Regional Study of Marine Endangered Species (Mammals and Sea Turtles) in the Tropical Asia for Effective Conservation (MESTA)

A New Project Proposed to IOC/WESTPAC
Joint proposers from:

• The First Institute of Oceanography (FIO) - Sate Oceanic of Administration of China
• Phuket Marine Biological Center (PMBC), and
• The Institute of Oceanography & Environment - Universiti Malaysia Terengganu (INOS-UMT)
Project implementation duration

Long term

First phase:
• May 2015 - May 2017
Justification for the project

- The marine and coastal areas in the tropical Asia under dual impacts from the Indian and Pacific Oceans, hosting richest **biodiversity** in the world that **support the social-economics in the region**, such as fisheries and eco-tours.
  - In the Indo-West Pacific, inhabit ca. 40 spp of the global total 86 cetacean spp, ca. 30 spp in the Southeast Asia and 9 species are endemic, e.g. Irrawaddy dolphin - “vulnerable” (www.iucnredlist.org)
  - 5 out of 7 species of sea turtles occur in this region (FAO 1990) e.g. green sea turtle

- These marine animals are **iconic species loved by the public**, not only because of ecological and economic importance, but also because they easily tackle human’s feeling and fascinate and intrigue people by charming elegant appearance and friendly behavior in general.
Justification for the project

• Important species/population(s) is endangered, e.g. the whales and five sea turtles, largely due to
  – anthropogenic pressure as they are migratory by nature, often come to or encounter habitats in the coastal and brackish waters where human disturbance is intensive
  – lack of scientific capabilities to study and protect under economic/developmental deficiency, and
  – increasing impacts from climate change.

• Traditionally, the region relies on labor intensive methods to observe/study/protect the endangered marine species
  – methods cannot meet increasing demand for higher efficiency, objectivity and repeatability
  – can be empowered with modern science and technologies such as marine bioacoustics, unmanned aero vehicles (UAV), molecular biology and advanced analysis
Justification for the project

• State of research and protection:
  – From 2012, FIO and PMBC initiated joint study on marine endangered species (MES) (Thailand-China Joint Laboratory for Climate and Marine Ecosystem)
  – FIO, INOS-UMT and NARA (National Agency of Aquatic Resources of Sri Lanka) collaboration on MES research
  – WESTPAC member states have made their OWN efforts at various extents on research and protection of MES

• Many MES have wide distributions or migrate across wide space (meta-populations?)
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• Regional cooperation is in need for joining efforts and sharing knowledge toward network based better protection.

• At the 1st-2nd China-ASEAN Countries Forums for Marine Science & Technology Cooperation (2013 in Bali and 2014 in Phuket), experts from China, Thailand, Malaysia, Philippines, Indonesia, Cambodia and the Laos discussed and reaffirmed their common interests in joint study on marine endangered species in the tropical Asia
Project objectives and expected outcomes

• The project considers the situation
  – the tropical Asia, spanning from the Indian Ocean to the West Pacific Ocean
  – lacks and needs scientific information, research capacity and effective protection for MES
  – The project aims to establish a longterm and regular regional mechanism and conduct relevant research activities to provide expertise for effective protection of MES in the tropical Asia.

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  – conduct relevant research activities
  – to provide expertise for effective protection of MES in the tropical Asia.

• The project expect to
  – build a network for research and protection of MES in the tropical Asia, improve the research capacity for MES in the region
  – enrich the knowledge on MES in the region, and
  – promote the protection of MES in the region
Terms of reference of project steering group

• Composition (more members are welcome)
  – Dr. Xuelei Zhang, Research Professor of FIO, China (coordinator)
  – Dr. Kongkiat Kittiwattanawong, Researcher of PMBC, Thailand (focal point for Thailand)
  – Dr. Saifullah A. Jaaman, Associate Professor of INOS-UMT, Malaysia (focal point for Malaysia)
  – Dr. Louisa Ponnampalam, Research Fellow, Institute of Ocean and Earth Sciences, University of Malaysia, Malaysia
  – Dr. Juanita Joseph, Senior Lecturer of INOS-UMT, Malaysia
  – Mr. Mahmud Yussof, CEO of Heart of Borneo Centre, Ministry of Industry & Primary Resources, Negara Brunei Darussalam
  – Mdm. Desimawati Metali, Director of Marine Biodiversity Centre, Ministry of Industry & Primary Resources, Negara Brunei Darussalam
  – Dr. Ngurah N. Wiadnyana, Professor of the Research Center for Fisheries Management and Conservation, AMFRD, Indonesia
  – Dr. Jo Marie V. Acebes, Ateneo de Manila University and Balyena.org, Philippines
  – Mr. James Bali, Manager, Sarawak Forestry Corporation, Malaysia
  – Mr. Tint Tun, Marine Biologist, Marine Science Association, Myanmar
  – Mr. Ing Try, Deputy Director, Department of Fisheries, Cambodia
  – Ms. Dongdavanh Sibounthong, Head of Fisheries Recourses Management Section, Department of Livestock and Fisheries, Lao PRD
Terms of reference of project steering group

• Functions
  – To discuss and elaborate the annual work plan and other suggestions for the project;
  – To recommend, discuss and adopt new members;
  – To provide relevant information, data and materials to the project;
  – To draft the project report;
  – To participate the project meetings and training and recommend trainees;
  – To coordinate the project activities in the member’s home country and submit the activity report; and
  – To explore supports from the the member’s home country and other relevant agency or organization.
Draft work plan May 2015 - May 2017

Items of work:
- develop a network for MES research and protection in the tropical Asia
- **take Irrawaddy dolphin as a research focus**
- apply and integrate traditional methods and modern science and technologies such as marine bioacoustics, UAV, molecular biology and advanced analysis
- study the dolphin’s critical habitats and population size
- explore the populations’ biodiversity and main threats; and
- transfer the knowledge through the MESTA network and promote followup collaboration within the project
- **the project will conduct the following meetings and training:**
## Draft work plan May 2015 - May 2017

- work plan and budget

<table>
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<tr>
<th>Activities</th>
<th>Objectives</th>
<th>Expected outcomes</th>
<th>Date &amp; Place</th>
<th>Funding required</th>
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<tr>
<td>Project meeting A: 1st Scientific Symp on Tropical Indo-WPacific Marine Endangered Species</td>
<td>Knowledge communication, annual work plan making and network formation</td>
<td>Inception of the MESTA network</td>
<td>Thailand, 2015</td>
<td>US$20,000.00</td>
<td>Supports from the member’s home country and China-ASEAN Maritime Cooperation Fund</td>
</tr>
<tr>
<td>Project meeting B: 2nd Scientific Symposium on Tropical Indo-WPacific Marine Endangered Species</td>
<td>Knowledge communication, annual work plan making and network formation</td>
<td>Development of the MESTA network, project’s followup phase proposal</td>
<td>Malaysia, 2017</td>
<td>US$20,000.00</td>
<td>Supports from the member’s home country and China-ASEAN Maritime Cooperation Fund</td>
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<tr>
<td>Project training: 1st Training Course on Observation of Tropical Indo-WPacific Marine Endangered Species</td>
<td>Knowledge and technical skills transfer</td>
<td>Capacity building of the MESTA network</td>
<td>Thailand/Malaysia, 2016</td>
<td>US$20,000.00</td>
<td>Supports from the member’s home country and China-ASEAN Maritime Cooperation Fund</td>
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Thanks