

1. Background

According to the decision of 16th NOWPAP Intergovernmental Meeting, one of the NOWPAP POMRAC activities for 2012-2013 biennium will be the preparation of the second “State of Marine Environment Report for the NOWPAP region” (SOMER-2).

First “State of Marine Environment Report for the NOWPAP region” (SOMER) has been compiled by POMRAC in close cooperation with other RACs in 2006 and published in 2007. The main goal of that report was to give a holistic description, analysis and overview of marine environmental problems of the NOWPAP sea area.

The specific objectives of the State of the Marine Environment Report (2007) included:

- Assessment of the current state of the marine environment in the NOWPAP area, with attention to recent changes in the environmental conditions and the impacts of human activities on the marine environment and coastal areas;
- Identifying current regional concerns and emerging issues which present major challenges;
- Presentation of actions and measures (including those suggested by different relevant programs/projects) to help decision makers to address these challenges at the national and regional level.

First SOMER for the NOWPAP region was based on the results obtained through the NOWPAP RACs activities before 2005. The achievements of other regional and international programs/projects, and information from the scientific literature were broadly used as well.

During the last 6 years since 2005, there is significant progress in the activities of all NOWPAP RACs. CEARAC has carried out the joint WG3 and WG4 activity on the assessment of the eutrophication status in the selected coastal sea areas. MERRAC continues their fruitful activity on the oil spills issues and also expands their efforts to deal with other ecological problems of the sea: marine litter, hazardous and noxious substances, ballast waters. POMRAC is carrying out the activity on the ICARM applications in our region. Other activities of POMRAC help to find relationships between the changes of river and direct inputs of contaminants, ecological situation in the adjacent sea areas and socio-economical factors on the watersheds, and to assess in detail the atmospheric input of different substances. The main goals of DINRAC continue to carry out information support and integration of other RACs results, but DINRAC is also finalizing very important work on marine invasive species in the NOWPAP region.

In fact, the activities of all NOWPAP RACs are already implemented in more and more holistic way. Therefore, the regular compilation or synthesis of environmental problems, status and trends

connected with natural and socio-economical conditions seems logical stage in the NOWPAP activities. The regular assessments of the state of marine environment is proposed as one of the key thematic element of the NOWPAP medium-term strategy (Annex 1).

The regularity of the assessment procedure is in line with the UN approach (“the UN Regular Process for Global Reporting and Assessment”). The SOMER-2 might contribute to the implementation of the UN Regular Process. And vice-versa outcomes from the UN Regular Process and other global initiatives will be used while implementing NOWPAP activities. Thus, POMRAC Secretariat believes that preparation of second “State of Marine Environment Report for the NOWPAP Region” (SOMER-2) will be timely and appropriate activity.

2.Objective

The synthesis of environmental problems, status and trends connected with existing and changing natural and socio-economical conditions in the NOWPAP region.

3 Main features

3.1 The consistency with the “UN Regular Process”

The main peculiarity of the proposed SOMER-2 compare with the previous SOMER (2007) should be intrinsic consistency with the “UN Regular Process”. For the time being the structure and content of the “Regular process” still continue to be under consideration and discussion (http://www.un.org/Depts/los/global_reporting.htm), but the main features are already clear and available. The approach based on the “ecosystem services” concept is one important feature. The including of the regulatory frameworks and capacity building aspects to the environmental issues is another feature. The presented draft structure and contents of SOMER-2 is prepared taking into account these peculiarities of “UN Regular process”, though the international experts on Regular process stressed the inevitable contradictions at any attempts to implement “tripartite” approach combined ecosystems services, human activities and stresses induced by these activities, and biodiversity/habitats issues.

3.2 The integrative nature

The most important feature of SOMER-2 activity is its integrative nature. It means SOMER-2 could be prepared only at the close collaboration of all NOWPAP RACs as it has been done during the implementation of activity on SOMER. Moreover compare with first SOMER preparation the earlier

collaboration will be realized at the SOMER-2 activity. In fact joint work has already began from the stage of structure discussion and will be continued at the stage of drafts of separate chapters.

4. Main tasks

Each NOWPAP member state as well as all RACs will be required to cooperate with POMRAC in this activity, because many aspects and results which should be included in SOMER-2 will be obtained during the ongoing activities of NOWPAP RACs, or have been obtained already.

4.1. Preparation of the different chapters of the SOMER-2

According to schedule (see table below), it is expected that different chapters of SOMER-2 will require the input of the different experts, NOWPAP RACs, and maybe other organizations. The list of the experts involved will be determined after the discussion, finalization and approval of the structure of SOMER-2 during POMRAC 10th FPM. Upon the preparation of the separate chapters, the review and harmonization of them will be carried out.

4.2. Compilation and preparation of SOMER-2

After finalization of the separate chapters, they will be compiled according to the approved structure. The prepared SOMER-2 will be reviewed by the FPs, RACs and RCU.

5. Expected Outcomes

After preparation, discussion and approval by the FPs and RACs, the SOMER-2 will be published and available for the public, organizations and officials. Even if the SOMER-2 will not coincide with the future “UN Regular Process” assessment in detail, POMRAC Secretariat believes that the SOMER-2 will be necessary step forward.

5. Schedule

Time		Actions	Main Body
2012	Q1	Discussion of the involvement of other RACs in the preparation of SOMER-2 through correspondence	POMRAC
	Q2 10 th POMRAC FPM	Approval of workplan and budget by POMRAC FPM	POMRAC and FPs
	Q2 to Q3	Preparation of the different chapters of	Experts, RACs

		SOMER-2	and relevant organizations
	Q4	Review and improvement of the different chapters of SOMER-2	POMRAC, FPs and experts/RACs
2013	Q1 to Q2	Preparation and Compilation of SOMER-2	POMRAC consult
	Q3	Review of Draft SOMER-2	POMRAC, FPs and RACs
	Q3, 11 th POMRAC FPM	Presentation of Draft SOMER-2	POMRAC
	Q4	Publication of SOMER-2	POMRAC

6. Budget

Contract	Timing	Output	To be completed	Counterpart	Budget
Preparation of the different chapters of SOMER-2	2012 Q2	Different chapters of SOMER-2	2012 Q4	CEARAC, DINRAC, MERRAC	6,000
		Different chapters of SOMER-2		Experts of external organizations	14,000
Preparation and compilation of SOMER-2	2013 Q1	Draft SOMER-2	2013 Q2	POMRAC and consult	5,500
Publication of SOMER-2	2013 Q4	SOMER-2	2013 Q	POMRAC	4,000
Total					29,500

According with schedule some discussion of the structure of SOMER-2 has been carried out during 2012 Q1. POMRAC appreciate the input of other RACs especially CEARAC to this work. For the time being the Structure of SOMER-2 is as follow:

Draft Structure of the SOMER-2 as for 26 March 2012

Executive Summary

1. Introduction (including objectives, scope, information sources and procedures) (P)

2. Current Status

2.1 Geographical features of the NOWPAP Marine and Coastal Areas (including characteristics and features of population, land use, industrial and agricultural activities) (P)

2.2. Assessment of the supporting and regulating ecosystem services

2.2.1. The main hydrological and hydrochemical features of the region and its parts (P, D)

2.2.2. Sea/Atmosphere and Sea/Sediment interactions (P)

2.2.3. Primary production (C)

2.3. Assessment of the provisioning and cultural ecosystem services

2.3.1. NOWPAP marine and coastal areas as sources of food (including fisheries, aquaculture, etc.) (C)

2.3.2. Other provisioning ecosystem services (mineral resources, energy, transport, etc.) (M)

2.3.3. Cultural ecosystem services (recreation, cultural heritage) (All RACs)

3. Problems /Issues

3.1 Human impacts (including negative consequences of transport, oil and gas production, agricultural and industrial wastewaters, etc.) (P, M)

3.2 . Assessment of ecological problems connected with biodiversity issues and climate change impacts (including HAB, MPAs, invasive species, endangered species, overfishing etc.). (C, D)

3.3 Overall assessment and evaluation of marine and coastal areas of NOWPAP Region (including marine litter, persistent toxic substances, etc.) (P, M, C)

4. Conclusions (including recommendations on policy and legislation, data exchange and management, ICARM, etc.) (All RACs)

References

C, D, M, P means CEARAC, DINRAC, MERRAC, and POMRAC responsibility

The “annotated” Draft Structure of the SOMER-2 as for 26 March 2012

1. Introduction – will include objectives, scope, information sources and procedures - **POMRAC**

2. Current Status – *first of the two main parts of SOMER-2 with major objective – to describe the present situation of the environmental features and qualities from the point of view “ecosystem services” approach. This is also the place to give the data on the temporal trends, especially if it is not clear anthropogenic origin of these trends.*

2.1 Geographical features..... conventional chapter including characteristics and features of population, land use, industrial and agricultural activities etc. – **POMRAC**

2.2 Assessment of the supporting and regulating ecosystem services – Supporting services include peculiarities of nutrient cycling and primary production in the NOWPAP sea areas and regulating services include climate regulation and such related with climate issues as river discharge and water currents.

2.2.1. The main hydrological and hydrochemical features of the water bodies in the region and its parts. This chapter will include characteristics of sea currents, water structures, hydrochemical parameters of the different sea areas and region as a whole. Second subchapter will describe the main characteristics of river discharge in terms of concentrations and fluxes, and will give main features of water balance within region. The existing temporal trends will be described as well. – **POMRAC.**

2.2.2. Sea/Atmosphere and Sea/Sediment interaction.... The existing data on the role of atmosphere input in the water balance and nutrient input within different parts of the region will be presented. The contribution of sea/sediment interface to the nutrient cycling will be assessed. – **POMRAC.**

2.2.3. Primary production (Plankton production?).... The level and main features of seasonal and spatial variability of phytoplankton production will be described for the main parts of region and for the region as a whole. The existing synthesis on zooplankton component of sea areas within NOWPAP region will be also presented. - **CEARAC**

2.3. Assessment of provisional and cultural ecosystem services – Provisional services of ecosystems include providing by food, water, energy, mineral resources, transport routes. Cultural ecosystem services include first of all recreational services, and non-material benefits people obtain from ecosystems through spiritual enrichment, cognitive development, reflection, recreation, and aesthetic experience. The major attention could be concentrated on the recreation due to difficulties of the assessment of non-material benefits.

2.3.1. NOWPAP marine and coastal areas as sources of food... This chapter will give the characteristics of fisheries and aquaculture in the different parts of NOWPAP sea area and for the region as a whole. The data of the catches for different groups(species) and dynamic during last 20-30 years could be presented for the east and west parts of the NOWPAP region. Some synthetic data on the aquaculture production will be presented also – **CEARAC**

2.3.2. NOWPAP marine and coastal areas as a provider of mineral resources, energy and transport routes... This chapter will outline the role of different parts of NOWPAP region in the oil and gas production, other mineral resources (sands, stones). Second important issue of this chapter is an assessment of marine routes density within region and assessment of the coastal construction/infrastructure/urbanization in the transformation of coastal zones. – **MERRAC**.

3. Problems/Issues - *second main part of SOMER-2 with major objectives – to describe the human influence with possible negative consequences on the different ecosystem services, and to assess the ecological problems on biodiversity issues and climate change impacts. Another important chapter of this part is overall assessment of marine and coastal areas of NOWPAP region.*

3.1 Human impacts (including negative consequences of transport, oil and gas production, agricultural and industrial wastewaters, etc.) ...This chapter will describe in separate subchapters the main human pressures and impacts which can lead to the negative ecological consequences.

3.1.1. Contamination by hazardous substances (heavy metals, PTS, POPs, radionuclides) from all sources

3.1.1.1. River runoff and direct inputs - POMRAC

3.1.1.2. Maritime transport and operations - MERRAC

3.1.1.3. Offshore Oil and gas production – DINRAC

3.1.2. Nutrient and organic matter enrichment, HAB, eutrophication and hypoxia – CEARAC

3.1.3. Marine litter – MERRAC, CEARAC

3.2 . Assessment of ecological problems connected with biodiversity issues, habitat disturbance and climate change impacts (including HAB, MPAs, invasive species, endangered species, overfishing etc.).

3.2.1. Non-indigenous and invasive species – DINRAC

3.2.2. Impact of fisheries and aquaculture on the biodiversity and habitats – DINRAC

3.2.3. Habitat transformation due to constructions and urbanization – (POMRAC, CEARAC?,MERRAC?)

3.2.4. Endangered species – DINRAC

3.2.5. Climate change impacts and emerging issues- POMRAC.

3.3 Overall assessment and evaluation of marine and coastal areas of NOWPAP Region.... This chapter will use existing approaches to the spatial planning and functional zoning of the sea areas in the NOWPAP member states along with results of international (YSLME) and national projects. – **all RACs**

4. Conclusions (including recommendations on policy and legislation, data exchange and management, ICARM, etc.) **(All RACs)**

References