

1. Background

As shown in the mid- and long-term strategies of CEARAC, one of CEARAC's activities is to establish environmental assessment methods to be shared among the NOWPAP member states. The environmental assessment methods developed by CEARAC will contribute to the conservation of the marine environment in the NOWPAP region.

Based on this strategy, CEARAC developed the procedures for assessment of eutrophication status for the NOWPAP region in the 2008-2009 biennium. These procedures are the first one to assess the coastal environment in the NOWPAP region. However, in recent years, it has been suggested that the coastal environment should be assessed and managed from various viewpoints, such as eutrophication, biodiversity, hazardous substances and maritime activities.

Therefore, CEARAC has initiated the development of a new coastal environment assessment method for the NOWPAP region, which will use marine biodiversity among other indicators in order to conduct a more effective and comprehensive assessment in the NOWPAP region together with the procedures for assessment of eutrophication status.

2. Objective

Objective of this activity is to develop the draft coastal assessment method focusing on marine biodiversity, which can be shared among the NOWPAP member states, based on lessons learned from the pilot study conducted in Toyama Bay. In this new assessment method, parameters related to marine biodiversity, such as background information on the coastal environment, information on marine environmental conditions, information on communities and species, and other factors, which might have negative impacts on marine biodiversity, will be used as indicators.

3. Main tasks

CEARAC will develop the draft assessment method focusing on marine biodiversity by the end of 2011, based on the validation results from the pilot study to be conducted in Toyama Bay in 2010 by the Northwest Pacific Region Environmental Cooperation Center (NPEC). CEARAC Focal Points and biodiversity experts who will participate in the 8th and 9th CEARAC Focal Points Meetings (CEARAC FPM) back-to-back with Expert Meetings are expected to review the outcomes of the following tasks of CEARAC.

3.1 Development of the draft methodology for the coastal environmental assessment focusing on marine biodiversity

To conduct the pilot study in Toyama Bay, at first, CEARAC develops the draft

methodology based on assessment methods developed by other international organizations such as HELCOM.

CEARAC will assess the data themselves which are used in the pilot study with the draft methodology and will select which data and indicators to be collected and used. The Potential indicators to be used in the new assessment method are shown in Annex.

3.2 Implementation of the pilot study in Toyama Bay

CEARAC tests the draft methodology as a pilot study in Toyama Bay to consider how to set the reference values and which parameter is good to use for an assessment of the coastal environment. The progress interim report of the pilot study will be submitted to the 8th CEARAC FPM (to be held back-to-back with Expert Meeting) for review of CEARAC FPs and marine biodiversity experts.

3.3 Development of the draft assessment method for the NOWPAP region

CEARAC develops the draft assessment method based on the pilot study and review by CEARAC FPs and marine biodiversity experts at the 9th CEARAC FPM to be held back-to-back with Expert Meeting in 2011.

4. Expected outcome

A new assessment method for the NOWPAP region which is shared among NOWPAP member states, based on the review of the draft assessment method by each member state, will be developed. The NOWPAP member states can assess the coastal environment in this region comprehensively by using two assessment tools developed by CEARAC: Procedures for assessment of eutrophication status for the NOWPAP region and the new assessment tool focusing on marine biodiversity. NOWPAP member states can share information on the current coastal environmental situation and marine biodiversity data through these assessments.

5. Potential partners

This new assessment tool will be developed based on the existing assessment methods developed by other international organizations such as HELCOM and Large Marine Ecosystem (LME) approach. CEARAC will contact several other international organizations and projects and learn the know-how on marine biodiversity assessments from them and share the information of the NOWPAP region with them.

6. Schedule

Schedule of this activity and main body are as follows:

Time		Actions	Main body
2010	Q1	Approval of workplan by e-mail correspondence	CEARAC and FPs
	All year	Implementation of Pilot Study in Toyama Bay	CEARAC and NPEC
	Summer (8th CEARAC FPM back-to-back with Expert Meeting)	Review of the Progress report of the pilot study	CEARAC, CEARAC FPs and Experts on biodiversity
2011	All year	Development of the draft assessment method	CEARAC and NPEC
	Q3 (9th CEARAC FPM back-to-back with Expert Meeting)	Review of the draft assessment method	CEARAC, CEARAC FPs and Experts on biodiversity

7. Budget

This activity will be implemented with in-kind support by NPEC.

Annex

Potential indicators to be used in the assessment method focusing on marine biodiversity

Categories	Indicators
Category I (Background information on coastal area)	Change of human population and industry in the surrounding areas; Information about major rivers and dams
Category II (General information on coastal area)	Seashore condition (natural, artificial); Seagrass/seaweed bed; Intertidal flat; Condition of sea bed; Aquaculture
Category III (Communities and species information)	Phytoplankton, Zooplankton, Benthos, Seaweed, Fish Catch Marine Trophic Index*, Indigenous Species, Endangered Species
Category IV (Other factors which could have negative impact on marine biodiversity)	Eutrophication, Chemical Oxygen Demand (COD), Suspended Substance (SS), Invasive species, Pollution, Landfill, Overfishing

* Marine Trophic Index is a parameter which is considered to be measure of overall ecosystem health and stability, but also serves as a proxy measure for overfishing.