The Activities of MERRAC for Oil and HNS Spills Preparedness and Response in the NOWPAP Region

2015 PICES Annual Meeting
15 October 2015, Qingdao, China

Seong-Gil Kang, Jeong-Hwan Oh, Yoon Young Back, Jung Hyun Lim, Bo Sik Kang
NOWPAP MERRAC
I. Introduction
NOWPAP – UNEP’s Regional Seas Programme

adopted by China, Japan, R. Korea, Russia in 1994
Institutional Arrangement of MERRAC

NOWPAP Intergovernmental Meeting

- UNEP
- IMO
- KRISO

CEARAC
DINRAC
POMRAC

NOWPAP RCU

MERRAC

People’s Republic of China
China MSA

Japan
JCG

Republic of Korea
KCG

Russian Federation
SMPCSA
II. Oil and HNS Spill Risks in the NOWPAP Region
NOWPAP sea is regarded as one of hot spot areas in the world...
Location of Oil Spill Accidents (1990-2014)

313 oil spill incidents over 10 tons

60 HNS spill incidents over 10 tons

China
Japan
Korea
Russia

(@ merrac.nowpap.org)
Statistics on Oil Spill Incidents (1990-2014)

Number of oil spills in the NOWPAP region

Number of oil spills in the NOWPAP region

(@ merrac.nowpap.org)
Statistics on Oil Spill Incidents (1990-2014)

Quantity of oil spilled in the NOWPAP region

- **Sea Prince**: 4,150 Tons
- **Nakhodka**: 5,304 Tons
- **Hebei Spirit**: 10,766 Tons

Causes of oil spills in the NOWPAP region (1990-2014):
- Collision: 44%
- All other: 19%
- Stranding: 17%
- Fire & Explosion: 4%
- Other: 1%
- Metocean: 1%
- Grounding: 1%
- Abandonment: 2%

(@ merrac.nowpap.org)
Statistics on HNS Spill Incidents (1990-2014)
Statistics on HNS Spill Incidents (1990-2014)

Quantity of HNS spilled in the NOWPAP region

Tons

Year

Causes of HNS spills in the NOWPAP Region (1990-2014)

Collision 42%

Grounding 17%

Sinking 15%

Fire & Explosion 7%

Other 10%

Damage of Hull 16%

(@ merrac.nowpap.org)
III. NOWPAP Regional Oil & HNS Spill Contingency Plan
NOWPAP Regional Oil and HNS Spill Contingency Plan (RCP)

Signatures of the MOU for the NOWPAP RCP
In Nov. 2004
Purpose and Objectives

◆ **Purpose**
To provide a framework under which NOWPAP Members may co-operate at the operational level in responding to major oil spill incidents

◆ **Overall objective**
To provide an operational mechanism for mutual assistance through which the NOWPAP members will cooperate in order to coordinate and integrate their response to marine oil spill incidents which affect or seem likely to affect the Action Area of one or more of the NOWPAP Members and which exceeds the response capability of a NOWPAP member and the resource available to it.
Geographical coverage
- 33°N~55°N, 121°E~145°E
- Bordering 5 countries

Risks of Spill
- Oil and HNS traffic is dense
- Navigational dangers
- MERRAC maintains the information on main shipping routes, the amount of oil and HNS

Sensitivity
- Very sensitive to spill
- Fisheries, aquaculture, ecosystem, tourism, industry, salt marshes
Actions to be taken through the implementation of the RCP

a) developing appropriate preparedness measures and effective systems for detecting and reporting pollution incidents affecting or likely to affect the Action Area of the NOWPAP Members;
b) promoting and implementing regional co-operation in oil/HNS pollution contingency planning, prevention, control and clean-up operations;
c) establishing a declared response capability in each Member to minimise the hazard posed by oil & HNS spills;
d) developing and implementing a programme of training courses and practical exercises available for personnel of the NOWPAP Members involved in oil pollution prevention and combating; and
e) developing procedures to increase regional co-operation.
## Components of Contingency Plan

<table>
<thead>
<tr>
<th>Risk Assessment</th>
<th>Strategic Policy</th>
<th>Operational Procedures</th>
<th>Administrative and Information Directory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Likelihood of a spill occurring: frequency, volume, risk</td>
<td>Response Techniques: Offshore, Shoreline</td>
<td>Notification</td>
<td>Prearrangement: Logistics, Financing procedures</td>
</tr>
<tr>
<td></td>
<td>Leadership, Command and Management</td>
<td>Initiation</td>
<td>: overflight</td>
</tr>
<tr>
<td></td>
<td>Training and review procedures</td>
<td>Mobilisation</td>
<td>: Health/Safety</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Clean-up / Support</td>
<td>Example documents</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Progress Review/ Termination</td>
<td>Supplementary Information</td>
</tr>
</tbody>
</table>
Geographical coverage
- 33°N~55°N, 121°E~145°E
- Bordering 5 countries

Risks of Spill
- Oil and HNS traffic is dense
- Navigational dangers
- MERRAC maintains the information on main shipping routes, the amount of oil and HNS

Sensitivity
- Very sensitive to spill
- Mariculture, fish farms, fisheries, wildlife, tourism, industry, salt marshes
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 NCP of that Member
  - with the laws and regulations of that Member

◆ Each member should designate the following:
  - CNA(s), NOCP(s), ADA
For prompt and effective response, NOWPAP Members should exchange information on:

- Competent National Authorities, Operational Contact Points and Assistance Decision Authority
- sources of 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
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
Operational Responsibilities

- **Lead Member** (taking the lead role) should:
  - activate the Plan
  - ask for assistance within the framework of the Plan
  - designate the **Lead On-Scene Co-ordinator (LOSC)**
  - assess and forecast the situation
  - report the result to other NOWPAP Members
The Plan requests to pre-arrange requirements necessary for Joint Response Operation such as:

- Logistics
- Financial Procedures
- Customs and immigration procedures
- Overflight and navigation procedures
- Health and safety
- Medical Insurance and medical assistance
- Documentation of response operations and related costs
ANNEXES to the Plan

◆ **Annex 1.** Directory of Competent National Authorities
   National Operational Contact Points
   and Assistance Decision Authorities

◆ **Annex 2.** Communications Plan

◆ **Annex 3.** National Contingency Plan of Participating Members
   (People’s Republic of China, Japan,
   Republic of Korea, Russian Federation)

◆ **Annex 4.** NOWPAP Pollution Reports (NOWPAP POLREPs)

◆ **Annex 5.** Guidelines for Reporting Oil Spills
   - Aerial Surveillance

◆ **Annex 6.** Claims Manual

◆ **Annex 7.** Post-Incident Report

◆ **Annex 8.** Regional Activity Centre-Terms of Reference

◆ **Annex 9.** The list of examples of HNS to be covered under the PLan
Case of Activation of RCP
*Hebei Spirit* Incident (2007.12)

- Activation of the NOWPAP RCP upon the request by Korea:
  . Notification to NOWPAP members about the spill and request for assistance
- Support from NOWPAP Members: resource mobilization
  . China (56 tons) & Japan (10tons) of absorbents
- Support from UN/EC, JCG and USCG
  . UN/EC expert briefings (assessed as a “very successful response”)

---

![Image of meeting and activities related to the Hebei Spirit incident]

---

*Note: The image contains photographs and text describing the event.*
IV. MERRAC activities for facilitating regional co-operation on marine pollution preparedness and response
MERRAC’s Activities on regional cooperation in marine pollution preparedness and response

• Regional activities related to the development of effective measures for regional cooperation in marine pollution preparedness and response in the NOWPAP region

• The secretariat for NOWPAP MERRAC Focal Points Meeting and the NOWPAP Regional Oil & HNS Spill Contingency Plan

• Cooperation with NOWPAP RCU, IMO, and other international/regional organizations

• Special activities designated under its Terms of Reference (TOR)
Organization of MERRAC Focal Points Meetings and Competent National Authorities Meetings

- Review of MERRAC activities
- Update of RCP, including relevant annexes
- Report on oil and HNS pollution incidents
- Update of the Information System
- Planning of the training and exercises, etc
Organization of Experts Meetings

- To undertake specific advisory functions relating to scientific and technical issues on oil/HNS in implementing the regional cooperation in the region.
  • 2010 Expert Meeting (Forum on Sakhalin Projects, Wakkanai, Japan, September 2010)
  • 2013 Expert Meeting on HNS Spill Preparedness and Response (Qingdao, Russia, October 2013)
  • 2015 Expert meeting on Response to oiled wildlife (Vladivostok, Russia, October 2015)
Conduction of Exercises

- NOWPAP BRAVO Exercise: Twice/year
- Table top exercise (during CNA meetings)
- NOWPAP Regional OPRC training course (IMO Level 2)
◆ NOWPAP DELTA Exercises

✓ 1st DELTA Exercise (‘06, Russia/Japan, Sakhalin, Russia)
✓ 2nd DELTA Exercise (‘08, China/Korea, Qingdao, China)
✓ 3rd DELTA Exercise (‘10, Japan/Russia, Wakkanai, Japan)
✓ 4th DELTA Exercise (‘12, Korea/China, Yeosu, Korea)
✓ 5th DELTA Exercise (‘14, Russia/Japan, Vladivostok, Russia)
List of POLREP issued in 2013-2015
Implementation of MERRAC specific projects

- To facilitate the designated mandates of MERRAC
- Expert groups consisted of NOWPAP members: technical advice

- Guideline on sensitivity mapping, shoreline cleanup, use of dispersants
- Minimum level of preparedness, oil spill prediction model
Collection and dissemination of information

- Information on Focal Points and Organizations
- Database on Response equipment
  - Oil recovery boat
  - Oil recovery system
  - Oil booms
  - Aircraft
- National laws related to the use of the response equipment
  - Oil transfer pump
  - Beach cleaner
  - Dispersant
  - Sorbents

http://merrac.nowpap.org
Current projects (‘14-15)

◆ Update of DB on Oil and HNS Spill Response Equipment and Experts

• to standardize terminology and detailed information related to oil and HNS spill response equipment and experts

• to facilitate request and assistance of the equipment and experts inventories

➢ Reviewed the applicability of the guidance for International Offers of Assistance in Response to a marine oil pollution incident (IOA) of IMO into the MERRAC DB of response equipment and experts
Online Pollution Reporting System

- To facilitate the exchange of information of the incident (POLREP) among the NOWPAP members
- To be able to check the delivery status
- To use in both the real incidents and exercises
- To electronically archive the POLREPs

Developed an Online Pollution Reporting System
Risk Assessment of Oil Spill Incident: Likelihood Analysis

- Likelihood Analysis: Quantify the likelihood of a spill
  - Spill probability map

- Spill Scenarios: Identify sensitivity of resources to a spill
  - Worst Case

- Consequence Assessment: Determine the probable effects on the resources
  - Damage Map

- Sensitivity Analysis: Identify sensitivity of resources to a spill
  - Sensitivity map

Historic incidents, Vessel traffic, Source of pollution

Impact

Environmental, Ecological, Socio-Economic resources
V. Summary and Conclusions
• Under the framework of the NOWPAP RCP, the NOWPAP members worked together to enhance the regional cooperation to develop efficient countermeasures to minimize the hazard to be imposed by the major oil spills in the region.

• MERRAC, as the Secretariat of all the activities imposed under the RCP, has successfully supported the NOWPAP members in strengthening the regional cooperation and enhancing the regional capacity for oil and HNS pollution preparedness and response.
• For this, MERRAC has been implementing specific projects and conducting exercises on a regular basis, as well as facilitating the exchange of relevant information among the Members, in order to increase level of preparedness in the region.

• As the volume of the spills is increasing, the preparedness and response capacity is required more and more at the regional level.

• Among others, development of expertise and sharing of information is one of the crucial components in increasing the level of preparedness and response capacity.
Save our Seas