

## **Annex VII**

### **Proposal for HAB Case Studies**

#### **1. Background**

WG3/CEARAC compiled "the National Reports" that introduce current situation on harmful algal blooms (HABs) in each country of the NOWPAP Member States, "the Integrated Report" based on the National Reports and "HAB Reference Database" that summarized published papers on HAB in the NOWPAP region in the 2004-2005 biennium.

In the Integrated Report, the need to mitigate HAB in the NOWPAP region is mentioned. Based on this need, "Booklet of the countermeasures against HABs" is published in the 2006/2007 biennium, which summarizes information on countermeasures implemented in each country.

In order to share information on HAB occurrence more effectively and enhance actions against HABs in each member state, CEARAC plans to implement HAB Case Studies in the 2008-2009 biennium.

#### **2. Objective**

Objectives of these case studies are to establish the most effective and laborsaving ways for sharing information among the NOWPAP member states about HAB occurrence, oceanographic and meteorological condition and nutrients in selected sea areas (hot regions) and to summarize common concerned items in the hot regions in reports.

#### **3. Main tasks**

##### **3.1 Selection of HAB hot region in each member state**

HAB hot regions should be sea areas where HAB monitoring has been already implemented regularly because HABs occur frequently or HAB occurrence will be concerned in the near future. CEARAC FPs and WG3 experts are requested to select one or two hot region(s) in the NOWPAP area.

##### **3.2 Implementation of case studies**

CEARAC prepares a draft implementation plan for HAB case studies and WG3 experts will review the plan. Upon approval of the implementation plan at the 6<sup>th</sup> CEARAC FPM, CEARAC will conclude MoU for making a report with experts recommended by WG3 experts or WG3 experts themselves. Case studies will be implemented by these experts, and progress of case studies will be reviewed at the 4<sup>th</sup> WG3 and WG4 Meeting.

### 3.3 Sharing information on hot region

Final reports made by the experts will be submitted to CEARAC by the end of 2008 and will be uploaded to CEARAC website so that the information will be disclosed not only among the NOWPAP member states but also among other regional seas and international agencies. CEARAC will promote cooperation with other international agencies which have databases related to HAB such as PICES etc. for sharing information.

### 3.4 Updating the information on hot region

In 2009, the experts will collect latest data and update the report. After 2009, this report will be updated regularly as a routine task.

## 4. Expected outcome

Implementation of HAB case studies of hot region will contribute to establish effective and laborsaving ways for sharing information. Also, the achievement of case studies will be listed on a database established by CEARAC's other activity (HAB Integrated website), so the information will be available for wider community. At this point, synergy effect, sharing information on not only hot regions but also other sea areas where HAB occur, will be promoted.

## 5. Schedule

Schedule of this activity and main body are as follows:

Time	Actions	Main body	
2008	Q1	Preparation of draft implementation plan	CEARAC and Consultant
		Review of draft implementation plan	WG3 Experts
		Selection of hot regions in each country	FPs and WG3 Experts
	Mar. (The 6 <sup>th</sup> CEARAC FPM)	Approval of implementation plan	CEARAC and FPs
	End of Q1	Conclusion of MoU on HAB case studies of hot region	CEARAC and Experts
	Q2 – Q4	Making report on HAB case studies	Experts
	Sep. (The 4 <sup>th</sup> WG3/4 Meeting)	Progress report on HAB case studies	Experts
End of Q4	Submission the report to CEARAC	CEARAC and Experts	

2009	All year	Updating of report (As with a above, conclusion of MoU)	CEARAC and Experts
------	----------	--	-----------------------

Provisional Contents of a Report on HAB Case Studies

<p>1. Monitoring system and items on HABs</p> <p>1.1 Outline of hot region (Reason of selection, location of hot region, characteristics on ocean environment etc.)</p> <p>1.2 Monitoring system (Name of monitoring implementing agency, Monitoring area etc.)</p> <p>1.3 Monitoring items (HAB occurrence, Oceanographic condition, Meteorological condition etc.)</p> <p>1.4 Standards for HAB occurrence (Standards for HAB occurrence, Standards for HAB warning/alarm, Quarantine limits of harvested shellfish etc.)</p> <p>2. HAB occurrence</p> <p>2.1 Status of HAB events (Change of the number of HAB occurrences, Period of HAB occurrences, Location of HAB occurrence)</p> <p>2.2 HAB species (Causative species, Maximum cell density)</p> <p>3. Environmental condition (Oceanographic condition: Water temperature, Salinity, Current direction/speed, DO and Nutrients) (Meteorological condition: Temperature, Precipitation amount and length of sunshine)</p> <p>4. Adverse effect by HAB</p> <p>5. Summary (The result of analysis, if possible, concerned items of this region)</p> <p>Attachment (List of HAB events)</p>
--