



**Regional
Seas**

Regional Overview on Legal Aspects Related to NOWPAP Regional Action Plan on Marine Litter



NOWPAP DINRAC

Northwest Pacific Action Plan
Data and Information Network Regional Activity Center

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This regional overview was prepared according to the NOWPAP Regional Action Plan on Marine Litter (RAP MALI), focusing on national environmental legislation, policies, programs and institutional arrangements related to dealing with marine litter.

This regional overview has been compiled based primarily on the latest data and information provided by NOWPAP member states. It might be useful for people who are interested to take a glimpse at the current situation in the region.

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1. All the photos used in this publication are provided and collected by DINRAC staff.
2. Images of fish and octopus on page 5, lobster on page 6, whale on page 17 are made of fishing line/net, highlighting negative impact of marine litter on marine life.

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1. Introduction

This document may be considered as an updated version of the “Regional Overview on Legal Instruments, Institutional Arrangements and Programmes Related to Marine Litter in the NOWPAP Region” published in 2007. It reflects the subsequent changes through the years of 2007-2009 in legal aspects of marine litter control in the member states (People’s Republic of China, Japan, Republic of Korea and Russian Federation) of the Northwest Pacific Action Plan (NOWPAP).

NOWPAP Marine Litter Activity (MALITA) has been started after its approval by the 10th Intergovernmental Meeting (IGM) held in November 2005 in Toyama, Japan. It was carried out from then to the end of 2007 to address the marine litter problem in the region. The overall goal of the MALITA project was to develop (and eventually implement) a Regional Action Plan on Marine Litter in the NOWPAP region. Details of MALITA implementation can be found at the NOWPAP website (<http://www.nowpap.org>).

In order to develop the Regional Action Plan, a series of activities have been undertaken: a review of the existing legal and administrative instruments, institutional arrangements and programmes related to marine litter in the region; collection of data and information on the current status of marine litter; organization of workshops and meetings to exchange information and views between the member states; development of monitoring and sectoral guidelines to provide practical and technical assistance to the member states. A variety of public awareness activities (e.g., publication of brochures and leaflets, organization of the International Coastal Cleanup campaigns) have also been implemented to highlight the severity of marine litter problem to stakeholders concerned as well as to the general public and to encourage their active participation in dealing with the marine litter problem towards changing people’s attitude and behaviour.

Through the implementation of MALITA project, several key activities have been successfully implemented. Such activities include the establishment of a marine litter database, the organization of a series of meetings and workshops on marine litter as well as the International Coastal Cleanup (ICC) campaigns, the publication of several reports, guidelines, brochures and leaflets for different sectors and different target audiences, and the preparation of a regional review of legal and administrative aspects related to marine litter of the member states.

One of the major MALITA outcomes is the NOWPAP Regional Action Plan on Marine Litter (RAP MALI). The Draft NOWPAP RAP MALI was presented and discussed at the 12th NOWPAP IGM in October 2007 and its implementation was further discussed in detail at a special NOWPAP RAP MALI meeting in November 2007. It was approved by the NOWPAP Member States in March 2008 and has been implemented since then. Therefore, RAP MALI can be considered as the second phase of NOWPAP activities related to dealing with marine litter.



The NOWPAP RAP MALI is a non-legally binding action plan for the NOWPAP member states. It consists of three key elements:

- (1) Prevention of marine litter input to the marine and coastal environment;
- (2) Monitoring of marine litter quantities and distribution; and
- (3) Removing existing marine litter and its disposal.

The goal of the NOWPAP RAP MALI is to improve the quality of the marine and coastal environment of the Northwest Pacific region by addressing the marine litter problem through cooperation and partnerships. Workplan and budget were provided for the 2008-2009 and 2010-2011 biennium, and the efforts to address the marine litter problem will be continuing. Most of the RAP MALI activities have been implemented at the national level, in cooperation with local governments and authorities within the NOWPAP region, and regular assessments need to be conducted.

The decision to prepare a regional overview of the RAP MALI implementation is based on the NOWPAP DINRAC workplan in 2008/2009 biennium, which has been agreed at the Eighth NOWPAP DINRAC National Focal Points (NFP) Meeting (Beijing, People's Republic of China, 19-21 May, 2009). As such, preparation of this document serves as the implementation activity of the NOWPAP RAP MALI.

Major information used in this regional overview is based on the updated national summaries of China and Japan on legal and administrative arrangements to deal with marine litter in the NOWPAP member states. Some information is based on the Regional Overview of Marine Litter in the Northwest Pacific Region.¹ Facts are also found from the UNEP website and relevant publications such as: Marine Litter: A Global Challenge.²

The objective of this regional overview is to update information on legal and administrative instruments and arrangements related to marine litter at the national and regional level. It reflects the progress on major implementation activities for the prevention, control and management of marine litter according to the RAP MALI workplan, 2008-2009. This overview will help to establish a regional mechanism to deal with marine litter problem, and eventually contribute to achieving the overall goal of NOWPAP for the sustainable development of the region.



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1. NOWPAP, 2008. Marine Litter in the Northwest Pacific Region. Northwest Pacific Action Plan. 63 pp.
 2. UNEP, 2009. Marine Litter: A Global Challenge. Nairobi: UNEP. 232 pp.

2. National Laws and Regulations

According to the NOWPAP regional overview on legal instruments, institutional arrangements and programmes related to marine litter,¹ the four NOWPAP member states have all established a comprehensive set of laws and regulations to address the general environmental issues including control and management of marine litter. They also have existing legal framework in compliance with international conventions and agreements related to marine litter such as the MARPOL Convention, the London Convention, the Basel Convention and the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (GPA).¹ However, marine litter is, in most cases, not specifically mentioned in their national laws and regulations. The litter problem is more likely connected to other marine and coastal environmental protection and health issues.

Understanding that marine litter should be further addressed by national laws and regulations with measures to prevent, reduce, and control the waste discharge from all sources, the NOWPAP member states have undertaken activities in the recent years including:

- To reinforce the implementation and enforcement of the existing national legal instruments;
- To comply with marine litter-related international conventions and agreements with clear responsibility of the specific governing authority;
- To integrate marine litter into the national legislation on solid waste management;
- To strengthen institutional arrangement in dealing with environmental issues including marine litter.

1. UNEP/NOWPAP/DINRAC/Publication No. 8, October 2007.

2.1. People's Republic of China

In China, more than 30 laws and regulations are found relevant to marine environment and environmental protection. Among which, 16 laws and regulations are obviously related to marine litter management. The Environmental Protection Law (EPL, enacted in 1989) sets the overall supervision and management of the environmental protection throughout the country. Marine Environment Protection Law (MEPL, adopted in 1982 and amended in 1999) aims to supervise the nationwide marine environment protection, conserve marine resources, prevent pollution, safeguard human health and promote economic and social development. These two laws guide the national practice for marine environmental protection.

Recent years through 2006-2009, China has revised and approved several domestic laws and regulations related to the marine litter management, such as Regulations on Prevention of Marine Environmental Pollution by Marine Construction Projects (adopted in 2006); Regulations on Prevention of the Marine Environmental Pollution by the Coastal Construction (adopted in 2007); and Revision of the Law on Prevention and Control of Water Pollution (amended and put into force in June 2008).

In addition to these laws, some recent actions of China are also noticeable. On December 31, 2007, the State Council of PRC issued a Notice on the Restriction of Production, Selling and Usage of Plastic Shopping Bags. This Notice, commonly known as the Plastic Bags Restrictive Order, makes it clear that from June 1, 2008 onwards, it is to be prohibited to produce, sell and use plastic shopping bags thinner than 0.025 mm, and from that date on, all shops, supermarkets and fairs etc must not provide customers with free plastic shopping bags.

Most significantly, an inter-Department Experience-Sharing Meeting on Marine Litter was held by the Chinese government in September 2008 to address the marine litter problem at the national level. The meeting involved five key ministries and agencies such as the Ministry of Environmental Protection, Maritime Safety Administration, Fishery Management Bureau, State Oceanic Administration (SOA) and People's Liberation Army (Navy). Before this meeting, the SOA has initiated marine litter monitoring programme. Currently, a National Action Plan on Marine Litter (NAP MALI) is under development.



2.2. Japan

Japan governs its oceans through a series of sectoral ocean policies, and most of its strategies, policies and plans stem from the Basic Environmental Law (1993) which forms the basic structure of Japanese environmental laws and policies. It declares the basic principles of Japan for environmental policy, defines the responsibilities of each actor in the society, and prescribes the policy instruments to protect the domestic and global environment. Also, the Basic Act of Japan on Ocean Policy was approved in 2007. Under this law, the government shall establish the Basic Plan on Ocean Policy in order to implement measures on marine issues in comprehensive and planned manners. Headquarters for the promotion of comprehensive marine policies was established under the Cabinet in July 2007.

In addition to the aforementioned Basic Environment Law and Basic Act on Ocean Policy, there are other major national legislations related to marine litter management, such as Waste Management and Public Cleansing Law (Effective date: 25 December 1970; revised on 02 June 2006), Cabinet Order of Waste Management and Public Law (Effective date: 24 September 1971; revised on 31 March 2006), Law on the Prevention of Marine Pollution and Maritime Disaster (Effective date: 25 February 1970; revised on 19 May 2004 and 30 March 2007), Seacoast Law (Effective date: 12 May 1956; revised on 08 February 2004), and Port and Harbor Law (Effective date: 31 May 1950; revised on 07 June 2006).

Since 2007, Ministry of the Environment of Japan is implementing a two-phase national project related to marine litter. Eleven locations around Japan were selected in phase one to implement “Model Survey” (case studies) on marine litter quantities, composition and distribution as well as removal methods and cost involved. The project phase one completed in 2008 and phase two started in 2009 in 10 locations. The results of the project (the results of the first phase of the project were distributed to Marine Litter Focal Points through CEARAC) might be very useful in developing and applying more efficient techniques to marine litter monitoring and removal as well as in reducing marine litter quantities.



Most recently, Japan has enacted the Law for the Promotion of Marine Litter Disposal since July 2009. The purpose of the law is to promote smooth disposal and reduction of generation of marine litter, in order to conserve the good landscape and environment of the coasts. The main points of this law are as follows:

- A fundamental principle of this law is to make effort to conserve and rehabilitate the integral coastal environment in consideration of beautiful landscape conservation and maintaining biodiversity.
- It promotes the smooth disposal of waste by clarifying the responsibility of those concerned with handling marine litter. In particular, it specifies rules regarding prefectural coastal managers and cooperation of municipalities.
- Appropriate role sharing and cooperation among the various bodies is aimed for through: setting up working groups on regional marine litter countermeasures to be taken by relevant ministries and agencies; and cooperation and support of private groups.
- Promotion of international cooperation for the solution of marine litter problems recognized as common issues of Japan and neighbouring countries.

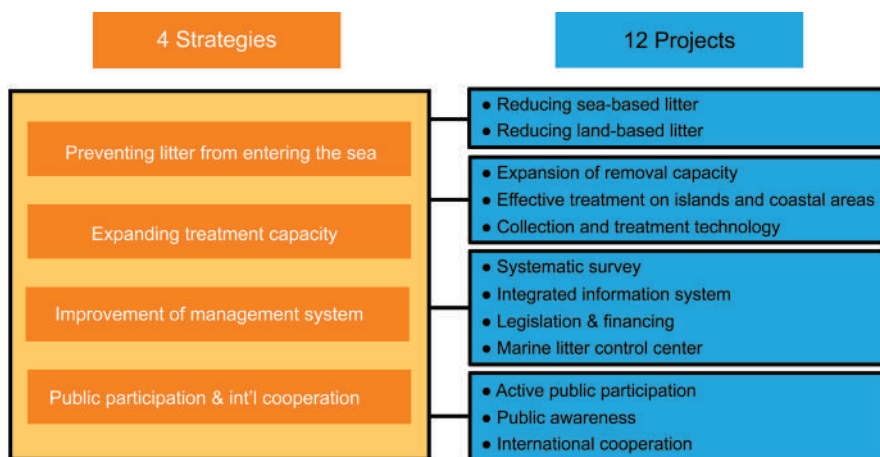
To promote integrated and effective marine litter counter measures pursuant to the law, the central government shall formulate a basic policy and prefectural governments formulate regional plans based upon the Basic Policy. Marine litter counter measure working groups such as Task Force of Marine Litter under the Ministry of the Environment have been established. The law puts emphasis on importance of the cooperation between relevant government ministries and agencies and collaboration with private and public sectors as well as counter measures in the remote islands. It is expected that various activities encouraged by the law are going to improve the situation of marine litter in Japan.



2.3. Republic of Korea

In the Republic of Korea, Marine Environment Management Act (MEMA) came into force in January 2008 after the revision of Marine Pollution Prevention Act. Since January 2009, a Marine Litter Management Plan (the Plan) was developed based on MEMA and implemented. The Plan aims at establishing an advanced national marine litter management system and has four strategies: (1) preventing litter from entering seas; (2) strengthening the removal and treatment capacity; (3) improving management system; and (4) encouraging public participation while promoting international cooperation. Specifically, the four strategies and 12 projects have been developed (Chart 1). As a national action plan on marine litter (NAP MALI), this plan will contribute significantly to the effectiveness of Korea's marine litter management system.

Chart 1: Marine Litter Management Plan: Strategies and Projects



2.4. Russian Federation

In the Russian Federation, under the Primorsky Kray Governor, an inter-departmental cooperation commission was established in 2005 to protect the southern Primorsky Kray coastal areas (known as the hot spot of marine litter in the Russian Far East). The commission consists of representatives of the Federal and local environmental protection agencies, major water users, state administration of sea ports and navy. According to programmes known as "Clean Primorsky Kray" and "Clean Port", a Law of Primorsky Kray on Solid Waste Management is currently under development and expected to be approved in the late 2009 by Primorsky Governor.

3. Institutional Arrangements

As mentioned in the regional overview on legal instruments, institutional arrangements and programmes related to marine litter, governmental responsibilities for marine litter issues are shared by different authorities such as ministries, provincial and municipal governments and agencies.¹ In general, environmental ministries take the lead for the overall supervision of land-based marine litter and maritime ministries/administrations take responsibility for sea-based marine litter. Local governments take charge of the general management of waste generated within their coastal area.

Despite of differences in structures and in action, the four NOWPAP member states have continuously making progress in strengthening institutional mechanisms for the protection of marine environment. Some details and major changes to this account are provided below.

3.1. People's Republic of China

The management and supervision of China's marine affairs have been shared within a number of governmental agencies. The Ministry of Environmental Protection (MEP, formerly State Environmental Protection Administration), China Maritime Surveillance within the State Oceanic Administration (SOA), Fisheries Management Bureau and Fishing Port Superintendency (FMB) of the Ministry of Agriculture, Harbor Superintendency under the Ministry of Communication, China Customs, Marine Patrol Contingent under the Public Security Authority and the Environment Protection Department of the Armed Forces. The subordinate divisions of these agencies within the local governments at or above the county level take a role in the management of marine environment and may formulate more rigid local standards to cover areas within their administration. Recent years have seen China reinforcing its institutional arrangements for environmental protection. Among which, the promotion of the State Environmental Protection Administration (SEPA) into the Ministry of Environmental Protection (MEP) in 2008 indicates more strength and efforts will be attributed in dealing with environmental issues including marine litter management.

1. UNEP/NOWPAP/DINRAC/Publication No. 8, October 2007.

3.2. Japan

In Japan, ocean management and development is the function of a 20-member Council on Ocean Development (COD). The COD's primary purpose is to promote ocean development over the long term. It is not a policy coordination body, but does inform and advise national ocean issues and focus on national ocean policy debate in anticipation of future developments, such as drafting a Ten-Year Plan for the 21 Century. The Central Environment Council and other branches were established for environmental protection. The Japan Coast Guard, consists of several departments, is one of the Bureaus responsible for the enforcement of marine laws except in cases where the use of force is needed. Local municipalities, prefectures and some cities are responsible for waste disposal, waste treatment, coast and port management, development of fisheries ports and fishing grounds under various governmental agencies such as the Ministry of the Environment and the Waste and Recycling Department. Local authorities are involved in the day-to-day port management.

3.3. Republic of Korea

In Korea, in February 2008, the Ministry of Land, Transport and Maritime Affairs (MLTM) replaced the Ministry of Maritime Affairs and Fisheries (MOMAF) that was established in 1996 as almost the sole governmental institution responsible for marine affairs. Ministries and/or business functions consolidated to this Ministry included the Ministry of Construction and Transportation, Ministry of Maritime Affairs and Fisheries' Ocean Logistic, Port & Sea Environment, Ministry of Government Administration and Home Affairs' Land Register Business.¹ The MLTM is responsible for the overall supervision and protection of the marine and coastal environment including the management of marine litter.

Besides MLTM, the Ministry of Environment (MOE) has its own function and roles regarding environmental protection issues in inland areas including the management of land-based waste. The cooperative and integrated mechanism between the two governmental agencies is essential to effectively manage and control the land-based activities. While responsibilities of the two ministries have been incorporated into the National Comprehensive Plan for Marine Environmental Conservation, more consolidated cooperative approach needs to be introduced on the basis of legal or institutional framework. Korea Coast Guard (KCG) is responsible for the enforcement of marine related laws and regulations, including waste discharge from ships at sea. Local governments in collaboration with MLTM also share the responsibility for the protection of the coastal zone and the general management of waste including marine litter.

1. For more information on this account, see <http://english.mltm.go.kr/intro.do>



3.4. Russian Federation

In the Russian Federation, the Ministry of Environmental Protection and Natural Resources (MEPNR) and the Department of Natural Resource and Environmental Protection of the Central Administration share responsibilities for decision-making with other federal executive bodies. Apart from other functions, the Department of the State Policy in the Environment Protection ensures the implementation of the protection and management of the biological resources; protection and conservation of the marine environment in Russian internal waters, territorial seas, Exclusive Economic Zones and continental shelf. Department of International Cooperation in the Environment Protection and Nature Management cooperates within the framework of intergovernmental and interdepartmental treaties, agreements, and programmes relating to environmental protection issues. Administration of Sea Port is subordinated to the Federal Agency of Sea and River Transport. The Ministry of Transport of the Russian Federation is engaged in rendering state services and safety provision on merchant fleet of shipping organization.

4. Programmes, Initiatives and Specific Activities

The NOWPAP member states recognized a need for the regional monitoring programme to address the marine litter problem effectively and agreed upon the NOWPAP monitoring guidelines developed as part of the MALITA implementation in 2006-2007. The NOWPAP member states have set up monitoring programmes for marine environmental protection, and nominated National Marine Litter Focal Points. International Coastal Cleanup in which all member countries have joined also contribute to obtaining data on marine litter quantities and distribution. Marine litter-related programmes and initiatives have been carried out in the four NOWPAP member states through the RAP MALI implementation.

China has established several years ago a nationwide monitoring and supervision network to assess environmental quality and released data at a regular basis. In recent years, China has been paying more attention to the quality of marine environment. This is evidence from that fact that marine litter is newly included in the monitoring target in this network by SOA on its quantities and distribution. China has published annually the Report on the State of the Environment, Report on the State of the Fishery Eco-environment and notices on the special monitoring results over the marine environment. In 2006 Report on the State of the Environment, marine litter status was included for the first time. Since June 2008, the State Council has been prohibiting the producing, selling and use of plastic shopping bags, and encouraging the usage of recycling and reused waste plastic. Several governmental agencies have developed some projects on Coastal Cleanup. Local municipalities and volunteers have made efforts to clean the litters along the coast lines.

Japan has been contributing to share its accumulated knowledge and know-how on the marine litter issue with its neighboring countries, helping to raise awareness on the issue and to reduce marine litter in the oceans. Recently, Japan has developed some programmes and activities on marine litter issues, as problems related to marine litter and washed-up litter have become more significant along the Japanese coast lines. Local municipalities and volunteers have made efforts in recovering the coast lines. Several agencies of the Japanese government have been concerned about this matter, and carried out some projects which are listed in the National Summary of Japan. Some activities related to marine litter and washed-up litter have also been carried out in Japan. Detailed plans of recovery, transport and treatment are listed below:

(1) Countermeasures against litter sources

- Guidance and enlightenment activities to people and parties related to maritime affairs, citizens, and fishermen by related agencies;
- Cooperation with neighboring countries to reduce marine litter through international institutions by the Ministry of Foreign Affairs of Japan and the Ministry of the Environment;
- Consideration of efficient ways of recovery and transport of fishing gears, which helps promotion of recycling activities of Styrofoam fishing gears used in fish farms by the Fisheries Agency; and
- Enlightenment activities aiming at preventing illegal discharge into rivers by setting signs and implementing clean-up activities with citizens and river management bodies.

(2) Recovery/transport/Treatment

- Marine Environment Improvement Project by the Ministry of Land, Infrastructure and Transport;
- Natural Disaster-related Emergency Large-scale Countermeasure Project against Driftwoods by the Ministry of Land Infrastructure and Transport and the Ministry of Agriculture, Forestry and Fisheries; and
- Subsidy for Promoting the Recycling-based Society by subsidy for developing facilities of waste treatment by the Ministry of the Environment.

(3) Understanding of situations

- Survey on Floating Plastics and Tar Balls by the Japan Meteorological Agency;
- Marine Environment Monitoring Survey by the Ministry of the Environment;
- Survey on and Washed up Driftage on the Coasts along the Eastern area of NOWPAP Region and the Yellow Sea by the Northwest Pacific Region Environmental Cooperation Center;
- Survey on Classification of Washed-up Litter by the Japan Environmental Action Network, and the Japan Coast Guard;
- Understanding situations of being washed-up in large quantity by the Ministry of the Environment and the Japan Coast Guard ,Cooperated with local municipal entities;
- Collecting information on litter quantities by beach clean-up activities, cooperated with prefectures by the Fisheries Agency; and
- Development of track prediction model of marine litter and washed-up litter by the Ministry of the Environment.

In Japan, in accordance with “the Governmental response policy on the 8th proposals of special zones for Structural Reform” (decided on February 15, 2006 by Headquarters for Promotion of Special Zones for Structural Reform), the Governmental Meeting of Relevant Ministries on Countermeasures against Drifted Marine Litter (hereafter referred to the meeting) has been organized to discuss practical countermeasures against drifted marine litter was established in April 2006 to set national countermeasures against drifted marine litter. The Ministry of the Environment takes the lead in organizing the meeting in cooperation with Ministry of Land, Infrastructure and Transport and the Ministry of Agriculture, Forestry and Fisheries. The participants are director-generals of related ministry bureaus. Academic experts are also invited to participate in the Meeting to provide their opinions on countermeasures against drifted marine litter. Within the Meeting, an executive board is organized comprising of directors of related ministry, departments and divisions.

The mid and long-term objective of the meeting is to review and discuss measures to address pollutant sources, including international ones. Second, the meeting discusses practical measures to be implemented, especially in areas where damages are significant. The measures to be taken from 2007 were compiled from the meetings. The meeting has been held three times. These meetings played a coordination role between the State and local municipalities to inform what measure the State would take and to exchange information about measures of each municipality.

Japan has been promoting a series of programmes in controlling of waste including litter:

First, National Information on Solid Waste Management: solid waste management has legally started in 1954. Solid waste management is prescribed in “Waste Management and Public Cleansing Law” and Ministry of the Environment is responsible for enforcement. The aim of solid waste management is to protect environment and improve public hygiene. In line with the Law, local governments have set plans to collect and dispose home-generated wastes properly. The annual amount of solid waste is about 52 million tons; about 10 million tons were recycled in 2006. The collection and disposal of solid waste has been effectively executed.



In order to promote the 3R (reduce, reuse and recycle) system, the Basic Law for Establishing the Recycling-based Society was promulgated in June 2000. In the Basic Law, priority efforts for waste management were stipulated as follows:

- To reduce production of wastes as much as possible;
- To reuse, as many times as possible, things that are still usable;
- To recycle, as resources, things that cannot be used repeatedly;
- To burn things that cannot be used as resources, and use the heat produced from their incineration; and
- To appropriately dispose of things that cannot be reused or recycled and that must be disposed of, in a manner that does not contaminate the environment.

Furthermore, concrete measures to establish the Sound Material-Cycle Society have been implemented, mainly by the Ministry of the Environment, based on the Basic Plan on Establishing the Sound Material-Cycle Society which was published according to the Basic Law. There are several individual laws, harmonized with the Basic Law, such as Waste Management and Public Cleansing Law and Container and Packaging Recycling Law which promote appropriate waste management and 3R policy.

Three main indexes to monitor the progress of measures with regard to the Basic Plan were set. The objectives are 60% increase for resource productivity, 50% increase for circulation usage rate, and 60% decrease for disposal amount from 2000 to 2015. These measures emphasize solid waste management and establish Sound Material-Cycle Society related to reduction of marine litter.

Second, Integrated Coastal Management: the Basic Act on Ocean Policy was promulgated in April 2007. The concrete measures regarding integrated coastal management have been implemented based on the Basic Plan on Ocean Policy which was published in March 2008 according to the Act, to promote ocean policy including protection of ocean environment. Cabinet secretariat is reasonable for comprehensive ocean policy as a coordination body of several ministries. Marine litter issues are expected to be included to the integrated coastal management policies.

Third, Market-based Economic Instruments: a good example is the approach to the reduction of plastic bags. Toyama Prefecture has introduced plastic bag tax into grocery stores and laundries since April 1, 2008. This measure is based on a voluntary agreement between the local government of Toyama Prefecture, consumers and private sectors. The introduction of plastic bag tax in whole area of prefecture is the first attempt in Japan. According to the recent survey, consumers who bring their own bags for shopping has greatly increased by the introduction of the tax, from 20% to 93%. In Japan, as of April 1, 2008, 28 local governments have already introduced plastic bag tax. Moreover, there are 19 local governments considering the introduction of the tax. It is expected that more local governments will introduce the tax.

In Korea, relevant national activities to deal with the marine litter problem have already been in place, in addition to national legal instruments and administrative institutions as described. Such national programmes and initiatives are expected to be further developed and specified taking into account the growing magnitude of the litter problem. In particular, two projects implemented in Korea, "Waste Fishing Gear Buy Back Project" and "Cost-Sharing Programme", could be replicable good practices not only in the NOWPAP region but beyond.

In Russia, marine litter-related national initiatives are more likely to focus on the port areas that are mainly organized by local administration authorities governing the coastal zone. Most recently, Russia has launched a "Clean Port" program. The legal basis for the program is the decision of the meeting chaired by the Vice Governor Primorsky Kray in 2008. It is expected that the program is to be approved by Primorsky Kray Governor in 2009.

The program objective is to develop a system of cleaning and prevention of pollution of the sea surface in the port of Vladivostok (including marine litter). The "Clean Port" program will be prepared by the Sea Protection Institute, Maritime State University (Vladivostok) from September 2009 to December 2010 with a 200 million rubles program funding. The main steps in preparing the program are as follows:

- Analysis of available data on sea surface pollution in the port of Vladivostok (including Amursky and Ussuriysky bays, Zolotoy Rog inlet and Bosphor Vostochny Strait);
- Suggestions on legislative, administrative and financial arrangements for the system of cleaning and prevention of pollution of the sea surface in the port; and
- Suggestions on the system components and possible funding sources; budget estimation.

5. Conclusions and Suggestions

The NOWPAP member states are the sources and final destinations of marine litter at the same time. Therefore, it is essential to address the issue of marine litter from the sources where waste is produced through to its final disposal or processing in every country. In this regard, the four NOWPAP member states have established domestic legal frameworks and implementing agencies for the protection and management of the marine environment to ensure the prevention of marine pollution from various sources including litter.

Positive signs are observed that the NOWPAP member states have been paying more attention to the marine litter problem particularly since the implementation of the NOWPAP MALITA project. Programmes to address marine litter issues are designed and carried out (such as the ICC events); consideration has been given to the treatment/reuse of marine litter (in the case of Japan and Korea); and marine litter and its main sources started to be regulated by relevant national laws and regulations (such as the Marine Litter Management Plan of Korea). Furthermore, the NOWPAP member states have started their cooperation to develop cooperating strategies and regional measures to tackle the trans-boundary marine litter issue and to organize practical actions to improve the conditions of significantly polluted areas.

However, it is obvious that the NOWPAP member states still face many of the marine environmental challenges. As more than one government authority is involved in dealing with the marine litter issues in the NOWPAP member states, the governmental responsibilities are, therefore, shared between different authorities (e.g., ministries, provincial and municipal governments and agencies) which contributed to more awareness build-up and wider participation, but in some cases it may cause confusion as to who is responsible. An integrated approach needs to be adopted to reduce the problems created by fragmentation of competing regulatory authorities. At the national level, a mechanism to strengthen cooperation between different national institutional bodies is needed for better management of marine litter (for example in Japan).



More active and coordinated measures are necessary to promote regional cooperation. Japan indicates that recently, the volume of marine litter and washed up driftage originated from Japan and foreign countries along the Japanese coastlines have increased, causing nuisance to the people living in remote places far away from any obvious sources and raising public concern over the environmental, economic, health and aesthetic damages caused by marine litter. Japan will cooperate with other NOWPAP members and make its utmost efforts to address this issue internationally, regionally and nationally.

The NOWPAP member states are encouraged to undertake the following activities:

- To improve national institutional arrangements to prevent and reduce the amount of marine litter effectively, with clearly defined responsibility of the governing authority based on best management practices to deal with marine litter from its generation to disposal;
- To promote cooperation among relevant national and local authorities involved in the marine litter issues to establish appropriate cooperation mechanism;
- To develop comprehensive national action plans on marine litter. Such national plans should include measures to prevent and reduce the generation of marine litter, in particular targeting at changes in consumption patterns (e.g., avoiding the use of excessive packaging and plastic shopping bags, promoting the use of biodegradable plastics, etc.) with the application of the 3R principles;
- To improve waste management practices, including garbage collection and recycling;
- To apply market based economic instruments to deal with marine litter; and
- To provide capacity building support on the prevention and control of marine litter from both land-based and sea-based sources where regional workshops and training courses might be helpful.

Further considerations on some specific issues could start from tackling the root causes of environmental problems including marine litter issues. A specific legislation on marine litter and an appropriate coordinating mechanism is necessary to fulfil the aim of reducing the input and impact of litter. With concerted efforts, a better solution will be worked out to control marine litter of this region.

List of Acronyms

COD	Council on Ocean Development of Japan
CRAES	Chinese Research Academy of Environmental Science, MEP
FMB	Fisheries Management Bureau of the People's Republic of China
GPA	Global Programme of Action for the Protection of the Marine Environment from Land-based Activities, UNEP
ICC	International Coastal Cleanup
IGM	Intergovernmental Meeting
IMO	International Maritime Organisation
KCG	Korea Coast Guard
KMI	Korea Maritime Institute
KORDI	Korea Ocean Research & Development Institute
MALITA	Marine Litter Activity
MEMA	Marine Environment Management Act of the Republic of Korea
MEPNR	Ministry of Environmental Protection and Natural Resources of the Russian Federation
MEP	Ministry of Environmental Protection of the People's Republic of China (former SEPA, State Environmental Protection Administration)
MLIT	Ministry of Land, Infrastructure and Transport of Japan
MLTM	Ministry of Land, Transport and Maritime Affairs of the Republic of Korea
MOA	Ministry of Agriculture of the People's Republic of China
MOE	Ministry of Environment of the Republic of Korea
MOERI	Maritime and Ocean Engineering Research Institute (former KRISO, Korea Research Institute of Ships and Ocean Engineering)
MOMAF	Ministry of Maritime Affairs and Fisheries of the Republic of Korea
NAP MALI	National Action Plan on Marine Litter
NFP	National Focal Points
NOWPAP	Northwest Pacific Action Plan
NPC	National People's Congress of the People's Republic of China
NPEC	Northwest Pacific Region Environmental Cooperation Center
RAP MALI	Regional Action Plan on Marine Litter
SOA	State Oceanic Administration of the People's Republic of China





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