

United Nations Environment Programme

NOWPAP



**Northwest
Pacific
Action Plan**

Distr.: RESTRICTED
UNEP/NOWPAP IG. 24/7 rev 0
27 December 2019
Original: English



Twenty Fourth Intergovernmental Meeting of
the Northwest Pacific Action Plan
Beijing, People's Republic of China
11-13 February 2020

Report on NOWPAP Special Projects

For reasons of economy, this document is printed in a limited number. Delegates are kindly requested to bring their copies to meetings and not to seek additional copies.

**Regional
Seas**

Contents

1. Introduction.....	4
2. Progress of the Development of Special Projects in 2018 and 2019	5
3. New NOWPAP Special Project “Identification of Key Indicator Species and Ecosystems of Biodiversity Change in the NOWPAP Region”	8
4. Lessons learned in developing NOWPAP Special Projects	10
Recommendations for the meeting:	10
Annex 1. Project 1: Monitoring and Assessment Methods for Microplastics Pollution.....	11
Annex 2. Project 4: Identification of Key Indicator Species and Ecosystems of Biodiversity Change in the NOWPAP Region.....	13

List of Acronyms

CEARAC	Special Monitoring and Coastal Environmental Assessment Regional Activity Center
COBSEA	Coordinating Body on the Seas of East Asia
CRAES	Chinese Research Academy of Environmental Science
DINRAC	Data and Information Networking Regional Activity Center
GESAMP	Group of Experts on the Scientific Aspects of Marine Environmental Protection
GODAC	Global Oceanographic Data Center
ICARM	Integrated Coastal and River Basin Management
IGM	Intergovernmental Meeting
IOC-WESTPAC	Sub-Commission for the Western Pacific of the Intergovernmental Oceanographic Commission
JAMSTEC	Japan Agency for Marine-Earth Science and Technology
KIOST	Korea Institute of Ocean Science and Technology
MTS	Mid-Term Strategy
NGOs	Non-Governmental Organisations
NOWPAP	Northwest Pacific Action Plan
OSEAN	Our Sea of East Asia Network
PICES	North Pacific Marine Science Organization
POMRAC	Pollution Monitoring Regional Activity Center
RACs	Regional Activity Centers
RAP MALI	Regional Action Plan on Marine Litter
RCU	Regional Coordinating Unit
SG-MMP	Study Group of Marine Microplastics
SSFA	Small-Scale Funds Transfer Agreement
UNEP	United Nations Environment Programme

1. Introduction

1. Responding to several resolutions of the past intergovernmental Meetings (IGM) requesting Regional Coordination Unit (RCU) and Regional Activity Centers (RACs) to enhance resource mobilization efforts, while at the same time recognizing their limited technical and financial capacities, RCU initiated consultations with Member States, RACs and various stakeholders on the feasibility of developing NOWPAP special projects/initiatives (called thereafter, NOWPAP Special Projects) in 2017.

2. The overall objective of NOWPAP Special Projects is to secure larger-scale and sustained impact of the NOWPAP MTS 2018-2023 through closer integration of MTS objectives into national or regional strategies and plans using partnerships. NOWPAP Special Projects will be implemented in partnership with the leading national institutions of NOWPAP Member States (lead project agency) and supported by other partners (including NGOs, the scientific community or the private sector), unlike current NOWPAP practice of implementing projects through RACs. This would allow for:

- enhanced opportunities to generate synergies across various thematic areas of the NOWPAP MTS within the framework of national and/or regional sustainable development
- expansion of the NOWPAP partnerships
- an enhanced scope for catalyzing action, replication and innovation at the national and regional levels
- an opportunity for interested donors or other partners (including the private sector) to invest additional and focused funding based on the scope of the project

3. NOWPAP project will be designed and led by a designated lead project agency, in close consultation with NOWPAP Focal Points and RCU. The lead project agency will coordinate activities under the project, such as consultations at the country and regional level, project monitoring and evaluation, leveraging additional partners and funding sources, and knowledge management.

4. It is expected that additional to NOWPAP Trust Fund resources will be used by the lead project agency and partners (both cash and in-kind) for project preparation. It was assumed that project preparation would be completed within one year by which time full project document, including activities, budget, knowledge management, and monitoring and evaluation components should be developed. Depending on the nature of the project and the source of funds and to be decided during project preparation, the project could be submitted to an external funding agency or continue to be recognized as an internal NOWPAP project. In both instances, NOWPAP will continue to remain the essential partner of the project.

5. As a rule, a full project document to be submitted for approval by the IGM in a year following the approval of the project preparation grant and include the following elements:

- description of activities and targets results to be achieved and expertise needed
- relevance and contribution to NOWPAP Mid-Term Strategy (MTS) 2018-2023 thematic areas
- project budget proposal with the information about sources of financing, indicating both expected funding from NOWPAP Trust Fund and external sources broken into different expenses (salaries, travels, publications, etc.) and other sources

- resources needed, e.g., project team, equipment, facilities, number of meetings, ways of conducting the project
 - relevance to NOWPAP Member State(s) national and regional priorities
 - proposal for the Project Manager(s)
 - time-table for the project including milestones as well as reporting schedule and
 - reporting and evaluation requirements
6. NOWPAP IGM should approve the final project report. It could include proposals for further decisions to be taken by the NOWPAP, NOWPAP Focal Points, or entity(ies) responsible for the project, if needed. The final report shall also contain information on the potential financial implications of implementing the proposed measures.
7. Upon the request to the Member States by RCU, at the time of the 22nd NOWPAP IGM in December 2017, RCU received four project proposals for further development. Three project proposals were submitted by the NOWPAP Focal Point of the People's Republic of China and one by the Russian Federation.
8. The 22nd IGM approved the budget envelope of up to US\$95,000 for the 2018-2019 biennium to develop two project proposals. The IGM requested NOWPAP RCU together with the lead project agency, Chinese Research Academy of Environmental Science (CRAES), to develop the project proposal, "Monitoring and Assessment Methods for Microplastics Pollution" with the total budget for project preparation not exceeding US\$50,000.
9. The 22nd IGM has also requested NOWPAP RCU to keep a track record of the submitted project proposals and continue soliciting further project ideas for consideration by the 23rd NOWPAP IGM.
10. The 23rd IGM (Moscow, October 2018) requested NOWPAP RCU in consultation with RACs and together with the lead national agency to develop project proposal submitted by Russia "Identification of Key Indicator Species and Ecosystems of Biodiversity Change in the NOWPAP Region" with the total budget for project preparation not exceeding US\$45,000 for consideration by the 24th IGM Meeting.

2. Progress of the Development of Special Projects in 2018 and 2019

11. NOWPAP RCU held a teleconference with the Chinese Research Academy of Environmental Science (CRAES), the Lead Agency of the Project "Monitoring and Assessment Methods for Microplastics Pollution", in February 2018 to discuss the work plan to develop the Special Project. Several consultations followed the inception call to discuss the project development modality and the scope of activities. CRAES proponents prepared a draft project preparation document that was reviewed and commented on by RCU. Considering proposed activities and recognizing that all four NOWPAP members (except for Russia) have ongoing national programs/projects on microplastics, RCU recommended CRAES to hold face-to-face meetings with experts from the Member States to agree upon the future direction of the project. This way, the national and regional project ownership will be ensured.
12. RCU has requested the National Regional Action Plan on Marine Litter (RAP MALI) Focal Points to nominate experts to participate in the development of the special project on microplastics. While with some delay, the following experts were nominated by May 2018:

- Dr. Daoji LI, Professor, State Key Laboratory of Estuarine and Coastal Research, East China Normal University
- Dr. Atsuhiko ISOBE, Professor, Research Institute for Applied Mechanics, Kyushu University, Japan
- Dr. Sang Hee Hong, Principal Research Scientist, Korea Institute of Ocean Science and Technology (KIOST), R. Korea
- Dr. Sergey MONINETS, Dean of the Department of Ecological Safety and Shelf Development, Maritime State University, Russian Federation
- Mr. Nikolai KOZLOVSKII, Engineer, NOWPAP POMRAC, Russian Federation

13. On June 3rd, 2018, RCU convened the Expert Meeting of the NOWPAP Special Project: "Monitoring and Assessment Methods for Microplastics pollution" in Busan, Republic of Korea. The meeting was attended by microplastics experts nominated by the NOWPAP Member States, representatives of NOWPAP RACs and RCU. The goals of the meeting were to share global, regional and national efforts on the development of microplastics monitoring methods and progress on research. It included the assessment of ecological risks; identification of regional challenges and gaps in monitoring and assessment of microplastics among four NOWPAP member states that are not currently addressed by the ongoing efforts; discussions on the main objectives and components/activities of the proposed NOWPAP Special Project; and, finally, reaching an agreement on specific responsibilities of project stakeholders.

14. CRAES presented the overview of the NOWPAP Special Project "Monitoring and Assessment Methods for Microplastics pollution," including background, project's goals, implementation mechanism and the roadmap, proposed a work plan and budget. They highlighted that the project was to understand and, as far as feasible, to harmonize methods for monitoring microplastics in the marine environment in the NOWPAP region; to discuss approaches to performing aquatic toxicology of microplastics used by four members and for evaluating the ecological risks of microplastics pollution.

15. After the discussion, the participants agreed upon the main three components of the future NOWPAP Special Project:

16. - Component 1: Adopt existing criteria and review current microplastics monitoring methods in four NOWPAP member states and develop a harmonized regional approach to microplastics monitoring in water, sediments, beaches and biota (2018-2019);

17. - Component 2: Review existing eco-toxicological studies assessing the impacts of microplastics on the environment (exposure and impacts) to guide future common approach to microplastics ecological risk assessment (2019-2020);

18. -Component 3: Using tiered regional microplastics monitoring methodology developed in Component 1, undertake monitoring of microplastics contamination in selected sites of the NOWPAP region (2020-2021). Presentations of the expert workshop are available at the following website:

- http://www.nowpap.org/meetings/ICC_2018.html.

19. The recommendations of the Expert Meeting on the focus of the special project were later endorsed by the 2018 RAP MALI Meeting held on 5-6 June 2018 in Busan.

20. Following the agreement on the scope and main components of the project, RCU has prepared a Small-Scale Funds Transfer Agreement (SSFA) for the special project on microplastic in June 2018 and sent it to CRAES for review and approval. The SSFA was signed on 12 December 2019.

21. The Second Expert Meeting of the Project was held in Dalian, China, on 27 September 2019. The meeting was attended by microplastics experts nominated by the NOWPAP Member States, Focal Points of Marine Litter, experts from China's National Marine Environment Monitoring Center, Coordinating Body on the Seas of East Asia (COBSEA), Our Sea of East Asia Network (OSEAN), representatives of NOWPAP RACs and RCU. Workshop presentations are available on the NOWPAP website: <https://www.unenvironment.org/nowpap/meetings/marine-litter/second-expert-meeting-nowpap-special-project-%E2%80%9Cmonitoring-and-assessment>

22. The objective of the meeting was to discuss further how to develop the Special Project. Dr. Daoji Li, East China Normal University, introduced that his team has set up 48 survey stations along the coastline in China. In July 2019, his team conducted a comprehensive microplastic study in Yangtze Estuary for the full tide and whole depth of the water. In August 2019, they expanded their research to 15 main estuaries in China. He pointed out there was little research on microplastic pollution in the deep ocean. Verified sampling methodologies and sample volumes are critical. He recommended using Fourier Transform Infrared Spectrometer and Raman spectroscopy approaches to identify polymer nature for particles smaller than 1 mm in size, because both are nondestructive and straight-forward characterization techniques.

23. Dr. Atsuhiko Isobe, Research Institute for Applied Mechanics, Kyushu University, Japan, introduced the on-going research project on microplastic surveys in the oceans in Japan. He highlighted that based on the numerical particle tracking model for predicting microplastic abundance in the Pacific after 50 years, due to the relatively calm oceanic conditions, and denser concentration than the Southern Hemisphere, high concentrations of microplastics will occur in the upper ocean in boreal summer in the Northern Hemisphere. He pointed out that if the plastic waste would not be appropriately managed, marine plastic pollution is likely to reach to the point of no return. There is a need to identify the threshold concentration of microplastic abundance.

24. Dr. Sang Hee Hong from KIOST introduced the environmental risk assessment of microplastics in the Korean marine environment (2015 - 2020) which includes: Development of core techniques for assessing microplastic pollution and biological effects; Assessment of microplastic pollution in the Korean marine environment; Understanding of the environmental fate of microplastics; Assessment of the impacts of microplastics on marine organism; Identification of the risk of microplastics in the Korean marine environment.

25. Mr. Nikolai KOZLOVSKII, Engineer, NOWPAP POMRAC, introduced that scientists in Russia have conducted research on microplastics in the Baltic Sea coastal area in Kaliningrad city and in the Far East of Russia. In 2014 and 2015, an initial assessment of microplastic concentration in the tidal zone was conducted along the urban coasts of the Muravyov-Amursky Peninsula (i.e., Vladivostok). He also introduced the project of microplastics abundance in river runoff and coastal waters of the NOWPAP region with a case study in the Russian part of the NOWPAP area. The project is to compare existing data on microplastics quantity and composition in the coastal water within the NOWPAP region and to assess the microplastics input from river runoff to the sea.

26. On behalf of the Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection (GESAMP), Dr. Sang Hee Hong, KIOST, presented the Guidelines for the Monitoring and Assessment of Plastic Litter in the Ocean.

27. On behalf of the Sub-Commission for the Western Pacific of the Intergovernmental Oceanographic Commission (IOC-WESTPAC) and the North Pacific Marine Science Organization (PICES), Dr. Daoji Li introduced the progress of microplastic research of these two organizations. He informed that the Second WESTPAC Workshop on Distribution, Source, Fate and Impacts of Marine Microplastics in Asia and the Pacific was organized on 15-17 October 2018 in Shanghai, China, and the Third Workshop would be held on 5-7 November 2019 in Shanghai China.

28. Dr. Li has also briefed on major meetings organized by PICES on microplastic research since 2017. He informed that on behalf of NOWPAP, he would attend the Session 7: "Environmental indicators of plastic pollution in the North Pacific" in the PICES 2019 Annual Meeting in October 2019, Vitoria, BC, Canada. He also introduced the survey results of the Study Group of Marine Microplastics (SG-MMP) of PICES.

29. Dr. Juying Wang, Marine Debris and Microplastics Research Center, National Marine Environmental Monitoring Center of China, presented the progress and challenges of plastics and microplastics in the marine environment in China.

30. Dr. Ruizhi LIU from CRAES introduced the progress of the NOWPAP Special Project, "Monitoring and Assessment Methods for Marine Microplastics Pollution". The scientists from CRAES composed a proposal writing team. The NOWPAP Marine Litter Focal Points have nominated experts.

31. After Dr. Liu's presentation, Dr. Sanghee Hong commented the project was an intergovernmental approach, so it should be simplified. Dr. Isobe said that if the project was just for harmonization of monitoring and assessment methods, the proposed 1 million USD budget was too big. Mr. Kozlovskii suggested inviting more experts in different fields to join this project. Dr. Sanghee Hong added that it was challenging to give comments without a drafted document. Dr. Isobe and Dr. Hong commented that it was difficult to conduct eco-toxicological studies. They suggested that the project writing team circulate the draft proposal among the Marine Litter Focal Points and the microplastic experts. They would nominate or recommend experts based on the draft proposal.

32. CRAES revised the draft proposal and circulate it among the participants in early December 2019. It was suggested that the Marine litter Focal Points, in consultation with micro-plastics experts, would nominate experts to work on this special project before 21 January 2020.

33. It was expected that CRAES would submit the first draft of the project proposal by 15 May 2020, and completed the detailed proposal with project framework, budget and work plan before 1 October 2020.

3. New NOWPAP Special Project "Identification of Key Indicator Species and Ecosystems of Biodiversity Change in the NOWPAP Region"

(for consideration by the 23rd NOWPAP IGM)

34. Upon recommendation from the Russian Focal Point, National Scientific Centre for Marine Biology of the Far East Branch of the Russian Academy of Sciences submitted project proposal "Identification of key indicator species and ecosystems of biodiversity change in the NOWPAP region" at the 22nd IGM in 2017. As member states did not have time to review the proposal, it is being re-submitted for consideration by the 23rd NOWPAP IGM. The project was presented at the 16th CEARAC Focal Point Meeting on 10-11 May 2018 in Toyama, Japan, and at the 15th POMRAC Focal Point Meeting on 4-5

July 2018 in Vladivostok, Russia. RCU has further circulated the project proposal to NOWPAP Focal Points in early July 2018 for advance review.

35. Recognizing the transboundary nature of many biodiversity issues in the region and NOWPAP's comparative advantage to address conservation of marine and coastal biodiversity, MTS 2018-2023 emphasizes this issue by allocating funds to this area to be supplemented by leveraged financing. The goal of NOWPAP activities in this area is to undertake several assessments and activities that should lead ultimately to the development of the Regional Action Plan on Marine and Coastal Biodiversity Conservation by the end of the MTS period. The project complements and supports ongoing efforts by NOWPAP, particularly of CEARAC in the development of its medium-term strategy on biodiversity and will work in close cooperation with CEARAC and other NOWPAP regional centers.

36. The project aims to assist the NOWPAP Member States to understand ongoing biodiversity changes (caused by both natural/climate-induced and anthropogenic causes) that should inform future regional and national conservation measures. The project's main goal is to assess ongoing marine and coastal biodiversity changes in the NOWPAP region using key indicator species and specific ecosystem types.

37. The following experts were nominated by the Member States to work on this project:

- Dr. Hongjun Li, National Marine Environmental Monitoring Center, Ministry of Ecology and Environment of China
- Dr. Takashi Hosono, Japan Agency for Marine-Earth Science and Technology (JAMSTEC), Global Oceanographic Data Center (GODAC)
- Dr. Eun-chan YANG, Marine Ecosystem and Biological Research Center, Korea Institute of Ocean Science and Technology.

38. In support of the Special Project on key indicator species, RCU has submitted a project proposal: *International Workshop on Key Indicator Species and Habitats for Marine Biodiversity Change in East Asia*, to Asia-Pacific Network for Global Change Research (APN) in early 2019. The APN Secretariat approved US\$40,291 to support the project in October 2019. The project aims to enhance capabilities to participate in research on global change and sustainability and to support science-based decision-making in the region and beyond to understand what key indicator species are, ecosystem types and major pathways resulting in marine biodiversity changes in the Northwest Pacific. Recommendations of the proposed international workshop entitled "Key Indicator Species and Habitats for Marine Biodiversity Change in East Asia" will strengthen the evidence-based science-policy making process, inform decision-makers and enhance public awareness in the region about marine biodiversity loss and changes. Furthermore, workshop results would provide information for the development of the NOWPAP Regional Action Plan on Marine and Coastal Biodiversity and contribute to the achievement of SDG 14. The International Workshop on Key Indicator Species and Habitats for Marine Biodiversity Change in East Asia is planned to be organized in late March 2020 in Jeju. Jeju National University will lead the organization of the workshop with the support of RCU.

39. RCU has discussed with CEARAC Secretariat on the possible administrative support to the Special Project on key indicator species. Once the nomination of national experts is completed, RCU will further discuss with CEARAC Secretariat on this matter.

4. Lessons learned in developing NOWPAP Special Projects

40. The 22nd IGM (December 2017, Toyama, Japan) approved the Special Project on microplastics research and requested the project proposal to be completed within one year. However, due to slow administrative processes by UNEP/NOWPAP, consultations with the lead institute and other factors, the project will be delayed for two years, and the project proposal is expected to present in the 25th IGM in the end of 2020.

41. Due to the delay in nomination of national experts for the Special Project on key indicator species, and administrative process of UNEP/NOWPAP, the Project has been delayed for one year.

42. The initial thoughts of RCU was that the "Special Projects will be implemented in partnership the lead national institutions of NOWPAP Member States (lead project agency) and supported by other partners (including NGOs, the scientific community or the private sector) unlike current NOWPAP practice of implementing projects through RACs", however, in the past two decades, NOWPAP activities have been implemented through RACs that have mature administrative mechanisms and capacities to run a number of projects. Considering the limited RCU staff, the factor that the lead national institutions might not be familiar with the NOWPAP mechanism and might not be able to provide secretariat service as RACs do, Member States are requested to reconsider whether should continue developing new Special Project.

Recommendations for the meeting:

NOWPAP member states are invited to discuss and consider the following recommendations/ meeting decisions:

Notes the progress and lessons learned while developing NOWPAP Special Projects, "Monitoring and Assessment Methods for Microplastics Pollution" and "Identification of key indicator species and ecosystems of biodiversity change", and recommends:

Acknowledging the delay in submitting final project proposals for the 24th NOWPAP IGM, requests NOWPAP RCU together with the lead national agencies and partners to accelerate the preparation of the projects and submit for approval by the 25th NOWPAP IGM.

Requests RCU to coordinate with the lead national agencies, relevant external partners and RACs mobilization of financial resources for the approved Special Projects;

Member states would consider whether to submit new Special Project proposals after completion of the development of the recommended two proposals.

Annex 1. Project 1: Monitoring and Assessment Methods for Microplastics Pollution

Project Information	
Title	Monitoring and Assessment Methods for Microplastics Pollution
Country (ies) / region	China, Korea, Japan, Russia
Lead NOWPAP Regional Activity Centre (RAC) (other RACs where applicable)	DINRAC (POMRAC)
Lead project agency	Chinese Research Academy of Environmental Sciences
Estimated project size	\$ 650,000
Relevance to MTS 2018-2023 and NOWPAP past activities	NOWPAP MTS 2018-2023 stresses the importance for NOWPAP to start addressing the issue of microplastics as a part of RAP MALI implementation. The availability of common monitoring and assessment methods for microplastic pollution, especially in the marine environment constrains further progress in this area.
Expected involvement of public or private sector	Only public
NOWPAP MTS 2018-2023 priority areas	<i>Which of the following Priority Themes intended project results address?</i>
	<ul style="list-style-type: none"> ■3: Prevent and reduce land-based and sea-based pollution ■4: Conserve marine and coastal biodiversity Implementation of NOWPAP RAP MALI
Project / programme life span4... years
Estimated implementation start and end date	Start: ...01/01/2018..... End: ...31/12/2021.....
Project description (objectives, main activities, results, and budget allocations)	<p><i>Project objectives:</i></p> <p>Assess aquatic toxicology of microplastics; Evaluate the ecological risk of microplastics; Establish common methods for monitoring microplastics in the marine environment;</p> <p><i>Main activities</i></p> <p>First, we will investigate the acute and chronic toxicity to algae, daphnia, mollusks, and fish, respectively. The toxicological endpoints should include the growth, development, reproduction. Moreover, we should evaluate the possible toxicological mechanisms in aquatic organism exposure to different microplastics, such as PE, PS and PVC.</p>

	<p>Second, we will establish the methodology for evaluating the ecological risks caused by microplastics. We could follow the general program of risk assessment for chemicals. But the method will be evaluated firstly to judge its advantage and disadvantage. Of course, more work should be done to adjust this method based on the toxicological data, the mode of action, and the environmental levels. Third, we will develop the monitoring methodology for microplastics in the marine environment, including collection procedures pre-treatment methods and analysis. Pollution criteria of microplastics in the marine environment will be discussed, such as the contents of microplastics in water, sediment, aquatic organisms, and the detection ratio in the environment and biota.</p> <p>Expected results</p> <p>To establish the method for monitoring and evaluating the presence of microplastics in marine, including the monitoring method, ecotoxicology, and risk assessment.</p> <p>Proposed budget allocation</p> <p>Leading expert: \$ 200,000 USD</p> <p>Other member states expert: \$ 150,000 USD each</p>
--	---

Annex 2. Project 4: Identification of Key Indicator Species and Ecosystems of Biodiversity Change in the NOWPAP Region

A. Project / Programme Information	
A.1. Project / Activity title	Identification of key indicator species and ecosystems of biodiversity change in the NOWPAP region
A.2. Country (ies) / region	Japan, China, Korea and Russia
A.3. Lead NOWPAP Regional Activity Centre (RAC) (other RACs where applicable)	CEARAC
A.4. Lead national authority(ies)/institutions to support implementation	National Scientific Centre of Marine Biology, Far East Branch of the Russian Academy of Sciences
A.5. Estimated project size (amount in thousand USD)	TBD: USD500,000
A.7. Expected involvement of public or private sector	Mostly public, expected engagement of aquaculture companies, private educational institutions, mass media with potential in-kind contributions
A.8. NOWPAP MTS 2018-2023 focus areas (mark all that apply)	<i>Which of the following Priority Themes intended project results address?</i>
	<input type="checkbox"/> 1: Support integrated coastal and river basin planning and management (ICARM) <input checked="" type="checkbox"/> 2: Assess status of the marine and coastal environment <input type="checkbox"/> 3: Prevent and reduce land-based and sea-based pollution <input checked="" type="checkbox"/> 4: Conserve marine and coastal biodiversity <input type="checkbox"/> 5: Promote Sustainable Consumption and Production <input type="checkbox"/> 6: Enhance effectiveness of NOWPAP
A.9. Project / programme life span	2018-2020
A.10. Estimated implementation start and end date	Start: ...2019..... End: ... 2020.....
B. Project/Programme Details	
B.1. Project description (objectives, main activities, results, and budget allocations)	<p>The proposed project aims to assist NOWPAP Member States to understand ongoing biodiversity changes (caused by both, natural/climate-induced and anthropogenic causes) that should inform future regional and national conservation measures.</p> <p>Project's main goal is to assess ongoing marine and costal biodiversity changes in the NOWPAP region using key indicator species and characteristic ecosystem types. The project will consider key species and pathways leading to transboundary migration of the marine organisms in the region as follows:</p> <ul style="list-style-type: none"> • seasonal migrations caused by the impacts of global warming; • transportation of free-floating organisms with the currents and caused by biofouling including the biofouling of marine litter); • transportation of marine invasive species via ballast waters;

	<ul style="list-style-type: none">• planned man-made introduction of marine species and its consequences for the local biodiversity. <p>Ultimate results of this project will include:</p> <ul style="list-style-type: none">- Understanding of major trends and impacts of marine and coastal biodiversity changes in the NOWPAP region;- Recommendations for NOWPAP Member States for improved marine biodiversity monitoring and mitigation measures addressing negative impacts of biodiversity changes;- Improved institutional and human capacity to protect marine and coastal biodiversity among NOWPAP countries, particularly among younger specialists;- Strengthen regional cooperation and critical contribution to global efforts aimed at biodiversity conservation (including contribution to the achievement of biodiversity-related targets of Sustainable Development Goals)
--	--