

Annex V

Report on implementation and expenditure of CEARAC activities for the 2006-2007 biennium

1. General Briefing

Background

The Special Monitoring and Coastal Environmental Assessment Regional Activity Centre (CEARAC) is one of the four Regional Activity Centres (RACs) to coordinate activities relevant to specific components of the Action Plan for the Protection, Management and Development of the Marine and Coastal Environment of the Northwest Pacific Action Plan (NOWPAP). CEARAC was founded in 1999 and is hosted by the Northwest Pacific Region Environmental Cooperation Center (NPEC), which was established in 1998 in Toyama, Japan, under the auspices of the Ministry of the Environment.

Following the Resolution of the 7th Intergovernmental Meeting (IGM) (Vladivostok, Russia, March 2002), which allows NOWPAP to evolve toward a RAC-based rather than an Activity-based structure, the CEARAC Focal Points Meeting (FPM) was established in order to promote smooth and effective implementation of special monitoring and assessment of the marine and coastal environment. The First CEARAC FPM (Toyama, Japan, February 2003) defined the priorities and initial steps of CEARAC activities. Following the decision of the First CEARAC FPM, CEARAC has been working on monitoring and assessing Harmful Algal Blooms (HAB) under Working Group 3 (WG3), and developing new monitoring tools using Remote Sensing (RS) under Working Group 4 (WG4).

Activities of CEARAC in the workplan such as CEARAC Focal Points Meetings, WG3/WG4 meetings, specific activities for WG3/4, and other intersessional work are funded by the NOWPAP Trust Fund and supported by in-kind contribution by NPEC, originated from the Ministry of the Environment, Japan and Toyama Prefectural Government, and operation of CEARAC is financially supported by Toyama Prefectural Government, including the personnel salaries and other miscellaneous costs.

Staff

Mr. Takeshi Ogawa	Director (ogawa@npec.or.jp)
Ms. Taeko Yamamoto	Section Chief (yamamoto@npec.or.jp)
Dr. Takafumi Yoshida	Researcher (yoshida@npec.or.jp)
Mr. Genki Terauchi	Researcher (terauchi@npec.or.jp)

2. Major activities of CEARAC carried out since the 4th NOWPAP CEARAC FPM (March 2006)

2.1 The Fourth NOWPAP CEARAC FPM

The 4th CEARAC FPM was held on 8-9 March 2006 in Toyama, Japan. The implementation of CEARAC activities in 2005 and the expenditure for the 2004-2005 biennium were reported as well as those of WG3 and WG4. The meeting acknowledged all of these reports.

The CEARAC workplan and budget for the 2006-2007 biennium which had been adopted by the 10th NOWPAP IGM (Toyama, Japan, 24-26 November 2005) were reported. Following these reports, detailed activities of WG3 and WG4 were explained. Main activity of WG3 was to make a booklet on countermeasures to terminate red tides; main activities of WG4 were to prepare Eutrophication Monitoring Guidelines by RS for the NOWPAP Region and to conduct a RS training program on data analysis. Based on these reports, the workplan and budget of CEARAC including those of WG3 and WG4 were adopted. Workplan for MALITA assigned to CEARAC was also explained and adopted.

The revised TORs for the CEARAC FPM, WG3 and WG4 were explained. The revised TOR for CEARAC FPM was agreed to be submitted to the next IGM. Guidelines on establishing and disbanding of Working Groups were asked to be prepared for the next CEARAC FPM. The revised TORs for the WG3 and WG4 were adopted with minor changes. There was a request that regardless of budget, long-term objectives of CEARAC would be documented in a workplan, and it was decided to discuss this issue in WG meetings and the next FPM.

2.2 NOWPAP WG3 and WG4 Meetings

The 3rd WG3 and WG4 Meetings were jointly held on 6-7 July 2006 in Toyama Japan. Activities and budget for both WGs for the 2004-2005 biennium were reviewed and the details of new activities for the next biennium were discussed.

The achievements of the meeting related to WG3 were a change of the title of the booklet to "Countermeasures against HABs" and addition of a new chapter about toxic producing algal blooms. Also, publishing *Cochlodinium* pamphlets in four languages (Chinese, Japanese, Korean and Russian) was agreed.

Related to WG4, publishing Eutrophication Monitoring Guidelines by RS for the NOWPAP Region through refining "NPEC Eutrophication Monitoring Guideline by RS" by the NOWPAP Members in 2006 and conducting a RS training program on data analysis in 2007

were agreed.

Besides the issues above, the mid- and long-term strategies of CEARAC and mid- and long-term objectives of WG3 and WG4 were discussed, and the meeting confirmed to continue discussing these issues.

2.3 Implementation of CEARAC Projects

2.3.1 Working Group 3

1) Booklet of "Countermeasures against HABs"

According to the workplan approved at the 4th CEARAC FPM (UNEP/NOWPAP/CEARAC/FPM 4/13) and the discussion at the 3rd NOWPAP Working Group 3 Meeting, CEARAC took several steps to develop a booklet of "Countermeasures against HABs." At first, experts of the member states collected and compiled information on countermeasures against HABs respectively and submitted it to CEARAC. Then, a Japanese consultant harmonized the information in the submitted reports. Finally, the same Japanese consultant made a draft booklet by the integrated information. This draft booklet was sent to WG3 experts for review and comments. The booklet will be published after approval by CEARAC FPs and WG3 experts.

2) Activity on *Cochlodinium*

In the Third Meeting of NOWPAP Working Group 3 (HAB), the Secretariat proposed to make the *Cochlodinium* pamphlets in each language of the NOWPAP Member States, targeting general public including fishermen and students as their users. This proposal was approved and translation of the pamphlet from English to each language was done by WG3 experts voluntarily. These pamphlets were published and circulated through WG3 experts to related persons and agencies.

2.3.2 Working Group 4

1) Eutrophication Monitoring Guidelines by RS for the NOWPAP Region

In accordance with the agreement at the 3rd NOWPAP WG4 Meeting, "NPEC Eutrophication Monitoring Guideline by Remote Sensing" was reviewed and refined by the experts of the NOWPAP Member States. With the comments and suggestions from the experts, CEARAC revised this NPEC guideline with a national consultant and compiled "Draft Eutrophication Monitoring Guidelines by Remote Sensing for the NOWPAP Region". This draft was reviewed by experts of WG3 and WG4 of each NOWPAP Member State and will be published by the end of September.

2) RS Training

CEARAC organized the first NEAR-GOOS - NOWPAP Joint Training Course on Remote Sensing Data Analysis at Nagasaki University, Nagasaki, Japan from 3-7 September 2007 jointly with IOC/WESTPAC..

The course consisted of lectures by specialists and hands-on practical sessions on the analysis of satellite data. The course provided an overview of remote sensing with special emphasis on applications of ocean color relevant to the Northwest Pacific Region. The course was designed for postgraduate students, professional researchers and local government officers working in the areas of marine sciences and coastal-zone management in the Northwest Pacific Region.

3) Development of RS information network

Several areas in the NOWPAP Region were added to marine calendar of Marine Environmental Watch Project website for wide use of the system.

It has also been registered as one of the databases of NEAR-GOOS, which is one of the regional GOOSs (Global Ocean Observing System) sponsored by Intergovernmental Oceanographic Commission of UNESCO (IOC).

2.3.3 CEARAC Activities on Marine Litter

Based on the workplan for MALITA approved in the 10th NOWPAP IGM, activities related to marine litter issues and implementation of the MALITA project by CEARAC were discussed in the 4th CEARAC FPM. Workplan of CEARAC for MALITA was approved by the meeting. Consulting with NOWPAP RCU, CEARAC prioritized related activities and has conducted them.

1) Monitoring Guidelines on the Beaches and Shorelines

CEARAC developed "Guidelines for Monitoring Marine Litter on the Beaches and Shorelines of the Northwest Pacific Region" in March 2007, which was designed as a tool for the NOWPAP Member States, including local governments, volunteers and NGOs, to monitor marine litter on their beaches and shorelines. These guidelines are circulated to related international agencies and persons at an occasion such as a workshop and/or International Coastal Cleanup Campaign.

2) Tourism Guidelines

Taking the fact that tourists are one of the sources of marine litter into consideration, CEARAC is developing tourism guidelines to reduce waste generation targeting tourist

themselves and four designers. After approval by MALITA FPs and NOWPAP RCU, these guidelines will be uploaded onto CEARAC website.

3) The 2nd NOWPAP Workshop on Marine Litter

CEARAC organized the 2nd NOWPAP Workshop on Marine Litter on 28-29 March 2007 with in-kind support from the Ministry of the Environment, Japan. This workshop was held to explore effective countermeasures against marine litter and to contribute towards the establishment of the Regional Action Plan on marine litter management in the NOWPAP region.

4) Pamphlet for reduction of marine litter

CEARAC made a pamphlet which promotes reduction of marine litter in August 2007. This pamphlet targets general public including the youth, and aims to raise public awareness and to change their attitudes toward their daily lives.

5) Booklet on recycling of plastic marine litter

CEARAC is making a booklet on recycling of plastic marine litter in 2007. This booklet introduces technologies of plastic recycling implemented in Japan, and it is expected to disseminate useful recycling technologies among the NOWPAP Member States.

6) Monitoring survey to raise public awareness

CEARAC and NPEC will conduct a monitoring survey during the 5th CEARAC FPM (19 September 2007). In order to raise public awareness and promote an educational campaign on marine litter issues, CEARAC FPs and local school students will jointly participate in this annual monitoring survey carried out by NPEC.

2.4 Intersessional Activities

Website on Oil spill monitoring by remote sensing

Website on Oil spill monitoring by remote sensing was updated by the end of 2006 based on the proposal from Pacific Oceanological Institute of the Far Eastern Branch of Russian Academy of Sciences. More synthetic aperture radar images of oil spills will be added to the website.

2.5 Regional Cooperation with UNEP, NOWPAP RACs and other organizations

2.5.1 Participation in NOWPAP IGM, Workshop and other RACs FP Meetings

1) 1st NOWPAP Workshop on Marine Litter and 1st NOWPAP Regional Meeting on Marine Litter

CEARAC staff participated in the 1st NOWPAP Workshop on Marine Litter (Incheon, Korea, 8-9 June 2006) and the 1st NOWPAP Regional Meeting on Marine Litter (Incheon, Korea, 10 June 2006). At the Regional Meeting on Marine Litter, CEARAC staff introduced current progress of collection of existing data/information, fundamental concepts of monitoring guidelines and a strategy on integrated management.

2) PICES 15th Annual Meetings

CEARAC staff participated in PICES 15th Annual Meeting (Yokohama, Japan, 13-22 October 2006) and introduced the activities of WG3 and CCG for sharing information not only in the NOWPAP Region but also in the North Pacific region.

3) 4th Korean-Japan Workshop on Ocean Color Remote Sensing

CEARAC staff participated in the 4th Korean-Japan Workshop on Ocean Color Remote Sensing (Cheju, Korea, 19-20 December 2006) and discussed implementation plan of the 1st RS Training Course on data analysis with remote sensing experts from IOC/WESTPAC and YSLME.

4) 1st COBSEA Marine Litter Workshop

CEARAC staff participated in the First COBSEA Marine Litter Workshop (Jakarta, Indonesia, 8-9 May 2007) and made a presentation. He introduced Monitoring survey carried out by Northwest Pacific Region Environmental Cooperation Center (NPEC), a hosting organization of CEARAC, NOWPAP Monitoring Guidelines published in March 2007, and the future prospects for solution of marine litter issues.

5) NOWPAP International Coastal Cleanup (ICC)

CEARAC staff participated in the NOWPAP ICC held in Sakata, Japan (29-30 September 2006) and in Rizhao, China (27-28 June 2007). In Rizhao ICC, CEARAC staff introduced the results of monitoring survey carried by NPEC and NOWPAP Monitoring Guidelines. CEARAC staff will also participate in NOWPAP ICC in Busan, Korea (29-30 September 2007).

6) RACs Focal Points Meetings

CEARAC has kept a close contact with the other three NOWPAP RACs in order to promote protection and management of the coastal and marine environment in the NOWPAP Region. The Director of CEARAC and the staff attended Focal Points Meetings of the other RACs.

2.5.2 Cooperation with other RACs and Organizations

1) The 4th International Workshop on Remote Sensing of the Marine Environment in the Northwest Pacific Region

The 4th International Workshop on Remote Sensing of the Marine Environment in the Northwest Pacific Region was co-organized by NPEC and Pukyong National University on 1-2 August 2006 in Busan, Korea, aiming at providing an opportunity for experts to present their latest research results and to exchange information on ocean remote sensing applications.

2) The State of Marine Environment Report in the NOWPAP Region

CEARAC contributed reports such as Harmful Algal Blooms, marine litter and persistent toxic substances in some chapters to the State of Marine Environment Report in the NOWPAP Region under the MoU with POMRAC in 2006-2007.

3) Assistance to POMRAC for organizing ICARM

CEARAC assisted POMRAC to smoothly organize the First Meeting of ICARM Working Group (Toyama, Japan, 10-11 July, 2007).

2.6 Publication of CEARAC Newsletter

The 3rd issue of CEARAC Newsletter was published in November 2006, which introduces implementation status of CEARAC activities and future workplan and budget of CEARAC for the 2006-2007 biennium. NOWPAP RCU and some experts of Working Group kindly contributed articles to this newsletter. CEARAC Newsletters are distributed free of charge to people who are interested in CEARAC activities and special monitoring and coastal environmental assessment. The 4th issue will be published in 2007.

3 The use of the 2006-2007 budget

The 10th IGM (Toyama, Japan, November 2005,) approved the allocation of the budget of CEARAC for the 2006-2007 biennium. Following the approval at the IGM, the 4th CEARAC

FPM (Toyama, Japan, March 2006,) approved the workplan and budget of CEARAC for the 2006-2007 biennium (UNEP/NOWPAP/CEARAC 4/12).

Table 1 shows planned budget, paid expenditure and expected expenditure (including partially paid ones) of CEARAC for the 2006-2007 biennium. Each expenditure was reported to UNEP through NOWPAP RCU in accordance with the Project Document that was signed between UNEP and NPEC.

Table 1 Workplan and budget of CEARAC for the 2006-2007 biennium
(as of 30 June, 2007)

Activity	Date & Venue	Planned Budget US\$	Expenditure (expected) US\$
Organization of CEARAC 4 th Focal Points Meeting -organizing the meeting -publishing the meeting report	March 2006	21,000 2,000	17,560 1,908
Organization of CEARAC 5 th Focal Points Meeting -organizing the meeting -publishing the meeting report	September 2007	21,000 2,000	(21,000) (2,000)
Organization of 3 rd Meetings of WG3 (HAB) and WG4 (RS) -organizing the meeting -publishing the meeting report	July 2006	26,000 4,000	27,679 4,000
WG3(HAB) -Making a Booklet of "Countermeasures against HABs" -Publication of <i>Cochlodinium</i> pamphlet in four languages	Throughout 2006 and 2007	22,000 4,000	(21,245) 4,755
WG4(RS) -Eutrophication Monitoring guideline by RS - RS training	Throughout 2006 and 2007	15,000 15,000	15,000 (16,000)
MALITA -Monitoring Guideline -Tourism Guideline -Pamphlet for the reduction of marine litter -Booklet on recycling of plastic marine litter	Throughout 2006 and 2007	19,500	3,594 (6,000) (3,000) (6,906)
Intersessional work -Website on Oil spill monitoring by remote sensing -Preparing documents for 6th FPM	Throughout 2006 and 2007	3,000 3,000	3,000 (3,000)

Cooperation, coordination of CEARAC activities -2006 -2007	Throughout 2006 and 2007	4,300 3,700	4,400 (4,545)
Publication of CEARAC Newsletter -Third issues -Fourth issue	Autumn 2006 and 2007	2,000 2,000	1,908 (2,000)
TOTAL		169,500	169,500