Monitoring of HAB Species in the Coastal Waters of India and Sri Lanka

Introduction:

- Harmful Algal Blooms (HAB's) and their related consequences on fisheries and human health is a global concern

- This alarms every maritime country to adopt regular monitoring programmes in their territorial water bodies

- Coastal waters of India and Sri Lanka will be monitored in the context of HAB's

- Biological and chemical methods will be adopted for taxonomic and toxin characterization of HAB species

- Remote Sensing and mathematical modelling approaches will also be used to further understand HAB dynamics at larger scale
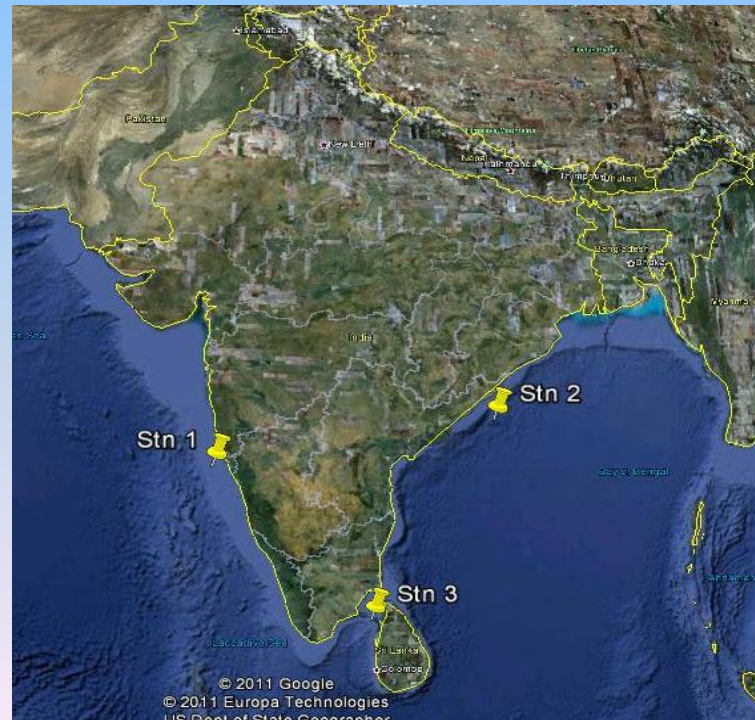
Objectives:

(A) **Study of the dinoflagellates community structure with reference to HAB species and dissolved phytotoxins in the coastal waters of** Indian and Sri Lankan subcontinent

(B) Use of remote sensing and bio-optical properties to understand HABS in this region.

Sampling locations in the Indian Ocean

Variables measured:

- **Dinoflagellates composition by Light and Scanning Electron Microscopy**

- **Analysis of phytotoxins by Liquid Chromatography Mass Spectrometry (LCMS)**

- **Chl *a*, Reflectance and SST from remote sensing**

Networking/Capacity Building:

Researchers from India and Sri Lanka will be involved in this interdisciplinary project. A workshop will be conducted in Sri Lanka to enhance knowledge in sample collection/handling protocols, data analysis, modeling aspects, etc. at the early stage of the project. The data will be available for the other NF-POGO alumni as well as for the global community.

Anticipated Results:

- **Baseline data exclusively on HAB species in the Indian and Sri Lankan waters**
- **Spatial and temporal distribution of dissolved and particulate phytotoxins from the study area.**

Participant List

Participant	Institute/Country	Role in the project	Category
Ravidas K Naik*	NIO Goa, India	Biology	NF-POGO alumni
Rajdeep Roy	NIO Goa, India	Chemistry	NF-POGO alumni
Shovonlal Roy	Univ. of Oxford, UK	Modelling	NF-POGO alumni
Sahana Rai	NIO, India	Data Management	NF-POGO alumni
Kanthi Yapa	Univ. of Ruhuna, Sri Lanka	Remote sensing	NF-POGO alumni
H.B. Jayasiri/Akila Viraj	NARA, Sri Lanka	Biology	NF-POGO alumni
W.N.C. Priyadarshani	NARA, Sri Lanka	Biology	NF-POGO alumni

* - Regional coordinator

In addition to the above participants, following senior scientists from India and Sri
Lanka will also be involved in the proposed project

Name	Institute/ Country	Expertise
Dr. A.C.Anil	NIO Goa, India	Marine Biology
Dr. M. DeelipKumar	NIO Goa, India	Marine Chemistry
Dr. K. Arulananthan	NARA, Sri Lanka	Physical oceanography