Draft workplan and budget of CEARAC Activities for the 2020-2021 biennium

1. Background

In accordance with the priority areas of the NOWPAP Medium-term Strategy (MTS) 2018-2023 and some global targets such as Sustainable Development Goals (SDGs) and Aichi Biodiversity Targets, CEARAC has implemented relevant activities in recent years. While developing its medium-term strategy on marine biodiversity in 2018-2019 to set up clearer visions on its future activities, CEARAC has carefully reviewed the outcomes and outputs of its past and on-going activities to prepare its workplan for the 2020-2021 biennium while pursuing its responsibility in NOWPAP.

Then, CEARAC Secretariat decided to continue working on same topics: marine biodiversity conservation, seagrass mapping and eutrophication assessment. At the same time, taking into consideration necessity of capacity building in the NOWPAP region and rapid advancement technology in recent years, it is planned to organize another training session of remote sensing data analysis during the 2020-2021 biennium.

2. Proposal for CEARAC activities for the 2020-2021 biennium

A draft workplan of CEARAC activities for the 2020-2021 biennium is shown in Table 1.

Table 1 Draft Workplan of CEARAC activities for the 2020-2021 biennium.

Activity
<**Specific Projects**> ➢ **Activities on marine biodiversity (Selecting from the following 3 candidate activities)**
(1) Assessment of distribution of tidal flats and salt marshes in the NOWPAP region
(2) Organization of a training course on Environmental DNA analysis
(3) Update of HAB database and HAB reference database
➢ **Case studies of Estimating Seagrass Blue Carbon in selected sea areas in the NOWPAP region**
➢ **Improvement of the NOWPAP Eutrophication Assessment Tool (NEAT) for assessment and monitoring of eutrophication using satellite chlorophyll-a**
➢ **Organization of the 5th NOWPAP Training Course on Remote Sensing Data Analysis**
<Routine Work> ➢ **Organization of Meetings (FPMs and Expert Meeting)**
➢ **Maintenance of Websites**
<Other Intersessional Work> ➢ **Cooperation/Coordination with other RACs and/or NOWPAP Partners**
➢ **Marine Litter Activities**

< Specific Projects >

2.1. Activities on marine biodiversity

Based on the draft of CEARAC MTS and feasibility assessments in the 2018-2019 biennium, following three activities are candidates to be implemented:

(1) Assessment of distribution of tidal flats and salt marshes in the NOWPAP region

Habitat conservation is selected as a high priority topic for marine biodiversity conservation in the NOWPAP region. While CEARAC has worked on seagrass mapping during the past biennia, tidal flats and salt marshes are also recognized as important habitats for marine species. So, CEARAC plans to assess the distribution and historical change of tidal flats and salt marshes in the NOWPAP region and evaluate anthropogenic pressures on these habitats.

(2) Organization of a training course of Environmental DNA analysis

Environmental DNA (e-DNA) is a new molecular biological technique. From a cup of water, information on living species can be collected. It has high potential to provide information on biodiversity. However, it is a very new technique and the analytical methods are not standardized yet, and there may be gaps to use this technique in the member states. As the first step for using e-DNA for NOWPAP biodiversity activities, CEARAC plans to organize a training course on e-DNA analysis to for scientists of the NOWPAP member states to understand/share its methodology.

(3) Update of HAB database and HAB reference database

Monitoring and assessment of HAB is one of the CEARAC's main works since its inception. In recent years, new problems, such as change of distribution of HAB causative species due to global warming and massive algal blooms like green tide and golden tide were reported in the NOWPAP member states. Such phenomena give impact on ecosystem and biodiversity in the NOWPAP region. Therefore, CEARAC plans to update both HAB database and reference database in 2020-2021.

2.2 Case studies of estimating seagrass blue carbon in selected sea areas in the NOWPAP region

CARAC will estimate the amount of blue carbon is some selected areas in the NOWPAP member states. The results of the case studies will be reported in an expert meeting in 2020, which is to be held back-to-back with an international workshop to raise public awareness on importance of seagrass beds.

2.3 Improvement of NOWPAP Eutrophication Assessment Tool (NEAT) for assessment and monitoring of eutrophication using satellite chlorophyll-a

CEARAC will improve NOWPAP Eutrophication Assessment Tool (NEAT), which is based on the Screening Procedure of the NOWPAP Common Procedure for evaluation of potential eutrophic zones in the NOWPAP region. In the improvement, new ocean color sensors will be evaluated and incorporated into assessment of eutrophication in the coastal and closed bays in the NOWPAP region.

2.4 Organization of the 5th NOWPAP Training Course on Remote Sensing Data Analysis

CEARAC will organize a one-week training course on remote sensing data analysis for graduate students, young scientists, professionals and NGO staffs. The venue will be in one of the NOWPAP member states, same as the past four trainings. At the training course, lectures and hands-on training on eutrophication assessment and mapping seagrass will be given by prominent lecturers to help improve knowledge and skills of trainees. An Organization Committee will be established to screen applications as well as design the contents of the training course.

< Routine Work >

2.5 Organization of meetings (Focal Points Meeting and Expert meeting)

The 18th and 19th CEARAC Focal Points Meetings (FPM) will be held in Toyama, Japan in spring 2020 and fall 2021 respectively.

Each FPM will review the progress of on-going activities and give suggestions. In addition, in the 19th FPM, CEARAC FPs will discuss a draft workplan and budget of CEARAC activities for the 2022-2023 biennium.

The 3rd expert meeting on eutrophication assessment will be held in 2021 and nominated national experts will report the status of eutrophication in selected areas of the member states.

2.6 Maintenance of CEARAC Website

CEARAC will continue updating the contents (data and information) of its websites regularly.

< Other Intersessional work>

2.7 Cooperation and coordination with other RACs and NOWPAP Partners

CEARAC will actively participate in meetings and other events such as workshops held by NOWPAP RCU, other NOWPAP RACs, NOWPAP Partner organizations and other relevant regional/international organizations to exchange/share information and data as well as to disseminate past and on-going CEARAC activities.

Also, CEARAC explores opportunities to co-organize meetings, workshops and/or training sessions with other organizations to strengthen collaboration with them, avoid unnecessary overlapping of activities, utilize existing knowledge/techniques and human resources in an efficient

and effective manner as well as increase visibility of CEARAC and NOWPAP in wider communities.

2.8 Activities on marine litter

NOWPAP Regional Action Plan on Marine Litter (RAP MALI) was developed in 2008. Since then, 10 years have passed, and during this time, situations on marine litter have changed. Actions for prevention of marine litter in the NOWPAP member states have been strongly enhanced. Now a new problem, marine microplastic, has drawn attention around the world. Taking into consideration the change of marine litter-related situations, NOWPAP plans to revise RAP MALI in the near future. In the new RAP MALI, the role of CEARAC may be revised accordingly. Through the discussion for revising RAP MALI, CEARAC would like to propose appropriate activity/-ies to contribute to resolve marine litter issues in the NOWPAP region.

3. Budget for CEARAC activities for the 2020-2021 biennium .

Calculating the volume of each task in proposed activities for the 2020-2021 biennium, CEARAC Secretariat estimates the total budget for CEARAC activities for 2020-2021 will be $185,000, as shown in Table 2 below.

Table 2 Workplan and Budget for CEARAC Activities for the 2020-2021 biennium

(US$ 185,000)

Activity	Planned Budget (US$)			Time
	2020	2021	Total	
<Specific projects> ➢ **Activities on marine biodiversity[*1]** **(1) Evaluation of distribution of tidal flats and salt marshes in the NOWPAP region**			20,000	2020-2021
(2) Organization of a training course on Environmental DNA analysis			25,000	2020-2021
(3) Update of HAB database and HAB reference database			9,000	2020-2021
➢ **Case studies of estimating seagrass blue carbon in selected sea areas in the NOWPAP region**	12,000	15,000	27,000	2020-2021
➢ **Improvement of the NOWPAP Eutrophication Assessment Tool (NEAT) for assessment and monitoring of eutrophication using satellite chlorophyll-a**	4,000	16,000	20,000	2020-2021
➢ **Organization of the 5th Training Course on Remote Sensing data analysis**	20,000	0	20,000	2020
<Routine work> ➢ **Organization of meetings**	20,000	34,000	54,000	FPM18 - spring 2020 FPM19 - fall 2021 EM - 2021
➢ **Maintenance of Websites**	2,500	2,500	5,000	2020-2021
➢ **Cooperation/coordination**	2,500	2,500	5,000	
TOTAL			**185,000**	
➢ **Marine Litter Activity (RAP MALI)**			**0[*2]**	

*1 Based on the decision at the 17th CEARAC FPM on which marine biodiversity activities are implemented, CEARAC Secretariat will revise the entire budget plan for the 2020-2021 biennium. However, the total amount should be kept as 185,000 US dollars.

*2 All RAC activities and budget on marine litter (RAP MALI) for 2020-2021 will be discussed at the RAP MALI FPM held in late September in 2019. CEARAC will wait for their decision and propose suitable activities and budget for the next biennium.