

Contents

Towards the next biennium
.....1

Recent developments of
NOWPAP2

Step Forward-CEARAC
-Activities

NOWPAP Working
Group 3 (HAB)3

NOWPAP Working
Group 4 (RS)3

CEARAC Activities on
Marine Litter4

Workplan and Budget for
CEARAC5

Voice from the Region6

Announcement8

No. 4
December 2007

Towards the next biennium

Greetings from the Director of CEARAC, Takeshi Ogawa



It is my great pleasure to publish the fourth issue of CEARAC newsletter and report the progress on our activities. I would like to appreciate cooperation of all the people who have helped CEARAC with planning, initiating and implementing our activities.

CEARAC Activities

CEARAC was established in 2002, and since then, we have achieved steady progress in accordance with the mandate of CEARAC. In the 2004-2005 biennium, Working Group 3 (HAB) and Working Group 4 (RS) made the Integrated Reports respectively, and these reports enabled us to comprehend the current status of the region and build consensus on the future steps to take.

Upon the comments and suggestions in these Integrated Reports, CEARAC developed several tools, such as guidelines and pamphlets in the 2006-2007 biennium. NOWPAP Marine Litter Activity (MALITA) was initiated following its approval by the 10th IGM in 2005, and some components of MALITA were allocated to CEARAC. CEARAC has been implementing these activities in cooperation with other RACs and other international organizations under coordination of RCU.

Implementation of activities for the 2006-2007 biennium.

Main outcomes of this biennium for WG3 have been (1) development of the Booklet of Countermeasures against Harmful Algal Blooms in the NOWPAP region, and (2) development of *Cochlodinium* pamphlet in the languages of the NOWPAP member states. For WG4, main outcomes have been (1) development of Eutrophication Monitoring Guidelines by Remote Sensing for the NOWPAP Region, (2) organization

of the First training course on remote sensing data analysis, and (3) development of RS information network. The necessity of these activities was suggested in the above-mentioned Integrated Reports. Besides the activities of the two working groups, CEARAC also implemented some activities related to marine litter: (1) development of guidelines for monitoring marine litter on the beaches and shorelines; (2) publication of pamphlets targeting at the general public; and (3) organization of the 2nd NOWPAP Workshop on Marine Litter. In these activities, experiences of NPEC, hosting organization of CEARAC were well-applied.

Moreover, CEARAC consolidated its mid- and long-term strategies to respond “the New Directions of NOWPAP RACs” which were adopted at the 10th IGM in November 2005. The mid- and long-term strategies include cooperation of WG3 and WG4 to develop procedures of coastal environment assessment and to tackle related environmental problems.

The results of the current biennium will be basis for identifying necessary and/or possible activities for the next biennium.

Proposals for the 2008-2009 biennium

The 5th CEARAC Focal Points Meeting was held on 18-19 September 2007 in Toyama, and the meeting adopted the workplan and budget of CEARAC for the 2008-2009 biennium. The workplan was developed based on our mid- and long-term strategies. In the workplan, while collecting and sharing and providing related information of coastal environmental assessment, CEARAC will develop database and demonstrate case studies for utilization of collected / accumulated information and data. To be more specific, WG3 will (1) implement HAB case studies, and (2) develop HAB Integrated Website. WG4 will (1) develop educational materials for utilization of remote sensing data for marine

environment conservation, and (2) organize the second NOWPAP training course on remote sensing data analysis. Also, the both WGs will implement a joint activity to develop procedures for assessment of eutrophication status including evaluation of land based sources of nutrients. These proposals were adopted at the 12th IGM (23-25 October, 2007) and will be followed by reporting of their adoption and further

discussion on their workplans at the 6th CEARAC FPM (2008).

In addition, CEARAC will take part in implementation of RAP MALI (NOWPAP Regional Action Plan on Marine Litter), following discussion and decision at RAP MALI Expert Meeting, which was held on 20-21 November 2007 in Toyama. RAP MALI is one of the outcomes of MALITA and its first phase will start in 2008.

CEARAC will continue making our efforts for promoting development of coastal environmental assessment and protection of the marine and coastal environment in the Northwest Pacific region in cooperation with other RACs and under coordination of RCU. We expect assistance of CEARAC Focal Points, WG experts and those who are interested in the marine and coastal environment of the region to our activities.

Recent developments of NOWPAP

Xiaodong Zhong, Deputy Coordinator, Northwest Pacific Action Plan (NOWPAP) of UNEP



Dear friends,

I feel privileged to report to you on the latest NOWPAP developments through this newsletter.

According to their work plans, four NOWPAP Regional Activity Centres (RACs) have organized Focal Points Meetings where ongoing activities were reviewed and future plans and budgets mapped out for approval at the 12th NOWPAP Intergovernmental Meeting held in Xiamen, China on 23-25 October 2007.

As one of the NOWPAP projects in which all RACs are participating and contributing, Marine Litter Activity (MALITA) is proceeding quite smoothly. In March 2007, we had 2nd MALITA workshop and working meeting where we discussed the issues of countermeasures against marine litter in terms of reduction and prevention, coastal cleanup, monitoring and waste management policies and systems. We also discussed how to further implement the MALITA work plan. This year has witnessed further development of the International Coastal Cleanup (ICC) campaigns in the region as People's Republic of China, Republic of Korea and Russian Federation have successfully organized the ICC activities and associated workshops which brought wider participation of governments, academic institutions, NGOs, schools from not only NOWPAP countries but also from COBSEA countries and from our partners like PEMSEA and YSLME. The

NOWPAP ICC campaigns were highly spoken by the Ocean Conservancy (TOC, the founder of ICC), and certificates were awarded by TOC representative to the participating organizations in the Busan ICC event. Monitoring guidelines on beach and seabed marine litter and guidelines for good practices in various sectors such as shipping, fisheries and tourism have been developed. The database on marine litter has been established and marine litter related legal instruments and programmes have been reviewed and compiled. We were happy to see that the NOWPAP Regional Action Plan on Marine Litter was approved in principle at the 12th IGM. At a subsequent workshop in November this year, we discussed details of its implementation.



2007 NOWPAP ICC Campaign and Marine Litter Workshop in Korea

We have seen progress in developing partnership with PEMSEA: the letter of cooperation signed allows NOWPAP to be a formal member of PEMSEA Partnership Council. A similar letter of cooperation was also signed in May this year with YSLME to facilitate substantive cooperation. We have hosted and organized 2nd Yellow Sea

Partnership workshop in Busan in October 2007. The first NEAR-GOOS - NOWPAP joint training course was organized by CEARAC with the support of IOC/WESTPAC in September 2007.



2nd Workshop of the Yellow Sea Partnership

According to the decision of the 11th IGM, evaluation of the performance of the four NOWPAP RACs has been completed. An evaluation report was prepared by an independent consultant based on interviews and questionnaires. The results of the evaluation were presented at the 12th IGM and good response was received from the meeting. Further improvements of the RACs performance will be expected in the future which will definitely benefit the implementation of NOWPAP as a whole.

In addition, NOWPAP has launched new activities related to integrated coastal and river basin management and hazardous and noxious substance spills which will contribute to the solution of marine environmental problems in the region.

I wish that our NOWPAP family, including RACs, will have beautiful future ahead.

Step Forward –CEARAC Activities

NOWPAP Working Group 3 (WG3)

NOWPAP Working Group3 (WG3) was established mainly to implement monitoring and assessment of harmful algal blooms (HAB) including red tide, which is chosen as the initial subject of coastal environmental assessment. WG3 mainly conducted (1) publication of National Reports and Integrated Report on Harmful Algal Blooms (HABs) for the NOWPAP Region, (2) establishment of HAB Reference Database, and (3) publication of *Cochlodinium* pamphlet and establishment of *Cochlodinium* Home page for the 2004-2005 biennium in order to treat HAB-related problems as a part of activities of coastal environmental assessment.

For the 2006-2007 biennium, CEARAC conducted the following 2 things as its main activities of NOWPAP WG3.

1) *Cochlodinium* pamphlet

CEARAC made “*Cochlodinium* pamphlet” in 4 languages of the NOWPAP member states, namely Chinese, Japanese, Korean and Russian. These pamphlets target at the general public including fishermen and students as their users.

2) The booklet of Countermeasures against Harmful Algal Blooms (HABs)

CEARAC will publish “the booklet of Countermeasures against HABs in the NOWPAP Region” by the end of 2007. The objectives of this booklet are to provide and share information on countermeasures against HABs implemented in the NOWPAP member states, and to contribute to establishment of policies and measures against HABs in stakeholders and related agencies.

For the 2008-2009 biennium, CEARAC plans to implement the following new activities under WG3: (1) implementation of HAB case studies, and (2) development of HAB Integrated Website.

In HAB case studies, CEARAC will establish the most effective and laborsaving way for sharing information on HAB occurrence and oceanographic and meteorological condition and will summarize common concerned items in HAB occurrence regions (HAB Hot Region). In HAB Integrated Website, CEARAC will develop a website to provide and share information on HAB occurrence, countermeasures, oceanographic conditions and HAB-related issues in order to enhance activities against

HABs in the NOWPAP region. Through these new activities, CEARAC promotes not only end-of-pipe countermeasures but also front-of-pipe countermeasures by local agencies, research and development by researchers, and cooperative works with other international organizations.

Moreover, WG3 will initiate a joint activity with WG4 to develop procedures for assessment of eutrophication status including evaluation of land based sources of nutrients for the NOWPAP region.



Cochlodinium pamphlets

NOWPAP Working Group 4 (WG4)

WG4 was established mainly to develop monitoring tools for marine and coastal environment with using Remote Sensing (RS) techniques. WG4 mainly conducted (1) publication of National Reports and Integrated Report on Ocean Remote Sensing for the NOWPAP Region, and (2) establishing RS information Network for the 2004-2005 biennium.

For the 2006-2007 biennium, CEARAC conducted the following 3 things as its main activities of NOWPAP WG4.

1) Eutrophication Monitoring Guidelines by Remote Sensing for the NOWPAP Region

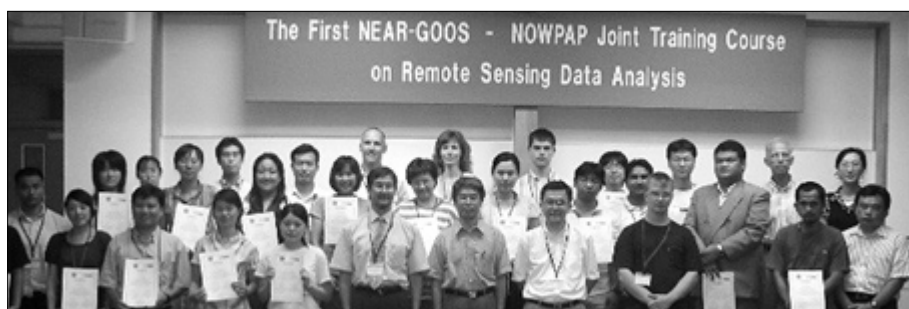
NPEC prepared ‘Eutrophication Monitoring Guideline by Remote Sensing

for the NOWPAP Region’ in order to optimize the use of remote sensing techniques for monitoring of eutrophication by referring to the results and lessons learned from a case study conducted in Toyama Bay. To share these guidelines in the NOWPAP region, national experts of NOWPAP WG4 have reviewed and refined the guidelines prepared by NPEC in order to fit in the particular characteristics of each region and to have one integrated set of guidelines suitable for use throughout the NOWPAP region.

2) Training Course on Remote Sensing Data Analysis

CEARAC organized the first NEAR-GOOS – NOWPAP Joint Training Course

on Remote Sensing Data Analysis at Nagasaki University, Nagasaki, Japan on 3-7 September 2007 jointly with IOC/WESTPAC. The course consisted of lectures by specialists and hands-on practical sessions on the analysis of satellite data. The course provided an overview of remote sensing with special emphasis on application of ocean color relevant to the NOWPAP region. The course was designed for post graduate students, professional researchers and local government officers working in the areas of marine sciences and coastal-zone management. There were 25 trainees gathered from the NOWPAP member states and adjacent Asian countries.



Photos from the First NEAR-GOOS–NOWPAP Joint Training Course



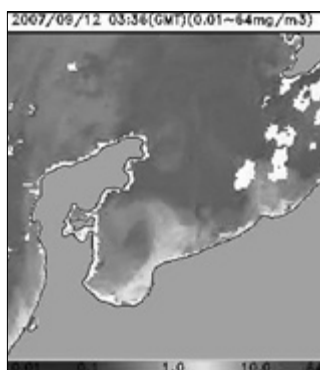
3) Development of RS information network

Several areas in the NOWPAP region were added to marine calendar of Marine Environmental Watch Project website for wide use of the system.

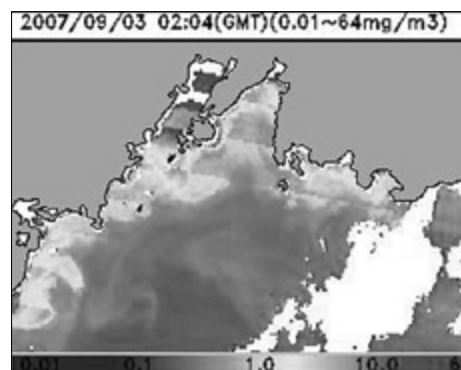
It has also been registered as one of the databases of NEAR-GOOS, which is one of the regional GOOSs (Global Ocean Observing System) sponsored by Intergovernmental Oceanographic Commission of UNESCO (IOC).

For the 2008-2009 biennium, CEARAC plans to implement the following new activities under WG4: (1) development of educational materials for utilization of remote sensing data for coastal environment conservation, (2) organization of the second NOWPAP training course on remote sensing data analysis.

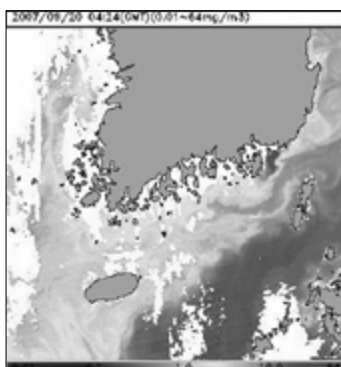
Moreover, WG4 will initiate a joint activity with WG3 to develop procedures for assessment of eutrophication status including evaluation of land based sources of nutrients for the NOWPAP region.



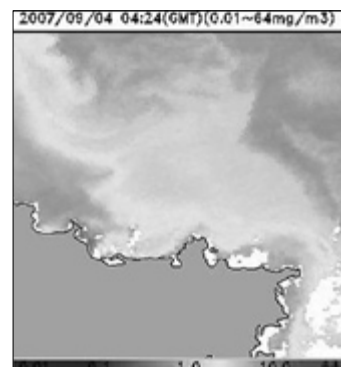
Toyama Bay, Japan



Peter the Great Bay, Russia



Coastal area of Korea



Off Shandong Peninsula, China

Marine calendar of Marine Environmental Watch Project.
<http://www.nowpap3.go.jp/jsw/eng/index.html>

CEARAC Activities on Marine Litter

Marine Litter Activity (MALITA) was approved at the 10th NOWPAP Intergovernmental Meeting in November 2005 and implemented in the 2006-2007 biennium. CEARAC achieved the following activities based on the approval at the 10th IGM and the first and second MALITA Working Meetings.

1) Guidelines for Monitoring Marine Litter on the Beaches and Shorelines of the Northwest Pacific Region

CEARAC developed guidelines for monitoring marine litter on the beaches and shorelines, which was designed as a tool for the NOWPAP member states, including

local governments, volunteers and NGOs.

2) Marine Litter Guidelines for Tourists and Tour Operators in Marine and Coastal Areas

CEARAC developed guidelines for tourists and tour operators because this sector is one of the sources of marine litter. These guidelines aim to reduce waste generation targeting at tourists themselves and tour designers.

3) The 2nd NOWPAP Workshop on Marine Litter

CEARAC organized the 2nd NOWPAP Workshop on Marine Litter on 28-29

March 2007 with in-kind support from the Ministry of the Environment, Japan. This workshop was held to explore effective countermeasures against marine litter and to contribute towards the establishment of the Regional Action Plan on marine litter management in the NOWPAP region.

4) Pamphlet for reduction of marine litter "What can we do about marine litter"

CEARAC made a pamphlet which promotes reduction of marine litter. This pamphlet, targeting at the general public including the youth, aims to raise public awareness and to change their attitudes toward their daily lives.

5) Booklet on recycling of plastic marine litter

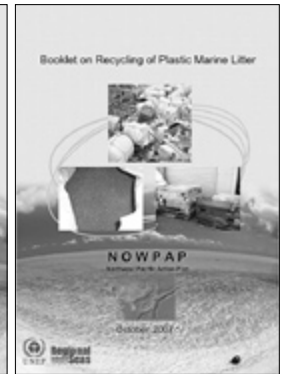
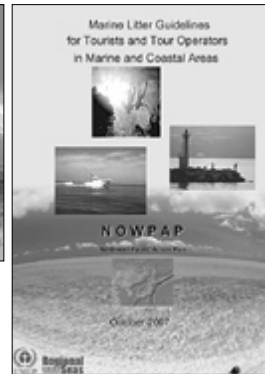
CEARAC made a booklet on recycling of plastic marine litter. This booklet introduces technologies of plastic recycling implemented in Japan, and it is expected to disseminate useful recycling technologies among the NOWPAP member states.

6) Monitoring survey to raise public awareness

CEARAC conducted a monitoring survey to raise public awareness and promote an educational campaign on marine litter issues at the 5th CEARAC FPM in cooperation with NPEC.

The materials developed by CEARAC are downloadable from CEARAC website (<http://www.cearac-project.org/MALITA/index.htm>).

In the 2008-2009 biennium, CEARAC will implement activities on marine litter based on the NOWPAP Regional Action Plan on Marine Litter (RAP-MALI).



Workplan and Budget for CEARAC for 2008-2009 biennium

Workplan and budget for CEARAC for the 2008-2009 biennium was discussed at the 5th CEARAC FPM, and the meeting agreed to submit this workplan and budget to the 12th IGM for adoption.

The 12th IGM adopted the workplan and revised the budget into US\$140,000. It means that CEARAC should promote and carry out its activities more effectively and efficiently within a tighter budget.

This revised workplan and budget for the 2008-2009 biennium will be finalized at the 6th FPM to be held in March 2008.



Photo from the 5th FPM

Activity	Tentative Time
Organization of CEARAC Focal Points Meeting	6 th FPM Mar. 2008 7 th FPM Sep. 2009
Organization of WG3 (HAB) and WG4 (RS) Meetings	Summer 2008
Specific project (tentative) WG3(HAB) -HAB case studies -development of HAB Integrated Website WG4(RS) -development of educational materials for utilization of RS data for coastal environment -second NOWPAP training course on RS data analysis WG3 and WG4(joint) -development of procedures for assessment of eutrophication status including evaluation of land based sources of nutrients. Others *	
Intersessional work	
Cooperation, coordination of CEARAC activities	
Publication of CEARAC Newsletter	Autumn 2008 and 2009

Note ; *Others (pending approval by the 12th NOWPAP IGM and availability of funds) might include marine litter related issues, land based sources of pollution and so on.

Voice from the Region

Recent Activities in Ocean Remote Sensing in China

Sun Ling, Deputy Researcher, Satellite Meteorological Research Institute, National Satellite Meteorological Center, China Meteorological Administration (NOWPAP WG4 Expert of China)



1. Status of Related Satellite Programs

Succeeding to the first Chinese ocean color satellite HY-1A launched in 2002, HY-1B has been in orbit since

April 11 2007, with similar optical sensors of 10-band COCTS (Chinese Ocean Color and Temperature Scanner) and 4-band CZI (Coastal Zone Imager). Besides the standard products of SST, water-leaving radiance, aerosol optical thickness, chlorophyll and suspended sediment concentrations, some application and demo subsystems were constructed such as ocean primary production, red tide detecting, coastal zone monitoring and sea ice monitoring.

After the test of three model microwave sensor M3RS in SZ-4 launched in 2002, the ocean dynamic satellite HY-2 carrying microwave scatterometer, radiometer and altimeter has been approved by the State Department and planned to be launched in 2009. The ocean surveillance satellite HY-3 carrying SAR has been listed into the 11th five-year plan for pre-research.

MERSI (Medium Resolution Spectral Imager), a new sensor on FY-3 expected to be launched next year is a MODIS-like sensor with 5 bands of 250 m and 15 bands

of 1000 m. The operational ocean color products include water-leaving reflectance, aerosol optical thickness and water constituent concentrations (chlorophyll, TSM and yellow substance). A marine environment monitoring demo system and two monitoring application service systems (red tide and estuary sediment) are under way.

2. Advances in Scientific Research

Many cruises have been conducted covering most region of China Sea and a lot of in-situ data were obtained to support researches in water optical properties, retrieval algorithms, calibration and validation. Relative comprehensive investigation in optical properties (IOP and AOP) in the Yellow Sea and East China Sea was conducted. Bubbles' influence on apparent optical properties has also been studied. Regional retrieval algorithms for chlorophyll, TSM and CDOM have been developed. Active phosphate concentration around Pear River estuary were tried to be derived using SeaWiFS. Chlorophyll-a, suspended matter concentration retrieval and oil type distinguishing were experimentally carried out using fluorescence lidar. Atmospheric correction in coastal turbid region is still a focal point, algorithms using shortwave infrared bands

and spectral iteration optimizing have been developed.

Progresses in mechanism of red tide breakout, prediction technology and remote sensing detection model have been made, though there was much to be done to reach an operational level. Influence of dynamic environment factors on red tide by remote sensing is been studied. Besides the oil spill remote sensing mechanism and oil spectral properties, oil spill detection using UV spectral imaging technique is under study.

A series of shipboard instruments have been developed for ocean environment monitoring, about 30 parameters such as COD, BOD et al can be measured. Multi-layer large buoy for marine environment monitoring and marine optical buoy are been developed.

Some remote sensing application systems have been constructed, such as shipboard operational satellite remote sensing system for fishery, ocean fishery environment information application deco system and integrated Bohai environment monitoring demo system. Some GIS platforms aiming at the management, analysis and visualization of marine environmental data are developed, such as MaXplorer, a general marine GIS software and MAGIS (Marine and Atmospheric Geographical Information System).

Fish kills associated with *Cochlodinium* blooms in Korean coasts

Changkyu Lee, Senior Scientist, Marine Ecology Research Team, Department of Oceanography and Marine Environment, National Fisheries Research and Development Institute (CEARAC Focal Point of Korea)



It has been causing fish kills in Korea, particularly annual blooms by harmful algae, *Cochlodinium polykrikoides* in Korea since the

1990s. Extensive economic losses were reported, the highest in 1995, of about US \$95 millions. Economic losses this year has been recorded as the third largest ones since 1995 by showing US \$12 millions of fish kills for aquaculture animals such as rockfish, flounder, seabream, rabbit fish, abalone, etc.

Particularly, the scale of the bloom this year was comparatively huge by covering several hundred kilometers of the southern coast spreading to the eastern part along the Kuroshio currents, the typical circulation pattern in Korean Peninsular during this season. Moreover, the bloom lasted for about one and half month from August to

September with high cell densities (max. 32,500 cells/ml) in the southern coast where there are many aquaculture farms near by. The huge fisheries damage this year was primarily attributed to the unusual massive bloom which was beyond capacity for local governments and extension service centers responsible for HAB mitigation in Korea. It is, also, assumed that the unusual massive *Cochlodinium* bloom is closely related with remarkable hydrographical changes of coastal area due to the increase of air temperature, resulting in the elevation of water temperature by 2-3 °C than ordinary years, and the strong impact of Kuroshio currents on the environment of Korean coasts during the bloom season.

It has been reported that *Cochlodinium* formed frequent blooms in Asian region, particularly, annual blooms in Japan since the 1970's and Korea in the 1980's. More recently, it has been blooming and/or causing fish kills in Southeast Asia, in the latter part of 2003 in Sabah of Malaysia, in February, 2004 in Brunei, and in March, 2002 and 2005 in Southern Philippines. It is reported that *Cochlodinium* swimming cells are occurring in the NOWPAP region and be treated as one of potential species that might form deadly blooms in the near future considering the recent trend in Asian region even though it has not formed any blooms in some parts of the NOWPAP areas.

Thus, it is encouraged to strengthen the collaboration and data sharing on the species under NOWPAP umbrella for the minimization of fisheries damage and sustainable development of marine environment in NOWPAP region.



ICARM in the NOWPAP region – new activity for joint action



Vladimir Shulkin, Head of Laboratory, Pacific Geographical Institute, Far Eastern Branch of Russian Academy of Sciences (CEARAC and POMRAC Focal Point of Russia)

Ivan Arzamastsev, Senior Researcher, Pacific Geographical Institute, Far Eastern Branch of Russian Academy of Sciences (POMRAC expert)



Integrated Coastal and River Basin Management (ICARM) - is an economic and legal tool of harmonization of numerous inconsistent interests of the coastal communities and stakeholders. Its final objective is to reach the sustainable development of the coastal regions. This goal is very close to the objectives declared in the initial background NOWPAP documents. And this is a reason why one of the NOWPAP RACs – POMRAC has to focus from the 2007 on the activities related to ICARM according to the decisions of 10th NOWPAP IGM. Within the last 20 years, about 100 countries worldwide apply ICARM successfully. The greatest progress in ICARM was reached in Europe, and this experience has highlighted the extreme complexity of the problems and necessity to combine efforts of the “players”.

ICARM itself is not been a subject of action by NOWPAP RACs or NOWPAP RCU, because ICARM by definition is a set of actions and measures within the certain localities of different countries.

The possible subjects for the NOWPAP actions in this field are the follows:

- The analysis of the peculiarities of ICARM in the different NOWPAP

countries;

- The exchange of information about difficulties and disadvantages during the initiation and implementation of ICARM;
- The discussion of features of ICARM at the transboundary territories and protected areas.

Two approaches are possible for the RACs activities on ICARM.

First one is based on the triune nature of ICARM as a synthesis of (1) resource management, (2) land-use planning, and (3) environmental management.

In this approach the activity on the block (1) could be expressed in the inventory of the problems connected with limitation/excess of resources in the different parts of NOWPAP region. Activity on the block (2) could be in the presentation of schemes and approaches of the functional zoning for ICARM in the different NOWPAP countries. Activities on the block (1) and block (2) will be implemented jointly (or separately) in the form of National Reports. The analysis of data gaps and way forward for the improvement of situation would be an activity on the block (3) based on the previous results of RACs (National Reports,

Regional Overviews, SOMER). Then the joint consideration of these results will be a base for the characteristic of existing level and way forward for ICARM in the NOWPAP region.

Second approach is corresponded to the common scheme (“chain”) of ICARM planning, namely:

- Initiation;
- Analysis of existing situation;
- Identification of the conflicts and contradictions;
- Identification of the goals and alternatives;
- Development of the strategy;
- Implementation;
- Monitoring and assessment.

At such approach the activity of NOWPAP RACs on ICARM will be realized in the analysis of the existing and expected programs in the NOWPAP countries. Taking in mind the beginning stage of ICARM in the NOWPAP region, any programs of the local and/or regional development with analysis and account of the interaction of resource exploitation, and its linkage with the environmental problems would be identified as the ICARM programs.

The outcome at such approach will be in the form of a) National Reports, describing the ICARM programs/projects, and b) creation of data base of such programs/projects in the NOWPAP region. The format of National Reports and data base is a subject

for the discussion, but proposed format should include main stages of ICARM process.

The next stage in the activity at such approach would be an analysis of typical gaps and needs in the ICARM "chain" in

the NOWPAP region.

Obviously that ICARM itself is almost all-embracing field of actions, and joint efforts of all NOWPAP RACs are quite necessary for the any substantial step forward.

Recent progress made in Japanese policies relevant to sustainable development

Akio TAKEMOTO, Deputy Director, Global Environment Issues Division, Global Environment Bureau, Ministry of the Environment JAPAN (CEARAC Focal Point of Japan)



In recent months, Japanese environment policies have made substantial progress. One is "Cool Earth 50", which was

announced by ex- Prime Minister Shintaro Abe, which was succeeded by Prime Minister Yasuo Fukuda. Cool Earth 50 is a long-term strategy to mitigate the emissions of greenhouse gases by half from current level by 2050 as a common goal for the entire world. The framework will be participated by all major emitters, moving beyond Kyoto Protocol, flexible and diverse, taking into account circumstances of each country, and will have compatibility between environmental protection and economic growth. Under this initiative, Japan will create a new financial mechanism to extend support developing countries with high aspiration for implementing climate change policies, and will study an integrated approach to fight both of pollution and global warming, which is so-called co-benefits approach.

Co-benefits are wide concepts. In the context of Cool Earth 50, "Pollution" is not limited to air pollution, but also extends to others such as river and marine pollution. Therefore, it is possible that measures against marine pollution in the NOWPAP region will be covered by co-benefit projects under the initiative in the future.

Another achievement related to environment policies is enactment of the Marine Basic Law. 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, the basic law was promulgated on April 27th and came into effect on July 20th this year. The law provides six following fundamental concepts; (1) marine resources shall be developed and utilized actively in accordance with conservation of marine environment, (2) measures on marine safety shall be implemented safely, (3) scientific knowledge on the sea shall be enhanced, (4) marine industries which aim to develop, utilize and protect marine resources shall be developed soundly, (5) issues relevant to marine resources, environment, transport and safety shall be managed comprehensively and (6) measures on

marine affairs shall be implemented through international cooperation.

Based on the law, Headquarters for promotion of comprehensive marine policies, chaired by Prime Minister and comprised of all Ministers of State, was established under the Cabinet in July this year.

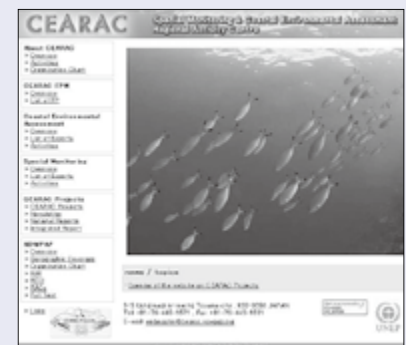
Despite of slight difference in policy areas, both of Cool Earth 50 and Marine Basic Law have big potential to innovate policies in the world, particularly in Asia. Moreover, I assure readers of the news letter that the next year will become an epoch-making with a view to global environmental policies. That's because Japan will host G8 Toya Summit in July. Followed by announcement of Cool Earth 50 and agreement at Heiligendamm Summit, Toya Summit will focus on environmental Agenda. Another important achievement next year is the Marine Basic Plan. According to the Marine Basic Law, the Plan will be adopted by the Cabinet. In the context of implementing G8 agreement and Marine Basic Law, NOWPAP will play a further important role in Japan as well as other NOWPAP members.

Announcement

The CEARAC Newsletter is published every year and distributed free of charge. For additional copies, or if you would like to be placed on our mailing list, please contact CEARAC at the following address: cearac@npec.or.jp All the information about this newsletter and more can be downloaded from CEARAC Website.

NOWPAP CEARAC

Northwest Pacific Action Plan
Special Monitoring & Coastal Environmental Assessment Regional Activity Centre
Established at NPEC
Northwest Pacific Region Environmental Cooperation Center
5-5 Ushijimashin-machi, Toyama City,
930-0856 JAPAN
Tel: +81-76-445-1571
Fax: +81-76-445-1581



Visit our Website
<http://cearac.nowpap.org/>