NOWPAP MERRAC

Northwest Pacific Action Plan Marine Environmental Emergency Preparedness and Response Regional Activity Centre Website - http://merrac.nowpap.org





Oil spill- risk, preparedness and response in the Northwest Pacific

Oct. 5 2005

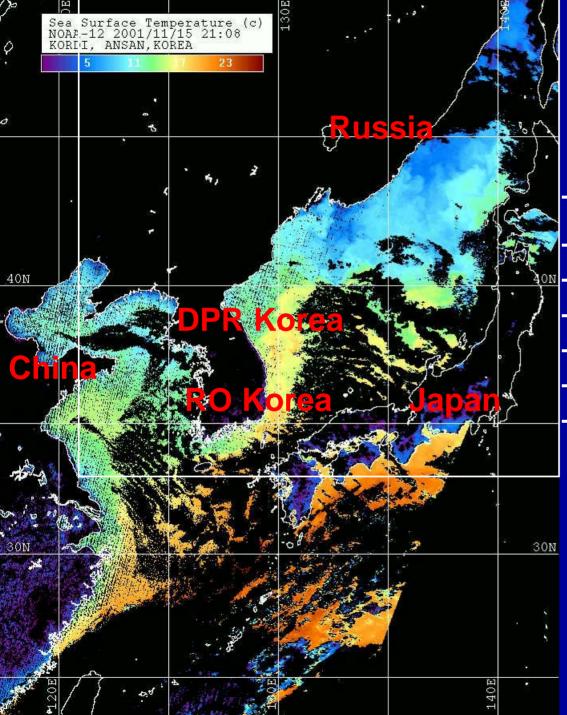
Chang-Gu KANG Seong-Gil KANG

Jeong-Hwan Oh

KORDI

Overview

- 1. Oil Spill Risk in the NOWPAP region
- 2. What's MERRAC?
- 3. MERRAC's activities on regional cooperation in marine pollution preparedness & response
- 4. NOWPAP Regional Oil Spill Contingency Plan
- 5. Conclusion



1. Oil Spill Risk in NOWPAP Region

- 33°N~52°N,121°E~143°E
- Bordering 5 countries
- Complicate political issues
- Different economic status
- High population
- Rapid industrialization
- No marine environmental conservation strategy & action

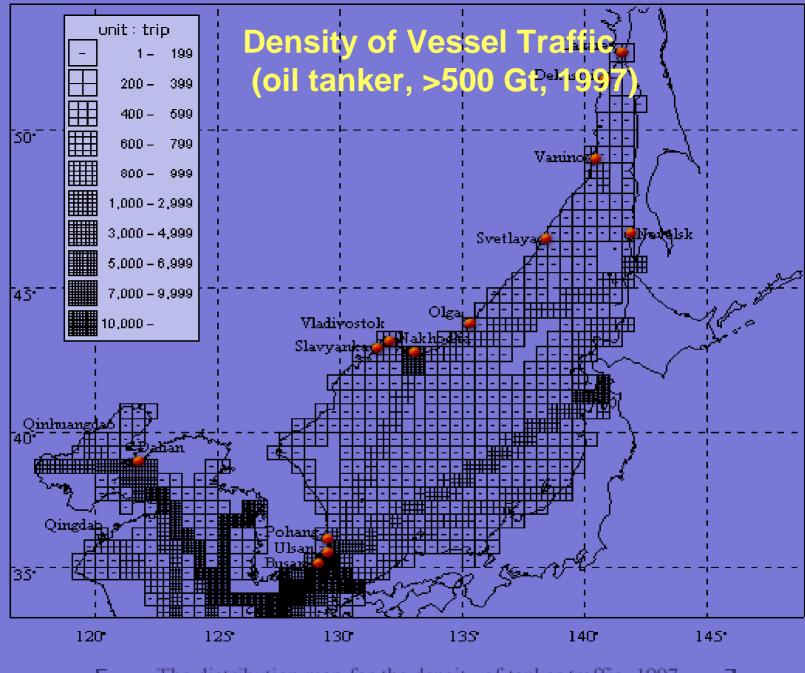


Degradation of Marine Environments

Environmental Threats in NW Pacific

- Land-based pollutants from sources such as industries, municipalities agricultures and so on, including chemicals (PCBs and DDT), tar balls, heavy metals and marine debris
- Eutrophication in coastal zone : red tide
- Marine litters
- Habitat and community modification
- Heavy tanker traffic in coastal zone, transporting crude oil to Japan, China, Korea and Russia - high risk of oil pollution





The distribution map for the density of tanker traffic, 1997

(The tanker, 500G/Tor more)

* An unit of division is 0.5 degree square of Latitude / Longitude



Statistics on Oil Spill Accidents in NOWPAP Sea Area ('90-'02)

Category	No. of Cases	
Major Oil Spills (>1,000 tons)	16	
Intermediate Oil Spills (50~1,000)	115	
Small Oil Spills (<50)	Several thousands	



Kill by Oil Spill, by Richard Mock (1991)

Comparison of Risk and Preparedness for 19 Regional Sea Areas

Regional Sea	Risk	Level of	Priority
	Category	Preparedness	ranking
North-east Pacific (NEP)	Low	Low	0
South-east Pacific (SE/PCF)	Low	Low	0
Upper South-west Atlantic (SWAT)	Medium	Medium	0
Wider Caribbean (WCR)	Medium	Low	+1
West & Central Africa (WACAF)	Medium	Low	+1
Eastern Africa (EAF)	Medium	Low	+1
Red Sea & Gulf of Aden (PERSGA)	Medium	Low	+1
Gulf Area (ROPME)	Medium	Low	+1
Mediterranean (MED)	High	Medium	+1
Black Sea (BLACK)	High	Low	+2
Caspian	Medium	Low	+1
Baltic (HELCOM)	Medium	High	-1
North-east Atlantic (OSPAR)	High	High	0
South Asian Seas (SAS)	Medium	Low	+1
East Asian Seas (EAS)	High	Medium	+1
South Pacific (SPREP)	Low	Low	0
North-west Pacific (NOWPAP)	High	Medium	+1
Arctic	Low	Medium	-1
Antarctic	Low	Low	0

- The International Tanker Owners Pollution Federation (ITOPF)

-High Risk of Oil Spill

-Low Level of Preparedness for Oil Spill



to develop the regional cooperative system on marine pollution preparedness and response in the NOWPAP region



2. What's MERRAC?

Its Mission--

 MERRAC is designated to coordinate regional activities relating to development of effective measures for regional cooperation in marine pollution preparedness and response in the NOWPAP region, with supports from NOWPAP RCU, UNEP and IMO.



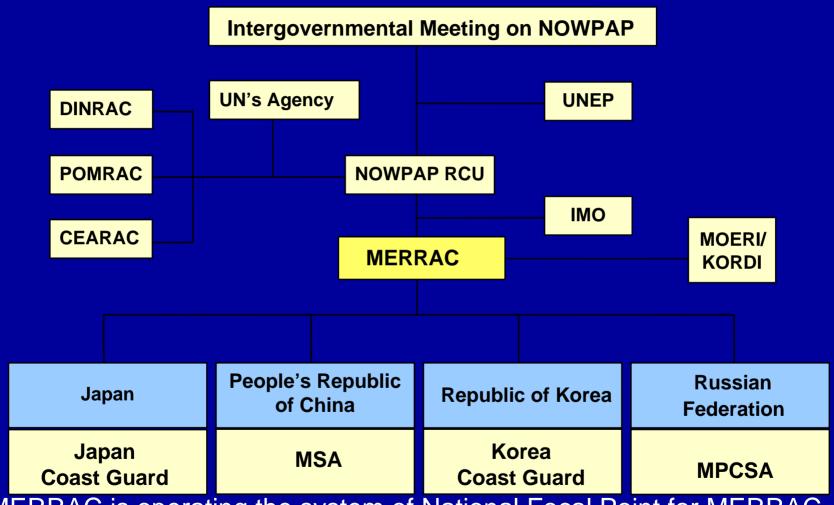
Northwest Pacific Action Plan (NOWPAP): One of 17 Regional Seas Programme (UNEP)



Early History (- 2000)

- Sep. 1994: 1st Intergovernmental Meeting on NOWPAP –
 Adoption of the Northwest Pacific Action Plan (NOWPAP)
 by four countries (China, Japan, R.Korea, Russia)
 as one of UNEP's Regional Seas Programs
- 6-7 April 1999: 4th NOWPAP IGM –
 Decision of establishment of MERRAC and other 3 RACs to implement the NOWPAP projects
- 22 March 2000 : Opening ceremony of MERRAC office at MOERI/KORDI in Daejeon, Korea
- 28 July 2000 : Final signature of MOU among UNEP, IMO and MOERI/KORDI regarding the establishment & operation of MERRAC

Institutional Arrangement of MERRAC



"MERRAC is operating the system of National Focal Point for MERRAC, who is nominated by each country and is responsible for the marine pollution preparedness and response in the respective NOWPAP Members"

3. MERRAC's Activities

on regional cooperation in marine pollution preparedness and response

- MERRAC has carried out various regional activities relating to the development of effective measures for regional cooperation in marine pollution preparedness and response in the NOWPAP region
- MERRAC covers the secretariat for NOWPAP MERRAC Focal Focal Points Meeting and NOWPAP Regional Oil Spill Contingency Plan
- MERRAC cooperates with NOWPAP RCU, UNEP, IMO, and other international/regional organizations for establishment of a regional cooperation framework to prepare for and respond to marine pollution emergency.
- MERRAC carries out special activities designated under its Terms of Reference (TOR).

1) Organization of MERRAC FPM (MERRAC, in May)



The 8th NOWPAP MERRAC Focal Points Meeting &
1st Competent National Authorities Meeting
(MERRAC, Daejeon, 24-27 May 2005, organized by RCU, IMO& MERRAC)

Exchange relevant information

- Focal Points
- Information System (equipment, institutions, experts)
- Oil pollution incidents

Review Specific Projects

- Regional Oil Spill Prediction Model
- Regional mapping of Vulnerable Resources
- Minimum Level of Preparedness
- publication of Technical Report
 (ESI map, Shoreline Clean-up, Oil dispersants)
- Update of NOWPAP Regional Oil Spill Contingency Plan
- Coordinating workplan and budget
- Others

2) Organization of the Expert meeting and Training Course

Expert Advisory Group Meeting on NOWPAP Regional Oil Spill Contingency Plan and Memorandum of Understanding (MOU) (Tokyo, Japan, 5-9 Nov. 2001)

2002 NOWPAP Regional OPRC Training Course (IMO Level 2 Course) (Incheon, Republic of Korea, 28 Oct. – 1 Nov. 2002)

2003 NOWPAP Regional OPRC Training Course (IMO Level 2 Course) (Shimonoseki, Japan, 10 – 14 Nov. 2003)

2004 NOWPAP Expert meeting regarding MERRAC specific projects and preliminary CNA meeting (Qingdao, China, 15-18 Nov. 2004)



NOWPAP Regional OPRC Training Course (IMO Level 2)

(Shimonoseki, Japan, 10 - 14 Nov. 2003, hosted by Japan)

NOWPAP MERRAC





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NOWPAP Regional OPRC Training Course (IMO Level 2 Course)

Shimonoseki, Japan

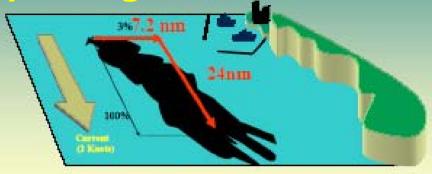
10 - 14 November 2003

Student Manual

- Programme: IMO OPRC Level 2 Course (5 days course) aims to provide selected national staffs with the knowledge and skills required by On-Scene Commanders
- Lecturers of IMO, OSRL, EARL, ITOPF, IOPC







Expected drift after 12hrs:

Wind direction: 20 knots x 12hrs x 3% = 7.2nm

2 knots x 12hrs x 100% = 24nm







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MEMORANDUM OF UNDERSTANDING(MOU) ON REGIONAL CO-OPERATION REGARDING PREPAREDNESS AND RESPONSE TO OIL SPILLS IN THE MARINE ENVIRONMENT OF THE NORTHWEST PACIFIC REGION

&

NOWPAP REGIONAL OIL SPILL CONTINGENCY PLAN

Note from MERRAC

The Plan & MOU were adopted by the 8th Intergovernmental Meeting of NOWPAP (UNEP/IMO/NOWPAP/MERRAC IG.8/6/1).

3) Secretariat of NOWPAP Regional Oil Spill Contingency Plan

- Development of draft Plan and its MOU (finally by the 5th FPM)
- Adoption by NOWPAP members in 2003 and Signature at Ministerial Level in 2004
- Maintenance and Update of the Plan
- Finalization and Update of the Annexes to the Plan
- Implementation of Regional Activities as Required by the Plan

4) Publication of MERRAC Newsletters





Newsletter from

NOWPAP MERRAC

Northwest Pacific Action Plan Marine Environmental Emergency Preparedness and Response Regional Activity Centre

Signing Ceremony of the MoU on Oil Spills

By the Director of MERRAC, Chang-Gu Kang



I am pleased to inform you that the Memorandum of Understanding (MoU) on the NOWPAP Regional Oil Spill Contingency Plan has officially come

into effect on being signed by NOWPAP Members in November 2004. MERRAC held the ceremony for signing the MoU in Busan, Republic of Korea, on 2 November for the 8th NOWPAP Intergovernmental Meeting (IGM), where the MoUs signed by NOWPAP Members were presented to MERRAC. This event was held together with some other memorable events for NOWPAP - the opening ceremony of the Regional Coordinating Unit (RCU) in Toyama and Busan, and 10th anniversary of NOWPAP.

As you know, this region is frequently subject to major marine pollution accidents, as was the case with the Sea Prince and the Nakhodka oil spills, which resulted in serious environmental and economic damage. Following such experiences, NOWPAP members have developed effective measures for regional cooperation in marine pollution preparedness and response as one of major priorities for NOWPAP activities. Since 1997 we have developed the Plan and its MoU, which will be a firm foundation for our strong partnership between NOWPAP Members for the protection of our common sea from marine pollution. The MoU and the Plan were adopted by all the NOWPAP members at the 8th NOWPAP IGM in November 2003, and the MoU was signed at

ministerial level by NOWPAP Member

Much support and many contributions have come from the Member States, UNEP, IMO and other relevant international and regional organizations during the development of the Plan. As Director of NOWPAP (MERRAC is to act as secretariat for the Plan and MoU), on behalf of all the secretariats. I would like to express sincere gratitude to all of you for your valuable support and contributions made during the process of adoption of the MoU and Plan and signatures of the MoU.

The Plan will provide an official framework and technical guidelines for regional cooperation in the field of marine pollution and an operational mechanism for mutual assistance to coordinate and organize a prompt and effective response to marine oil pollution incidents which affect or seem likely to affect the Action Area of one or more of the NOWPAP Members.

However, many issues related to the implementation of the RCP remain, as discussed at the 7s NOWPAP MERRAC Focal Points Meeting. In order to discuss in detail practical matters such as conduct of joint training courses and exercises, financial matters related to mutual assistance, and national arrangements on customs and immigration procedures in order to facilitate the movement of response personnel and equipment, a preliminary Competent National Authorities (CNA) Meeting was held in Qingdao from 15 to 18 November 2004 following a decision of the 7th NOWPAP MERRAC Focal Points. The results and outcomes of the preliminary CNA Meeting will be discussed and reviewed at the next 80

No. 4 March 2005

NOWPAP MERRAC

4th issue

- Published in March 2005
- Major Contents / 10 pages
 - . MERRAC news
 - . MERRAC activities in 2004
 - . Congratulatory Address by Secretary General, IMO
 - . Messages from all the **NOWPAP Members & RCU**



Newsletter from **NOWPAP MERRAC**



Adoption of the NOWPAP Regional Oil Spill Contingency Plan and its MoU



MERRAC

G PARTNERSHIP

RAC, Chang-Gu Kang

4CWPAP MERRAC Focal Points Meeting

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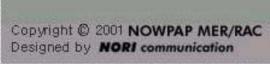
R/RAC and who works there?



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5) Maintenance of NOWPAP MERRAC Website







6) Regional Cooperation with NOWPAP RCU, UNEP, IMO, and other Regional Seas and other RACs



4. NOWPAP Regional Oil Spill Contingency Plan

1) History-Regional Contingency Plan and Its MoU

- ♦ NOWPAP adopted by the 1st IGM (1994)
 - As one area of priority activities-- "Development of Effective Measures for Regional Co-operation in Marine Pollution Preparedness and Response"
- OPRC 1990 accepted by NOWPAP Members after experience of major oil spill such as the Sea Prince (1995), Nakhodka (1997), etc.
- Informal meetings in 1995 & 1996- regarding the establishment a regional forum for regional co-operation on marine pollution preparedness and response

- ◆ 2nd IGM (1996) approved
 - NOWPAP Members establish a Forum meeting, which has the goals and objectives:
 - (i) Exchange of Information on marine pollution preparedness and response
 - (ii) Development of a Regional Contingency Plan (Plan)
 - (iii) Development of its Memorandum of Understanding (MoU)
- 4th IGM (1999) approved
 - MERRAC, "Marine Environmental Emergency Preparedness and Response Regional Activity Centre" was established as one of four RACs

- Development of the Plan
 - through 5 MERRAC Focal Points Meetings and 2 Informal Expert meeting
 - Finally 5th NOWPAP MERRAC Focal Points Meeting (2002) agreed to forward the texts of the Plan and MoU to the IGM for its approval.
- 8th IGM (2003) finally adopted the Plan and its MoU
- During intersessional period, the MoU for Plan was signed individually by each Members at ministerial level
- November, 2004 "Ceremony for Presentation of Signatures for MoU for Plan

"Presentation Ceremony of Signatures for MoU for Plan" in Nov. 2004



Signature Pages of MoU signed by NOWPAP Members

China

The Memorandum of Understanding is signed at Beijing on October 28, 2004 by the following representatives of respective NOWPAP Members.

For the People's Republic of China



Name and title Zhang Chunkian, Minister of Communications

Japan

The Memorandum of Understanding is signed at _______ on _____ 19 October 2004 by the following representatives of respective NOWPAP Members.

For Japan



Kazuo Kitagawa

Name and title Minister of Ministry of Land, Infrastructure and Transport

Korea

The Memorandum of Understanding is signed at Sewl on o5 Oct. 2004 by the following representatives of respective NOWPAP Members.

For the Republic of Korea

Seinglood, Chang

The Memorandum of Understanding is signed at Moscow on 29 October 2004 by the following representative of respective NOWPAP Members.

For the Russian Federation (signature)

Name and title

Levitin Igor,

Minister of Transport of the Russian Federation

Name and title <u>Seung-Woo Chang</u>, <u>Minister of Ministry of Moritione</u>
Affairs and Tisheries.

MoU is

the confirmation of political will of the countries

- to develop regional co-operation;
- to formally adopt the regional contingency plan,
- to agree to implement the operational procedure set-up in the Plan in case of joint operation

2) Overall and Specific Objectives of the Plan

- ◆ To provide an operational mechanism for mutual assistance through which NOWPAP Members will co-operate in order to co-ordinate and integrate their response to major marine oil spill incidents in the region which exceeds the response capability of a NOWPAP members
 - to determine the means of co-operation for the implementation of the Plan;
 - to specify the type of assistance which might be provided;
 - to identify the operational responsibilities;
 - to establish the principles of coordination and liaison, and;
 - to specify the considerations necessary for co-operative action.

Basis for the Plan

- NOWPAP Members should have
 - their own National Contingency Plan (NCP)
 - resources to respond to marine oil spills
- Response to a pollution incident within the Action Area of a NOWPAP Member should be
 - with the provisions of Member's NCP
 - with their own laws and regulations

Relationship among OPRC, Plan & NCP

OPRC 90

-Umbrella for the Plan

NOWPAP Regional Oil Spill Contingency Plan

National Contingency Plans (China, Japan, Korea, Russia)

- Base for the Plan

Designation of National Authorities and contact points

- Each NOWPAP Members should designate the following
 - Competent National Authority or Authorities with responsibility for oil pollution preparedness and response
 - National Operational Contact Point or Points, which shall be responsible for the receipt and transmission of oil pollution reports
 - Assistance Decision authority entitled to act on behalf of the Member to request assistance or to decide to render the assistance requested.

Exchange of information

- NOWPAP Members should exchange information
 - Competent National Authorities, Operational Contact Points and Assistance Decision Authority
 - sources of oil spills and vulnerable resources
 - inventory of pollution response equipment and products
 - directory of experts, trained personnel and Strike Teams
 - rules concerning the use of dispersants
 - logistic support available within the Member
 - NCPs of the NOWPAP Members
 - maps showing the main environmentally sensitive areas
- This information is maintained by MERRAC and is provided to the Members

Pre-arrangements Relating to Administration, Logistics and Funding

- logistic support (personnel, equipment)
- Financial Procedures
- Customs and Immigration Procedures
- Overflight and Navigation Procedure
- Health and Safety
- Medical Insurance and Medical Assistance
- Documentation of Response Operations and related Costs

Response Operations during the Activation of the Plan

Response Phase

- For the purpose of the Plan, co-operation in pollution response operations has been divided into four distinct phases:
 - . Phase I Notification
 - . Phase II Evaluation and activation of the Plan
 - . Phase III Joint Response Operation at sea
 - . Phase IV Joint Response Operation on shoreline

Phase I. Notification

- in accordance with the provisions of the NCP of each Member
- in the form of a NOWPAP POLREP (Annex 4), if a NOWPAP Member become aware of a major pollution incident regardless of the need for the activation of the Plan
- National Operational Contact Points make further notification within the Member

POLREP (Initial Information Format)

AA. Date and Time of Incident

BB. Position(Latitude, Longitude) (True Bearing, Distance From a Landmark)

CC. Brief Description of Incident

DD. Ship's Particulars

- (1) (Ship's Name /Port of Registry /Owner /Agent)
- (2) (Ship's Type /G.T/Draft)
- (3) (Number of Crew /Nationality)
- (4) (Type of Cargo /Amount /Owner)
- (5) (Type and Quantity of Cargo /Fuel Oil)
- (6) (P&I /Other Insurance)

EE. Brief Description of Pollution

- (1) (Type of Spilled Oil):
- (2) (Estimate of the Quantity):

FF. Brief Details of Weather and Sea Conditions(time, date, month)

- (1) (Weather): windy and cloudy
- (2) (Wind Direction /Velocity):
- (3) (Current /Wave Height /Swell):
- (4) Atmospheric /Water Temperature):
- (5) (Visibility):

GG. Others

POLREP (Midterm Information Format)

AA. Date and Time of Information

BB. Situation of Spill

- (1) (Type /Quantity of Spilled Oil)
- (2) (Continuity of Sill)
- (3) (Spreading /Drifting of spilled Oil)

CC. Brief Description of Weather and Sea Condition

- (1) (Weather)
- (2) (Wind Direction /Velocity)
- (3) (Current /Wave Height)
- (4) (Atmospheric /Wave Temperature)
- (5) (Visibility)

DD. Brief Description of Cleanup Operation

EE. Others

Phase II. Evaluation and activation of the Plan

- NOWPAP Member should assess the pollution by the spill and decide whether or not to activate its NCP and the Plan
- Lead Member should not activate the Plan without first activation its NCP
- Surveillance of spill movement and behaviour by aircraft or vessels (Annex 5)
- Forecasting Oil Movement:
 - . Gether information about wind, tides, current, type of oil
 - . Using a suitable computer program
- Requests for assistance within the framework of the Plan
 - . Following the activation of the Plan
 - . Through Assistance Decision Authorities
 - . Using the standard form in the NOWPAP POLREP (Annex 4)
 - . Immediately acknowledge receipt

- Phase III. Joint Response Operation at Sea
- should be conducted in accordance with the procedures described in the NCP of the NOWPAP Member whose Action Area is affected

- Phase IV. Joint Response Operation on shoreline
 - oil dispersants, in-situ burning or bioremediation should be used in accordance with the provisions of the NCP of the NOWPAP Member concerned

- Request for assistance from outside the Region
 - The Plan does not hinder requesting assistance from outside the Region or from the private sectors
- Termination of Joint Response Operation and deactivation of the Plan
 - The lead member will authorize the LOSC to terminate the JROs when:
 - . to a point where the benefits of further counter pollution measures would not be justified by their cost
 - . The response capabilities and resources of the Lead Member are sufficient for finalizing them
 - . The pollutant does not further threaten their interests
 - Following the deactivation of the Plan
 - . All equipment which took part in the JROs be returned to its owners clean and in working order
 - . Each assisting Member should prepare a report of the part they played in the JROs.

3) Competent National Authorities (CNA) Meeting for NOWPAP Regional Oil Spill Contingency Plan

- ◆ To discuss questions related to(as agreed at 7th FPM)
 - the implementation of the plan
 - response to actual incidents
 - organization of training courses and exercises
 - other relevant matters



Preliminary CNA Meeting for NOWPAP Regional Oil Spill Contingency Plan

(Qingdao, China, 15 - 18 Nov. 2004, hosted by China)

• 1st CNA Meeting for NOWPAP Regional Oil Spill Contingency Plan (MERRAC, 26 - 27 May 2005)

- . Case study of other regional experience
- . Presentation and Analysis of National Contingency Plans
- . Pollution warnings and Requests for assistance
- . Case Studies and lessons learned
- . Specific topics of the Plan: financial matter, Customs etc.
- . 2nd CNA Meeting will be held in Sahkalin in May 2006 in conjunction with the NOWPAP Japan-Russia Joint Oil Spill Combating Exercise 2006 (NOWPAP Delta 2006)

5. Conclusion

- MERRAC has been building a strong partnership among NOWPAP Members and carried out the designated activities in the field of oil spill preparedness and response in the NOWPAP region, with professional supports from IMO, NOWPAP RCU and UNEP.
- ◆Especially, adoption of the Plan and its MoU are meaningful this is the first agreement actually signed under NOWPAP, and it clearly demonstrates a spirit of co-operation for the protection of the precious and delicate marine and coastal environments in the NOWPAP region.
- As this, the four countries of the NOWPAP region are in a better state of preparedness to respond to oil spills, as each of them may request assistance from the other three NOWPAP members in cases of large oil spill emergencies.

- The Plan will provide
 - an official framework and technical guidelines for regional co-operation and
 - an operational mechanism for mutual assistance to coordinate and organize a prompt and effective response to major oil spill incidents in the NOWPAP region
- In the event of an oil spill incident, prompt and effective action within the framework of the Plan will minimize the damage which may result from major oil spill
- MERRAC, as a secretariat of the Plan, will keep the Plan up-to-date and also implement the Plan through the Joint Oil Spill Combating Exercise

