

## Steady Development of CEARAC Activities

*Greetings from the Director of CEARAC, Hidemasa Yamamoto*



It is a great pleasure for me to greet you through this newsletter. I took up a post as CEARAC Director in July 2008 and became a member of NOWPAP

Family. This newsletter functions as a means to connect us to the people who are interested in CEARAC activities and marine environment, and I am proud of publishing this 5th issue.

### CEARAC activities in the past

Since starting its operation in 2002, CEARAC has implemented several activities with satisfied outcomes. In 2005, Working Group 3 (Harmful Algal Blooms) and Working Group 4 (Remote Sensing) developed the Integrated Reports on their main fields respectively to understand the status and problems to tackle in the NOWPAP region. WG3 also constructed websites on HAB related publications and on *Chocloclodium*, and developed *Chocloclodium* pamphlets (in the 4 NOWPAP languages) and a booklet on countermeasures against HAB. WG4 constructed RS information network (Ocean Remote Sensing Portal Site; Website on Oil Spill Monitoring; and Marine Environmental Watch Project), developed eutrophication monitoring guidelines by RS and organized the first training course on remote sensing data analysis.

In addition to these activities, NOWPAP initiated Marine Litter Activity (MALITA) in 2006 led by NOWPAP Regional Coordinating Unit (RCU), and some of the activities were assigned to CEARAC. Taking advantage of the experiences in our host organization, Northwest Pacific Region Environmental Cooperation Center (NPEC), we prepared guidelines for monitoring marine litter on the beaches and shorelines of the Northwest Pacific Region and some other pamphlets for raising citizens' awareness on the matter. We also held 2

workshops on marine litter.

These are three major fields CEARAC focuses on in coordination of RCU and cooperation with other RACs and international organizations.

### Activities in 2008

CEARAC is currently implementing some activities for this biennium (2008-2009) based on the approved workplan at the 6th Focal Points Meeting (FPM) (March 2008, Toyama, Japan). Besides annual FPM, WG 3 and WG4 Joint Meeting was held in September to receive advice and opinions from WG experts. The 2nd Coastal Environmental Assessment Workshop was also held in back-to-back with the joint meeting. In the workshop, there were interim reports of HAB Case Studies implemented in each NOWPAP country, which is one of the WG3 activities in this biennium, and there were also discussion and review of the procedures for assessment of eutrophication status including evaluation of land based sources of nutrients. Development of the procedures is the first visible joint activity between WG3 and WG4, and we expect it will facilitate efficiency of 2 WGs and further achievement of our goals. Moreover, following the last year (Nagasaki, Japan), CEARAC organized the 2nd NOWPAP training course on remote sensing data analysis in Jeju, Korea on 1-5 November. 23 young researchers and graduate school students from the NOWPAP member states and other countries and region (France, Taiwan and Thailand) participated in this 5-day training course to acquire the latest remote sensing techniques in terms of application of the techniques into marine environmental conservation.

### Activities in the future

During this biennium, CEARAC continues sharing and providing relevant information on coastal environment assessment among other relevant NOWPAP and international organizations and

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plans to develop HAB Integrated Website and educational materials for utilization of remote sensing data for coastal environment.

As for activities on marine litter, it is in its second phase, Regional Action Plan on Marine Litter (RAP MALI) now, and CEARAC is responsible for compiling and interpreting monitoring results conducted in the NOWPAP member states.

CEARAC will continuously implement various activities for development of

procedures of coastal environmental assessment and will make every endeavor to conserve coastal and marine environment in the Northwest Pacific Ocean in close coordination and cooperation with RCU as well as other RACs.

Furthermore, the UNEP Regional Seas Programme (RSP) Global Strategic Directions for 2012 and UNEP Medium-Term Strategy for 2010-2013 indicate the importance to address the environmental problems such as climate change, ecosystem management, biodiversity protection,

harmful substances, and hazardous waste among other issues. Parts of these issues are closely related to our activities; thus we would like to expand our future activities to these fields as long as they are feasible for us to deal with.

With this goal and future, we strongly look forward to having cooperation and support to our activities from focal points and WG experts from the NOWPAP member states and all the people who care for the future of the marine environment.

## Recent NOWPAP Developments and Future Challenges

*Alexander Tkalin, Coordinator, Northwest Pacific Action Plan (NOWPAP) of UNEP*



Dear friends,

In this issue of CEARAC Newsletter, I would like to tell you about recent achievements

of NOWPAP and about challenges that lie ahead of us. Due to space limitations, I can hardly describe every development and activity, so I will try to give you just a couple of examples.

Last December, *Hebei Spirit* oil spill in the Republic of Korea was a stark reminder that the NOWPAP region is the area of high risk of such accidents associated with oil transportation and exploration. According to the request of the Korean Government, the NOWPAP Regional Oil Spill Contingency Plan was promptly activated and all member states generously suggested their help. With the practical help from the NOWPAP Marine Environmental Emergency Preparedness and Response Regional Activity Center (MERRAC) and RCU, China dispatched a ship to deliver sorbents needed for cleanup operations and Japan provided the team of experts and sorbents by aircraft. By combined efforts of thousands of volunteers, central and local governments, and help from NOWPAP member states, cleanup operations were successfully completed. The long-term ecological and economical effects of this spill will be estimated at a later stage.



During the last three years, according to the member states decisions, NOWPAP is dealing with marine litter issues in the region. After successful completion of the NOWPAP MALITA in 2006-2007, the NOWPAP RAP MALI has been approved by the member states in March 2008. Among numerous activities suggested in the RAP MALI, more than 50 should be implemented at a national and local level. The NOWPAP member states realized that removing litter from beaches, sea surface and seabed does not resolve the problem unless the sources of litter are addressed. Changing behavior and attitude of people as well as changing the “behavior” of the whole industries is needed.

At the recent working meeting on the RAP MALI implementation (held on 28 September 2008, in Vladivostok, Russia), the member states reported very positive results in this regard. For example, in Japan and China, inter-ministerial dialogue has been initiated as many sectors of national economies should be involved in tackling the marine litter problem (e.g., shipping, fisheries, plastic manufacturers, packaging industry, solid waste management including recycling, etc.). In the Russian Far East (the areas bordering the NOWPAP sea area), major sources of marine litter are located in the southern part of Primorsky Kray. Therefore, local government (Primorsky Kray Administration) is developing new laws addressing solid waste management, recycling and harbors cleanup. In Korea, in addition to well known “Buy Back

Program” for marine litter collected by fishermen, new initiatives on the watershed management and the marine litter monitoring programme are being implemented with strong support from the central government.

As for the challenges lying ahead of NOWPAP, I would like to mention the following. First, though NOWPAP can not and should not duplicate the efforts of global conventions (such as UNFCCC or CBD), the issues of climate change adaptation and biodiversity conservation should be reflected in our future work, perhaps through new activity on the Integrated Coastal and River Basin management (ICARM). Second, financial sustainability is very important for long-

term programs such as NOWPAP. Therefore, member states contributions allowing to continue NOWPAP activities aiming to protect the marine and coastal environment of the NW Pacific Ocean should be increased and paid without delay. The last issue was discussed at the 13th NOWPAP Intergovernmental Meeting (IGM) in Jeju, Korea, on 20-21 October 2008 and member states agreed to continue consultations to ensure smooth NOWPAP operations in the future.

After spending 4 years in Toyama office of NOWPAP RCU, I am moving to Busan office in December 2008, while Mr. Zhong, Deputy Coordinator, is moving to Toyama\*. During these four years, NOWPAP became more mature regional program which is well

known among the professionals working on marine environment protection not only in the Asia-Pacific region, but worldwide. NOWPAP example has demonstrated that neighboring countries, in spite of differences in their political systems and economic situation, can effectively work together in solving environmental problems. If the issue of financial sustainability will be also resolved in the same manner, I am sure that NOWPAP will have very bright and successful future ahead.

\*According to the decision of the 7th NOWPAP IGM, Coordinator and Deputy Coordinator should be rotated between Toyama and Busan offices every four years. The first rotation will take place around 1 January 2009.

## Step Forward – CEARAC Activities

### Meetings and Workshops

#### *6th CEARAC FPM & 1st Coastal Environmental Assessment Workshop (March 2008)*

The Sixth CEARAC Focal Points Meeting was held on the 6th and 8th of March 2008 in Toyama, Japan. About 20 experts and authorities including the members of FPM, representatives of NOWPAP RACs and others participated in the meeting.

In the meeting, the workplan and budget of CEARAC activities for the 2008-2009 biennium, which had been approved at the 12th NOWPAP IGM, were explained. The workplan includes 7 proposals of new activities: 2 workplans for WG3 (HAB Case Studies, HAB Integrated Website), 2 workplans for WG4 (educational materials for utilization of RS data, training course on RS data analysis), 1 workplan for Joint WG3/4 (procedures for assessment of eutrophication status including land based sources of nutrients), oil spill monitoring and RAP MALI respectively.

Also, the First Coastal Environmental Assessment Workshop was held on the 7th of March by NPEC, a hosting organization of CEARAC.

In this workshop, information on the status of the coastal environment and its

assessment in the NOWPAP Region were exchanged and shared to deepen cooperation with other international projects and to contribute to development of common methods for coastal environmental assessment in the NOWPAP Region.



#### *4th NOWPAP WG3/4 Joint Meeting & 2nd Coastal Environmental Assessment Workshop (September 2008)*

The Fourth NOWPAP Working Group 3 and 4 Joint Meeting was held on the 10th and 12th of September 2008 in Toyama, Japan. About 20 experts, representatives of

NOWPAP RACs and others participated in the meeting.

In the meeting, the workplan and budget of CEARAC for the 2008-2009 biennium

approved by the 6th CEARAC FPM were explained and their interim progress of the activities was reviewed.

Also, the Second Coastal Environmental Assessment Workshop was held on the 11th of September by NPEC.

In this workshop, European approaches for eutrophication assessment were introduced and participants discussed about standardization of eutrophication in different sea area and ideal database to share

and utilize information among multiple countries and organizations. In addition, there were also reports on reviews on HAB Case Studies in the NOWPAP region and on the draft procedures for assessment of eutrophication status.



## NOWPAP Working Group 3 (HAB) Activities

NOWPAP Working Group3 (WG3) was established mainly to implement monitoring and assessment of coastal environment as an indicator of harmful algal blooms (HAB) including red tide, which is chosen as the initial subject of coastal environment assessment. WG3 mainly conducted (1) publication of National Reports and Integrated Report on Harmful Algal Blooms for the NOWPAP Region, (2) establishment of HAB Reference Database and (3) publication of *Cochlodinium* pamphlet (in five languages: English and languages of the member states) and establishment of *Cochlodinium* Home page, (4) publication of Booklet of Countermeasures against HABs in the NOWPAP Region in 2004-2007 in order to enhance activities against HAB in each member state. These outcomes are available in CEARAC Website.

For the 2008-2009 biennium, we initiate two new activities in order to establish closer partnership to share information not

only among the NOWPAP member states but also other HAB-related organizations. These activities, "Implementation of HAB case studies" and "Development of HAB Integrated Website," are being implemented based on the approval at the 6th CEARAC FPM.

The objective of HAB Case Studies is to establish the most effective and laborsaving way for sharing HAB-related information. To achieve this objective, each member state selects target sea area, and the nominated experts make HAB Case Studies Reports in each area. The selected sea areas are where HAB occur frequently and HAB monitoring is conducted regularly. These reports will introduce who monitors HAB events, what parameters are monitored, and which species is focused on and so on. These reports will be submitted to CEARAC by the end of 2008 and we will develop HAB Case Studies Database using the most effective and laborsaving way, based on these case studies reports. The database will be updated annually based on

the support of each member state.

The other activity is to develop HAB Integrated Website, and its objective is to provide and share HAB-related information as a whole in order to enhance activities against HABs in the NOWPAP region. This website will start its operation from the end of 2009. Through this website, we can share HAB information not only among the NOWPAP member states but also among other international organizations.



**Location of target sea area for HAB Case Studies in each member state**

## NOWPAP Working Group 4 (RS) Activities

One of the priority activities of CEARAC is development of new monitoring tools by remote sensing. With the consensus of the NOWPAP member states, activities on remote sensing applications with a focus on eutrophication and oil spills have been implemented since 2003. To implement these activities, NOWPAP Working Group 4 (WG4), was formed in CEARAC with experts on remote sensing of marine environment from each NOWPAP member state. Outcomes of the NOWPAP WG4 can be obtained through CEARAC websites.

For the 2008-2009 biennium, we will implement two activities based on the approval at the 6th CEARAC FPM: (1) Development of educational materials for utilization of remote sensing data for coastal environment conservation and (2) Organization of the second NOWPAP training course on remote sensing data analysis.

The objective of developing educational materials for utilization of remote sensing data for coastal environment conservation is further promoting the use of remote sensing as a marine environment tool. Expected

users will be student, young researchers and coastal managers in the NOWPAP regions. The educational material will function as a web service, which provides GIS compatible annotated satellite images concerned with the issues of eutrophication, oil spill and red tides in NOWPAP area. We are now developing its pilot version with the nominated experts in the NOWPAP member states.

Another activity is organization of the second NOWPAP training course on remote sensing data analysis. We have already conducted the Second NOWPAP

training course on remote sensing data analysis, at Cheju National University, Jeju, Korea from 1-5 November 2008 with Korea Ocean Research & Development Institute (KORDI) as a co-organizer.

The training course was conducted for 23 selected trainees who are postgraduate students and professional researchers working in the fields of marine sciences, from 7 countries and regions: China, Japan, Rep. of Korea, Russian Federation, France, Taiwan and Thailand. 12 lecturers composed of experts from the NOWPAP countries (China, Japan, Rep. of Korea, Russian Federation) and from Germany, India and USA were invited and gave lectures on remote sensing applications for monitoring and assessment of the marine

and coastal environment in the Northwest Pacific Region.

The course was successfully organized and

we plan to continue this activity for the capacity building of NOWPAP member states in the future.



**A group photo from the 2nd NOWPAP Training Course on Remote Sensing Data Analysis, Cheju National University, Jeju in Korea.**

## Joint Activity between NOWPAP WG3 and WG4

As a joint activity between NOWPAP WG3 and WG4, CEARAC plans to develop useful procedures for assessment of eutrophication status that can be shared among the NOWPAP member states. Draft procedures, developed by NPEC, was presented the 2nd Coastal Environment Assessment Workshop taken place in

Toyama on 11 September 2008, where 25 experts from NOWPAP region and Germany gathered for discussion.

Now, the NPEC prepared draft procedures are being reviewed and refined by the nominated experts from each NOWPAP member state. The results of review and refinement will be harmonized to make

common procedures for assessment of eutrophication status for the NOWPAP region. We expect that the developed procedures will be used to conduct a case study in each NOWPAP member state to assess status of eutrophication in the near future.

## CEARAC Activities on Marine Litter

CEARAC published "Guidelines for Monitoring Marine Litter on the Beaches and Shorelines of the Northwest Pacific Region," "Marine Litter Guidelines for Tourists and Tour Operators in Marine and Coastal Areas," "Booklet on recycling of plastic marine litter" and a pamphlet for reduction of marine litter: What can we do about marine litter. We also organized 2nd NOWPAP Workshop on Marine Litter in the 2006-2007 biennium as part of NOWPAP MALITA activities. These outputs are downloadable through CEARAC website.

In the 2008-2009 biennium, CEARAC implements following activities based on the NOWPAP RAP MALI.

- (1) Compilation and harmonization of marine litter monitoring data on beaches and submission of collected

data to DINRAC

Based on RAP MALI, the member states implement monitoring surveys of marine litter on beaches and shorelines. The results of their monitorings will be submitted to CEARAC by national coordinators. CEARAC will compile and harmonize these results and submit them to DINRAC in order to provide the data through NOWPAP marine litter website. CEARAC will also analyze the distribution and composition of marine litter in the NOWPAP region.

- (2) Interpretation of results of marine litter monitorings on beaches  
CEARAC will provide necessary and useful information to improve the current situation, to solve marine litter issues and to formulate measures against marine litter by

interpreting the survey results.

- (3) Development of technical materials and introduction of best practices on solid waste management including removal of marine litter on beaches  
The Ministry of Environment, Japan will make the technical report on technologies and research outcomes on prevention, collection and treatment of marine litter. CEARAC will translate the report to English to share the useful information among the NOWPAP member states.
- (4) Development of public awareness materials  
CEARAC will develop public awareness materials to enhance activities against marine litter using the abovementioned other activities' outputs.

## Voice from the Partners

### The North Pacific Marine Science Organization (PICES) Harmful Algal Bloom Section - promotion of collaborative research and management of HABs



**Dr. Hak Gyoon Kim and Dr. Vera L. Trainer, Co-Chairman, Harmful Algal Blooms Section, Marine Environmental Quality Committee, North Pacific Marine Science Organization**



The North Pacific Marine Science Organization (PICES) is an intergovernmental organization established in 1992 to promote and coordinate marine scientific research in the North Pacific and adjacent marginal seas. The current PICES member countries are Canada, Japan, the People's Republic of China, the Republic of Korea, the Russian Federation, and the United States of America. The success of PICES, now and into the future, is being built upon three pillars: scientific excellence, scientific advice and scientific capacity. Information on the Organization and its activities can be found on the PICES website at <http://www.pices.int>.

Harmful algal blooms have become increasingly widespread, persistent, and threatening to the public health in the North Pacific region. Responding to interest in sharing information from active science and management HAB programs in each of its member countries, and to achieve the appropriate level of coordination and collaboration among these countries, PICES formed, in 2003, a Section on *Ecology of Harmful Algal Blooms in the North Pacific*, under the Marine Environmental Quality (MEQ) Committee. This Section coordinates exchanges of national reports of HAB incidents and developments in order to inform researchers and managers about new toxins, issues and approaches to mitigate HAB occurrences and their effects. Drs. HakGyoon Kim (Korea) and Vera Trainer (U.S.A.) co-chair the HAB Section since its establishment.

During past PICES Annual Meetings, discussion topics have focused on communication of HAB science, and recently have included a HAB Section meeting, a workshop on selected harmful algae in the PICES region, and a special topic session.

A major commitment of the HAB Section is to develop and implement annual bloom reporting procedures that are consistent with IOC (Intergovernmental Oceanographic Commission of UNESCO) and ICES (International Commission for Exploration of the Sea) procedures, allowing them to be incorporated into the joint Harmful Algal Event Database (HAEDAT). Building a common data resource is important in assessing impacts of HAB events and as a research tool to look at global patterns leading to predictive capabilities for HABs.

Since 2005, the HAB Section has held an annual series of workshops to document the existing knowledge on the eco-physiology of HAB species that impact all, or most, countries in the North Pacific, including *Pseudo-nitzschia* and *Alexandrium* (PICES XIV, 2005), *Dinophysis* and *Cochlodinium* (PICES XV, 2006), *Heterosigma akashiwo* and other harmful raphidophytes (PICES XVI, 2007), and *Karenia* and *Prorocentrum* (PICES XVII, 2008). These workshops are normally preceded by a half-day laboratory demonstration focused on species and toxin identification, including new methods/technique used for their detection.

Special topic sessions convened by the HAB Section have included the following:



**Dr. Reiji Sekiguchi pointing at a graph monitoring the PP2A reaction at the laboratory demonstration at PICES XV in Yokohama, Japan, 2006**

*"Harmful algal blooms in the PICES region: New trends and potential links with anthropogenic influences"* (2006), *"The relative contributions of off-shore and in-shore sources to harmful algal bloom development and persistence in the PICES region"* (2007), and *"Species succession and long-term data set analysis pertaining to harmful algal blooms"* (2008).

Recently, the HAB Section members have suggested possible areas of synergy with CEARAC/NOWPAP in the understanding and management of HABs. In particular, collaboration on submission of HAB data from countries in the western Pacific to the IOC/ICES/PICES HAEDAT would be of great benefit to many countries, both regionally and world-wide.

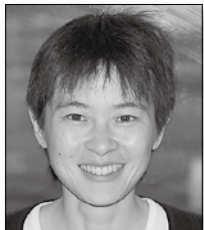
The 2009 PICES Annual Meeting will be held in October 2009, on Jeju Island, Korea. At this meeting, a 1½-day HAB workshop (with the laboratory demonstration) will focus on identification of benthic cysts and dynamics of cyst-forming species, underlying their initiation and subsequent development into blooms. A ½-day HAB Topic Session will be on *"Mitigation of harmful algal blooms"*. Both the workshop and the session are directly related to CEARAC activities, and CEARAC is invited to play an active role in these events.



**Dr. Carmelo Tomas preparing materials for the laboratory demonstration on harmful raphidophytes at PICES XVI in Victoria, Canada, 2007**

# Collaborative activities between NOWPAP and UNDP/GEF Yellow Sea Project

*Connie Chiang, Environment Officer, UNDP/GEF Yellow Sea Project*



The UNDP/GEF Yellow Sea Project started in 2005, and addresses ecosystem-based, environmentally-sustainable management and use of the Yellow Sea and its watershed by reducing development stress and promoting sustainable use of the ecosystem. The focus of the project includes sustainable fisheries management and reducing stress to the ecosystem. It also provides an opportunity for exploring how this GEF project can further national and regional commitments to international conventions and agreements, such as the United Nations Convention on the Law of the Sea, the FAO Code of Conduct for Responsible Fisheries, and MARPOL.

In order to achieve the objectives, the project has prepared a Transboundary Diagnostic Analysis (TDA), National Strategic Action Plans, and a regional Strategic Action Programme (SAP) for the Yellow Sea. The TDA was used as a basis for focusing on the threats, their root causes and the activities that endanger the critical ecosystem of the Yellow Sea, to implement selected components of the SAP, as appropriate. The TDA identified the following main transboundary water-related problems faced by this region:

- Overfishing
- Unsustainable mariculture
- Eutrophication
- Reduction in biodiversity & habitats
- Changing ecosystem structure & function

The project will initiate and facilitate the implementation of the SAP. The SAP consists of a series of legal, political and institutional reforms and investments to address the priority transboundary issues, and uses the ecosystem-based approach to address priority actions to be taken by the participating countries in the fields of marine pollution, degradation of critical

habitats, and over-fishing.

The project works with numerous partners in the region to achieve the common goal of better managing and protecting the Yellow Sea. NOWPAP is one of the partners with which the project actively co-operates, and together have implemented a number of joint activities.

Some of the recent activities that have been implemented together are:

- Remote sensing training and ocean colour algorithm development, sharing common scientists who are using remote sensing to develop ocean colour algorithm for Case II waters, and also enhancing skills of trainees in using remote sensing data and information.
- Marine environment assessment workshops where the project and NOWPAP have held 3 regional marine assessment workshops with representatives from both parties attending each other's events. Presentations were given on assessment-related activities, such as the NOWPAP guidelines for eutrophication assessment,

and what Yellow Sea project is doing in terms of pollution and economic assessment e.g. cost-benefit analysis.

- The project has participated in a number of marine litter events, such as joining the ICC campaigns in Busan and Vladivostok. One SAP demonstration activity addressing better management of recreational waters including marine litter is being implemented in the Qingdao bathing beaches.
- Under the umbrella of the Yellow Sea Partnership, of which both parties are members, the project and NOWPAP have each hosted a meeting in 2006 and 2007 to facilitate co-operation and co-ordination among various organisations in the region which conduct environmental conservation activities. The meetings and a partnership website provide members with information on each other's activities, and potential activities on which to collaborate.

Additional information about the project can be found on the project website, [www.yslme.org](http://www.yslme.org)



**Presentation at the 2nd Coastal Environmental Assessment Workshop (11 September 2008 Toyama, Japan)**

# Recent Progress of Japanese Marine Policy

*Nobuyuki Konuma, Chief of Section, Global Environmental Issues Division, Global Environment Bureau, Ministry of the Environment JAPAN (Acting CEARAC Focal Point of Japan)*



On behalf of CEARAC Focal Point of Japan, it is my pleasure to inform you of recent progress of Japanese marine policy. Today, I would like to introduce two topics; 1) Basic Plan on Ocean Policy and 2) Policies and Measures against marine litter issues.

Taking into account the points that the sea is an essential element for the life on the earth and that Japan is a marine-oriented nation, "Basic Act on Ocean Policy" was promulgated in April 2007. Followed by its enforcement in July 2007, "Basic Plan on Ocean Policy" was published in March 2008, in order to promote ocean measures comprehensively and systematically.

There are twelve main ocean measures in the Basic Plan; 1) promotion of marine resource development, 2) conservation of marine environment, 3) promotion of development in Exclusive Economic Zone, 4) securing marine transportation, 5) securing marine safety, 6) promotion of marine surveys, 7) promotion of research and development on marine science and technology, 8) promotion of marine industry and strengthening international

competitiveness, 9) comprehensive management of coastal areas, 10) conservation of outer islands, 11) promotion of international cooperation, and 12) public awareness of ocean.

NOWPAP is described on measures 2), 6), and 11) as the framework to promote the conservation of marine environment and marine surveys in a cooperative manner of four member countries.

In this context, we hope CEARAC to collect basic data and assess the state of marine environment utilizing outcomes of both WG3 and WG4 activities. Ministry of the Environment, Japan would like to support CEARAC activities continuously.

Another remarkable topic regarding marine environment is recent progress of policies and measures against marine litter issues. Recently, marine litter issues are emerging as big social problems in Japan, as they influence marine environment, scenery, safe navigation, fisheries, and local economy. In order to deal with the issues, the Japanese government established "Inter-Ministry Meeting on Marine Litter" in April 2006. After active discussion including consultation with local governments, the Meeting published the report which describes the roles of several stakeholders and the measures of each Ministry. There

are three pillars regarding measures by the national government; 1) monitoring the state of marine litter, 2) control of sources of marine litter including international cooperation, and 3) support of severely damaged coastal areas.

The Ministry of the Environment launched "Model Survey for the Reduction of Marine Litter" in 2007, as one of the outcomes of Inter-Ministry Meeting. We are implementing in-depth cleanup surveys and data analyses in 11 coasts over 7 prefectures. Furthermore, we are pursuing mutual cooperative actions and a framework with participation of every local stakeholder, which are suitable for local circumstances. We would like to establish good practices in each model area and disseminate them not only to other areas in Japan but also to NOWPAP member states through the framework of NOWPAP.

Because the Northwest Pacific Ocean is shared with each member state, we hope NOWPAP to facilitate these kinds of information and knowledge exchange system as one of the most important roles of NOWPAP.

We strongly hope for further NOWPAP activities both on the marine litter issues and on the assessment of marine environment.

## Announcement

CEARAC Website is now under construction for renewal. The new version will be friendlier for its users to easily look for information. It's coming soon! (<http://www.cearac.nowpap.org/>)



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