

## Spatial and temporal patterns of the sea grasses biodiversity in Palk Bay, Bay of Bengal

**C. Govindasamy**  
Alagappa University, India

Rapid environmental changes have precipitated a general concern for the state of Palk Bay ecosystem. Clearly there have been major changes in some water quality variables in this ecosystem last two decay. Present paper deal with the seasonal fluctuations in various physico-chemical parameters in the coastal waters off the Palk Bay. The increase in the nutrient levels in the seagrass environment would favour the growth of seagrasses. The temporal dynamics of seagrasses were monitored in the Palk Bay. Plant morphological characteristics; shoot density, biomass and productivity were monitored. Morphological characteristics showed seasonal variation and ecological characteristics of the seagrass are related to the seasonal variability of water temperature and nutrients. This study provided the data to establish seagrass distribution and to understand the interactions between seagrass and environmental factors. Seagrass associated flora and fauna are the main component of marine biodiversity of the Palk Bay. The study will contribute to the understanding of shallow water seagrass bed ecosystems of this region, which has been largely neglected until now. Spatial and temporal patterns in the biomass and productivity of seagrasses show in the results. Seagrass productivity and standing crop varied primarily in response to changes in water temperature, salinity, which themselves varied mostly as a function of season, rainfall and freshwater inflow. The present paper reveals that comparing to the seagrasses in all the four stations have more percentage, shoot density, biomass and productivity because Palk Bay region which possess more salinity and more temperature, waves, currents, less depth, sandy-clay substrate and more day length, light, nutrient and sedimentation which favour the changes in Seagrasses diversity and their population in future.

### Biography

C. Govindasamy, Marine biologist, graduated from Zoology department, University of Madras in 1983. He completed his M.Sc., M.Phil. and Ph.D. degrees in the Centre of Advanced Study in Marine Biology, Annamalai University, Parangipettai in 1986, 1988 and 1992 respectively. He worked as a CSIR, Research Associate at University of Madras in 1995- 2004 and he served as guest faculty in Thiruvalluvar University in 2005- 2008. From 2008- till date, he is working as a Chairperson, Associate Professor and Head in the Department of Oceanography and Coastal Area Studies, School of Marine Sciences, Alagappa University, Thondi Campus. Now, he has published more than 75 papers in reputed international and national journals, 8 chapters in edited books and he published one CD ROM in titled on Rotifers of Porto-Novo. Moreover, he has participated more than 85 international and national seminars, workshop and training in the area of marine biology. He completed 4 Major Projects funded by government of India in various funding agencies. He was awarded as a Best Citizen of Indian in 2012.

[drcgsamy@gmail.com](mailto:drcgsamy@gmail.com)