

## Coastal Marine Biodiversity and Ecosystem Functioning

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It is a general perception that biological diversity enhances the ecosystem productivity because each species, have very unique and important role to play. Hence each species depends on the services provided by others. The solar energy is utilized by plants to convert carbon dioxide into organic compounds. This first stair of natural food chain provides food for all other living species on the planet. However this very step is being disturbed due to the release of carbon dioxide and other harmful gases. The disturbance is largely due to the human being, who is the integral part of the natural living resource and is the major beneficiary of the ecosystem services.

The human population is over growing which was 6 Billion in 2000 to 7 Billion in 2011 and is estimated to be over 9 Billion by 2050. This ever increasing hungry mouth will required enormous food material to fulfill their daily requirement. As per the *Convention on Biodiversity*  $\approx$  40% of the world's economy and 80% of the needs of the poor population are derived from biological resources. Moreover, rich diversity of life provides greater opportunity for medical discoveries and economic development, making biodiversity as a focal point of discussion for nutritional requirement and or industrial development. Nonetheless, the diversity of life on earth is changing dramatically and since the change is negative, it is already showing the warning signal. Therefore everyone have to be concern of the natural bioresources and get educated on the globally observed

biodiversity trends so that every individual can participate in its sustainable utilization.

In this communication, I propose to address some of the important issues related to assessing the coastal biodiversity and conservation. Currently "BioSearch" compiled data of ~20,000 species within Indian EEZ . BioSearch is an online marine biodiversity database of CSIR-NIO Goa and is part of the global "Ocean Biogeographic Information System" (OBIS). Recent biodiversity review also identified clear gaps in knowledge extending to several smaller taxa and to large parts of the shelf and deep-sea ecosystems, including seamounts. Habitat loss, uncontrolled developmental activities in the coastal zone, overextraction of resources and coastal pollution are some of the main constraints on maintenance of highly diverse biota, especially in countries like India. Thus, I will be focusing on: Why Is Biodiversity Important? How biodiversity and ecosystem function in a given environment? Who should care for it? How biodiversity can be studies and managed?

Finally, I will attempt to give some evidences on people's perceptions on resource management and biodiversity conservation.

**Key words** : Biodiversity; assessment; inventory; resource management; conservation.