**NOWPAP MERRAC**

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

UNEP IMO

# Development of the Manual on Conduction of Oil Spill Response Operational Exercise (NOWPAP DELTA)

MERRAC Technical Report No. 11

Regional Seas

# Foreword

MERRAC, the Marine Environmental Emergency Preparedness and Response Regional Activity Centre, is one of four Regional Activity Centres of the Northwest Pacific Action Plan (NOWPAP) which was adopted in 1994 as a Regional Seas Programme of the United Nations Environment Programme (UNEP) by the People's Republic of China, Japan, Republic of Korea, and Russian Federation. MERRAC is responsible for regional co-operation on marine pollution preparedness and response in the NOWPAP region.

With technical support from the International Maritime Organization (IMO), MERRAC is currently functioning as secretariat for the NOWPAP MERRAC Focal Points Meeting (FPM), Expert Meeting, and Competent National Authorities (CNA) Meeting for the NOWPAP Regional Oil and HNS Spill Contingency Plan. The Centre is also carrying out other activities including the management of regional information system, organization of training courses and exercises, and co-ordination of research and development on the technical aspects of oil and Hazardous & Noxious Substances (HNS) spill preparedness and response.

As one of major outcomes of MERRAC activities, the NOWPAP Regional Oil and HNS Spill Contingency Plan had been adopted by all NOWPAP members and officially come into effect in 2008. The purpose of the Plan is to provide an operational mechanism for mutual assistance through which the members can co-operate during major marine oil and HNS pollution incidents in the NOWPAP region.

For providing practical and technical guidelines to promptly and effectively respond to major oil and HNS spill accidents within the framework of the Plan, the 15th NOWPAP MERRAC FPM (May 2012) agreed to launch the MERRAC Specific Project on Development of the Manual on Conduction of Oil Spill Response Operational Exercise to harmonize and unify the process of preparing and conducting exercises, based on the experience of NOWPAP competent national authorities that have participated in the NOWPAP DELTA Exercise, as well as significantly facilitate the management of oil spill response capacity and equipment of participating countries during the exercise.

The manual was developed by Russia and China, compiling the information prepared by Expert Group consisted of 4 experts who were nominated by MERRAC Focal Points as follows: Mr. Xiaofeng PENG (China, co-leading country), Mr. Kazuhisa TAKUMI (Japan), Mr. Hyoung-Jun LEEM (Korea), and Dr. Natalia KUTAEVA (Russia, leading country). MERRAC staff (Dr. Seong-Gil KANG, Dr. Jeong-Hwan OH, Ms. Jung-Hyun LIM, and Ms. Yoon-Young BACK) edited and finalized the manual with technical support of MERRAC Focal Points, NOWPAP Regional Coordinating Unit (RCU), and International Maritime Organization (IMO).

As Director of MERRAC, I would like to thank the MERRAC Focal Points and all experts of the Expert Group for their support and contribution to finalizing this MERRAC Specific Project.

Seong-Gil KANG
Director of MERRAC

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# 1. Introduction

The Action Plan for the Protection, Management and Development of the Marine and Coastal Environment of the Northwest Pacific Region (NOWPAP) and three Resolutions were adopted at the First Intergovernmental Meeting (Seoul, September 14, 1994; UNEP (OCA)/NOWPAP/IG.1/5) by the States in the Northwest Pacific region: People's Republic of China, Japan, Republic of Korea and Russian Federation (hereinafter referred to as China, Japan, Korea, Russia, respectively). Resolution 1 identified five areas of priority for implementation of the Action Plan, one of which is NOWPAP/4: Development of Effective Measures for Regional Cooperation in Marine Pollution Preparedness and Response.

For the development of effective measures for regional cooperation in marine pollution preparedness and response, it was recommended that a Forum on Marine Pollution Prevention in the Northwest Pacific be created under the NOWPAP framework (i) to exchange information on marine pollution preparedness and response; (ii) to develop the NOWPAP Regional Oil Spill Contingency Plan; and (iii) to develop the Memorandum of Understanding (MOU) on the Regional Cooperation Regarding Preparedness and Response to Oil Spills.

The 13th NOWPAP IGM (October 2008) adopted the Resolution of the NOWPAP Regional Oil and HNS Spill Contingency Plan (hereinafter referred to as the Plan) and the Plan came into effect. For efficient implementation of the Plan, the 8th NOWPAP MERRAC FPM and the 1st CNA Meeting (May 2005) adopted the "NOWPAP Regional Joint Exercises and Guidelines Regarding Oil Spill Preparedness and Response" as a reference for joint exercise to be taken in the NOWPAP region (**Annex I**).

Based on the NOWPAP Regional Joint Exercises and Guidelines Regarding Oil Spill Preparedness and Response, the regular oil spill combating exercises have been conducted:

- Synthetic Exercise (NOWPAP ALPHA)
- Alarm Exercise (NOWPAP BRAVO)
- Equipment Exercise (NOWPAP CHARLIE)
- Operational Exercise (NOWPAP DELTA)
- STATE-of-the-art Exercise (NOWPAP ECHO)

Among the above exercises, the NOWPAP ALPHA (Table-top Exercise) is kind of a paper exercise which aimed to discuss on particular matters relating to combat actions among two or more NOWPAP members. The NOWPAP ALPHA has been carried out in case of necessity to recall the roles and actions of leading and assisting members in accordance with the general procedure of the Plan, and to identify the necessity to share further information on custom and immigration procedures and on pre-arrangement procedures of the NOWPAP members. The implemented exercises are as follows:

- 1st NOWPAP ALPHA exercise aimed to introduce the concept and methods of development of exercise (led by MERRAC, 2004 MERRAC Expert Meeting).
- 2nd NOWPAP ALPHA exercise aimed to prepare national arrangements related to the assistance procedure (led by Korea, 10th NOWPAP MERRAC FPM).
- 3rd NOWPAP ALPHA exercise aimed to build regional capacity and increase understanding of the Plan (led by Oil Spill Response, 12th NOWPAP MERRAC FPM).
- 4th NOWPAP ALPHA exercise aimed to identify general procedure and the roles and actions of leading and assisting members (led by MERRAC, 13th NOWPAP MERRAC FPM).
- 5th NOWPAP ALPHA exercise aimed to test prompt and effective assistance procedure of the response resources among the NOWPAP members taking roles and actions as leading and assisting members (led by Oil Spill Response, 14th NOWPAP MERRAC FPM).

The NOWPAP BRAVO is a communication exercise using the Pollution Reporting System (POLREP) for the purposes of exchanging information when pollution of the sea has occurred or when a threat of such is present under the NOWPAP RCP. In order to test the procedure and communication system to be used in case of large-scale oil spills and other maritime accidents, the NOWPAP BRAVO has been conducted twice a year. The following exercises have been conducted since 2008:

- 1st NOWPAP BRAVO exercise, 2008, Russia
- 2nd NOWPAP BRAVO exercise, 2009, Japan
- 3rd NOWPAP BRAVO exercise, 2009, Korea
- 4th NOWPAP BRAVO exercise, 2009, China
- 5th NOWPAP BRAVO exercise, 2010, Russia
- 6th NOWPAP BRAVO exercise, 2011, Japan
- 7th NOWPAP BRAVO exercise, 2011, Korea
- 8th NOWPAP BRAVO exercise, 2011, China
- 9th NOWPAP BRAVO exercise, 2012, Russia
- 10th NOWPAP BRAVO exercise, 2012, Japan
- 11th NOWPAP BRAVO exercise, 2013, Korea
- 12th NOWPAP BRAVO exercise, 2013, China
- 13th NOWPAP BRAVO exercise, 2014, Russia
- 14th NOWPAP BRAVO exercise, 2014, Japan
- 15th NOWPAP BRAVO exercise, 2015, Korea
- 16th NOWPAP BRAVO exercise, 2015, China

In order to increase the level of preparedness of the NOWPAP members to jointly respond to major marine pollution incidents within the framework of the Plan, the NOWPAP DELTA (Joint Oil Spill Response Exercise) has been continuously carried out once every two years rotating between the NOWPAP members. The aim of the NOWPAP DELTA is partly to test the alarm procedure, the

response capability, and the response time of the NOWPAP members, partly to test and train the staff functions and the co-operation between response units (including the response equipment) of the NOWPAP members. The following exercises have been conducted since 2006:

- 1st NOWPAP DELTA exercise mobilized 10 vessels, 3 aircrafts, 1 oil recovery ship, 1 helicopter, oil containment and recovery equipment (led by Japan and Russia, in Aniva Bay, Russia, May 2006).
- 2nd NOWPAP DELTA exercise mobilized 27 vessels, 1 fixed-wing aircraft, 1 helicopter, 2 ambulances, 1 emergency command automobile, radar, mobile video transmission devices and communication equipment (led by China and Korea, in Qingdao, China, September 2008).
- 3rd NOWPAP DELTA exercise mobilized 9 vessels, 2 helicopters, radar, mobile video transmission devices and communication equipment (led by Japan and Russia, in Wakkanai port, Japan, September 2010).
- 4th NOWPA DELTA exercise mobilized 32 vessels, 3 helicopters, 6 oil skimmers and 2,500 meters of oil booms including 1 response vessel and 16 crew members from China MSA (led by by Korea and China, in Yeosu, Korea, May 2012).
- 5th NOWPA DELTA exercise mobilized 6 vessels, 3 helicopters including 3 diving boats, oil containment and recovery equipment (led by Russia and Japan, in Amur Bay, Vladivostok, Russia, October 2014).

In the above exercises, the NOWPAP ALPHA exercises usually were conducted during the MERRAC FPM and focused on discussion to test one particular issue relating to organization, communication, logistics, etc. in marine pollution incidents among the NOWPAP members. Regarding the NOWPAP BRAVO, the exercises utilized the POLREP format to test the communication system when oil and HNS spills have occurred and were successfully conducted.

In case of the NOWPAP DELTA, the exercises were conducted in accordance with exercise plan developed by the leading country to test and increase the level of preparedness of the NOWPAP members under the NOWPAP RCP. In addition, large-scale response forces from the participating NOWPAP members are mobilized on the scene like a real situation and it is necessary to support the exercise participants for customs, quarantine, immigration, etc. Thus, the DELTA exercises are more complicated than other exercises (e.g., ALPHA, BRAVO, etc.) and accordingly a unified manual for the DELTA exercise among the NOWPAP members is needed to efficiently implement the exercise in the NOWPAP region. However, each NOWPAP member has used different format of exercise plan, debriefing and final report, etc. (**Annex II**). Thus, it was emphasized that it is necessary to develop a Guidelines/Manual which could assist the NOWPAP members to more efficiently unify the process of preparing and conducting exercises. Accordingly, this manual is developed based on the experience of conducting the exercises of the NOWPAP members in accordance with the agreement of the 15th NOWPAP MERRAC FPM (May 2012).

# 2. Review of NOWPAP DELTA exercises

The NOWPAP DELTA exercises have been continuously carried out once every two years rotating between the NOWPAP members since 2006. The participation in the NOWPAP DELTA exercise is voluntary and it is usually organized bilaterally. The hosting and participating countries are decided at the NOWPAP MERRAC FPM. The hosting country has the overall responsibility to plan and conduct the exercise, and acts as a Lead Member. One neighboring country participates to establish practice response units of the exercise and two other NOWPAP members participate as observers. Since 2006, a total of five exercises were implemented under the leadership of hosting country and a large number of observers were participated in the exercises. Accordingly, key elements of the NOWPAP DELTA exercises such as weather condition, size of participants and response forces, scenario, etc. were briefly summarized in **Table 1**.

**Table 1. Summary of the NOWPAP DELTA exercises conducted in the past**

| Exercises | 1st | 2nd | 3rd | 4th | 5th |
|---|---|---|---|---|---|
| Date | 11 May 2006 | 2 September 2008 | 4 September 2010 | 18 May 2012 | 21 October 2014 |
| Host | Russia & Japan | China & Korea | Japan & Russia | Korea & China | Russia & Japan |
| Participants | China, NOWPAP RCU, Media and other public observers | IMO, IPIECA, NOWPAP MERRAC, Japan, Russia, Indonesia, Malaysia, Vietnam, Philippines, Media and 16 national agencies and local public observers | Korea, China, NOWPAP MERRAC, NOWPAP RCU, Media and numerous public observers | Japan, Russia, NOWPAP MERRAC(co-organizer), KOEM(co-organizer), Yeo-su Regional Maritime Affair & Port Office(co-organizer), Yeo-su City(co-organizer) | Russia, Japan, NOWPAP MERRAC, Media |
| Weather condition | Poor visibility | Sunny and Clear | Sunny and Clear | Sunny and Clear | Cloudy |
| Response forces | 9 vessels (8 from Russia, 1 from Japan), 4 helicopters | 27 vessels (25 from China, 2 from Korea), 2 helicopters | 9 vessels (8 from Japan, 1 from Russia), 2 helicopters | 32 vessels (31 from Korea and 1 from China), 2 helicopters | 6 vessels (5 from Russia and 1 from Japan), 3 helicopters |
| Phases | 1. Search, rescue and fire fighting<br>2. Protection of shoreline and cleaning activity in the sea<br>3. Inspect ships and aircrafts | 1. Fire fighting<br>2. Search and rescue<br>3. Oil recovery<br>4. Shoreline protection and cleaning up<br>5. Inspect ships and aircrafts | 1. Gas detection<br>2. Oil recovery<br>3. Search and rescue<br>4. Inspect ships and aircrafts | 1. Oil Spill Response<br>2. Search and rescue<br>3. Counter-terror operation<br>4. Inspect ships and aircrafts | 1. Search and rescue<br>2. Assistance to the vessel in distress (fire extinguishing on board)<br>3. Oil spill combating at sea |
| Scenario | About 800 tons of oil was spilled out from the vessel in emergency. | A passenger-container vessel lost control due to a fire in the engine room and collided with an oil tanker anchored nearby. About 600 tons of crude oil was spilled. | An aircraft of JCG found large amounts of black or brown coloured drifting oil of unknown origin in the northern part of Wakkanai port and the estimated amount was about 700 kl. | An oil tanker has been hijacked and then collides with a cargo vessel, rupturing the tanker's hull and spilling approximately 1,000 kl of cargo oil "Bunker A". | A tanker collided with a supply vessel. The tanker caught fire and then explosion. As a result, the tanker was damaged and approximately 1,200 tons of oil was spilled out in the sea. |

For development of an efficient and informative manual, based on the above experience of the NOWPAP members that had participated in the NOWPAP DELTA exercises, factors having effects on conduction of exercise were analyzed as follows.

## 2.1. Choosing of date

For preparation of exercise, choosing of date is the most basic factor. In case of five NOWPAP DELTA exercises which were conducted in the past, two of which was held in May and the other two was held in September, and the latest exercise was held in October. And most of the weather condition of the exercises was good, only one was poor visibility. However there are some unexpected and sudden extreme bad weather such as typhoon, fog, etc. Unfortunately, there was an accident occurred during the 1st NOWPAP DELTA exercise organized by Russia. Despite the accident did not directly relate to the poor weather conditions, the poor visibility, strong wind, heavy rain and other poor weather conditions could increase risk of collision and other accidents. Therefore, reserved dates as well as exercise date should be chosen considering weather, season, geographical characteristic of exercise area, etc. to change the date of the exercise when weather becomes worse. If the exercise began as scheduled and then weather has suddenly worse, it should be considered to adjust the contents or scenario of the exercise as an alternative to avoid occurrence of unexpected accident on account of conduction of exercise by constraint.

## 2.2. Phases of exercise

According to the statistics on oil and HNS spill incidents in the NOWPAP region, most of oil and HNS incidents occurred by collision and subsequently grounding, sinking, fire and explosion, etc. were the major causes of incidents (**Figure 1**).

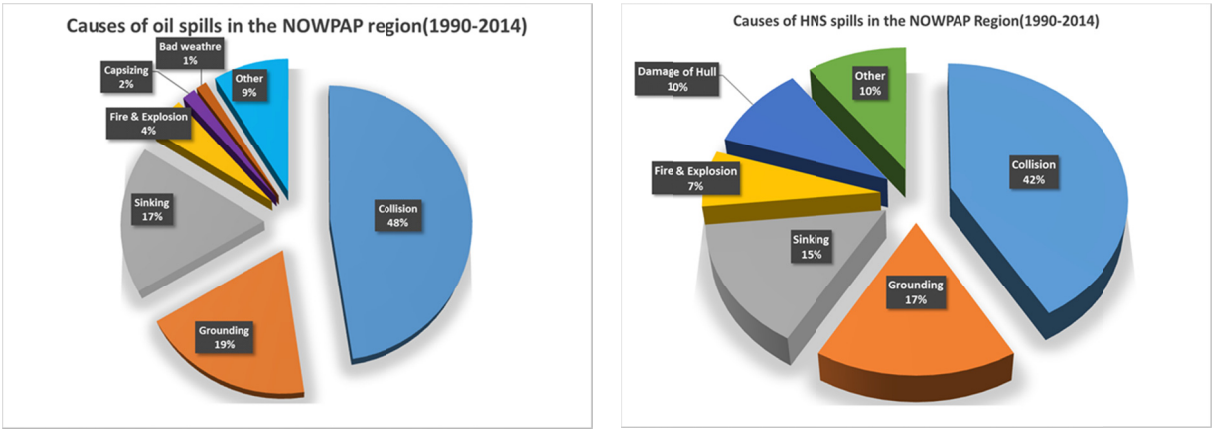


**Figure 1. Causes of oil and HNS spills in the NOWPAP region.**

In consideration of real incidents based on the results of the statistics, the NOWPAP members have mainly established phases of exercise on oil recovery, search and rescue, fire-fighting, etc. to test the response capability, the staff functions, and co-operation between response units (**Table 2**). For example, collision which is the most frequent cause of incidents in the NOWPAP region is almost required to recovery spilled oil, and search and rescue distressed people at the sea and from vessel in distress. Accordingly, phases on oil recovery, and search and rescue as indispensable exercise items were implemented at all DELTA exercises. Other exercise items were based on the function or duty of the department/competent national authorities of the host country. For instance, the exercise item on gas-detection was established as a major phase in the 3th exercise which was led by Japan Coast Guard (JCG). In the 4th exercise, Korea Coast Guard (KCG) particularly added the hostage-rescue item. Besides the drill of firefighting, search and rescue and anti-terrorism could improve the actual skill of the staff.

**Table 2. Types of phases of the NOWPAP DELTA Exercise**

| | 1st Exercise (Russia) | 2nd Exercise (China) | 3rd Exercise (Japan) | 4th Exercise (Korea) | 5th Exercise (Russia) |
|---|---|---|---|---|---|
| **Fire-fighting** | O | O | | | O |
| **Gas-detection** | | | O | | |
| **Search and rescue** | O | O | O | O | O |
| **Hostage-rescue** | | | | O | |
| **Oil recovery** | O | O | O | O | O |
| **Shoreline protection** | O | O | | | |

## 2.3. Scenario of exercise

In accordance with phases of exercise, a scenario indicates what situations should be simulated in an exercise. Therefore, the scenario of the exercise has a thread of connection with the phases of the exercise. In real incidents, collision was the most typical cause of incidents and then it was principally tested as a type of scenario in almost all exercises. For search and rescue, a scenario about people fall into sea was set up in all exercises. In addition, a fire situation and hijack of personnel were particularly demonstrated. Regarding the unknown oil, a situation when we couldn't identify an origin of spilled oil was set up (**Table 3**).

**Table 3. Types of scenario of the NOWPAP DELTA Exercise**

| | 1st Exercise (Russia) | 2nd Exercise (China) | 3rd Exercise (Japan) | 4th Exercise (Korea) | 5th Exercise (Russia) |
|---|---|---|---|---|---|
| Fire | O | O | | | O |
| People fall into sea | O | O | O | O | O |
| Hijack | | | | O | |
| Collision (typical cause of incident) | O | O | | O | O |
| Unknown oil (unknown origin) | | | O | | |

## 2.4. Mobilization of response forces

According to the size of exercise, a number of ships and aircrafts were mobilized during the past five exercises (**Figure 2**). During the five exercises, the number of mobilized ships was outstandingly high when China and Korea were the hosting country in the 2nd and 4th exercises and the number of mobilized aircrafts almost remained steady at the quantity of 2. The majority of response forces were mobilized by hosting country but also neighboring country mobilized and supported a small number of ships and helicopters to establish practice response units of the exercise. In particular, Korea Coast Guard implemented hostage-rescue as well as search and rescue as a phase of exercise in the 4th exercise. Accordingly, large-scale of vessels and staff were mobilized to demonstrate hijack of personnel as one of additional exercise phases based on the function of KCG and especially a large number of control vessels were deployed to efficiently manage a place of exercise and reduce the risk of accident occurrence.

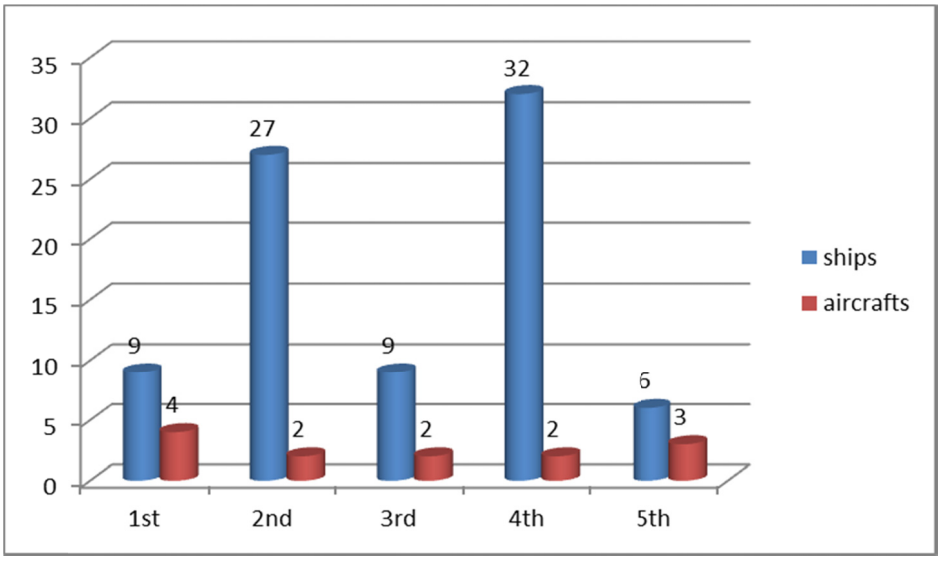


**Figure 2. The number of mobilized ships and aircrafts during the past NOWPAP DELTA exercises.**

In fact, the large quantity of vessels engaged in the exercise will obviously augment the difficulty of the management of the exercise. Big number of the aircrafts will increase the risk of having accident during exercise. Therefore, it is necessary for the organizer to maintain the ships and aircrafts at an appropriate level.

# 3. Manual on conduction of oil spill response operational exercise

In this chapter, the Manual which was developed based on the experience of the NOWPAP members provides guidelines for efficiently organizing and implementing the NOWPAP DELTA exercise by the NOWPAP members. The stage of conducting NOWPAP DELTA exercise is consisted of Preparation, Conduction, and Debriefing. The following flowchart shows entire process of NOWPAP DELTA exercise (Figure 3). In the stage of preparation, the leading country mainly makes plans and prepares exercise to efficiently conduct the exercise together with the relevant documents such as exercise preparation plan, scenario, and exercise conduction plan, etc. Subsequently, exercise is conducted and then the leading country is finally debriefed on the exercise, and makes a final report.

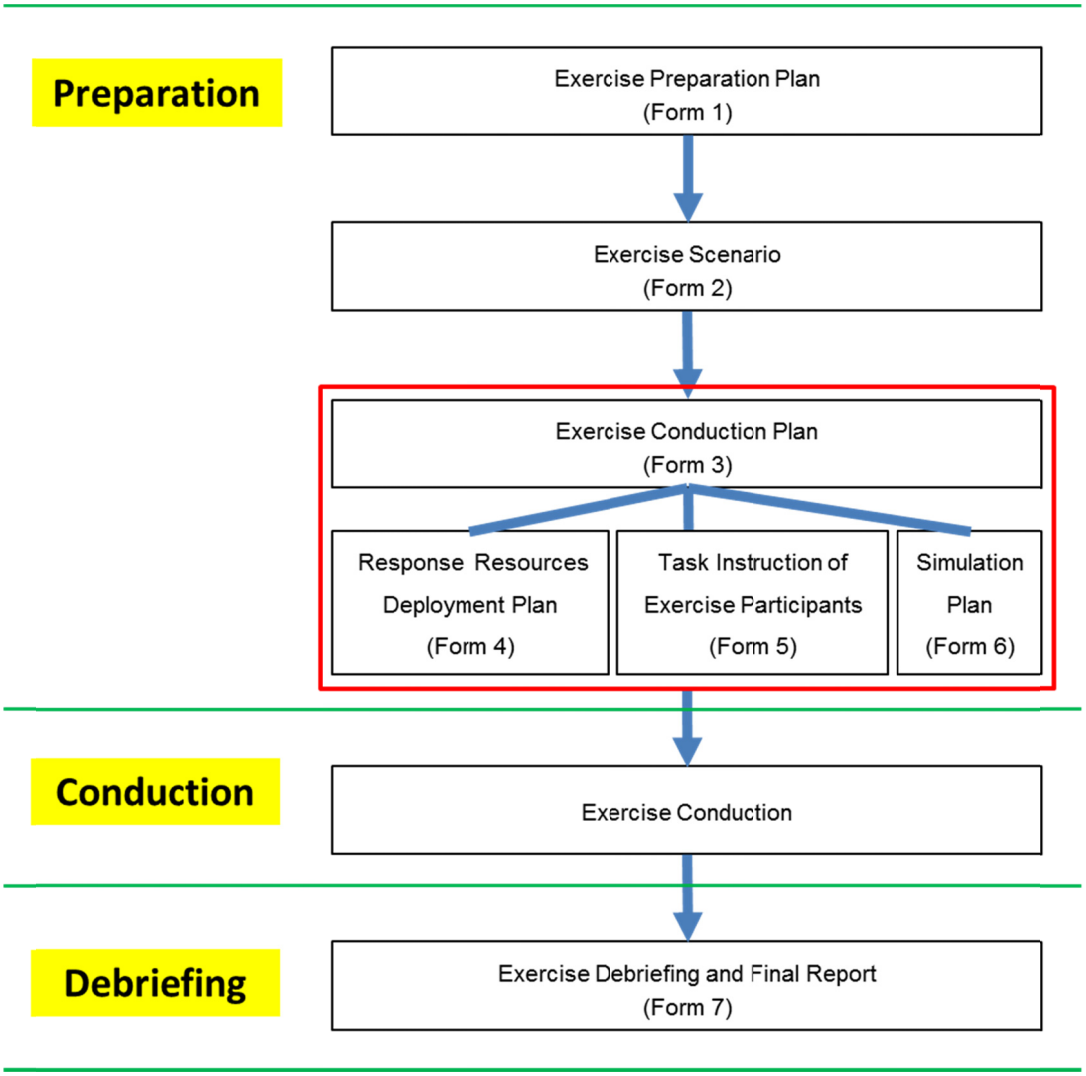


**Figure 3. Flowchart of conducting NOWPAP DELTA exercise.**

## 3.1. Exercise preparation

### 3.1.1. Design and preparation of exercise

First of all, Lead Member should prepare the Exercise Preparation Plan (**Form 1**) for design and preparation of exercise which is initially needed for internal procedure of exercise organization. In this stage, necessary arrangements for conduction of exercise should be generally decided. The plan is comprised of 3 main parts; 1) development of exercise documents, 2) determination of exercise scale, and 3) other matters concerning exercise preparation and it is useful to check the readiness of preparation of exercise.

**1) Development of exercise documents**

For efficient conduction of exercise, exercise documents should be developed by the Lead Member during the period of exercise preparation. The main documents to be developed are as follows:

- Exercise Scenario;
- Exercise Conduction Plan;
- Response Resources Deployment Plan;
- Task Instruction of Exercise Participants;
- Simulation Plan.

At this part, preparatory period and responsible person for each document should be identified to prepare exercise documents.

**2) Determination of exercise scale**

For general review of exercise scale, exercise participants, response forces (vessels and aircrafts), and equipment to be mobilized during the exercise should be determined and filled in the form.

**3) Other matters concerning exercise preparation**

Regarding the other matters, it is crucial to consider the issues about customs, quarantine, immigration, and financial matters. The plan will particularly address the issues of entry and registration of foreign response forces in the territorial waters and the airspace of the Lead Member in accordance with the national legislation as well as the berthing location of foreign vessels and landing of aircrafts during the briefing, conduction and debriefing of the Exercise. In addition, the Lead Member should arrange an agent at port for the rapid granting of entry visas and facilitation of customs and quarantine formalities of foreing participants. Accodrindly, how to support foreign participats is filled in the form. Lastly, financial issue about offer of response equipment and forces is briefly discussed in the plan to deal with the incurred expense during the exercise between requesting and offering countries.

## [Form 1] Exercise Preparation Plan

### Title of exercise: _____

| Development of exercise documents | | |
|---|---|---|
| Main Documents | Responsible person | Preparatory period |
| Exercise Scenario (Form 2) | | |
| Exercise Conduction Plan (Form 3) | | |
| Response Resources Deployment Plan (Form 4) | | |
| Task Instruction of Exercise Participants (Form 5) | | |
| Simulation Plan (Form 6) | | |
| Determination of exercise scale | | |
| Participants | - Leading country:<br>- Neighboring country:<br>- Other observers: | |
| Vessels | - Leading country:<br>- Neighboring country: | |
| Aircrafts | - Leading country:<br>- Neighboring country: | |
| Response equipment | - Leading country:<br>- Neighboring country: | |
| Other matters concerning exercise preparation | | |
| Entry and registration of foreign vessels and aircrafts (e.g. berthing & departure) | | |
| Quarantine of foreign participants | | |
| Visa support of foreign participants | | |
| Consideration of financial issues (offer of response equipment and forces) | | |
| Others | | |

**Lead Member**

Position:

Name:

Approved Date:

_____ (Signature)

**Exercise Coordinator**

Position:

Name:

Signed Date:

_____ (Signature)

### 3.1.2. Scenario of exercise

Exercise Scenario (**Form 2**) is a basic document which serves as background for development of other documents concerning design and conduction of the exercise and this document informs initially the participating NOWPAP members of major contents to be implemented at the exercise for consultation with them. The exercise scenario is divided into 3 parts; 1) exercise outline, 2) initial situation, and 3) phases of exercise and exercise situation.

**1) Exercise outline**

For general information on conduction of exercise, leading country should detemine the following information after consultation with co-leading country and fill it in the exercise scenario.

- Date and time (local);
- Area (lat. & long.);
- Organizer, co-organizer, and other participants;
- Response forces.

**2) Initial situation**

In the scenario, leading country should also indicate an initial situation of exercise. Accordingly, a primary situation before the exercise is started should be briefly described at the part of the initial circumstances of incident. In addition, forecasting information on current, wind, wave heigt, visibility, etc. should be filled in the the part of the navigation and hydro-meteorological conditions.

**3) Phases of exercise & exercise situation**

For condution of exercise, phases of exercise should be established necessarily in the exercise scenario. As shown in the Chapter 2, different types of exercise phases could be established considering real incidents and the function or duty of the department/competent national authorities of the host country, for example oil recovery, search and rescue, fire-fighting, etc. In accordance with the phases, situation to be simulated at the exercise should be described in the exercise scenario.

Some contents of the exercise scenario can be revised during the period of developing documents concerning design of the exercise. The developed exercise scenario shall be consulted with co-leading country on operation items including topic, date and time, location, and exercise scale by the working level meeting or electric communication. The draft exercise scenario shall send by Lead Member to the NOWPAP members six months in advance to enable them to comment.

## [Form 2] Exercise Scenario

### Title of exercise: _____

| | |
|---|---|
| Topic of exercise | |
| Objectives of exercise | |
| Exercise outline | |
| Date & Time (local) | |
| Area (lat. & long.) | |
| Organizer | |
| Co-organizer | |
| Other participants | |
| Response forces | |
| Initial situation | |
| Initial circumstances of incident | |
| Navigation and hydro-meteorological conditions | - Current:<br>- Wind:<br>- Wave height:<br>- Visibility:<br>- Others: |

| Phases of exercise | Exercise situation in accordance with phases |
|---|---|
| | |
| | |
| | |
| | |
| | |

**Lead Member**

Position:

Name:

Approved Date:

_____ (Signature)

**Exercise Coordinator**

Position:

Name:

Signed Date:

_____ (Signature)

### 3.1.3. Conduction plan of exercise

Exercise Conduction Plan (**Form 3**) is the main document which explains how the exercise should be carried out and this plan could be developed in detail based on the Exercise Scenario (**Form 2**). For preparation of the exercise, development of exercise conduction plan is the most fundamental and also more detailed exercise documents are developed simultaneously as separate forms to establish specific plans for efficient conduction of exercise as below:

- Response Resources Deployment Plan (**Form 4**)
- Task Instruction of Exercise Participants (**Form 5**)
- Simulation Plan (**Form 6**)

First, general items of exercise such as background, topic, date and time, area, etc. should be filled in the form in accordance with the exercise scenario. Regarding the outline of accident, initial situation of exercise should be described on the basis of exercise scenario. In the conduction plan, in particular, how to deploy response forces to be mobilized at the exercise and its simulation plan should be briefly mentioned. In addition, communication among exercise participants should be arranged. For example, call signals of all participating institutions are determined and the leading country should inform communication channels for use during exercise. Safety and security measures during the exercise also determined after consultation with co-leading country. The details will be addressed in the **Form 4, 5, and 6**. At the part of relation with public and mass media, a general plan for public relations such as determination of news contents, interview schedule should be consulted between the leading country and mass media before the exercise. Also, the leading country should inform all exercise participants about schedule of preparation meeting and final debriefing in the exercise conduction plan. At the part of other matters, it is carefully considered the procedures of entry of foreign vessels from other NOWPAP members in the territorial waters and their mooring at the port, and entry of foreign aircraft into the airspace of the leading country. Furthermore, the leading country considers how to assist foreign participants in the issue of entry visa for ensuring their stay and participation at the exercise.

Exercise Conduction Plan is approved by Head of the organizations of the leading country and signed by the Exercise Coordinator. And it shall send by Lead Member to the NOWPAP members at least one month in advance to enable them to review it.

**[Form 3] Exercise Conduction Plan**

## Title of exercise: _____

1. Background

2. Topic of exercise

3. Objectives of exercise

4. Date & Time (local)

5. Area (lat. & long.)

6. Participants
   - Organizer:
   - Co-organizer:
   - Other participants:

7. Outline of accident (exercise situation)

8. Call signal of the beginning of the exercise

9. Response forces and equipment
   - Vessels:
   - Aircrafts:
   - Response equipment:
   - Other utility:

10. Schedule of deployment of forces and equipment at the exercise (*Refer to the Form 4 for details*)

11. Organization of communication (*Refer to the Form 5 for details*)

12. Safety & security measures (*Refer to the Form 5 for details*)

13. Simulation tools and use procedure (*Refer to the Form 6 for details*)

14. Relation with public and mass media

15. Schedule of preparation meeting & final debriefing
    - Preparation meeting:
    - Final debriefing:

16. Other matters

**Lead Member**

Position:

Name:

Approved Date:

_____ (Signature)

**Exercise Coordinator**

Position:

Name:

Signed Date:

_____ (Signature)

### 3.1.4. Response resources deployment plan

Response Resources Deployment Plan (**Form 4**) is developed as a part of the Exercise Conduction Plan (**Form 3**). This document indicates how to deploy response forces to be mobilized at the exercise and defines its tasks by order of Exercise Coordinator on a separate form which is reflected the following contents:

- Deployable response items;
- Deployable and operational time (local);
- Phase of exercise;
- Order of Exercise Coordinator;
- Call name of response forces.

In this exercise document, the Lead Member should make a detailed plan for deployment of response items. The exact deployable and operational time (local) by the each item should be determined and informed for standby of response forces and equipment of participating countries on time during the exercise. Furthermore, order of Exercise Coordinator with call name of each response item should be mentioned in accordance with the phase of exercise. Under the order of Exercise Coordinator, exercise participants should deploy their response forces and equipment and then implement their tasks during the exercise as planned.

The Response Resources Deployment Plan shall be sent by Lead Member to the NOWPAP members at least one month in advance to enable them to review it. It could be considered and specified during the briefing before the beginning of exercise.

## [Form 4] Response Resources Deployment Plan

### Title of exercise: _____

| Deployable item (response forces and equipment) | Time (local) | | Phase of exercise | Order of Exercise Coordinator | Call name of response forces |
|---|---|---|---|---|---|
| | Deployable | Operational | | | |
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**Lead Member**

Position:

Name:

Approved Date:

_____ (Signature)

**Exercise Coordinator**

Position:

Name:

Signed Date:

_____ (Signature)

<Additional form>

| Deployable item (response forces and equipment) | Time (local) | | Phase of exercise | Order of Exercise Coordinator | Call name of response forces |
|---|---|---|---|---|---|
| | Deployable | Operational | | | |
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### 3.1.5. Task instruction of exercise participants

Task Instruction of Exercise Participants (**Form 5**) is developed on the basis of the Exercise Conduction Plan (**Form 3**) and is a background document for acknowledge of exercise participants and/or participating institutions in the exercise situation as well as contents and operational sequence of their tasks. The task instruction is signed by the Exercise Coordinator and is given in time to enable exercise participants to prepare for the tasks.

In this document, it sets out what tasks exercise participants and/or institutions should implement according to the situation during the exercise. Accordingly, the Lead Member will fill and distribute the document to each participating institution depending on the tasks.

Regarding the starting situation, status at the starting of exercise is notified that each participant could implement the tasks by designated response forces and equipment. In addition, the part of the implemented tasks explains the contents and sequence of implemented tasks of exercise participants during the preparation and conduction of the exercise. In case of communication for exercise, all call signals which are recognized by exercise participants should be informed in the task instruction (e.g. headquarters of management, signal of starting of exercise, break of exercise, continuation of exercise, cancellation of exercise, end of exercise, etc.). Especially, additional channels of communication during the exercise should be considered and set up against emergencies. Also, safety and security measures should be informed that participants could successfully conduct exercise without any accident as planned. Under the other matters, issues which are not included in the above points, but which are needed for organization and conduction of the exercise should be indicated.

This document is distributed to the exercise participants, not later than one month prior to the exercise and after the decision on the main issues of design of phase and conduction of exercises in order to provide more time for timely preparation for exercise. It could be considered and specified during the briefing before the beginning of exercise.

**[Form 5] Task Instruction of Exercise Participants**

**Title of exercise: _____**

1. Participants

2. Date & Time of exercise (local)

3. Area of exercise

4. Starting situation

5. Implemented tasks
   - During the preparation of exercise

   - During the conduction of exercise

6. Call signal

7. Communication

8. Safety & security measures

9. Other matters

**Lead Member**

Position:

Name:

Approved Date:

_____ (Signature)

**Exercise Coordinator**

Position:

Name:

Signed Date:

_____ (Signature)

### 3.1.6. Simulation plan

Simulation Plan (**Form 6**) is developed simultaneously with the Exercise Conduction Plan (**Form 3**). This document which indicates operational sequence and contents of simulation is developed and signed by the Exercise Coordinator and handed to the captain (commander) of vessel and aircraft who is responsible for simulation, taking into account the time needed for preparation of simulation and their staff. The simulation plan is contained:

- Simulation time (local);
- Situation;
- Player of simulation;
- Actions of player;
- Note.

The simulation plan shall be made in those cases where situation of fire and explosion, gas contamination as well as rescue of distressed people at the sea and from vessel in distress. In case of necessity, other cases also could be included in the simulation plan through the approval of the Exercise Coordinator before exercise. According to the established situation, the Exercise Coordinator should decide what actions to take by players of simulation and notify all participants of the plan. In addition, other matters such as safety measures during the exercise are considered under the part of note.

The Simulation Plan shall be sent by Lead Member to the NOWPAP members at least one month in advance to enable them to review it. It could be considered and specified during the briefing before the beginning of exercise and all participants could acquaint themselves with the overall sequence of exercise through the simulation plan.

**[Form 6] Simulation Plan**

**Title of exercise: _____**

| | Simulation Time (local) | | Situation | Player of simulation | Actions of player | Note |
|---|---|---|---|---|---|---|
| | Start | End | | | | |
| 1 | | | | | | |
| 2 | | | | | | |
| 3 | | | | | | |
| 4 | | | | | | |
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| 6 | | | | | | |
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| 10 | | | | | | |

**Lead Member**

Position:

Name:

Approved Date:

_____ (Signature)

**Exercise Coordinator**

Position:

Name:

Signed Date:

_____ (Signature)

<Additional form>

| | Simulation Time (local) | | Situation | Player of simulation | Actions of player | Note |
|---|---|---|---|---|---|---|
| | Start | End | | | | |
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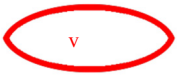
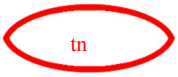
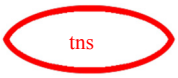
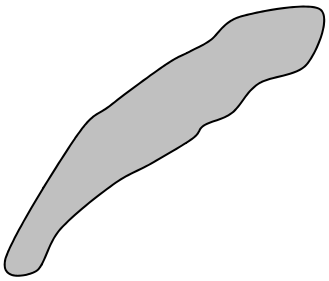
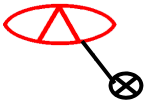
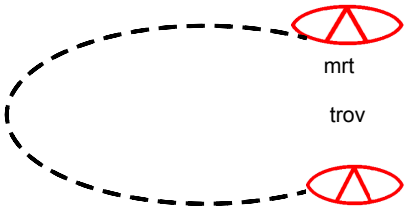
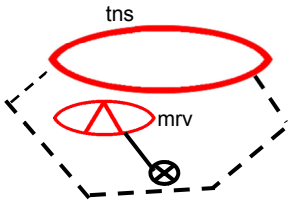
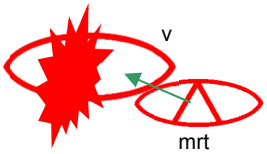
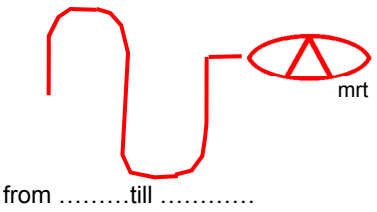
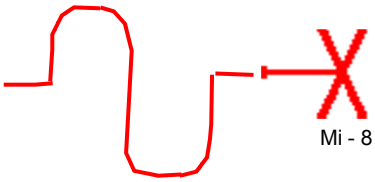
### 3.1.7. Legend

Legend is a kind of graphic to indicate exercise scenario using symbols on the map when Lead Member develops a situation map of exercise, and it will be useful to easily understand exercise situation among exercise participants through a unified legend of exercise. However, NOWPAP members have used different type of legend and there is no unified legend in the NOWPAP region until now. Thus, it is necessary to develop a unified legend which could assist the NOWPAP members to more efficiently prepare and conduct exercises. **Table 4** is a national example of Russia which is used to conduct exercise in Russia. Each symbol of the legend presents response forces or exercise situation with abbreviations and the legend might be changed based on the situation or principle of leading country in some cases.

**Table 4. Legend (National example from Russia)**

| Symbol | Full name | Abbreviation |
|---|---|---|
|  +.0`` | `1` | mrt - multifunctional rescue-tug;<br>rt- rescue-tug;<br>mrv - multifunctional rescue vessel;<br>sav - salvage sea-going vessel;<br>trov - tug of restricted operational area;<br>sbv-salvage vessel-boom vessel |
|  | Diving vessel<br>(inside of triangle abbreviation is placed) | sdv – sea-going diving vessel;<br>sdb – sea-going diving boat |
|  | Raid diving boat | rdb |
|  | Rescue boom speed boat | rbsb |
|  | Oil-collecting vessel | ocv |
|  | Self-mobile crane | smc |
|  | Transport vessel | v |
|  | Cargo vessel | cv |
|  | Tanker | tn |
|  | Tanker-storage | tns |
|  | Barge | |
|  | Salvage barge | sb |
|  | Rescue pontoon | rp |
|  | Boarder guard ship | bgs |
|  | Boat | b |
|  | Aircraft | |
|  Be-200 | Aircraft Be-200 | |

| Symbol | Full name | Abbreviation |
|---|---|---|
|  | Helicopter | |
|  Mi-8 | Helicopter Mi-8 | |
|  | Mobile point of medical care | mpmc |
|  | Spreading of oil pollution patch | |
|  | Single patch of oil pollution | |
|  | Towing transport vessel by salvage tug | |
|  | Multifunctional salvage vessel with onboard oil recovery system and skimmer | |
|   RO BOOM-1500 – 300 m | Oil-recovery U-order arranged by mrt and trov with sea boom RO BOOM-1500 – 300 m | |
|   | Deployment of boom around of vessel in distress with deployment skimmer | |
|   | Firefighting of v by mrt | |

| Symbol | Full name | Abbreviation |
|---|---|---|
|  | Rescue 2 peoples from water by helicopter | |
|  | Rescue 3 peoples from water by speed boat | |
|  | Search operation in the area by mrt from (indicate time of action) | |
|  | Search operation in the area by helicopter Mi-8 from (indicate time of action) | |

Notes:

1. The applied colors to indicate the vessels, boats and aircraft:
   - Leading member - red;
   - Participating NOWPAP members - blue.

## 3.2. Exercise conduction

### 3.2.1. Beginning of exercise

The exercise will be started by the following direction:

- by a special signal which is dedicated in the Exercise Conduction Plan and denoted the beginning of exercise;
- by the directive of Exercise Coordinator or in time which is designated according to the Exercise Conduction Plan (following established procedures);
- by handing of instruction concerning the emergency situation to the captain (commander) of ship in distress;

### 3.2.2. During exercise

In general, the following objectives are tested during the exercise:

- organization of reporting system and alerts about the accident;
- interaction of response forces and equipment, management bodies of the NOWPAP members which is responsible for search and rescue of people in distress at the sea, assistance to ship in distress, and oil spills prevention and response;
- actions of the leaders on scene of exercise concerning the implementation of the operational plan, including their tasks, monitoring of their performance, preparation of reports, etc.;
- practical implementation by all participants of their tasks during the exercise;
- arrangement of entering procedure of foreign response resource from other NOWPAP members such as custom, quarantine, immigration and access of port utilities;
- management of exercise by the leading country, communication with the NOWPAP members, procedure of reports;
- interaction of emergency services of the NOWPAP members, and management bodies.

Exercise Coordinator is not recommended to interfere in the decision of leaders (managers) at all levels and actions of participants except the cases leading to a breach of security, and disruption of the Exercise Conduction Plan.

During the exercise, all the reports are produced by the rules established for the actual situation. To identify exercise traffic and to avoid conflict with exercise undertaken within other agreements, the text of all messages (both to and from the Lead Member) shall begin with the words:

**“EXERCISE NOWPAP”**

All messages shall end with the words:

**“EXERCISE-EXERCISE-EXERCISE”**

### 3.2.3. End of exercise

At the end of each exercise, the Lead Member shall send a final “End of Exercise” message to all participants.

The record book of exercise and log books are fulfilled by the appointed officials at the headquarters of Exercise Coordinator in accordance with established rules and organizational instructions for exercises. All events, decisions, instructions and orders given, received reports as well as actions of personnel and equipment during the exercise are reflected in the record book of exercise.

## 3.3. Exercise debriefing and final report

### 3.3.1. Debriefing of exercise

Debriefing of exercise which is a final stage of exercise is essential. Its main objective is to summarize and evaluate performance of practical actions of all involved participants. Preparation of debriefing is begun simultaneously with preparation of exercise and completed in time which is determined by Exercise Coordinator.

For debriefing concerning the implementation of the exercise's tasks, the leaders of the participating NOWPAP members as well as organizations of Lead Member should submit to Exercise Coordinator the following documents:

- map (schemes) of actual situation and actions on the exercise;
- extracts from the record book of exercise, log books as well as necessary explanatory notes and references;
- additional reporting documentations which are determined according to the instructions for exercise.

At debriefing, Exercise Coordinator should report the following:

- basic provisions on the topic, objectives;
- significant issues associated with the design of phase, conduction and results of exercise;
- evaluation of the decisions and actions of the leaders on the scene of exercise, the heads of rescue units, and the captains of ships and aircrafts;
- evaluation of new techniques, and methods to provide assistance, responding to marine accidents and other instructive actions implemented during the exercise;
- analysis of causes of weak (unsuccessful) actions of exercise participants with lessons learned;
- general conclusions and the extent of actual achievement of objectives in accordance with the Exercise Conduction Plan as well as dissemination of good practices;
- proposals concerning the necessity of amendment of the NOWPAP Regional Oil and HNS Spill Contingency Plan, if necessary.

### 3.3.2. Final report

Final report of exercise is directed to the MERRAC Secretariat not later than 30 days after the end of exercise. Exercise Coordinator is organized the preparation of a report on the results of exercise.

The report (**Form 7**) should include the following contents:

1) Design and beginning of exercise

- brief description of exercise such as background, topic, time and area of exercise, etc.;
- organization of alert;

- operational planning;
- deployment of management staff, response resources to the exercise area;
- request of assistance and its allocation.

2) Conduction of exercise and its termination
- actions of personnel and equipment, resources, management staff and exercise participants;
- management of exercise and communication;
- completion of the exercise, recovery of equipment and forces, resources;
- impact of navigational, geographical and meteorological conditions during conduction of exercise.

3) Comments of exercise participants

Comments of Exercise Coordinator, the leaders on the scene, the heads of staff management center, which are involved in the exercise, concerning the most important issues of design phase and conduction of Exercise as well as their respective proposals for amendment of the NOWPAP Regional Oil and HNS Spill Contingency Plan, if necessary.

4) Conclusion

Conclusions are made by Exercise Coordinator with indicating the positive side and shortcomings in design of phase and conduction of exercise, suggestions and recommendations for preparation and conduction of exercise in the future. If necessary, charts, maps, photos, tables, graphs are included to each section of the report and video of exercise is recommended to distribute to exercise participants.

**3.3.3. Evaluation**

The Exercise Evaluation team (EET) could be established for purpose of exercise evaluation (**Annex I**). The EET normally consists of three members, of which one is from the Lead Member, one from the NOWPAP member who arranged the previous exercise, and one from the NOWPAP member who will arrange the next exercise.

The EET shall, in order to strengthen the operational co-operation between the NOWPAP members, do an unbiased evaluation of the exercise. This evaluation is to be conducted in two steps; as an intermediate evaluation and as a final evaluation.

For **the intermediate evaluation** the tasks of the ETT are:
- to be present during the exercise; and
- to give an oral presentation of the findings and a preliminary evaluation of the exercise to the participants immediately after the exercise (at the debriefing).

For **the final evaluation** the task of the ETT is:

- to make a written final evaluation including lessons learned and proposals for future activities. The report should be submitted by the Lead Member to the next meeting of the NOWPAP Focal Points.

**[Form 7] Final Report of Exercise**

## Title of exercise: _____

1. Background

2. Topic of exercise

3. Objectives

4. Exercise outline
   - Date & Time (local):
   - Area (lat. & long.):
   - Participants:

5. Mobilized response resources

6. Implemented exercise with scenario

7. Lessons learned

**Lead Member**

Position:

Name:

Approved Date:

_____ (Signature)

**Exercise Coordinator**

Position:

Name:

Signed Date:

_____ (Signature)

# Annex I.

# NOWPAP Regional Joint Exercises and Guidelines Regarding Oil Spill Preparedness and Response

# Annex I. NOWPAP Regional Joint Exercises and Guidelines Regarding Oil Spill Preparedness and Response (agreed at the 9th NOWPAP MERRAC FPM)

## 1. EXERCISES ANF RELATED GUIDELINES

### 1.1 TYPES OF EXERCISES

Under the framework of the NOWPAP Regional Oil Spill Contingency Plan the following types of combating exercises have been agreed upon:

- **Synthetic Exercise** **(NOWPAP ALPHA)**
- **Alarm Exercise** **(NOWPAP BRAVO)**
- **Equipment Exercise** **(NOWPAP CHARLIE)**
- **Operational Exercise** **(NOWPAP DELTA)**
- **State-of-the-art Exercise** **(NOWPAP ECHO)**

Decisions on the exercise programme including the types of exercises, aims and goals for the exercises, time for the execution and appointment of Lead Member are taken during the meetings of the NOWPAP Focal Points.

NOWPAP BRAVO, CHARLIE, DELTA and ECHO can be executed independently or in combination with each other.

◆ **Synthetic Exercise (NOWPAP ALPHA)**

This exercise type is a “paper exercise”, the aim of which is to create a base for discussion on matters relating to organization, communication, logistics, etc. in combating actions involving two or more NOWPAP Members.

The exercise will normally take place during the meeting of the NOWPAP Focal Points.

The outline of the exercise is preplanned in such a way that the players will be presented with a scenario of a pollution incident giving such facts of the incident that most probably would be at hand in the initial phase.

The situation in the initial phase will be followed by presentations of the situation as it has developed at certain chosen later stages.

After each presentation the players are given the necessary time to consider their national follow-up actions are then presented and discussed before a presentation of the next following chosen stages of the incident situation will take place.

◆ **Alarm Exercise (NOWPAP BRAVO)**

The aim of this exercise type is to test the agreed procedures and lines of communication for reporting, requesting and providing assistance, and to get a picture of the current response readiness of the NOWPAP Members when called to assist.

The exercise further aims at familiarizing the personnel with the use and national handling of the NOWPAP POLREP.

It is not the intention with this exercise that combating equipment and its handling personnel should be activated.

When receiving an exercise POLREP the participating NOWPAP Members should record the time of receipt, time of transmission to the responsible national authority and time of the receipt of POLREP (POLWARN) by the person responsible for initiating further national action.

When receiving an exercise POLREP in addition to the times recorded as for POLREP the participating NOWPAP Members should make a realistic evaluation of the types and the amount of equipment and personnel at their disposal for rendering assistance called for, as well as the time for its arrival at the scene of the accident.

After the termination of each exercise the participating NOWPAP Members shall submit a report containing the above mentioned times and evaluations to the Lead Member. The Lead Member should compile this information in a report, for discussion at the following meeting of the NOWPAP Focal Points.

The NOWPAP BRAVO is executed without notice but within a specified period of time.

The NOWPAP BRAVO can be carried out in turn between two or more NOWPAP Members, and the arrangement and the initiation of the exercise are undertaken by representatives of the Members involved and assisted by the Secretariat, if needed.

◆ **Equipment Exercise (NOWPAP CHARLIE)**

The purpose of this exercise is to test the co-operation between the combating units of the NOWPAP Members with respect to both communication and equipment. Involvement of personnel - expect those needed for running the equipment - should be very restricted.

The NOWPAP CHARLIE is carried out between two or more NOWPAP Members with bordering Response Regions.

Notice as to the time and event is to be given well in advance of the exercise, and the NOWPAP Members not taking part in the exercise and the Secretariat shall be invited to send observers to the exercise.

When planning the date for the execution of the exercise a back-up date should be held in reserve. The participating Members must be informed as soon as possible and at least three days in advance if the exercise has to be executed on the back-up date or altogether cancelled.

Reports on the exercise should be sent from the Lead Member to the Secretariat for further circulation to other NOWPAP Members in order to have the report presented and discussed at the following meeting of the NOWPAP Focal Points.

The NOWPAP CHARLIE is arranged and executed after direct consultation between the NOWPAP Members involved.

◆ **Operational Exercise (NOWPAP DELTA)**

The aim of this exercise type is partly to test the alarm procedure, the response capability, and the response time of the NOWPAP Members, partly to test and train the staff functions and the co-operation between response units (including the response equipment) of the NOWPAP Members.

The NOWPAP DELTA is carried out the execution of exercises rotating between NOWPAP Members. At the meetings of the NOWPAP Focal Points it is decided who should arrange the coming years exercises and what should be the aims if these exercises.

The Lead Member has the overall responsibility to plan and execute the exercise (see further 1.5, section 1).

A report, evaluating the results of the exercise should be send to the Secretariat for distribution to the NOWPAP Members in order to have the report presented and discussed at the following meeting of the NOWPAP Focal Points (see further 1.5, section 2).

While participation in the exercise is voluntary, it is recommended that at least the neighboring countries participate.

◆ **State-of-the-art Exercise (NOWPAP ECHO)**

The aim of this is to demonstrate the state-of-the-art of a specific topic, e.g., a type of equipment, a response method, means of communication or scientific tests. Traditional operational response activities will not form a part of this type of exercise.

As the aim of NOWPAP ECHO is to demonstrate the-state-of-the-art, great emphasis should be given to inviting relevant observers from the NOWPAP Members.

The exercise should be followed by a "hot wash-up" in order to benefit from the remarks from the observers. The Lead Member should send a report of the exercise to the Secretariat for further distribution to the NOWPAP Members in order to have the report presented and discussed at the following meeting of the NOWPAP Focal Points.

### 1.2 PROCEDURES FOR THE EXERCISES

To identify exercise traffic and to avoid conflict with exercise undertaken within other agreements, the text of all messages (both to and from the Lead Member) shall begin with the words:

**"EXERCISE NOWPAP"**

All messages shall end with the words:

**"EXERCISE-EXERCISE-EXERCISE"**

At the end of each exercise the Lead Member shall send a final "End of exercise" message to all Participants.

### 1.3 EXERCISE REPORT

After an exercise the Lead Member shall prepare a brief report (for reports from NOWPAP DELTA Exercises, see further 1.5, section 2).

The report should, as a minimum, cover the following items:

(1) Preparation of the exercise
   - a short description of how the exercise was prepared and relevant references

(2) Implementation of the exercise
   - date and period of exercise,
   - a brief description of how the exercise was initiated

(3) Participating NOWPAP Members
- names of participating Members with a description of participating units and items from each Member

(4) Running and finalization of exercise
Under this heading a brief description of following items (if applicable) should be given:
- scenario
- command
- communications
- finalization of exercise

(5) Comments of the Participating Members
A brief summary of comments received from each participating Member. Only comments on important matters should be mentioned.

(6) Conclusion
- a general conclusion from the Lead Member's point of view on lessons learned
- suggestions and recommendations on how to improve exercises in the future.

Tables, statistics or figures can be added as necessary under each item as annexes at the end of the heading.

## 1.4 CHECKLIST OF ADMINISTRATIVE AND ORGANIZATIONAL PROBLEMS WHICH COULD ARISE IN AN OPERATIONAL EXERCISE (NOWPAP CHARLIE OR DELTA)

In general it is up to each participating Member to take care of all formalities itself. But it is advisable that the Lead Member undertakes to make precautions in order to facilitate the granting of all clearance and permissions required.

This checklist is to help the Lead Member arranging an operational exercise and the participating Members not to forget issues of importance:
- diplomatic clearance
- customs questions
- conditions of work
- insurance of personnel
- civil liability for injuries or damage
- accommodation and meals
- medical treatment
- equipment and repairs

- report to the meeting of the NOWPAP Focal Points (see further 1.5, section 2)
- general program well in advance, including:

| | |
|---|---|
| * exercise condition | * time zone |
| * briefing/debriefing | * exercise command |
| * operational command | * liaison officer |
| * participating units | * communication |
| * timetable | * recommended charts |
| * pilot regulation | * required diplomatic clearance |
| * moorage | * hotel reservation |
| * transports | * observers |
| * social events | * information service |

## 1.5 PLANNING AND EVALUATION OF NOWPAP DALTA EXERCISES

### (1) PLANNING

First announcement and invitation to participation should be send to the Secretariat for distribution to the NOWPAP Members six months in advance of the exercise. This first announcement should:

- inform on the aim, the date, including a back-up date, and place of the exercise: and
- call for participation of ships and observers.

Announcements of participation should be made to the Lead Member four months in advance of the exercise.

Having received the announcements of participation should be made to the Lead Country four months in advance of the exercise.

Having received the announcements of participation the Lead Member should send out practical information about the exercise. Examples of such information are given in section 1.4. This information should not include details of the exercise scenario.

In general it is up to the Lead Member to plan the exercise scenario. An Exercise Evaluation Team (EET) shall, however, be established, to enable beforehand comments on the exercise scenario, and thus ensure the best benefits of the scheduled exercise. The exercise scenario shall send in due time to the members of the EET to enable them to comment thereupon.

The EET normally consists of three members, of which one is from the Lead Member, one from the NOWPAP Member who arranged the previous exercise, and one from the NOWPAP Member who will arrange the next exercise.

Although the aim of a NOWPAP DELTA Exercise is to check and train the operational system as a whole, efforts should also be made to change the tasks of the participating units during the exercise, in order for personnel to gain as much experience as possible from the exercise.

The participating Members must be informed as soon as possible and at least three days in advance if the exercise has to be executed on the back-up date or altogether cancelled.

**(2) EVALUATION**

The EET shall, in order to strengthen the operational co-operation between the NOWPAP Members, do an unbiased evaluation of the exercise.

This evaluation is to be conducted in two steps; as an intermediate evaluation and as a final evaluation.

For **the intermediate evaluation** the tasks of the ETT are:

- to be present during the exercise; and
- to give an oral presentation of the findings and a preliminary evaluation of the exercise to the participants immediately after the exercise(at the debriefing).

For **the final evaluation** the task of the ETT is:

- to make a written of the final evaluation including lessons learnt and proposals for future similar activities. The report should be submitted by the Lead Member to the next meeting of the NOWPAP Focal Points.

The members of the EET decide between themselves their individual tasks and their geographical location(s) during the execution of the exercise.

# Annex II.

# Report of the NOWPAP DELTA exercise conducted in the NOWPAP region

# Annex II. Report of the NOWPAP DELTA exercise conducted in the NOWPAP region

## 1. The 1st NOWPAP DELTA Exercise in Russia

On 11 May 2006, the First Joint NOWPAP DELTA Exercises under NOWPAP Regional Oil Spill Contingency Plan was organized in Aniva Bay, Sakhalin Island (Russia), under the direction by Mr. A. Yanchuk, Acting Director, State Maritime Pollution Control, Salvage & Rescue Administration of the Russian Federation (SMPCSA). Two NOWPAP members participated in the exercise. From Russia, 8 vessels and 3 aircrafts participated. From Japan, two Coast Guard vessels, oil recovery ship and 1 helicopter participated. Oil containment and recovery equipment was also provided by Japan and Russia. Two observers from China Maritime Safety Administration as well as representative of NOWPAP RCU were present.

The original plan was composed of the following three phases:

- Phase 1 - search, rescue and fire fighting;
- Phase 2 - protection and cleaning activity in the sea;
- Phase 3 - protection of shoreline (phase 3 was planned to be conducted simultaneously with phase 2).

Due to poor visibility on 11 May, the exercise was started from phases 2 and 3 at 10:30 local time with a scenario that 800 tons of oil was spilled out from the vessel in emergency. Russian vessel ‘SPA004’ deployed the booms around the vessel in emergency to protect spreading of the oil spilled. Russian vessels ‘Alga’, ‘Atlas’ and ‘Miss Ina’, Japanese patrol vessel ‘Erimo’, and Japanese oil recovery ship ‘Hakusan’ collected the oil spilled using booms and skimmers in close cooperation with each other. On the shore, the Ministry of the Russian Federation for Civil Defense, Emergencies and Elimination of the Consequences of the natural Disaster (EMERCOM of Russia) and Ecoshelf Co. Ltd. implemented the activities to protect and clean-up the coast.

The computer simulation was done during the exercise using two stations to monitor atmosphere and sea conditions. One station was set up on the coast and another one was on the command ship ‘Gipanis’. It was confirmed that the simulation technology is applicable for the exercise purposes.

At the review meeting in Yuzhno-Sakhalinsk on 12 May 2006, overall, in spite of tragic accident of a helicopter crash, the exercise was considered as a successful one. It was also confirmed that good communication and cooperation was done during the real rescue activity during the helicopter accident.

All participants agreed that the exercise was an important step in improving regional capabilities to combat oil pollution in case of spills. It was also agreed upon that similar exercises should be continued in the future, involving all NOWPAP members, if possible.


**The 1st NOWPAP DELTA Exercise (11 May 2006, Russia)**

## 2. The 2nd NOWPAP DELTA Exercise in China

The second NOWAP Joint Oil Spill Exercise (China and Korea) was conducted on 2 September 2008 in Qingdao (China). The exercise was jointly organized by the Ministry of Transport of China, People's Government of Shandong Province and Korea Coast Guard. Together with representatives from sixteen national and local agencies and related industries, the following participants were invited to attend the exercise, international observers included NOWPAP Regional Coordinating Unit and the Marine Environmental Emergency Preparedness and Response Regional Activity Center (NOWPAP MERRAC), International Maritime Organization, Japan Coast Guard, International Petroleum Industry Environmental Conservation Association (IPIECA), and observers from Russia, Korea, Indonesia, Malaysia, Vietnam, Philippines, etc.

**Objectives**

- to check the cooperative capability of China and the Korea as members of the NOWPAP Regional Oil Spill Contingency Plan;
- to test the practicality and utility of different levels of contingency plans; and
- to check the response and coordination capability of various response.

**Ships, aircrafts and other resources**

Twenty-seven ships, one fixed wing aircraft, one helicopter, one emergency command vehicle and over four hundred people took part in the exercise.

**Scenario of the Exercise**

The exercise presented a scenario where a passenger-container vessel lost control due to a fire in the engine room and collided with an oil tanker anchored nearby. The collision inflicted a 1m2 hole at the waterline of the tanker and about 600 tons of crude oil was spilled. The passengers and crew needed urgent evacuation and the spilled oil, which imposed a serious threat to the sea areas and beaches of Qingdao, required emergent control and removal.

**Exercise Objectives**

The exercise, which was divided into rescue effort and oil spill response, included six objectives:

① Emergency coordinating and commanding,
② Ship emergency fire control,
③ Maritime search and rescue,
④ Oil control and removal at sea,
⑤ Beach protection and
⑥ International cooperation on oil spill emergency.

During the exercise, domestic contingency plans of each level was activated subsequently upon reception of the emergency report, and once the accident was evaluated as a catastrophic one by on-scene inspection, the NOWPAP Regional Oil Spill Contingency Plan was activated. China MSA contacted with Korea Coast Guard and Coordinated the Korean response capacity to participate in the emergency response.

**Conduction of the Exercise**

Under the unified command of China MSA's Commander, response vessels were immediately dispatched to control and remove the oil at sea. Four vessels were grouped to deploy the protection booms to prevent the spill from affecting the sensitive areas, in the meantime, two vessels dropped skimmers to the oiled area and towed a boom in J-configuration to direct the oil to the skimmers. Four specific oil spill recovery vessels, respectively affiliated to the Maritime Safety Administration, the Port Group, and the Petroleum Industry, were directed to recover the spilled oil.

The two oil recovery vessels sent by Korea Coast Guard were assigned to perform cooperative oil recovery work with the Chinese response vessels, as commanded by the Chinese on-scene commander on the Patrol Vessel “Haixun 31”. Through smooth communication and coordination, all the response vessels utilized their respective recovery devices, including the belt skimmer, the brush skimmer and the DIP devices, and performed their duties successfully.

To improve efficiency of the response action, the Oil Spill Trajectory Model was initiated to predict the drifting direction of the spill. Based on the hydrological and meteorological data of the accident site, and the oil properties, the Model predicted that a portion of the spilled oil would be ashore the nearby bathing beach at the high tide. Hence the beach protection team was mobilized to the beach for the protection operation, which included the deployment of beach protection boom and sorbent boom, the operation of vacuum suction systems, and the manual cleaning work.

**Outcome of the Exercise**

- With all the subjects conduced smoothly and successfully, the NOWAP Joint Oil Spill Exercise concluded and accomplished its proposed and expected mission. The Exercise shows that the Northwest Pacific Action Plan is playing an increasingly important role in the protection of marine environment in this region, and NOWPAP members are taking active measures to fulfill their obligations as prescribed by the NOWPAP Regional Oil Spill Contingency Plan.
- The Exercise strengthened the cooperation between NOWPAP members in oil spill emergency response and accumulated experiences which might be utilized to further enhance the coordination mechanism of members.
- The Exercise also demonstrated various advanced techniques on oil treatment, all of which had reflected the progress of response capacity building in the NOWPAP region. It was also noted that response forces from both government agencies and industry had actively participated in the exercise, which showed the rising social awareness of prevention of oil spills and response.

**The 2nd NOWPAP DELTA Exercise (2 September 2008, China)**

## 3. The 3rd NOWPAP DELTA Exercise in Japan

The 3rd NOWPAP DELTA Exercise was conducted on 4 September 2010 in Wakkanai, Hokkaido (Japan).

**Objectives**

- to increase the level of preparedness of NOWPAP members to jointly respond to major oil spill incidents within the framework of the NOWPAP RCP;
- to reinforce the collaboration in responding to oil spill incidents among the related parties including the private sector in Japan and Russia; and
- to give the public a better understanding of oil spill response systems for ensuring their safety and security.

**Participants**

Japan and the Russia mobilized nine vessels/crafts and two helicopters with about 400 participants (including about 100 public observers). The Korea (Korea Coast Guard), China (China Maritime Safety Administration), NOWPAP MERRAC, and the NOWPAP RCU were invited to observe the exercise. The authorities and organizations which dispatched response resources for this exercise were:

- Japan Coast Guard (Japan);
- Sakhalin Salvage Department, State Marine Pollution Control, Salvage and Rescue Administration (Russia);
- Hokuriku Regional Development Bureau, Ministry of Land, Infrastructure, Transport and Tourism (Japan);
- Maritime Disaster Prevention Center (Japan); and
- Wakkanai Fishery Cooperation (Japan).

**Simulated conditions and contents of the exercise**

- An aircraft of Japan Coast Guard (JCG) found large amounts of black or brown coloured drifting oil sleek of unknown origin in the northern part of Wakkanai port, Hokkaido-prefecture, Japan;
- Estimated amount of spilled oil: about 700 kl; and
- Weather and sea conditions: fine, south-westerly wind 8 m/s, and wave height, 1m.

**Response operations conducted during the exercise**

- Gas detection by a JCG patrol vessel;
- Spraying of oil dispersant with TC3 on a JCG helicopter;
- Oil recovery operation with TRANSREC250 on a JCG patrol vessel;
- Oil recovery operation with LSC on a JCG patrol vessel;
- Spraying of oil dispersant by a JCG patrol vessel;
- Oil recovery operation with outrigger and TDS250 on a tugboat (Maritime Disaster Prevention Center);

- Oil recovery operation with the ship side installed oil recovery system (Hokuriku Regional Development Bureau, Ministry of Land, Infrastructure, Transport and Tourism);
- Oil recovery operation with the ship side installed oil recovery system of the vessel of Russia; and
- Lifesaving operation by a JCG rescue diver going down from a JCG helicopter, assuming that one of the crew members watching the situation of oil spill in a fishing boat falls into the sea.

**Outcomes and lessons learned**

- All planned response operations were successfully conducted during the exercise.
- Although the weather conditions was very fine during the exercise, wave height was a little high to the extent that some oil recovery operators felt it difficult to control the oil pollution using mechanical means (e.g. by LSC or TDS250) while piloting vessels.
- The participating authorities and organizations recognized that there might be some risk that mechanical oil recovery operations would become difficult, causing accidents that could result in operators' injury or death, if weather and sea conditions were more severe than those encountered during the exercise.
- In evaluating the results, NOWPAP MERRAC concluded that the exercise would contribute to strengthening the cooperation between NOWPAP members for oil spill response in the NOWPAP sea areas, including the region where the exercise was conducted.

**The 3rd NOWPAP DELTA Exercise (4 September 2010, Japan)**

## 4. The 4th NOWPAP DELTA Exercise in Korea

The 4th NOWPAP DELTA Exercise was conducted on 18 May 2012 in the Sea of Yeosu, Korea. The above exercise was jointly organized by Korea and China in order to enhance oil spill response capabilities of NOWPAP members and to ensure the safety and security of the public, especially people living in coastal areas.

◆ Date & Time

10:30 – 11:30 18th May, 2012 (Friday)

◆ Location

Offshore of Man-Sung Ri in Yeosu, Korea

◆ Participating Fleet Strength Plan

3,000 ton patrol vessel to be the On-scene Command center

◆ Mobilized Response Resource

| | Vessel | Aircraft | Personnel | Oil skimmer | Oil boom(m) |
|---|---|---|---|---|---|
| **Total** | 32 | 2 | 449 | 6 | 1,180 |
| **KCG** | 16 | 2 | 380 | 3 | 580 |
| **KOEM** | 2 | - | 10 | 1 | 300 |
| **Response Corp.** | 7 | - | 25 | 2 | 300 |
| **Others** | 6 | - | 18 | - | - |
| **China** | 1 | | 16 | - | - |

**Scenario of the Exercise**

- Oil Spill Response: oil boom deployment, oil dispersant spraying, and oil recovery operation
- Search and Rescue: evacuation guidance, rescue operation
- Counter-terrorist operation: air mobile assault, hostage rescue operation

**Conduction of the Exercise**

1) Counter terrorism, and search and rescue

Yeosu Coast Guard receives notification that an oil tanker has been hijacked and is headed to the Port of Kwang Yang; 3 crew members have fallen into the sea in the process of the counter-terror operation.

2) Oil spill response

An oil tanker collides with a cargo vessel, rupturing the tanker's hull and spilling approximately 1,000 kl of cargo oil "Bunker Oil" into the sea offshore of Man-Sung-Ri in Yeosu.

3) Participants and support

The exercise was organized by Korean Coast Guard and China MSA, and co-organized by the Yeosu Regional Maritime Affair & Port Office, Yeosu City, KOEM and NOWPAP MERRAC. The exercise was supported by KOEM (Korea Marine Environment Management Co-operation) and oil shipping companies based in Yeosu; other NOWPAP members (Japan Coast Guard, SMPCSRA (Russia) participated in the exercise as observers. The concerned parties, the press, the media and the public were invited to board KCG Patrols.


**The 4th NOWPAP DELTA Exercise (18 May 2012, Korea)**

## 5. The 5th NOWPAP DELTA exercise in Russia

**Background**

1. NOWPAP members (People's Republic of China, Japan, Korea, and Russian Federation) have conducted a Joint Oil Spill Response Exercise: NOWPAP Delta Exercise, - every two years since 2006, with participation of relevant response authorities each country, so as to ensure the effectiveness of framework NOWPAP Regional Oil and HNS Spill Contingency Plan (NOWPAP RCP).

2. The NOWPAP DELTA has been carried out by rotating among the NOWPAP members as follows:
   - 1st NOWPAP DELTA (lead by Russia and Japan, Aniva Bay, Russia, May 2006)
   - 2nd NOWPAP DELTA (lead by China and Korea, Qingdao, China, Sep. 2008)
   - 3rd NOWPAP DELTA (lead by Japan and Russia, Hokkaido, Japan, Sep. 2010)
   - 4th NOWPAP DELTA (lead by Korea and China, Yeosu, Korea, May 2012)

3. The 5th NOWPAP Delta Exercise 2014 has been conducted in accordance with the Workplan for MERRAC Activities for the 2014/2015 biennium which was adopted at the 16th NOWPAP MERRAC FPM (17-21 June 2013).

4. At the 17th NOWPAP MERRAC Focal Points Meeting (MERRAC, 11-13 June 2014), the draft scenario (including the maps of the three stages of the scenario) of the 5th NOWPAP DELTA Exercise, to be organized by the Russian Federation (MRS) and Japan (Coast Guard), was reported by the Russian Federation.

5. The 5th NOWPAP Delta Exercise 2014 was conducted on October 21, 2014, in the Peter the Great Bay on the approaches to the Sea Port of Vladivostok. These exercises was conducted in the context of the realization of' the NOWPAP Regional Oil and HNS Contingency Plan.

**Exercise preparation**

6. The following main arrangements were implemented in the aspect of the exercise preparation:

**<National level>**

- Plan of Conduction "5th NOWPAP Delta Exercise" preparation was developed, agreed by established national procedures and approved by Head of Federal Agency of Maritime and River Transport;

- Plan of Conduction Exercise was updated taking into account comments and proposals of all involved federal executive bodies and their regional authorities; oil, shipping and aviation companies; cooperating organizations. List of Exercise participants was defined and agreed;
- MRS conducted working meetings on implementing of Plan of Conduction "5th NOWPAP Delta Exercise" in Vladivostok on September 23, 2014, and on October 14, 2014, with representatives of national involved organizations which were participated in Exercise. The main objectives were discussion of organizational issues for final consideration of conduction of "5th NOWPAP Delta Exercise";
- Accordingly to the Manual on Conduction of Oil Spill Response Operational Exercise it were developed the main documents as following:
  - Idea of Exercise/Scenario;
  - Plan of Conduction Exercise;
  - Specific Exercise Plan/Planned Exercise Table;
  - Institutional Guidelines of the Exercise;
  - Task/Specific Instruction of the Exercise Participants;
  - Simulation Plan.

**<Regional level>**

- The Idea of Exercise/Scenario (including the maps of the three stages of the scenario) of the 5th NOWPAP DELTA Exercise was reported by the Russian Federation at the 17th NOWPAP MERRAC Focal Points Meeting (MERRAC, 11-13 June 2014);
- Plan of Conduction Exercise, which has been adopted at the national level, was distributed to all NOWPAP members thought the MERRAC;
- Transport maintenance plan of Exercise was sent to Exercise participants from Republic of Korea and Japan;
- Briefing was conducted day before of exercise (on October 20, 2014). All participants received the instruction as well as presented the reports about their readiness to Exercise.

**Notification, start of Exercise.**

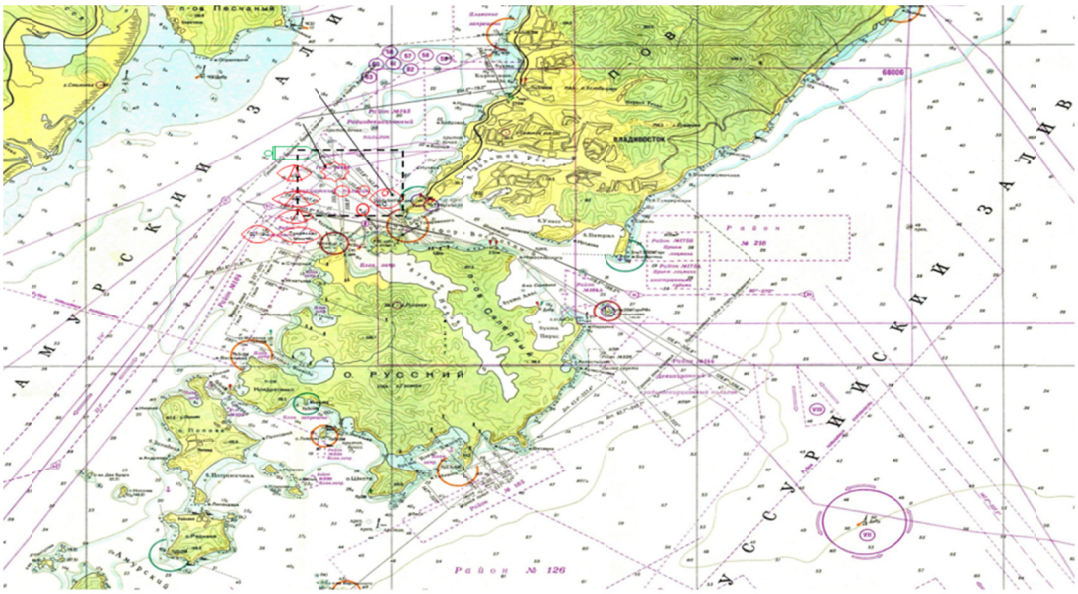
7. On October 21, 2014, accordingly to command of the Exercise Commander: «To Start Exercise» "5th NOWPAP Delta Exercise 2014" has been started at 11.00 (Local Time).

8. Area of Exercise: Peter the Great Bay (Amur Bay), sea water area limited by parallels Lat=43°05,0 N, Lat=43°07,0 N, and the longitudes: from the East Long=131°47,5 E and from the West Long=131°50,5 E.

9. Exercise was conducted at 3 stages.

Because of hard hydrometeorogical conditions order of conducting of stages N 1 and N 2 has been changed to the following sequence:

1) Stage 2 Assistance to the vessel in distress (fire extinguishing on board).
Time 11.00-11.44
2) Stage 1 Search and Rescue of the peoples in distress.
Time 12.32-13.05
3) Stage 3 Oil spill combating at sea.
Time 13.40-15.00



10. Composition of the forces and resources:

.1 Federal Agency of Maritime and River Transport:

- Emergency Commission, Headquarter.

.2 Marine Rescue Service of Rosmorrechflot (MRS):
- operational group;
- State Marine Rescue Coordination Center (SMRAA).

.3 Primorskiy Branch of MRS:
- emergency dispatch service;
- sea-going rescue tug (srt) "Lasurit";
- raid diving boat (rdb) "Diver Stashkov";
- raid diving boat (rdb) "VRD-1097";
- raid diving boat (rdb) "VRD-1409".

.4 Administration of the Maritime Ports of Primorskiy Krai:
- Marine Rescue Coordination Center (MRCC) Vladivostok;
- Emergency Response Centre (ERC).

.5 Far-Eastern Regional Center (FERC) of EMERCOM of Russia:
- helicopterMi-8 from aviation rescue center of FERC of EMERCOM of Russia (Ozernye Kluchi helipad);
- rescuers of Far Eastern Regional Search and Rescue Team of the EMERCOM of Russia;
- Center for Crisis Management (CMC) of the EMERCOM of Russian on the Primorskiy Krai.

.6 Far East Expeditionary Rescue Unit:
- emergency dispatch service;
- icebreaker salvage vessel (isv) "Spravedlivyi".

.7 Far-Eastern Aviation Search and Rescue Center, Khabarovsk city:
- 3 rescuers of the Vladivostok Regional Search and Rescue Base, Khabarovsk city;
- powerboat and 2 divers for EMERCOM helicopters work supplying.

.8 Local Dispatch Point Vladivostok Branch of the "Far Eastern Air Navigation".
- dispatch service;
- dispatcher and radio technician with portable communication devices.

.9 Pacific Fleet:
- rescue tug (rt) "Alatau";
- helicopter Ka-27ps (Nikolaevka airdrome).

.10 Border Directorate of the FSB of Russia on the Primorskiy Krai
- coast guard ship (cgs) "Primorye".

.11 Far Eastern Department of Federal Supervisory Natural Resources Management Service (Rosprirodnadzor)
- environmental engineers and a team of experts of Department for Supervision at the sea in the Primorskiy Krai.

.12 Pacific Directorate of Technical Support of Supervisory at the Sea:
- patrol boat (pb) "Berkut";
- powerboat РИВ 470 “Odissey”;
- environmental engineers

.13 Sea Protection and Shelf Development Institute, Maritime State University named after G.E.Nevelskoy, Vladivostok:
- analytical group of experts

.14 Company “Prime Shipping”:
- tanker “Taurus” (reserve – vessel “Kora”)

.15 Company “USK Most”:
- vessel “Hamadori”.

.16 Primorsky territorial center of disaster medicine:
- ambulances and medical and nursing team

.17 Dispatch service of Primorsky Krai

.18 Japan Coast Guard:
- patrol vessel "Echigo" (Niigata port) with one helicopter BELL 212 on board.

.19 Observers from China, Korea, Japan.

**Conduction of Exercise in accordance with the Scenario**

11. Stage 1. Search and Rescue of the peoples in distress.

General ship alarm was announced on tanker, emergency vessel crew began to fight for vitality according to vessel schedules. Head of MRCC Vladivostok announced stage «Disaster».

As directed by the Chief of the MRCC duty captain coordinator:
- notified the ships in area of incident, duty officer of Primorskiy Branch and Sakhalin Branch of MRS, interacting organizations, duty officer of SMRCC, in accordance with the notification system in the event of the marine incident in the Russian search and rescue region in the Peter the Great Bay (Amur Bay);
- engaged the response capabilities and resources of the interaction organization and ships conditionally located in the area of the accident to the search and rescue (SAR) operations;

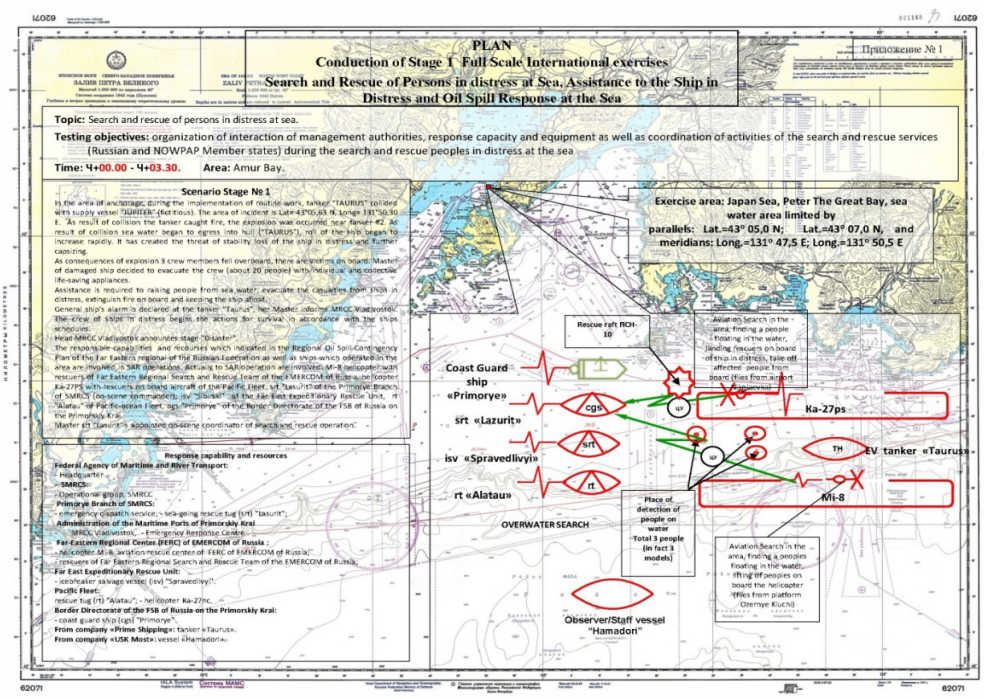
Actually SAR operation involved: Mi-8 helicopter with rescuers of Far Eastern Regional Search and Rescue Team of the EMERCOM of Russia, helicopter Ka-27PS with rescuers on board aircraft of the Pacific Fleet, srt "Lasurit" of the Primorskiy Branch of MRS (on-scene commander); isv "Spravedlyvyi" of the Far East Expeditionary Rescue Unit, rt "Alatau" of Pacific-ocean Fleet, cgs "Primorye" of the Border Directorate of the FSB of Russia on the Primorskiy Krai;
- appointed an on-scene coordinator of search and rescue (Master srt "Lasurit");
- calculated the region of search, give instruction to the search forces and coordinate SAR operations.

The involved response capabilities and resources were activated immediately and respond in accordance with their tasks and commands of Headquarter of Exercise.

Accordingly to the instruction of the on-scene coordinator of search and rescue (MRCC Vladivostok), transmitted through the Center for Crisis Management (CMC) of the EMERCOM of Russian on the Primorskiy Krai, and after the receiving relevant permission of the Head flight, the helicopter Mi-8 taken off and conducted SAR operation in a designated area. Upon detection of liferafts and people floating in the water it informed about their location to the on-scene coordinator. As directed by the on-scene coordinator, rescuers landed from helicopter to the ships in distress and evacuated the injured persons (actually one mannequin). Then with the permission of the on scene coordinator helicopter Mi-8 returned to its base.

Accordingly to the instruction of the on-scene coordinator of search and rescue (MRCC Vladivostok), transmitted through the Center for Crisis Management (CMC) of the EMERCOM of Russian on the Primorskiy Krai, helicopter Ka-27PS taken off from airport and arrived to the area of incident where conducted search the life rafts and people floating in the water. Upon their detection it informed about their location to the on-scene coordinator. Then it facilitated the detection of people floating on the water by ships involved in the SAR operation. Then an injured person (actually one mannequin) was recovered from water. Then with the permission of the on scene coordinator helicopter Ka-27PS returned to its base.
MRCC Vladivostok coordinated of the SAR operation.

The scheme of conduction of the Stage 1 of Exercise is given below.




12. Stage 2. Assistance to the vessel in distress

Accordingly to the instruction of the Exercise Commander the captain of «emergency tanker» sent a report about training accident to MRCC Vladivostok:

«In the area of anchorage during planned work the collision with supplying vessel «Jupiter» happened in the point with coordinates 43°05,63 N and 131°50,30 E, fire on vessel has started, burst in the area of tank N 2 has occurred. As a result of accident intensive outboard water flow has been started into vessel's hull, list of the vessel abruptly began to increase. There was a threat of stability losing and further vessel's capsize. As a result of burst outside vessel 3 people were overboard, there were also casualties on board. Decision about crew evacuation (about 20 people) with using of individual and collective rescue equipment was taken. It is needed to render assistance in lift of 3 people overboard, man in distress evacuation from the vessel board, firefighting and keep the vessel afloat».

Accordingly to the command of the Exercise Commander the fire imitation smoke bomb was activated on the board of tanker. Signal of vessel emergency alarm was sent. Focus and volume of fire were determined. Ventilation and electricity were disconnected. Doors were batten down. Crew began firefighting on the vessel according to schedule. Fighting of open fire was made by the most effective ways and also irrigation of adjacent spaces bulkheads, desks was made. Captain sent the message about fire to duty captain-coordinator of MRCC Vladivostok and permanently supported

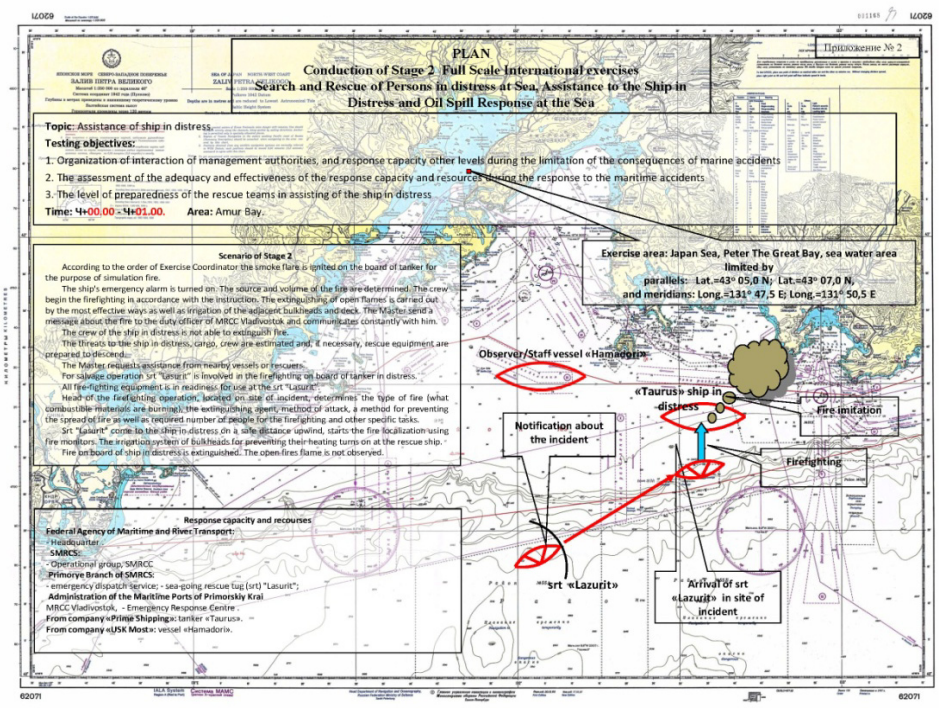
connection with him. Emergency vessel crew did not deal with fire on own capabilities. Captain requested the assistance from the nearest vessels and rescuers.

By the decision of Emergency Situations Commission of “Administration of Marine Ports of Primorskiy Krai and Eastern Arctic” head of emergency rescue works was appointed as well as the Staff of emergency rescue works was formed.

Vessel “Agat” from Primorskiy branch of MRS was engaged for emergency rescue works on firefighting on tanker. Firefighting equipment was alerted to use on vessel “Agat”. Head of firefighting operation on the place, where fire was occurred, determined type of fire, demanded method of attack, method of fire spread prevention, necessary amount of people for firefighting. Vessel “Agat” approached to emergency vessel on safe distance from windward and began fire localization using fire monitors. On the rescue vessel the system of bulkheads irrigation was turned on for their hit prevention. Fire on emergency vessel was extinguished; there were no opened pockets of flame.

Results were reported to Emergency Situations Commission of “Administration of Marine Ports of Primorskiy Krai and Eastern Arctic” and Exercise Commander. Actual actions of the management bodies as well as response capacity and resources were carried out in accordance with the Planned Exercise Table.

The scheme of conduction of the Stage 2 of Exercise is given below



13. Stage 3. Oil spill combating at sea.

This stage began after the receiving notification of the Master of the tanker that a collision with supply vessel "Jupiter" was occurred in the area of anchorage. The tanker was damaged and there was an oil spill. The estimated quantity of the spill in the sea was up to 1200 tons.

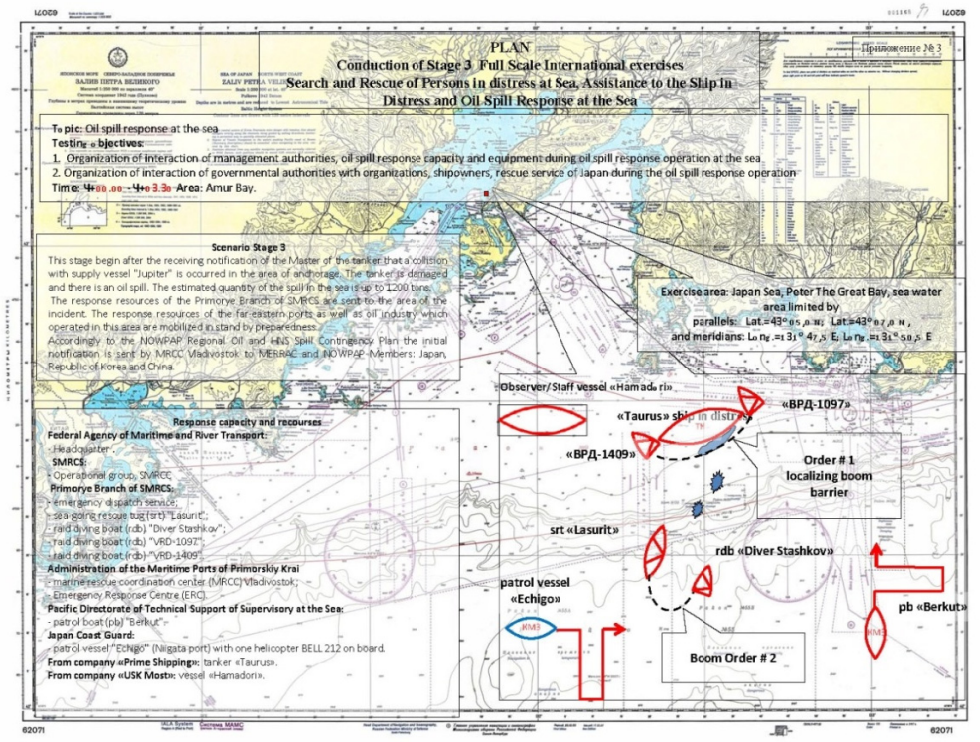
The ship's emergency alarm was turned on. SOPEP was activated. The crew taken measures to mitigate and prevent further oil spill. POLINF was sent to all concerned organizations at the marine basin. Duty captain-coordinator of MRCC Vladivostok notified SMRCC of MRS, duty officer of Primorskiy Branch of MRS. Then he acted in accordance with the scheme of the organization of notification and communication in the event of a maritime accident in the Russian Far East search and rescue region. Far-Eastern Regional Plan for the Prevention and Response of Oil Spill of the Russian Federation was activated. Headquarter of Operation was established at the premises of the Administration of the Maritime Ports of Primorskiy Krai.

The response resources of the Primorskiy Branch of MRS were sent to the area of the incident. The response resources of the far-eastern ports as well as oil industry which operated in this area were mobilized in stand by preparedness.

Ministry of Transport of Russian Federation made a decision (conditionally) to require for an international assistance in Marine Environmental Emergency Preparedness and Response Regional Activity Centre (MERRAC) to involve vessel from Japan Coast Guard in actions on oil spill combating. Notification of Japan, Korean and Chinese parts about oil spill was made through MRCC Vladivostok at direction from SMRCC according to NOWPAP Regional Oil and HNS Spill Contingency Plan.

Commission of “Administration of Marine Ports of Primorskiy Krai and Eastern Arctic” appointed On-scene Commander from the headship of Primorsky branch of MRS which led the actions on oil spill localization and combating at sea in the area of accident.

The scheme of conduction of the Stage 3 of Exercise is given below.




After receiving the results of oil spill spread modeling and forecast of its development from the Commission of “Administration of Marine Ports of Primorskiy Krai and Eastern Arctic” On-scene Commander organized the construction of the oil combating orders taking into account actual hydrometeorological conditions:

.1 Boom Order N 1 - to limit further spreading which consist of "VRD-1097" and "VRD-1409", constant buoyancy boom БПП-830, 300 meters.

.2 Boom Order N 2 - U-configuration which consist of srt "LASIRUT" and rdb "Diver Stashkov", heavy duty boom RO-BOOM 1500, 250 meters, skimmer DESMI HELIX.

After the oil spill localization of pollution Boom Order N 2 was transformed into J-configuration. Oil spill recovery was started by using skimmers.

Japan Coast Guard vessel "Echigo" and ps"Berkut" Pacific Directorate of Technical Support of Supervisory at the Sea were used for conduction of pollution monitoring. Vessel «Echigo» from Japan Coast Guard, patrol vessel «Berkut» from Federal State Enterprise «Pacific Ocean Direction on technical supplying of supervision at sea» were involved for spill monitoring as well as united group of environmental engineers and experts – state inspectors from Rosprirodnadzor, which were located on motorboat РИВ 470 «Odissey». The motorboat РИВ 470 «Odissey» was launched on water from vessel «Berkut». It was made preliminary inspection of accident area and oil slick on water surface, determined oil slick drift, made photos and videos, water environment parameters measurement, sampling from oil slick for determination of pollutant weight on 1 square meter of water surface and for its identification was made documentary formalization of the fact of sampling, further-control for consequences elimination of sea pollution and documentary formalization.

The analytical group of experts, Sea Protection and Shelf Development Institute of the Maritime State University named after G.E.Nevelskoy, was responsible for providing the data of oil spill prediction modeling. The oil-water mixture which gathered during the oil spill response operation was delivered to the reception facilities NNB 500-57 "Trans-Eco" (simulated) for final treatment. Actual actions of the management bodies as well as response capacity and resources were carried out in accordance with the Planned Exercise Table.

**Finalization of Exercise, organization of demobilization of the oil spill response forces, equipment and resources.**

14. Exercise was finished at 15.00 on October 21, 2014, with finalization of Stage 3 of Exercise accordingly to the command of the Exercise Commander: «To finish Exercise».

15. Accordingly to the instructions of their authorities and dispatch services all Exercise participants, resources and equipment were demobilized and departed to their places of permanent deployment.

**Using of imitation means at Exercise conducting.**

16. Using of imitation means at Exercise was implemented completely according to Exercise Plan.

**Outcomes and lessons learned. Exercise participant's comments.**

17. Debriefing/Exercise analysis was conducted on October 22, 2014, at the premises of Sea Protection and Shelf Development Institute, Maritime State University named after G.E.Nevelskoy.

18. Exercise Plan was implemented completely, purposes were achieved, tasks were completed.

19. The participants expressed the following comments:
    .1 exercise working documents were developed on high quality level;
    .2 crews of vessels «Agat», «Svetlomor - 3», «Vodolaz Stashkov», «VRD-1097», «VRD-1409», «Spravedlivyi», «Alatau», «Primorye», «Berkut», «Taurus», «Hamadori» demonstrated the high marine skill at all stages of exercise conducting;

.3 crew of helicopter Mi-8 demonstrated the professional actions during of mannequin lifting from board of vessel «Agat» at hard hydrometeorological conditions;

.4 the Exercise has given a good opportunity to practice the working off interaction between all organizations - participants of the exercises;

20. At the same time on Exercise analysis the following shortcomings were mentioned:
Japan part expressed great regret that during Exercise helicopter Bell212 wasn't used. For the further exercises the Japan part was suggested to give suggestions on involving the helicopter in the exercise tasks during the process of Exercise Scenario preparation. Also Russian part suggested to equip Japan vessels with equipment for oil spill combating for the further participation at the NOWPAP DELTA Exercises, that will correspond with purposes of NOWPAP Regional Contingency Plan.

21. General evaluation of Exercise preparation and conducting is «good».

## NOWPAP MERRAC

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

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