ENHANCING OIL SPILL READINESS AT THE LOCAL LEVEL: VIETNAM’S EXPERIENCE

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1. Oil spill response system in Vietnam
2. Set up comprehensive legal documents
3. Oil spill response training, drill and workshop
4. Investment in vessel, base and equipment
5. Heung-A Dragon incident
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OIL SPILL RESPONSE SYSTEM IN VIETNAM
The three resources of Vietnamese spill response

- Governmental resources
- Provincial resources
- Private industry resources
Vietnam National Committee for Search and Rescue (Vinasarcom)

Chairman (Deputy PM)

Permanent Vice Chairman (Lieutenant General)

Members (Deputy Ministers: Public Security/ Transport/ Agriculture & Rural Development/ MONRE)

Standing member (Office Executive Director/ Head of Department of Rescues and Salvage)

Members (Deputy Head of relevant Ministries/ Vietnam Television/ Voice of Vietnam)

Standing member (Office Executive Director/ Head of Department of Rescues and Salvage)

Members (Deputy Head of relevant Ministries/ Vietnam Television/ Voice of Vietnam)

Permanent Vice Chairman (Lieutenant General)

Vung Tau

Da Nang

Khanh Hoa

Hai Phong

Binh Thuan

Under Vinasarcom, there are 3 regional oil spill response centers in Vietnam:

- The National Northern Oil Spill Response Center: OSR base in Hai Phong

- The National Central Oil Spill Response Center: OSR base in Da Nang and Khanh Hoa

- The National Southern Oil Spill Response Center: OSR in Vung Tau

SET UP COMPREHENSIVE LEGAL DOCUMENTS
Law on environmental protection dated 29 November 2005

Prime Minister Decision No. 02/2013/QĐ-TTg dated 14 January 2013 promulgating the regulation on oil spill response:
- Classify 3 levels of OSR
- Classify 3 Tiers of Oil Spill Incidents
- Oil spill preparedness
- Inspection to determine the cause of oil spill incident
- Procedures of settlement of oil spill consequences
- Specify responsibilities of all stakeholders in oil spills

Decree No. 95/2010/ND-CP on licensing of and cooperation with foreign search and rescue forces in Vietnam:
- The process of approval of participation of foreign search and rescue forces
- Licensing agencies:
  - MOFA: To receive proposals, notify licensing decisions
  - MOND, MOT: To grant and notify licenses to MOFA, Vinasarcom
  - Ministry of Public Security: To grant entry and exit visas
  - Ministry of Information and Communications: To grant license to use radio frequencies and transmitters
  - VNASARCOM: To give opinions for concerned ministries to fulfill their licensing responsibilities

Decree No 93/2013/ND-CP on administrative violation sanctions in maritime sector (applied for vessels):
- A fine from 10 – 20m VND for those vessels not having OSCP as required by current regulations.
- A fine from 20 – 40m VND for those vessels not building OSR forces as required by current regulations.

Decree No 179/2013/ND-CP on administrative violation sanctions in environmental protection (applied for organizations on land):
- A fine from 10 – 30m VND for those organizations not sending participants to OSR training or not organizing OSR drill as required by current regulations.
- A fine from 30 – 40m VND for small organizations trading petroleum products not having OSCP approved as required by current regulations, 10 – 20m VND fine for not investing in OSR equipment or not signing contract with OSR service provider
- A fine from 40 – 50m VND for ports not having OSCP approved as required by current regulations, 20 – 30m VND fine for not investing in OSR equipment or not signing contract with OSR service provider
OIL SPILL RESPONSE TRAINING, DRILL AND WORKSHOP

GOT TRAINING & WORKSHOP

<table>
<thead>
<tr>
<th>GOT TRAINING VIII</th>
<th>GOT WORKSHOP 06</th>
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<tbody>
<tr>
<td>Time: 3 days, 19 – 21/05/2015</td>
<td>Time: 3 days, 12-14/10/2015</td>
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<tr>
<td>Venue: Ca Mau province</td>
<td>Venue: Vung Tau city</td>
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<tr>
<td>Main contents:</td>
<td>Main contents: experience sharing and progress report on the development of Provincial Oil Spill Contingency Plan &amp; Provincial ESI Maps as well as appraisal of OSCP at grassroots level of southern provinces.</td>
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<tr>
<td>+ Overview of oil spill response</td>
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<td>+ GOT ESI Mapping project achievements and lessons learned (PEMSEA representative)</td>
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<td>+ Guidelines for shoreline cleanup</td>
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<tr>
<td>+ Development of OSCP at provincial level and grassroots level.</td>
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<tr>
<td>+ Field survey in coastline of Ca Mau province.</td>
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OSR DRILL

- Internal exercise of 3 regional centers
- Annual exercise of oil companies: conducted by PV Drilling
- National exercise: 1st time: 2002
NASOS internal exercise

Objectives:

- To enhance OSR professional capability of NASOS staff in general and OSR skills of responder teams in particular;
- To test NASOS capability in terms of personnel, OSR equipment and facilities, methods of communications and coordination among relevant teams;
- To help newcomers in getting familiar with OSR equipment, their functions and method of operation in reality as well as understanding clearly roles and responsibilities of each team member in OSR.

NASOS internal exercise (cont’)

Equipment and facilities:

- 02 oil recovery vessels: NASOS I and NASOS II;
- 02 sets of offshore Ro-boom: 250m/set.
- 01 offshore skimmer: 66m³/h.
- 01 temporary storage tank: 25 tonnes.
- 01 dispersant spray set.
- 03 hydraulic sets

Manpower:

- Crew of 02 vessels NASOS I and NASOS II: 24 persons
- NASOS offshore responder team: 14 persons
Training

- Annual training of 3 regional centers for provincial environmental officers in designated area
- Training for HSE staff of oil companies: conducted by PV Drilling
- Training for military forces: organized by Vinasarcom
- Training for provincial officers: organized by each province

Procedure for review and approval of OCPP

Procedure for review and approval of OCPB
Up to date, the OCPPs of the following Southern provinces have been approved:

1. Binh Thuan
2. Dong Nai
3. Tra Vinh
4. Ben Tre
5. Ca Mau
6. Ho Chi Minh city
7. Soc Trang
8. Kien Giang
9. Tien Giang
10. Bac Lieu

Outline of OCPP:

■ PART I: GENERAL INTRODUCTION OF OCPP
■ PART II: NATURAL, SOCIO-ECONOMIC AND BIOLOGICAL FEATURES OF THE PROVINCE
■ PART III: SOURCES OF POTENTIAL OIL SPILL AND REAL SITUATION OF OIL SPILL RESPONSE AT PROVINCE
■ PART IV: OIL SPILL RESPONSE CLASSIFICATION
■ PART V: PREPAREDNESS FOR OIL SPILL RESPONSE ACTIVITIES
■ PART VI: TECHNICAL ISSUES RELEVANT TO OIL SPILL RESPONSE
■ PART VII: ASSURANCE ON OIL SPILL RESPONSE
■ PART IX: COMPENSATION FOR DAMAGE FROM OIL SPILL
■ PART X: MANAGEMENT, UPDATE, BUILD UP AND IMPLEMENTATION OF OIL SPILL RESPONSE PLAN

Appendix 1: List and address of relevant agencies
Appendix 2: List of local forces available for mobilization during oil spill

Up to date, the ESI-MPs of the following Southern provinces have been approved:

- Ca Mau
- Binh Thuan
- Dong Nai
INVESTMENT IN VESSEL,
BASE AND EQUIPMENT

OSR capacity of 3 centers

- Northern Center:
  - 3 offshore recovery vessels
  - 1 river oil recovery vessel
  - 1 vessel for storage of spilled oil (1,000 m³)
  - 04 oil recovery devices
  - 3,500m oil boom, shoreline cleanup equipment
- Central Center:
  - 2 offshore recovery vessels
  - 03 oil recovery devices
  - 5,000m oil boom, shoreline cleanup equipment
- Southern Center:
  - 2 offshore recovery vessels
  - 1 Transrec 126 oil recovery system, 1 Helix skimmer
  - 500m offshore boom 1800, 250m boom 2020
    (agreement in principle with PV Drilling: 2,200m oil boom, 9 skimmers, storage tanks, 2 river oil
    recovery vessels, shoreline cleanup equipment)

2 OIL RECOVERY VESSELS OF NASOS

**VESSEL NASOS I**
- Technical data:
  - 589 DWT
  - 559 GT
  - Length overall: 44m
  - Breadth moulded: 10.6m
  - Engine: 2,000 BHP
  - Max speed: 12knots
  - Spilled oil storage: 180 m³
  - Dispersant tank: 10 m³
- Operation scope: international sea, limited level 1
- Handover: Nov 2010

**VESSEL NASOS II**
- Technical data:
  - 952 DWT
  - 922 GT
  - Length overall: 53m
  - Breadth moulded: 12m
  - Engine: 3,300 BHP
  - Max speed: 12knots
  - Spilled oil storage: 327 m³
  - Dispersant tank: 12 m³
- Operation scope: international sea, unlimited level
- Handover: August 2012
Base in Vung Tau city

- The base was put into operation in October 2012.
- Total area: 26,000 m²: land 6,000 m²; water and pier: 20,000 m²
- Pier: 130m long, 8-16m wide (for 02 vessels to harbour)
OIL RECOVERY SYSTEM TRANSREC 125

- Handover: 8/2015
- Floating Umbilical Hose:
  - Length: 80m
  - Double barrel to carry hydraulic hoses for power and oil discharge hose
  - Umbilical hose consist of discharge hose, hydraulic line and electrical cable. The transmission system of this umbilical hose could be operated at least 3 separate functions (skimmer, transfer pump, thrusters)
- Telescopic crane:
  - Max outreach: 5.55 m
  - Max lifting capacity at max outreach: 1.300 kgs
- Skimming Head HIVISC 125:
  - Working oil viscosity: up to 1,000,000 cSt
  - Skimming capacity: 115 m³/h @ 50,000 cSt
- Radio remote control system: adjust cargo pump speed, speed for shovel drum, movement of thrusters, telescopic arm (in/out & up/down), winding control, slewing control, water injection pump speed of water lubricant system

OFFSHORE OIL CONTAINMENT RO-BOOM 2200

- Handover: October 2015.
- 5p of 50m, ASTM standard connector
- Total height: 2.200 mm
- Material of boom: Synthetic rubber with exterior Hypalon layer with two plies of polyester/polyamide reinforcement fabric, tensile strength of boom wall ≥ 300 N/mm²
- Containerized Hydraulic boom reel with fairlead for 250 m Ro-Boom 2200.
- Equipped with hydraulic powerpack and towing equipment.

02 commissioning video clip:

https://www.youtube.com/watch?v=dHHTbF3nJg&feature=youtu.be

\My_Pictures\Commissioning_Boom_2015\Sequence 6.mts
HEUNG A DRAGON INCIDENTS

GENERAL INFORMATION

• CAUSE OF INCIDENT:
   – Collision between Eleni Ship & Heung A Dragon at buoy no. 2, Vung Tau.

• LOCATION:
   – Bouy no. 2, Vungtau

• TIME OF INCIDENT:
   – 23h40 on 7 Nov. 2013

• SPILL RISK:
   – Est. 400 m³ FO, 40 m³ DO & some LO inside Heung M/V

GENERAL INFORMATION

• SHIP INFORMATION:
   – Name: Heung A Dragon
   – Type: container ship
   – GW: 13199 tons
   – Cargoes on board: food, chemical...

• RESPONSE TEAM:
   – Salvage Team: Svitzer (US)
   – Oil spill response: PVDO/NASOS

• RESPONSE TIME:
   – 22 Nov. – 22 Dec. 2013
GENERAL INFORMATION

• SHIP STATUS:
  – Grounding & machine room is damaged.
  – All fuel tanks are safe.
  – All crews are safe.
  – Some containers are on fire

• HAZARDS:
  – No infor. on chemicals
  – Containers fall out & drift away
  – Weather is bad (NE wind) & tide changes 04 times/day.

INITIAL RESPONSE

SITE SECURITY PLAN
• Port authority assign 03 ships from (border guard & police) to keep all non-authorized ships be away from the incident site.
• Launch out some Marking Buoys.
• Inform the isolation zone to all shipping companies on Marine Notices.

RESPONSE OPERTION

Salvage Team
• Transfer all the containers from Heung to barges via crane.
• Divers use hot-tap equipment to drill some holes on fuel tanks & pump out all the fuel inside

OSR Team
• Booming behind the Heung, ready to recover all oil slick leaked.
RESPONSE OPERATION

- Response operation was conducted in a fast, effective & safe way.
- All the fuels inside the vessel were transferred to tankers safely. All spilt oil was recovered (est. > 3 m³).

RISKS AT SITE

- Site security plan was not conducted in proper way.
- No information on the dangerous cargoes on board of the vessel.

CONCLUSION
RECOMMENDATIONS

✓ Promulgating the regulation on dispersant use ASAP
✓ The OSR national exercise maintained
✓ Procedures, forms and deadline to approve the mobilization of foreign oil spill response forces into Vietnam.
✓ Strengthening the regular inspection of business.

Q & A
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