

"Toward Future Research on
Biodiversity in Asian region".

MALAYSIA

Developing programs for fostering young scientists

- **Ecosystem based projects**- opportunity for biodiversity and ecological studies.
 - Significantly important in many levels (biological, socio-economics)
 - easier to generate interest in the public mind (precursor to awareness)
 - Sources of funding associated with ecosystems (GEF, JSPS)
 - Support (National Oceanography Directorate, Dept of Marine Parks, PERHILITAN, Forestry Dept Peninsular Malaysia)
- **Mangrove/ Coral reef** – coastal areas provide terrestrial and aquatic research.
 - System under human impact in most South East Asian countries.
 - Biodiversity conservation, understand maintenance, interesting processes, erosion
 - There is succession of expertise in mangrove ecology
 - New interest in coral reef ecology- appealing to budding scientists

Developing programs for fostering young scientists

- Biodiversity Demonstration Site:
- **“serve the purposes of biodiversity research, monitoring human impacts and climate change, and the protection of marine living resources for the benefit of the coastal community as well as the impact of forest management”.**
- portray the best management practices to enhance the coral reef /mangrove ecosystem for the benefit of marine wildlife.

Function of Biodiversity Demonstration Site

- Reference points of non-impacted coral reefs/mangrove forest
- Positive control sites for reef re-establishment and mangrove forest rehabilitation.
- Comparative sites for monitoring of reef health and management of other coral reefs
- Permanent sites for monitoring effects of **climate change**, ENSO events and natural hazards on marine habitats and biodiversity

Function of Biodiversity Demonstration Site

- Sites for testing and developing methodologies for specific **management applications**. BDS as learning and training centers.
- Protected sites for spawning and young stocks of fish and others, ensuring larvae and recruits to downstream reefs, and enhancement of fish catches outside the protected areas.
- Preserving the gene pool of living marine resources
- **Connectivity** – migratory birds, fish stocks/recruitment

Developing programs for fostering young scientists

- Facilitate training and education
 - young scientists
 - marine park personnel
 - community and public awareness on the importance of marine habitats.
- Training in the field of :
 - Taxonomy, Ecology, Population genetics, etc..
 - Socio-economic / carrying capacity studies,
 - Conservation, Rehabilitation , Management

Identifying challenges for improving the research environment

- Available and adequate resources? - funding, human resource, technology, -
- Common Regional interest & policy?
- **Concerted effort**- intensive rather than extensive? Clear objectives that are feasible to achieve by collaborators.
- Continuity- important in monitoring.
- **Short-term** (assessment) and **long term** (monitoring, rehabilitation) projects/plans?

Establishing a cooperative framework for building a research network

- **Identify research themes:** Connectivity, Adaptation to Climate Changes, Ocean Acidification, Coastal Rehabilitation. (significant scientific & practical value)
- **Identify several model organisms-** microbial, plants, animals. (comparison of information)
- **Application of new technologies-** GIS, development of standardized databases, ecological informatics (transfer of technology)
- **Analysis and Interpretation of data** (transfer of knowledge)
- **Partners and duties** - national and international collaborators. (Term Of Reference)