status of biodiversity of mangrove species in and around Nettoor region was attempted during the month of October, 2019. The study was conducted in selected five different spots using quadrat method and species identification was carried out. A preliminary observation on the general biodiversity of the studied quadrats revealed the presence of six true mangrove species, (*Acanthus ilicifolius*, *Avicennia officinalis*, *Bruguiera gymnorhiza*, *Bruguiera cylindrica*, *Rhizophora apiculata* and *Kandelia candel*), one semi mangrove (*Acrostichum aureum*), two mangrove associates (*Scaevola sericea* and *Ipomoea*), and one invasive species (*Eichhornia*). In order to describe the species composition of the sampling spots PRIMER V6 software was used. Univariate diversity indices such as Species richness (Margalef's index, d), Species equitability (Pielou's index, J'), Species diversity (Shannon-Wiener index, H') and Species dominance (Simpson's index, λ') were worked out for mangrove species using PRIMER 6. *Rhizophora mucronata*, and *Sonneratia caseolaris* reported in previous studies were not observed in the present study. However, the results of the study are based only on a preliminary assessment and therefore more data based on season wise sampling is necessitated to reach a conclusive statement.

**Keywords:** *Vembanad, Nettoor, Mangroves, PRIMER, Diversity indices*