North-East Asian Subregional Programme for Environmental Cooperation (NEASPEC)

Background Report on the Terms of References (TOR) of the North-East Asian Marine Protected Areas Network

Submitted by Dr. SHIM Suk-Kyung

TABLE OF CONTENTS

| 1. Background 3 |
|--|
| 1.1. Institutional Progress |
| 1.2. Rationale for Creation of a Subregional Marine Protected Area (MPA) Network in the North-East Asia |
| 2. Development Directions for Creating a Marine Protected Area Network in Northeast Asia |
| 2.1. Objectives of the Network7 |
| 2.2. Target MPAs of the Network 12 |
| 2.3. Activity Areas of the Network16 |
| 2.4. Secretariat and Programme Operation of the Network |
| |

Abbreviations and Acronyms

| BR | Biosphere Reserve | | |
|------------------|--|--|--|
| CBD | Convention on Biological Diversity | | |
| EAAFP | East Asian-Australasian Flyway Partnership | | |
| EABRN | East Asian Biosphere Reserve Network | | |
| EBSAs | Ecologically or Biologically Significant Marine Areas | | |
| GEF | Global Environment Facility | | |
| IUCN | International Union for Conservation of Nature | | |
| LMMA | Local Marine Management Area | | |
| MPAs | Marine Protected Areas | | |
| NEAMPA | North-East Asian Marine Protected Area | | |
| NEASPEC | North-East Asia Subregional Programme of Environment | | |
| | Cooperation | | |
| NOWPAP | Northwest Pacific Action Plan | | |
| OSPAR Convention | Convention for the Protection of the Marine Environment of | | |
| | the North-East Atlantic | | |
| PEMSEA | Partnerships in Environmental Management for the Seas of | | |
| | East Asia | | |
| SOM | Senior Officials Meeting | | |
| TOR | Terms of Reference | | |
| UNDP | United Nations Development Programme | | |
| UNESCAP | United Nations Economic and Social Commission for Asia | | |
| | and the Pacific | | |
| UNOPS | United Nations Office for Project Services | | |
| YSLME | Yellow Sea Large Marine Ecosystem | | |
| YS MPA | Yellow Sea Marine Protected Area | | |

1. Background

1.1. Institutional Progress

At the **16**th **Senior Officials Meeting (SOM-16)** of the North-East Subregional Programme of Environment Cooperation (NEASPEC) held in September 2011 in Seoul, the government of Republic of Korea presented a project proposal on "Strengthening Subregional Cooperation to Address Environmental Challenges related to Transboundary Marine Pollution", which recommended a new framework of cooperation in the sub-region to address challenges in protecting marine environment. This new framework would entail the sharing of information and knowledge on issues and policies regarding transboundary marine pollution.

An **Expert Consultation Meeting (ECM)** was organized on 27-28 June 2012 in Seoul in accordance with the decision of the SOM-16 that supported the proposal of convening an ECM to further elaborate the proposal for the decision of SOM-17. The meeting was attended by including national experts from China, Japan, Republic of Korea, and the Russian Federation and resource persons from the intergovernmental organizations and programmes including the Partnerships in Environmental Management for the Seas of East Asia (PEMSEA), and UN bodies including Northwest of Pacific Action Plan (NOWPAP) of UNEP and UNDP/GEF Yellow Sea Large Marine Ecosystem Project (YSLME).

The ECM facilitated exchange of views and ideas among national experts and other involved stakeholders on the scope of the project, modality of its implementation and required partnerships with relevant organizations working in the field of transboundary marine pollution in North-East Asia. In particular, participants discussed and exchanged ideas and views on existing gaps in multilateral cooperation in North-East Asia and identified the following possible areas for joint sub-regional activities within the framework of NEASPEC: marine litter, marine Protected Areas (MPA), influence of chemicals, ecosystem assessment and climate change. Considering existing programmes, scientific capacity and sub-regional needs for each topic, it was generally perceived that the facilitation of cooperation among MPAs could be a main focus of MPAs in the sub-region as well as potentials of establishing a MPA network.

At the 17th SOM of the NEASPEC in December 2012 in Chengdu, China, member

States agreed to launch the North-East Asian Marine Protected Areas (MPA) Network. As a follow-up to this decision, the Secretariat organized a **Joint Workshop on Marine Biodiversity Conservation and MPAs in the Northwest Pacific (Toyama Joint Workshop)** in March 2013 in Toyama, Japan in collaboration with the NOWPAP to facilitate discussions among member States on concrete plans of the Network and to ensure close collaboration with relevant mechanisms for the development and implementation of network programme. During the workshop, national experts came to a general conclusion on the objective, activity areas, target MPAs, and operational modality. Based on the overall plan agreed at the workshop, the Secretariat was advised to develop a detailed TOR and programme of the network for the approval by member States at the 18th SOM to be held in Ulaanbaatar, Mongolia in November 2013.

1.2. Rationale for Creation of a Subregional Marine Protected Area (MPA) Network in the North-East Asia

All countries in North-East Asia generally give strong support for creating MPAs. A variety of MPAs exist at national and local levels, having different terms and purposes as well as dissimilar institutional settings for the management. Considering only those MPAs that are located at the national level and administered by the national government, the four member States (China, Japan, Republic of Korea and Russian Federation) provided the categories, number and institutional mechanism of their MPAs and the related information during the Toyama Joint Workshop (see the report the Toyama Joint Workshop for the details.). The MPAs differ in purposes, regulations and needs across the different countries. Disparity also exists in the degree of management capacities for different countries. Although North-East Asia has so extensive MPAs, there is a lack of sub-regional network that links these MPAs together.

| Member States | National Marine Protected Areas ¹ | |
|---------------|--|--|
| China | 235 MPAs, consisting of 171 Marine Nature Reserves (at both | |
| | national and provincial levels), 40 Special Marine Reserves, and | |

¹ National MPAs in member States show different levels of regulations for management. Some of them may not correspond with some features of MPAs.

| | 24 Fisheries Genetic Resources Reserves | | |
|--------------------|--|--|--|
| Japan | 29 National Parks, 56 Quasi National Parks, 91 Natural Coastal Protected Zones, 1 Nature Conservation Area (in Okinawa), 82 Wildlife Protection Areas, 55 Protected Water Surface, Natural Habitat Conservation Area, and Natural Monuments | | |
| Republic of Korea | 565 Protected areas adjacent to/or related to marine environment, consisting of 6 Protected Marine Areas, 12 Wetland Protection Areas, 4 Marine Environment Conservation Areas, 10 Fisheries Resource Protection Areas, 167 Special Islands, 4 National Parks, 3 Ecosystem/Landscape Conservation Areas, 166 Wildlife Protection Areas, and 193 Natural Heritages | | |
| Russian Federation | 10 marine nature reserves, 2 national parks, and 10 wildlife refuges | | |

Internationally coordinated MPA network could help filling the gaps between different purposes and management capacities of MPAs and bring additional benefits to the constituent national MPA networks and other smaller programmes. Through an MPA network, social and economic connections between protected areas are strengthened, sectoral agencies are brought together, and a common platform for establishing common goals is possible.

Some international programmes and projects have been initiated for conservation of marine and coastal ecosystems covering all or parts of North-East Asian region, notably NOWPAP of UNEP, YSLME Project of UNDP/GEF, Yellow Sea Ecoregion Support Project of WWF, and PEMSEA. However, existing programmes and projects do not approach the marine system of the North-East Asia as a whole, or mostly focus on monitoring tasks (particularly, NOWPAP) and partnerships for sustainable development (particularly, PEMSEA) with no component on MPA networking. While the Yellow Sea Network of MPA (YS MPA) Network was initiated by YSLME Project in 2009, it does not involve MPAs of the entire North-East Asian region. In this respect, the creation of the North-East Asian MPA Network (NEAMPAN) initiated by the NEASPEC responds effectively to the urgent need for ensuring the protection and sustainable use of marine biological diversity and ecosystem through MPA-based regional cooperation.

The NEAMPAN will also contribute to the goals of the NEASPEC Nature Conservation Strategy, particularly in terms of survival of its target species such as Black-faced Spoonbills and Cranes, of which habitats are often located at wetlands and islands of MPAs. The NEASPEC Nature Conservation Strategy, endorsed at the 12th Senior Officials Meeting (SOM-12) in 2007 in Beijing, aims to assist NEASPEC member States in undertaking joint action on nature conservation in "the conservation and recovery of large mammals" and "the conservation, monitoring and cooperative research on important migratory species." The six flagship species of North-East Asia, namely, Amur Tiger, Amur Leopard, Snow Leopard, Hooded Crane, White-naped Crane and Black-faced Spoonbill were identified as target species, and transboundary and intergovernmental cooperation among concerned member States was requested to secure their survival. Besides, the networking MPAs could give momentum to transboundary conservation efforts of NEASPEC, which have been made so far for terrestrial species and their habitats, by offering new opportunities for transboundary marine conservation, such as creation of marine or coastal transboundary protected areas.

2. Development Directions for Creating a Marine Protected Area Network in Northeast Asia

The overall plan of the NEAMPAN was formulated at the Toyama Joint Workshop. Based on the plan, the TOR of the Network including a detailed programme and operational modality has been elaborated through reviewing relevant programmes and projects in North-East Asia and other regions, in particularly YS MPA Network and holding interviews with several experts and stakeholders for relevant information, opinions and suggestions.

Among the elements of the TOR, objectives, target MPAs, activity areas, and secretariat and programme operation are specifically discussed at below, since they are critical for setting a development direction of the Network.

2.1. Objectives of the Network

2.1.1. Objectives of a (sub-) regional MPA Network in General Aspect

Definition of an MPA Network

According to the definition by the International Union for Conservation and Nature (IUCN), an MPA network is "a collection of individual MPAs or reserves operating cooperatively and synergistically, at various spatial scales, and with a range of protection levels that are designed to meet objectives that a single reserve cannot achieve." MPA networks are becoming valuable tools in the face of overfishing, runoff of nutrients and other land-based pollutants, habitat degradation and the increasing impacts of climate change, and natural disasters. In addition to ecological benefits, MPA networks could contribute to resolving and managing conflicts and facilitating the efficient use of resources.

Benefits of a (sub-) regional MPA network

Not only national MPA networks, internationally coordinated network could help minimize the duplication of efforts and resources by convening all stakeholders from the public and private sectors, as well as from the local communities. A (sub-) regional network could bring additional benefits to the constituent national MPA networks and other smaller programs, not implicating eradication of national-level networks. These additional benefits that a (sub-) regional network could pursue are like the following:

- Ensuring the protection of an ecosystem or species that cannot be adequately protected in one country, such as migratory species;
- Ensuring that transboundary protected areas are given adequate attention;
- Sharing effective conservation approaches across similar sites in different regions;
- Developing collaboration between neighbouring countries to address common challenges and issues;
- Strengthening capacity by sharing experiences and lessons learned, new technologies and management strategies, and by increasing access to relevant information.

2.1.2. A MPA Network as an Ecological Network and a Social Network

MPA Network as an Ecologically Coherent MPA Network

An MPA network as an **ecological network** is a coordinated system of MPAs, linked through biological levels as well as administrative levels. Therefore, it must be appropriately placed, sized and spaced to function collectively for biodiversity goals, reflecting a consistent approach to design, finance, management and monitoring. UNEP indicates the four key aspects of principles for the design of MPA networks referring to several sets of criteria and principles on how to establish a protected areas system or ecological network:

- Adequacy: To be of sufficient size, shape and appropriate spatial distribution to ensure the ecological viability and integrity of populations and species;
- Representativity: To include one or more MPAs for each example of the full range of biological diversity and the associated oceanographic environment within the given area
- Resilience: To include multiple samples of habitat types, separated spatially, in a system to spread the risk of a large scale event destroying the only protected site of a certain habitat; and
- Connectivity: To ensure linkages as a result of the particular characteristics of marine organisms and of the marine environment including the mixing of waters

MPA Network as a Social MPA Network

In addition to MPA networks based on ecological considerations, some MPA networks are **social MPA networks**, which focus more on networking individuals, such as managers and other MPA practitioners, and MPA institutions, such as administrative agencies and management offices. Social MPA networks can be formed to facilitate learning and coordination of administration and planning by linking people and institutions involved in MPAs into a coordinate and holistic initiative. They can be an effective platform for individual MPA stakeholders or communities to cooperate with each other to share experiences and to enhance efforts in managing their respective MPAs. An ecological MPA network also plays a role of networking people managing the components of individual MPAs and promoting the network's viability and longevity.

Examples of Social MPA Networks

At the regional and national levels, there are many social and learning networks (see Table 1). One example in Asian region is the Pacific Local Marine Management Area (LMMA) Network in South-East Asia. The LMMA Network founded in 2000 consists of practitioners MPAs in the Indo-Pacific region that are not linked in an ecologically meaningful way, and demonstrates how social networks can contribute to and accelerate the rapid development of ecological MPA networks. Support for the growing number of social networks help to promote the development of ecological MPA networks.

[Table 2] Examples of Social MPA Networks

| | Caribbean MPA Managers Network and Forum (CaMPAM) |
|----------|--|
| | North American MPA Network (NAMPAN) |
| | Mediterranean Protected Area Network (MedPAN) |
| Regional | Proposed WIOMSA network of MPA professionals |
| onal | Regional Network of Protected Coastal and Marine Areas in the South-East Pacific |
| | Tropical Eastern Pacific Marine Corridor Network (CMAR – or Corredor Marino) |
| | Pacific Local Marine Management Area (LMMA) Network |

| | Philippine MPA Support Network |
|----------|--|
| Na | Vietnam social MPA Network |
| National | Fiji LMMA Network |
| | Ecuador Grupo Nacional de Trabajo sobre Biodiversidad Marina |
| | |

(Source: UNEP-WCMC, 2008)

> North-East Asian MPA Network as Social and Ecological MPA Network

As indicated at the Toyama Joint Workshop as well as interviews with stakeholders, the concrete standards for MPAs of the NEAMPAN as well as representative biodiversity values and habitats to be protected through networking the MPAs are not yet clearly identified nor agreed among member States. Besides, no national MPA networks exist in North-East Asian countries, and current MPAs of the countries do not necessarily represent the marine and costal ecosystems in North-East Asia.

Considering the overall current technical and institutional situation of the NEAMPAN, the Network will be primarily characterized during the initial stage as a social MPA network, despite some activities among ecologically connected MPAs and the aim of the Network to develop into an ecological network representing all seas of North-East Asia. In other words, more focus of the Network will be put on management improvement during initial period with activities among some MPAs with focus on biodiversity prevalence. It must be noted that a social MPA network could contribute to and accelerate the rapid development of an ecological MPA network, as observed in the Pacific LMMA Network in South-East Asia.

2.1.3. Components of Goals and Objectives of an MPA Network

Goals and objectives of an MPA network should be clear, measurable and realizable. They affect significantly the network's design, management measures and focus of network activities and guide management decisions and monitoring its progress and performance. It is requested that network goals and objectives reflect both the needs of an MPA network and the objectives of individual component MPAs. Ideally, the combined effects of participating individual MPAs will result in the overall goals for the network. In addition, objectives of a (sub-) regional MPA network should support conservation policies of member States as well as regional and global environmental commitments, such as biodiversity targets and sustainable development.

International Union for Conservation of Nature (IUCN) advises to consider the ecological economic and socio-cultural categories of objectives for MPA networks in a broad sense:

- Ecological objectives. These typically seek to protect, manage and/or restore marine ecosystems and their components, including processes, structure, function and integrity, as well as wildlife and geographic features.
- Economic objectives. Current resource uses, users and economic prospects for the area should be understood. Economic considerations should involve a short- and long-term view of costs and benefits, as well as a perspective on how local needs may interface with national sustainable development goals.
- Socio-cultural objectives. MPA networks should contribute to quality of life of the local community. Understanding, ownership and support for MPA networks can be fostered by assessing the full range of benefits that biodiversity provides, including those that directly affect human health and well-being.

> A Goal and Objectives of the MPA Network of North-East Asia

The overall objective of the NEAMPAN identified at the Toyama Joint Workshop is to strengthen roles of marine protected areas in the conservation of marine biodiversity with aim to reach ecologically coherent network of well managed MPAs.

Based on decisions and recommendations of the relevant SOMs and expert meetings as described in Section 1.1, the goal of the MPA Network of North-East Asia could be summarized as:

"to establish an effective, functional representative network of MPAs in North-East Asia for conservation of marine and coastal biodiversity and more efficient MPA management."

Under the goal of the Network, the objectives of the Network are proposed as followings:

i) To strengthen roles of MPAs in conservation of marine and coastal

biodiversity with aim to reach ecologically coherent network of well managed MPAs

- ii) To act as a key institutional mechanism for North-East Asian countries for sharing information and experiences on MPA management, including marine biodiversity conservation, socio-economic development, dialogue between stakeholders, and local community participation.
- iii) To provide opportunities for the relevant stakeholders of the MPAs to improve their knowledge and skills in maintaining and managing MPAs as well as design and expand MPAs.
- iv) To promote and facilitate cooperative research and projects for improving management effectiveness of individual MPAs as well as the concerned national and local policies.
- v) To promote and strengthen cooperation and partnership with other subregional, regional and global programmes concerning biodiversity conservation and sustainable development of marine and coastal areas.
- vi) To contribute to the national conservation policies and regional and global environmental commitments, such as biodiversity targets and sustainable development goals.

2.2. Geographical Scope and Target MPAs of the Network

2.2.1. Geographical Scope of the Network

The NEAMPAN covers the geographical scope of the YS MPA and NOWPAP, while being a part of PEMSEA region (see Table 2).

| Programmes/Projects | Geographical Scope | | |
|------------------------------|--|--|--|
| Yellow Sea MPA Network | Yellow Sea | | |
| NOWAP | North-West Pacific (121°E-143°E, 33-West Pa | | |
| North-East Asian MPA Network | Seas of North-East Asia | | |
| PEMSEA | Seas of South-East Asia and North-East As including five large marine ecosystems (East Chi Sea, Yellow Sea, South China Sea, Sulu-Celebes Se | | |

[Table 3] Geographical Scopes of Marine Programmes and Projects in North-East Asia

| Indonesian Seas) |
|------------------|
| |

Geographical Scope of the Network

The geographical scope of the NEAMPAN is the seas of North-East Asia, where MPAs of the five member States, namely China, Democratic People's Republic of Korea, Japan, Republic of Korea and Russian Federation, are located.



[Figure 1] A map of the Geographical Scope of the North-East Asian MPA Network (Source: www.unep.org)

2.2.2. Target MPAs by the Network's Development Stages

The Toyama Joint Workshop decided to enlist all the MPAs of each member State for further consideration and requested the national focal points to communicate with the NEASPEC Secretariat about the scope of target MPAs. Each member State will be further consulted for the selection of target MPAs. The Russian Federation focuses on MPAs in Russian Far East only.

Target MPAs will be selected by each member State after the scope of target MPAs is decided in accordance with the Network's objectives accepted by member States. Since no member State of the Network has a national MPA network, the way to connect national MPA networks cannot be of consideration. The Network will focus more on a role of social MPA network at an initial stage with the efforts to strengthen a function as an ecological MPA network; therefore, the scope of target MPAs will be mostly project-based initially and be specified scientifically at a later stage.

Target MPAs at an Initial Stage

The target MPAs at an initial stage will be mainly the MPAs participating in activities of the NEAMPAN for management improvement, cooperation among MPAs of similar ecological features or management challenges (e.g. coastal wetlands, islands, management of aquaculture) as well as some MPAs involved in protection of key migratory species (e.g. Spotted Seals, Sea Turtles, Black-faced Spoonbills). National representative MPAs that are selected by the member States could be also included, and the participation of managers and institutions of the national representative MPAs could facilitate a function of human networking of the Network. The national focal points will propose potential sites, and the Advisory Committee of the Network will review and decide the member MPAs.

Target MPAs at a Later Stage

As the Network aims to develop into an ecologically coherent network of well managed MPAs (refer to the first objective of the Network), the target MPAs at a later stage should be the MPAs that form an ecologically coherent network of wellmanaged MPAs or a representative system of MPAs in the sub-region. To identify and select sites to be included in the Network, aims, principles, ecological criteria of the ecologically coherent MPA Network in North-East Asia should be developed and agreed by the Network member States. An ad-hoc expert working group could be organized for drafting the aims, principles and criteria, which will be reviewed by the advisory committee the Network and adopted by the steering committee of the Network. Criteria of other regional MPA networks, such as MPA Network of OSPAR, are of useful reference. In addition, the Ecologically or Biologically Significant Marine Areas (EBSAs) of the Convention on Biological Diversity (CBD) could be incorporated into the ecological criteria of the Network, particularly for open-ocean waters and deep-sea habitats, which EBSAs aim to protect.

Example of OSPAR MPA Network

The MPA Network of OSPAR, which includes 15 countries in North-East Atlantic area, adopted the guidance to Contracting Parties to the OSPAR Convention to provide Contracting Parties with principles and information on the selection of sites to be included to the OSPAR MPA Network in 2003. The guidance is non-binding on

Contracting Parties. The seven ecological criteria or considerations were identified in correlation with the aims of the OSPAR MPA Network, as shown in Table 3.

| Aims | Protect, conserve and restore species, habitats and ecological processes which are adversely affected as a result of human activities | Prevent degradation of and damage to species, habitats and ecological processes following the precautionary principle | Protect and conserve areas which best represent the range of species, habitats and ecological processes in the maritime area |
|------------------------|---|---|---|
| Ecological criteria | (1) High priority habitats and species which meet the Texel- Faial criteria of 'Decline' | (1) High priority habitats and species which meet the Texel- Faial criteria of 'high probability of a significant decline' (2) Important habitats and species which meet the other Texel-Faial criteria (global importance, local (species)/regional (habitats) importance, rarity, sensitivity, keystone species, ecological significance) (6) Sensitivity | (3) Ecological significance (4) High natural biological diversity (of species within a habitat and of habitats in an area) (5) Representativity, including the biogeographic regions (7) Naturalness |

[Table 4] Aims and Ecological Criteria/Considerations of the OSPAR MPA Network

(Source: OSPAR Commission, 2006)

Ecologically or Biologically Significant Marine Areas (EBSAs) of the CBD

Another important consideration for a scope of target MPAs as an ecological network is the Ecologically or Biologically Significant Marine Areas (EBSAs) of the CBD. EBSAs are marine areas in need of protection in open-ocean waters and deep-sea habitats that are identified using the seven scientific criteria adopted at the ninth Conference of the Parties (COP 9) to the Convention in 2008 (CBD Decision IX/20, Annex I). The identification of EBSAs and the selection of conservation and management measures is a matter for States and competent intergovernmental organizations. The seven scientific criteria of ESBAs are:

1. Uniqueness or Rarity

- 2. Special importance for life history stages of species
- 3. Importance for threatened, endangered or declining species and/or habitats
- 4. Vulnerability, Fragility, Sensitivity, or Slow recovery
- 5. Biological Productivity
- 6. Biological Diversity
- 7. Naturalness

In 2010, COP 10 noted that the application of the EBSA criteria is a scientific and technical exercise and that this can be achieved through a variety of means, including marine protected areas and impact assessment. It was also encouraged to cooperate collectively or on a regional or sub-regional basis to identify and adopt appropriate measures for conservation and sustainable use in relation to EBSAs including by establishing representative networks of MPAs. Pursuant to the request of COP 10, a series of regional workshops were convened in several regions including North Pacific Region in Russian Federation in 2013 and some member States of the NEAMPAN, including Republic of Korea, are in the process of developing means to introduce EBSAs nationally.

2.3. Activity Areas of the Network

The Toyama Joint Workshop identified as activity areas of the MPA Network in North-East Asia information and knowledge sharing, knowledge building through collaborative work, capacity building for management, networking with relevant regional and global mechanisms and raising public awareness and stakeholder involvement.

Activities of the NEAMPAN should be based on interest and needs of the member States and target MPAs, which could be addressed effectively through the Network cooperation, as well as the objectives of the Network. Priority activity areas of the NEAMPAN and their modalities have been proposed during the Toyama Joint Workshop and interviews with stakeholders.

➤ Thematic Areas

The following four themes are priority thematic areas of the NEAMPAN.

i) Protection of key marine animals, such as Spotted Seals, Black-faced Spoonbills and Sea Turtles, and their habitats

- Joint surveys and research on important migratory key species could be designed with relatively clear activity goals and scope of participating MPAs, which are suitable for first Network activities.
- ii) Sustainable use of marine resources, such as aquaculture, seafood security and fish stocks restoration
 - Many parts of the seas of North-East Asian countries, particularly in China, Japan and Republic of Korea, are subject to active uses for fisheries including aquaculture. It is becoming one of significant challenges at the regional level to maintain marine and coastal ecosystems healthy and productive and to safeguard social and economic development through MPAs.
- iii) Effective MPA management, such as local participation, public awareness, prevention of 'paper parks,' and MPA database
 - The current focus on establishing new MPAs could present a considerable risk that attention will be detracted from ensuring effective management of existing sites, and thus creating more 'paper parks'. Efforts must also go into all aspects of effective management.
 - Many of the existing MPA networks have organized various countries' information into a database that is accessible to the members and the general public. The MPA database will promote accessibility to exchanging ideas about MPA management plans, as well as share progress on the ongoing activities. The information collected could also contribute to devising a regional guide, as demonstrated in the regional guide developed by the Regional Organization for the Conservation of the Environment of the Red Sea and Gulf of Aden (PERSGA).
- iv) Collaboration with other relevant programmes, networks and projects in the region, such as NOWPAP, YSLME and EAAFP (see Section 2.4), as well as other relevant initiatives and projects of NEASPEC
 - For instance, the project proposal on Conservation and Rehabilitation of Habitats for Key Species with special emphasis on Cranes and Blackfaced Spoonbills was considered at the 17th SOM of the NEASPEC held

in December 2012 in Chengdu. The project will be further elaborated seeking synergies with existing relevant mechanisms such as the East Asian-Australasian Flyway Partnership (EAAFP). The collaboration between the project and the NEAMPA activities on seashore birds could also create meaningful synergy, which contributes to the NEASPEC Nature Conservation Strategy.

> Modalities of Activities

There are various types of activity modalities for protected area networks upon their needs and financial and human resources. At an initial stage of the NEAMPAN, the Network necessitates particular efforts to learn from experiences of other similar networks and adjust them to its own purpose and situation. Joint activities with other relevant programmes and networks could be also considered when necessary. Activity modalities should be selected and designed to be effective in accomplishing the objectives of the Network.

- i) Regular network meetings, publication and internet homepage for sharing of experiences and information
 - The network meetings on a regular basis will be instrumental for overall operation of the Network, particularly for information sharing, networking among people involved in MPAs, and reviewing other activities of the Network. It is proposed that meetings will be held biennially by one of member States in cooperation with the secretariat of the Network on issues of common concern. Participants include MPA managers and experts of the member States, representatives from other relevant programmes and networks and government agencies and local communities.
 - The network meetings could be used for management improvement in a way to combine field evaluations of MPAs by the Network members and experts attending the meetings with the meetings. The network meetings of the East Asian Biosphere Reserve Network (EABRN), of which member States are China, Democratic People's Republic of Korea, Japan, Kazakhstan, Republic of Korea and Russian Federation, are a good example. The meetings of the EABRN are organized biennially (annually for the first several years) in a Biosphere Reserve (BR) of the EABRN on a

rotational basis among member States. In every meeting with different themes, a field evaluation of the BR where the meeting is held is carried out for 1.5-2 days. During a field evaluation, a BR management office gives presentations on its BR, and meeting participants visit key places of the BR and meet local communities. Finally, participants make comments and suggestions for improving conservation and management of the BR.

- Publications are useful for sharing and disseminating knowledge, experiences and lessons learned. Books on best practices at local, national and regional level could be considered as the first publication of the Network to develop.
- ii) Research and monitoring projects and seminars for biodiversity conservation and management improvement
 - One of benefits that network could offer to network members is knowledge building and multi-lateral policy dialogues through collaborative work, such as joint research and monitoring, joint assessment and monitoring of different MPAs, and seminars. As for one of the first research activities of the NEAMAP Network, joint research on important migratory key species was proposed among the relevant MPAs and institutes. Another priority research subject could be the assessment of management effectiveness of MPAs for situation analysis.
 - On a long-term basis, the research how to develop the NEAMPAN into an ecologically coherent MPA network should be carried out including aims, principles and criteria of the MPAs that could be included in the Network.
 - Partnership with other relevant agencies for jointly implementing research and seminars should be explored whenever and wherever possible. Small-scale research projects and cooperative studies among different MPAs and different member States could be operated with moderate budget and more efficiency. The results of research and seminars should be published and distributed for use of the Network members.

- iii) Training courses and exchanges of MPA mangers for capacity building
 - Lack of management capacity is one of critical constraints of many MPAs in the member States. Capacity could be strengthened by sharing experiences and lessons learned, new technologies and management strategies, and by increasing access to relevant information. Training courses and exchanges of MPA managers within the NEAMPAN provide a forum for sharing knowledge, expertise and lessons learned among sites, as well as opportunities for coordination and communication with MPA managers and planners outside of the network. A way of training of trainers could be considered particularly aiming for capacity building at the local level.
- iv) Networking with relevant regional and global mechanisms for overall objectives
 - Networking with not only existing regional marine programmes and projects (NOWPAP, PEMSEA, YS MPA network) but also those related to the protection of wetlands and migratory birds, such as EAAFP, could complement each other and be beneficial to the MPAs of the NEAMPAN. EAAFP was launched in 2006 with an aim to protect migratory waterbirds, their habitat and the livelihoods of people dependent upon them. A potential project on Conservation and Rehabilitation of Habitats for Key Species of NEASPEC could be also a subject of collaboration, if launched. In addition, cooperation with (sub-) regional MPA networks in other regions, particularly in Asia, such as South-east Asian MPA network, could be explored for mutual learning as well as common regional and global environmental goals.
 - The Network should also serve for the effective implementation of the globally important targets and objectives for biodiversity conservation and sustainable development, namely,
 - CBD targets to encourage the establishment of an effective global network of MPAs covering 10% of coastal and marine ecoregions by 2020 (CBD 8, 2006);
 - EBSA Criteria (COP 9, 2008);
 - CBD 'Strategic Plan for Biodiversity 2011-2020' (Aichi Biodiversity

Targets), particularly Target 6, 8, 9, 11 and 14 in relation to marine biodiversity and coastal and marine areas protection (COP 10, 2010); and

• Outcome document of the UN Conference on Sustainable Development (Rio+20) in Rio de Janeiro, Brazil in 2012.

[Table 5] Aichi Biodiversity Targets of Particular Concern for Marine and Coastal Areas

| No. | Description | | | |
|-----------|--|--|--|--|
| Target 6 | By 2020 all fish and invertebrate stocks and aquatic plants are managed and harvested sustainably, legally and applying ecosystem based approaches, so that overfishing is avoided, recovery plans and measures are in place for all depleted species, fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems and the impacts of fisheries on stocks, species and ecosystems are within safe ecological limits. | | | |
| Target 8 | By 2020, pollution, including from excess nutrients, has been brought to levels that are not detrimental to ecosystem function and biodiversity. | | | |
| Target 9 | By 2020, invasive alien species and pathways are identified and prioritized, priority species are controlled or eradicated, and measures are in place to manage pathways to prevent their introduction and establishment. | | | |
| Target 11 | By 2020, at least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well-connected systems of protected areas and other effective area- based conservation measures, and integrated into the wider landscapes and seascapes. | | | |
| Target 14 | By 2020, ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, indigenous and local communities, and the poor and vulnerable. | | | |

2.4. Secretariat and Programme Operation of the Network

The Toyama Joint Workshop agreed that the Network Secretariat will be operated by NEASPEC in collaboration with NOWPAP and other partners. With regard to programme operation, the Workshop, after reviewing two options, suggested that the activities of the Network shall be coordinated by NEASPEC in cooperation with other relevant mechanisms including NOWPAP, YSLME, PEMSEA and WWF.

Organizational structure of the NEAMPAN consists of: Steering Committee as the governing body, Advisory Committee for scientific and technical guidance and advices, National Focal Points for activity coordination, and Secretariat.

Secretariat of the Network

It was agreed at the Toyama Joint Workshop that NEASPEC will act as Secretariat of the NEAMPAN and manage daily work of the Network. The Secretariat of NEASPEC is served by UNESCAP's East and North-East Asia Office (ENEA), located in Incheon, Republic of Korea.

Under the supervision of the Steering Committee, main roles of the Secretariat of the NEAMPAN are: to administer the work of the Network, to coordinate the Network's activities and to run the meetings of Steering Committee and Advisory Committee. Although the NEASPEC will work in collaboration with NOWPAP and other partners for the NEAMPAN operation, human capacity for the Secretariat needs to be enhanced due to the limited number of staff of the NEASPEC Secretariat. In order to operate activities of the NEAMPAN efficiently in terms of financial and human capacity, member States are invited to send voluntarily national experts to the Secretariat. It is also recommended to secure a Network office in a form of the NEAMPAN Center,' where daily work the secretariat and some activities of the Network could take place. In this regard, during the consultation process for developing the TOR of the Network, intent of possible contribution of an office and staff to the Network from a member State has been identified.

Programme Operation of the Network

Programmes of the NEAMPAN must be operated in a way to build on existing schemes to create synergies, to promote partnership with existing activities and networks and to support the sub-regional implementation of international agreements such as CBD. NOWPAP, YS MPA Network, EAAFP and PEMSEA are the main mechanisms and (sub-) regional programmes, projects and networks

related to marine biodiversity that are operating in North-East Asia and could be key partner programmes (see Table 5). Partnerships with WWF, UNEP, UNDP and multi-lateral financing institutions such as Asia-Pacific Network for Global Change Research (APN), Asian Development Bank (ADB) and Global Environment Facility (GEF) should be also sought. The key partner programmes and international organizations could participate in the Network activities as members of the Network and provide their professional expertise as members of the Advisory Committee of the Network.

| | NOWPAP | | | SCRSHIP for the |
|--------------------|--|--|---|--|
| | UNEP NOWPAP | Voltow Sea YS MPA | PEMSEA | EAAFP EAAFP |
| Brief Description | A cooperative framework where countries co- sharing Northwest Pacific are grouped for region-suited solutions to deteriorating coastal and marine environment, in the context of an UNEP' global initiative, the Regional Seas Programme (RSP). | A MPA network of the YSLME project established in 2009 to conserve the sea's biodiversity, financed by GEF 3-4 year work plan under preparation | A partnership arrangement involving various stakeholders of the Seas of East Asia and the regional coordinating mechanism for the implementation of the Sustainable Development Strategy for the Seas of East Asia (SDS-SEA), implemented by the UNDP and executed by the UNOPS | A partnership as an informal and voluntary initiative to protect migratory waterbirds, their habitat and the livelihoods of people dependent upon them along the East Asia – Australasian Flyway |
| Geographical scope | North-West Pacific (121°E-143°E, 33°N-52°N) | Yellow Sea | Seas of South-East Asia and North-East Asia including five large marine ecosystems (East China Sea, Yellow Sea, South China Sea, Sulu-Celebes Sea, Indonesian Seas) | Arctic Circle in Russian Federation and Alaska, East and South-East Asia, Australia, New Zealand |

[Table 6] Key Partner (sub-) regional Programmes of the North-East Asian MPA Network

| | | | 12 | |
|--------------------------|---|---|---|---|
| Members | - Four member States: China, Japan, ROK and the Russian Federation | - Individuals and institutions of MPAs in the Yellow Sea of China and Republic of Korea | 12 countries, including China, Democratic People's Republic of Korea and Japan, 20 nongovernmental organizations | 15 countries, including Japan, Republic of Korea, Russian Federation 4 intergovernmental agencies, 10 international non- governmental organizations, 1 international business sector |
| Organizational structure | Annual intergovernment al meetings as high-level governing & decision-making body Four Regional Activity Centers - Regional Coordinating Unit (RCU) | Annual network meetings National focal points (to be designated) | East Asian Seas (EAS) Partnership Council EAS Congress for knowledge sharing, held every three years | Regular meetings of partners Working groups by thematic areas Task forces for monitoring and research Chair |
| Secretariat | RCU offices in Toyama, Japan and Busan, Republic of Korea | Secretariat office hosted by Liaoning Ocean & Fisheries Bureau (Shenyang, China) with operational support by Liaoning Ocean & Fisheries Science Research Institute (Dalian, China) | PEMSEA Resource Facility (PRF) located in Quezon City, Philippines | A small professional team located in Incheon, Republic of Korea |
| un | Financed mainly by contributions from the member States to the UNEP Trust Fund for NOWPAP | GEF project grant & contributions from member countries | Regional Partnership Fund, established by the EAS Partnership Council | Contributions from partners |

References

CBD Secretariat. 2010. Quick guides for Aichi Biodiversity Targets. https://www.cbd.int/nbsap/training/quick-guides/

CBD Secretariat. 2012. Ecologically or Biologically Significant Marine Areas (EBSAs). http://www.cbd.int/marine/doc/ebsa-brochure-2012-en.pdf

Ma, C. et al., 2013. China's Special Marine Protected Area Policy: Trade-off between Economic Development and Marine Conservation. *Ocean & Coastal Management*, Vol. 76. 1-11.

Global Ocean Biodiversity Initiative (GOBI). Frequently Asked Questions. Available from http://www.gobi.org/faqs (29/08/2013)

IUCN World Commission on Protected Areas (IUCN-WCPA) (2008). *Establishing Marine Protected Area Networks – Making It Happen*. Washington, D.C.: IUCN-WCPA, National Oceanic and Atmospheric Administration and The Nature Conservancy. 118 p

NEASPEC Secretariat (2012). North-East Asian Subregional Programme Environmental Cooperation: Challenges and Opportunities. 17th Senior Officials Meeting, 20-21 December 2012, Chengdu, China.

NEASPEC Secretariat (2013). Subregional Cooperation for Strengthening Marine Protected Areas in North-East Asia: Background Paper for North-East Asian Marine Protected Areas (MPAs) Network. 30 p

NOWPAP (2013). NOWPAP History, Structure and Regional Coordinating Unit. Available from http://www.nowpap.org/

OSPAR Commission (2006). Guidance on Developing an Ecologically Coherent Network of OSPAR Marine Protected Areas. OSPAR Convention for the Protection of the Marine Environment of the North-East Atlantic. Reference no. 2006-3.

OSPAR Commission (2013). OSPAR Network for Marine Protected Areas. Available from

http://www.ospar.org/content/content.asp?menu=00700302210000_000000_000000 (30/08/2013)

Partnerships for the East Asian-Australasian Flyway (2013). The Partnership. Available from http://www.eaaflyway.net/partnership.php

PEMSEA (2013). About PEMSEA, Operating Mechanisms, and Partnerships. Available form http://www.pemsea.org/ (29/08/2013)

UNDP/GEF Yellow Sea Large Marine Ecosystem Project (2013). Introduction of the Project. Available from http://www.yslme.org/ (26/08/2013)

UNEP Regional Seas (2013). Northwest Pacific. Available from http://www.unep.org/regionalseas/programmes/unpro/nwpacific/default.asp (29/08/2013)

UNEP-WCMC (2008). National and Regional Networks of Marine Protected Areas: A Review of Progress. UNEP-WCMC, Cambridge. 144 p

UNESCAP (2007). Saving the Flagship Species of North-East Asia. Brochure.

UNESCAP (2012). Development of the Cooperation Mechanisms for Nature Conservation in Transboundary Areas in North-East Asia. Document for the 17th Senior Officials Meeting of NEASPEC, 20-21 December 2012.

UNESCO Beijing Office (2011). East Asian Biosphere Reserve Network. Available from http://www.unescobej.org/natural-sciences/environment/ecological-andearth-sciences/east-asian-biosphere-reserve-network-eabrn/ (30/08/2013)

YSLME Project Management Office (2012). Meeting Report of the 4th Yellow Sea Marine Protected Area Network Meeting, 8-9 October 2012, Shenyang, China.