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**Programme**

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**Northwest Pacific Action Plan  
Special Monitoring and Coastal Environmental Assessment  
Regional Activity Centre**

**The Fourth NOWPAP Working Group 3 and 4 Joint Meeting  
Toyama, Japan, 10-12 September 2008**

**Development of HAB Integrated Website**

## **1. Background**

In the 2004-2005 biennium, CEARAC compiled the National Reports and the Integrated Report that introduce current situation on harmful algal blooms (HABs) in each NOWPAP member state. Based on these reports, CEARAC summarized existing paper on HABs in the NOWPAP region in "HAB Reference Database," and established *Cochlodinium* website and published a *Cochlodinium* pamphlet for sharing information on *Cochlodinium* that is one of the concerned species in the NOWPAP region.

Also, some international organizations established several HAB-related databases in the NOWPAP region; therefore, the needs to cooperate with other international organizations and to establish a common understanding through the development of a database and information network are pointed in the Integrated Report.

Based on these needs, CEARAC proposed to develop HAB Integrated Website at the 12th NOWPAP IGM and 6th CEARAC FPM for promoting not only end-of-pipe countermeasures but also front-of-pipe countermeasures by local agencies, and for promoting further research and development by researchers and further cooperative work with other international organizations for the 2008-2009 biennium, and this proposal was approved at the meetings.

## **2. Objective**

Objectives of developing HAB Integrated Website are to provide and share information on HAB occurrences, countermeasures, oceanographic condition and HAB-related issues in order to enhance activities against HABs in the NOWPAP region.

## **3. Status of implementation**

Upon approval of the workplan at the 6th CEARAC FPM, CEARAC prepared a draft outline of the website, which includes contents and methods for collecting information of the website. An image of this website is attached in Annex 1.

## **4. Future work**

The draft outline of the website will be reviewed by WG3 experts and Focal Points. On the other hand, in October 2008, CEARAC will introduce its activities on HAB in PICES 17th Annual Meeting and discuss coordination of CEARAC's HAB Integrated Website with other websites by other international organizations such as PICES. After that, a pilot integrated website and rules for updating data will be developed, and FPs and WG3 experts will be requested to review and make comments to them.

Information collected by HAB Case Studies will be added to this pilot website as the database along with its test operation. After the test operation and enhancement of the database, this website will start its operation officially by the end of 2009.

### 5. Expected out come

The website can provide useful information to support actions against HABs in the NOWPAP member states as the integrated data center. Also, this website contributes to information exchange and sharing with other regional seas and international organizations.

### 6. Schedule

Schedule of this activity and main body are as follows:

Time	Actions	Main body	
2008	Mar. (The 6 <sup>th</sup> CEARAC FPM)	Approval of workplan and budget	CEARAC and FPs
	Q1 – Q2	Preparation of draft outline of website	CEARAC and Consultant
	Sep. (The 4 <sup>th</sup> WG3/WG4 Meeting)	Review of draft outline of website	WG3/WG4 experts
	Oct.	Coordination with other databases by international organizations	CEARAC
2009	Q1	Development of HAB Integrated Website	CEARAC and Consultant
		Preparation of draft rule for updating data	CEARAC and Consultant
		Review of draft rule for updating data	FPs and WG3 experts
	Q2	Test operation of the website	CEARAC and Consultant
	Q2	Updating data	CEARAC and experts and Consultant
	Q4	Starting official operation	CEARAC and Consultant

## 7. Budget

Contract	Timing	Output	To be completed	Counterpart	Budget (US\$)
MoU for development of HAB Integrated Website	2008 Q4	<ul style="list-style-type: none"> <li>- HAB Integrated Website</li> <li>- Rule for updating data</li> <li>- Test operation</li> <li>- Adding data of the HAB Case Studies</li> <li>- Enhancement of the database</li> </ul>	2009 end of Q4	Consultant	10,000
Total					10,000

### Annex 1 Image of HAB Integrated Website

#### Site for download of CEARAC's publications

1. Information on HAB occurrence etc.  
National Reports, Integrated Report
2. Information on countermeasures  
Booklet of Countermeasures against HABs
3. HAB Case Studies  
Reports of HAB Case Studies in member states



#### Site for Database

4. HAB Reference Database
5. HAB Case Studies Database
6. WG3 Experts Database

#### Site for Topics

7. Use of Remote Sensing techniques  
Marine Environmental Watch Project Homepage
8. Hot topics in the NOWPAP region  
*Cochlodinium* Homepage
9. Coastal Environmental Assessment  
Result of WS, Procedures for assessment of eutrophication status

#### Site for event information

10. HAB events information of related organizations (Annex 2)

#### Site for Link

11. Links to related organizations

## Annex 2 Example of HAB events of related organizations

Organizations	Name of Event	Date	Venue
GEOHAB	GEOHAB Modeling Workshop 2009	Summer of 2009	TBD
IOC	IOC Training Course and Identification Qualification in Harmful Marine Microalgae 2008	18-28 August 2008	University of Copenhagen, Denmark
	IOC Training Course and Identification Qualification in Harmful Marine Microalgae 2009	17-27 August, 2009	University of Copenhagen, Denmark
	IOC Training Course on Qualitative and Quantitative Determination of Algal Toxins	Later 2008	Germany
ISSHA	The 13th International Conference on Harmful Algae 2008	3-7 November, 2008	Hong Kong, China
PICES	PICES 17th Annual Meeting	October 23- November 2, 2008	Dalian, China
SCOR	WG 132 on Land-based Nutrient Pollution and Relationship to Harmful Algal Blooms in Coastal Marine Systems	28-31 July, 2008	Geesthacht, Germany