

1. Background

CEARAC was established on 17 July 2002 under the Memorandum of Understanding (MOU) between UNEP and the Northwest Pacific Region Environmental Cooperation Center (NPEC) in Toyama, Japan. The MOU defines the responsibility of CEARAC as coordination of regional activities for assessment of the state of the marine, coastal and associated freshwater environments, including assessment of pollutant input for the purpose of comparison with the monitoring results. CEARAC is also expected to develop tools for environmental assessment including special techniques for monitoring and assessment, which can be used and shared among the NOWPAP member states.

In accordance with this given responsibilities, CEARAC has been implemented activities on assessment of the marine environment with Harmful Algal Blooms, eutrophication, oil spills, marine litter and marine biodiversity in the NOWPAP region. Special monitoring techniques of the marine environment with the use of remote sensing have also been developed to help assess these subjects during the past decade.

Outcomes of CEARAC activities are posted regularly on CEARAC websites and collected information and data are made available to stakeholders and the public through dedicated websites with a focus on each CEARAC activity. Thus, an activity on further maintenance of these websites and upgrade of Marine Environmental Watch System were included in CEARAC workplan and budget for the 2012-2013 biennium and it was approved at the 16th NOWPAP IGM (20-22 December, 2011, Beijing, China).

This document explains the workplan for maintenance of CEARAC websites and upgrade of the Marine Environmental Watch System for the 2012-2013 biennium.

2. Objective

Objective of this activity is to deliver latest information and data collected through implementation of CEARAC activities for monitoring and assessment of the marine environment in the NOWPAP region to stakeholders and the public worldwide.

3. Main tasks

3.1. Maintenance of CEARAC websites

CEARAC plans to implement some routine work for improving the quality of the existing CEARAC websites on harmful algal blooms (HAB) and remote sensing (RS) in close consultation and cooperation with FPs, relevant experts and other RACs and organizations. The following website contents will be periodically added or updated.

- Latest information on HAB occurrences and references in the HAB integrated website.

- Latest information on educational materials, website links, references in NOWPAP Ocean Remote Sensing Portal.
- Establishing link to the Chlorophyll Globally Integrated Network (ChloroGIN*) from the Marine Environmental Watch Website.

*ChloroGIN project aims to promote in situ measurement of chlorophyll in combination with satellite derived estimates.

3.2. Upgrade of the Marine Environmental Watch System

The Marine Environmental Watch System (the Watch System) was installed at Toyama Prefectural Environmental Science Research Center (TESC) in 2002 by the Ministry of the Environment of Japan to support implementation of CEARAC activities. As the hosting body of NOWPAP CEARAC, the Northwest Pacific Region Environmental Cooperation Center (NPEC) has been operating the Watch System since its installation. Satellite data retrieved by the Watch System are processed into the sea surface temperature or chlorophyll-*a* concentration data on a near real time basis. Processed images and data are distributed on the website of the Watch System at <http://www.nowpap3.go.jp/jpn/> and used by researchers or coastal managers in the NOWPAP region. There are more than 10,000 page accesses monthly to the website and the number of registered users has been increasing. While requirements from end users have also been increasing, technologies used in part of the Watch System are becoming outdated to meet these requirements. Thus, we propose upgrade of the Marine Environmental Watch System to try to meet users' requirements.

The upgrading plan of the Watch System is explained in the presentation material. (Appendix VII)

4. Expected outcomes

Information and data to be updated on CEARAC websites and the Watch System Website are expected to provide baseline information for researchers and coastal managers in the NOWPAP region to help assess the marine and coastal environments.

5. Schedule

The Proposed schedule is as follows.

Time		Actions	Main body
2012	Q2	<ul style="list-style-type: none"> ● Approval of the workplan and budget for maintenance of CEARAC websites and upgrade of the Watch System 	CEARAC and CEARAC FPs
	Q2 to Q3	<ul style="list-style-type: none"> ● Preparing the upgrading plan of the Watch System and discussion among the NOWPAP WG4 members 	WG4 members, Ministry of the Environment of Japan , NPEC and CEARAC
	Q4	<ul style="list-style-type: none"> ● Adding latest information on HAB occurrences and references in the HAB integrated website. ● Adding latest information on educational materials, website links, references in NOWPAP Ocean Remote Sensing Portal ● Establishing link to the Chlorophyll Globally Integrated Network (ChloroGIN*) from the Marine Environmental Watch Website 	CEARAC, National experts and CEARAC FPs
2013	Q4	<ul style="list-style-type: none"> ● Adding latest information on HAB occurrences and references in the HAB integrated website. ● Adding latest information on educational materials, website links, references in NOWPAP Ocean Remote Sensing Portal 	CEARAC, National experts and CEARAC FPs
	Q4	<ul style="list-style-type: none"> ● Upgrade of the Watch System 	Ministry of the Environment of Japan and NPEC

6. Budget

Contract	Timing	Output	To be completed	Couterpart	Budget (US\$)
MoU for maintenance of CEARAC websites	2012 Q4	<ul style="list-style-type: none"> ● Added information on HAB occurrences and references in the HAB integrated website. ● Added information on educational materials, website links, references in NOWPAP Ocean Remote Sensing Portal. 	2013 Q4	Consultant	4,000
Total					4,000

*Budget for upgrading the Watch System is pending approval by the Ministry of the Environment of Japan.