

## **1 Background**

In line with the adopted mid- and long-term strategies of CEARAC and goals of NOWPAP WG3/WG4 approved at the 5<sup>th</sup> CEARAC FPM, CEARAC has developed the Procedure for assessment of eutrophication status including evaluation of the eutrophication status for the NOWPAP region (UNEP/NOWPAP/CEARAC/FPM 7/Ref2: the Common Procedure) in June 2009. The Common Procedure is expected to enable each NOWPAP member state to assess the status and impacts of eutrophication in their respective sea areas, by using existing information obtained through monitoring activities. As the Common Procedure was prepared using the example of Toyama Bay case study, now expected the usefulness of the Common Procedure is expected to be evaluated through assessment of eutrophication in selected sea areas in each NOWPAP member state, with different environmental conditions.

This document explains a work plan to conduct an assessment along with the Common Procedure in the selected sea area in each NOWPAP member state, as an activity (specific project) of CEARAC for the 2010-2011 biennium.

## **2 Objective**

Objective of this activity is to apply the Common Procedure and to evaluate the suitability of suggested methodology for the assessment of eutrophication status in the selected sea areas in the NOWPAP member states.

## **3 Main tasks**

Each NOWPAP member state will be required to conduct an assessment of the eutrophication status in their selected sea areas based on the Common Procedure. CEARAC will request CEARAC Focal Points to nominate an expert or organization that is capable of undertaking the following work under MoU with CEARAC.

### **3.1 Selection of assessment area**

Select an assessment area in the NOWPAP sea area of each member state, where water quality degradation and frequent occurrence of red tides were reported in the past. Divide the assessment area into sub areas if necessary to conduct an assessment effectively.

The following areas are considered as potential areas for assessment.

- Yangtze River Estuary and adjacent area, China
- Northwest Kyushu sea area, Japan

- Jinhae Bay, Korea
- Peter the Great Bay, Russia

### **3.2 Collection of relevant information**

Collect information and data on the assessment area(s) from existing monitoring and survey activities based on the Common Procedures.

### **3.3 Selection of assessment parameters and data**

Select all the assessment parameters from the collected data, and then categorize them into the 4 categories indicated by the Common Procedures.

### **3.4 Setting of assessment period**

Set the assessment period as long as possible in accordance with the assessment objectives and availability of reliable data.

### **3.5 Data processing**

Process the selected monitoring/survey data into assessment values and prepares data sets to conduct assessment.

### **3.6 Setting of assessment criteria**

Set the assessment criteria for each assessment parameter, category and area/sub areas based on the Common Procedures.

### **3.7 Preparation of a report of assessment in each selected area**

Prepare a report of assessment for each selected area based on the assessment results. Draft table of contents of a report of assessment in each selected area is proposed in Annex A.

### **3.8 Review of integrated report on assessment results in selected areas**

Review the Integrated report on eutrophication assessment in selected sea area, prepared by CEARAC. Draft table of contents of the integrated report is attached as Annex B.

#### 4. Expected outcomes

The obtained assessment results from each NOWPAP member state will be compiled as an integrated report on assessment of eutrophication status for the NOWPAP region, hoping that it will provide essential information for proper management of the marine and coastal environment in the NOWPAP region.

#### 5. Potential partners

In order to best utilize obtained assessment results for proper management of the marine and coastal environment, it is necessary to share the obtained assessment results with groups or organizations that are working on coastal area management. CEARAC will form a cooperative relationship with relevant organizations within and without NOWPAP framework, such as NOWPAP RACs, local governments and other relevant organizations.

#### 6. Schedule

Proposed schedule will be as follows.

Time		Actions	Main body
2010	Q1	<ul style="list-style-type: none"> <li>▪ Approval of workplan and budget by e-mail correspondences</li> </ul>	CEARAC and FPs
	Q1	<ul style="list-style-type: none"> <li>• Conclusion of MoU with experts or organizations</li> </ul>	CEARAC / National experts or organizations
	Q2	<ul style="list-style-type: none"> <li>• Implementation of the assessment on eutrophication status in each NOWPAP member state</li> </ul>	National experts or organizations
	Summer (8th CEARAC FPM back to back with Expert Meeting)	<ul style="list-style-type: none"> <li>• Review of interim progress on the assessment of eutrophication status in each selected area</li> </ul>	CEARAC FPs National experts or organizations

	Q4	<ul style="list-style-type: none"> <li>Continuation of the assessment on eutrophication status in each selected area</li> </ul>	National experts or organizations
2011	Q2	<ul style="list-style-type: none"> <li>Completion of the assessment on eutrophication status in each selected area</li> </ul>	
	Q3	<ul style="list-style-type: none"> <li>Preparation of integrated report by experts and CEARAC FPs</li> </ul>	CEARAC and consultant
	Q3 (9th CEARAC FPM back to back with Expert Meeting)	<ul style="list-style-type: none"> <li>Review of integrated report by experts and CEARAC FPs</li> </ul>	National experts or organizations and CEARAC FPs

## 7. Budget

<b>Contract</b>	<b>Timing</b>	<b>Output</b>	<b>To be completed</b>	<b>Counterpart</b>	<b>Budget (US\$)</b>
Implementation of eutrophication assessment in each selected area	2010 Q1	Results of eutrophication assessment in each selected area	2011Q2	Expert or organization in China	4,000
				Consultant in Japan	4,000
				Expert or organization in Korea	4,000
				Expert or organization in Russia	4,000
Preparation of integrated report on eutrophication assessment in selected areas	2011 Q3	Integrated report on eutrophication assessment in selected areas in the NOWPAP region	2011 Q3	Consultant	4,000
<b>Total</b>					<b>20,000</b>

## **Annex A**

### **Draft table of contents for a report on eutrophication assessment in each selected sea area**

#### 1. Scope of Assessment

1.1 Selection of assessment area

1.2 Collection of relevant information

1.3 Division of assessment area into sub-areas (if necessary)

1.4 Selection of assessment parameters

#### 2.. Data processing

2.1 Organization of collected data

2.2 Screening and sorting of data into sub-areas

2.3 Preparation of data sets for assessment

#### 3. Setting of assessment criteria

3.1 Setting of identification criteria of the assessment data

3.2 Setting of classification criteria of the assessment parameters

3.3 Classification criteria of the assessment categories

3.4 Classification criteria of the assessment area/sub-areas

#### 4. Assessment process and results

4.1 Division of assessment areas and assessment categories

4.2 Assessment results in each sub-area

#### 5. Summary

## **Annex B**

### **Draft table of contents for the integrated report on eutrophication assessment in selected sea area in the NOWPAP region**

#### Executive summary

#### 1. Introduction

#### 2. Results of eutrophication assessment in the selected sea areas

##### 2.1. Scope of Assessment

###### 2.1.1 Selection of assessment area

###### 2.1.2 Collection of relevant information

###### 2.1.3 Division of assessment area into sub-areas (if necessary)

###### 2.1.4 Selection of assessment parameters

##### 2.2. Data processing

###### 2.2.1 Organization of collected data

###### 2.2.2 Screening and sorting of data into sub-areas

###### 2.2.3 Preparation of data sets for assessment

##### 2.3. Setting of assessment criteria

###### 2.3.1 Setting of identification criteria of the assessment data

###### 2.3.2 Setting of classification criteria of the assessment parameters

###### 2.3.3 Classification criteria of the assessment categories

###### 2.3.4 Classification criteria of the assessment area/sub-areas

##### 2.4. Assessment process and results

###### 2.4.1 Division of assessment areas and assessment categories

###### 2.4.2 Assessment results in each sub-area

##### 2.5. Summary

#### 3. Comparison of assessment results in the selected areas in each NOWPAP state

##### 3.1. Similarities and differences in each selected areas

##### 3.2. Comparison of assessment criteria

###### 3.2.1 Similarities and differences in assessment data

###### 3.2.2 Similarities and differences in assessment parameters

###### 3.2.3 Similarities and differences in classification criteria of assessment categories

###### 3.2.4 Similarities and differences in classification criteria of assessment area/sub-areas

##### 3.3. Comparison of assessment results of each selected area

#### 4. Overall conclusions and recommendations