日本財団 The Nippon Foundation 助成

平 成 17 年 度

アセアン地域内三カ国における海洋汚染防止体制の充実・強化支援報告書

＝ CMV プロジェクト〈フェーズ３〉＝

［別冊］

平成 18 年 6 月

社団法人 日本海難防止協会

ありがとう競艇
「この報告書は競艇の交付金による日本財団の助成金を受けて作成しました」

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Ⅰ　海上災害防止センターにおける各級指揮官に対する研修

CMV - PROJECT

15th July, 2005

Excellency the Minister,
Ministry of Public Works and Transport,
Kingdom of Cambodia

Subject : Invitation for the training course in Japan

Excellency,

I have a great pleasure to inform Your Excellency that the Japan Association of Marine Safety has started the project of the third phase to assist ASEAN countries on improving the marine pollution response system, focusing on the developing the human resources in this field.

As a part of the project, we invite five persons from Kingdom of Cambodia to join the training course on Oil Spill Response at Maritime Disaster Prevention Center which will be held from 12th to 16th September, 2005.

Therefore, we would be grateful if Your Excellency would send five persons from Kingdom of Cambodia to join the training course in the coming September 2005. We are expecting your Excellency's reply including the information of the five persons to join the training course by 10th August.

As for your Excellency's reference, necessary expenses to join the course will be borne by the Nippon Foundation.

I sincerely hope your Excellency's high consideration and cooperation.

Yours faithfully,

Michio Matsuura

Michio Matsuura

President,
The Japan Association of Marine Safety

CMV - PROJECT

15th July, 2005

Mr. Chan Dara,
Director,
Ministry of Public Works & Transport,
General Department of Transport,
Kingdom of Cambodia

Subject : Detail of the invitation for the training course

Dear Mr. Chan Dara,

I would like to inform you the details of the invitation for the training course on Oil Spill Response which will be held at Japan Maritime Disaster Prevention Center in September. The detail of invitation for the training course as follows,

1. Period of training: 12th – 16th September, 2005
   Period of stay in Japan:11th-17th September.2005
2. Place : Yokosuka-city, Japan (at Maritime Disaster Prevention Center)
3. Qualification for the nominee :
   - The person who will be an commander in each section in the case of the oil spill incident
   - The person who will become a key person of the oil spill response
   - The person who has the constant knowledge of the oil spill incident
   - The person who has English skill to understand the training course
   - The person who has never participated in this Maritime Disaster Prevention Center's training course

Generally, the person who will be expected to invite is a deputy director or special assistant class in the central governmental organization, is a director or deputy director class in the local government organization, and is a director or deputy director class in private sector.

4. General information and Nomination Form
   The general information and Nomination Form are going to be sent you from Mr.

Yamaguchi until the early next week.

5. Nomination of the trainee :

Should be informed not later than 10th August 2005, by sending the attached Nomination Form with photograph to the Secretariat through post by the air.

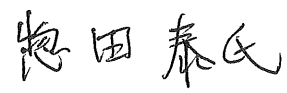
6. Country Report

On final day of the training course we are planning the lectures from the representative each countries about the present situation of counter measures for oil spill(Country Report). Please be ready to the presentation and country report. The details will be informed by Mr.Yamaguchi later.

Finally I inform you Mr. Yamaguchi will be touch with you and your staff to arrange air- tickets, hotel ,meals and so on.

Thank you very much for your high consideration and cooperation.

Best regards,



CDR. Yasushi Soda,
Manager,
CMV-Project

KINGDOM OF CAMBODIA
Nation Religion King

Ministry of Public Works and Transport

No: 1614 MPWT Phnom Penh, Date 24/8/05

The Japan Association of Marine Safety
15-16 Toranomon 1-chome, Minato ward
Tokyo 105-0001, Japan
Fax: **81-3-3581-6136**

Subject: **Nomination of five candidates to participate in the training course on Oil Spill Response, 12-16 September 2005.**

The Ministry of Public Works and Transport presents its compliment to the Japan Association of Marine Safety and has the honor to nominate five candidates as follow:

1.	Mr. **En Sopheap**	Technical Staff, Merchant Marine Department
2.	Mr. **Leng Thun Kosal**	Technical Staff, Merchant Marine Department
3.	Mr. **Tep Saran**	Technical Staff, Inland Waterways Transport Department
4.	Mr. **Hun Sam Nang**	Pilot, Sihanoukville Port
5.	Mr. **Tor Ny**	Pilot, Phnom Penh Port

to attend the training course on Oil Spill Response, which will be held from 12-16 September 2005, Tokyo, Japan.

With best regards,

MINISTER
SECRETARY OF STATE

CHUM IEK

CMV - PROJECT

15th July, 2005

Captain Soe Win,
Director General,
Department of Marine Administration,
Ministry of Transport,
Union of Myanmar

Subject : Invitation for the training course in Japan

Dear Sir,

I have a great pleasure to inform you that the Japan Association of Marine Safety has started the project of the third phase to assist ASEAN countries on improving the marine pollution response system, focusing on the developing the human resources in this field.

As a part of the project, we invite five persons from your country to join the training course on Oil Spill Response at Maritime Disaster Prevention Center which will be held from 12th to 16th September, 2005.

Therefore, we would be grateful if you would send five persons from your country to join the training course in the coming September 2005. We are expecting your reply including the information of the five persons to join the training course by 10th August.

As for your reference, necessary expenses to join the course will be borne by the Nippon Foundation.

Thank you very much for your high consideration and cooperation.

Yours faithfully,

Michio Matsuura

Michio Matsuura

President,
The Japan Association of Marine Safety

CMV - PROJECT

15th July, 2005

Captain Kyaw Zeya,
Director,
Ministry of Transport,
Department of Marine Administration,
Union of Myanmar

Subject : Detail of the invitation for the training course

Dear Captain Kyaw Zeya,

I would like to inform you the details of the invitation for the training course on Oil Spill Response which will be held at Japan Maritime Disaster Prevention Center in September. The detail of invitation for the training course as follows,

1. Period of training: 12th – 16th September, 2005
   Period of stay in Japan:11th-17th September.2005
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3. Qualification for the nominee :
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   - The person who has English skill to understand the training course
   - The person who has never participated in this Maritime Disaster Prevention Center's training course

Generally, the person who will be expected to invite is a deputy director or special assistant class in the central governmental organization, is a director or deputy director class in the local government organization, and is a director or deputy director class in private sector.

4. General information and Nomination Form
   The general information and Nomination Form are going to be sent you from Mr.

Yamaguchi until the early next week.

5. Nomination of the trainee :

Should be informed not later than 10th August 2005, by sending the attached Nomination Form with photograph to the Secretariat through post by the air.

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On final day of the training course we are planning the lectures from the representative each countries about the present situation of counter measures for oil spill(Country Report). Please be ready to the presentation and country report. The details will be informed by Mr.Yamaguchi later.

Finally I inform you Mr. Yamaguchi will be touch with you and your staff to arrange air- tickets, hotel ,meals and so on.

Thank you very much for your high consideration and cooperation.

Best regards,

CDR. Yasushi Soda,
Manager,
CMV-Project

MINISTRY OF TRANSPORT
DEPARTMENT OF MARINE ADMINISTRATION
SIX STOREY BUILDING, STRAND ROAD, YANGON
MYANMAR. P.O. BOX 194, FAX – 095 -1- 254159
E-mail: myanmarine@mptmail.net.mm

To,

President

The Japan Association of Marine Safety

Attn: Michio Matsuura
Fax No. 81 3 3581 6136
Your Ref.

From **U Myo Thein**
Tel:No. 095 -1-556049

Date 18th August 2005
Total pages(s) Twenty five (25)
OurRef.

Dear Sir,

Re: Advanced Oil Spill Response Training Course

With reference to your E-mail dated 15th July 2005 we have nominated the undermentioned candidates from our department who will be attending the "**Course on Advanced Oil Spill Response Training**" to be held at **Japan** from **12th September to 16th September 2005.**

WIN AUNG	**Engineer Superintendent**	**Department of Marine Administration**
HTWE MYINT	**Deputy Director (Mechanical)**	**Directorate of Water Resources and Improvement of River Systems**
MIN AUNG	**Captain**	**Myanmar Port Authority**
TUN TUN	**Captain**	**Myanmar Port Authority**
AUNG WIN	**Captain**	**Myanmar Maritime University**

I would appreciate your kind acknowledgement of receipt by return and also kindly update us if so required, to enable us to process and finalise their arrangements and formalities to attend the above mentioned course.

Thanking you for you kind attention,

Regards

18/8/05

U Myo Thein
for Director General
Department of Marine Administration

CMV - PROJECT

15th July, 2005

Mr. Pham Quoc Te,
Chief of Chancellery,
National Committee,
For Search and Rescue,
Socialist Republic of Viet Nam

Subject : Invitation for the training course in Japan

Dear Sir,

I have a great pleasure to inform you that the Japan Association of Marine Safety has started the project of the third phase to assist ASEAN countries on improving the marine pollution response system, focusing on the developing the human resources in this field.

As a part of the project, we invite five persons from your country to join the training course on Oil Spill Response at Maritime Disaster Prevention Center which will be held from 12th to 16th September, 2005.

Therefore, we would be grateful if you would send five persons from your country to join the training course in the coming September 2005. We are expecting your reply including the information of the five persons to join the training course by 10th August.

As for your reference, necessary expenses to join the course will be borne by the Nippon Foundation.

Thank you very much for your high consideration and cooperation.

Yours faithfully,

Michio Matsuura

Michio Matsuura

President,
The Japan Association of Marine Safety

CMV - PROJECT

15th July, 2005

Mr. Nguyen Doan Chat,
Director,
National Committee,
For Search and Rescue,
Socialist Republic of Viet Nam

Subject : Detail of the invitation for the training course

Dear Mr. Nguyen Doan Chat,

I would like to inform you the details of the invitation for the training course on Oil Spill Response which will be held at Japan Maritime Disaster Prevention Center in September. The detail of invitation for the training course as follows,

1. Period of training: 12th – 16th September, 2005
   Period of stay in Japan:11th-17th September.2005
2. Place : Yokosuka-city, Japan (at Maritime Disaster Prevention Center)
3. Qualification for the nominee :
   - The person who will be an commander in each section in the case of the oil spill incident
   - The person who will become a key person of the oil spill response
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Finally I inform you Mr. Yamaguchi will be touch with you and your staff to arrange air- tickets, hotel ,meals and so on.

Thank you very much for your high consideration and cooperation.

Best regards,

惣田泰氏

CDR. Yasushi Soda,
Manager,
CMV-Project

NATIONAL COMMITTEE FOR SEARCH AND RESCUE
SOCIALIST REPUBLIC OF VIETNAM
(VINASARCOM)
Fax: (84) 7333845
Tel: (84) 7333664

No: 98/ Note

National committee for Search and Rescue of the Socialist Republic of Vietnam(VINASARCOM) presents its compliments to the Japan Association of Marine Safty

At the invitation of the President of the Japan Association of Marine Safetym Mr Michio Matsuura, VINASARCOM would like to recommend 05 officials to participate in the training course on oil spill response at Marine Disaster Prevention Center held from 12 to 16 Sep. 2005 including:

1- Mr Nguyen Doan Chat, Chief of Oil spill Sections of VINASARCOM

2- Mr Pham Bang Tien, Oil spill expert of the Oil spill response Center of the Central part of Vietnam

3- Mr Huynh Ngoc Thua, an expert of the Oil spill response Center of the south- PV Dilling and Well Company of Petrovietnam.

4- Mr Nguyen Quoc Thuy, a SAR expert of the Maritime Search and Rescue Coordination Center of Vietnam

5- Mr Nguyen Hanh Phuc, Director of the Oil Spill Response Center of the North-128 Company.

It would be grateful if the Japan Association of Marine Safety can support for the participation of above nominees in the Oil spill response training course in Japan

National Committee for Search and Rescue of the Socialist Republic of Vietnam avail itself of this opportunity to renew to the Japan Association of Marine Safety

Hanoi 11 August 2005

TO: **Mr Michio Matsuura**
President,
The Japan Association of Marine Safety

Cc: Mr Yasushi SODA
The Japan Association of Marine Safety
Fax: +81-3-3581-6136

Participants List（Cambodia）

Organization	Picture	Guest Full Name/Title/Date Of Birth	TEL	FAX	E-MAIL
Merchant Marine Department, General Department of Transport of the Ministry of Public Works and Transport		**Mr. En Sopheap** Technical Staff 15, September 1984, (21years)	855-12-835867	855-23-881846	mmd@forum.org.kh
Merchant Marine Department, General Department of Transport of the Ministry of Public Works and Transport		**Mr. Leng Thunkosal** Thecnical Staff October 18th 1983, (22years)	855-12-835867	855-23-881846	mmd@forum.org.kh
Inland Waterways Transport Department of the Ministry of Public Works and Transport		**Mr. Tep Saran** Operation Staff November 20th 1974, (31years)	855-11-919168		
Port Autonomous of Sihanoukville		**Mr. Hun Sam Nang** Pilot of Sihanoukville Port January 1st 1963, (42years)	855-1655-5559		samnang59@yahoo.com
Port Autonomous of Phnom Penh		**Mr. Tor Ny** Pilot of Phnom Penh Port May 9th 1958, (47years)	855-2398-6984	855-2342-7812	

Participants LIST (Myanmar)

Organization	Picture	Guest Full Name/Title/Date Of Birth	TEL	FAX	E-MAIL
Department of Marine Administration Provincial Motor Vessels Section		**Mr. Win Aung** Engineer Super intendent December 20th 1961,(34years)	+95-1-553086		myanmarine@mptmail.net.mm
Directorate of Water Rescues and Improvement of River Systems (DWIR) Marine and Equipment Division		**Mr. Htwe Myint** Deputy Director (Mechanical) December 25th 1954,(51years)	+95-1-292961	+951-290-230	dwir@myanmar.com.mm
Myanma Port Authority Marine Department		**Mr. Min Aung** Captain October 17th 1964,(41years)	+95-9-5007221		
Myanma Port Authority Marine Department		**Mr. Tun Tun** Captain January 19th 1963,(38years)	+95-9-5007221		
Myanmar Maritime University Department of Nautical Science		**Mr. Aung Win** Captain January 8th 1950,(55years)	+95-56-22171	+95-56-22175	myanmaruniversity@gov.mm

Participants List（Vietnam）

Organization	Picture	Guest Full Name/Title/Date Of Birth	TEL	FAX	E-MAIL
PetroVietnam Drilling and Well Services Company		**Mr. Huynh Ngoc Thua** Health, Safety, Environement & Quarity Officer November 17th, 1979 (26years)	+84-64-511041	+84-64-590199	thuahn@pvdrilling.com.vn
Vietnam Marine Search and Rescue Coordination Center Rescue Coordinate Department		**Mr. Nguyen Quoc Thuy** Expert of Rescue Cordination DEPT. June 15th, 1974 (31years)	+84-4-7683050	+84-4-7683048	vmrcc@fpt.vn
National Committee for Search and Rescue of Vietnam Oil Control Services		**Mr. Nguyen Doan Chat** Chief of Oil spill Section June 16th, 1949 (56years)	+84-4-7333664	+84-4-7333845	huongvinasar@yahoo.com
State Oil Spill Response Center for Middle Region-Songthu Company Project Management Board		**Mr. Pham Bang Tien** Staff (ORS Project) Assistant (Songthu co.) April 17th 1972 (33years)	+84-90-3505909	+84-511-621964	bangtien@vnn.vn
128 Company		**Mr. Nguyen Hanh Phuc** Director March 2nd 1950 (55years)	+84-31-741464	+84-31-766191	congty128@vnn.vn

CONTENTS

COUNTRY REPORT

1)Background: Following a five-year struggle, communist Khmer Rouge forces captured Phnom Penh in 1975 and ordered the evacuation of all cities and towns; over 1 million displaced people died from execution or enforced hardships. A 1978 Vietnamese invasion drove the Khmer Rouge into the countryside and touched off 13 years of fighting. UN-sponsored elections in 1993 helped restore some semblance of normalcy, as did the rapid diminishment of the Khmer Rouge in the mid-1990s. A coalition government, formed after national elections in 1998, brought renewed political stability and the surrender of remaining Khmer Rouge forces.

2)Geography

Location: Southeastern Asia, bordering the Gulf of Thailand, between Thailand,

Vietnam, and Laos

Geographic coordinates: 13 00 N, 105 00 E

Map references: Southeast Asia

Area:
total: 181,040 sq km
land: 176,520 sq km
water: 4,520 sq km

Area - comparative: slightly smaller than Oklahoma

Land boundaries:
total: 2,572 km
border countries: Laos 541 km, Thailand 803 km, Vietnam 1,228 km

Coastline: 443 km

Maritime claims:
contiguous zone: 24 nm
continental shelf: 200 nm
exclusive economic zone: 200 nm
territorial sea: 12 nm

Climate: tropical; rainy, monsoon season (May to November); dry season (December to April); little seasonal temperature variation

Terrain: mostly low, flat plains; mountains in southwest and north

Elevation extremes:
lowest point: Gulf of Thailand 0 m
highest point: Phnum Aoral 1,810 m

Natural resources: timber, gemstones, some iron ore, manganese, phosphates, hydropower potential

Land use:
arable land: 13%
permanent crops: 0%
permanent pastures: 11%
forests and woodland: 66%
other: 10% (1993 est.)

Irrigated land: 920 sq km (1993 est.)

Natural hazards: monsoonal rains (June to November); flooding; occasional droughts

Environment - international agreements:
party to: Biodiversity, Climate Change, Desertification, Endangered Species,

Marine Life Conservation, Ship Pollution, Tropical Timber 94, Wetlands
signed, but not ratified: Law of the Sea, Marine Dumping

Geography - note: a land of paddies and forests dominated by the Mekong River and Tonle Sap

3) People

Population: 12,212,306
note: estimates for this country explicitly take into account the effects of excess mortality due to AIDS; this can result in lower life expectancy, higher infant mortality and death rates, lower population and growth rates, and changes in the distribution of population by age and sex than would otherwise be expected (July 2000 est.)

Age structure:
0-14 years: 42% (male 2,610,009; female 2,505,932)
15-64 years: 55% (male 3,132,198; female 3,542,655)
65 years and over: 3% (male 173,179; female 248,333) (2000 est.)

Population growth rate: 2.27% (2000 est.)

Birth rate: 33.48 births/1,000 population (2000 est.)

Death rate: 10.79 deaths/1,000 population (2000 est.)

Net migration rate: 0 migrant(s)/1,000 population (2000 est.)

Sex ratio:
at birth: 1.05 male(s)/female
under 15 years: 1.04 male(s)/female
15-64 years: 0.88 male(s)/female
65 years and over: 0.7 male(s)/female

total population: 0.94 male(s)/female (2000 est.)

Infant mortality rate: 66.82 deaths/1,000 live births (2000 est.)

Life expectancy at birth:
total population: 56.53 years
male: 54.44 years
female: 58.74 years (2000 est.)

Total fertility rate: 4.82 children born/woman (2000 est.)

Nationality:
noun: Cambodian(s)
adjective: Cambodian

Ethnic groups: Khmer 90%, Vietnamese 5%, Chinese 1%, other 4%

Religions: Theravada Buddhist 95%, other 5%

Languages: Khmer (official) 95%, French, English

Literacy:
definition: age 15 and over can read and write
total population: 35%
male: 48%
female: 22% (1990 est.)

4)Government

Country name:
conventional long form: Kingdom of Cambodia
conventional short form: Cambodia
local long form: Preahreacheanachakr Kampuchea
local short form: Kampuchea

Data code: CB

Government type: multiparty liberal democracy under a constitutional monarchy established in September 1993

Capital: Phnom Penh

Administrative divisions: 20 provinces (khett, singular and plural) and 3 municipalities* (krong, singular and plural); Banteay Mean Cheay, Batdambang, Kampong Cham, Kampong Chhnang, Kampong Spoe, Kampong Thum, Kampot, Kandal, Kaoh Kong, Keb*, Krachen, Mondol Kiri, Otdar Mean Cheay, Phnum Penh*, Pouthisat, Preah Seihanu* (Sihanoukville), Preah Vihear, Prey Veng, Rotanah Kiri, Siem Reab, Stoeng Treng, Svay Rieng, Takev
note: there may be a new municipality called Pailin

Constitution: promulgated 21 September 1993

Legal system: primarily a civil law mixture of French-influenced codes from the United Nations Transitional Authority in Cambodia (UNTAC) period, royal decrees, and acts of the legislature, with influences of customary law and remnants of communist legal theory; increasing influence of common law in recent years.

Suffrage: 18 years of age; universal

Executive branch:
chief of state: King Norodom Sihamoni (24 September 2004)
head of government: Prime Minister HUN SEN (since 30 November 1998)
cabinet: Council of Ministers appointed by the monarch
elections: none; the monarch is chosen by a Royal Throne Council; prime minister appointed by the monarch after a vote of confidence by the National Assembly

Legislative branch: bicameral consists of the National Assembly (122 seats; members elected by popular vote to serve five-year terms) and the Senate (61 seats; two members appointed by the monarch, two elected by the National Assembly, and 57 elected by "functional constituencies"; members serve six-year terms.

Judicial branch: Supreme Council of the Magistracy, provided for in the constitution, was formed in December 1997; a Supreme Court and lower courts exercise judicial authority

Political parties and leaders: Buddhist Liberal Party or BLP [IENG MOULY]; Cambodian Pracheachon Party or Cambodian People's Party or CPP [CHEA SIM]; Khmer Citizen Party or KCP [NGUON SOEUR]; National United Front for an Independent, Neutral, Peaceful, and Cooperative Cambodia or FUNCINPEC [Prince NORODOM RANARIDDH]; Sam Rangsi Party or SRP (formerly Khmer Nation Party or KNP) [SAM RIANGSI] .

Flag description: three horizontal bands of blue (top), red (double width), and blue with a white three-towered temple representing Angkor Wat outlined in black in the center of the red band.

5) Economy

Economy - overview: After four years of solid macroeconomic performance, Cambodia's economy slowed dramatically in 1997-98 due to the regional economic crisis, civil violence, and political infighting. Foreign investment and tourism fell off. Also, in 1998 the main harvest was hit by drought. But in 1999, the first full year of peace in 30 years, progress was made on economic reforms and growth resumed at 5%.The long-term development of the economy after decades of war remains a daunting challenge. The population lacks education and productive skills, particularly in the poverty-ridden countryside, which suffers from an almost total lack of basic infrastructure. Recurring political instability and corruption within government discourage foreign investment and delay foreign aid. On the brighter side, the government is addressing these issues with assistance from bilateral and multilateral donors. So long as political stability lasts, the Cambodian economy is likely to grow at a respectable pace.

GDP: purchasing power parity - $8.6 billion (2002 est.)

GDP - real growth rate: 5.5% (2002 est.)

GDP - per capita: purchasing power parity - $710 (2002 est.)

GDP - composition by sector:
agriculture: 30%
industry: 36%
services: 34% (2001est.)

Population below poverty line: 32% (2002 est.)

Household income or consumption by percentage share:
lowest 10%: NA%
highest 10%: NA%

Inflation rate (consumer prices): 4.5% (1999 est.)

Labor force: 6.3 million (2001 est.)

Labor force - by occupation: agriculture 80% (1999 est.)

Unemployment rate: 2.8% (1999 est.)

Budget:
revenues: $327 million
expenditures: $393 million, including capital expenditures of $NA (1999 est.)

Industries: garments, rice milling, fishing, wood and wood products, rubber, cement, gem mining, textiles

Industrial production growth rate: NA%

Electricity - production: 210 million kWh (1998)

Electricity - production by source:
fossil fuel: 59.52%
hydro: 40.48%
nuclear: 0%
other: 0% (1998)

Electricity - consumption: 230 million kWh (2002)

Agriculture - products: rice, rubber, corn, vegetables

Exports: $821 million (f.o.b., 1999 est.)

Exports - commodities: timber, garments, rubber, rice, fish

Exports - partners: US, Singapore, Japan, Thailand, Hong Kong, Indonesia, Malaysia, US

Imports: $1.2 billion (f.o.b., 1999 est.)

Imports - commodities: cigarettes, gold, construction materials, petroleum products, machinery, motor vehicles

Imports - partners: Singapore, Vietnam, Japan, Australia, Hong Kong, Indonesia, Thailand

Debt - external: $829 million (1999 est.)

Economic aid - recipient: $470 million pledged in grants and concessional loans for 2000 by international donors

Currency: 1 new riel (CR) = 100 cents

Exchange rates: new riels (CR) per US$1 – 4,200

Fiscal year: calendar year

6) Communications

Telephones - main lines in use: 21,800 (mid-1998)

Telephones - mobile cellular: 34,880 (1998)

Telephone system: adequate landline and/or cellular service in Phnom Penh and other provincial cities; rural areas have little telephone service
domestic: NA
international: adequate but expensive landline and cellular service available to all countries from Phnom Penh and major provincial cities; satellite earth station - 1 Intersputnik (Indian Ocean region)

Radio broadcast stations: AM 7, FM 3, shortwave 3 (1999)

Radios: 1.34 million (1997)

Television broadcast stations: 5 (1999)

Televisions: 94,000 (1997)

Internet Service Providers (ISPs): 2 (1999)

Transportation

Railways:
total: 603 km
narrow gauge: 603 km 1.000-m gauge

Highways:
total: 35,769 km
paved: 4,165 km
unpaved: 31,604 km (1997 est.)

Waterways: 3,700 km navigable all year to craft drawing 0.6 m or less; 282 km navigable to craft drawing 1.8 m or less

Ports and harbors: Kampong Saom (Sihanoukville), Kampot, Krong Kaoh Kong, Phnom Penh

Merchant marine:
total: 211 ships (1,000 GRT or over) totaling 953,105 GRT/1,345,766 DWT

ships by type: bulk 20, cargo 166, combination bulk 1, container 5, livestock carrier 2, multi-functional large load carrier 1, passenger/cargo 1, petroleum tanker 2, refrigerated cargo 7, roll-on/roll-off 6 (1999 est.)
note: a flag of convenience registry; includes ships of 8 countries: Aruba 1, Cyprus 7, Egypt 1, South Korea 1, Malta 1, Panama 1, Russia 5, Singapore 1 (1998 est.)

Airports: 19 (1999 est.)

Airports - with paved runways:
total: 6
2,438 to 3,047 m: 2
1,524 to 2,437 m: 2
914 to 1,523 m: 2 (1999 est.)

Airports - with unpaved runways:
total: 13
1,524 to 2,437 m: 2
914 to 1,523 m: 11 (1999 est.)

Heliports: 3 (1999 est.)

7) Military

Military branches: Royal Cambodian Armed Forces (RCAF), including Army, Navy, and Air Force - created in 1993 by the merger of the Cambodian People's Armed Forces and the two noncommunist resistance armies
note: there are also resistance forces comprised of the Khmer Rouge (also known as the National United Army or NUA) and a separate royalist resistance movement.

Military manpower - military age: 18 years of age

Military manpower - availability:
males age 15-49: 2,763,568 (2000 est.)

Military manpower - fit for military service:
males age 15-49: 1,547,078 (2000 est.)

Military manpower - reaching military age annually:
males: 156,119 (2000 est.)

Military expenditures - dollar figure: $85 million (FY98)

Military expenditures - percent of GDP: 2.4% (FY98)

8) Transnational Issues

Disputes - international: offshore islands and sections of the boundary with Vietnam are in dispute; maritime boundary with Vietnam not defined; parts of border with Thailand are indefinite; maritime boundary with Thailand not clearly defined

Illicit drugs: transshipment site for Golden Triangle heroin; possible money laundering; narcotics-related corruption reportedly involving some in the government, military, and police; possible small-scale opium, heroin, and amphetamine production; large producer of cannabis for the international market

II. MARITIME ADMINISTRATION ORGANIZATIONS

The Royal Government of Cambodia established the Department of Merchant Marine on 05 April 1999. The Department of Merchant Marine is under the direct responsibility of the General Department of Transport of Ministry of Public Works and Transport. This Department consists of 5 (five) offices including the General Affairs,- Planning and legal affairs, Ship Registration,

Seaman Affairs and' Certificates, Ports and Flag State Implementation, and Coastal State and Search
and Rescuer. The organizational structure of Merchant Marine Department is attached herewith.

The role and responsibility of each office as follows:

1. General Affairs Office

a. Supervise the general administrative works and Department staff;
b. Provide training to the staff of the department and other seafarers;
c. Cooperate with the port authorities on the management of ship navigation within the ports areas;
d. Supervise coastal ports in terms' of loading and unloading techniques of goods, passengers, and ship navigation within the ports areas;

e. Review all kinds of forms of permission for operation of shipping companies and their agents; and other seagoing ships such as fishing vessel, merchant ship, cl1lise ship, and search and rescue ship;
f. Supervise 'shipyards of any kind, in terms of techniques for ship construction and repairs;
g. Review and advise 011 the request for entry permits, and loading and unloading of goods of all types of merchant ships. Manipulate materials, equipment, facilities, petroleum/fuel, construction work of the department, and unmovable assets, and make inventories according to the determined regime;
i. Collect revenues derived frol11 shipping and transfer such income to the national coffin.

The Office is so active to act as an executive office of the Department, performing administrative works, training on multimodal transpol1 in cooperation with ESCAP, initiatives to develop maritime legislation and regulations, reports of activities of the Department, communication with governmental institutions and other organizations, and cooperation with others.

2. Planning and Legal Office

a, Develop, promote and m6nitor the implementation of plans arid options for maritime transport development with respect to the government's

defined policy;

b. Cooperate, in terms of economic and technical aspects of maritime transport; with local and international organizations;

c. Develop material and technical base for maritime transport, in order to ensure the safety of sea, and avoid environment pollution

d. Conduct research and statistics, and 'sum up activities of maritime transport;

e. Develop draft of law and various norms, which relate to the management of maritime transport. Implement and supervise law enforcement and all effective norms; .

f. Undertake research and dissimulate treaties, conventions, convents and the other regulations of international organizations such as IMO, ILO UNT AD and UNCLOS, To which the Government is ratified;

g. 'Tackle all conflicts related to maritime transport

The activities which the Office has done so far are:

a. Development plans for the Department,

b. Preparation of draft of Declaration on the Organization and Functioning of Merchant Marine Department, Instruction on Management of Maritime Transport, Declaration on Maritime Transport Permit, Sub-decree on the Establishment of Port State Control for the Kingdom of Cambodia, and other legal instruments for the maritime transport;

c. Review of legal documents related to the issuance of ship card, technical inspection book, ship operational license, and contracts

d. Study the international treaties, laws, conventions and regulations .(of Th10 and ILO) and status for implementation related to maritime transport.

3. office of Ship Registration, Seamen Affairs and Certificates

a. Study and develop registration fees of all kind ship, and review the documents. for such registration;

b. Review and tackle all conflict related to ship registration;

c. Supervise all affairs of seafarers such as discipline, safety and welfare. Review and make an arrangement related to the issuance of seamen's book, certificates, and other necessary documents.

d. Survey ships of any kind and other facilities equipped with the ship. Prepare documents related to the issuance of ship cards, ship certificates and equipment certificates.

The Office staff has been sent to the field for ship inspection before putting ships in service. The office also makes sure that the ships have complete documents/certificates~ The Office prepares documents, such as ship cards, .technical inspection book, seamen book, ship operational license, certificates or competency and other related documents. Recently, the Office prepared draft

proposal for the establishment of maritime vocational schools for the purpose to strengthen Cambodia's seamen capacity and increase employment opportunities

in maritime sector.

4. Office of Port/Flag State Implementation

a. Inspect technical characteristics of ships and other facilities on-board ship of all nationality, calling the maritime ports of the Kingdom of Cambodia;

b. Inspect necessary documents of ships and their seafarers;

c. Take reasonable measures necessary for ships incompliant to the national and international legislation,

5. Office of Coastal State Control, and Search and Rescue

a. Control over ship navigation in Cambodia coastal water, and conduct search and rescue

of all maritime accidents/incidents, in cooperation with relevant institutions;

b. Research and develop methodology for search and rescue operation

c. conduct maritime investigation on all maritime accidents/incidents

CERTIFICATION PROCEDURES FOR CAMBODIAN SEAFAFEHS

Cambodia is a country with two international ports, the Sihanouk Ville Port and the Phnom Penh Port. The country is ~now opened for foreign investors to invest on maritime transport. Most of activities are actively operated in the Sihanouk Ville Port.

The coastline of Cambodia is a part of the gulf of Thailand. From year to year,- transportation at sea is gradually increased: Therefore, the number of vessels is also increased.

Many people employed as seafarers without proper training. The accident or incident may occur due to the insufficient competency. In order to prevent any human life or vessel from the accident, the capacity building of seafarer has to be improved by local training or outside.

Because of the political altercation in the last three decades most of educating institutions had been destroyed, including the seafarers' education center. In the 80s a lots of .Cambodian students were sent abroad, to former socialist countries, to be educated as seafarers. After their graduations from universities they work now as seafarers on Cambodian ships or as pilots at the Sihanouk Ville Port and Phnom Penh Port. The people who' attended the training c04rse in the vocational school of Cambodia during the 80S and 90s, which supported by Vietnamese in the 80s and French experts in the 90s are now working as 1_{st}, 2_{nd} or 3_{rd} Officers of Cambodian coastal passenger ships and as chief officers of coastal cargo or fishing vessels. Before they play B; role as pilots, Capt. etc., they must be certified by the Merchant Marine Department of the Ministry of Public Works and Transport.

The vocational school was closed after 1994 due to the budget shortage. Recently, the government has negotiated with Flanders's government (Belgium)

to set up a vocational training center.

Assessment

People, who w to obtain Master's Certificates, have to obtain:
Diploma from foreign academy
Training Certificate signed by ship's Capt. or by port authority (with at least 2 years work experience)
People, who want to obtain 1st, 2nd or 3rd Officers Certificates, have to obtain
Diploma from foreign academy or from the vocational school of Cambodia

Training Certificate signed by ship's Capt: or by port authority (with at least 2 years work experience),
After all necessary documents have been produced for the examination can take place within two weeks,

Examination procedures

All of the Cambodian seafarers must pass the following examinations:
- The theoretical exam: The theoretical examination is composed by the oral test and the writing test.

a- The oral test: the examinees are requested to choose 3 envelops containing selected questions. They have time for36Jnfin, to understand the question and ten min: left to answer the three questions.

b- The writing test: the examinees have36 questions to answer.
They only have time for three hours

c- The practical exam: Each examinee will he provided a practice by the examination.

III- Planning for Oil Spill Response

- As of right now, Cambodia is not yet to have a system or organization for controlling, combating and preventing oil spill. Moreover, to develop an organization or system for control oil spill, it requires a lot of time and participating from other relating competence authorities.

On the other hand, Merchant Marine Department is, referring to the above matter, conducting in preparing a draft for Contingency Plan for Oil Spill Response in Cambodia. In Addition, after this plan was completed and received ratification from the council of ministers and national assembly. We do hope that, it must be a chance for us to comply with the plan in combating and prevention of oil spill, plus effective and efficient activities. Referring to the draft, it shall constitute plans and other significant activities relevant to controlling, combating and preventing for oil spill incidents. For instance, many institutions with respect to the draft will be developed, such as follow:

- Organization and Responsibilities which is including international cooperation.
- Oil spill risk, will be specified on identifications of activities and risk, oil types and probable fate of spill oil.

- Strategy for oil spill response will be described about priorities for protection, strategy for costal areas, strategies for shoreline response, equipment for oil spill response, and etc...
- Response organization will be described about organization structure, duty and responsibilities.
- Response operation will be described about general and response procedures.
- Designation of responsibilities which will be focused on the operation team, coordination, communication, and etc…

IV- Conclusion

Nowadays, Cambodia is still a very poor country if we compare to some other neighbor countries. Many deficiencies lead the country facing many obstacles in developing, especially the lack of human resource. For instance, refer to Cambodia maritime transport sector which is countering the many lacks of material, equipment, and the significant two are finance and human resource for improving and implementation in this field. Thus, it does require much more supplement and support from other advance countries, especially the Japan Government and also the Japanese organizations, by purveying much more supports and opportunities for Cambodian official in participating in seminar/workshop, short and long term training courses adopted by them. Through experience and experiment that gaining from those ceremonies, they may have ability and capacity in comply with their own job, and also they may contribute their knowledge and experience to other persons.

（２）ミャンマー

Union of Myanmar

Country Report
On
Advanced Oil Spill Response Training course

Presented By

(1) Mr. Win Aung
Dy. Director (Engineering),
Department of Marine Administration

(2) Mr. Htwe Myint
Dy. Director (Mechanical)
Directorate of water Resources and improvement of River system

(3) Mr. Tun Tun
Captain
Myanma Port Authority

(4) Mr. Min Aung
Captain
Myanma Port Authority

(5) Mr. Aung Win
Captain
Myanmar Maritime University

Introduction

Myanmar is situated in southeast Asia and is bordered on the north and north - east by China, on the east and south - east by Laos and Thailand, on the south by the Andaman Sea and the Bay of Bengal and on the west by Bangladesh and India. It is located between latitudes 09°32'N and 28°31'N and longitudes 92°10'E and 101°11'E.

Geographically, the country covers an area of 677,000 square kilometers ranging 936 km from the east to the west and 2051 km from north to south.

Climate

The climate of Myanmar is roughly divided into three seasons; Summer, Rainy Season and winter season. Seasonal changes in the monsoon wind directions create summer, rainy and winter seasons.

Population

The union of Myanmar is made up of 135 national races of which eight national races are the main. Population of the country is estimated at more than 50 millions.

States and Division

Myanmar consists of 7 states and 7 divisions and each state or division has own government regional administration. All relevant departments under different ministries have been established at each state and division.

Capital

The capital of Myanmar is Yangon and it is situated in Yangon Division.

Coastal Areas, Rivers and Ports

Myanmar has a sea coast on the Bay of Bengal to the south and west. Myanmar has a long extended coastline of about 2229 km and 9 ports for sea going ships but only 4 ports (Yangon, Sittwe, Pathein and Mawlamyine Ports) can be used for international trade.

There are many rivers and creeks in Myanmar. Among them Ayeyarwaddy, Chindwin, Thanlwin, Sittaung and Kalardan are major rivers, which run down through the country from the north to the south, and in lower Myanmar, the delta region is crisscrossed with many waterways.

Yangon Port

It is the premier port of Myanmar and handles about 90% of the country's export and virtually all imports. The port of Yangon is located at latitude 16°47'N Longitude 96°15'E on the Yangon River. The port is accessible to vessels of 167 metre's length overall into the inner harbour and 250 meter's length overall into the outer harbour. The limit draught of Yangon River is 9m.

Pathein Port

Pathein Port is the second largest export port in Myanmar. It is situated on the eastern bank of the Pathein River in latitude 16°47'N and longitude 94°47'E about 67 nautical miles upstream from the mouth.

Sittwe Port

It is situated on the west bank of Kaladan River mouth at latitude 20°8'N and Longitude 92°55'E. It has two main jetties of coastal vessels and four jetties for inland traffic.

Mawlamyine Port

Mawlamyine Port is located on the eastern bank of the Salween River 25 nautical miles from the Gulf of Mattabon Sea and latitude 16°29'N longitude 29°37'E in Mon state. Berthing

facilities in the port of Mawlamyine are three swinging mooring buoys for export vessels and one Jetty for coastal trade.

Organization Structure of Marine Administration

Department of Marine Administration was one of the departments ten under the Ministry of Transport in Myanmar. The department composes if seven divisions and are stated s follows;

(1) Seamen Employment control Division.

(2) Nautical Division.

(3) Engineering Division.

(4) Planning and Account Division.

(5) Administration Division.

(6) Legal and Research Development Division.

(7) Dock Yards and vessels Division.

Organization Structure of Myanma Port Authority (MPA)

Myanma port Authority, under Ministry of Transport is responsible for providing terminal facilities and services for shipping. All the duties, functions powers and obligations MPA are governed by the Rangoon (Yangon) port Act, 1905 and order conferring Duties and Power on MPA issued by the Ministry of Transport and Communications on the 4th August 1976.

The organization of MPA consists of eight major departments. They are:

(1) Traffic Department

(2) Shipping Agency Department

(3) Marine Department

(4) Mechanical Engineering Department

(5) Civil Engineering Department

(6) Accounts Department

(7) Personal Department and

(8) Stores Department

Each department is headed by a Principal Officer. The Managing Director as the Chief Executive Officer is responsible for dealing with all matters of policy affecting the Ports and also directs and coordinates the working of the individual department. The Managing Director is assisted by the General Manager in matters relating to short and long term planning, personal and financial policies.

Organization Structure of Directorate of Water Resources and improvement of River System

The Directorate of water Resources and improvement of River system is responsible for the intra-structure of inland water ways. The department composes of four divisions and stated as follow,

(1) Administration Division

(2) Marine & Equipment Division

(3) Water Conservation Division

(4) Research & Planning Division

Organization Structure of Myanmar Maritime University

Myanmar Maritime University was one of the Departments ten under the Ministry of Transport in Myanmar. The University composes of two Departments as follows,

(1) Administrative Department

(2) Academic Department

Current state of oil control system

Where there is an actual or probable spill of oil into the marine it is the responsibility of the spiller to notify either the Directorate of Marine Administration, Ministry of Transport or through the local government administrative authorities or Marine Department's offices nearest to the incident site, by the quickest means possible.

If the oil spill occured, preliminary should have the following information as the minimal:

- Location of incident
- Type and size of spill
- Data and time of the incident
- Other relevant information

In the case of a vessel spill, the ship's master is responsible for ensuring that containment and clean-up operations begin immediately. In the case of shore-side or offshore installation spill, the company, plant or site manager is responsible for ensuring these operations are commenced without delay.

After notifying the Directorate of Marine administration of the oil spill, immediated steps must be taken by the person in charge to control the spill and commence treatment.

Oil control system is carried out by the following departments and these departments are responsible for implementing of the national response system in co-operation with one another

They are:

(1) Myanma Port Authority

(2) Department of Marine Administration

(3) Directorate Water Resources and Improvement of River systems

(4) National commission for Environment Affairs

(5) Mynama Petrochemical Enterprise

(6) Myanma Oil and Gas Enterprise

(7) Department of Forest

(8) Department of Fisheries

and other related departments and organizations from local Government Authority.

In port area, the local port authority is take charge for combating oil pollution within port and harbour area. In ports, the ships must contact to local port authority in case of Oil Spill.

In tanker jetty, the Myanmar Petrochemical Enterprise (MPE) is take charge combating oil pollution of the tankers in the jetty area.

In regional littoral area, local government administrative authorities are take charge in responding oil pollution in cooperation with regional departmental offices.

Cooperation with other departments

National commissions on environment affairs under Ministry of Foreign Affairs, Department of Marine Administration, under the Ministry of Transport are responsible for policy development, legislation, rules and regulation regarding pollution prevention and response.

In inland river system, the pollution responding is the responsibility of Directorate of Water Resources and Improvement of River System. In port areas, responding oil pollution is the responsibility of Myanma Port Authority and port reception facilities are also to be provided by MPA. Responding oil pollution in oil tanker jetty is the responsibility of Myanma Petrochemical Enterprise.

However, at national level, other departments such as Fire Brigade, Police force as well as Fisheries Department, under Ministry of Livestock Breeding and Fisheries, Forest department under the ministry of Forestry, Health department under the Ministry of Health, Myanma Petrochemical Enterprise, Myanma Oil and gas Enterprise under the Ministry of Energy, Planning Department under the Ministry of National Planning and Economic Development and Ministry of Defense, should take part in and cooperate in responding oil pollution.

At local or regional level in states and division, the local government administrative authorities should play in major role in cooperation with respective regional departmental offices in dealing with oil pollution incident.

Advanced oil control

The United Nations Convention on the Law of the Sea (UNCLOS 1982), Article 1.1 (4) defines pollution of the marine environment as follows: " the introduction by man, directly or indirectly, of substances or energy into the marine environment (including estuaries) which results, or is likely to result, in such deleterious effect as harm to living and marine life, hazards to human health, hindrance to marine activism including fishing and other legitimates uses of the sea, impairment of quality for use of seawater and reduction if amenities." Myanmar is a country who has ratified the United Nation Convention on the Law of the Sea (UNCLOS, 1982), has the right and obligation to tale necessary precaution to protect Myanmar marine environment sine her continental shelf cover 228,781sq-km and exclusive economic zone (EEZ) of 486,000 sq-km area.

Myanmar has ratified MARPOL 73/78 (international convention on the prevention of pollution from ships) annex I, Annex II and Annex III. As according to MARPOL, the ship registered in Myanmar and the ships calling to Myanmar port must be in compliance with the requirement in the regulation of pollution prevention.

The environmental protection regulations for port areas have been enforced by Myanmar Ports Acts Chapter IV section 21 (2), which states that any persons who by himself or another so cast or throws any ballast or rubbish or any such other thing or so discharge any oil or water mixed with oil and the master of any vessel from which the same is so cost, thrown or discharged, shall be punished with a fine.

Myanmar will sign the ASEAN - OSPAR project, which was established under the member countries' recognition of the necessity and significance of further cooperation among member countries in responding to oil spill incidents.

The ASEAN vision 2020 adopted in 1997, which provides the overall vision and policy, and direction for the development of ASEAN region, In addition, the ASEAN transport cooperation framework (target year 2020) together with success plan of action in transport (1999-2004) mentions the overall policy and development framework for steering regional cooperation in the transport sector. One of the projects states that "Cooperation" in transboundary oil spill prevention and preparedness". In this regard, member countries continued to exchange information on the activity on a voluntary basis.

Conclusion

In order to have a effective response for oil spill pollution at sea, we should provide knowledge on oil pollution to all concerned, develop contingency plan, establish the mechanism for oil spill response, develop a national maritime law and create an agreement between neighboring countries and also for region. Well Design and maintained information management systems will make it easier to identify ways to mitigate the environment from oil pollution. Furthermore, the oil combating unit needs a highly skillful human resources and effective equipment for combat ion operations as well as technical support. A wide range of knowledge covering of different education and technical background such as engineers, maritime experienced specialists in the ship operation, offshore specialists, biologists and lawyers' etc. plays an important factor in combating oil pollution, For this reason, training, exercises, holding seminars and workshops on oil spill control are necessary for successful combating oil spill pollution. Other Department May also conduct other smaller or more specific exercises by agreement with the Department of marine administration provided these are consistent with their regional oil spill plans. In addition, the effectiveness of the combating equipment also plays an important role for successful operation. Thus, purchasing of good quality equipment such as booms, skimmers, sorbet materials, vessels and barge equipment, vacuum tracks and pumps are necessary. For the oil spill control, the important factor is to take an immediate response action. And also the human recourses, because of that we have been sent here to attend this course. We hope that after returning home we can share the knowledge on combating oil pollution to all concerned, who will conduct in the nearest future and we can all together combat oil spill pollution with co-ordination and co-operation.

（３）ベトナム

COUNTRY REPORT
(Updated changes within two recent years)

1. INTRODUCTION

1.1. Potential Risks
Oil spill incident on water may be caused mainly from activities as below
- Sea transportation
- Oil drilling & producing activities: focuses mainly in southern region of Vietnam
- Fishing activities

1.2. Type of spilt oil
1.2.1. Crude oil from oil field offshore of Vietnam South
- Bach Ho (White Tiger)
- Dai Hung (Big Bear)
- Rong (Dragon)
- Rang Dong (Dawn)
- Ruby
- Su Tu Den (Black lion)
- Te Giac Trang (White Rhino) ***New***
- Cai Nuoc ***New***

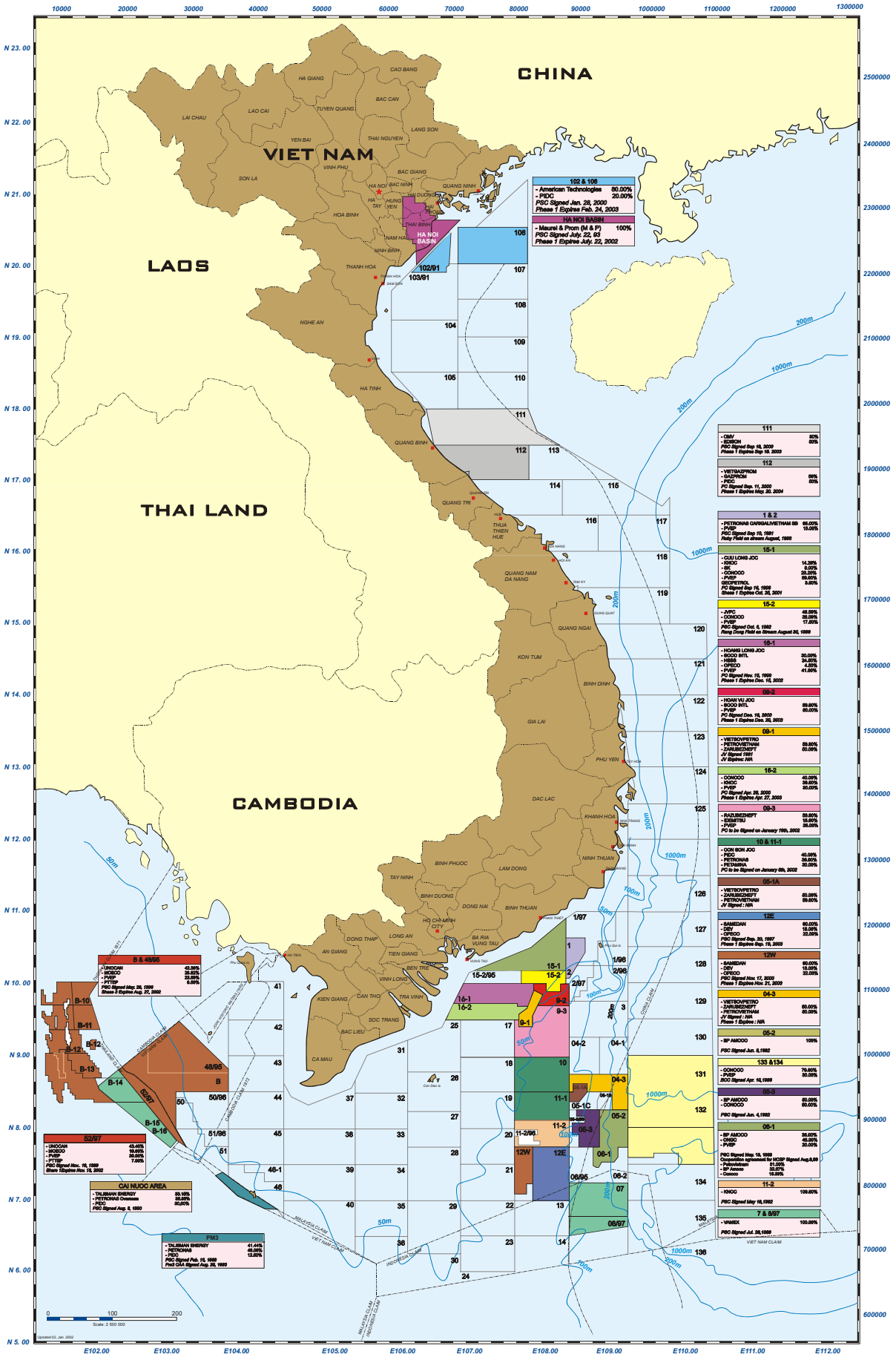
1.2.2. Oil product
- As fuel or goods of tankers, barges, vessels etc., cruise across or arrive at or leave ports, terminal located on coastal shore or inland.
- As fuel of fishing boats

1.3. Probable fate of spilt oil:
Weather in Vietnam is advantageous to fate. There are some researches on the weathering of crude oil in the southern region. According to the researching results, 50% of spilt oil will be gone after one day floating on the sea surface. In addition, we also use IDIOS software (NOAA) to forecast the weathering of oil.

1.4. Movement of spilt oil
The oil spill trajectory modes have been built up & developed for the south.
- Oil spill trajectory modes: developed by Research & Development center for petroleum safety & environment
- Oil spill trajectory modes developed by Institute of Marine Mechanics

1.5. Resources at risks
- Fish spawning areas
- Bird breeding areas
- Mangrove stands
- Fishing farms: oyster, shell, lobster, tiger shrimp,
- Seaside resorts
- Salt farms
- Tourist areas
- Bathing beaches
- Diving areas

VIETNAM ACREAGE MAP



2. LEGISLATION:

2.1. Environment protection law – 1993 & Decree No. 175/CP – 1995 guidelines to implement the Law

2.2. Petroleum Law – 1993 & Decree No. 48/2000/ND-CP guidelines to implement the Law

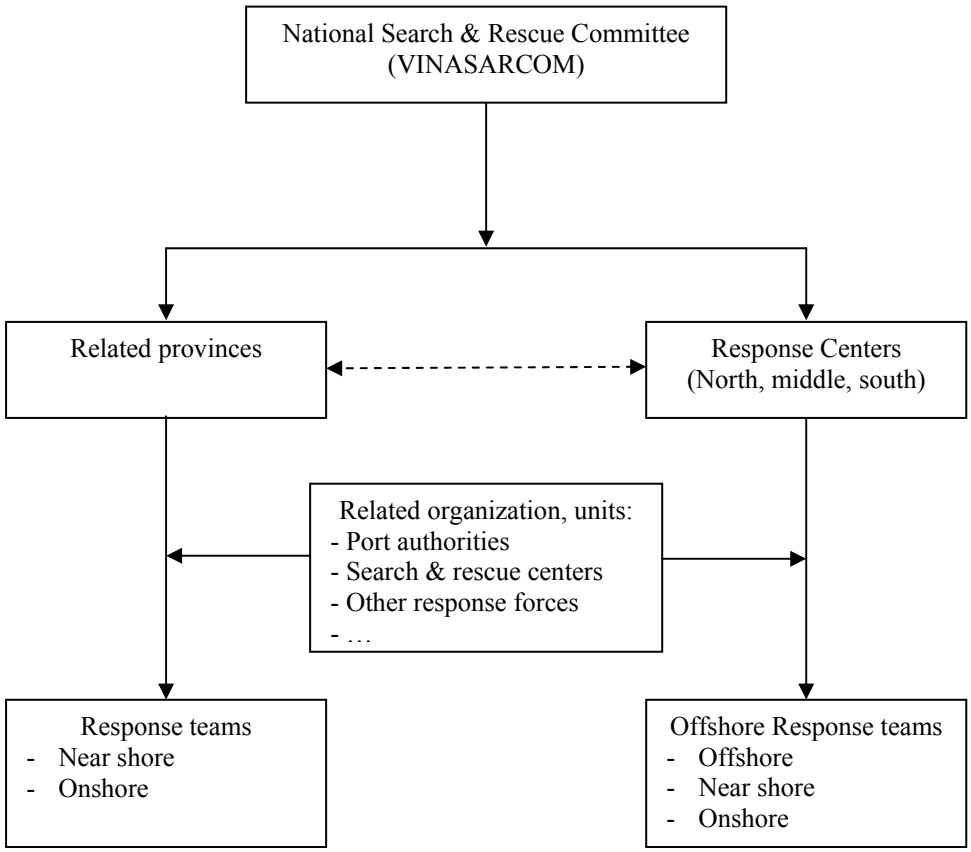
2.3. Decision No. 129/2001/QD-TTg to approve the national plan on oil spill from 2001-2010

2.4. ***(New)*** Decision No. 103/2005/QĐ-TTg regulates roles & responsibilities of related units, bodies on preventions & responses of oil spill, including of:
- Communication
- Allocating response tiers
- Roles and responsibilities of related units in each level
- Compensation
- Responsibilities on preparedness & prevention

2.5. ***(New)*** Joint Circular No. 12/2005/TTLT/BTM-BTNMT-BGTVT regulates details of responsibilities on sea environmental safety conditions of
- Oil supplier
- Oil tanker
- Oil discharging/ bunkering activities

3. NATIONAL RESPONSE PLAN

3.1. Organization Chart For Oil Spill ***(new)***



3.2. Roles & Responsibilities

Roles & Responsibilities of each unit on prevention, protection, response are regulated in Decision No. 103/2005/QĐ-TTg including of:

- Spiller
- Local authorities (people committee of province)
- National response centers
- Vinasarcom
- Related Ministries

3.3. Oil Spill Contingency Plan

3.3.1. Oil spill contingency plan for oil & gas industry (limited in the south only)

- Issue dated: in year of 2001
- Scope of the plan: focuses mainly on potential incidents in oil & gas activities
- Support tool:

  Environment sensitivity mapping:
  - From Ke Ga cape to Ca Mau cape with the scale in 1:250.000
  - From Ca Mau cape to Cambodia's border with the scale in 1:50.000 **(new).**

  *Beach cleaning manual **(new)***
  - Part A: Technical back ground
  - Part B: Field manual: provides guidelines to organize, coordinate beach cleaning operations

3.3.2. Oil spill contingency plan for the south of Vietnam

This plan is under construction support by PEMSEA project. We will conduct a workshop in October 2005 to discuss a draft plan before issuing the final one.

4. TRAINING & EXERCISE

4.1. Training:

4.1.1. IMO OPRC training course - Level 1,2,3:

- Training courses were conducted in Vietnam by experts come from EARL – Singapore, Norwegian Coastal Administration, OSRL – Singapore,
- Send people to attend to training course conducted by KIMFT University – Korea, Miami University – USA, Norway

4.1.2. Special course/project:

- Bio-Remediation (Hochschule Bremen University - Germany),
- Oil spill response and shoreline assessment (NOAA – USA),
- Environmental risk assessment (NCA – Norway)
- Compensation in oil spill (JMDC – Japan)
- Geographical response mapping plan: supported by National Oceanic & Atmospheric Administration (NOAA) – USA to prepare a draft plan for Ba Ria – Vung Tau province in July 2005.

4.2. Exercise

Petrovietnam has conduct regularly oil spill response exercises including of: communication, table top and equipment deployment exercise for oil companies and among subsidiaries.

Appendix 1: List of Oil Spill Response Equipment, Materials In Viet Nam

No.	Equipment/Material	General Specification	Quantity	Note
In the north				
1	Containment boom	Are being invested		
2	Skimming system	Are being invested		
3	Temporary storage tanks	Are being invested		
4	Work-boat	Type: tow, deploy & storage boat	03 vessels	
5	Other			
In the middle				
1	Containment boom	Type: solid & air buoyancy Height: 0.75-2 m	20 sets (total: 6000m)	
2	Skimming system	Type: weir, mop, disc, vacuum Capacity: 15-100 tons/hr	06 sets (total: 200tons/hr)	
3	Temporary storage tanks	Type: onshore, floating bags, barges Capacity: 2-500 tons	20 sets (total: 800 tons)	
4	Absorbent	Construct: boom, pad	5.000 sheets 600m of boom	
5	Shore cleaning tools	Type: hand tools	20 sets	
6	Work-boat	Type: supply boat, tow boat, fast canoe,	06 boats	
7	Other	Mobile-incinerator, Safety devices/tools		
In the south				
1	Containment boom	Type: solid & air buoyancy Height: 0.75-2 m	20 sets (total: 6000m)	
2	Skimming system	Type: weir, mop, belt, brush, disc, vacuum Capacity: 15-150 tons/hr	12 sets (total: 600tons/hr)	
3	Temporary storage tanks	Type: onshore, floating bags, barges Capacity: 2-500 tons	20 sets (total: 800 tons)	
4	Dispersant spray set	Type: Shipside, helicopter Capacity: 3-5 m3/hr	05 sets	
5	Oil spill dispersant	Type: concentrate, type III	200 drums (total: 40.000 ltrs)	
6	Absorbent	Type: biodegradable & non-biodegradable Construct: boom, pad	15.000 sheets 1000m of boom 06 tons of granular	
7	Shore cleaning tools	Type: hand tools	100 sets	
8	Work-boat	Type: supply boat, tow boat, fast canoe,	20 boats	
9	Other	Mobile-incinerator, washing machine, trolley Safety devices/tools		

Appendix 2: **LIST OF VIETNAMESE PARTICIPANTS**

No.	Name	Position/Rank	Body/Company	Contact
1	Nguyen Doan Chat	Chief of oil spill section	National Search & Rescue Committee of Vietnam (Vinasarcom)	Add: 26 Hoang Dieu Street, Ba Dinh District, Ha Noi city, Vietnam Tel: 84 69 553775 Mobile: 84 913235887
2	Huynh Ngoc Thua	Deputy Manager-Operation Base	National Oil spill response Center for the South of Vietnam (PV Drilling - Petrovietnam)	Add: Suite 610 PetroTower, 08 Hoang Dieu Street, Vung Tau city, Vietnam Tel: 84 64 511041 Fax: 84 64 590199 Mobile: 84 908 347420 Email: thuahn@pvdrilling.com.vn
3	Pham Bang Tien	Manager's Assistant	National Oil spill response Center for the Middle of Vietnam (Song Thu Company)	Add: Thuan Hoa Ward, Hai Chau Dist,. Da Nang city, Vietnam Tel: 84 511 625666 Mobile: 84 903505909
4	Nguyen Hanh Phuc	Director	National Oil spill response Center for the North of Vietnam (No. 128 Company – Naval Force)	Add: An Hai War, Dong Hai Dist., Hai Phong, Vietnam Tel: 84 31 766050 Mobile: 84 903 430709
5	Nguyen Quoc Thuy	Expert – Rescue Cooperating Deparment	Marine Search & Rescue Cooperation Center – Vietnam Marine Bureau	Add: 108 Pham Hung Street, Cau Giay District, Ha Noi city, Vietnam Tel: 84 7683050 Mobile: 84 904140475

Questionnaire for CMV members

Please answer following question with reason

Q1. Please mention your impression of this training course all through the CMV project.

Through the training course of the CMV project, it provided me much more new experience and experiment how to combat or prevent against the oil spill incident. Moreover, it also demonstrated the strategy and tactic which is using to conduct the oil spill recovery activity.

Q2. Which part (lesson) is most useful impressed for you?

I myself think that all of the lessons which I learnt from this course are so important for me; because this is the first time for me joinning in the course which is relating to the marine and maritime factor, and it provided me also, some new know-how and experience.

Q3. If you have the opinion / requests to improve / change the lesson, please write down the name of lesson

For me, I myself find out that I should receive more instruction about the near shore recovery operation planning lesson; as well as I should take more exercises relating to it, because through the exercise, I would be familiarized.

Q4. How this training course will be made the best use for your country?

In fact, it will be the most significant for my country, because due to this course provided know-how, experience, tactic and experiment through the indication of how to use the strategy, methodology, material so on to take part in the activity of the oil spill response.

Q5. Do you think that such training is more necessary in the future? And if yes, tell us that reasons.

According to everything that I learnt from this course, it will be useful in the advance time; because if there are incident / accident of the oil spill, we will already have the plan, by using, methodology, strategy, tactic and some kinds of material against the oil spill.

Q6. If the seminar in this field will be held in your country, what (kind of) subject is suitable for your country?

In my opion, I find out that almost all the types of subject relevant to the combating against the oil spill are important. For the most one, that I do want it to be held in my country, is role play exercise.

Questionnaire for CMV members

Please answer following question with reason

Q1. Please mention your impression of this training course all through the CMV project.

Through the training course of the cmv project, it provided me much more new experience and experiment how to combat or prevent against the oil spill incident. Moreover, it also demonstrated the strategy and tactic which is using to conduct the oil spill recovery activity.

Q2. Which part (lesson) is most useful impressed for you?

I myself think that all of the lessons which I learnt from this course are so important for me; because this is the first time for me in joining the course which is relating to the marine and maritime factor, and also it provided me some new know-how and experience.

Q3. If you have the opinion / requests to improve / change the lesson, please write down the name of lesson

For me, I myself find out that I should recieve more instructions about the near shore recovery operation planning lesson; and I should have more exercise on the field other than in the lesson, also because, through it, I would be familiarized.

Q4. How this training course will be made the best use for your country?

In fact, it will be the most significant for my country; because due to this this course, it provided know-how, experience, and experiment through the indication of how to use the strategy, methodology, tactic and material in the activity of the oil spill response. So that we can conduct or use the methodology and material follow this instruction of this course when incident of oil spill occurring in our country.

Q5. Do you think that such training is more necessary in the future? And if yes, tell us that reasons.

According to everything that I learnt from this course, it will be useful in the advance time; because if there are incident/accident of the oil spill, we will already have the plan by using methodology, strategy, tactic and some kind of material that demonstrated in the course to combat against the oil spilt.

Q6. If the seminar in this field will be held in your country, what (kind of) subject is suitable for your country?

In my opion, almost the types of subject relevant to the combating against the oil spill are important. For the most one that I do want it to be held in my country is role play exercise.

Questionnaire for CMV members

Please answer following question with reason

Q1. Please mention your impression of this training course all through the CMV project.

It's an interesting and knowledgeable training course. It uses the good methedology to train me so I can absorb easily and effectively understood.

Q2. Which part (lesson) is most useful impressed for you?

Every part of the lesson is important for me but the most vital & useful one is crisis management. Through this, I will be able to develop myself to be a commander.

Q3. If you have the opinion / requests to improve / change the lesson, please write down the name of lesson

Because of the short time, some parts of the lesson move fastly. For this training course, my opinion, it needs to take longer than one week (At least 2 weeks).

Q4. How this training course will be made the best use for your country?

To combat and prevent oil spill, only one person cannot do it. The more know-how people, the more advantage for my country as well as environment for international.

Q5. Do you think that such training is more necessary in the future? And if yes, tell us that reasons.

Of course, my country still needs lots of experts to in order to create and develop the oil spill organization.

Q6. If the seminar in this field will be held in your country, what (kind of) subject is suitable for your country?

Oil Spill Management Training Course.

Questionnaire for CMV members

Please answer following question with reason

Q1. Please mention your impression of this training course all through the CMV project.

I can absorb a lot of knowledge through these. Moreover, I can share my opinion and have good corporation with other countries.

Q2. Which part (lesson) is most useful impressed for you?

Crisis Management Lesson.

Q3. If you have the opinion / requests to improve / change the lesson, please write down the name of lesson

No comment.

Q4. How this training course will be made the best use for your country?

I'll take some experience in here to improve my country.

Q5. Do you think that such training is more necessary in the future? And if yes, tell us that reasons.

Of course. Much more knowledge, more development and prevention of the marine disaster

Q6. If the seminar in this field will be held in your country, what (kind of) subject is suitable for your country?

Oil Spill Management Training Course

Questionnaire for CMV members

Please answer following question with reason

Q1. Please mention your impression of this training course all through the CMV project. Around the world all nation mention about enviroment so that CMV project this training course of oil spill respond is important not only for CMV and Japanese but for all nation. We must take care marine safety and marine enviroment.

Q2. Which part (lesson) is most useful impressed for you?
For me all part (lesson) is most useful impressed, especially exercises and the plan to recovery the oil spill. I understand how to do. what to use. and thank to all experiences Japanese leeturers.

Q3. If you have the opinion / requests to improve / change the lesson, please write down the name of lesson

Q4. How this training course will be made the best use for your country?
Many years in my Country no accident of oil spill but all the time we standby to combat the marine oil spill but we have no more expirient same like Japanese that many time using oil recovery equipment and the training course made us more understand about this subjects.

Q5. Do you think that such training is more necessary in the future? And if yes, tell us that reasons. Safety of thinking it might happen to us in the future so training course will held us correctly to make the plan, Activity and Technique to successful management. So training Course nessessary.

Q6. If the seminar in this field will be held in your country, what (kind of) subject is suitable for your country?
The subject is suitable for my country. I think all subjects are necessery and important. But we have a little time to improve them.

HTWE - MYINT
MYANMAR

Questionnaire for CMV members

Please answer following question with reason

Q1. Please mention your impression of this training course all through the CMV project.

The We have been enhance our knowledge and skill about the oil spill control.

Q2. Which part (lesson) is most useful impressed for you?

Boom Deployment (lesson) is most impressed for me

Q3. If you have the opinion / requests to improve / change the lesson, please write down the name of lesson

No opinion & request.

Q4. How this training course will be made the best use for your country?

This training will help us to enable effective management on oil spill control for my country.

Q5. Do you think that such training is more necessary in the future? And if yes, tell us that reasons.

Yes, because without the training, we cannot response the if the actual oil spill occur.

Q6. If the seminar in this field will be held in your country, what (kind of) subject is suitable for your country?

Deployment of Booms and usage of skimmers.

Questionnaire for CMV members

Please answer following question with reason

Q1. Please mention your impression of this training course all through the CMV project.

We have been enhanced our knowledge and skill all through the cmv project.

Q2. Which part (lesson) is most useful impressed for you?

All lessons are most impressed for us.

Q3. If you have the opinion / requests to improve / change the lesson, please write down the name of lesson

Before the role playing exercise, should make video show first.

Q4. How this training course will be made the best use for your country?

This draing course will help us to use effective management on oil spill control for my country.

Q5. Do you think that such training is more necessary in the future? And if yes, tell us that reasons.

Yes, training is necessary in the future ~~because we cannot response the oil spill without training~~ so we will response the oil spill perfectly with skillful persons.

Q6. If the seminar in this field will be held in your country, what (kind of) subject is suitable for your country?

Deployment of booms and usage of skimmers.

MIN AUNG

MYANMAR

Questionnaire for CMV members

Please answer following question with reason

Q1. Please mention your impression of this training course all through the CMV project.

cmv project is we have enhanced our knowledge and useful about the oil spill control.

Q2. Which part (lesson) is most useful impressed for you?

All lesson is most impressed for us.

Q3. If you have the opinion / requests to improve / change the lesson, please write down the name of lesson

Before the role playing exercises, should be show the example video tape.

Q4. How this training course will be made the best use for your country?

This training course will help us to use effective management on oil spill control for my country.

Q5. Do you think that such training is more necessary in the future? And if yes, tell us that reasons.

Yes, Training is necessary in the future, so we will response the oil spill perfectly with skillful persons.

Q6. If the seminar in this field will be held in your country, what (kind of) subject is suitable for your country?

Deployment of booms and usage of skimmers.

(TUN TUN)

MYANMAR.

Questionnaire for CMV members

Please answer following question with reason

Q1. Please mention your impression of this training course all through the CMV project.

CMV project training is we have been enhance our knowledge and skill about the oil spill control.

Q2. Which part (lesson) is most useful impressed for you?

All (lesson) is most impressed for us.

Q3. If you have the opinion / requests to improve / change the lesson, please write down the name of lesson

NO opinion and requests.

Q4. How this training course will be made the best use for your country?

This training will help us to use effective management on oil spill control for my country.

Q5. Do you think that such training is more necessary in the future? And if yes, tell us that reasons.

Yes, because without the training, we cannot response if the actual oil spill occur.

Q6. If the seminar in this field will be held in your country, what (kind of) subject is suitable for your country?

Deployment of booms and usage of skimmers.

Mr. Aung WIN
MYANMAR

Questionnaire for CMV members

Please answer following question with reason

Q1. Please mention your impression of this training course all through the CMV project.

This Project is an essential for us. The training course upgrade our knowledge how to tackle oil spill accidents.

Q2. Which part (lesson) is most useful impressed for you?

Table Top Exercises.

Q3. If you have the opinion / requests to improve / change the lesson, please write down the name of lesson

To do more table top exercises will improve our efforts & we will understand and not forget ~~~~ some mistakes.

Q4. How this training course will be made the best use for your country?

This training open our mind in many ways, such as, recovery tactics, equipments which we should bought ~~~~ for in case of emergency.

Q5. Do you think that such training is more necessary in the future? And if yes, tell us that reasons.

Yes.
- It improve our knowledge and how to co-operate between different organizations.
- Also, we got new friends from neighbours countries, it will improve good relations between us.

Q6. If the seminar in this field will be held in your country, what (kind of) subject is suitable for your country?

- Table Top Exercises.

NGUYEN QUOC THUY - VIETNAM.

Questionnaire for CMV members

Please answer following question with reason

Q1. Please mention your impression of this training course all through the CMV project.

- Model organizations and professional.

Q2. Which part (lesson) is most useful impressed for you?

- Contingency Plan.
- Boom Deployment Exercise.
- Role play Exercise.

Q3. If you have the opinion / requests to improve / change the lesson, please write down the name of lesson

- Storage and Disposal.

Q4. How this training course will be made the best use for your country?

- Solve and evaluate issues required for oil spill control including arrangement, resources and equipment, communication and coordination with organization concerned.

Q5. Do you think that such training is more necessary in the future? And if yes, tell us that reasons.

Yes - In this Exercise Suply more experiences for participants of other country and make friendship.

Q6. If the seminar in this field will be held in your country, what (kind of) subject is suitable for your country?

- The same this training course, and in real condition in Vietnam

Huynh Ngoc Thua – Viet Nam

Questionnaire for CMV members

Please answer following question with reason

Q1. Please mention your impression of this training course all through the CMV project.

Very professional

Q2. Which part (lesson) is most useful impressed for you?

table-top exercise (Role play exercise)

Q3. If you have the opinion / requests to improve / change the lesson, please write down the name of lesson

Crisis management (improve).
disposal management (more details).

Q4. How this training course will be made the best use for your country?

It should provide related to disposal & legislations topics/subjects

Q5. Do you think that such training is more necessary in the future? And if yes, tell us that reasons.

Yes, It' provides basic knowledge on oil spill to dedicated personnel.

Q6. If the seminar in this field will be held in your country, what (kind of) subject is suitable for your country?

all of subjects, but need to adjust to accordance with real condition in my country

NGUYEN HANH PHUC - VIET NAM.

Questionnaire for CMV members

Please answer following question with reason

Q1. Please mention your impression of this training course all through the CMV project.

- Very professionals.

Q2. Which part (lesson) is most useful impressed for you?

- Role play Excerase.
- Boom Deployment Excerase.

Q3. If you have the opinion / requests to improve / change the lesson, please write down the name of lesson

- Disposal Management.

Q4. How this training course will be made the best use for your country?

- Yes, It provide the knowledge on oil Spill Response.

Q5. Do you think that such training is more necessary in the future? And if yes, tell us that reasons.

- Yes, have more Experiencg and Promotion of International Coorperation

Q6. If the seminar in this field will be held in your country, what (kind of) subject is suitable for your country?

- Yes, about Role play Exercise.

PHAM BANG TIEN - VIET NAM

Questionnaire for CMV members

Please answer following question with reason

Q1. Please mention your impression of this training course all through the CMV project.

It's too short

Q2. Which part (lesson) is most useful impressed for you?

That is the role-playing exercise. Because it is very helpful.

Q3. If you have the opinion / requests to improve / change the lesson, please write down the name of lesson

No opinion

Q4. How this training course will be made the best use for your country?

'Cause our OSR center is newly built so I'm sure that the course is ok to us dispite of whatever subject it goes through. Frankly, as per my role and my duty I would like to be trained how to make a plan, how to coodinate etc...

Q5. Do you think that such training is more necessary in the future? And if yes, tell us that reasons.

Yes! Because it helps OSR staff to improve their skill. However, such short training course should be held in each country instead of going (so far) to Japan.

Q6. If the seminar in this field will be held in your country, what (kind of) subject is suitable for your country?

Every subject is ok but at the moment Table-top exercise will make the best.

DOAN CHAT - VIET NAM

Questionnaire for CMV members

Please answer following question with reason

Q1. Please mention your impression of this training course all through the CMV project.

No

Q2. Which part (lesson) is most useful impressed for you?

Role playing exercise.

Q3. If you have the opinion / requests to improve / change the lesson, please write down the name of lesson

No opinion

Q4. How this training course will be made the best use for your country?

Help staffs to get more experience in oil spill response.

Q5. Do you think that such training is more necessary in the future? And if yes, tell us that reasons.

Yes, because we still have demand to get more knoledge in OSR.

Q6. If the seminar in this field will be held in your country, what (kind of) subject is suitable for your country?

Role - playing exercise.

Ⅱ　CMV 各国における机上訓練等の実施

Workshop on Table Top Exercise for Oil Spill Incident
23-24 February 2006, Hotel Phnom Penh, Phnom Penh

Name list of Participants

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List of Participant				
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3	Mr. LENG THUNKOSAL	Merchant Marine Department, MPWT	855-16 332 268	
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9	Mr. TOR NY	Port Autonomous of Phnom Penh, Pilot		
10	Mr. MAI MARITH	Port Autonomous of Sihanoukville, Harbour Master **(Sihanoukville)**	855-12 931 116	
11	Mr. HUN SAMNANG	Port Autonomous of Sihanoukville, Pilot **(Sihanoukville)**	855-16 555 559	
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15	Mr. KHUN BORIN	Cambodian Royal Navy **(Sihanoukville)**	855-12 848586	
16	Mr. MAO VANCHANN	Ministry of Environment	855-11 956 131	

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2	Mr. TSUYOSHI MATSUDA	Ch. Instructor of the Japan Maritime Disaster Prevention Center		
3	Mr. TOMOYA HATANAKA	Senior Response Officer of National Strike Team, JCG		
4	Mr. TAKESHI KISHIDA	Deputy General Manager of Nippon Maritime Center		
5	Capt. MATHEW MATHAI	Marine Manager of Nippon Maritime Center		
6	Mr. SHIGERU YAMAGUCHI	Researcher, Planning and International Department		
7	Mr. LIM KHOK-CHENG	Observer, Singapore		
8	Mr. PAKORN PRASERTWONG	Observer, Thailand		Pakorn Prasertwong
9	Ms. YUKIE YAMAZAKI	Cambodia Joho Service inc., Interpreter		
10	Mr. KIM VA	Architect / M. Engineer Managing Director / Interpreter		
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PARTICIPANTS LIST

CMV Project

Lecture and Seminar on Oil Spill (17.2.2006, Grand Plaza Park Royal Hotel)

Sr. No	Name	Occupation	Office Address	Signature
1.	Captain Tin Oo	Myanmar Navy	Myanmar Navy, Ministry of Defence	
2.	Captain Tin Aung San	Myanmar Navy	Myanmar Navy, Ministry of Defence	
3.	Commander Min Thein Tint	Myanmar Navy	Myanmar Navy, Ministry of Defence	
4.	Daw Kyi Kyi Myint	Head of Branch	National Commission for Environmental Affairs Ministry of Forestry	
5.	Daw Ohnmar Myint	Head of Branch	National Commission for Environmental Affairs Ministry of Foresty	
6.	Pol.Lt Col Kyaw Win Thein	Deputy Director	Myamar Police Force, Ministry of Home Affairs	
7.	Pol.Major Myo Min Htike	Assistant Director	Myamar Police Force, Ministry of Home Affairs	
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9.	U Myint Than	Assistant Director	General Administrative Department, Ministry of Home Affairs	
10.	U Khin Mg Than	Staff Officer	General Administrative Department, Ministry of Home Affairs	

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11.	U Htike Htike	Staff Officer	Department of Transport, Ministry of Transport	
12.	Daw Thida Lwin	Branch Clerk	Department of Transport, Ministry of Transport	
13.	Daw Wutt Ye Myo Min	Lower Division Clerk	Department of Transport, Ministry of Transport	
14.	U Htin Kyaw	Assistant Director	Department of Water Resources & Improvement of River System, Ministry of Transport	
15.	U Sau Daing	Assistant Engineer (D.W.I.R)	Department of Water Resources & Improvement of River System, Ministry of Transport	
16.	U Pye Phyo Maw	Special S.A.E (D.W.I.R)	Dapartment of Resources & Improvement of River System, Ministry of Transport	
17.	U Aye Kyaw	Assistant Director	Department of Fisheries, Ministry of Livestock & Fisheries	
18.	U Hla Win	Staff Officer	Department of Fisheries, Ministry of Livestock & Fisheries	
19.	U Tun Tun	Assistant Director	Myanmar Customs, Ministry of Finance Revenue	
20.	U Myat Ko Ko	Staff Officer	Myanmar Customs, Ministry of Finance Revenue	

Sr. No	Name	Occupation	Office Address	Signature
21.	U Myint Maw	Director	Transport Planning Deparment,Ministry of Raliways Transportation	
22.	U Thint Myat Thu	Assistant Director	Transport Planning Deparment,Ministry of Raliway Transportation	
23.	U Kyaw Ywe	Deputy Director	Department of Fire Services Ministry of Social Welfare, Relief & Reseltlement	
24.	U Tin Maung Ni	Assistant Direator	Department of Fire Services Ministry of Social Welfare, Relief & Reseltlement	
25.	U Aung Myaing	Master	Myanma Port Authority ,Ministry of Transport	
26.	U Soe Shwe	Master	Myanma Port Authority, Ministry of Transport	
27.	U Ohn Sint	Master	Myanma Port Authority, Ministry of Transport	
28.	U Ne Win	Chief Engineer	Myanma Port Authority, Ministry of Transport	
29.	U Zaw Lin OO	Chief Engineer	Myanma Port Authority, Ministry of Transport	
30.	Captain Lumum Ye Myint	Master	Myanma Five Star Line, Ministry of Transport	

Sr. No	Name	Occupation	Office Address	Signature
31.	U Zaw Htay	Chief Engineer	Myanmar Five Star Line, Ministry of Transport	
32.	U Kyaw Kyaw	Chief Engineer	Myanmar Five Star Line, Ministry of Transport	
33.	U Taike Soe Aung	Dy. Marine Superintendent	Inland Water Transport, Ministry of Transport	
34.	U Thein Myint	Fleet Officer	Inland Water Transport , Ministry of Transport	
35.	U Ngwe Tun	Assistant Engineer	Inland Water Transport, Ministry of Transport,	
36.	U Myint Oo	Deputy General manager	Transport Fleet Department,Myanma Hotel & Tourism Services	
37.	U Thein Lwin	Deputy General Manager	Stores & Motor Transport Section. Myanma Hotel & Tourism Services	
38.	Daw Khin Saw Win	Manager	Marine & Aviation Department, Myanma Insurance, Ministry of Finance Revenue	
39.	Daw Kyin Htay	Assistant General Manager	Myanma Insurance, Ministry of Finance Revenue	
40.	U Kyaw Aung Myint	Deputy Assistant Director	Myanma Petrochemical Enterprise (MPE), Ministry of Energy	

Sr. No	Name	Occupation	Office Address	Signature
41.	U Tin Aung	1st Mechnical Engineer	Myanma Petrochemical Enterprise (MPE), Ministry of Energy	
42.	U Maung Maung Than	2nd Engineer	Myanma Petrochemical Enterprise (MPE), Ministry of Energy	
43.	U Hla Shwe	General Manager	Offshore Base, Myanma Oil and Gas Enterprise (M.O.G.E), Ministry of Energy	
44.	U Than Sein	Production Engineer (Engineer Incharge)	Ywama Gas Supply Station, Insein Township, (M.O.G.E), Ministry Of Energy.	
45.	U Htay Aung	Executive Engineer (Mechnical)	Marine and Dry Dock Department, Thaketa Offshore Base, (M.O.G.E), Ministry of Energy.	
46.	Daw Tin Tin Mu	Professor	Myanmar Maritime University, Ministry of Transport	
47.	Daw Phyu Phyu Tin	Lecturer	Myanmar Maritime University, Ministry of Transport	
48.	U Tun Naing	Head of Education and Training Department	Institute of Marine Technology, Ministry of Transport.	
49.	U Zin Maung Tun	Head of Department (Nautical Studies)	Institute of Marine Technology, Ministry of Transport.	
50.	U Myat Moe	Lecture(Engineering Dept;)	Institute of Marine Technology, Ministry of Transport.	

Sr. No	Name	Occupation	Office Address	Signature
51.	U Tin Shwe	Lecturer (Nautical Dept;)	Institute of Marine Technology, Ministry of Transport.	
52.	U Shein Myint	Deputy Executive Director	Myanmar National Red Cross Society	
53.	Dr. Ye Myint	Deputy Head of Health Division	Myanmar National Red Cross Society	
54.	Daw Than Nwe	Professor	Law Department , University of Yangon	
55.	Daw May Htar	Associate Professor	Law Department , University of Yangon	
56.	U Khin Mg Than	Managing Director	P.I Transport Co; Ltd.	
57.	U Khin Maung Kyaing	Managing Director	P.I Transport Co; Ltd.	
58.	U Myat Thu	Vice Chairman	Private Boat Controlling Committee	
59.	U Thein Hlaing	Member	Private Boat Controlling Committee	
60.	U Min Naing	Instructor	Myanmar Overseas Seafarers Association.	

Sr. No	Name	Occupation	Office Address	Signature
61.	U Soe Tint	Treasurer	Myanmar Overseas Seafarers Association	
62.	U Khin Mg Kyaw Din	Deputy Director	News and Periodical Enterprise	
63.	U Soe Min Htike	Journalist	Weekly Eleven News Journal	
64.	San Thar Aung	Reporter	The Kumudra Weekly	
65.	U Pye Phyo Wai Zaw	Reporter	24/7 News Journal	
66.	U Soe Zeya Tun	Assistant Chief Reporter	Flower News, Yangon Times	
67.	U Myo Thein	Director	Department of Marine Administration, Ministry of Transport	
68.	U Htay Win	Director	Department of Marine Administration, Ministry of Transport	
69.	U Thaung Kyaing	Director	Department of Marine Administration, Ministry of Transport	
70.	U Aung Min	Superintendent for Dockyard	Department of Marine Administration, Ministry of Transport	

Sr. No	Name	Occupation	Office Address	Signature
71.	U Thet Htay	Deputy Director	Department of Marine Administration, Ministry of Transport	
72.	U Myint Aung	Deputy Director	Department of Marine Administration, Ministry of Transport	
73.	U Chan Myae	Assistant Director	Department of Marine Administration, Ministry of Transport	
74.	U Khin Mg Win	Assistant Director	Department of Marine Administration, Ministry of Transport	
75.	U Soe Thein Oo	Manager	Department of Marine Administration, Ministry of Transport	
76.	U Maung Maung Soe	Deputy General Manager	Myanma Five Star Line, Ministry of Transport	
77.	U Zaw Tun Lwin	Harbour Master	Myanma Port Authority, Ministry of Transport	
78.	U Nyunt Win	Captain	Myanma Port Authority, Ministry of Transport	
79.	U Min Aung	Captain	Myanma Port Authority, Ministry of Transport	
80.	U Tun Tun	Captain	Myanma Port Authority, Ministry of Transport	

Sr. No	Name	Occupation	Office Address	Signature
81.	U Aye Ko Ko	Deputy Director	Directorate of Water Resources & Improvement of River System, Ministry of Transport	
82.	U Htwe Myint	Deputy Director	Directorate of Water Resources & Improvement of River System, Ministry of Transport	
83.	U Tin Oo	Assistant Harbour Master	Myanma Petrochemical Enterprise(MPE), Ministry of Energy	
84.	U Kyaw San Naing	Head of Branch	National Commission for Environmental Affairs, Ministry of Forestry	
85.	U Aung Win	Master	Myanmar Maritime University, Ministry of Transport	
86.	U Toe Myint	Deputy Director	Department of Marine Administration, Ministry of Transport	
87.	U Soe Naing	Deputy Director	Department of Marine Administration, Ministry of Transport	
88.	U Win Aung	Deputy Director	Department of Marine Administration, Ministry of Transport	
89.	U Thant Zin Oo	Assistant Director	Department of Marine Administration, Ministry of Transport	
90.	U Soe Myint	Assistant Director	Department of of Marine Administration,Ministry of Transport	

Sr. No	Name	Occupation	Office Address	Signature
91.	U Khin Maung Aye	Architect	Department of Marine Administration Ministry of Transport	
92.	U Say Say	Assistant Director	Department of Marine Administration Ministry of Transport	
93.	U Thein Oo	Staff Officer	Department of Marine Administration Ministry of Transport	
94.	U Kyaw Moe	Assistant Engineer	Department of Marine Administration Ministry of Transport	
95.	U Mya Sein	Branch of Clerk	Department of Marine Administration Ministry of Transport	
96.	U Than Htay	PMV	Department of Marine Administration Ministry of Transport	
97.	U Maung Maung	PMV	Department of Marine Administration Ministry of Transport	
98.	U Thaung Aye	PMV	Department of Marine Administration Ministry of Transport	
99.	U Aung Kyaw	PMV	Department of Marine Administration Ministry of Transport	
100.	U Khin Mg Myint	PMV	Department of Marine Administration Ministry of Transport	
101.	U Thet Lwin Aung	Captain	Myanma Five Star Line, Ministry of Transport	
102.	U Myo Zarni	Reporter	The Voice Weekly	

CMV PROJECT
28 Feb – 2 Mar 2006

DANH SÁCH THAM DỰ
ATTENDANCE LIST

Stt No.	Họ và tên Name	Điện thoại liên lạc Phone number	Chức vụ Position	Cơ quan chủ quản Company	Ngày đăng ký Registered Date	Ngày có mặt tại Vũng Tàu (Ngày nhận phòng) Check in Date	Phòng Room No	Ghi chú Note
1	CDR. Yasushi Soda			**The Japanese Delegation**				
2	Mr Tomoya Hatanaka				24/02/06			1
3	Mr Tsuyoshi Matsuda							1
4	Mr Takashi Ichioka							1
5	Mr Mathew Mathai							1
6	Mr Shigeru Yamaguchi							1
7	Ms Mamiko Nakamura			The Nippon Foundation	24/02/06			1
8	Mr Pham Tu Liem			Translators				1
9	Mr Tran Thanh Binh							1
10	Mr Isao Kishi			Consulate General of Japan	24/02/06			1
11	Mr Basza Alexzandar bin Haji Basri			Marine Department-Brunei				1
12	Mr Beny Bastiawan			Ministry of Environment - Indonesia				1
13	Mr Antonio C. Lalisan			Phinippine Coast Guard MEPCOM-Phinippine				1

Stt No.	Họ và tên Name	Điện thoại liên lạc Phone number	Chức vụ Position	Cơ quan chủ quản Company	Ngày đăng ký Registered Date	Ngày có mặt tại Vũng Tàu (Ngày nhận phòng) Check in Date	Phòng Room No	Ghi chú Note
14	Nguyễn Đức Soát			UBTKCN				
15	Nguyễn Trọng Nhu							1
15	Nguyễn Đình Tân							1
16	Anh Hưởng							
17	Nguyễn Doãn Chất							1
18	Lê Hoài Vũ							
19	Phạm Quang Trò							1
20	Lái xe							
21	Anh Để							1
22	Nguyễn Hữu Tuyến			Tổng công ty				3
23	Nguyễn Văn Quyết							
24	Nguyễn Văn Mậu							
25	Nguyễn Xuân Miễn		P.GĐốc	Trung tâm ƯCSCTD KV Miền bắc Công ty 128				1
26	Phạm Ngọc Hoà							1
26	Đinh Bằng Sắt							
28	Đồng Minh Châu							1
29	Nguyễn Văn Phiếu							

Stt No.	Họ và tên Name	Điện thoại liên lạc Phone number	Chức vụ Position	Cơ quan chủ quản Company	Ngày đăng ký Registered Date	Ngày có mặt tại Vũng Tàu (Ngày nhận phòng) Check in Date	Phòng Room No	Ghi chú Note
30	Trần Mạnh			Trung tâm ƯCSCTD KV Miền Trung Công ty Sông Thu				1
31	Lê Quang Anh							
32	Trần Đình Sơn							1
33	Trần Ngọc Long							
34	Nguyễn Quang Khánh							1
35	Lái xe							
36	Nguyễn Hữu Phương			TT PHTKCN Hàng Hải Việt Nam				1
37	Anh Thuỳ							
38	Nguyễn Văn Đợi							
39	Huỳnh Thanh Nhã			Sở Tài Nguyên Môi Trường TP.HCM				1
40	Phương Anh Dũng			Cảng vụ Tp.HCM				
41	Lê Văn Chiến			Cảng vụ Vũng Tàu				
42	Lương Trường Phi			Trung tâm Cứu nạn Hàng hải KH III				
43	Trần Kim Vĩnh Thọ							

Stt No.	Họ và tên Name	Điện thoại liên lạc Phone number	Chức vụ Position	Cơ quan chủ quản Company	Ngày đăng ký Registered Date	Ngày có mặt tại Vũng Tàu (Ngày nhận phòng) Check in Date	Phòng Room No	Ghi chú Note
44	Tô Văn Đức							
45	Hoàng Minh Bình		Đội trưởng tàu	Trường TH Hàng Hải I	22/02/06			1
46	Trần Văn Hoạt			PV Drilling				
47	Nguyễn Trung Thành							
48	Nguyễn Tiến Hưng							
49	Hồ Vũ Hải							
50	Đàm Quang Phát							
51	Hồ Sỹ Mạnh							
52	Nguyễn Quang Hưng							
53	Võ Xuân Cảnh							
54	Huỳnh Ngọc Thừa							
55	Nguyễn Huy Hoàng							
56	Phan Văn Đại							
57	Lê Ngọc Hà							
58	Ngô Huy Liêm							
59	Nguyễn Quốc Dũng							
60	Phaạm Văn Bách							

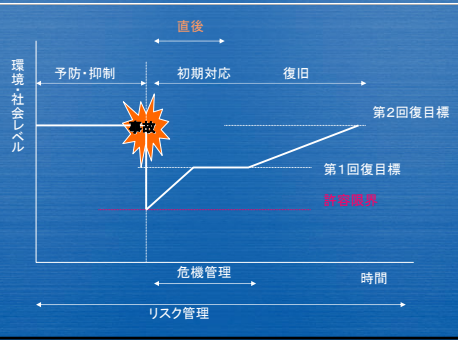
Stt No.	Họ và tên Name	Điện thoại liên lạc Phone number	Chức vụ Position	Cơ quan chủ quản Company	Ngày đăng ký Registered Date	Ngày có mặt tại Vũng Tàu (Ngày nhận phòng) Check in Date	Phòng Room No	Ghi chú Note
61	Phạm Minh Tuấn							
62	Nguyễn Kim Khánh							
63	Nguyễn Đức Hùng			VSP				
64	Đinh Văn Minh			PTSC				
65	Trần Ngọc Thới			UB Tỉnh Bà Rịa - Vũng Tàu				
66	Huỳnh Thị Liễu							
67	Trần Anh Đức			Sở TNMT Tỉnh BRVT				
68	Nguyễn Tâm Hùng			Ban Chỉ huy phòng chống lụt bão Tp.Vũng Tàu				
69	Đặng Xuân Trường							
70	Bùi Văn Thanh			Đài phát thanh BRVT				
71	Nguyễn Văn Dùng			Đài truyền hình BRVT				
72	Hồ Ngọc Trinh			PV Đài Phát Thanh Truyền Hình tỉnh BRVT				
73	Lưu Trọng Phú			Báo BR-VT				
74	Võ Minh Tuấn			Báo BR-VT				
75	Nguyễn Quang Đạt			Báo BR-VT				

Stt No.	Họ và tên Name	Điện thoại liên lạc Phone number	Chức vụ Position	Cơ quan chủ quản Company	Ngày đăng ký Registered Date	Ngày có mặt tại Vũng Tàu (Ngày nhận phòng) Check in Date	Phòng Room No	Ghi chú Note
76	Đoàn Việt			Báo BR-Vt				
77	Huỳnh Thu Phong			Báo BR-Vt				
78	Vũ Hải Sơn			Đài Truyền Hình VN				
79	Dương Văn Dương							
80	Nguyễn Tấn Thiệu							
81	Võ Văn Dũng			Báo QĐND				
82	Lê Nam Tư			Báo Nhân Dân				
83	Bùi Thanh Bình			Hỗ Trợ Hậu cần				
84	Phạm Hữu Hai							
85	Phạm T Thu Huyền							
86	Lương Thu Hà							
87	Vũ Hồng Tiến							

A GUIDE TO CONTINGENCY PLANNING FOR OIL SPILLS ON WATER

Tsuyoshi MATSUDA
MARITIME DISASTER
PREVENTION CENTER

リスク管理と危機管理



事故の予防と対応

- 事故防止（予防）が大事
- それでも油の流出は発生し、地域環境に影響を及ぼす
- 環境、社会経済の被害を最小限に抑え、被害を受けた生態系を回復させるよう努力する
- 対応は最大限、自然の力を補完する

緊急時対応計画の構成

1．戦略
- 計画の範囲
- 地理的範囲
- 想定されるリスク
- 関係者の役割と責務

2．行動及び作業
- 流出油の状況の評価
- 対応する人員・資機材の動員手順

3．データーディレクトリ
- 関連地図、資機材のリスト、データシート

計画策定に当たってのポイント

1. 段階的対応　**3段階**
2. 可能性の高い最大流出、もっとも起こりそうな事故シナリオ
3. 国家や他の関連する企業の計画との連携

資料の収集（リスクアセスメント）

- 過去のデータ
- 油の性状
- 気候
- 地域の気象
- 環境上の影響の受け易さ

事故の統計

危険に曝される環境のセンシティビティマップの作成

センシティビティマップの作成

- 特別な価値があると見做される地域
  - ・生態学上
  - ・レクレーション上
  - ・商業上
- 海岸のタイプによって被害の受け易さを識別

開放性の岩岬 ← 小 ―― 大 → 塩性湿地・マングローブ

海岸の被害を受けやすさの指標

1. 開放性の岩の岬
2. 侵食されている侵食台
3. 細い粒子の砂浜
4. 粗い粒子の砂浜
5. 開放性の目が詰まった干潟
6. 砂と礫が混じった浜
7. 砂礫の浜
8. 閉鎖性の岩石海岸
9. 閉鎖性の干潟
10. 塩性湿地／マングローブ

代表的な資機材

海　上	陸　上
▪ ブーム	▪ シャベル
▪ 回収機	▪ 掘削機／ローダー
▪ 油吸着剤	▪ ドラム缶／大型容器
▪ 油処理剤	▪ トラック／タンク車
▪ ポンプ／ホース	▪ バキュームカー
▪ タンク／バージ	▪ ビニールシート
▪ 無線機	▪ 防護服
▪ 船舶、航空機	▪ 通信設備、指揮所
	▪ 運搬用重機(クレーン等)

総合環境影響評価
NEBA: Net Environment Benefit Analysis

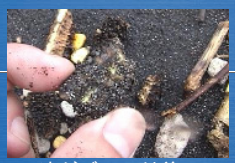
- 各対応策の長所・短所を検討し、またそれらの対策と自然による浄化との比較を行う１つの方法
- 原則的には常識的なもの
- 過去の教訓が新しい事例に活用

総合環境影響評価の手順

1. 地域に関する情報の収集
2. 対応方法の適否を事例から検討
3. 結果の予測
   - ・自然浄化に必要な時間
   - ・油の生態学的影響
   - ・油の社会・経済的影響
4. 利点と欠点の評価

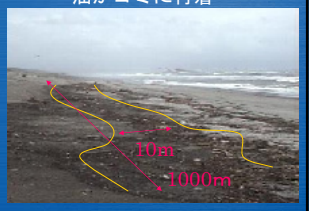
監視と評価

- 事故発生時の状況
- 流出量の見積もり
- 被害の見積もり



油がゴミに付着

油で汚染されている範囲、割合を現場で調査する



資機材の評価

- 性能
- 輸送、展開に必要な時間
- 使用できる油種

運搬

回収油とゴミの管理

- 廃棄物の管理は後方支援の主要項目
  事前に関係当局と調整
- 最良の方法
  - 回収現場にできるだけ近い場所で処分
  - 量をできる限り少なく
  - 分別処理をできるだけ行う

作業終了の判断

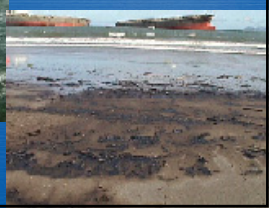
- 環境への影響のリスクを最小限に抑える
- 人間が油と接触しない

流出油対応を行わない場合は、過去の経験から自然浄化に必要な時間を予測する

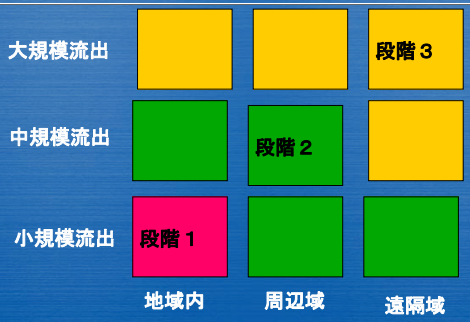
数日　→　数年　→　数十年

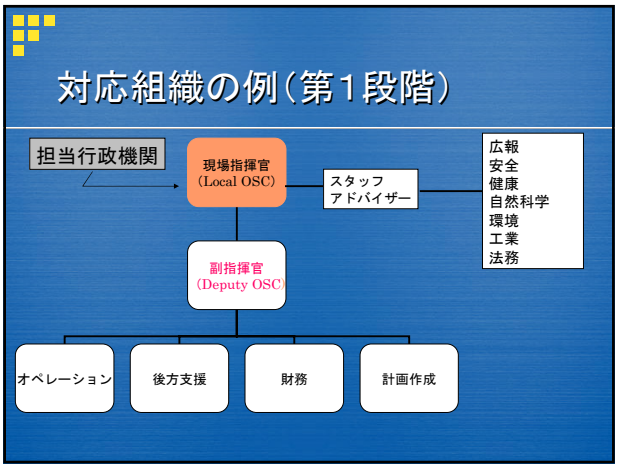
事例　貨物船A（5,000GT）

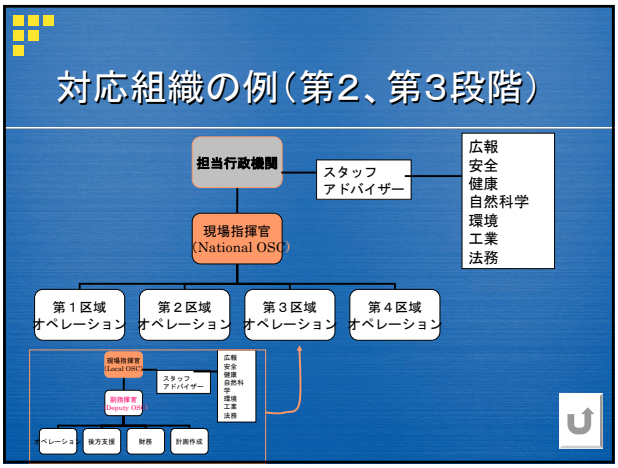
事例　貨物船B（36,000GT）

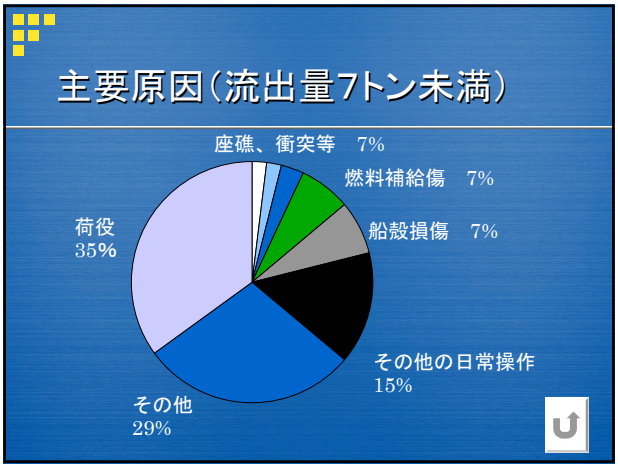


段階的対応




対応組織の例（第１段階）
担当行政機関
現場指揮官
(Local OSC)
スタッフ
アドバイザー
広報
安全
健康
自然科学
環境
工業
法務
副指揮官
(Deputy OSC)
オペレーション
後方支援
財務
計画作成


対応組織の例（第２、第３段階）
担当行政機関
スタッフ
アドバイザー
広報
安全
健康
自然科学
環境
工業
法務
現場指揮官
(National OSC)
第１区域
オペレーション
第２区域
オペレーション
第３区域
オペレーション
第４区域
オペレーション


主要原因（流出量7トン未満）
座礁、衝突等　7%
燃料補給傷　7%
船殻損傷　7%
その他の日常操作
15%
その他
29%
荷役
35%

Outline of the Law Relating to the Prevention of Marine Pollution and Maritime Disaster

① "Polluter Pays" Principle

② Order to Remove Discharged Oil

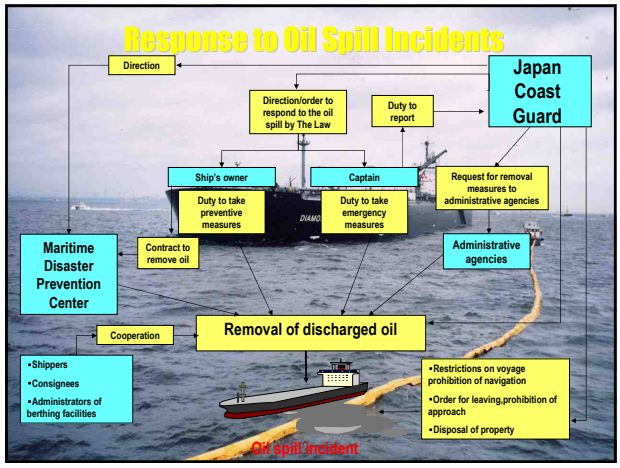
③ Oil Pollution Supervisor and Manual for the Prevention of Oil Pollution

④ Pre-positioned Oil Spill Combating Equipment

⑤ Maritime Disaster Prevention Center

⑥ Regional Contingency Plans

⑦ Councils for Countermeasures against Oil Spills



National Contingency Plan

Establishment of the "National Contingency Plan" (Decision at the Cabinet, on May 8th, 1995)

Article 6

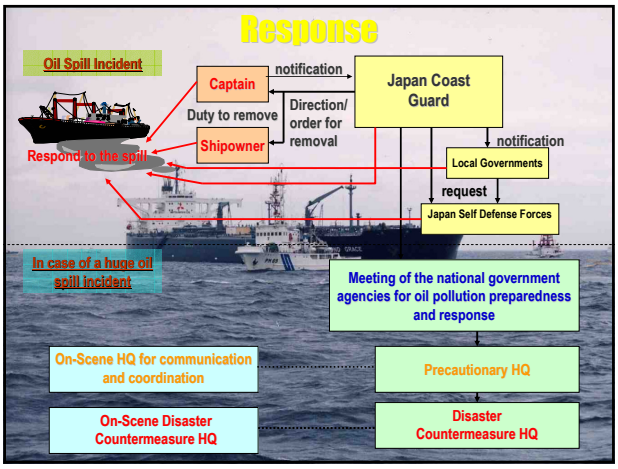
Accession of OPRC Convention (October 17, 1995)

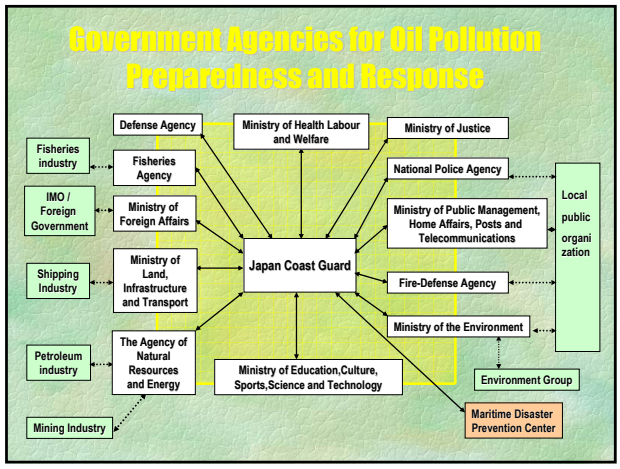
Nakhodka disaster (January, 1997)

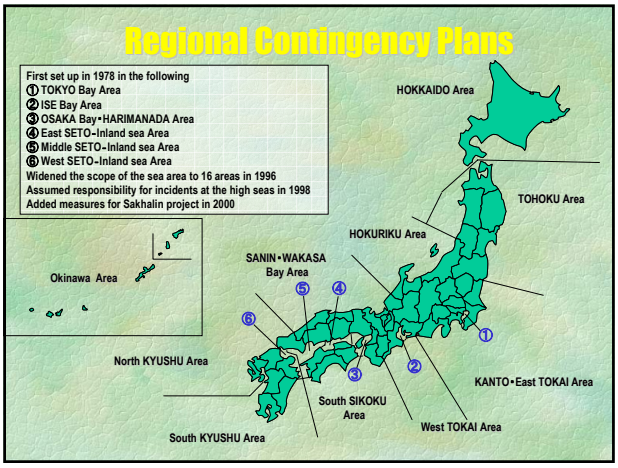
Revision of the "National Contingency Plan (January, 1997)

Preparedness

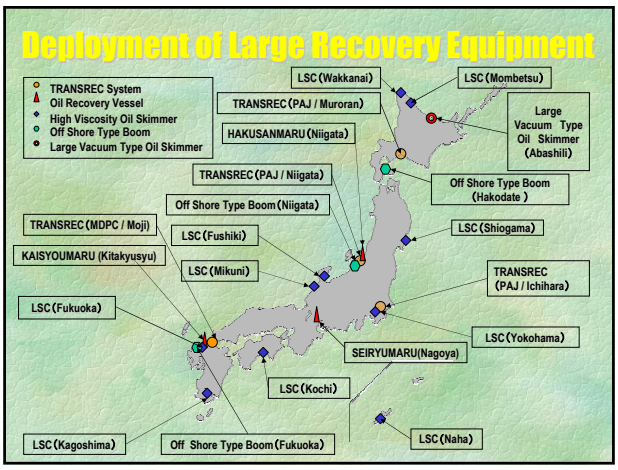
- **Maintenance of information on oil pollution**
  - —Meetings of the national government agencies for oil pollution preparedness and response
  - —Consolidation of information on experts and equipment
- **Systems for oil pollution response**
  - —Regional contingency plans
  - —National Strike Team (JCG)
- **System for Notification and Communication**
  - —Duty by the Law to report to the JCG
  - —Round-the-clock standby
- **Preparation of equipment**
  - —Pre-positioned equipment by institutions concerned
- **Exercises**
  - —Joint exercises with organizations concerned

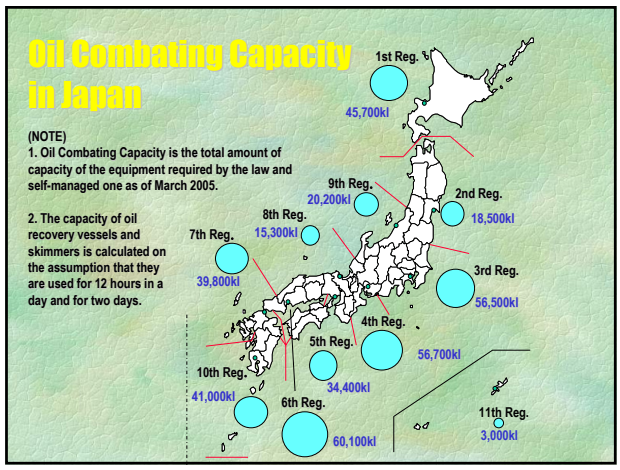

Response
Oil Spill Incident
Captain
notification
Japan Coast Guard
Duty to remove
Direction/ order for removal
Shipowner
Respond to the spill
notification
Local Governments
request
Japan Self Defense Forces
In case of a huge oil spill incident
Meeting of the national government agencies for oil pollution preparedness and response
On-Scene HQ for communication and coordination
Precautionary HQ
On-Scene Disaster Countermeasure HQ
Disaster Countermeasure HQ


Government Agencies for Oil Pollution Preparedness and Response
Defense Agency
Ministry of Health Labour and Welfare
Ministry of Justice
Fisheries industry
Fisheries Agency
National Police Agency
IMO / Foreign Government
Ministry of Foreign Affairs
Ministry of Public Management, Home Affairs, Posts and Telecommunications
Local public organization
Shipping Industry
Ministry of Land, Infrastructure and Transport
Japan Coast Guard
Fire-Defense Agency
Ministry of the Environment
Petroleum industry
The Agency of Natural Resources and Energy
Ministry of Education,Culture, Sports,Science and Technology
Environment Group
Mining Industry
Maritime Disaster Prevention Center


Regional Contingency Plans
First set up in 1978 in the following
① TOKYO Bay Area
② ISE Bay Area
③ OSAKA Bay・HARIMANADA Area
④ East SETO-Inland sea Area
⑤ Middle SETO-Inland sea Area
⑥ West SETO-Inland sea Area
Widened the scope of the sea area to 16 areas in 1996
Assumed responsibility for incidents at the high seas in 1998
Added measures for Sakhalin project in 2000
HOKKAIDO Area
TOHOKU Area
HOKURIKU Area
SANIN・WAKASA Bay Area
Okinawa Area
North KYUSHU Area
KANTO・East TOKAI Area
South SIKOKU Area
West TOKAI Area
South KYUSHU Area


Regional Contingency Plans
Section1 Purpose, Scope, and Fundamental Policy
Section2 Sea Area
Situation of sea area
Incident assumption
Target and current situation of pre-positioned oil spill combating equipment
Communication and information exchange
Combating spilled oil and prevention of danger
Section3 Countermeasures against spilled oil at the high sea
Section4 Countermeasures against oil spill incidents from Sakhalin Project (in Hokkaido Plan only)


Deployment of Large Recovery Equipment
TRANSREC System
Oil Recovery Vessel
High Viscosity Oil Skimmer
Off Shore Type Boom
Large Vacuum Type Oil Skimmer
LSC (Wakkanai)
LSC (Mombetsu)
TRANSREC (PAJ / Muroran)
Large Vacuum Type Oil Skimmer (Abashiri)
HAKUSANMARU (Niigata)
TRANSREC (PAJ / Niigata)
Off Shore Type Boom (Hakodate)
Off Shore Type Boom (Niigata)
TRANSREC (MDPC / Moji)
LSC (Fushiki)
LSC (Shiogama)
KAISYOUMARU (Kitakyusyu)
LSC (Mikuni)
TRANSREC (PAJ / Ichihara)
LSC (Fukuoka)
LSC (Yokohama)
SEIRYUMARU(Nagoya)
LSC (Kochi)
LSC (Kagoshima)
Off Shore Type Boom (Fukuoka)
LSC (Naha)


Oil Combating Capacity in Japan
(NOTE)
1. Oil Combating Capacity is the total amount of capacity of the equipment required by the law and self-managed one as of March 2005.
2. The capacity of oil recovery vessels and skimmers is calculated on the assumption that they are used for 12 hours in a day and for two days.
1st Reg.
45,700kl
2nd Reg.
18,500kl
3rd Reg.
56,500kl
4th Reg.
56,700kl
5th Reg.
34,400kl
6th Reg.
60,100kl
7th Reg.
39,800kl
8th Reg.
15,300kl
9th Reg.
20,200kl
10th Reg.
41,000kl
11th Reg.
3,000kl

Council for Countermeasures against Oil Spills

- Examines necessary combating operations to respond to major oil spills
- Established local contingency plan at each port where large oil tankers are coming in
- Promotes to place equipment and provide exercises and seminars

National Workshop on Table Top Exercise For Oil Spill Incident

23-24 February 2006, Phnom Penh, Cambodia

Organized by: The Ministry of Public Works and Transport

Supported by: The Japan Association of Marine Safety

Sponsored by: The Nippon Foundation

Contents

Response Organizations and its Responsibilities

Response Organizations

- Committee for Oil Spill Response
- Coordinator for Oil Spill Response
- Incident Commander
- Planning Section
- Operation Section
- Logistics Section
- Finance Section

Response Organization

Committee for Oil Spill Response

The Committee for Oil Spill Response (COSR) is composed of:

- Ministry of Public Works and Transport Chairman
- Ministry of Environment Vice
- Ministry of Economics and Finance, Vice
- Ministry of Defense Vice
- Ministry of Interior Member
- Ministry of Agriculture, Fisheries and Forestry, Member
- *Ministry of Water Recourses and Meteorology, Member*
- *Ministry of Foreign Affairs and International Cooperation Member*

Committee for Oil Spill Response (Cont')

- *Ministry of Industry, Mines and Energy, Member*
- *Ministry of Post and Telecommunication Member*
- *Ministry of Tourism Member*
- *Council Ministers Office, Member*
- *Provincial/Municipal Authorities (Based on the area of incident occurred) Member*
- *Oil Private Companies and Industries Member*

Responsibilities of the Committee

Responsibilities of the Committee are:

- Coordinate with international, regional and national institutions on the response of oil spill.
- Monitor and advise the Royal Government for the purpose of harmonizing policies, plans and legal framework concerning the oil spill response with national laws, international laws and conventions on oil spill response.
- Report to the Royal Government on the oil spill response operation as required.
- Provide necessary support to the Incident Command as required for oil spill response.
- Take all necessary actions to achieve the objectives of the NOSCP.
- Shall ensure that the Response Organization is setup in accordance to the NOSCP.
- Implement other roles as delegated by the Royal Government.

Coordinator for Oil Spill Response

The General Department of Transport is a Coordinator for Oil Spill Response.

Responsibilities of Coordinator for Oil Spill Response

Responsibility of Coordinator for Oil Spill Response are:

- Coordinator should decide on the magnitude of the oil spill.
- Notification of the concerned agencies for purpose of setting up the Committee for Oil Spill Response;
- Coordination of activities with concerned agencies;
- Ensure the oil spill response operation is conducted in compliance with the national contingency plan.
- Providing regular report of the operation to the Committee;
- Dissemination of reasonable information to media;

Incident Commander

Incident Commander is composed of:

- Director or deputy of the General Department of Transport — Commander
- Director of the Merchant Marine Department — Deputy

Responsibilities of Incident Commander

Responsibilities of Incident Commander are:

- Overall in-charge of the management for the oil spill response
- Evaluate spill or potential spill reports
- Designate the appropriate Tier of the spill.
- Activate pre-identified resources to implement the national contingency plan.
- Prioritize oil spill response activity areas and set response objectives for the response organization during the spill.
- Liaise with the Coordinator for Oil Spill with regards to the management of the oil spill response operation

Responsibilities of Incident Commander (Cont')

- Obtaining and providing the necessary support to section leaders to fulfill the objectives.
- Assign additional role and responsibilities within the response organization as required during an oil spill response.
- Ensuring the safety of the community and responders during the oil spill.
- Providing the necessary report to the Coordinator for Oil Spill Response.

Planning Section

Planning Section is composed of:

- Department of Protection and Natural Resources Conservation — Chief
- Department of Fisheries — Vice Chief
- Department of Meteorology — Situation Unit Leader
- Department of Natural Resources Assessment and Environmental Data — Plan Dev't Unit Leader
- Department of Environmental Pollution Control — Evn't Unit Leader
- Cambodian National Petroleum Authority — Technical Unit Leader
- Department of Industrial Works
- Merchant Marine Department — Doc. Unit Leader

Responsibilities of the Planning Section

Responsibilities of the Planning Section are:

- Evaluate appropriateness of strategy and tactics
- Ensure immediate plan for response is prepared
- Record, collate, reproduce, disseminate and secure all relevant documents pertaining to the spill incident.
- Ensure that continual scientific environment quality assessment are carried out and documented.
- Ensure that investigations, inspections and summary adjudication proceeding are conducted and documented.
- Report to the Incident Commander

Operation Section

Operation Section is composed of:

- Merchant Marine Department — Chief
- Provincial Authorities (Shelter evacuation) — Vice Chief
- Royal Navy (Source Control and Respond Unit) — Vice Chief
- Royal Air Force — Under Response Unit
- Port — Under Response Unit
- Oil Private Companies and Industries — Under Response Unit

Responsibilities of the operation Section

Responsibilities of the operation Section are:

- Shall carry out all operational activities required during the oil spill response.
- Implement incident action plan
- Establish source of incident, Implement tactics to isolate and control and prevent situation from escalating.
- Conduct containment and recovery operation at sea
- Conduct air operation
- Conduct shoreline protection and clean up operation
- Conduct special operation
- Report to the Incident Commander

Logistics Section

Logistics Section is composed of:

- Navy — Chief
- Port Authority — Vice Chief
- Provincial/Municipal Authorities — Vice (Resource coordination Unit Leader, Facilities Unit Leader, Transportation Unit Leader and Services Unit Leader)
- Police Department — Security Unit Leader
- Fisheries Department — Purchasing Unit Leader
- Communication Department — Communication Unit Leader
- Oil Private Companies and Industries — Facilities Unit Leader

Responsibilities of the logistics Section

Responsibilities of the logistics Section are:

- Provide all necessary logistical support for the implementation of the plan
- Ensure immediate availability of needed equipment, supplies and materials
- Ensure adequate transportation
- Ensure adequate and effective communication
- Ensure adequate personnel
- Report to the Incident Commander

Finance Section

Finance Section is composed of:

- Budget and Finance Department (Accounting Unit Leader) — Chief
- Legal and Counselor Department (Insurance and Claim Unit Leader) — Vice
- Protection and Natural Resources Conservation Department Human Resources Unit

Responsibilities of the Finance Section

Responsibilities of the Finance Section are:

- Manage the financial resources necessary for the response
- Institute appropriate financial controls
- Track all expenditure of the operation
- Prepare financial records that are consistent with the requirement of the international conventions on Liability and compensation for Oil Pollution Damage.
- Report to the Incident Commander.

THANK YOU FOR YOUR CONSIDERATION!

Training Table Top Exercise for
Oil Spill Incident

23-24 Feb 2006, Phnom Penh, Cambodia

Related Information to conduct the Exercise

By

Nhem Savong

Merchant Marine Department

CONTENT

I. Brief of Table-Top Exercise Plan
- Objective
- Proposed Response flow chart

II. Relevant Information and Data for OSR
- Conduct of exercise
- National Oil Spill Response Contingency Plan (Structure, Responsibly, and Tiered response)
- Relevant Data for Oil Spill Response

III. General Arrangement / Instruction and Player methodology

Objective

- To enhance the capability building on Oil Spill Combating by Concerned Organizations.
- The Organizations that are invited to participate in this Table Top Exercise are:
  - Government Organizations
  - Local Authority
  - Private sectors

Proposed Response Flow chart

- Proposed flow chart 1

  Incident ⟶ Local Authority ⟶ Government

√ Proposed flow chart 2

  Incident ⟶ Local Authority ⟶ NOSRC

  (National Oil Spill Response Committee)

Conduct of Exercise

- The aim of the exercise
  - preparing a strategic plan for oil spill response;
  - to minimize damage of property and environment;
  - to ensure that claim recovery can be made.
- Participants are split into 2 group:
  - Head Quarter
  - Near shore On-Scene

Conduct of Exercise (cont)

- Each group will develop an appropriate response action plan to each scenario;
- There are 3 stages to the exercise (6 scenarios)
- Exercise duration = 3hrs.
- Oil spill response equipments are available from port, local companies. They are sufficient to deal with shore line protection and shore line clean-up.

Concept of Action Taken

1. Notification & initial response

2. Required Information for evaluation of spill track
   - Record Data;
   - Actual Data.

3. Response action
   - Evaluation of the incident;
   - Development of action plan;
   - Conducting the response operations;
   - Providing information to public media;
   - Estimating cost of the response operations

3. Response action

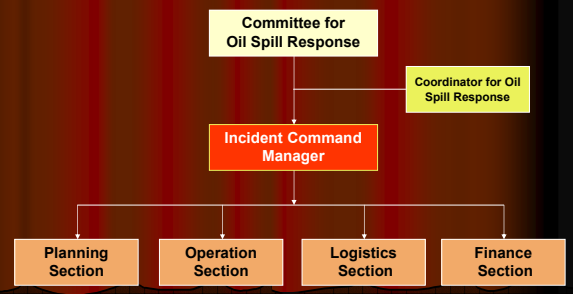
- Evaluation of the incident
  - Identify type and fate of oil
  - Identify key resources threatened
- Development of action plan
  - Identify immediate response priorities;
  - Identify immediate response strategies;
  - Identify equipment and what type and quantity of manpower is required to implement response strategies;
  - Establish Field Command Posts and Communications Plan.

3. Response Action (cont.)

- To implement the following OSR strategies, it will be necessary to mobilize suitable and sufficient amount of equipment, and manpower before the strategies can be implemented. Identify suitable and sufficient amount of equipment and manpower in each of the following strategies:
  - Offshore Containment & Recovery
  - Dispersant application
  - Shoreline protection
  - Shoreline clean-up

Organizational Structure and Responsibilities of the members of NOSRC

1. Organizational Structure



2. Responsibilities

Responsibilities of Incident Commander

- Overall in-charge of the management for the oil spill response
- Evaluate spill or potential spill reports
- Designate the appropriate Tier of the spill.
- Activate pre-identified resources to implement the national contingency plan.
- Prioritize oil spill response activity areas and set response objectives for the response organization during the spill.
- Liaise with the Coordinator for Oil Spill with regards to the management of the oil spill response operation
- Obtaining and providing the necessary support to section leaders to fulfill the objectives.
- Assign additional role and responsibilities within the response organization as required during an oil spill response.
- Ensuring the safety of the community and responders during the oil spill.
- Providing the necessary report to the Coordinator for Oil Spill Response.

Responsibilities of the operation Section are to:

- Shall carry out all operational activities required during the oil spill response.
- Implement incident action plan
- Establish source of incident, Implement tactics to isolate, control and prevent situation from escalating.
- Conduct containment and recovery operation at sea
- Conduct air operation
- Conduct shoreline protection and clean up operation
- Conduct special operation
- Report to the Incident Commander

Responsibilities of the Planning Section are to:

- Evaluate appropriateness of strategy and tactics
- Ensure immediate plan for response is prepared.
- Record, collate, reproduce, disseminate and secure all relevant documents pertaining to the spill incident.
- Ensure that continual scientific environment quality assessment are carried out and documented.
- Ensure that investigations, inspections and summary adjudication proceeding are conducted and documented.
- Report to the Incident Commander.

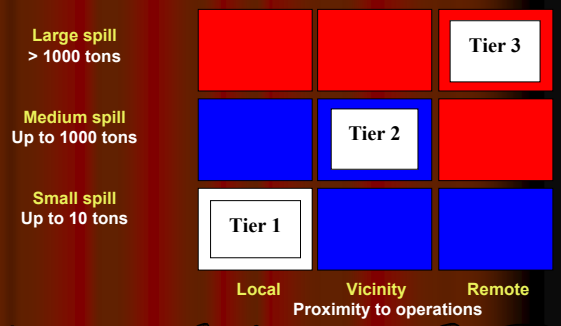
Responsibilities of the logistics Section are to:

- Provide all necessary logistical support for the implementation of the plan.
- Ensure immediate availability of needed equipment, supplies and materials.
- Ensure adequate transportation.
- Ensure adequate and effective communication.
- Ensure adequate personnel.
- Report to the Incident Commander.

Responsibilities of the Finance Section are to:

- Manage the financial resources necessary for the response.
- Institute appropriate financial controls.
- Track all expenditure of the operation.
- Prepare financial records that are consistent with the requirement of the international conventions on Liability and compensation for Oil Pollution Damage.
- Report to the Incident Commander.

Tiered Response and Oil Properties



Report formats

- Pollution Report format
  (Notification Stage)
- Daily work report format
  (Response Stage)

Pollution Report

1. Date/time of incident: .....
2. Date/time of report: .....
3. Location of Incident:
   - Bearing/distance.....
   - Latitude..... Longitude.....
4. Source of report: .....
5. Contacts: Phone..... Fax: .....
6. Nature of incident and spill source.....
7. Type and Amount of Spilled Oil .....
8. Nature and extent of pollution.....
9. Weather and sea condition:
   Wind: - Direction ..... Velocity .....
   Current: - Direction ..... Velocity .....
   Tide: .....
10. Ship name, Call Sign, Port of Registry, Ship Size and Type / Ship owner : .....
11. Additional information.....
12. Action(s) taken.....

DAILY WORK REPORT FORMAT

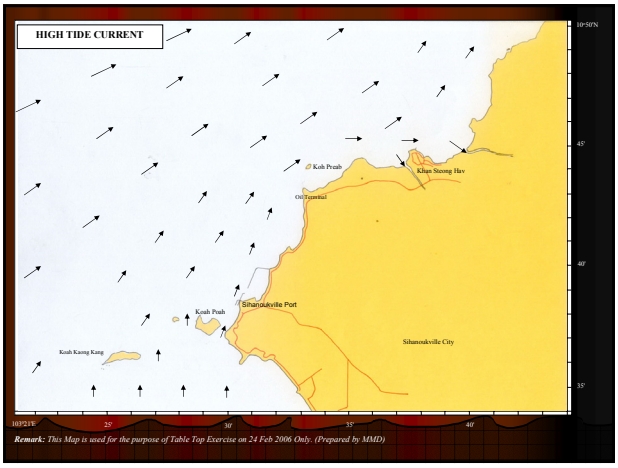
Contractor: .....
Supervisor:.....
Data: .....
Job description: .....
Equipment: .....
Number of men on job: .....
Daily Operations Commence: .....
Hour Secured: .....
Number of disposal loads: .....
Submitted: .....
(On-Scene Coordinator/Representative)

Relevant Data for Oil Spill Response

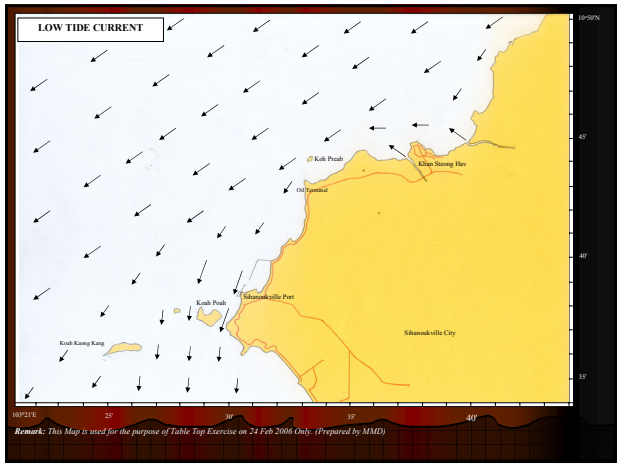
1. Wind and Sea Conditions
   - Annual Record of wind direction and speed on shore line of Sihanoukville city;
   - Tide Current chart;
   - Weather forecast
2. Geography
   - Admiralty chart;
   - Coastal Map of Stoenghav district ;
   - Land Distance Table in Sihahoukville city and vicinity area;
   - Environmental map of Kompongsom bay (general map)
3. List of Oil Spill Response Equipment

Wind Speed m/s										
Years	2001		2002		2003		2004		2005	
Months	Averag	Max	Averag	Max	Averag	Max	Averag	Max	Averag	Max
Jan	6.5	10	9	18	6.5	16	6	15	6.5	16
Feb	4	10	5	15	5	12	4	14	6.5	15
Mar	3	11	3	11	4	9	7	17	9.5	16
Apr	6	16	4	15	5	18	5.5	15	5	13
May	4	14	2	11	4	15	4.5	18	6.5	12
Jun	5	18	4.5	10	5	10	4.5	16	7.5	18
Jul	4	14	3	15	4.5	15	5	16	7.5	16
Aug	3	15	2	15	3	13	5.5	18	6	18
Sep	4	14	25	25	8	14	7	17	7	17
Oct	4	12	5	12	5	12	4.5	14	4.5	14
Nov	3	18	7	10	4	15	5	15	5	15
Dec	4	14	3	20	4	12	6	10	6	10

Source: Station of Sihanoukville, Department of Meteorology 2001-2005



Remark: This Map is used for the purpose of Table Top Exercise on 24 Feb 2006 Only. (Prepared by MMD)



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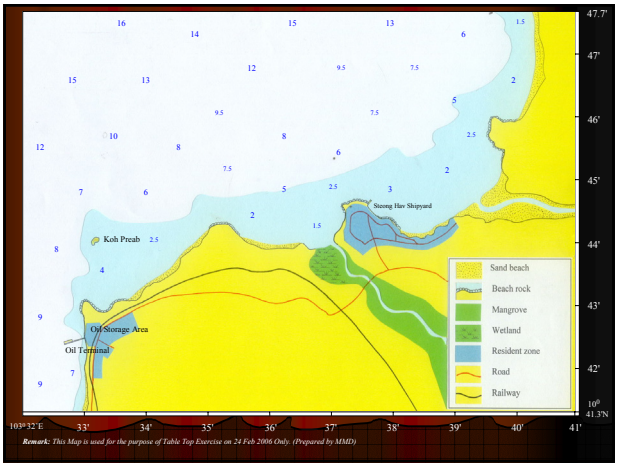

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Land Distance Table (in Km)

	Sihanoukville Government hall	Sihanoukville Port	Sokimex Oil Terminal	PTT Oil Teminal	Steng Hav Commune	Road Construction Co.	Waste Disposal Company
Sihanoukville Central Market	5	5	16	25	19	2	10
Waste Disposal Company	8	7	17	15	30	9	
Road Construction Co.	5	4	15	24	28		
Steng Hav Commune	25	24	13	45			
PTT Oil Teminal	23	22	32				
Sokimex Oil Terminal	12	11					
Sihanoukville Port	1						

Remark: This Data is used for the purpose of Table Top Exercise on 24 Feb 2006 Only. (Prepared by MMD)

List of equipment for oil spill response
(Separated feature)

1. Port Autonomous of Sihanoukville

No	Oil Spill Equipment	Specifications	QTY	Available for loan
1	Tug boat	800HP	2 units	2 units
2	Tug boat	1600HP	2 units	2 units
3	Mooring boat		1 unit	1 unit
4	Forklift	5-50T	10 units	10 units
5	Container Truck	20-30T	10 units	10 units
6	Boom	SK-10, 8Lghts	200 m	200 m

2. CALTEX – Private Company

No	Oil Spill Equipment	Specifications	QTY	Available for loan
1	Oil Contaminant Boom	SK-10, 8Lghts	200 m	100 m
2	Oil Contaminant Boom	SK-F06, 2Lghts	50 m	25 m
3	Dispersant	Tergro-R40, 25L/Drum	7 drums	4 Drums
4	Back Pad Sprayer	OSATU, 16L	4 units	2 units
5	Rigid Manta Ray Skimmer	With Hoses & Pump	1 set	1 set

Remark: *This Data is used for the purpose of Table Top Exercise on 24 Feb 2006 only. (Prepared by MMD)*

List of Equipment for Oil Spill Response
(Coalition feature)

N°	Contents	Total Quantity	Available for loan	Equipment Owner
1	Tug boat	4	4	SHV Port
2	Mooring boat	1	1	SHV Port
3	Forklift	10	10	SHV Port
4	Truck	10	10	SHV Port
5	Pontoon with Grab and Pusher	1	1	Road Construction Co.
6	Pontoon with Floating Crane	1	1	Road Construction Co.
7	Bulldozer	5	5	Road Construction Co.
8	Tank Truck	5	5	Road Construction Co.
9	Garbage Truck	20	15	Road Construction Co.
10	Vacuum Truck	7	5	Waste Disposal Co.
11	Garbage trolley	25	25	Waste Disposal Co.
12	Storage tank	10	10	Road Construction Co.
13	Oil Contaminant Boom	720	200 125 120 150	SHV Port CALTEX Co. SHELL Co. PTT Co.
14	Harbour Oil Boom	15m x 25	15m x 25	PTT Co.
15	Dispersant	27 drums	10 drums 4 drums	PTT Co. CALTEX Co.
16	Back Pad Sprayer	6 units	2 units 2 units	PTT Co. CALTEX Co.
17	Skimmers	2 units	2 units	CALTEX & PTT Co.
18	Sorbent	1 bale	1 bale	SHELL Co.
19	Dump truck	17 units	15 units	Road Construction Co.
20	Crane	3 units	3 units	Road Construction Co.
21	Generator	5 units	4 units	Road Construction Co.
22	Excavator	3 units	3 units	Road Construction Co.
23	Worker	150 pers.	100 pers. 50 pers.	Road Construction Co. Waste Disposal Co.

Remark: This Data is used for the purpose of Table Top Exercise on 24 Feb 2006 only. (Prepared by MMD)

General Arrangement / Instruction

- Exercise team and room location
- Exercise Scenario
- Necessary material/equipment are provide to exercise rooms
- Communication

Exercise team and Exercise room

Mekong Room 3
- ❑ Near Shore On-scene
  - ▪ Private Sector

- Media
- Controllers
- Experts and Observers

70m

Lotus Room
Opening Ceremony Room

Archid Room
- ❑ Head Quarter

Exercise Scenario

- Content Information in Scenario cards
  - Reporting from incident vessel (time, location, case of incident, amount spilled oil, ship's particular…);
  - Status information in each scenario (Spilled Oil Track, Weather forecast…);
- Scenario time: from 24th Feb morning to 25th Feb evening

Necessary material/equipment are provide to exercise rooms

- ❑ **Head Quarter**
  - Chart with Navigation instrument;
  - Clock is shown scenario time;
  - Symbol of Oil Spill Response Equipment.
- ❑ **Near shore On-Scene**
  - Background model;
  - Clock is shown scenario time;
  - Sample of Oil Spill Response Equipment.

Communication

- **Communication Language – *Khmer***
- **Communication equipment and rule**
  - 6 Walky Talkies are used instead phone lines
  - Home frequency (stand by) : 14812
  - How to call – set out in Player Methodology Table;
  - Short talk

Player Methodology

1.	Controller	2 pers.
2.	Head Quarter	7 pers.
3.	Near Shore On-Scene	7 pers.
4.	Media	2 pers.
5.	Private Sector	2 pers.

Total 20 pres.

Thank You for your attention!

" CMV PROJECT "

တွင် မြန်မာနိုင်ငံ ပူးပေါင်းပါဝင်ဆောင်ရွက်မှု

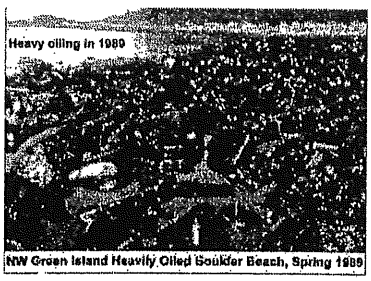
တင်ပြသူ

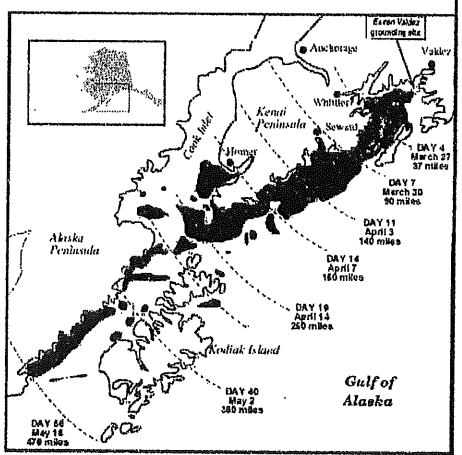
ဦးမောင်မောင်စိုး

မြန်မာ့ကြယ်ငါးပွင့်သင်္ဘောလုပ်ငန်း

■ Huge impect of oil spill accident over the world.

- ၁၉၈၉ ခုနှစ်၊ မတ်လ (၂၃) ရက်နေ့တွင် အမေရိကန်နိုင်ငံ Alaska ကမ်းခြေတွင် မတော်တဆ ဆီယိုဖိတ်မှု ဖြစ်ပွါးခဲ့သော Exxon Valdez ရေနံတင် သင်္ဘော နှစ်မြုပ်မှု





- **OPRC Convention 1990 (IMO)**
  (International Convention on Oil Pollution, Preparedness, Response and Cooperation)
- **OSPAR Project (1993)**
  (Project on Oil Spill Preparedness and Response)

- ဘရူနိုင်း၊ အင်ဒိုနီးရှား၊ ဖိလစ်ပိုင်၊ စင်္ကာပူ၊ ထိုင်း

OSPAR Project ၏ ရည်ရွယ်ချက်

- **Response Facilities** များကို အသုံးပြုနည်းနှင့်သတင်း ချက်အလက်များဖလှယ်ရေး
- နည်းပညာအထောက်အကူများပေးရေး
- ရေနံယိုဖိတ်မှုကာကွယ်တားဆီးရေးအတွက် ဒေသတွင်းနိုင်ငံများစုပေါင်း ဆောင်ရွက်ကြရေး

ASEAN OSPAR Project

- ၂၀၀၂ ခုနှစ် မေလတွင် အဆင့်မြှင့်တင်ခဲ့ပါသည်။

- **New OSPAR Project** အဖွဲ့ဝင်သစ် (၃)နိုင်ငံ ကမ္ဘောဒီးယား၊ မြန်မာ၊ ဗီယက်နမ် အတွက် **CMV Project** အဖြစ် သတ်မှတ်ဆောင်ရွက်ခဲ့ပါသည်။

OSPAR Project ကို -

Ministry of Land, Infrastructure and Transport of Japan မှ ဦးဆောင်ခဲ့ပါသည်။

Nippon Foundation မှ ပံ့ပိုးကူညီပြီး **JAMS, MDPC, JCG** တို့မှ **technial assistance** ပေးခဲ့ပါသည်။

ဂျပန်နိုင်ငံမှ **OSPAR Project** အတွက် အထွေထွေကုန်ကျစရိတ် ဂျပန်ယန်း (၁)ဘီလီယံ (အမေရိကန်ဒေါ်လာ ၈. ၆သန်း) ကူညီခဲ့ပါသည်။

Country	Equipment and Meterials Provided	US$ million
Brunei	Oil boom (1,450 m)	0.7
Indonesia	Oil boom (1,750 m) Skimmer 2 sets Storage Tank 4 sets Dispersant Spray System 5 sets	2.6
Malaysia	Oil boom (1,600 m) Skimmer 12 sets Storage Tank 5 sets Dispersant Spray System 4 sets	1.7
Philippines	Oil boom (2,280 m) Skimmer 3 sets Dispersant 7,000 litter Dispersant Spray System 1 set	2.1
Singapore	Oil boom (400 m) Skimmer 1 set Dispersant Spray System 26 sets Vacuum Pump 1 set	0.5
Thailand	Oil boom (3,530 m) Skimmer 3 sets Storage Tank 30 sets Dispersant 2,000 litter Dispersant Spray System 2 sets	1.0
	Total	**8.6**

3 Phases of CMV Project

- Operator Level (၅) ဦး
- Supervisory Level (၅) ဦး
- Senior Management Level (၅) ဦး

သင်တန်းပို့ချခဲ့သောသင်ခန်းစာများ

- The Oil Spill Sources
- Fire - Fighting
- Containment and recovery of the Spill Oil
- Shore Line Clean up Technique
- Crisis Management
- Recovery and Protection Planning
- International Convention for Marine Oil Pollution
- Usage of Dispersants

လက်တွေ့လေ့ကျင့်ခဲ့ရသောလေ့ကျင့်ခန်းများ

- Marine Fire-Fighting
- Usage of the Recovery Facilities
- Shore Line Clean up
- Recovery Operation Table Map Exercise
- Contingency Planning
- Role Playing Exercise

CMV Project
အဖွဲ့ဝင်ကမ္ဘောဒီးယားနိုင်ငံ၏ဆောင်ရွက်ချက်များ

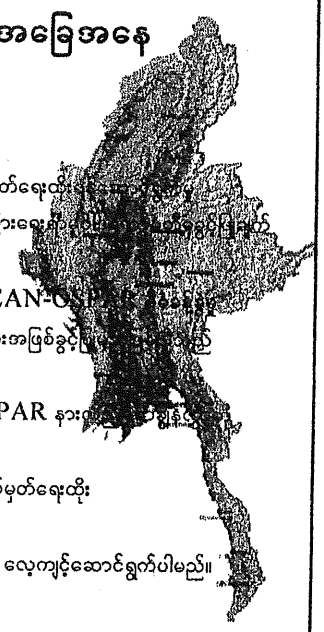
- Location
- Ports
- ရေနံယိုဖိတ်မှုတုံ့ပြန်တာဝန်ယူဆောင်ရွက်မှု
- Table Top Exercise တို့ ၂၀၀၆ ခုနှစ်ဖေဖော်ဝါရီလ (၂၁)မှ
- (၂၄) ရက်နေ့အထိ လေ့ကျင့်ဆောင်ရွက်ခြင်း
- ကြိုတင်ပြင်ဆင်မှုများဆောင်ရွက်ခြင်း

CMV Project
အဖွဲ့ဝင်ဗီယက်နမ်နိုင်ငံ၏ဆောင်ရွက်ချက်များ

- Location
- ရေနံယိုဖိတ်မှုကာကွယ်ရေးအကြိုဆောင်ရွက်မှုအခြေအနေ
  - ၁၉၈၇ viet sov petro joint venture ၏ဆောင်ရွက်မှု
  - ၁၉၉၄ petro Vietnam ၏ဆောင်ရွက်မှု
  - OSPAR Project ကိုအကောင်အထည်ဖော်မှုအခြေအနေ
  - ၂၀၀၂ ခုနှစ်၊ အမျိုးသားရေနံယိုဖိတ်မှုတားဆီးရေးဌာနတည်ထောင်ခြင်း
- Table Top Exercise ကို ၂၀၀၆ ခုနှစ်ဖေဖော်ဝါရီလ (၂၈) မှ မတ်လ (၁) ရက်နေ့အထိ လေ့ကျင့်ဆောင်ရွက်ခြင်း
- ကြိုတင်ပြင်ဆင်မှုများဆောင်ရွက်ခြင်း

CMV Project
အဖွဲ့ဝင် မြန်မာနိုင်ငံ၏ဆောင်ရွက်မှုအခြေအနေ

- Location
- Ports
- OSPAR Project အဖွဲ့ဝင်အဖြစ်ပါဝင်ရေး နားလည်မှုစာချွန်လွှာ လက်မှတ်ရေးထိုး[illegible]
  - အဖွဲ့ဝင်အဖြစ်ဝင်ရောက်ရန် ၂၀၀၃ ခုနှစ်တင်ဘာလ(၁)ရက်နေ့တွင်နိုင်ငံခြားရေး[illegible]
    ရရှိပြီးဖြစ်ပါသည်။
  - ၂၀၀၆ ခုနှစ်၊ မလေးရှားနိုင်ငံ ကွာလာလမ်ပူမြို့တွင်ကျင်းပပြုလုပ်မည့် ASEAN-OSP[illegible]
    အစည်းအဝေးမှ ကမ္ဘောဒီးယားမြန်မာ၊ ဗီယက်နမ်တို့ကို အဖွဲ့ဝင်သစ် နိုင်ငံများအဖြစ်ခွင့်ပြု[illegible]
- ဆက်လက်ဆောင်ရွက်ရမည့်လုပ်ငန်းစဉ်
  - ASEAN-OSPAR စိမံခန့်ခွဲမှု အစည်းအဝေးမတိုင်မီ ASEAN-OSPAR နား[illegible]
    အတည်ပြုလက်မှတ်ရေးထိုးပြီး စိမံချက်ကိုပေးပို့ရန်
  - IMO ၏ OPRC Convention (1990) တွင် မြန်မာနိုင်ငံပါဝင်လက်မှတ်ရေးထိုး ဆက်လက်ဆောင်ရွက်ရန်
- Table Top Exercise ကို ၂၀၀၆ ခုနှစ်၊ ဖေဖော်ဝါရီလ (၂၀) ရက်နေ့တွင် လေ့ကျင့်ဆောင်ရွက်ပါမည်။



ကမ္ဘာ့ပင်လယ်ပြင်ကြီးသန့်ရှင်းရေးအတွက် မြန်မာနိုင်ငံ၏ အခန်းကဏ္ဍ

- သယ်ဇာတပေါကြွယ်ဝသည့်အလျောက် ရေထုညစ်ညမ်းမှုဖြစ်နိုင်ခြေများပြားပါသည်။
- သဘာဝပတ်ဝန်းကျင်အရင်းအမြစ်များ ရေနံမတော်တဆယိုဖိတ်မှုကြောင့် ပျက်ဆီးဆုံးရှုံးမှုမဖြစ်ပေါ်စေရန်
  - ကော်မတီအဆင့်ဆင့်ဖွဲ့စည်းခြင်း
  - ရေနံယိုဖိတ်မှု တုံ့ပြန်ကာကွယ်ရေးစီမံချက် (Contingency Plan) များရေးဆွဲခြင်း
    * မြစ်ချောင်းများ
    * ကမ်းခြေအနားသတ်လိုင်းများ
    * ကမ်းခြေအပန်းဖြေစခန်းများ
    * ကမ်းလွန်ပင်လယ်ပြင်ဒေသများ
    * ကမ်းလွန်ရေနံအစမ်းတွင်းဒေသများ

ရေနံယိုဖိတ်မှုတုံ့ပြန်ကာကွယ်ကားဆီးရေးအဖွဲ့ကိုအဆင့် (၃)ဆင့် (3 tier)

- Local Level
- National Level
- Regional Level

ကမ္ဘာ့ပင်လယ်ပြင် ရေနံယိုဖိတ်မှု ကာကွယ်တားဆီးခြင်းဖြင့်
သဘာဝအရင်းအမြစ်များနှင့် ရေသတ္တဝါများကို ကာကွယ်
စောင့်ရှောက်ကြပါစို့

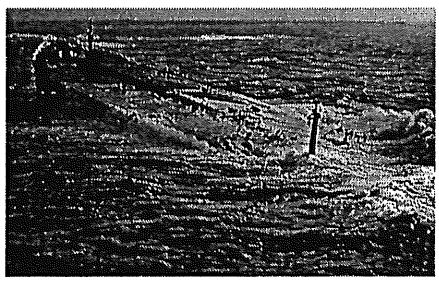
ကျေးလူးတင်စွာဖြင့်

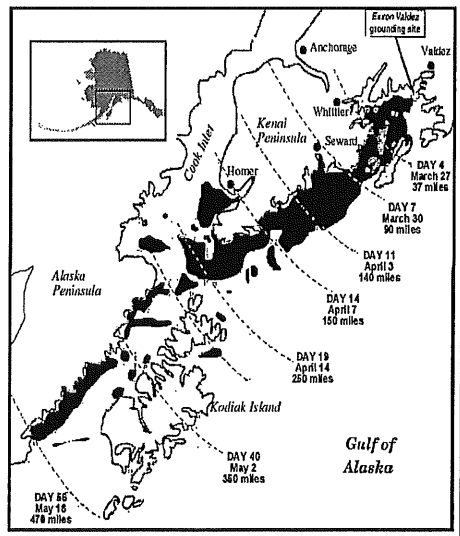
" CMV PROJECT "

ミャンマーの協力

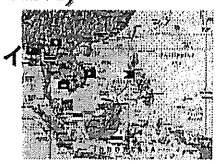
■ 世界での大規模な油流出事故

- 1989年3月23日 アメリカ合衆国アラスカ州の 海岸に Exxon Valdez 号船舶による油流出事故が 発生しました。





- OPRC Convention 1990 (IMO)
  (International Convention on Oil Pollution, Preparedness, Response and Cooperation)
- OSPAR Project (1993)
  (Project on Oil Spill Preparedness and Response)
- ブルネイ、インドネシア、フィリピン、シンガポール、タイ



OSPAR Project の目的

- 対応設備の扱い方法と情報交換
- 技術支援
- 油流出防除対策のため関係する国が共同で実施対策

ASEAN OSPAR Project

- 2002年5月にアップグレードしました。
- CMV Project を計画したのはカンボジア、ミャンマー、ベトナムの3ヶ国を新しくNew OSPAR Projectへ迎え入れるためです。

OSPAR Project は

日本国国土交通省の主催で行われました。

日本財団 の援助で JAMS, MDPC, JCG による技術支援を行いました。

日本は OSPAR Project のため10億円（約860万米ドル）を援助しました。

国名	供給された資機材	米ドル（ミリオン）
ブルネイ	オイルブーム(1,450 m)	0.7
インドネシア	オイルブーム(1,750 m) スキマー 2 セット 貯蔵タンク 4 セット 流出油処理剤スプレーシステム 5 セット	2.6
マレーシア	オイルブーム (1,600 m) スキマー 12 セット 貯蔵タンク 5 セット 流出油処理剤スプレーシステム 4 セット	1.7
フィリピン	オイルブーム (2,280 m) スキマー 3 セット 流出油処理剤 7,000 litter 流出油処理剤スプレーシステム 1 セット	2.1
シンガポール	オイルブーム (400 m) スキマー 1 セット 流出油処理剤スプレーシステム 26 セット バキュームポンプ 1 セット	0.5
タイ	オイルブーム (3,530 m) スキマー3 セット 貯蔵タンク 30 セット 流出油処理剤 2,000リットル 流出油処理剤スプレーシステム 2 セット	1.0
	合計	8.6

3 Phases of CMV Project

- オペレターレベル　(5) 名
- 監督レベル　(5) 名
- 上級管理レベル　(5) 名

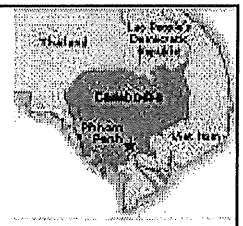
実習したコース

- The Oil Spill Sources
- Fire - Fighting
- Containment and recovery of the Spill Oil
- 清掃方法
- 危険管理
- 回復と保護計画
- International Convention for Marine Oil Pollution
- 分散剤の使用方法

実習したコース

- Marine Fire-Fighting
- 回復施設の使用法
- 沿岸清掃
- Recovery Operation Table Map Exercise
- Contingency Planning
- Role Playing Exercise

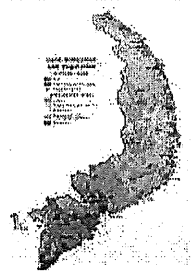
CMV Project
会員のカンボジアの活動



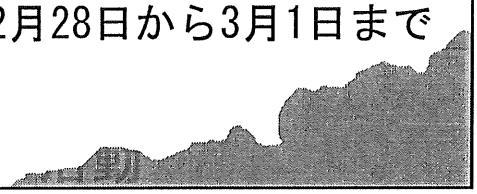
- ロケーション
- 港
- 油流出防除対策
- 机上訓練を2006年2月21日から24日まで行う
- 事前準備

CMV Project

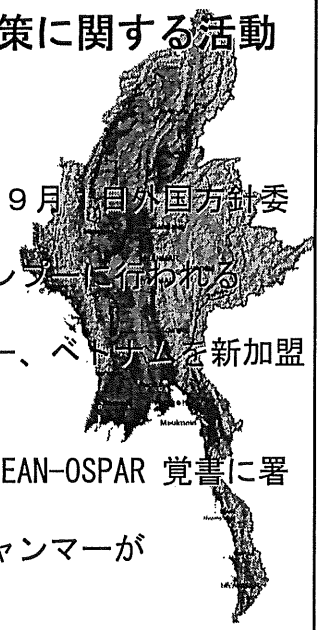
会員のベトナムの活動



- ロケーション
- 油流出防除対策事前準備の状況
- - 1987 viet sov petro joint venture の活動
  - 1994 petro Vietnam の活動
  - OSPAR Project　の実施状況
  - 2002年に国家油流出防除対策局を設立
  - 机上訓練を2006年2月28日から3月1日まで行う
- 事前準備



CMV Project
であるミャンマーの油流出防除対策に関する活動



- ロケーション
- 港
- OSPAR Project 加盟に関して２００３年９月１日外国方針委員会の許可を得られました。
  - 2006年においてマレーシア国クアラルンプールに行われる ASEAN-OSPAR　　マネジメント
    その会議によりカンボジア、ミャンマー、ベトナムを新加盟国として認可されます。

今後の計画

- ASEAN-OSPARマネジメント会議の前にASEAN-OSPAR 覚書に署名し計画書を送る
- IMO のOPRC Convention (1990) にミャンマーが

机上訓練を2006年2月20日に行います。

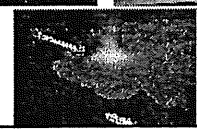
海洋清掃に関してミャンマーの役割

- 豊かな天然資源があるほど海洋汚染しやすい
- 天然資源を油流出事故発生することにより損害しないよう守る

組織を作る

- 油流出防除対策計画（緊急時計画）を作成
  - Ä 川
  - Ä 海岸線
  - Ä リゾートビーチ
  - Ä 沖合地域
  - Ä 沖合の油田地域






油流流出防除対策を三つの手段に分けてある

- 現地レベル
- 国家レベル
- 地域レベル

海洋油流出防除対策による天然資源や海水の生物を守りましょう

Preparation for Proposed Oil Spill Contingency Plan

in

Myanmar

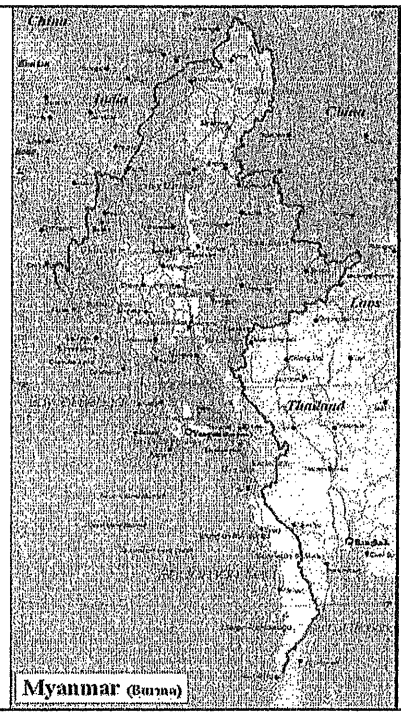
U Toe Myint
D.M.A

နိဒါန်း

- မြေပေါ်မြေအောက်/ရေပေါ်ရေအောက် သယ်ဖာတပေါ်ကြွယ်ဝသောနိုင်ငံ။
- ပတ်ဝန်းကျင်ကို ထိန်းသိမ်းစောင့်ရှောက်ရန်သည် နိုင်ငံသားတို်င်း၏တာဝန်။
- မတော်တဆယို်ပိတ်မှုကြောင့်သဘာဝပတ်ဝန်းကျင်အရင်းအမြစ်များပျက်ဆီးမှု မှ ကာကွယ်ရန်။
- အချိန်တို်အတွင်း တက်ညီလက်ညီ ပူးပေါင်းဆောင်ရွက်။

ရည်ရွယ်ချက်

- မြန်မာ့ကမ်းရိုးတန်းဒေသ
- သဘာဝအရင်းအမြစ်ရှိရာ မြစ်ချောင်းများ
- မတော်တဆ ဆီယိုဖိတ်မှုကြောင့် သဘာဝပတ်ဝန်းကျင်အရင်းအမြစ်များ ပျက်စီးဆုံးရှုံးမှုမရှိစေရေး
- အချိန်တို့အတွင်းကာကွယ်သွားနိုင်ရေး
- အစီအမံများချမှတ်ဆောင်ရွက်



အပိုင်း(၇)ပိုင်းဖြင့်စီစဉ်ဆောင်ရွက်

(၁) ရေနံယိုဖိတ်မှုထိန်းချုပ်ရေးအထောက်အကူပြု equipment များဖြည့်တင်းခြင်း။

(၂) ရေနံယိုဖိတ်မှုထိန်းချုပ်ရေးအဖွဲ့ ဖွဲ့စည်းခြင်း။

(၃) မြစ်ချောင်းများအတွင်းရေနံယိုဖိတ်မှုထိန်းချုပ်ရေးအစီအစဉ်ရေးဆွဲဆောင်ရွက်ခြင်း။

(၄) ကမ်းလွန်ပင်လယ်ပြင်ထိန်းချုပ်ရေးဆောင်ရွက်ခြင်း။

(၅) ပင်လယ်ကမ်းခြေအပန်းဖြေစခန်းထိန်းချုပ်ရေးစီစဉ်ဆောင်ရွက်ခြင်း။

(၆) အခြားသော ပင်လယ်ကမ်းခြေအနားသတ်လိုင်းများတွင် ထိန်းချုပ်ရေးဆောင်ရွက်ခြင်း။

(၇) ကမ်းလွန်ဒေသရှိရေနံအစမ်းတွင်းများမှ မတော်တဆယိုဖိတ်မှုအား ထိန်းချုပ်ရေးဆောင်ရွက်ခြင်း။

Equipment များဖြည့်တင်းခြင်း

ရေနံယိုဖိတ်မှုပယ်ရှားရန်နည်းလမ်း

- ရုပ်တန့်စေရန်အတားအဆီးသုံးခြင်း၊
- ရေနံကွက်ကျယ်ပြန့်လာမှုကို ထိန်းချုပ်ရန်ဆယ်တင်မှုဆောင်ရွက်ခြင်း
- ဆီအငွေ့ထူအဖြစ် တစ်နေရာတည်းတွင် စုစည်းထားခြင်း

-Pump နှင့် Skimmer များသုံး၍ ဆယ်ယူခြင်း

လိုအပ်သော Equipment

- **Curtain boom**
- **Fence boom**
- **Sorbent boom**
- **Bubble Barrier**
- **Chemical Barrier**
- **Skimmers**
- **Pumps**
- **Sorbent**
- **Dispersant**

ဧရိယာပိုဖက်မှုကာကွယ်တားဆီးထိန်းချုပ်ရေးဗဟိုကြီးကြပ်ရေးအဖွဲ့

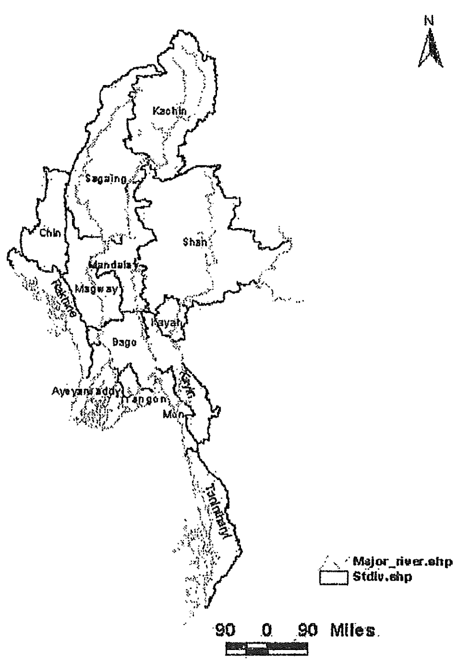
ဝန်ကြီး၊ ပို့ဆောင်ရေးဝန်ကြီးဌာန	– ဥက္ကဋ္ဌ
ဝန်ကြီး၊ မွေးမြူရေးနှင့်ရေလုပ်ငန်းဝန်ကြီးဌာန	– ဒု–ဥက္ကဋ္ဌ
ဝန်ကြီး၊ စွမ်းအင်ဝန်ကြီးဌာန	– ဒု–ဥက္ကဋ္ဌ
ဝန်ကြီး၊ ဆက်သွယ်ရေး၊စာတိုက်နှင့်ကြေးနန်းဝန်ကြီးဌာန	– အဖွဲ့ဝင်
ဝန်ကြီး၊ နိုင်ငံခြားရေးဝန်ကြီးဌာန	– အဖွဲ့ဝင်
ဝန်ကြီး၊ ပြည်ထဲရေးဝန်ကြီးဌာန	– အဖွဲ့ဝင်
ဝန်ကြီး၊ ဟိုတယ်နှင့်ခရီးသွားလာရေးလုပ်ငန်းဝန်ကြီးဌာန	– အဖွဲ့ဝင်
ဝန်ကြီး၊ သတ္တုတွင်းဝန်ကြီးဌာန	– အဖွဲ့ဝင်
ဝန်ကြီး၊ သစ်တောရေးရာဝန်ကြီးဌာန	– အဖွဲ့ဝင်
စစ်ဦးစီးအရာရှိချုပ်(ရေ)၊ ကာကွယ်ရေးဦးစီးချုပ်ရုံး(ရေ)	– အဖွဲ့ဝင်
စစ်ဦးစီးအရာရှိချုပ်(လေ)၊ ကာကွယ်ရေးဦးစီးချုပ်ရုံး(လေ)	– အဖွဲ့ဝင်
ဒုတိယဝန်ကြီး၊ ပို့ဆောင်ရေးဝန်ကြီးဌာန	– အတွင်းရေးမှူး
ညွှန်ကြားရေးမှူးချုပ်၊ ရေကြောင်းပို့ဆောင်ရေးညွှန်ကြားမှုဦးစီးဌာန	– တွဲဖက်အတွင်းရေးမှူး

ပြည်နယ်/တိုင်း ဧရိယာပိုတိုးမှုထိန်းချုပ်ရေးအဖွဲ့

– သက်ဆိုင်ရာပြည်နယ်/တိုင်း ဒု–တိုင်းမှူး	– ဥက္ကဋ္ဌ
– မြန်မာ့ဆိပ်ကမ်းအာဏာပိုင်	– အဖွဲ့ဝင်
– ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးကော်မရှင်	– အဖွဲ့ဝင်
– ငါးလုပ်ငန်းဦးစီးဌာန	– အဖွဲ့ဝင်
– မြန်မာ့ရေနံဓါတုဗေဒလုပ်ငန်း	– အဖွဲ့ဝင်
– မီးသတ်ဦးစီးဌာန	– အဖွဲ့ဝင်
– ကျန်းမာရေးဦးစီးဌာန	– အဖွဲ့ဝင်
– မိုးလေဝသနှင့်လေဗေဒညွှန်ကြားမှုဦးစီးဌာန	– အဖွဲ့ဝင်
– သက်ဆိုင်ရာရေတပ်စခန်းဌာနချုပ်မှူး	– အဖွဲ့ဝင်
– မြန်မာနိုင်ငံရေတပ်ဖွဲ့	– အဖွဲ့ဝင်
– ပြည်နယ်/တိုင်းဒေသကြီးသာယာရေးနှင့်ဖွံ့ဖြိုးကောင်စီ	– အဖွဲ့ဝင်
– ရေကြောင်းပို့ဆောင်ရေးညွှန်ကြားမှုဦးစီးဌာန	– အတွင်းရေးမှူး

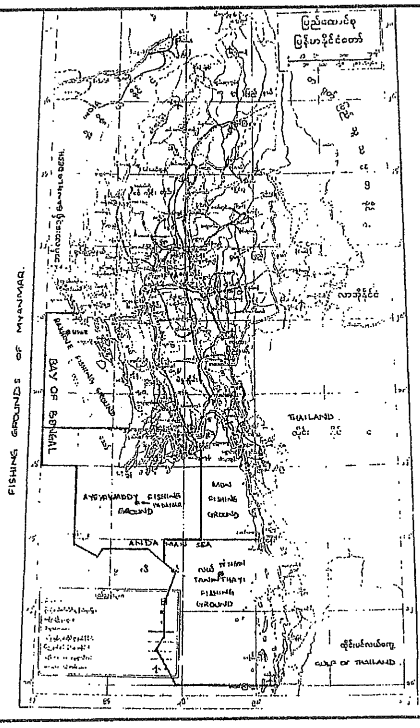
မြန်မာနိုင်ငံရှိမြစ်ကြီးများ
- ဧရာဝတီမြစ်
- ချင်းတွင်းမြစ်
- စစ်တောင်းမြစ်
- သံလွင်မြစ်

- မြစ်ကြီးများသည် ရေစီးအလွန်သန်ကြပါသည်။
- ရေနံယိုဖိတ်မှုမြစ်ကြီးများအတွင်းဖြစ်ပွါးပါက
  - လျှင်မြန်စွာလှုပ်ရှားဆောင်ရွက်ရန်။
  - သဘာဝပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစားပေးရန်။
  - ဒေသဖြစ် Local Boom များအသုံးပြုရန်။
  - Safety Precaution ရယူရန်။
  - လိုအပ်မှသာ Dispersant အသုံးပြုသွားရန်။
  - ဖြစ်ပွားသည့်နေရာတဝိုက်ရှိ အရေးကြီးအချက်အချာနေရာကာကွယ်ရေးစီမံဆောင်ရွက်ရန်



ပိုင်နက်ပင်လယ်

- ပိုင်နက်ပင်လယ်နှင့်ပင်လယ်ဇုံများဥပဒေအရ အောက်ပါအတိုင်းသတ်မှတ်ထား
- မြန်မာနိုင်ငံတော်၏ ပိုင်နက်ပင်လယ် (Territorial Water)သည် အခြေခံမျဉ်းများ မှပင်လယ်ဖက်သို့ရေမိုင်(၁၂)မိုင်ထိကျယ်ဝန်း
- မြန်မာနိုင်ငံတော်၏ ဆက်စပ်ဇုံ (Contiguous Zone)သည် အခြေခံမျဉ်းများ မှ ပင်လယ်ဖက်သို့ရေမိုင်(၂၄)မိုင်ထိကျယ်ဝန်း
- မြန်မာနိုင်ငံကမ်းလွန်ရေတိမ်ပိုင်း (Continental Shelf) သည်အခြေခံမျဉ်းများမှ ပင်လယ်ဖက်သို့ရေမိုင်(၂၀၀)မိုင်ထိကျယ်ဝန်း
- မြန်မာနိုင်ငံ၏သီးသန့်စီးပွားရေးဇုံသည် (Exclusive Economic Zone) အခြေခံမျဉ်းများမှပင်လယ်ဖက်သို့ရေမိုင်(၂၀၀)ထိကျယ်ဝန်း



– မြန်မာနိုင်ငံ၏ပင်လယ်ကမ်းရိုးတန်းအရှည်(၁၃၈၅)မိုင် (နတ်မြစ်ဝမှ စကားသောင်းထိ)

– ပင်လယ်ကမ်းခြေဒေသ၏အပြင်ပက်(၂၂)မိုင်ခန့်အကွာဆဲဖြစ်ပေါ်သောရေနံယိုဖိတ်မှုအတွက် ထိန်းချုပ်ရေးအစီအစဉ်ဖြစ်

<u>ကမ်းလွှန်ပင်လယ်ပြင်ဒေသ</u>

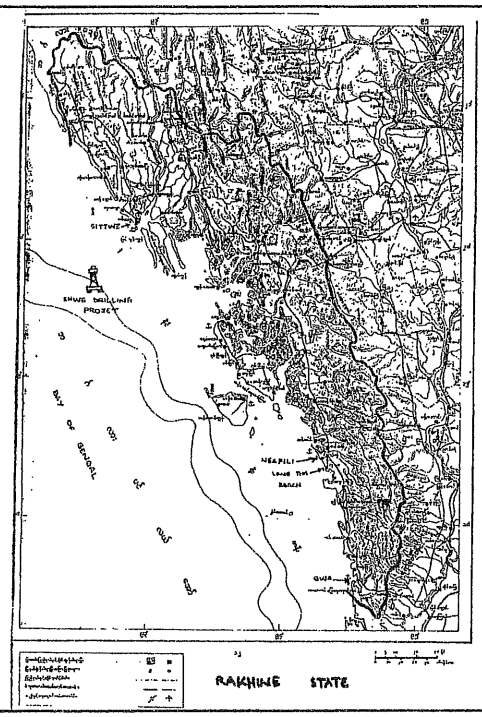
– ရခိုင်ပြည်နယ်ကမ်းလွှန်ပင်လယ်ပြင်၊

– ဧရာဝတီတိုင်းကမ်းလွှန်ပင်လယ်ပြင်၊

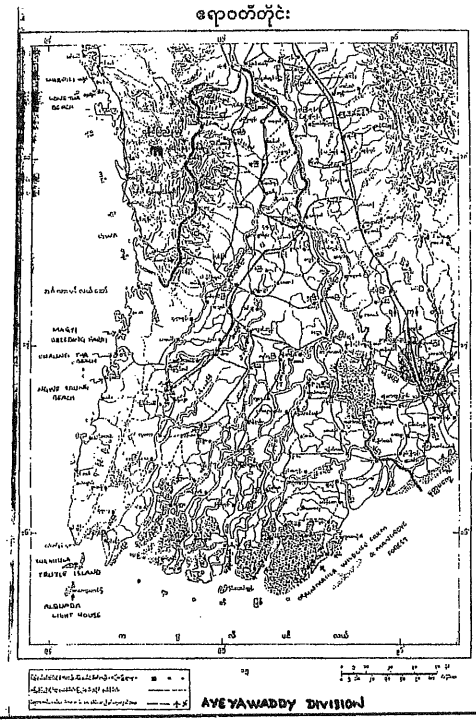
– ရန်ကုန်တိုင်းကမ်းလွှန်ပင်လယ်ပြင်၊

– မွန်ပြည်နယ်ကမ်းလွှန်ပင်လယ်ပြင်၊

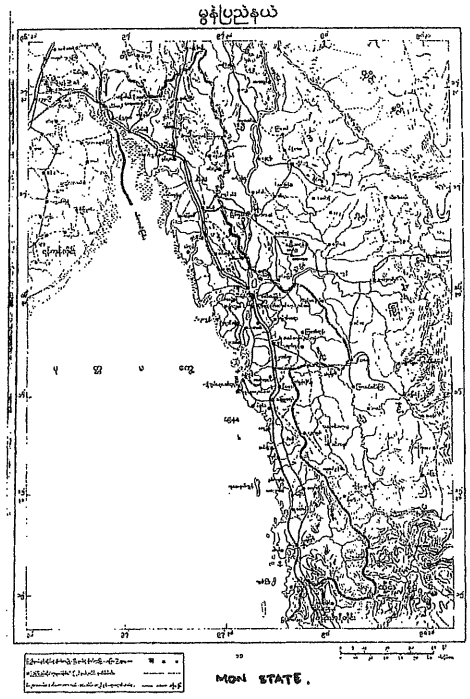
– တနင်္သာရီတိုင်းကမ်းလွှန်ပင်လယ်ပြင်၊

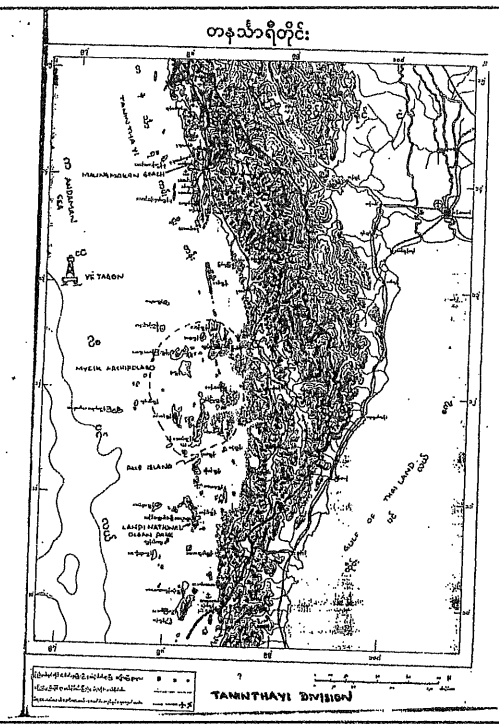


ဧရာဝတီတိုင်း



မွန်ပြည်နယ်



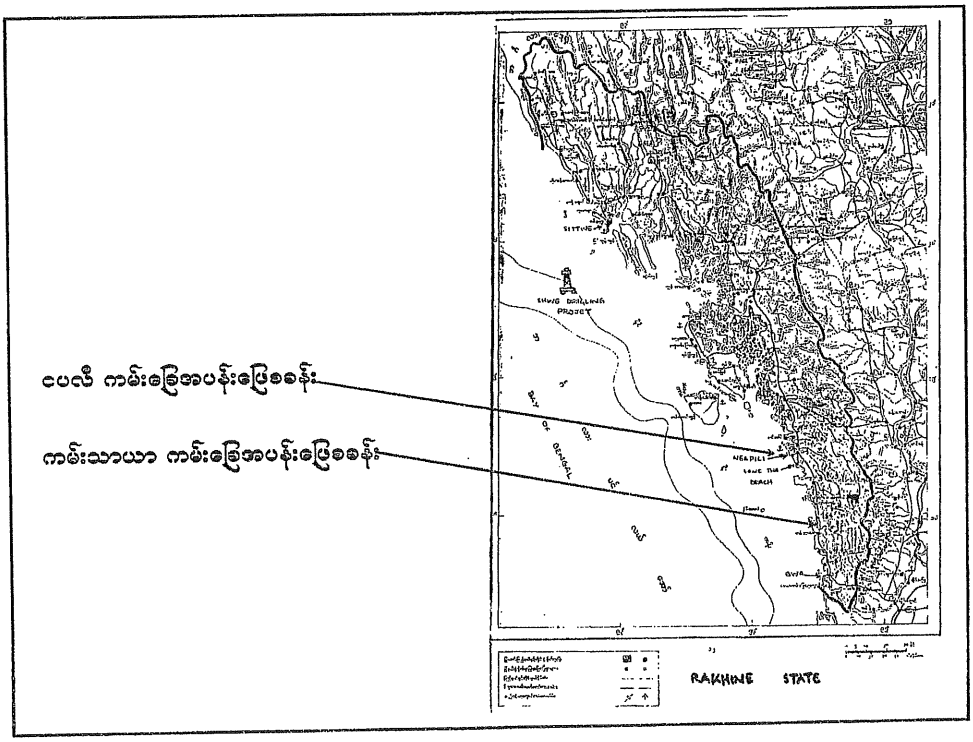


ကမ်းလွန်ပင်လယ်ပြင်တွင်ရေနံယိုဖိတ်မှုဖြစ်ပွါးပါက

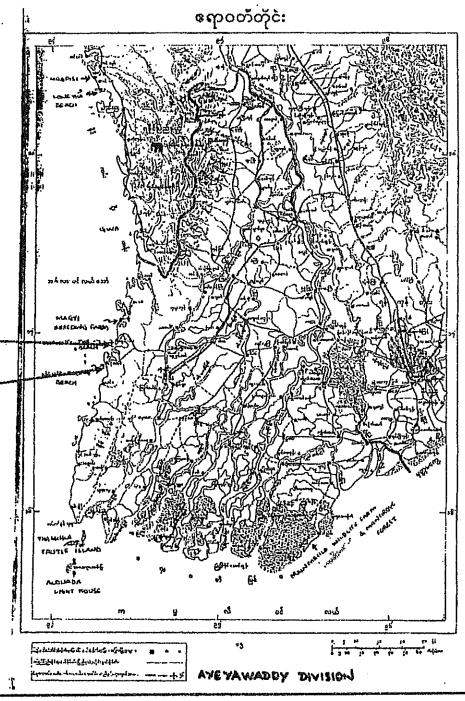
- ရေကြောင်းဦးစီးဌာန(နယ်ရုံး)များသည် မိမိတို့ အဖွဲ့ဥက္ကဋ္ဌထံချက်ခြင်းသတင်းပို့
- ရေနံယိုဖိတ်မှုထိန်းချုပ်ရေးစီမံချက်ပါအတိုင်းလျှင်မြန်စွာဆောင်ရွက်
- လိုအပ်ပါကရန်ကုန်မြို့ရှိ အထူးဖွဲ့စည်းထားသောအဖွဲ့အကူအညီတောင်းခံ
- သက်ဆိုင်ရာအဖွဲ့ဝင်များနှင့်ပူးပေါင်းညှိနှိုင်းပြီးအချိန်တိုအတွင်းအကောင်အထည်ဖော်ဆောင်ရွက်
- Safety Plan အတိုင်းဆောင်ရွက်

ပင်လယ်ကမ်းခြေအပမ်းဖြေစခန်းများ

- ပေလီ ကမ်းခြေအပန်းဖြေစခန်း
- ကမ်းသာယာ ကမ်းခြေအပန်းဖြေစခန်း
- ဥဒေဆောင် ကမ်းခြေအပန်းဖြေစခန်း
- ချောင်းသာ ကမ်းခြေအပန်းဖြေစခန်း
- လက်ခုပ်ကုန်း ကမ်းခြေအပန်းဖြေစခန်း
- ကျိုက္ခမီစက်ခဲကမ်းခြေအပန်းဖြေစခန်း
- မောင်းမကန် ကမ်းခြေအပန်းဖြေစခန်း



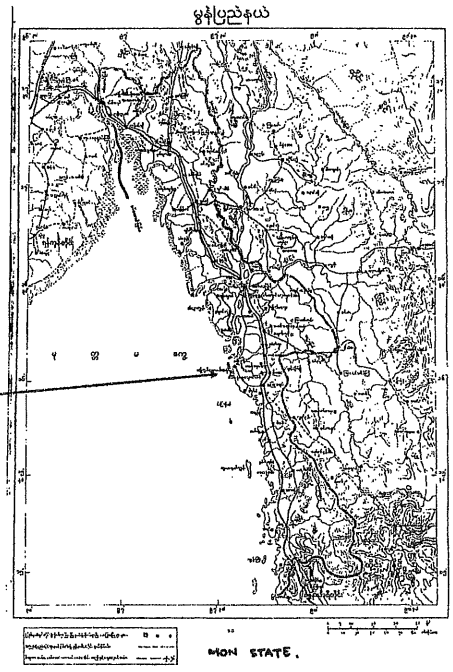
ရောဝတီတိုင်း



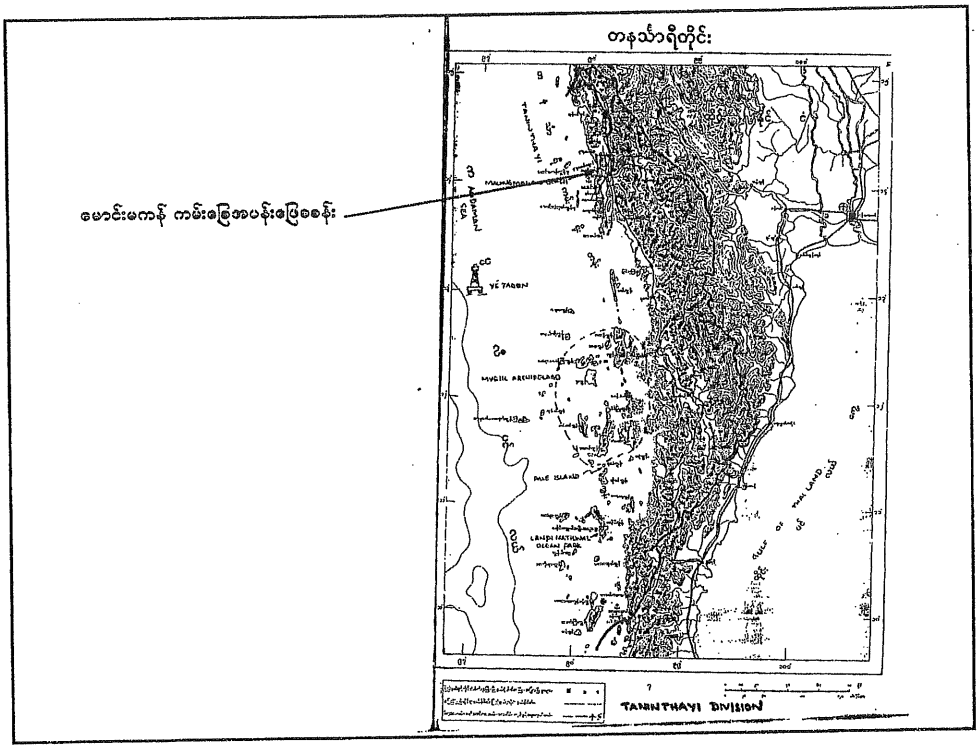
ချောင်းသာ ကမ်းခြေအပန်းဖြေစခန်း

ဒဂုံဆောင် ကမ်းခြေအပန်းဖြေစခန်း

မွန်ပြည်နယ်



ကျိုက္ခမီစက်စကမ်းခြေအပန်းဖြေစခန်း



ပင်လယ်ကမ်းခြေအပန်းဖြေစခန်းမှာတဝိုက်ရေနံယိုဖိတ်မှုသတင်းရရှိပါက

- ကမ်းခြေသို့မရောက်ရှိစေရေးကြိုတင်ကာကွယ်။
- ကမ်းခြေသို့ရောက်လာပါကကမ်းခြေရှင်းလင်းရေးအဆင့်(၃)ဆင့်ဖြင့်ဆောင်ရွက်။

အဆင့်(၁)

ဆိုးဝါးသောညစ်ညမ်းမှုနှင့်ရေပေါ်ဆီများကိုဖယ်ရှားခြင်း။

အဆင့်(၂)

အလယ်အလတ်အဆင့် ညစ်ညမ်းမှု သောင်တင်ဆီများနှင့် ကမ်းခြေရှိဆီထိထားသော ပစ္စည်းမှားကို သန့်စင်ခြင်း။

အဆင့်(၃)

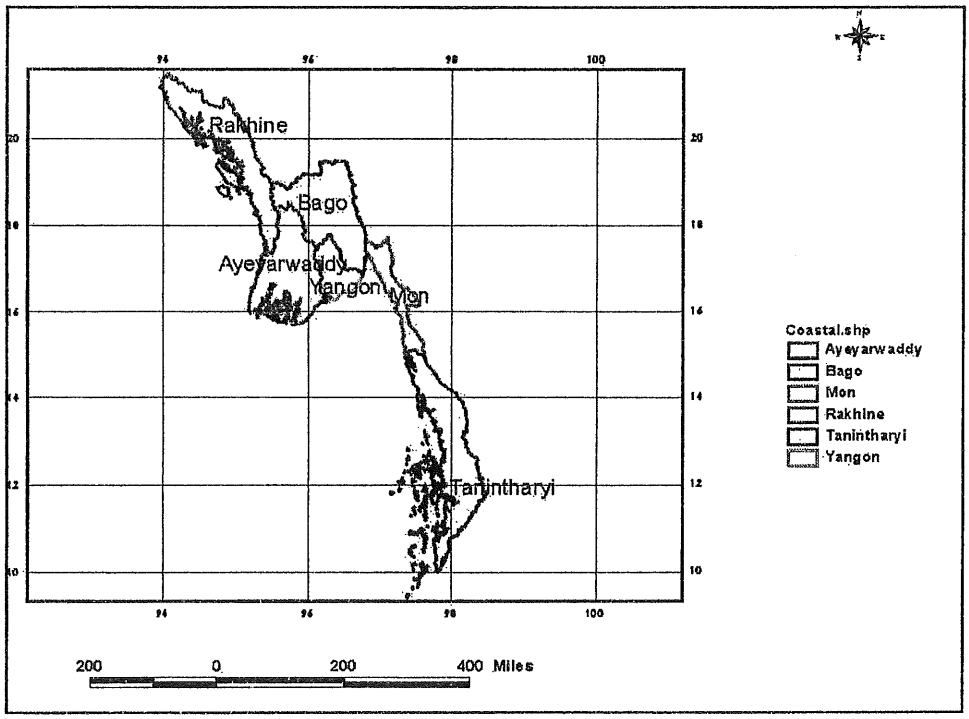
ညစ်ညမ်းမှုသက်သာသောကမ်းခြေနှင့်ဆီစွန်းစေမှုကိုဖယ်ရှားသန့်စင်ခြင်း။

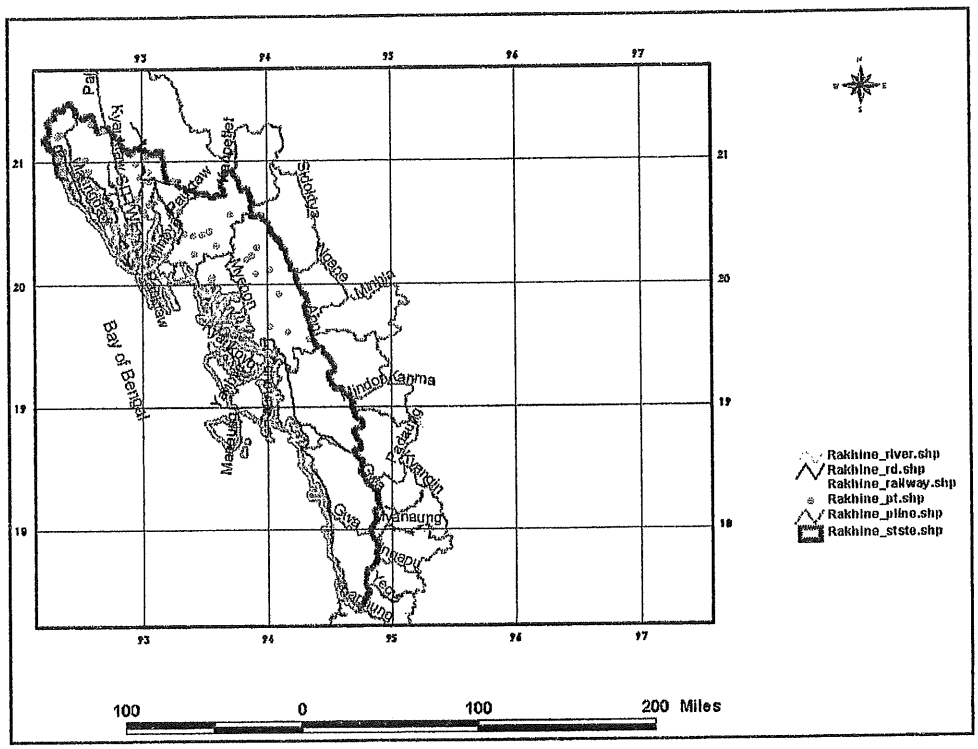
ပင်လယ်ကမ်းခြေအနားသတ်လိုင်း

- ရခိုင်ပြည်နယ်ပင်လယ်ကမ်းခြေ
- ဧရာဝတီတိုင်းပင်လယ်ကမ်းခြေ
- ရန်ကုန်တိုင်းပင်လယ်ကမ်းခြေ
- မွန်ပြည်နယ်ပင်လယ်ကမ်းခြေ
- တနင်္သာရီတိုင်းပင်လယ်ကမ်းခြေ

ပင်လယ်ကမ်းခြေအနားသတ်လိုင်းမျာအနီးတဝိုက် ဧရုန်းယိုဖိတ်မှုဖြစ်မှုားမှုသတင်းရရှိပါက

- ကမ်းခြေရှင်းလင်းရေးအဆင့်(၃)ဆင့်ဖြင့်ဆောင်ရွက်။
- ဆီထိသောကမ်းခြေတလျှောက်ရေယာဉ်သွားအပိုင်းများခွဲစိတ်လုပ်။
- ညအလုပ်လုပ်မှလုံလောက်သောမီးပေးနိုင်သောအစီအစဉ်တွင်ပင်ထိရောက်မှုရှိ/မရှိ။

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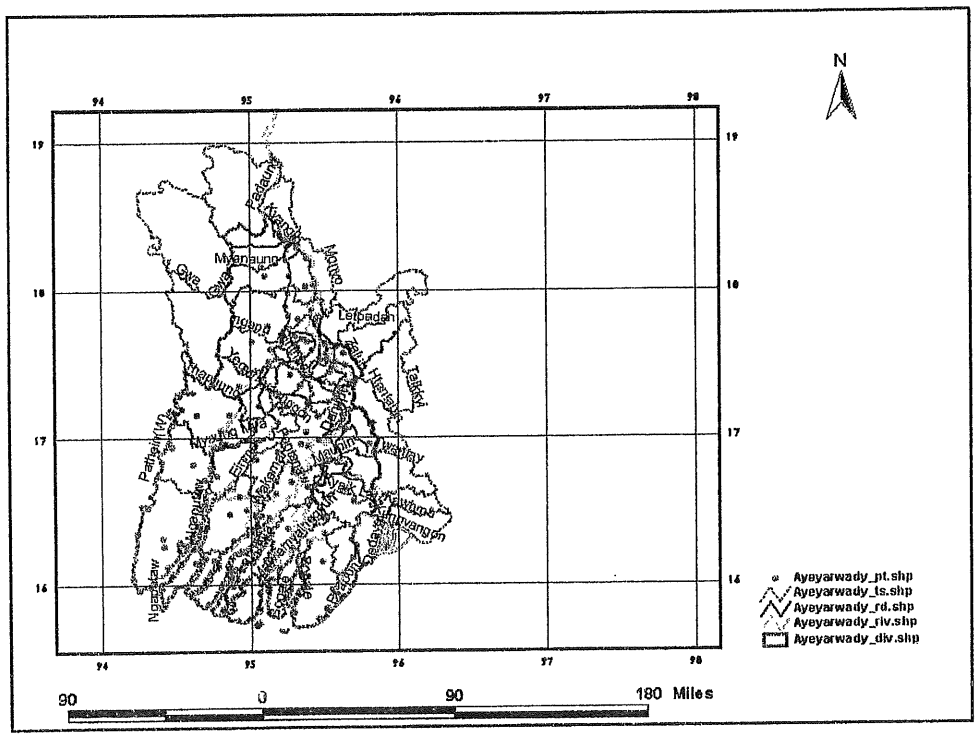
Rakhine_pt.shp
Rakhine_plne.shp
Rakhine_stste.shp
Bay of Bengal
Myanaung
100 0 100 200 Miles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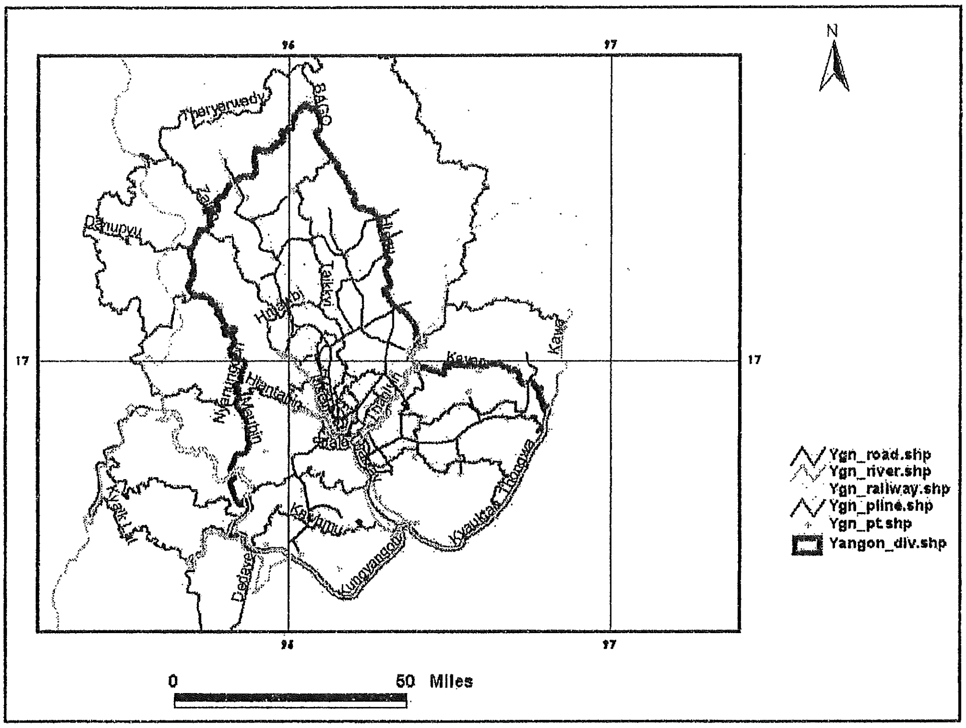
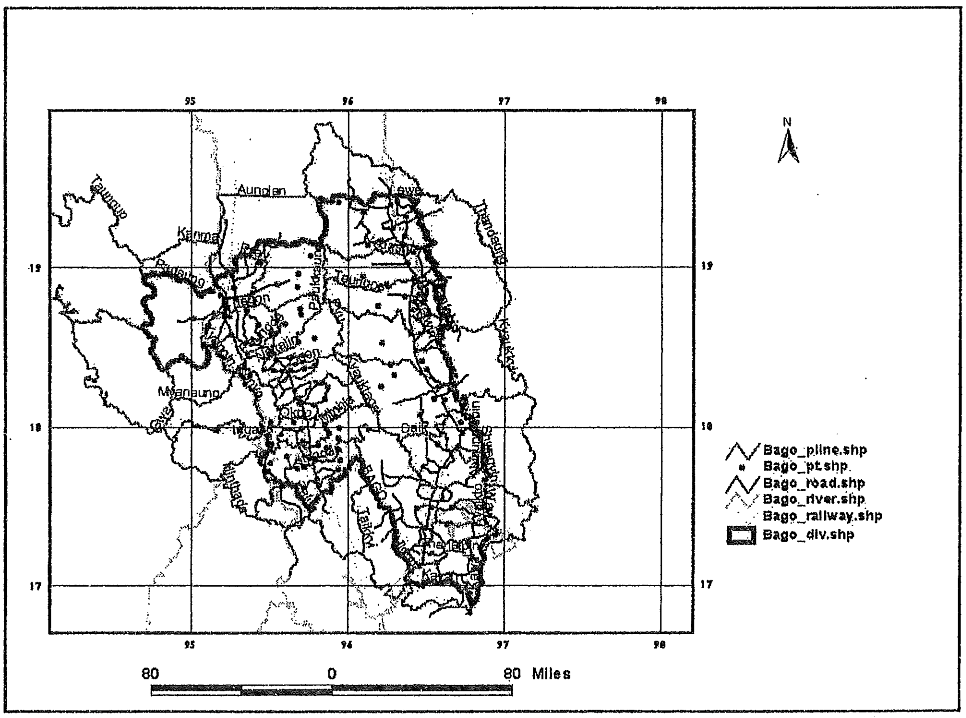
Ayeyarwady_riv.shp
Ayeyarwady_div.shp
Myanaung
Letpadan
90 0 90 180 Miles


N
96
97
17
Tharyarwady
Danupyu
Taikkyi
Kayan
Kawa
Kyauktan
Thongwa
Kawhmu
Kungyangon
Dedaye
Ygn_road.shp
Ygn_river.shp
Ygn_railway.shp
Ygn_pline.shp
Ygn_pt.shp
Yangon_div.shp
0
50 Miles


N
95
96
97
98
19
18
17
Aunglan
Thandaung
Myanaung
Bago_pline.shp
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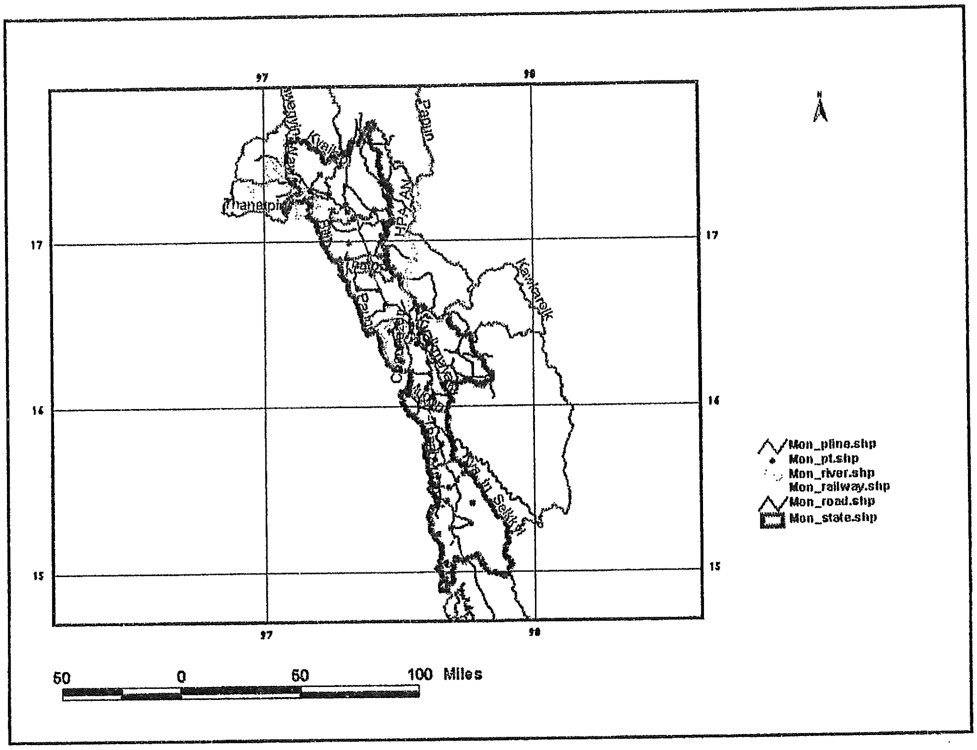
Bago_road.shp
Bago_river.shp
Bago_railway.shp
Bago_div.shp
80
0
80 Miles


Mon_pline.shp
Mon_pt.shp
Mon_river.shp
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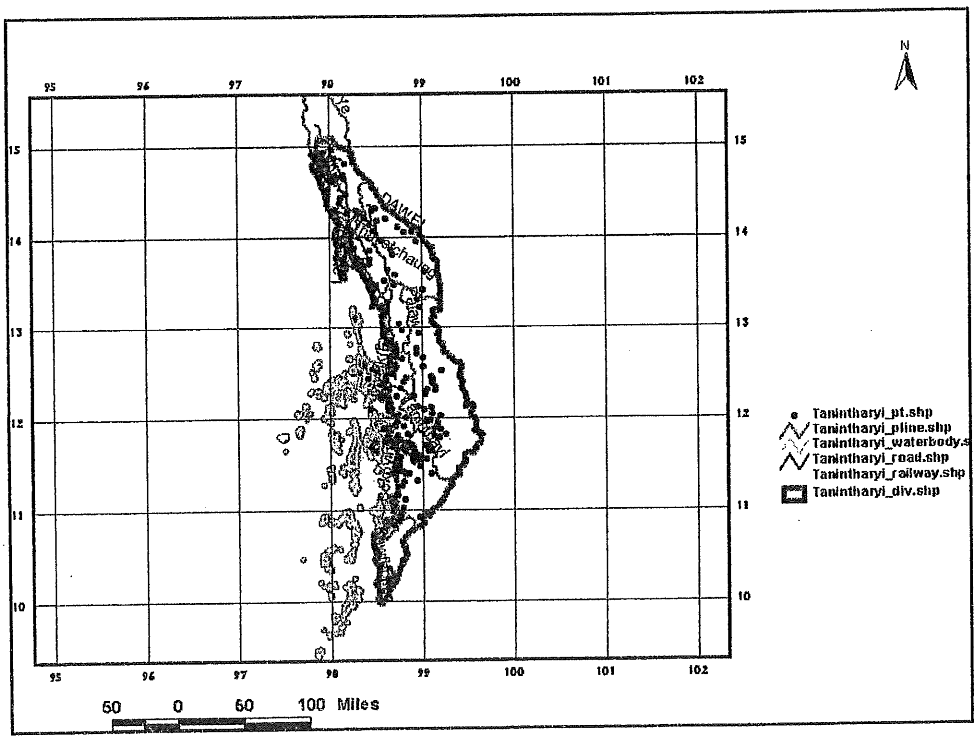
Mon_road.shp
Mon_state.shp
50 0 50 100 Miles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Tanintharyi_railway.shp
Tanintharyi_div.shp
50 0 50 100 Miles

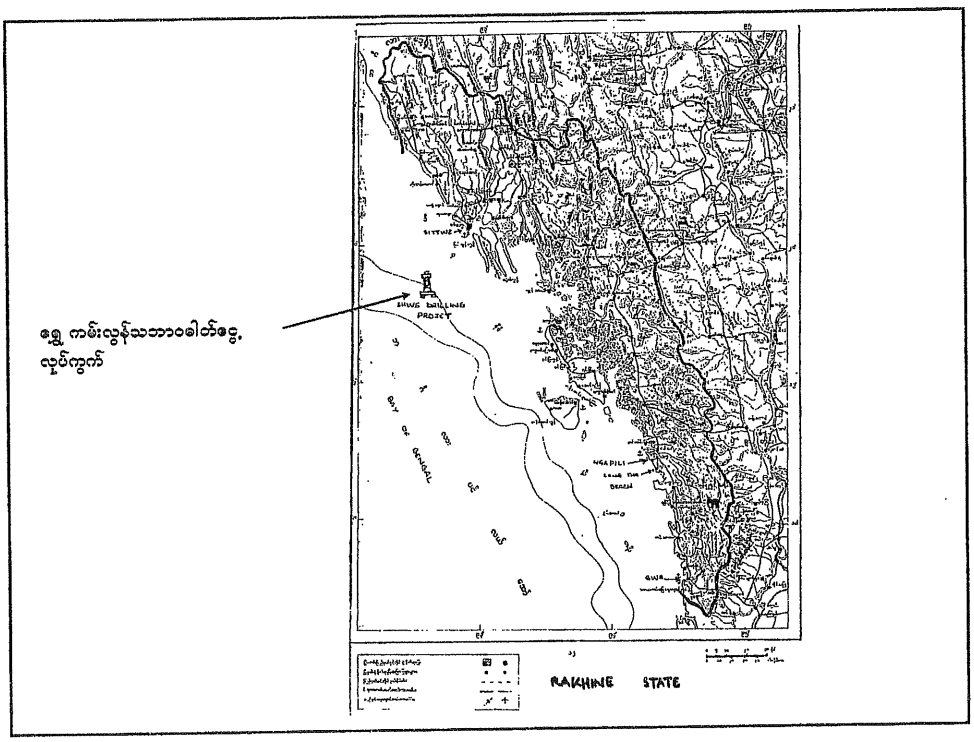
မြန်မာ့ကမ်းလွန်ရေနံနှင့်သဘာဝဓါတ်ငွေ့လုပ်ကွက်များ

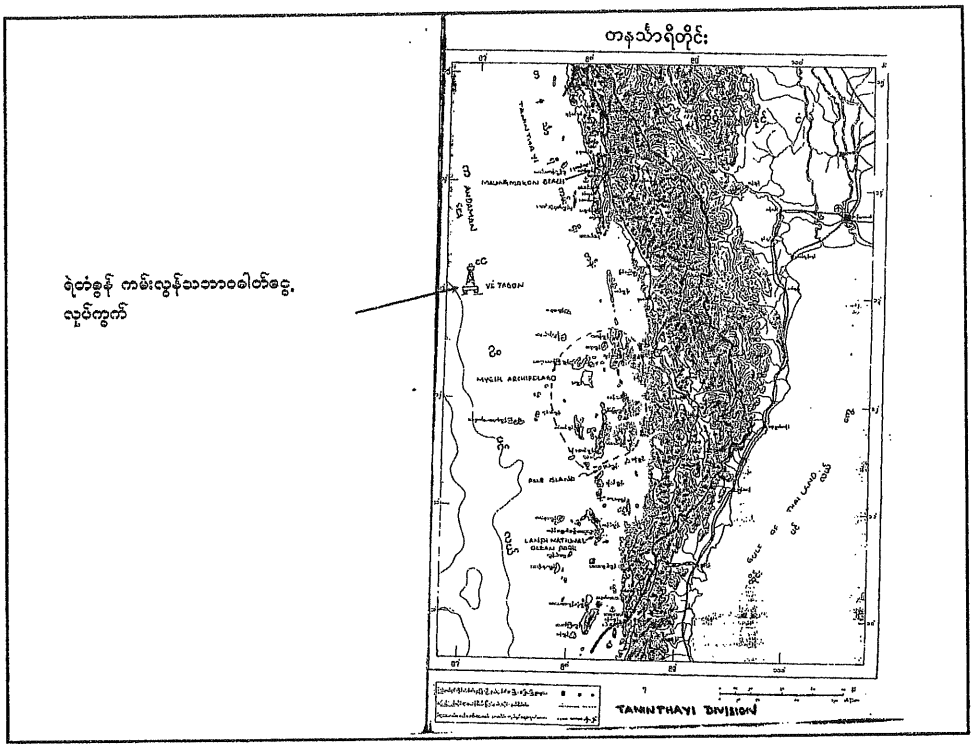
- ရတနာ
- ရဲတံခွန်
- ဧရာ

- မြန်မာကမ်းလွန်ရေနံနှင့်သဘာဝဓါတ်ငွေ့လုပ်ကွက်တွင်ဆောင်ရွက်သောရေနံကုမ္ပဏီများ။
- ရေနံယိုဖိတ်မှုထိန်းသိမ်းကာကွယ်ရေးစီမံချက်။
- ရေနံယိုဖိတ်မှုထိန်းသိမ်းကာကွယ်ရေးအထောက်အကူပြုပစ္စည်းကိရိယာဖြည့်တင်းထားရှိ။

ရေနံယိုဖိတ်မှုဖြစ်ပွားပါက

- သက်ဆိုင်ရာရေနံကုမ္ပဏီများမှ နှိုင်နင်းစွာကာကွယ်တားဆီး။
- လိုအပ်ပါကအပြည်ပြည်ဆိုင်ရာအကူအညီရယူ။
- စက်ပိုမူနှိုင်ငံရှိရေနံယိုဖိတ်မှုထိန်းသိမ်းကာကွယ်ရေးအဖွဲ့နှင့်ကြိုတင်သတင်းချိတ်ဆက်။





တုန့်ပြန်ရှင်းလင်းခြင်းအဆင့်

– ပင်လယ်ပြင်ရေနုံယိုဖိတ်မှုပမာဏပေါ်မူတည်

၁။ ဒေသဆိုင်ရာအဆင့် (Local)

၂။ နိုင်ငံအဆင့် (National)

၃။ ပတ်ဝန်းကျင်နိုင်ငံများပါပူးပေါင်းဆောင်ရွက်သောအဆင့်(Regional)

ရေနံယိုဖိတ်မှုအတွက်ဆက်နွယ်စဉ်းစားရမည့်အချက်များ

- ရေနံယိုဖိတ်မှုကာကွယ်တားဆီးရေး Equipment များစာရင်းနှင့်တည်နေရာ။
- မော်တော်ယာဉ်ရရှိရေး။
- ရေယာဉ် ရရှိရေး။
- မီးဘေးအန္တရာယ်ကာကွယ်ရေး။
- ဒဏ်ရာရလူနာများကုသရေး။
- လုံခြုံရေး။
- ရေနံယိုဖိတ်မှုဖြစ်ပွားရာဒေသ၏မိုးလေဝသအခြေအနေ။
- အပြည်ပြည်ဆိုင်ရာအဖွဲ့အစည်းများမှပံ့ပိုးကူညီနိုင်သည့်အခြေအနေ။
- သတင်းထုတ်ပြန်ရေး။

သင်တန်းများကိစ္စ

- ရေနံယိုဖိတ်မှုတုန့်ပြန်ကာကွယ်ရေးနှင့်ပတ်သက်သောနိုင်ငံတကာမှခေါ်ယူသည့် သင်တန်းများသို့တက်ရောက်ခြင်း။
- နိုင်ငံအတွင်းဆင့်ပွားသင်တန်းများဖွင့်လှစ်ပေးခြင်း။
- Table Top Exercise များပြုလုပ်လေ့ကျင့်ပေးခြင်း။
- Field Exercise ပြုလုပ်လက်တွေ့ဆောင်ရွက်စေခြင်း။

ဆက်သွယ်ရေးကိစ္စများ

- ဗဟိုကြီးကြပ်ရေးအဖွဲ့ ဝံး၊ ဖက်စ်များ ပြုစုထားရှိ။
- ပြည်နယ်တိုင်းအဖွဲ့ ဝံး၊ ဖက်စ်များပြုစုထားရှိ။
- အဖွဲ့လိုက်ဆက်သွယ်မှုအတွက်ဆက်သွယ်ရေးကွန်ယက်ထားရှိ။
- ဆက်သွယ်ရေးကွန်ယက်ကို
  - ဒေသအဆင့်
  - နိုင်ငံတော်အဆင့် (၂)မျိုးရေးဆွဲ။
- လျင်မြန်စွာပူးပေါင်းအကောင်အထည်ဖော်ဆောင်ရွက်မှုစံနှုန်း။

နိဒါန်း

- အရှေ့တောင်အာရှနိုင်ငံများ ASEAN အတွင်းရှိရေပြင်တွင်ရေထုညစ်ညမ်းမှုကာကွယ်ရန် OPSAR Project ကို ၁၉၉၃ခုနှစ်၊ မေလတွင် အတည်ပြုခဲ့။
- Project ရည်ရွယ်ချက်မှာ အရှေ့တောင်အာရှဒေသအတွင်းရေပြင်တွင်မတော်တဆရေတူညစ်ညမ်းမှုကြီးကျယ်စွာဖြစ်ပွားခဲ့ပါက အချိန်တိုအတွင်းလျင်မြန်စွာ သန့်စင်မှုပြုနိုင်ရေးဖြစ်။
- IMO မှ OPRC Convention (International Convention on Oil Pollution Preparedness, Report and Co-operation,1990) ဖြဋ္ဌာန်းခဲ့။
- မတော်တဆရေနံယိုဖိတ်မှုကြောင့်ပတ်ဝန်းကျင်ညစ်ညမ်းမှုကာကွယ်ရေးဆောင်ရွက်ရာတွင် ASEAN-OSPAR Project သည်ထင်ရှားသောဒေသဆိုင်ရာပူးပေါင်းဆောင်ရွက်မှုဖြစ်။

ASEAN-OSPAR Project တွင် ပူးပေါင်းဆောင်ရွက်ခြင်းဖြင့်-

- ကမ္ဘာနှိုင်ငံအသီးသီးမှ သဘော်ကြီးများမှ ရေထုညစ်ညမ်းမှုဖြစ်စေသောမတော်တဆဆီယိုဖိတ်မှု၊
- သေးအန္တရာယ်ဖြစ်စေသောပစ္စည်းများကြောင့်ဖြစ်စေသည့်ရေထုညစ်ညမ်းမှု၊
- ရေနံတွင်းတူးစင်များမှ ဖြစ်ပေါ်လာနိုင်သောယိုဖိတ်မှုအကြီးအကျယ်ဖြစ်ခဲ့လျှင်။
- အာဆီယံအဖွဲ့ဝင်နိုင်ငံအချင်းချင်းပူးပေါင်းဆောင်ရွက်ဖြေရှင်းနိုင်။
- မြန်မာနိုင်ငံသည် ASEAN-OSPAR Project နားလည်မှုစာချုပ်လွှာတွင်အဖွဲ့ဝင်ဖြစ်ရေးလက်မှတ်ရေးထိုးရန်အသင့်ဖြစ်နေ။

- တင်ပြခဲ့သော ရေနံယိုဖိတ်မှုကာကွယ်တားဆီးတုန့်ပြန်ဆောင်ရွက်ရေးစီမံချက်သည် မြန်မာနိုင်ငံ OSPAR အဖွဲ့ဝင် ဖြစ်ရေး တစိတ်တပိုင်း အနေဖြင့် အထောက် အကူပြုရန် ရည်ရွယ်၍ တင်ပြခဲ့ခြင်းဖြစ်ပါသည်။

ကျေးဇူးတင်ရှိပါသည်။

油流出に関する
緊急時対策の準備及び提案

ミャンマー

U Toe Myint
海事局

前書き

- 地上と地下の資源、海上と海底に天然の資源が豊富にある国
- 自然の環境を守るのは国民の義務
- 油流出事故により自然の損害を守る
- 短期間内に防除対策を共同で実施 する

目的

- ミャンマー海岸
- 天然資源が豊かな川
- 油流出事故による環境汚染や天然資源を守る
- 短期間内の防除対策
- 計画作成

以下のとおりの七項目で準備を行います

(1) 油流出防除対策に必要な資機材の導入
(2) 油流出防除対策団の組織を作る
(3) 川の中の油流出防除対策プログラムの作成
(4) 沖合の油流出防除対策プログラムの作成
(5) ビーチや観光地の油流出防除対策プログラム作成
(6) その他の海岸線の油流出防除対策プログラムの作成
(7) 沖合にある油田から油流出防除対策プログラムの作成

資機材の導入

油流出防除対策方法

-ブームを使用する
-油が広がらないよう収集する
-油層を増やし一ヶ所に収集する
-ポンプとスキマーを使用し油を回収する

必要な資機材

- Curtain boom
- Fence boom
- Sorbent boom
- Bubble Barrier
- Chemical Barrier
- Skimmers
- Pumps
- Sorbent
- Dispersant

油流出防止対策管理部（本部）

運輸省大臣	－	会長
畜産業省大臣	－	副会長
エネルギー省	－	副会長
通信省大臣	－	会員
外務省大臣	－	会員
内務省大臣	－	会員
ホテル観光省大臣	－	会員
鉱産賞大臣	－	会員
林業省	－	会員
参謀本部（海軍）参謀総長（海軍）	－	会員
参謀本部（空軍）参謀総長（空軍）	－	会員
運輸省副大臣	－	書記
海事局局長	－	書記補佐

管区及び州油流出防除対策団

- 関係地域の副管区長及び副州長	- 会長
- ミャンマー港湾局	- 会員
- 環境保全委員会	- 会員
- 漁業局	- 会員
- ミャンマー石油化学事業	- 会員
- 消防署	- 会員
- 健康保健局	- 会員
- 気象局	- 会員
- 関係地域（海軍）参謀総長	- 会員
- 警察署	- 会員
- 管区及び州平和開発委員会	- 会員
- 海事局	- 書記

ミャンマーの川
- エヤワディ川
- チンドィン川
- シッタウン川
- サンルイン川
- 川の流れが速い
- 油流出事故が川の中で発生した場合
- 緊急実施対策を行う
- 自然を守る
- 現地のブームを使用する
- 安全警戒
- 必要におじて分散剤を使用する
- 事故発生した地域周辺の大事な場所を防除対策行う計画

領水

- 領水及び海域法により以下のとおり定められております
- ミャンマーの海（領水）は海岸から海側へ12マイル
- ミャンマー の接続水域は海岸から海へ24マイル
- ミャンマー沖合（大陸棚）は基準ラインから200マイル
- ミャンマー特別経済地域（経済専管水域）は基準ラインから海側へ200マイル

- ミャンマーの海岸はナッ川の入り口からコタウンまで１３８５マイルあります。
- 海岸から海へ１２マイル離れたところに油流出事故が発生した場合，管理する計画

<u>沖合</u>

- ヤカイン州沖合
- エーヤワディ管区沖合
- ヤンゴン管区沖合
- モン州沖合
- タニンサリー管区沖合

沖合に油流出事故が発生した場合

- 海事局の（現地）は会長へ至急報告すること
- 油流出防止実施対策計画とおり行う
- 必要に応じてヤンゴンの本部から応援を要求
- 関係者と話し合い短期間内に実施対策を行う
- 安全計画とおり実施する

リゾートビーチ

- ガパリビーチ
- カンターヤービーチ
- グェサウンビーチ
- チャウンタービーチ
- レコッコンビーチ
- キャイカミィービーチ
- マウンマガンビーチ

海岸ビーチの周辺に油流出した情報があった場合

- 海岸に着くまでに防止対策を行う
- 海岸に油が着いた場合海岸清掃対策を三つの手段で行う

第１手段

大規模に堆積した汚物や汚水及び油の清掃

第２手段

中規模に堆積した汚物及び海岸にある施設による油汚染の清掃

第３手段

汚染された海岸辺と油汚染の清掃

海岸線

- ヤカイン州海岸地域
- エーヤワディ管区海岸地域
- ヤンゴン管区海岸地域
- モン州海岸
- タニンサリー管区海岸地域

海岸線周辺に油流出事故が発生した場合

- 海岸清掃対策は三つの手段で行う
- 油が着いている海岸エリアを区分して清掃作業
- 夜間電気があるときに清掃作業行うと効果が有無

ミャンマー沖合油田と天然ガース

- ヤダナー
- イエタゴン
- シュエー

- ミャンマー沖合で石油と天然ガス事業を行っている石油会社の油防除対策計画
- 油流出防除対策に関する必要な資機材などの導入

油流出事故が発生した場合

- 関係する石油会社が防除対策を行う
- 必要に応じて国際協力を得る
- シンガポールの油流出防除対策団と事前に打ち合わせする

防止対策手段

- 海上油流出の量により
  - (1) 現地レベル
  - (2) 国家レベル
  - (3) 隣国と協力し実施対策レベル

油流出事故に関して準備する項目

- 油流出防止対策に関する必要な資機材リストと位置場所
- トラック手配
- ボートの手配
- 火災防止
- 怪我人の対象
- 警備
- 油流出した地域の気象状況
- 国際機関の協力状況
- 報道

研修生

- 油防除対策に関して国際機関の主催で行われる研修へ研修生を派遣
- 国内にセミナを行う
- 机上訓練を行う
- 現地での訓練を行う

通信機関

- 管理部（本部）に電話とファクス機を置く
- 管区及び州（支部）に電話やファクス機を置く
- グループごとの連絡手段

  通信機関は

  - 地域レベル
  - 国家レベル二つの手段に作成
- 緊急対策を行うシステム

最後に

- 東南アジアにあるアセアン国の海上汚染防止対策するためOPSAR Project を1993年5月に決定しました。
- プロジェクトの目的は東南アジア地域の海上に油流出事故が発生した場合、短期間内に清掃対策を行うため
- 国際海事機関（IMO)は OPRC Convention(International Convention on Oil Pollution Preparedness, Report and Co-operation,1990)を 作成した。
- 油流出事故の発生により環境汚染防止対策を行う際にASEAN-OSPARプロジェクトは共同で実施する

ASEAN-OSPAR Projectに協力することにより

- 世界各国の船舶による海洋汚染になる油流出
- HNSによる海洋汚染
- 油田による油流出事故が発生した場合
- アセアン加盟国お互いの協力による問題解決
- ミャンマーは ASEAN-OSPAR Projectに加盟するための覚書に署名する準備が出来ています

今回提出した油流出防止対策計画書は
ミャンマー連邦国が
OSPAR 加盟に役に立つのを目的し、報告しました。

（３）ベトナム「机上訓練実施について」（原文）
（机上訓練説明会時に使用）

HƯỚNG DẪN

THAM GIA DIỄN TẬP XỬ LÝ THÔNG TIN ỨNG PHÓ SỰ CỐ TRÀN DẦU

Trình bày
Huỳnh Ngọc Thừa
Xí nghiệp DV Ứng cứu sự cố tràn dầu
Công ty Khoan & Dịch vụ Khoan Dầu khí

NỘI DUNG TRÌNH BÀY

1. Giới thiệu chung
2. Tình huống sự cố giả định
3. Tổ chức lực lượng tham gia diễn tập
4. Trình tự diễn tập
5. Các quy tắc trong diễn tập
6. Phân vai diễn tập cho học viên

2

1. Giới thiệu chung

1.1 Mục đích diễn tập

Giúp học viên làm quen với cách tổ chức, điều hành hoạt động ƯCSCTD

Rút kinh nghiệm để hoàn thiện kế hoạch ƯCSCTD cho khu vực phía Nam

Chuyển giao những kinh nghiệm, kiến thức từ các chuyên gia Nhật Bản, ASEAN

3

1. Giới thiệu chung

1.2 Yêu cầu của diễn tập

Tổ chức lực lượng tham gia diễn tập gần sát với thực tế hoạt động ứng cứu

Những kiến thức và kinh nghiệm chuyên môn phải được vận dụng để xử lý tình huống sự cố

Học viên tham gia và thể hiện đúng nhiệm vụ của vai mình được phân công

Tuân thủ các quy tắc diễn tập

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1. Giới thiệu chung

1.3 Thời gia diễn tập

08h10 – 09h10: diễn tập giai đoạn 1

Họp sơ kết giai đoạn 1 (20')

09h30 – 10h30: diễn tập giai đoạn 2

Họp sơ kết giai đoạn 2 (20')

11h05 – 12h05: diễn tập giai đoạn 3

Ăn trưa

Họp sơ kết giai đoạn 3 & tổng kết (60')

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1. Giới thiệu chung

1.4 Thành phần tham gia

UBQG TKCN

TT UCSCTD KV Bắc, Trung, Nam

TT PH TKCN Hàng hải VN và khu vực

Chính quyền địa phương BRVT, TP. HCM

Các lực lượng ứng cứu đóng trên địa bàn BRVT, Tp HCM

Các cơ quan, ban ngành liên quan

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2. Tình huống sự cố giả định

Thời gian: 05h00 ngày 01/03/2006

Địa điểm: Cách VT 20 hải lý theo hướng Nam

Nguyên nhân: 2 tàu va đâm

+ Tàu Delta 01 (bị nạn) thủng 2 khoang chứa gây tràn khoảng 1000 tấn dầu ra biển

+ Tàu Viễn Dương 03 (gây tai nạn) hỏng ở phần mũi, nhưng vẫn hoạt động bình thường

- Dưới tác dụng của dòng gió và dòng chảy, dầu có xu hướng trôi dạt vào bờ

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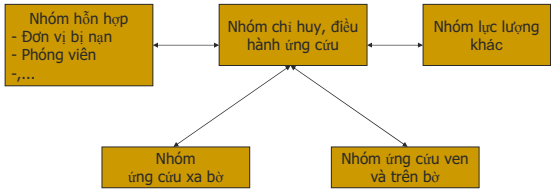
3. Tổ chức lực lượng

3.1 Sơ đồ tổ chức



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3. Tổ chức lực lượng

3.2 Nhiệm vụ của từng nhóm

a. Nhóm hỗn hợp:

do PV Drilling đảm trách gồm 3 người

- Tàu bị nạn:

  + Báo cáo Cảng Vụ Vũng Tàu về sự cố

  + Chỉ huy thủy thủ đoàn thực hiện công tác ứng phó ban đầu, đảm bảo an toàn cho người và phương tiện

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3. Tổ chức lực lượng

3.2 Nhiệm vụ của từng nhóm

a. Nhóm hỗn hợp: (tt)

- Đại diện đài truyền hình:

  + Phỏng vấn, đưa tin về sự cố và công tác tổ chức ứng cứu

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3. Tổ chức lực lượng

3.2 Nhiệm vụ của từng nhóm

b. Nhóm chỉ huy ứng cứu:

gồm 11 người: chỉ hu√ trưởng, các chuyên viên và đại diện các cơ quan liên quan

- Tiếp nhận thông tin sự cố từ tàu bị nạn
- Phân tích thông tin, đánh giá mức độ tác động của sự cố
- Thảo luận, đề xuất phương án ứng cứu
- Chỉ huy các đội ứng cứu triển khai hoạt động

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3. Tổ chức lực lượng

3.2 Nhiệm vụ của từng nhóm

b. Nhóm chỉ huy ứng cứu: (tt)

- Đánh giá hiệu quả hoạt động ứng cứu
- Tổ chức họp nội bộ rút kinh nghiệm sau mỗi giai đoạn
- Cung cấp thông tin cho cơ quan báo đài
- Ước tính tổng chi phí hoạt động ứng cứu

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3. Tổ chức lực lượng

3.2 Nhiệm vụ của từng nhóm

c. Nhóm ứng cứu xa bờ:

- Nhận lệnh điều động từ nhóm chỉ huy
- Tư vấn, phối hợp nhóm chỉ huy lựa chọn phương án ứng cứu phù hợp
- Trực tiếp triển khai, kiểm soát hoạt động ứng cứu trên biển
- Đánh giá hiệu quả hoạt động ứng cứu trên biển

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3. Tổ chức lực lượng

3.2 Nhiệm vụ của từng nhóm

d. Nhóm ứng cứu ven và trên bờ:

- Nhận lệnh điều động từ nhóm chỉ huy
- Tư vấn, phối hợp nhóm chỉ huy lựa chọn phương án ứng cứu phù hợp
- Trực tiếp triển khai, kiểm soát hoạt động ứng cứu ven bờ và làm sạch bờ biển
- Đánh giá hiệu quả hoạt động ứng cứu của nhóm mình

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3. Tổ chức lực lượng

3.2 Nhiệm vụ của từng nhóm

e. Nhóm lực lượng khác:

Bao gồm: TT UCSCTD miền Bắc, Trung & đại diện các lực lượng đóng trên địa bàn khu vực phía Nam

- Cung cấp thông tin cho ban chỉ huy
- Điều động lực lượng, phương tiện thiết bị theo yêu cầu của ban chỉ huy
- Lập hồ sơ điều động lực lượng

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4. Trình tự diễn tập

Bước 1:

Học viên tập hợp tại khu vực quy định

Bước 2:

Nhóm hỗn hợp vào vị trí, người bị nạn báo động Cảng Vụ Vũng Tàu

Bước 3:

Cảng Vụ Vũng Tàu đến Phòng chỉ huy tiến hành công tác TKCN và tập hợp các thành viên nhóm chỉ huy

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4. Trình tự diễn tập *(tt)*

Bước 4:

Nhóm chỉ huy đánh giá tình hình sự cố, đề ra chiến lược & phương án triển khai ứng cứu

Bước 5:

Điều động nhóm ứng cứu vào vị trí chuẩn bị triển khai ứng cứu

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4. Trình tự diễn tập *(tt)*

Bước 6:

Bước nhóm phối hợp tiến hành hoạt động ứng cứu theo tình huống giả định

Bước 7:

Họp tổng kết từng giai đoạn diễn tập

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5. Các quy tắc trong diễn tập

- Sử dụng tiếng Việt trong diễn tập
- Sử dụng điện thoại & gọi theo số qu√ định
- 5 phút trong thực tế = 1 giờ trong diễn tập
- Sử dụng thông tin được cung cấp trong phần phụ lục để xử lý tình huống
- Không tranh cãi về nội dung tình huống giả định
- Ghi nhật ký toàn bộ quá trình diễn tập

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6. Phân vai

Nhóm chỉ huy

TT	Vị trí diễn tập	Họ & tên	Đơn vị
1	Chỉ hu√ trưởng		
2	CV thông tin liên lạc		
3	CV hoạch định, chiến lược 1		
4	CV hoạch định, chiến lược 2		
5	Điều phối viên xa bờ		
6	Điều phối viên ven & trên bờ		

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6. Phân vai

Nhóm chỉ huy (tt)

TT	Vị trí diễn tập	Họ & tên	Đơn vị
7	CV TKCN		
8	Đại diện Cảng vụ VT		
9	Đại diện địa phương 1		
10	Đại diện địa phương 2		
11	Đại diện UBQG		

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6. Phân vai

Nhóm Ứng cứu xa bờ

TT	Vị trí diễn tập	Họ & tên	Đơn vị
1	Chỉ huy nhóm xa bờ		
2	Trợ lý chỉ huy		
3	CV UCSCTD 1		
4	CV UCSCTD 2		
5	CV thông tin liên lạc		
6	Đại diện cảng vụ		
7	Đại diện bộ độ biên phòng		

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6. Phân vai

Nhóm Ứng cứu ven và trên

TT	Vị trí diễn tập	Họ & tên	Đơn vị
1	Chỉ huy nhóm ven & trên bờ		
2	Trợ lý chỉ huy		
3	CV UCSCTD 1		
4	CV UCSCTD 2		
5	CV thông tin liên lạc		
6	Đại diện địa phương 1		
7	Đại diện địa phương 2		
8	Đại diện địa phương 3		

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6. Phân vai

Nhóm Lực Lượng Khác

TT	Vị trí diễn tập	Họ & tên	Đơn vị
1	Đại diện TT miền Trung		
2	Đại diện TT miền Bắc		
3	Đại diện các đơn vị khác ở phía Nam		

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TÓM TẮT

Diễn tập giúp học viên làm quen với các tổ chức, điều hành một hoạt động UCSCTD

Diễn tập được diễn ra theo 3 giai đoạn (tương ứng với 03 ngày trong diễn tập)

Đại diện các cơ quan, đơn vị liên quan sẽ tham gia diễn tập

Lực lượng tham gia diễn tập sẽ được chia thành 5 nhóm: nhóm chỉ huy, nhóm hỗn hợp, nhóm ứng cứu xa bờ, nhóm ứng cứu ven bờ, nhóm lực lượng khác

Học viên cần tuân thủ các quy tắc riêng trong diễn tập

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THẢO LUẬN

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ガイダンス

机上訓練実施について

プレゼンテーション
Huỳnh Ngọc Thừa
海難事故対応サービス企業
オイル掘削サービス社

プレゼン内容

1.概要

2. 事故想定

3. 机上訓練参加組織分担

4. 訓練順序

5. 訓練中の規則

6. 机上訓練の役割分担

2

1. 概要

1.1 机上訓練の目的

海難事故処理活動の対応に慣れるため。

南部の海難事故処理計画完成のための反省材料を得るため。

日本、ASEAN諸国の専門家から貴重な経験を教えてもらうため。

3

1. 概要

1.2 机上訓練に際して

机上訓練中は、実際の救助活動に限りなく近い状態で配備すること。

専門の知識や経験を生かして事故の処理にあたること。

自分にあてられた役割をきっちりと果たすこと。

机上訓練の規則を守ること。

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1. 概要

1.3 机上訓練のタイムスケジュール

08:10 - 09:10　　机上訓練(第1段階)

第1段階評価 *(20分)*

09:30 - 10:30　　机上訓練(第2段階)

第2段階評価 *(20分)*

11:05 - 12:05　　机上訓練(第3段階)

昼食

第3段階及び全体評価 (60分)

5

1. 概要

1.4 参加組織

捜索救難国家委員

北部、中部、南部の油流出事故救難センター、VN SARCOM、南部区域のVN SARCOM支部

ブンタウ、HCM市の地方政権

ブンタウ、HCM市担当の救助組織

関連の各機関

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2. 想定事故状況

時間: 2006年3月1日 05:00

場所: ブンタウから南に20海里

原因: 2隻が衝突

+ Delta 01号(被害船)の油積載場所2箇所が破損し、約1,000トンの油が海に流出。

+ VIEN DUONG03号(加害船)は、舳先が破損するも平常通りに走行。

- 風向きと潮流により、油が海岸方向にに流れる傾向あり。

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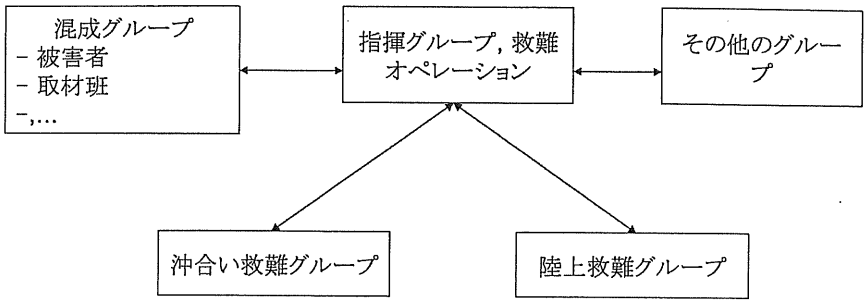
3. 組織分担

3.1 組織略図



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3. 組織分担

3.2 グループごとの役割

a. 混成グループ:

PV Drilling が担当する(3人)

- 被害船:

+ 事故発生をブンタウ港湾局に報告

+ 海兵隊を指揮して初動救難活動を行い、人・船の安全を確保する。

9

3. 組織分担

3.2 グループごとの役割

a. 混成グループ: (続き)

- テレビ局の代表者:
  - + 事故と救難活動に関する取材と報道。

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3. 組織分担

3.2 グループごとの役割

b. 救難指揮グループ:

11名編成: 総司令官、各専門員、関連各機関の長

- 被害船からの情報を受信
- 情報を分析、事故の程度を判断
- 救難方法を討論、決定。
- 各給難グループを指揮し実際の活動にあたらせる。

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3. 組織分担

3.2 グループごとの役割

b. 救難指揮グループ: (続き)

- 救難活動の効果を評価。
- 各段階ごとに内部の反省会を開く
- 報道機関に情報を提供。
- 救難活動の経費を試算する。

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3. 組織分担

3.2 グループごとの役割

c. 沖合い救難グループ:

- 指揮グループからの指令を受ける。
- 指揮グループと相談したり、協力したりして最適な救難方法を選択する。
- 海上の救難活動を直接展開、監督する。
- 海上の救難活動の効果を評価する。

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3. 組織分担

3.2 グループごとの役割

d.沿岸・陸上救難グループ:

- 指揮グループからの指令を受ける。
- 指揮グループと相談したり、協力したりして最適な救難方法を選択する。
- 沿岸の救難活動を直接展開、監督し、海岸を清掃する。
- 自分のグループの活動の効果を評価。

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3. 組織分担

3.2 グループごとの役割

e.その他のグループ:

北部、中部の油流出事故救難センターと南部の他の所属部隊の代表含み。

指揮グループに情報を提供。

- 指揮グループのリクエストどおりに要員、船舶を配備。
- 要員配備書類を作成。

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4. 机上訓練の順序

ステップ 1:

規定の場所に集合

ステップ 2:

混成グループ位置につく。被害者ブンタウ港湾局に連絡。

ステップ 3:

ブンタウ港湾局司令室に到着、捜索救難動開始、指揮グループ召集。

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4. 机上訓練の順序 *(続き)*

ステップ 4:

指揮グループ、事故状況を確認し、救難活動の戦略、方針を決定。

ステップ 5:

救難グループを配備、救難活動展開準備。

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4. 机上訓練の順序 *(続き)*

ステップ 6:

想定された事故に基づき救難活動を実行。

ステップ 7:

訓練の段階ごとに評価会。

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5. 机上訓練中の規則

- 訓練中はベトナム語を使用。
- 決められた番号に電話する。
- 実際の5分間 =訓練中の1時間。
- 別紙に提供された情報を駆使し、対応にあたる。
- 想定の事故状況に口をさしはさまない訓練過程全てを日誌につける。

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6. 役割分担

指揮グループ

	訓練中の役職	氏名	所属
1	総司令官		
2	情報連絡		
3	画定、戦略1		
4	画定、戦略 2		
5	沖合いコーディネーター		
6	沿岸、陸上コーディネーター		

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6. 役割分担

指揮グループ(続き)

	訓練中の肩書き	氏名	所属
7	捜索救難		
8	ブンタウ港湾局代表		
9	地域代表1		
10	地域代表2		
11	救助国家委員会代表		

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6. 役割分担

沖合い救難グループ

	訓練中の役職	氏名	所属
1	沖合いグループ指揮官		
2	指揮官補佐		
3	油流出事故救難1		
4	油流出事故救難2		
5	情報連絡		
6	港湾局代表		
7	国境警備隊代表		

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6. 役割分担

沿岸、陸上救難グループ

	訓練中の役職	氏名	所属
1	沿岸、陸上グループ指揮官		
2	指揮官補佐		
3	油流出事故救難1		
4	油流出事故救難2		
5	情報連絡		
6	地域代表 1		
7	地域代表 2		
8	地域代表 3		

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6. 役割分担

その他のグループ

	訓練中の役職	氏名	所属
1	中部センター代表		
2	北部センター代表		
3	南部の他の所属部隊の代表		

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まとめ

本訓練により、油流出事故救難活動の仕組み、進め方を知ることができる。

訓練は3段階にわけて実施される（訓連の３日間に相当する）

関連機関、部隊の代表が参加する。

訓練は５つのグループ（指揮グループ、混成グループ、沖合い救難グループ、沿岸・陸上救難グループ、その他のグループ）にわかれて実施される。

訓練中の各規則を遵守すること。

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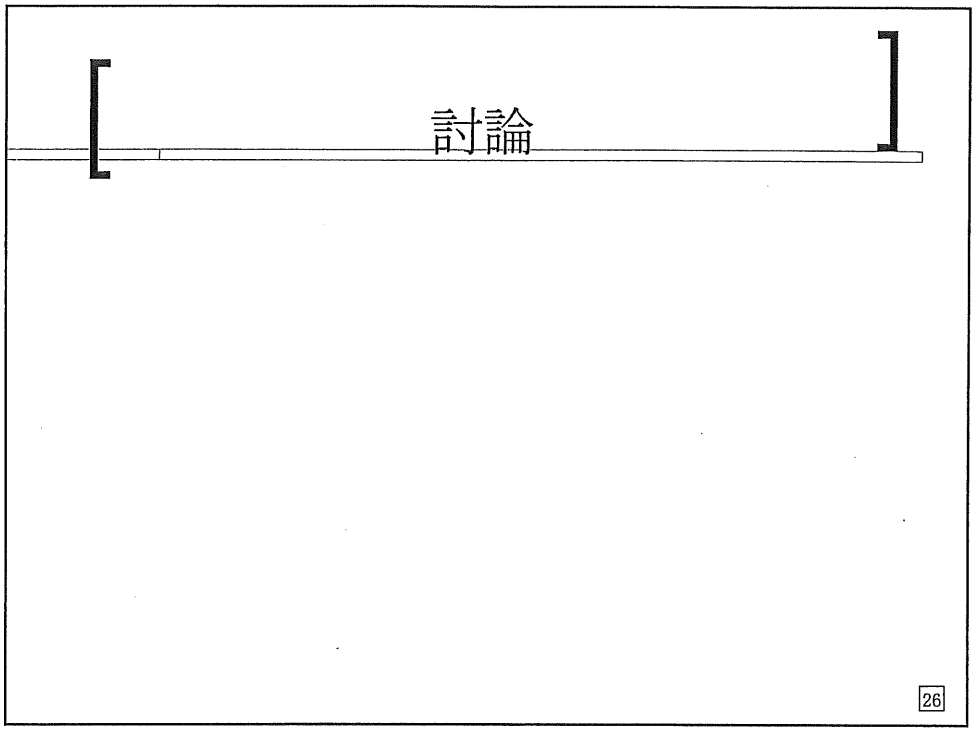
討論
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DRAFT OF TABLE-TOP EXERCISE PLAN
ON OIL SPILL RESPONSE

1. OBJECTIVE

When an oil spill incident occurs, government organizations and some privates should gather around to execute comprehensive activities in cooperation.
All concerned organizations must understand contents of their own jobs and must communicate closely and utilize available material or equipment mutually.

The objective of role table top exercise is to enhance the capability building on oil spill combating by concerned organizations.

2. PARTICIPANTS

The organizations that are supposed to participate in this table top exercise are:

- Government Organizations;
- Local Organizations;
- Private sectors.

(see details in appendix 1)

3. TIME & VENUE

- Time: 23-24 February, 2006
- Venue: Phnom Penh city

4. TRAINING & EXERCISE SCHEDULE

The oil spill table-top exercise shall take place with 2 days:

- The first day is explanation meeting/lectures which will be provided by Japanese experts and essential information of the table top exercise shall be given to all participants.

- The second day, all participants will attend to a table top exercise to play their roles in case of oil spill incident. Japanese experts and organizer will support the participants to perform the exercise properly.

(see details in appendix 2)

5. SCENARIO OF THE EXERCISE

- Participants will be split into two groups (Head Quarters and Near-shore).

- There will be 3 stages to the exercise. For each stage of the exercise, the groups will address 2 scenario cards. All stage in exercise will be given 3hrs to play for real period two day.
  - Stage 1 = Scenario card No 1&2 (Notification & Initial response)
  - Stage 2 = Scenario card No 3&4 (Evaluation)
  - Stage 3 = Scenario card No 5&6 (Response Actions)

  (See details in appendix 3(amendment))

6. Required information and Response Action

1. Incident Information:
   - Cause of incident: General cargo vessel grounding.
   - Time & location: 10 nm SW Sihanoukville port

2. Required Information for evaluation situation of incident
   - Spilt oil characteristic: type of oil, property, quantity,
   - Weather and sea condition: temperature, wind, current, wave

3. Response action (play during the exercise)
   - Evaluation of the incident
   - Development of action plan
   - Conducting the response operations
   - Providing information to public media
   - Estimating cost of the response operations

   (See details in appendix 3 & 4)

Note:

- Participants come from Phnom Penh city 16 persons
- Participants come from Sihanoukville city 4 persons

Appendix 1

List of Participants

No.	Organization	Participant No.
1. Government Organization		
	Merchant Marine Department, MPWT	5
	Inland Waterways Transport Department, MPWT	1
	Ministry of Environment	1
	Ministry of Interior	1
	Ministry of National Defense (Navy)	2
	Cambodia National Petroleum Authority (Council of Ministers)	1
2. Local authority and ports		
	Sihanoukville Municipality	2
	Port Autonomous of Phnom Penh	2
	Port Autonomous of Sihanoukville	2
3. Private Sector		
	Oil company	1
4. Organizers (Mr Chan Dara and Mr Mak Sideth **)**		2
Total		**20 pers.**

Note:

- Participants who attended training course in MDPC, Japan 13 persons
- New participants 5 persons
- Organizers 2 persons

Appendix 2

Tentative schedule
for Table-Top Exercise in Cambodia

23rd Feb 2006 (Day 1)

08:00 – 08:30	Registration
08:30 – 08:40	Gathering in meeting room and self introduction
08:40 – 10:10	Lecture provide by Japanese expert
10:10 – 10:30	Coffee break
10:30 – 12:00	Lecture (continue) and essential information for exercise
12:00 – 13:00	Lunch
13:00 – 14:40	Presentation of exercise scenario and assign roles for playing exercise
14:40 – 15:00	Coffee break
15:00 – 16:30	Question and Answer

24th Feb 2006 (Day 2)

08:00 – 08:30	Registration
08:30 – 09:00	Remarks and Opening ceremony and group photo
09:00 – 09:20	Coffee break
09:20 – 12:20	Conducting table top exercise
12:20 – 13:30	Lunch
13:30 – 15:30	Critique meeting
15:30 – 16:00	Coffee break
16:00 -	Closing ceremony

TABLE TOP EXERCISE SCENARIO

I. CONDUCT OF EXERCISE

- Participants will be split into two groups (Head Quarters and Near-shore).
- Participants will respond to the scenario cards. They are encouraged to discuss interactively as a team. Each group will develop an appropriate response action plan to each scenario. The scenario cards contain guideline to assist in the development of the response actions.
- There will be 3 stages to the exercise. For each stage of the exercise, the groups will address 2 scenario cards. All stage in exercise will be given 3hrs to play for period from 08:00hrs on 24th Feb. to evening of 25th Feb. 2006. There will be 6 scenarios to be dealt with in the process.
  -Stage 1 = Scenario card No 1&2 (Notification & Initial response)
  - Stage 2 = Scenario card No 3&4 (Evaluation)
  - Stage 3 = Scenario card No 5&6 (Response Actions)

II. Brief to Exercise

ISSUES TO BE TESTED:
Composition of the National Oil Spill Response Committee (NOSRC)
Information that will be needed
Prioritization of response activities

You are a member of the National Oil Spill Response Committee (NOSRC) responsible for oil spill response for the South-Western Region. You will be presented with an oil spill scenario which develops in series and stages. You are requested to provide an information that you need at each stage for planning preparation of the response related to oil spill, who will be in charge of those activities, and to identify where you can get all necessary information from. The aim is preparing a strategic plan for response of the spill which will allow you to clean up the spill successfully and thereby to minimize damages of the property and environment and to ensure that claim can be made for compensation to those who are suffering by damages from oil spill.

Some important acronyms:
National Oil Spill Response Committee (NOSRC)
Incident Command Manager (ICM)
Head Quarter (HQ)
You have access to the following clean-up resources, sufficient to deal with a Tier 1/ Tier 2 oil spill:

Dispersant spraying equipment, skimmers and booms available from Sihanoukville port and local oil companies are located in Sihanoukville.

They also have vessels available for response (lend). Additional manpower and vessels are available from local contractors.

III. Exercise Scenario

Scenario card N°1

Date : 24 Feb. 2006
Time : 07:00hrs local time
Master of general cargo vessel " XXX " reports:
- MV " XXX "

a- Flag : Cambodian
b- Ship owner : AAA
c- Last port of call : Haikou, China
d- Port of destination : Sihanoukville, Cambodia
e- Ship incident :
- Case of incident : Grounded on underwater rock
- Time of incident : 06:30hrs local time
- Position :
- Lat : 10^{o} 37.2' N and Long : 103^{o} 26.0' E
- Bearing: 253^{o} and Distance: 4.6nm from Sihanoukville pilot station.

- Reason: Ship's engine was out of order suddenly at harbour entrance. Then she drifted freely under her inertia and seasonal wind affects (Wind speed was about 8 knots in direction from SE, current in standstill situation).

- The grounding ruptured two starboard side deep oil tanks.
- Estimated spill quantity is about 50 tons of fuel oil, and continues leaking.
- Spilled oil spreading round the vessel and leading toward the Kompongsom bay in NE direction.
- Internal transfer of oil is starting.
- Total amount of FO in ruptured tanks are about 450 tons.
- Weather condition at grounding position:
  - Wind from South-East about 8 knots.
  - Current is about 1 knot to NE (High tide is starting up).

- Request immediate oil spill response assistance.
- The cargo vessel sustains minimal damage and drops anchor to assess and await further orders from the Sihanoukville port authority.

Scenario card N^{o} 2

Date : 24th Feb. 2006
Time : 09:00hrs

Status information:

- Internal transfer of oil is completed.
- Visually looks like no more leaking from the vessel. Confirmed no more oil leaking from the vessel.
- Estimated spill quantity is about 350 tons.
- Oil slicks leading toward the Kompongsom bay in bearing direction about 040^{o}.
- Weather condition still as before, only current speed increased up to 1.5 knots.
- Vessel has reported to Sihanoukville port of its particular and oil data as follow:

1. Ship's particular:

- Ship's name : XXX
- Ship owner : AAA
- Flag : Cambodian
- LOA : 154.6M
- Breadth moulded : 21.2M
- Draft max. : 9.0M
- Gross tonnage : 8,935 GT
- DWT : 13,970 T
- Fuel Oil Capacity : 1,115 T (Remaining on board after grounding : 550T)
- Total cargo on board : 9,000 T
- Master : Capt. ZZZ
- Ship agent : KAMSAB Sihanoukville

2. Data of Fuel Oil:

- API Gravity : 25.7 (API Gravity = 141.5/SG – 131.5)
- Density at 15^{o}C : 0.9
- Pour Point : +50^{o}C to -20^{o}C
- Flash Point : > +60^{o}C
- Viscosity at 20^{o}C : 60 at 50

➢ **Notification and Initial response**

- What would you expect the Master of the general cargo vessel to do in terms of Notification & initial response action?
- What will the report format contain?
- What would you expect the following stakeholders do on receipt of a notification of an oil spill incident from a vessel?
  - National Oil Spill Response Committee (NOSRC)
  - Sihanoukville port

Scenario card N°3

Date : 24th Feb. 2006
Time : 13:00hrs

Status information:

- Vessel has a little bit port lists.
- All oil slicks are passing through the SOKIMEX anchorage where:
  - Its head edge reaches to the position:
    - Lat: 10° 44.0'N and Long: 103° 31.3'E or
    - Bearing: 310° and Distance: 0.7Knots from jetty-end.
  - Oil slicks continue drifting ahead parallel to coast line in this area.
- Weather condition at SOKIMEX Harbour:
  - Tide current is about 1.5 knots in 065° direction.
  - Wind: - unseasoned wind has just changed its direction from NW with speed 10 knots.
- Received weather forecast for the whole Sihanoukville area.

Weather conditions for next 24 hrs:

- For next 12 hrs from 12:00hrs to 24:00 on 24th February 2006.

  Wind : Blows from NW (315°) direction with speed about 12 knots.
  Current : It depends on water tide. According to one time period tide in Kompongsom bay, the full water will be at 18:00hrs and then low tide current will flow outward in an opposite direction with medium speed is about 1.5 knots.

- For next 12 hrs from 00:00hr to 12:00 hrs on 25th Feb. 2006

  Wind : Blows from N (000°) with speed about 8 knots.
  Current : Low water will be at around 06:00hrs on 25 Feb 2006.

Scenario card N°4

Date : 24th Feb. 2006
Time : 15:00hrs

Status information:

- Vessel has a little bit port lists.
- Head edge of oil slicks have reached to the position Lat: 10° 45.2'N and Long: 103° 34.0'E, and leading to approach of Stoeunghav stream.
- Weather condition:
  - Current is about 1.5 knots in 090° direction.
  - Wind: blows from NW with speed 10 knots.

➢ **EVALUATION**

What would you expect the following stakeholders to do in terms of the Evaluation process?

- National Oil Spill Response Committee (NOSRC).

- Port Autonomous of Sihanoukville.

Management issues that may arise, and to consider:

- How will designation of tier spill?
- Who will alert and/or activate:
  - Resource from Industry – Tier 1 equipment
  - Manpower from Navy, Local authority,

Scenario card N°5

Date : 24th Feb. 2006
Time : 17:00hrs
Status information:

- Head edge of oil slicks have reached to the position Lat: 10° 45.0'N and Long: 103° 37.5'N, and look like no more drifting ahead. They are in standstill situation (full water).
- All oil slicks have covered an area about 4 Km^2, which stretches its long about 2nm with distance 0.5nm from and parallel coast line.
- Expected that part of oil slicks will reach to this shore area in few hours later, and the rest may be drift back and will impact on the shore upper of the SOKIMEX Oil Terminal,
- Weather condition:
  - Wind direction from NW with speed 10 knots.
  - Termination of high tide period, low tide period will start 1hr later, and current tide will also change its flow in opposite direction with medium speed about 1.5knots.

Scenario card N°6

Date : 25th Feb. 2006
Time : 07:00hrs
Status information:

- All spilled oil has impacted along shore line of Stoeunghav commune, which stretches from Phum Bei Smau Point downward to the area near SOKIMEX Oil Storage Tanks.
- Impacted shore line are covering about 8Km long.
- Weather condition:
  - Wind 8 knots from NW;
  - High tide current has just started with speed 0.5 knot in E direction.
  - Sea condition: Calm

➢ **RESPONSE ACTIONS**

- What would you expect the National Oil Spill Response Committee to do in terms of the Response action taken

- In the Planning and Decision making process, what actions and/or questions would NOSRC seek in the following process:
  - Identify type and fate of oil
  - Identify key resources threatened
  - Identify immediate response priorities
  - Identify immediate response strategies
  - Identify equipment and what type and quantity of manpower is required to implement response strategies
  - Establish Field Command Posts and Communications Plan.

- To implement the following OSR strategies, it will be necessary to mobilize suitable and sufficient amount of equipment and manpower before the strategies can be implemented. Identify suitable and sufficient amount of equipment and manpower in each of the following strategy:
  - Offshore Containment & Recovery
  - Dispersant application
  - Shoreline protection

- Shoreline clean-up

Interaction with the Media:

- Is there time schedule for first and subsequent press release?
- Will NOSRC gives press release and conferences?

Management Issues that might arise, and to consider:

- Is there sufficient time and resources to implement response strategies (Containment, Recovery and dispersant application)?
- Who and how will Waste Disposal be handle?
- Are waste disposal sites identified?

Appendix 4

1. Weather and sea condition

- Annual record of wind and current
- Current map/Season map
- Actual weather forecast

2. Oil Characteristics

The types and properties of oils and petroleum products potentially involved in a spill are listed below:

Oil type	Density (Kg/l) at (50 °C)	Viscosity MPA at (20 °C)	Pour Point (°C)	Flash Point (°C)
gasoline	0.70-0.78	0.5	na	<0
kerosene	0.8	2	<-40	38-60
diesel oil	0.85	5	-5 to -30	>55
Fuel Oil	0.9	60 at 50	+50 to -20	>60
Crude Oil	0.85-0.95	10-100	+10 to -36	Variable

3 Equipments available in Cambodia

Sihanoukville port

No	Oil Spill Equipment	Specifications	QTY	Available for loan
1	Tug boats	800HP	2 units	2 units
2	Tug boats	1600HP	2 units	2 units
3	Mooring boat		1 unit	1 unit
4	Forklifts	5-50T	10 units	10 units
5	Trucks	10-20T	10 units	10 units
6	Boom	SK-10, 8Lghts	200 m	200 m

CALTEX – Private Company

No	Oil Spill Equipment	Specifications	QTY	Available for loan
1	Oil Contaminant Boom	SK-10, 8Lghts	200 m	100 m
2	Oil Contaminant Boom	SK-F06, 2 Lghts	50 m	25 m
3	Dispersant	Tergro-R40	7 drums	4 Drums
4	Back Pad Sprayer	OSATU, 16 lts	4 units	2 units
5	Rigid Manta Ray Skimmer	With Hoses & Pump	1 set	1 set

SHELL – Private Company

No	Oil Spill Equipment	Specifications	QTY	Available for loan
1	Booms	T-20, 8"x10", gl/bale	120 m	120 m
2	Pads	HP-556, 17"x19", 37.3 gl/bale	1 bale	25m
3	Pads	HP-557,	1 pack	4 drums

PTT – Private Company

No	Oil Spill Equipment	Specifications	QTY	Available for loan
1	Oil Dispersant	Tergo-R40, 25 l/drum	20 drums	10 drums
2	Oil skimmer, Disc.	Engine driven with hydraulic pump	1 unit	1 unit
3	Habour oil boom	15m/set, total 375 m	25 units	25 units
4	Oil dispersant sprayer	20 liters	2 units	2 units
5	Boom	SK-10, 8Lghts	150 m	150 m
4	Operator			3 pers.

Road Construction Company

No	Equipment	Specifications	QTY	Available for loan
1	Barge	Komasu, 3-5 tons	1 unit	1 unit
2	Barge	Komasu, 1-3 tons	1 unit	1 unit
3	Bulldozer		5 units	5 units

4	Dump truck	10 tons	17 units	15 units
5	Crane	Kato, 1-3 tons	3 units	3 units
6	Generator	Yanmar	5 units	4 units
7	Excavator		3 units	3 units
8	Tank truck		5 units	5 units
9	Storage tank	5000L	10 units	10 units
10	Worker		100 pers.	100 pers

Waste Disposal Company

No	Equipment	Specifications	QTY	Available for loan
1	Garbage truck	2 tons	20 units	15 units
2	Vacuum truck	10000 L	7 units	5 units
3	Garbage trolley	300 Kg	25 units	25 units
4	Worker		50 pers.	50 pers.

4. Required actions

During this table-top exercise, participants should focus on notification, strategies, command and control issues and sources of vital information rather than the details of the clean up response.

RESPONSE ACTIONS

- What would you expect the National Oil Spill Response Committee to do in terms of the Response action taken

- In the Planning and Decision making process, what actions and/or questions would NOSRC seek in the following process:
  - Identify type and fate of oil
  - Identify key resources threatened
  - Identify immediate response priorities
  - Identify immediate response strategies
  - Identify equipment and what type and quantity of manpower is required to implement response strategies
  - Establish Field Command Posts and Communications Plan.

- To implement the following OSR strategies, it will be necessary to mobilize suitable and sufficient amount of equipment and manpower before the strategies can be implemented. Identify suitable and sufficient amount of equipment and manpower in each of the following strategy:
  - Offshore Containment & Recovery
  - Dispersant application
  - Shoreline protection
  - Shoreline clean-up

National workshop on
Table Top exercise for Oil Spill Incident

23-24 February 2006,
Phnom Penh, Cambodia

Information and Relevant Data for Conducting Table Top Exercise

Organized by
The Ministry of Public Works and Transport

Supported by
The Japan Association of Marine Safety

Sponsored by
The Nippon Foundation

List of Content

I. Exercise rule

1. Conduct of Exercise

- Participants will be split into two groups (Head Quarter and Near-shore).

- Participants will respond to the scenario cards. They are encouraged to discuss interactively as a team. Each group will develop an appropriate response action plan to each scenario. The scenario cards contain guideline to assist in the development of the response actions.

- There will be 3 stages to the exercise. For each stage of the exercise, the groups will address 2 scenario cards. All stage in exercise will be given 3hrs to play for period from 08:00hrs on 24th Feb 2006 to the evening of 25th Feb. 2006. There will be 6 scenarios to be dealt with in the process.
  - Stage 1 = Scenario card No 1&2 (Notification & Initial response)
  - Stage 2 = Scenario card No 3&4 (Evaluation)
  - Stage 3 = Scenario card No 5&6 (Response Actions)

2. Brief to Exercise

ISSUES TO BE TESTED:
Composition of the National Oil Spill Response Committee (NOSRC)
Information that will be needed
Prioritization of response activities

You are a member of the National Oil Spill Response Committee (NOSRC) and responsible for oil spill response for the Coastal Area of Cambodia. You will be presented with an oil spill scenario which develops in series and stages. You are requested to provide information needed at each stage for planning preparation of the response related to oil spill, and you are the one who will be in charge of those activities and identify where you can get all necessary information. The aim is preparing a strategic plan for response of the spill which will allow you to clean up the spill successfully, thereby minimize damages of the property and environment and ensure that claim can be made for compensation to those who are being suffering by damages from oil spill.

Some important acronyms:
National Oil Spill Response Committee (NOSRC)
Incident Command Manager (ICM)
Head Quarter (HQ)

You have access to the following clean-up resources, sufficient to deal with shore line protection and shore line clean-up.
Dispersant spraying equipment, skimmers and booms available from Sihanoukville port and local oil companies are located in Sihanoukville. Additional manpower is available from other local companies such as Road Construction Co. and Waste Disposal Co.

3. Concept of Action Taken

3.1. Notification and Initial Response

- What would you expect the Master of the general cargo vessel to do in terms of Notification & initial response action?
- What would you expect the following stakeholders do on receipt of a notification of an oil spill incident from a vessel?
  - Sihanoukville port;
  - Local authority;
  - Incident Command Manager (ICM)

3.2. Evaluation

What would you expect the following stakeholders to do in terms of the Evaluation process?

- Incident Command Manager (ICM).
- Sihanoukville Municipality.
- Port Autonomous of Sihanoukville.
- Other

3.3. Response Action

- What would you expect the ICM to do in terms of the Response action taken?
- In the Planning and Decision making process, what actions and/or questions would ICM seek in the following process:
  - Identify type and fate of oil
  - Identify key resources threatened
  - Identify immediate response priorities
  - Identify immediate response strategies
  - Identify equipment and what type and quantity of manpower is required to implement response strategies
  - Establish Field Command Posts and Communications Plan.

- To implement the following OSR strategies, it will be necessary to mobilize suitable and sufficient amount of equipment, and manpower before the strategies can be implemented. Identify suitable and sufficient amount of equipment and manpower in each of the following strategies:
  - Offshore Containment & Recovery
  - Dispersant application
  - Shoreline protection
  - Shoreline clean-up

Interaction with the Media:

- Is there time schedule for the first and subsequent press release?
- Will ICM gives press release and conferences?

Management Issues that might arise, and to consider:

- Is there sufficient time and resources to implement response strategies? (Containment, Recovery and dispersant application)
- Who will handle Waste Disposal? And how?
- Are waste disposal sites identified?

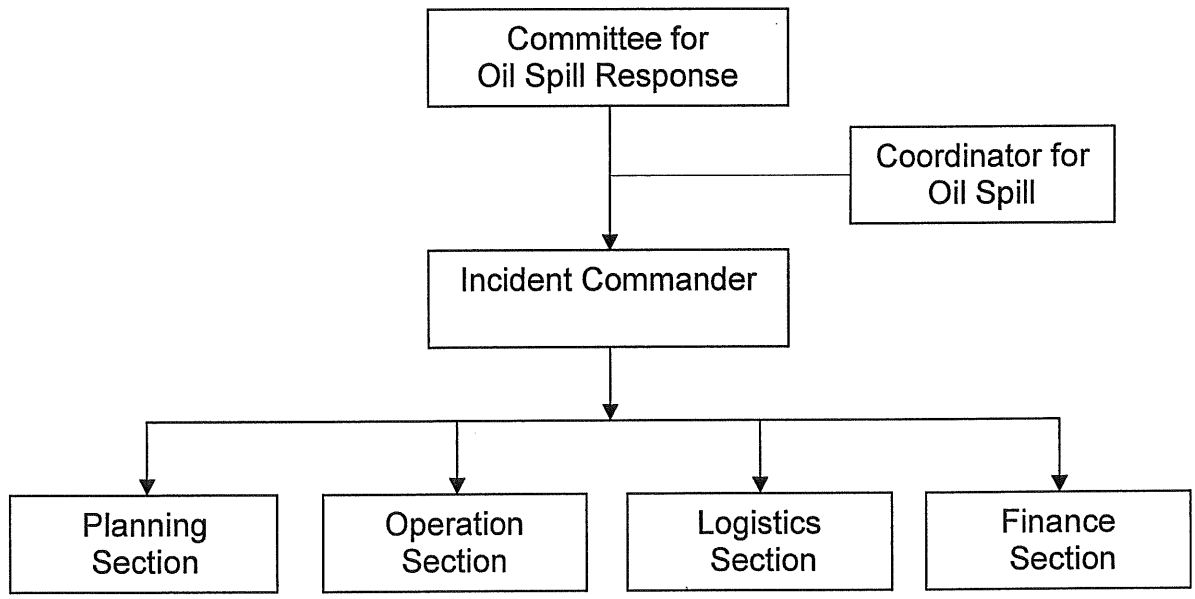
II. National Oil Spill Response Contingency Plan

1. Organizational Structure and Responsibilities

1.1. Organizational Structure

The structure established for Cambodia's National Oil Spill Response includes:

1. Committee for Oil Spill Response
2. Coordinator for Oil Spill Response
3. Incident Commander
4. Planning Section
5. Operation Section
6. Logistic Section
7. Finance Section



1.2. Responsibilities

1.2.1. Responsibilities of the Committee

- Coordinate with international, regional and national institutions on the response of oil spill.

- Monitor and advise the Royal Government for the purpose of harmonizing policies, plans and legal framework concerning the oil spill response with national laws, international laws and conventions on oil spill response.

- Report to the Royal Government on the oil spill response operation as required.
- Provide necessary support to the Incident Commander as required for oil spill response.
- Take all necessary actions to achieve the objectives of the NOSCP.
- Shall ensure that the Response Organization is setup in accordance with the NOSCP.
- Implement other roles as delegated by the Royal Government.

1.2.2. Responsibilities of the coordinator:

- Coordinator should decide on the magnitude of the oil spill.
- Notification of the concerned agencies for purpose of setting up the Committee for Oil Spill Response.
- Coordination of activities with concerned agencies.
- Ensure the oil spill response operation is conducted in compliance with the national contingency plan.
- Providing regular report of the operation to the Committee.
- Dissemination of reasonable information to media.

1.2.3. Responsibilities of Incident Commander

- Overall in-charge of the management for the oil spill response
- Evaluate spill or potential spill reports
- Designate the appropriate Tier of the spill.
- Activate pre-identified resources to implement the national contingency plan.
- Prioritize oil spill response activity areas and set response objectives for the response organization during the spill.
- Liaise with the Coordinator for Oil Spill with regards to the management of the oil spill response operation
- Obtaining and providing the necessary support to section leaders to fulfill the objectives.
- Assign additional role and responsibilities within the response organization as required during an oil spill response.
- Ensuring the safety of the community and responders during the oil spill.
- Providing the necessary report to the Coordinator for Oil Spill Response.

1.2.4. Responsibilities of the operation Section are to:

- Shall carry out all operational activities required during the oil spill response.
- Implement incident action plan
- Establish source of incident, Implement tactics to isolate, control and prevent situation from escalating.

- Conduct containment and recovery operation at sea
- Conduct air operation
- Conduct shoreline protection and clean up operation
- Conduct special operation
- Report to the Incident Commander

1.2.5. Responsibilities of the Planning Section are to:

- Evaluate appropriateness of strategy and tactics
- Ensure immediate plan for response is prepared.
- Record, collate, reproduce, disseminate and secure all relevant documents pertaining to the spill incident.
- Ensure that continual scientific environment quality assessment are carried out and documented.
- Ensure that investigations, inspections and summary adjudication proceeding are conducted and documented.
- Report to the Incident Commander.

1.2.6. Responsibilities of the logistics Section are to:

- Provide all necessary logistical support for the implementation of the plan.
- Ensure immediate availability of needed equipment, supplies and materials.
- Ensure adequate transportation.
- Ensure adequate and effective communication.
- Ensure adequate personnel.
- Report to the Incident Commander.

1.2.7. Responsibilities of the Finance Section are to:

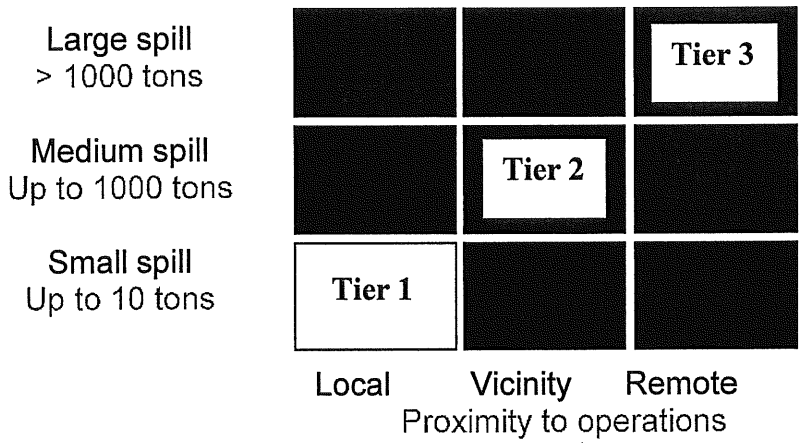
- Manage the financial resources necessary for the response.
- Institute appropriate financial controls.
- Track all expenditure of the operation.
- Prepare financial records that are consistent with the requirement of the international conventions on Liability and compensation for Oil Pollution Damage.
- Report to the Incident Commander.

2.1. Tiered Response

Tier 1 is normally associated with small local events for which response resources should be existed locally. Examples of Tier 1 spills include transfer of fuel or bunkers at a terminal or smaller spill at port. There will normally be no need to call for external assistance for a Tier 1 spill.

Tier 2 is a larger spill that may occur in the vicinity of a response center or smaller spills at distant locations for which resources from several sources may be required from oil private company, industry and government resources.

Tier 3 is dimensioned for the largest spills, such as large cargo vessel accidents resulting in loss of its fuel bunkers, large oil tanker accidents or offshore oil production platform blowouts. Tier 3 incidents will usually call for the entire oil spill response resources in a national and may also call for international assistance.



2.2. Oil Characteristics

The types and properties of oils and petroleum products potentially involved in a spill are listed below:

Oil type	Density (Kg/l) at (50 °C)	Viscosity MPA at (20 °C)	Pour Point (°C)	Flash Point (°C)
Gasoline	0.70-0.78	0.5	na	<0
Kerosene	0.8	2	<-40	38-60
Diesel oil	0.85	5	-5 to -30	>55
Fuel Oil	0.9	60 at 50	+50 to -20	>60
Crude Oil	0.85-0.95	10-100	+10 to -36	Variable

DAILY WORK REPORT FORMAT

Contractor: .....

Supervisor: .....

Data: .....

Job description: .....
.....
.....
.....
.....

Materials Utilized: .....
.....
.....
.....
.....

Equipment: .....
.....
.....
.....
.....
.....
.....

Number of men on job: .....

Daily Operations Commence: .....

Hour Secured: .....

Number of disposal loads: .....

Submitted: .....
(On-Scene Coordinator/Representative)

Pollution Report

1. Date/time of incident: .....

2. Date/time of report: .....

3. Location of Incident:
   - Bearing/distance.....
   - Latitude..... Longitude.....

4. Source of report: .....

5. Contacts: Phone..... Fax: .....

6. Nature of incident and spill source.....

7. Type and Amount of Spilled Oil .....

8. Nature and extent of pollution.....

9. Weather and sea condition:
   Wind: - Direction ..... Velocity .....
   Current: - Direction ..... Velocity .....
   Tide: .....

10. Ship name, Call Sign, Port of Registry, Ship Size and Type / Ship owner : .....

11. Additional information.....

12. Action(s) taken.....

Wind Speed m/s										
Years	**2001**		**2002**		**2003**		**2004**		**2005**	
Months	Averag	Max	Averag	Max	Averag	Max	Averag	Max	Averag	Max
Jan	6.5	10	9	18	6.5	16	6	15	6.5	16
Feb	4	10	5	15	5	12	4	14	6.5	15
Mar	3	11	3	11	4	9	7	17	9.5	16
Apr	6	16	4	15	5	18	5.5	15	5	13
May	4	14	2	11	4	15	4.5	18	6.5	12
Jun	5	18	4.5	10	5	10	4.5	16	7.5	18
Jul	4	14	3	15	4.5	15	5	16	7.5	16
Aug	3	15	2	15	3	13	5.5	18	6	18
Sep	4	14	25	25	8	14	7	17	7	17
Oct	4	12	5	12	5	12	4.5	14	4.5	14
Nov	3	18	7	10	4	15	5	15	5	15
Dec	4	14	3	20	4	12	6	10	6	10

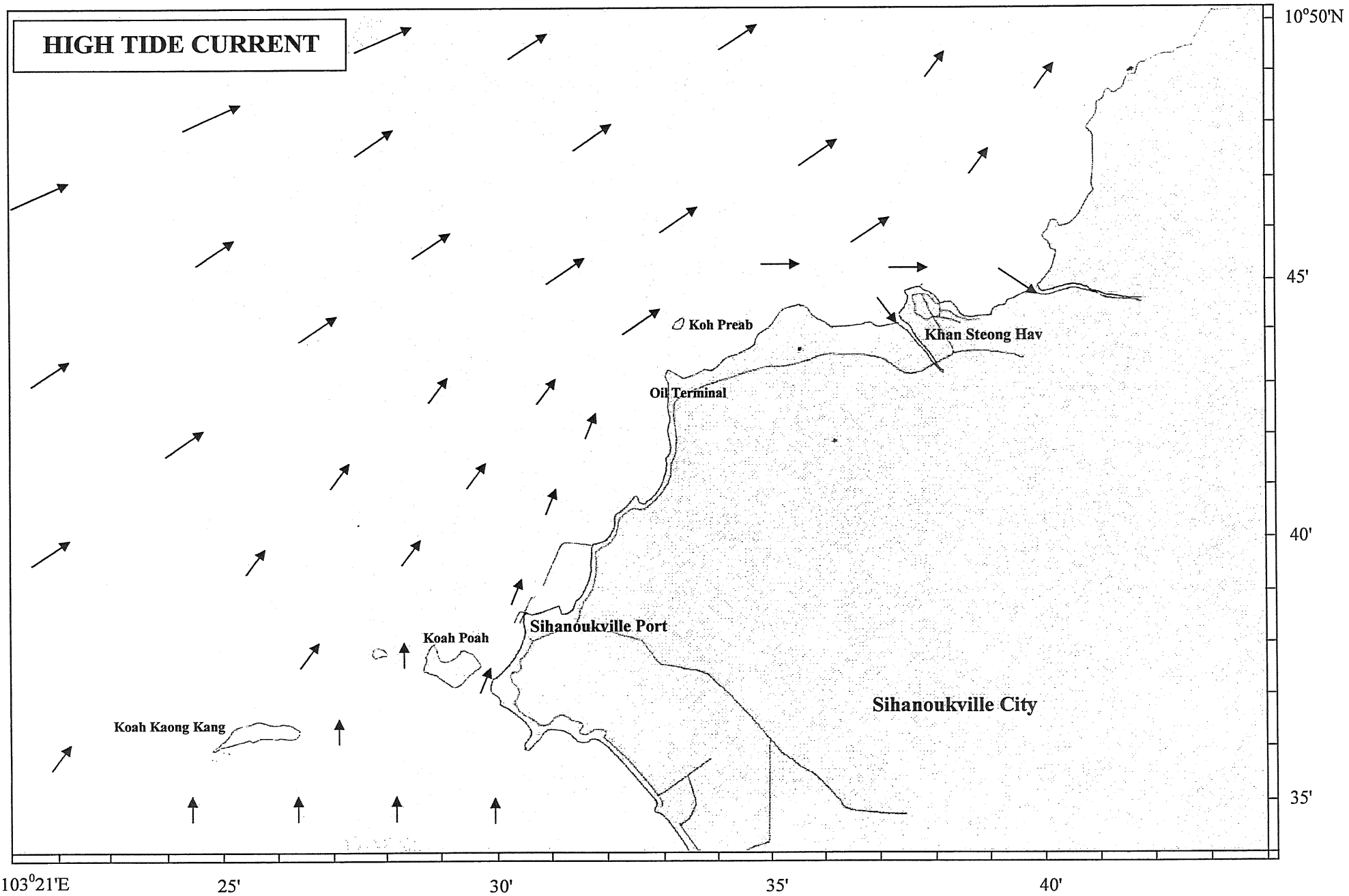
Source: Station of Sihanoukville, Department of Meteorology 2001-2005

Remark: *This Data is used for the purpose of Table Top Exercise on 24 Feb 2006 only.*
(Prepared by MMD)

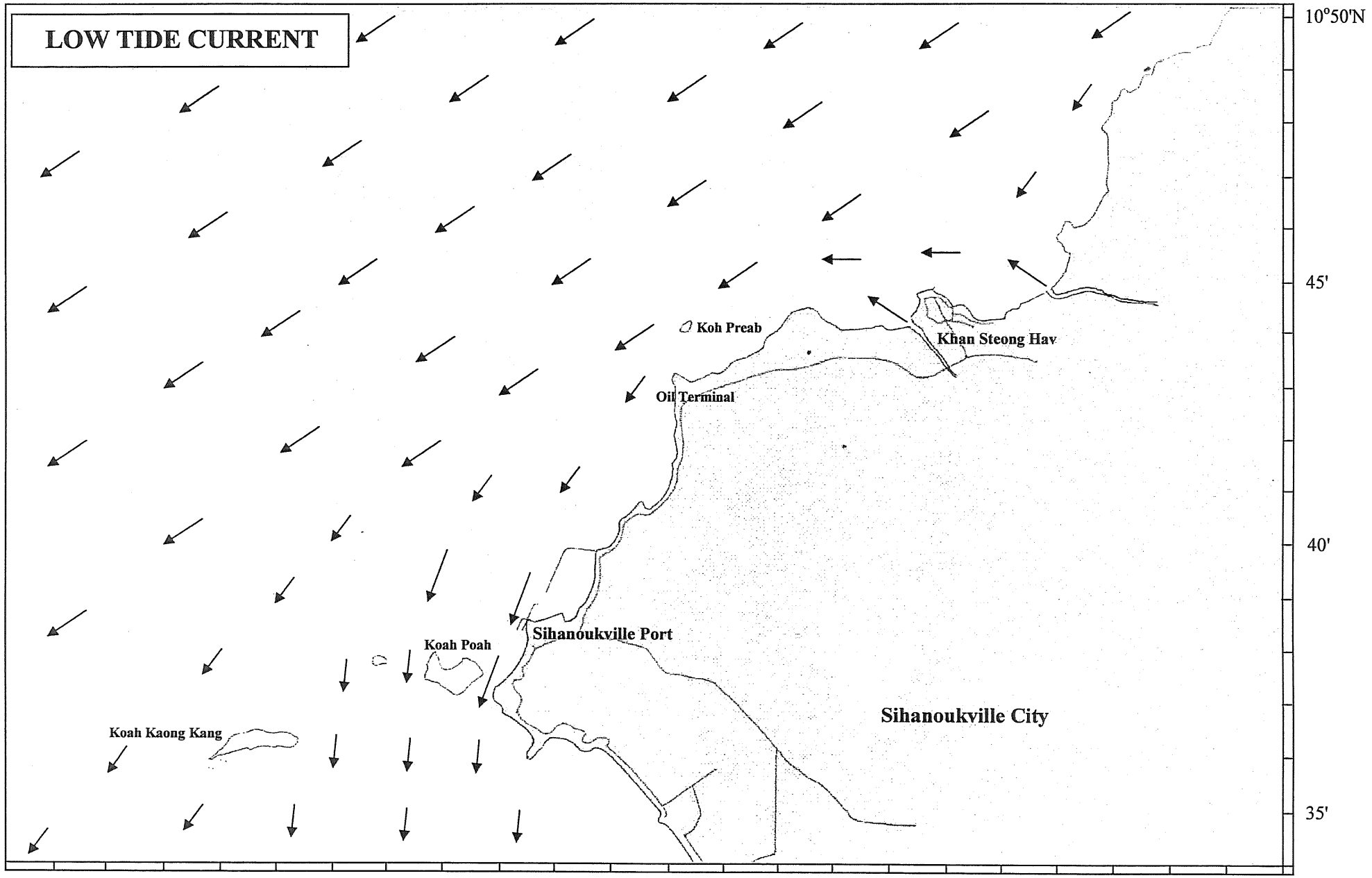
Wind Direction/Speed (m/s) for 2005

Month	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
Day	dd	fx	dd	fx	dd	fx	dd	fx	dd	fx	dd	fx	dd	fx	dd	fx	dd	fx	dd	fx	dd	fx	dd	fx
1	SE	5	N	9	SE	15	SEN	6	SW	9	SW	10	SW	10	SW	6	SW	7	NE	7	SW	6	N	6
2	SE	4	S	9	NE	16	SE	6	S	9	SW	16	W	4	W	3	W	7	N	5	SW	5	NNE	7
3	SE	4	S	8	S	6	S	4	SW	4	SW	10	W	6	WSW	6	S	5	W	6	SW	2	N	7
4	NE	5	S	10	S	3	SE	4	SW	2	SW	4	W	2	SW	4	SSW	3	S	6	NW	3	N	6
5	SE	5	S	6	SE	4	S	6	SW	8	SW	2	W	8	S	4	W	3	SSW	6	W	6	N	7
6	N	5	SE	4	S	3	S	2	SW	5	SW	4	W	7	S	4	S	5	SSW	6	WN	6	N	7
7	NNE	6	S	2	SE	4	S	4	W	4	NW	4	W	2	W	4	W	5	SW	5	W	5	N	8
8	WN	6	S	2	SE	6	SE	7	SW	5	WSW	8	E	2	W	2	W	4	N	4	SW	4	N	8
9	N	16	SE	6	SE	4	S	4	SW	6	SW	2	WSW	4	W	2	WSW	4	N	4	N	4	N	8
10	S	6	S	6	S	7	SE	3	SW	6	SW	2	SSW	3	W	6	SW	5	NE	5	SW	7	N	10
11	S	4	S	6	S	8	SE	4	SW	10	W	6	NW	16	N	8	W	5	NNW	6	N	13	N	2
12	SE	4	S	3	SE	4	SE	8	SW	11	W	4	WNW	4	NNW	18	ENE	5	N	6	NNW	15	NE	2
13	S	3	S	12	SE	4	SE	9	S	11	W	18	W	4	W	6	E	3	ENE	5	N	2	N	2
14	SE	3	S	15	S	2	S	8	SW	10	W	4	W	12	NW	2	W	3	N	5	N	4	N	2
15	S	4	SE	6	S	6	NE	8	SW	6	SW	4	S	8	W	4	SW	3	N	6	N	2	NE	4
16	S	3	SE	4	SE	6	NE	6	SW	6	SW	4	N	5	SW	2	SW	3	N	5	N	2	N	10
17	SE	6	S	3	S	4	S	2	SW	2	W	4	SW	6	S	3	NNW	3	N	8	N	1	NNE	6
18	E	5	SE	6	S	5	SE	3	SW	2	W	4	W	6	SW	3	N	17	NE	8	NNW	2	N	2
19	E	5	E	8	S	5	S	6	S	2	W	4	W	4	WSW	6	SW	6	S	4	NNE	2	N	2
20	SSE	4	SE	2	S	5	SE	12	S	12	W	3	W	2	W	6	S	2	S	4	N	2	N	4
21	E	4	SE	3	S	4	SW	10	S	2	W	6	W	3	WSW	3	WSW	4	N	3	N	4	N	10
22	S	5	SE	15	SE	4	S	13	SE	3	W	4	SSW	10	W	4	W	2	WNW	2	N	2	ENE	3
23	SSE	3	SE	6	SE	6	S	2	S	3	SW	6	W	4	WSW	7	W	2	S	14	NNE	4	NNE	6
24	SE	4	S	4	NW	6	S	6	E	2	W	5	W	6	WSW	6	SW	4	SE	2	N	4	NNE	4
25	SE	6	SE	10	SE	6	S	6	SW	6	W	2	W	2	W	2	S	4	E	12	N	2	N	5
26	NNE	4	S	6	SE	4	S	4	SW	8	W	2	WS	4	W	4	SSE	2	N	1	N	4	NNE	2
27	E	5	SE	4	NE	6	S	3	W	2	W	6	SW	5	W	4	SW	6	NW	4	NE	4	NE	4
28	NE	2	SE	4	NE	6	S	2	W	6	W	4	W	4	W	4	SW	4	N	2	S	4	N	5
29	NNE	6			E	8	S	6	WS	2	W	8	NW	16	WSW	7	WNW	4	NNE	2	S	4	NNE	4
30	NE	6			SE	6	NE	4	W	3	W	5	WSW	4	S	6	SW	3	NE	2	S	4	NNE	4
31	SE	8			S	4			NW	4			SW	5					N	2			N	6
Average		6.5		6.5		9.5		5		6.5		7.5		7.5		6		7		4.5		5		6
Max		16		15		16		13		12		18		16		18		17		14		15		10

Remark: This Data is used for the purpose of Table Top Exercise on 24 Feb 2006 only.
(Prepared by MMD)



Remark: *This Map is used for the purpose of Table Top Exercise on 24 Feb 2006 Only. (Prepared by MMD)*



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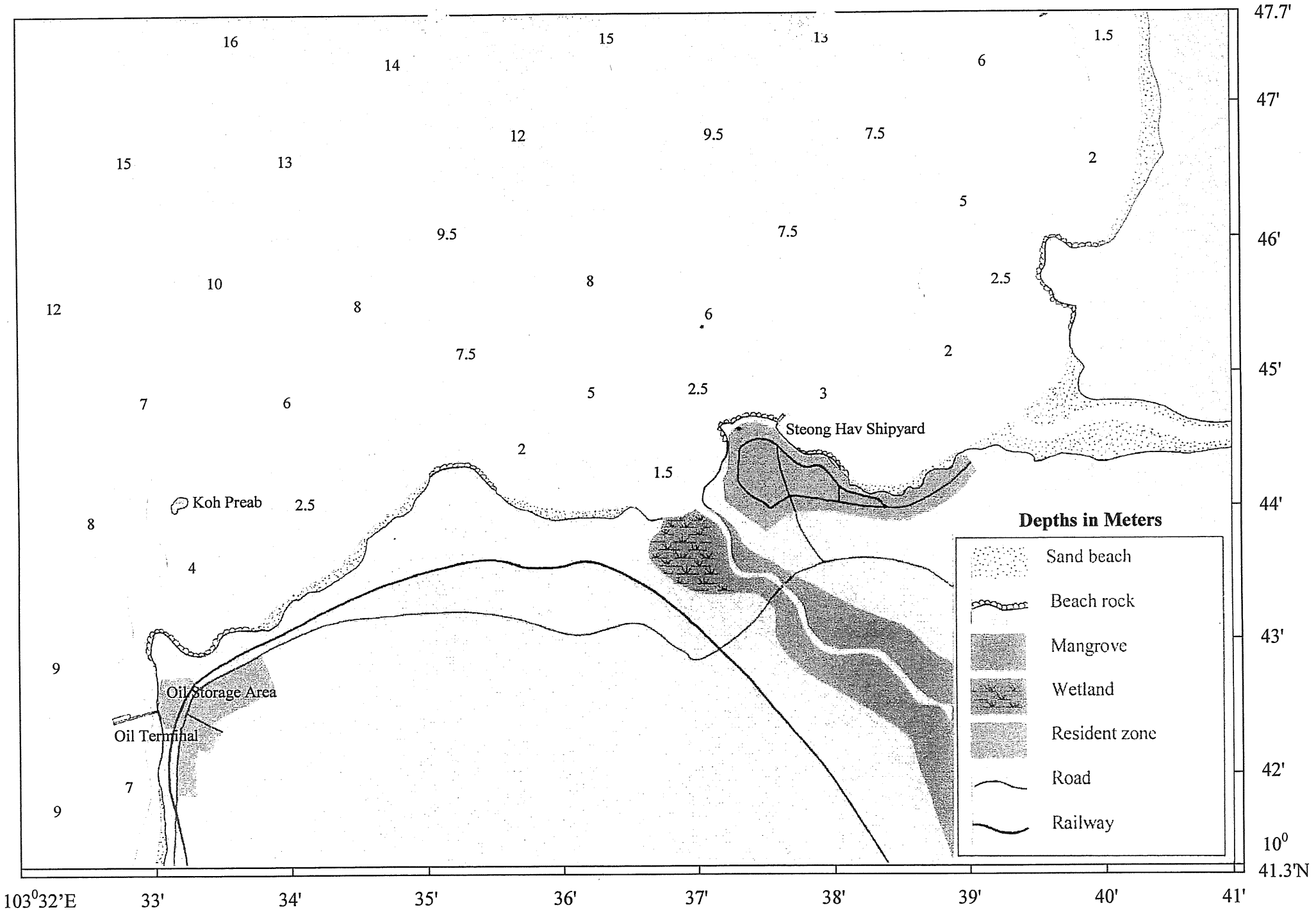


Remark: *This Map is used for the purpose of Table Top Exercise on 24 Feb 2006 Only. (Prepared by MMD)*

Land Distance Table
(in Km)

	Sihanoukville Government hall	Sihanoukville Port	Sokimex Oil Terminal	PTT Oil Teminal	Stoeng Hav Commune	Road Construction Co.	Waste Disposal Company
Sihanoukville Central Market	5	5	16	25	19	2	10
Waste Disposal Company	8	7	17	15	30	9	
Road Construction Co.	5	4	15	24	28		
Stoeng Hav Commune	25	24	13	45			
PTT Oil Teminal	23	22	32				
Sokimex Oil Terminal	12	11					
Sihanoukville Port	1						

Remark: *This Data is used for the purpose of Table Top Exercise on 24 Feb 2006 Only.*
(Prepared by MMD)

List of equipment for oil spill response
(Separated feature)

1. Port Autonomous of Sihanoukville

No	Oil Spill Equipment	Specifications	QTY	Available for loan
1	Tug boat	800HP	2 units	2 units
2	Tug boat	1600HP	2 units	2 units
3	Mooring boat		1 unit	1 unit
4	Forklift	5-50T	10 units	10 units
5	Container Truck	20-30T	10 units	10 units
6	Boom	SK-10, 8Lghts	200 m	200 m

2. CALTEX – Private Company

No	Oil Spill Equipment	Specifications	QTY	Available for loan
1	Oil Contaminant Boom	SK-10, 8Lghts	200 m	100 m
2	Oil Contaminant Boom	SK-F06, 2Lghts	50 m	25 m
3	Dispersant	Tergro-R40, 25L/Drum	7 drums	4 Drums
4	Back Pad Sprayer	OSATU, 16L	4 units	2 units
5	Rigid Manta Ray Skimmer	With Hoses & Pump	1 set	1 set

3. SHELL – Private Company

No	Oil Spill Equipment	Specifications	QTY	Available for loan
1	Booms	T-20, 8"x10", gl/bale	120 m	120 m
2	Sorbent	HP-556, 17"x19", 37.3 gl/bale	1 bale	25m

4. PTT – Private Company

No	Oil Spill Equipment	Specifications	QTY	Available for loan
1	Oil Dispersant	Tergo-R40, 25L/Drum	20 drums	10 drums
2	Oil skimmer, Disc.	Engine driven with hydraulic pump	1 unit	1 unit
3	Habour oil boom	15m/set, total 375 m	25 units	25 units
4	Oil dispersant sprayer	20 liters	2 units	2 units
5	Boom	SK-10, 8Lghts	150 m	150 m
6	Operator			3 pers.

5. Sihanoukville Road Construction Company

No	Equipment	Specifications	QTY	Available for loan
1	Pontoon (Sand Carrier) with Pusher boat and Grab	Ballast Tank = 450 tons 550 HP, SWL=3tons	1 unit	1 unit
2	Pontoon (Multipurpose Carrier) with Floating Crane	Ballast Tank = 300 tons SWL=25tons	1 unit	1 unit
3	Bulldozer		5 units	5 units
4	Dump truck	10 m^3	17 units	15 units
5	Crane	Kato, SWL =5-40 tons	3 units	3 units
6	Generator	Yanmar, 20-100KW	5 units	4 units
7	Excavator		3 units	3 units
8	Tank truck	20-30 m^3	5 units	5 units
9	Storage tank	Volume =5000-30000L	10 units	10 units
10	Worker		100 pers.	100 pers

6. Sihanoukville Waste Disposal Company

No	Equipment	Specifications	QTY	Available for loan
1	Garbage truck	8 m^3	20 units	15 units
2	Vacuum truck	6 m^3	7 units	5 units
3	Garbage trolley	300Kg	25 units	25 units
4	Worker		50 pers.	50 pers.

Remark: *This Data is used for the purpose of Table Top Exercise on 24 Feb 2006 only.*
(Prepared by MMD)

List of Equipment for Oil Spill Response
(Coalition feature)

N°	Contents	Total Quantity	Available for loan	Equipment Owner
1	Tug boat	4	4	SHV Port
2	Mooring boat	1	1	SHV Port
3	Forklift	10	10	SHV Port
4	Truck	10	10	SHV Port
5	Pontoon with Grab and Pusher	1	1	Road Construction Co.
6	Pontoon with Floating Crane	1	1	Road Construction Co.
7	Bulldozer	5	5	Road Construction Co.
8	Tank Truck	5	5	Road Construction Co.
9	Garbage Truck	20	15	Road Construction Co.
10	Vacuum Truck	7	5	Waste Disposal Co.
11	Garbage trolley	25	25	Waste Disposal Co.
12	Storage tank	10	10	Road Construction Co.
13	Oil Contaminant Boom	720	200 125 120 150	SHV Port CALTEX Co. SHELL Co. PTT Co.
14	Harbour Oil Boom	15m x 25	15m x 25	PTT Co.
15	Dispersant	27 drums	10 drums 4 drums	PTT Co. CALTEX Co.
16	Back Pad Sprayer	6 units	2 units 2 units	PTT Co. CALTEX Co.
17	Skimmers	2 units	2 units	CALTEX & PTT Co.
18	Sorbent	1 bale	1 bale	SHELL Co.
19	Dump truck	17 units	15 units	Road Construction Co.
20	Crane	3 units	3 units	Road Construction Co.
21	Generator	5 units	4 units	Road Construction Co.
22	Excavator	3 units	3 units	Road Construction Co.
23	Worker	150 pers.	100 pers. 50 pers.	Road Construction Co. Waste Disposal Co.

Remark: This Data is used for the purpose of Table Top Exercise on 24 Feb 2006 only.
(Prepared by MMD)

UNION OF MYANMAR

Oil Spill Table Top Exercise

CMV Project

Detail Data.

Date – 20-2-2006

Place – YANGON

Contents

Aims & Objects

1. Plans to be implemented on response to oil spill at sea and to form responsible Organizations.

2. To promote powerful new emerging forces in response to counter oil spill with available tools and equipment and men power.

3. To prevent water pollution and ecological nature at sea, due to oil spill.

4. As a member state, it is to cooperate and participate with other member state of ASEAN, in ASEAN's OSPAR Project.

Oil Spill Table Top Exercise

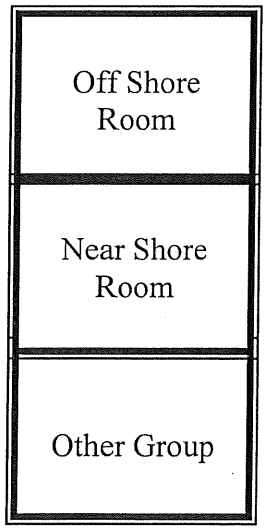
Date- 20-2-2006

Time- 09:00

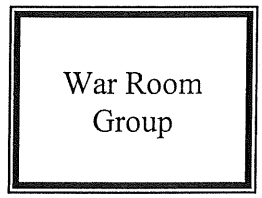
Place- Grand Plaza Park Royal Hotel, Meeting Room 1, 2 and 3.
Ball Room 3

Floor Plan

Meeting Room 1, 2 and 3



Ball Room 3



PARTICIPANT LIST

No.	Name	Rank	Department
1.	U MAUNG MAUNG SOE	DEPUTY GENERAL MANAGER	M.F.S.L
2.	U ZAW TUN LWIN	HARBOUR MASTER	M. P.A
3.	U NYUNT WIN	CAPTAIN	M. P.A
4.	U MIN AUNG	CAPTAIN	M. P.A
5.	U TUN TUN	CAPTAIN	M. P.A
6.	U AYE KO KO	DEPUTY DIRECTOR	D.W.I.T
7.	U HTWE MYINT	DEPUTY DIRECTOR	D.W.I.T
8.	U TIN OO	ASSISTANT DIRECTOR	M.P.E
9.	U KYAW SAN NAING	HEAD OF BRANCH	N.C.E.A
10.	U AUNG WIN	CAPTAIN	M.M.U
11.	U TOE MYINT	DEPUTY DIRECTOR	D.M.A
12.	U SOE NAING	DEPUTY DIRECTOR	D.M.A
13.	U WIN AUNG	DEPUTY DIRECTOR	D.M.A
14.	U THANT ZIN OO	ASSISTANT DIRECTOR	D.M.A
15.	U SOE MYINT	ASSISTANT DIRECTOR	D.M.A
16.	U KHIN MAUNG AYE	NAVAL ARCHITECT	D.M.A
17.	U SAY SAY	ASSISTANT DIRECTOR	D.M.A
18.	U THEIN OO	STAFF OFFICER	D.M.A
19.	U KYAW MOE	ASSISTANT ENGINEER	D.M.A
20.	U MYA SEIN	BRANCH CLERK	D.M.A

Table Top Exercise Schedule

15-2-2006

Pre - Negotiation between Myanmar and Japanese Experts

16-2-2006

Explanation meeting with all participants for preparation of Table-Top Exercise

17-2-2006

Opening Ceremony and Lecture and Seminar on oil spill Response

20-2-2006

Table Top Exercise and Closing Ceremony

Tentative Schedule for Table-Top Exercise

15 February

0930 – 1230 Pre Negotiation between staffs of core member of Myanmar side and Japanese experts for discussion about Table Top Exercise.

16 February

0930-0940	Gathering at meeting room
0940-1010	Proposed National Oil Spill Contingency plan explained by Myanmar Side
1010-1030	Coffee break
1030-1230	Explanation meeting with all participants
1230-1330	Lunch
1330-1440	Presentation of exercise scenario and assign roles for playing exercise
1440-1500	Coffee Break
1500-1630	Advice and Comment by Japanese Experts

17 February

1230-1250	Inaugural Ceremony
1250-1300	Refreshments
1300-1310	Opening remarks by Chair Person
1310-1400	Frame work to prepare for and Respond to oil spills in Japan (by Mr. HATAWAKA)
1400-1450	A Guide to contingency planning for oil spills on water by Tsuyoshi MATSUDA
1450-1530	CMV Project and Myanmar by U Maung Maung Soe
1530-1610	Preparation for proposed oil spill contingency plan in Myanmar by U Toe Myint
1610-1650	Discussion and Questions
1650-1700	Closing Remark by Chairperson

20 February

0830-0900	Introduction about Oil Spill Table Top Exercise.
0900-1230	Conducting Table Top Exercise.
1230-1330	Lunch.
1330-14:15	Presentation of "the necessity of human development in the field of oil spill response & CMV project " by CDR Soda as the final stage of CMV project.
1415-1520	Evaluation-Evaluation by Myanmar-side, Comments from AEAN guests and Evaluation and Instruction by Japanese experts.
1520-1530	Coffee break
1530-1600	Discussion and Question.
1600-1630	Closing Ceremony.

Incident Information

- Cause of incident: oil tanker collision
- Time & location 17th Feb 2006, 45 mile away from south of Yangon

First stage of exercise

- Time and Location of the incident :
- Oil spill occurred 1300th (Local time) 17th February 2006, at lat 16 05'N long 96 30' E, 45 mile away from Yangon City.
- Incident Cause:
  Mother Tanker: MT Ocean Apex; off Dagon Light vessel, Myanmar flag M.T Ye Nant Tha after cargo transferred proceed to Yangon port, steering gear failure and collided with mother tanker, No. 1 Tank of M.T Ye Nant Tha was leaking and 300 tons of FO were spilt and oil is leaking from M.T Ye Nant Tha.
- Sea condition: Wave height 0.5 meter to Wind: 20 knots North 70° East; Current 2.25 knots to North 30° West.

Second state of exercise

- Sea conditions:
  From 0600h: wave height: 0.5 meter, Wind : 20 knots from the Easterly, current: 2.25 knots to South 20° West.
  After 1300h: East Wind 20 knots, current 2.8 knots to North 20°East.

Third stage of exercise

Sea conditions : Wind : 25 knots Easterly
Current : 2.4 knots to 20° East.

Tide Table

Elephant Point

	Time	Metre
17-2-2006	0014	0.88
	0527	5.99
	1236	0.62
	1745	6.02
18-2-2006	0040	0.91
	0553	5.74
	1256	0.74
	1812	5.90
19-2-2006	0104	1.01
	0623	5.41
	1316	1.01
	1841	5.69

Viscosity at 40° C	-	43.4
Density	-	0.9829
Pour Point	-	75° F
Flash Point	-	+ 50° C

Particular of Ship

MT OCEAN APEX		M.T Ye Nant Tha	
GT	- 58400	LOA	-214' 6"
NT	- 30100	LBP	-213' 6"
DWT	- 95000T	GT	-992.52
LOA	- 243 M	DWT	-2029.44 T
BREADTH	- 18 M	BREADTH	-36' 1"
DRAFT	- 14 M	DEPTH	-18'
		DRAFT	-16' 2"

WAYS & MEANS TO RESPONSE COUNTER MEASURES IN OIL SPILL

Where, there will be oil spill at Myanmar off shore and littoral waters of bays, delta, rivers and tributaries, there will be water pollution damages and loss in natural marine resources, damage to sea beaches and rivers, damage to marine products and fisheries, loosing incalculable huge sum of money. So, it is the unavoidable duty of propose of Myanmar to response the oil spill.

Wherever there will be outbreak of oil spill-

(1) Means and ways to response and clearance at off shore area.

(2) To implement means and ways to deter the arrival of along the coast;

(3) Finding Ways to use bread crude oil or to friend ways to dispose the spill oil.

(4) To find means and ways to coast and the spill oil build temporary scan age tanks.

(5) To draw plans to be implemented in finding means and ways to use dispersant chemical, which depends on the volumes of oil spill. These are to be handed by Responsive organizations of all levels. Their responsibilities are to be adopted and are to be carried out with perverted duties.

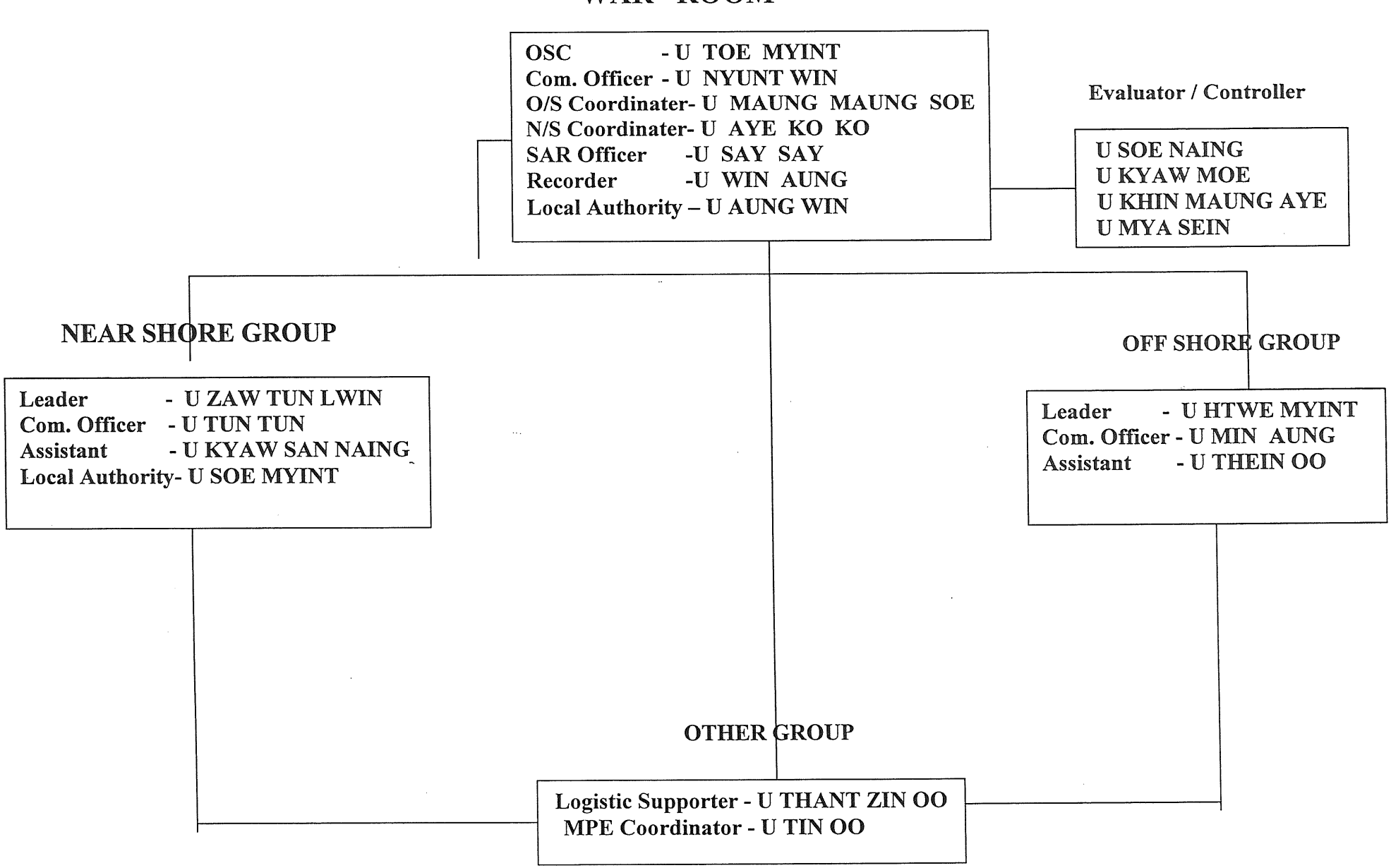
Wherever, there will be oil spill in offshore area the watercrafts and booms are to be used and the oil slick are to be contained the of spilled oil be used with skimmers. The Dispersants is to contained the oil and set it alight which depends on type of oil and nature of spilled oil's thickness.

Wherever the oil slicks reaches the in-shore sensitive areas such as sea beach, Rhizophora mangroves coral reefs, fish and pearl breeding areas, they are to be prevent not to reach such areas using booms, and to divert the oil slick to the other areas.

Supposing that the oil slicks residues the shores, the oil slicks residues on send dunes, rocks and coral reefs be removed by using vacuum trucks and so on. The oil that remain stuck be removed with deck-brush and dispersant chemicals. Those after on the sand dune be cleared by removing the effected surface of the sand dune. These are to be executed with manpower.

If the oil slicks are near the area of fish and pearl breeding farms the use of dispersant be considered their. The recovered oil must be kept in a temporary oil tanks and they are duely dispatched to the recycling plants. The untraceable oil be used in brick baking factory as furnace oil. It there may be difficulty in transportation the oil is to be dumped in a pit without posing any danger to natural resources. And this may be the last and final stage in disposing the salvaged oil.

ORGANIZATION CHART FOR TABLE TOP EXERCISE



THE DUTIES & RESPONSIBILITIES OF `ON SCENE COMMANDER'.

- Having responsibilities concerning with Oil Spill response counter measures, management overseeing and safety of the participants.
- to monitor the movement of Oil Slicks to determine the amount of oil in oil slick and their volume.
- During the wage of oil spill Response, which area must be given first priority and oil spill response group under his authority to given proper tasks .
- to supply necessary equipments and paraphinalia to all response leaders.

THE DUTIES & RESPONSIBILITIES OF LEADERS OF NEAR-SHORE CLEARANCE GROUPS.

1. The tasks to be executed in oil spill response procedure be supervise and overseened.
2. Near shore oil spill prevention and clearance tasks are to be supervised .
3. to control the expansion of oil slicks be executed seperately .
4. to execute the prevention of approaching of oil slicks towards the shore and if there will be overflow of oil slicks, he is to supervice clearance of oil.
5. to carryout the directives of OSC.
6. to prepare a report and submitted to OSC.
7. to acquire office equipments.
8. to redirect the order of job suspensions, abolishment and directives to the subordinate groups.
9. Other emending extra ordinary events be take over and supervised .
10. The list of staff, used, articles, job carried outs be entered in their respective forms and are dually dispatched to record section .

THE DUTIES & RESPONSIBILITIES OF LEADER OF OFF SHORE CLEARANCE GROUP

1. The task to be executed in response of oil spill program be accomplished completely.
2. To supervise the salvage of oil slicks in off shore area.
3. To maintain the control of oil slicks within the spill area.
4. To execute the orders of OSC.
5. To prepare the report of executed jobs and submitted to the OSC.
6. The suspension of jobs, the a abolishment and the directives be known to the lower subordinate groups.
7. To exercise to acquire office equipments.
8. Other emerging extraordinary events be taken over and supervised.
9. The list of staff, used articles jobs carried out to be entered in than respective forms and are duely dispatched to the record section.

The Opening events of table Top Exercise

Period of Exercised	Events of Oil Spill	Events in full detail	Remarks
20-2-2006	17-2-2006 13:00 Hours	The MT Yenantha, after receiving of oil from the bulk carrier, started to enroute towards Yangon. It Suddenly collided with the Bulk carrier due to failure of steering gear. The impact cause spill of furnace oil from tank No.1.	
09:100	13:30	The accident was reported duely to the Port Communication Tower and Ministry of Energy. It also requested to the Directorate of Marine Administration for the salvage of oil spill.	
		The position of oil spill ship is at North lat 16° 5' and East Long 96° 30', 45 miles away from Yangon according to the Port Communication Tower	
09:15	13:40	According to the report of Pilot Vessel the possibility of outbreak of fire from oil spill is very low and the wind speed that was blowing at that time and current, the crest of waves are duly reported as follows. Wind speed 25 knots North 70° East Crest of wave 0.5 Meters. Current 2.25 knots to North 30° West.	
09.25	14:50	According to the Ministry of Energy's report, the fact as figures of furnace oil is as follows. Density of Oil 0.9829 Temperature of oil crust + 15°c	
09:30	14:50	According to the report of MT. Yenantha, there is no casualty amongst the crew, it is a mile apart from the bulk carrier, drifting along with the current it is now under control and anchorage at North lat. 16° 6' East Long. 96° 29'.	
09:35	15:00	According to the reports of Naval ship Yan Shin Aung which is at the position of North Lat 16°78' and East Long 96°32' that is on duely to safe guard against the bulk carrier is still an duty.	
09:45	16:00	The MT Yenantha report that the crude oil remaining in the tank No.1, that is about 75 tons was successfully transferred to the tank No.2, and the oil spilled towards the sea is a about 100 tons.	
10:00	17:45	The Naval vessel reported that the oil spill drifted towards North lat 16' 11.8' and East Long 96° 21' near the Wetkite village, which was 13 miles away. Similarly the Yangon Division Development Council issued an emergency that the Let Khoke Kon sea beach and resort was closed temporarily for the line being. The wind speed and tide is as follows. Wind speed 20 knots Easterly Current 3.0 knots South 10 West	

Period of Exercised	Events of Oil Spill	Events in full detail	Remarks
20-2-2006 10:10	17-2-2006 18:45	The Navel vessel reported that the oil spill drifted North Lat. 16° 9' and East Long 96° 21.2' the blowing of wind and the current is as follows: Wind Speed 20 knots Easterly Current 3.0 knots North 10° West	
10:30	21:00	The oil carrier M T Yenantha reported that the steering gear is repaired and is now in normal position and every thing is under control.	
	22:45	The Navel Vessel reported the Weather at sea as follows. Wind Speed 20 knots Easterly Crest of Wave 0.5 meter Current 3.7 Knots North 10° West	
10:45 Hours	18-2-2006 04:45 Hours	It is accordingly known of the report by the fishing schooner of Witkite that the Oil Spill drafted towards the Sandbank .The Naval Vessel Yan Shin Aung also reported that the oil spill is now at the North Lat 16°19.2' and East Long 96°13'. She further at sea at that Locality. Wind Speed 20 Knots Easterly Crest Wave 0.5 meter Current 2.2 knots to South 20°' West	
11:00	07:00	The Yangon Derision Peace & Development Council proclaimed that the Let Khoke Kone Sea Beach & Resort is closed with effect from 6:00 AM .	
11:20	13:00	The off shore Oil Spill Response Committer reported that the Oil-Spill drafted towards the locality of North Sat 16° 2.5' and East Long 96° 3'. It further reported the weather at that Locality as follows: Wind Speed 20 Knots Easterly Current 2.8 Knots to North 20° East	
11:45	18:00	A similar report issued by the off shore Oil-Spill Response committee is that the head Response of Oil-Spill is at North Lat 16° 16' and East Long. 96° 5' and the weather is as follows. Wind Speed 15 Knots Easterly Current 2.6 Knots to North 10° west	
	19-2-2006 01:00 Hours	The off-Shore Oil-Spill Response committee reported the nature of weather at sea at that moment Wind Speed 25 Knots Easterly Current 2.4 Knots to North 20° East	
11:55	06:00	The off-shore Oil-Spill Response committee reported that the remaining Oil-Spill is countered by locally made straw booms not to spread towards the sea. The head of the Oil-Spill 16° 11' and East Long 16° 3'.	
12:30	12:30	The off shore Oil Spill Response Committer reported that the Oil-Spill along the Mayan Island is completely and successfully contained.	
12:00	12:00	The Table Top Exercise came to an end.	

Event No.(1)

MT Yeanantha Oil carrier flash message to Ministry of Energy and Post communication Tower by SSB and it was duely received.

Date 17-2-2006

Time 13:00 Hours

It is said that after receiving the oil from the Bulk carrier, MT Yenantha started to depart, and it happened to collided with the Bulk carrier, due to steering gear's failure. The N0.1, tank of MT Yenantha that holds 300 tons of oil, damage.

Event No.(2)

A message flash by Port Communication Tower

Date 17-2-2006

Time 13:30 Hours

The position of MT Yenantha is North Latitude 16° 5' and East Longitude 96° 30', 45 miles away from Yangon.

Event No.(3)

A message from Pilot Vessel.

Date	17-2-2006
Time	13:40 Hours

The out break of fire due to Oil Spill is very little.

Wind speed	25 knots, N.70° E
Crest of Wave	0:5 meter
Current	2.25 knots N 30° W

Event No.(4)

A message from Ministry of Energy.

Date	17-2-2006
Time	14:30 Hours

Facts & figures of Oil Spill from MT Yenantha

Density of oil	0.9829
Temperature of Oil Crust	+15° C

Event No.(5)

A message from MT Yenantha.

Date 17-2-2006

Time 14:50 Hours

It is said that the MT Yenantha lay anchor at and control at about a mile from the bulk carrier N. Lat 16°6' E Long 96° 29' .

Event No.(6)

A message from Navel vessel Yan Shin Aung.

Date 17-2-2006

Time 15:00 Hours

The Oil Spill is situated at N. Lat 16° 7.8' & E. Long 96° 26.5'.

Event No.(7)

A message from MT Yenantha.

Date 17-2-2006

Time 16:00 Hours

It is said that the remaining crude oil of above 75 ton has been transferred to tank No.2 from Tank No.1 about 100 tons has been lost.

Event No.(8)

A message from Navel vessel Yan Shin Aung.

Date 17-2-2006

Time 17:45 Hours

The Oil Spill has been drifted to N. Lat 16° 11.8' and E. Long 96° 20', 13 miles away from Wet Kite Village.

Wind Speed	20 knots Easterly.
Crest of Wave	0.5 meter
Current	3.0 knot South 10° West

Event No.(9)

A message from Navel Vessel Yan Shin Aung.

Date 17-2-2006

Time 18:45 Hours

It is said that the oil spill drifted to North Lat 16° 9'and East Long 96° 21.2'.

Wind speed 20 knots Easterly.

Current 3.0 knots South 10° West.

Event No.(10)

A message from MT Yenantha

Date 17-2-2006

Time 21:00 Hours

The nature of steering gear came to normal.

Event No.(11)

A message from Naval Vessel Yan Shin Aung.

Date	17-2-2006
Time	22:45 Hours
Wind speed	20 knots Easterly.
Wave Crest	0.5 Meter
Current	3.7 knots North 10° West

Event No.(12)

A message from Naval Vessel Yan Shin Aung.

Date	18-2-2006
Time	04:45 Hours

It is said that the oil spill drifted to wards a sand dune near a shore estimately Lat N. 16° 19.2' and East Long 96° 13'.

Wind Sped	20 knots Easterly
Wave Crest	0.5 meter
Current	2.2 knots South 20° West

Event No.(13)

An announcement from Yangon Division Peace & Development Council.

Date 18-2-2006

Time 07:00 Hours

The Yangon Dr. P&D council announced that the Let-Khoke Kone Sea Beach Resort has been temporarily suspended.

Event No.(14)

A message from the off-shore Oil Spill Response group.

Date 18-2-2006

Time 13:00 Hours

The Oil Spill drifted towards North Lat 16° 2.5' and East Long 96° 3'.

Wind Speed 20 knots Easterly

Current 2.8 knots to North 20° East

Event No.(15)

A message from off shore Oil Spill Response group.

Date 18-2-2006

Time 18:00 Hours

It is said that the Oil Spill drifted towards North Lat 16° 16' and East Long 96° 05'.

Wind Speed 15 knots Easterly

Current 2.6 knots to South 10 West

Event No.(16)

A message from off-shore Oil Spill Response group.

Date 19-2-2006

Time 01:00 Hours

Wind Speed 15 knots Easterly

Current 2:4 knots North 20° East

Event No.(17)

A message from Near Shore Oil Spill Response group.

Date 19-2-2006

Time 06:00 Hours

The remaining Oil Spill gas been contained with locally produced straw booms. It reaches to the position of North Lat 16° 11' and East Longitude 96° 3 '.

Event No.(18)

A message from Near Shore Oil Spill Response group.

Date 19-2-2006

Time 12:00 Hours

It remnants of Oil Spill has been salvaged and completely contained

Equipments Available

Vehicle

1.	Forklift (10-20 tons)	10 Nos.	(MPA)
2.	Tanker Truck (6 ton)	5 Nos.	(MPE/ MPA)
3.	Truck	5 Nos.	Kyaw General Trading Co., Ltd
4.	Ambulance	2 Nos.	Kyaw General Trading Co., Ltd

Vessel

1.	Sea going Tug Boat (Nat Thar and Hi Gyi)	2 Nos.	(MPA)
2.	Salvage Tug Boat (May Khalar)	1 Nos.	(MPA)
3.	Utility Boat	1 Nos.	(MPA)
4.	Dredger	4 Nos.	(MPA)
5.	Storage Tanker (500 tons)	5 Nos.	(MPE)
6.	Ro Ro Ferry	2 Nos.	(I.W.T)

Equipments and Material

1.	Boom (200 m)	2 Nos.	
2.	Skimmer (300 gal/min)	2 Nos.	
3.	Suction Pump	20 Nos.	
4.	Dispersants Type III	100 Lit.	
5.	Nylon Rope/ Plastic Rope	200 Lbs	Kyaw General Trading Co., Ltd
6.	Gaw Pya	100 Nos.	
7.	Bucket	200 Nos.	
8.	Temporary tank (1 ton Storage)	20 Nos.	
9.	Blanket	100 Nos.	
10.	Temporary hut	100 Nos.	
11.	Medical Team	5 Groups	

COUNTER MEASURES ON IMPACT OF OIL SPILL AND HOW TO COMBAT IT

Preface

1. The Union of Myanmar is rich in natural resources in, on shore off-shore and subterranean . It is the historical duty to protect these ecological nature of beautiful environment .

2. Although the Union of Myanmar is not a Signatory nation of 1990, OPRC Convention (the International Convention on oil Pollution Preparedness Response and cooperation) it is conducting to find oil and natural gas resources, So it is his duty to prevent oil pollution in South east Asia, It is known that in 1993, The Japan - led ASEAN-OSPAR Project, that is Project on oil spill Preparedness and Response in the ASEAN sea area has been in existence . So at the time of drafting New OSPAR Project, the Union of Myanmar is ready to join as a partner of MOU.

3. As a main factor in Restoration of Ecological Environment , the Prevention of oil Spill which may cause damage to Ecological System. is our duty to fight hand in hand within a short Period.

AIMS & OBJECTS:

4. To adopt Plans to prevent oil spill within a short period that spread along the Myanmar Coastal Region, and into, river, rivulets, where there is natural resources.

ROUGH SCHEME

5. The rough scheme would be carried out in seven parts.

(a) Part 1. The purchasing of equipment that used to control Oil Spill.

(b) Part 2. To form a task force that control oil spill.

(c) Part 3. To draw Plans to control the oil spill into the rivers and rivulets .

(d) Part 4. To draw plans to control oil spill in off shore area.

(c) Part 5. To draw plans to prevent and control oil spill in areas of sea beach resorts

(f) Part 6. To draw plans to prevent and control oil spill in other littoral areas.

(g) Part 7. To draw plans to prevent and control oil spill from off shore oil wells.

SCHEME IN DETAIL

Part I. The purchasing of equipments that used to control the oil spill

6. The use of barrier to stop in prevention and control oil spill. To diminish and minimize oil spill area and to concentrate the oil in a small single area, There, these are remove from the area by pumps and skimmers.

7. In order to prevent and control of oil spill, the following equipment may be needed.

(a) Curtain boom
(b) Fence boom
(c) sorbent boom
(d) Bubble Barrier
(e) Chemical Barrier
(f) Skimmers
(g) Pumps
(h) Sorbents
(i) Dispersant

8. In order to procure the above mentioned equipment in full and complete set, it is to submit for the allowance to buy it to the higher authorities.

9. Oil Spill Prevention & Control Central Committee is to be organized as follows-

(a)	Minister, Ministry of Transport	-	President
(b)	Minister, Ministry of livestock Breeding	-	Vice President
(c)	Minister, Ministry of Energy	-	Vice President.
(d)	Minister, Ministry of Communications, Posts & Telegraphs	-	Member.
(e)	Minister, Ministry of Foreign Affairs	-	Vice President.
(f)	Minister, Ministry of Home Affairs	-	Member.
(g)	Minister, Ministry of Hotel & Tourism	-	Member.
(h)	Chief Executive officer, office of the Vice Chief Staff(Navy)	-	Member.
(i)	Chief Executive officer, office of the Vice Chief Staff (Air)	-	Member.

(j) The Dy- Minister, Ministry of Transport - Secretary

(k) The Director- General - Joint Secretary .
Depart of Marine Administration

PART II Forming a group to prevent and control of oil spill.

10. The occurrence of oil spill may broken out at any time, at any place, As soon as it occurs the formation of a group is to be composed of the following officials:-

(a) Regional authority or the government.

(b) Directorate of Marine Administration.

(c) Myanmar Port Authority.

(d) Waterway Department (Water Resources, waterway Development Department).

(e) Ecological Commission.

(f) Directorate of fisheries.

(g) Myanmar pearl breeding.

(h) Myanmar oil & gas.

(i) Myanmar oil & Chemical.

(j) Directorate of fire Department.

(k) Directorate of Health.

(l) Myanmar Navy.

(m) Myanmar Air Force.

(n) Myanmar Police.

(o) Myanmar Red Cross.

(p) Non governmental organizations.

(q) Human Resources.

(r) Myanmar Five Star Lines.

PART III Planning to prevent and control of oil spill in or spread into rivers and rivulets.

11. In the Union of Myanmar there are five rivers flowing from North to South; They are-

(a) Ayeyarwaddi

(b) Chindwin

(c) Sittaung

(d) Thanlwin

(e) Kaladan rivers.

12. As the above mentioned rivers flow very fast, and when the oil spill occurs, the occurrence be control under States and Division level oil spill committee. Under the guidance of the committee, Regional organizations and Social welfare associations are to be in a united movement against the oil spill.

13. Especially in the Yangon river, Other are two places of which oil spill may occur, such as OEA (Old Explosive Anchorage) and NEA (New Explosive Anchorage) Whenever there will be an oil spill in the area when there will be oil spill in such area it will be controlled and prevent pollution by special Task force in the following way;-as shown in appendix(a)

PART IV Planning of Control of oil spill in the off shore area.

14. Off shore area means area beyond the 12 miles of International waters. The total length of Myanmar coast line is 1770 miles (2832 km) and it concern with control of oil spill beyond that of 12 miles, of territorial water in the coastal lines.

15. The off shore areas will be divided into four parts according to the plan as shown in the appendix (b)-

(a) off-shore area of Rakhine
(b) off-shore area of Ayeyawaddi
(c) off-shore area of Mon
(d) off-shore area of Thaninthayi

16. It is assigned that where there be oil spill off-shore area of Myanmar First Information Report be submitted to the DMA of Ministry of Transport, As soon as the report of oil spill is received, the Head office of DMA be informed at once to the DMA Branch office at Mawlamyine, Pathein, Sittway, and Myeik. The Branch office of DMA at the above mentioned ports are on receiving the message, at once dispatch the oil spill suppression and control units to the area of mishap with the help of regional authorities .If necessary, the DMA (HQ) will dispatch a special Task force with the arrangement of Transport Ministry.

PART-V. Drawing Plan to tame oil spill near the beach resorts.

17. The Myanmar Beach report are as shown appendix (C)-

(a) Ngapali Beach Resort

(b) Kan Thaya Beach Resort

(c) Ngwe Saung beach Resort

(d) Chaungtha Beach Resort

(e) Letkhokekone Beach Resort

(f) Kyaikkhame Beach Resort

(g) Maungmakan Beach Resort

18. Of them all Ngapali Beach Resort Kan Thaya Beach Resort are to be sponsored by Rakhine off shore oil spill control Task Force. Ngwe Saung, Chaungtha and Letkhokkon Beach Resort are to be sponsored by Ayeyawaddi off shore Oil Spill Control Task force. Kyaikkhame and Set Se Beach Resort are to be sponsored Mon State off shore Oil Spill Task force. Maungmagan Beach Resort be sponsored by Thawnthayi Beach off shore Oil Spill Task force respectively.

19. As soon as the news of out break of Oil Spill in such area, it is to prevent the Oil pollution may not reach the resort area. Although task force is try hard to prevent from reaching the resort area, the Union Solidarity and Development Organization, non-governmental social Organization, Myanmar Red Cross Organization, Fire Brigade, and local people will execute real time assistances.

PART VI Drawing of plans to control oil spill in the littoral areas;

20. The Union of Myanmar costal Region, littoral areas will be carried out for oil spill control as shown in appendix (d) and divided into five regions;

(a) Rakhine Coastal Region

(b) Ayeyawaddi Coastal Region

(c) Yangon Coastal Region

(d) Mon Coastal Region

(e) Thaninthayi Coastal Region

21. Whenever there will be oil spill along coastal region, littoral areas, it is to submit First Information Report to the DMA as it assigned before. As soon as the DMA received the news of oil spill along the coastal Region and in littoral areas, the DMA will at once be informed the branch offices of Mawlamyine, Pathine, Sittway and Myeik. The Branch offices, as soon as, they received the news of oil spill , asked their respective Regional authorities, to help them. The oil spill at Yangon Coastal region be take up by DMA (HQ).If necessary the DMA will report to the Ministry of Transport and DMA will reinforced the control of oil spill with specially constituted Special Task Force.

22. The three stages of coastal oil spill control and clearance are;

(a) removing badly polluted oil from water surface

(b) Intermediate level oil spill and cleaning of polluted articles as shown.

(c) Less polluted beach and cleaning of oil pollution.

PART-7. Planning of control of oil spill from off shore Oil Drilling Platform;

23. The followings are the diagram of Myanmar off shore oil extracting and gas extracting blocks in Myanmar off shore area as shown in appendix(c).

24. The Oil Extracting companies have already got plans to prevent oil spill and they have already stored anti- pollution devices, chemical detergents and other paraphernalias on the oil rig and at the shore base logistic Depots.

25. Whenever there will be oil spill at off shore oil rigs, the Ministry of Energy will duely inform DMA .The Oil Spill will be contained effectively by their respective companies. If there is need for outside international help, they have already engaged with Singapore-cased oil spill control groups.

ADMINISTRATION

26. Oil Spill control, that depends on nature of amount that spill in an area is classified into three Levels;

(a) Local area (or) division Level

(b) National Level

(c) Regional Level

27. In order to get equipments, chemicals and paraphernalias that used in control of oil spill be submitted to the higher authorities. They following arrangements are to be made in order to use sufficiently.

(1) The List of ready made equipments for the purpose of oil spill prevention and control , which was caused by oil gas exploration in Myanmar, and the position of storage stations of these equipments must be acquired and in case of emergency, these stations are to be contacted and it must be coordinated in advance to be hired and used.

(2) The List of the necessary equipments and their values are to be calculated and estimated .These estimates are to be submitted to the higher authorities. In order to be in a state of readiness, these equipments are to be collected and acquired in advance, after the proper authorization from higher authorities.

(3) In order to acquire equipment of very high value, we are to approach international organizations, such as Nippon Foundation, and requested them to supply such valuable equipments.

28. In order to get vehicles, to be used in control of oil spill it will have the plan of using Vehicles from Ministry of Transport, Development Affairs Dept, RTE and Boxers from Myanmar Petroleum. Product enterprises. If necessary Bulldozens and Excavators from Ministry of Construction may be used .

29. As for watercraft, it is planned to use river crafts from Port authorities, DMA, IWTB under Transport Ministry and Barge, Bulk-Carries from Myanmar oil & gas enterprises may be used.

30. As for fire prevention and extinguishing, it is in contact with Directorate of fire Department.

31 In many ceases of oil spill, there have been occurrence of Volcanic eruption. In that ease protection of human life is given first priority. Those who are wounded be cured by medical teams comprises in collaboration with Health Ministry.

32. Along with the containment of Oil Spill there always been a security precaution. The problem of security in the area of oil spill be submitted to the regional authorities, and security in the whole area of oil spill be doubled.

33. The news concerning with oil spill be released in real-time to the Ministry of Information by oil spill control office. The information Ministry be in turn release the news to Daily News Papers, MRTV, Myawaddi TV and private journals.

34. Concerning with oil spill prevention and response, we have our own arrangement to send suitable trainees to the classes carried out by the international organizations. By attending such courses, we can not only acquired modern technological skill, but also grew friendship amongst various nationals form many countries. These can leads to quicken and more effective in carrying out these duties whenever arisen. Besides these the trainees can assimilate and produce multiplier courses .They also can participate effectively, whenever there may be oil spill in their region. Not only this, we let our participants in state level and local levels that can take part in the field Exercises and Table Top Exercises, occasionally in order to minimize their obstacles and mistakes.

35. Any oil spill in coastal region and off-shore areas, be duely submit first information Report, to the DMA of Transport Ministry. The fax, e-mail, and Telephone numbers are as follows.

1. Directorate of Marine Administration (HQ)
   Yangon Fax 095,1-556047
   e.mail (myanmarine @ mptmail.net.mm)
   095,1-556907

2. Directorate of Marine Administration , Sittway
   095.043.23458
   095.043.21066

3. Directorate of Marine Administration , Pathein. 095.042.21256
   095.042.25031

4. Directorate of Marine Administration , Mawlamyaing 095.057.24643

5. Directorate of Marine Administration , Megeik 095.059.41707

6. Directorate of Marine Administration , Tawei 095.059.21004

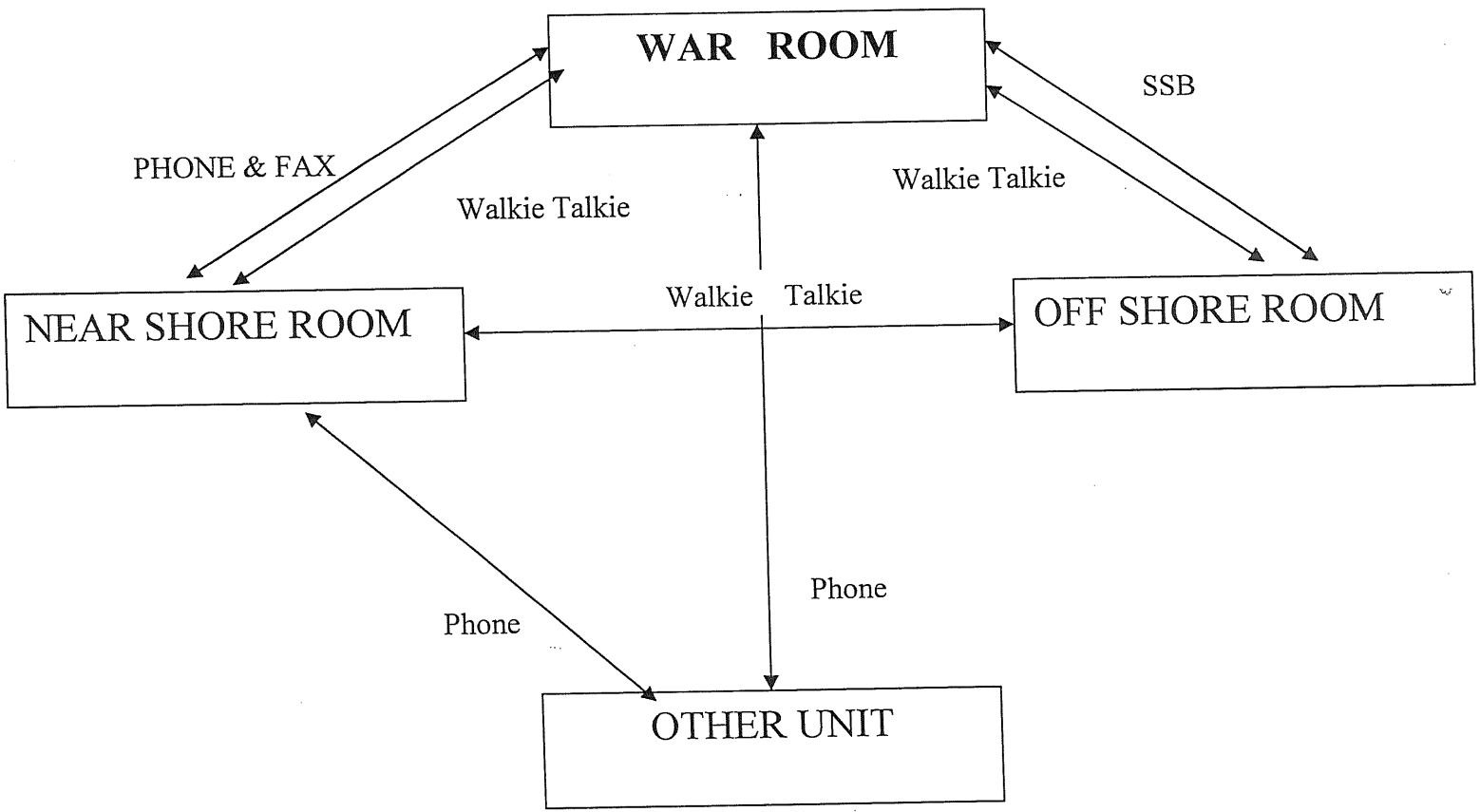
7. Directorate of Marine Administration , Kawthong 095.059.51567

36. Not only the above mentioned communicable telephone numbers, but also the telephone numbers and fax of other officials from various ministries, that shoulder the oil spill response and preparedness, must be compiled and listed. In case of emergency, these are to be duely informed and the real time execution of response can be made simultaneously. These communicable net is to be compiled systematically in two stages, such as local stage and National stage. In order to communicate effectively amongst these organizations, the systems are to be created and distributed in advance, so as to response and implemented collectively.

37. The Marine Administration, on receiving the news of oil spill, it will make notification and fully cooperation with regional Authorities, in fighting against the oil spill in emergency status.

(MAUNG MAUNG OO)
DIRECTOR GENERAL

TABLE TOP EXERCISE
COMMUNICATION DIAGRAM



OBSERVATION CHECK LIST

OBSERVATION CHECK LIST FOR WAR ROOM

No.	Required Actions	Played Actions		
		Yes	No	N/A
1.	***Communication***			
1.1	Communication with spiller			
1.2	Communicate with members of Command Group			
1.3	Communicate with Response Groups			
1.4	Communicate with Related Organizations, such as Local authority, Logistic Group and Search and Rescue			
2.	***Assessing the incident and its effects***			
2.1	Search and Rescue activities			
2.2	Weather condition: present & a week forecast.			
2.3	Movement of oil slick: Wind, Current, Wave Height condition: Spreading Status			
2.4	Estimated damages of social, economical and environmental damages			
3.	***Checking the readiness of response teams***			
3.1	Checking equipments			
3.2	Checking vehicles			
3.3	Checking personnel			
3.3	Checking provisions, sanitation, emergency medical and ambulance services			
4.	***Management plan on offshore and near shore***			
4.1	Methods of containment & recovery on sea; prepare shoreline cleaning operations			
4.2	Arranging response teams, choosing vehicles, vessels, equipments			
4.3	Cooperation with local authority and other forces			
5.	***Conducting with response operations***			
5.1	Vessels and vehicles for loading equipment			
5.2	Ordering offshore and near shore response team to the scene			
5.3	Updating operation information from offshore and near shore			
5.4	Information and instruction to likely impacted Area via response groups and local authority			
5.5	Checking recovered oil storage capacity			
5.6	Possibility of using dispersant			
5.7	Identifying High sensitive areas			
5.8	Temporary Storage condition and transporting waste to treatment plant			
5.9	Updating information to report to Higher Level			
6.	***Public Media***			
6.1	General information of incident			
6.2	Recommendations for local people for effected areas.			
7.	***Estimating response Cost***			
7.1	Operating equipments, vehicles, personnel, provisions, transportation			
7.2	Standby equipments, vehicles			
7.3	Rate of each kind			
7.4	Total cost			

OBSERVATION CHECK LIST FOR NEAR SHORE GROUP

No.	Required Actions	Played Actions		
		Yes	No	N/A
1.	Receiving accident information from war office via coordinator			
2.	Discussion with coordinator to provide required equipments, vehicles and personnel			
3.	Response action of team to the scene			
4.	Response action of team at the scene and report back to war office			
5.	Making and deploying local made boom			
6.	Small boats cooperation and temporarily oil storage arrangement			
7.	Conducting shoreline protection operations and standby for shoreline cleaning operations			
8.	Collecting equipments and assign the personnel, whose from various organizations, to contribute shoreline cleaning operations			
9.	Discussion on oil effected area mapping			
10.	Conducting shoreline cleaning operation, cleaning Methods			
11.	Storage condition & transporting way			
12.	Response activities for reporting to war room			
13.	Emergency Health Care activity			
14.	To avoid any information of accident or response activities to public media			

OBSERVATION CHECK LIST FOR OFFSHORE

No.	Required Actions	Played Actions		
		Yes	No	N/A
1.	Receiving accident information from war office via coordinator			
2.	Discussion with coordinator to provide required equipments, vehicles and personnel			
3.	Response action of team to the scene, Such as equipment loading and provision			
4.	Response action of team at the scene and report back to war office			
5.	Arranging of boom deploy method			
6.	Oil containment and recovering condition			
7.	Report to war room about oil recovery amount, sea condition, oil slick direction			
8.	Proposing other response methods: dispersant spraying operation			
9.	Recovered oil transport operation			
10.	Safety precautions between vessels			
11.	Safety precautions of personnel			
12.	To avoid any information of accident or response activities to public media			

1) Two sets of model for near-shore area and off-shore area.
2) Fax machine (2) sets.
3) Walkie-Talkie (5) sets with charger.
4) SSB Transceiver (MF/HF) (2) sets.
5) Time clock (3) Nos.

OIL SPILL TABLE-TOP EXERCISE PLAN

1. AIM & OBJECTIVES

1.1. To familiarize related persons/units/bodies with the oil spill response operations illustrated by activities during the table-top exercise before developing an oil spill contingency plan.

1.2. To find out improper/proper points for continuously improving the oil spill response plan for the southern area of Vietnam.

1.3. To transfer knowledge from Japanese experience in oil spill planning and responding

2. TIME & LOCATION

2.1. Location: Palace hotel, 01 Nguyen Trai Street, Vung Tau City Vietnam

2.2. Time: 28th Feb – 1st March of 2006 (Estimated)

3. PARTICIPANTS

Participant come from different organization, units which are related to oil spill incident, such as governmental bodies, national response centers, Petrovietnam (in charge for oil spill in the south), local authorities – see details in appendix 01

4. TRAINING & EXERCISE SCHEDULE

The oil spill table-top exercise shall take place with two days.

The first day is a training one in which Japanese experts will provide theory lectures and share their experiences on oil spill response in Japan. In addition, essential information of the table-top exercise shall be given to all participant.

On the second day, all participants will attend to a table-top exercise to play their roles in case of oil spill incident. Japan experts and organizer will support the participants to perform the exercise properly.

(see details in appendix 02)

5. SCENARIO OF THE EXERCISE

5.1. Incident Information:

- Cause of incident: oil tanker collision
- Time & location: 17 miles E-SE Vung Tau city
- Spilt oil characteristic: volume, spill rate, type oil oil,
- Weather condition: temperature of sea water, wind, current, wave

5.2. Required Response Actions (played during the exercise):

- Assessment of the incident
- Development of actions plan

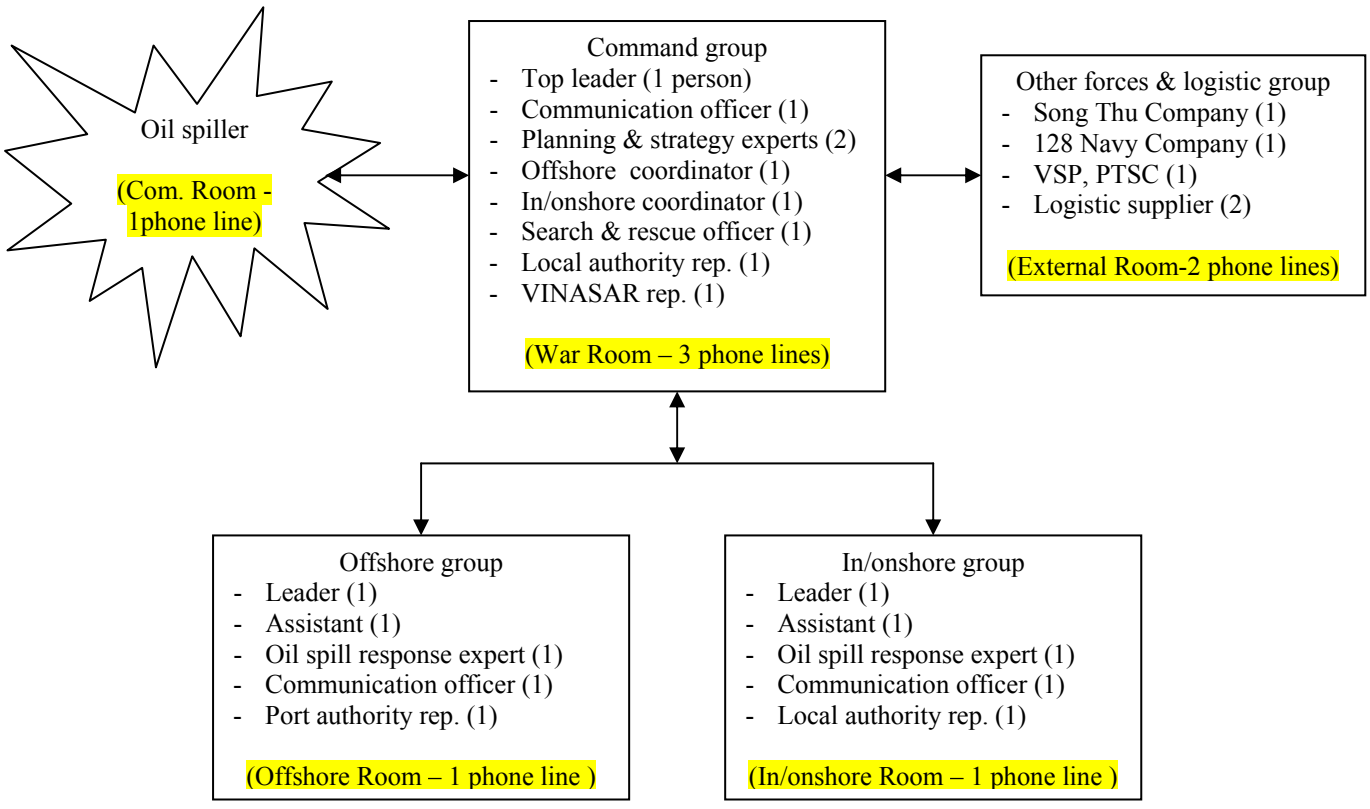
- Mobilization of response operation
- Response at the site
- Waste management and disposal
- Public media
- Cost estimation

The exercise time will be assumed to take place within three days. The incident situation and required actions of response teams are different for each assumed exercise day. The information of each day will be detailed in appendix 3.

6. EXERCISE ORGANIZATION

6.1. Organization chart

Participants will be divided into four groups: command group, offshore group, in/onshore group, other forces & logistic group. Four groups will be organized as below chart:



6.2. Basic roles of each group

Command Group (War room)

- Receiving incident reports from oil spiller (played by the organizers)
- Notifying related persons, units, bodies, agents
- Assessing the incident and evaluating its potential affects
- Check the readiness of response teams

- Developing an actions plan including of offshore, in/onshore operations
- Conducting the response operations
- Providing information to public media
- Estimating cost of the response operations

Other response forces and logistics group

- Communicating with the command board
- Reporting the available response resources
- Mobilizing equipment, vehicles ordered by command board

Offshore & on/inshore response group

- Communicating with the command board
- Choosing response strategy
- Ordering equipment, personnel, vehicles for response
- Conducting response operations at the scene
- Reporting the situation of incident at the scene to Command Board

Organizers group

- Playing as oil polluter, public media, exercise facilitators

Appendix 01:

LIST OF PARTICIPANTS

No.	Bodies/Companies	Participant No.	Notes
1. National response center for oil spill			
	PV Drilling (southern center for oil spill)	03	
	Song Thu Company (middle center for oil spill)	02	
	Navy Company 128 (northern center for oil spill)	02	
2. Local response forces (Ba Ria – Vung Tau province & Ho Chi Minh City)			
	People committees	02	
	Port Authorities	02	
	Search & Rescue Center for Marine	02	
	Natural Resource & Environment Dept.	02	
	Industrial stakeholders (Petrovietnam, VSP, RDCPSE)	05	
	Coastguard Forces in the South	01	
3. Governmental Bodies			
	National Search & Rescue Committee (VINASARCOM)	02	
	Vietnam Environment Protection Agent (VEPA)	01	
4. Organizer			
	CMV' Representatives (instructors, translator, observers)	05	
	PV Drilling logistics & support team	06	
	Total	**35**	

Note:

- Participants come from province in the North: 06 persons
- Participants come from province in the Middle: 02 persons
- Participants come from HCM City: 06 persons
- Other participants stay in Vung Tau

Appendix 02:

TRAINING SCHEDULE

Training day:	**28th February 2006**
08h00-08h30	Welcome
08h30-08h50	Opening statements (rep.s from VINASARCOM & Japan)
08h50-09h00	Introduce instructors, participants and exercise program
09h00-10h00	Presentation presented by Japanese expert
10h00-10h30	Tea break
10h30-11h30	Presentation presented by Vietnamese expert
11h30-13h30	Lunch time
13h30-15h30	Guidelines for the exercise (presented by Vietnamese instructor)
15h30-16h00	Questions & Answer

Exercise day	**1st March 2005**
08h00-08h10	Exercise briefing
08h10-09h10	The first stage of the exercise
09h10-09h30	Review the first stage
09h30-10h30	Second stage of the exercise
10h30-10h45	Tea break
10h45-11h05	Review the second stage
11h05-12h05	The third stage of the exercise
12h05-13h30	Lunch time
13h30-14h30	Review the third stage and the overall review
14h30-14h50	Report from observing team
14h50-15h05	Tea break
15h05-15h35	Recommendations from Japanese Experts
15h35-15h50	Comments from ASEAN Observers
15h50-16h00	Closing statement

Appendix 03: INCIDENT INFORMATION OF THE EXECISE

3.1 INFORMATION FOR EACH STAGE OF THE EXERCISE

The first stage of the exercise: (exercise day: 1 March 2005)

- Time & location of the incident:

  Oil spill occurred at 05h00 (local time) 1st March of 2006, at Lat ……, Long ……, 17 miles E-SE offshore Vung Tau city

- Incident cause:

  Prestige oil tanker: Flag: Singapore; From: Singapore to Ho Chi Minh City

  was collided by

  Delta Carrier: Flag: Vietnam, From: Ho Chi Minh city to Malaysia

  Two oil tanks of Prestige were failed, but she is still floating. Delta Carrier's has a little damage but is safe.

- 1000 tons of IFO were spilt, and oil is still leaking from the damage tanks.
- Some sailors of the damaged tank missed (were rescued later)
- Sea condition: Wave height: 1,0 – 1,3m Wind: 10 knots from the East; Current: 0.7 knot from the South.

The second stage of the exercise: (exercise day: 2nd March 2005)

- Sea condition:

  From 06h00: wave height: 1,5, wind: 15 knots from the East , current: 0.8 knot from the South

  After 13h00: wave height: 2-3m, wind: 23-25 knots, current: 0.8 knot

- Oil slicks present in near shore area of Vung Tau, and continue reaching beaches of Vung Tau city, Can Gio bio-conservation
- Oil from damaged oil tanker is leaking under bad weather, 5-10 tons/hours

The third stage of the exercise: (exercise day: 3rd March 2005)

- Sea condition: wave height: 1.5 m, wind: 15 knots from the East, current: 0,6 knot from the South
- Oil slicks stranded on the beaches belong Long Hai, Vung Tau city and Can Gio

3.2. INFORMATION OF RESPONSE RESOURCES IN THE SOUTH OF VIETNAM

No.	Company	Resources
Petrovietnam Subsidiaries		
1	**PV Drilling** Vung Tau city	**Oil spill equipment** <u>*Oil containment boom*</u> - Offshore boom: 6 sets x 250m - Inshore/reviver boom: + Inflatable: 4 x 250m + Solid buoyancy: 4 x 200m <u>*Oil skimmers:*</u> - Disc skimmer: 2 sets (20 tons/hr & 50 tons/hr) - Weir skimmer: 3 sets (100 tons/hr, 120 tons/hr & 15 tons/hr) - Mop skimmer: 2 sets (15 tons/hr & x 35 tons/hr) - Belt/brush skimmer: 2 sets (45 tons/hr & 50 tons/hr) <u>*Temporary storage tank:*</u> - Floating tank + 8 sets x 25 tons + 4 sets x 10 tons + 8 sets x 5 tons - Open-top barge: 1 set x 100 tons - Open-top shore tank: 5 x 4 tons <u>*Dispersant & spray set:*</u> - Dispersant type III: 100 drums x 200 litters - Spray set: + Shipside tpye: 2 sets + Helicopter lifted type: 1 set <u>*Absorbent material:*</u> - Absorbent boom: 12m/bale x 100 bales - Absorbent material: 100 pads/bale x 150 bales - Bio-degradable absorbent: 5 tons <u>*Other equipment:*</u> - High pressure washing machine: 02 sets - Mobile lighting system: 01 set - Mobile incinerator: 01 set x 2 tons/day **Vessel:** - Offshore deployment vessel: 4 vessels - Offshore towing vessel: 4 vessels - River/ harbor vessel: 06 vessels and 01 canoe **Personnel** - Trained personnel: 35 persons

No.	Company	Resources
2	**Vietsovpetro** Vung Tau city	**Oil spill equipment** *Oil containment boom:* - 1 set x 500m - 1 set x 300m - 5 sets x 250m *Inshore/reviver boom:* - 8 sets x 250m *Oil skimmers:* - Weir skimmer: 1 sets x 200 tons/hr - Disc skimmer: 1 set x 30 tons/hr *Temporary storage tank:* - Oil bag: 1 set x 500 tons - Oil barge: 2 sets x 100 tons *Dispersant & spray set:* - Dispersant type III: 50 drums x 200 litters - Shipside spray set: 1 set x 4 m3/hr **Vessel & Jetty:** - Offshore towing/deployment vessel: 9 vessels - River/ harbor vessel: 01 vessels - Jetty: 200m **Land transport vehicles:** - Mobile crane: 5 vehicles (15 – 80 tons) - Forklift: 7 vehicles (5-15 tons) - Trailer: 8 vehicles (12 tons) **Personnel** - Trained & dedicated personnel: 12 persons
3	**PTSC** Vung Tau city	**Vessel & Jetty:** - Offshore towing/deployment vessel: 6 vessels - Offshore towing vessel: 3 vessels - River/harbor vessel: 02 high speed canoe - Jetty: 300m **Land transport vehicles:** - Mobile crane: 05 vehicles (15 – 70 tons) - Forklift: 8 vehicles (5-15 tons) - Trailer: 10 vehicles (12 tons) **Personnel** - Enough trained personnel for running vehicles

No.	Company	Resources
Other response forces		
1	**Thanh Trung Privated Company** Vung Tau city	**Oil spill equipment** - Solid boom: 1 x 500m (for river and inshore) - Disc skimmer: 1 x 25 tons/hr **Vessel & Jetty:** - River/harbor vessel: 02 vessels - Storage tanker: 02 x 400 tons **Personnel** - Enough trained personnel for running vehicles & equipment
2	**Dai Minh Privated Company** HCM city	**Oil spill equipment** - Solid boom: 1 x 500m (for river only) - Circus skimmer: 1 x 30 tons/hr **Vessel & Jetty:** - River/harbor vessel: 024vessels - Storage tanker: 02 x 100 tons **Personnel** - Enough trained personnel for running vehicles & equipment
3	**Song Thu Company** Da Nang City (middle center)	- **Will be updated later**
4	**128 Navy Company** Hai Phong city (northern center)	- **Will be updated later**

Appendix 04: **OBSERVATION CHECK LIST**

(not provide to participant)

OBSERVATION CHECK LIST FOR COMMAND GROUP

No.	Required actions	Played actions
1. Communication		
1.1	Communicate with spiller	
1.2	Communicate with members of Command Group	
1.3	Communicate with Response Group	
1.4	Communicate with other Response Forces and Logistic Group	
2. Assessing the incident and evaluating its potential affects		
2.1	Search and rescue activities	
2.2	Weather condition: this day and coming days	
2.3	Movement of oil slick: direction, speed, spreading status	
2.4	Weathering of oil	
2.5	Estimated damages of soci-economic condition	
3. Checking the readiness of response teams		
3.1	Checking equipment	
3.2	Checking vehicles	
3.3	Checking personnel	
4. Developing an actions plan including of offshore, in/onshore operations		
4.1	Choosing response strategy: containment & recovery on sea; prepare shoreline cleaning operations	
4.2	Making actions plan: Establishing response teams, Choosing equipment, vessel,	
5. Conducting the response operations		
5.1	Ordering vehicles for loading equipment	
5.2	Mobilizing offshore response team to the scene	
5.3	Updating incident information from the scene	
5.4	Informing provinces which are likely impacted by the oil and other response forces	

No.	Required actions	Played actions
5.5	Informing in/onshore team to standby	
5.6	Checking recovered oil and storage capacity at the site	
5.7	Checking response effectiveness	
5.8	Conduct response teams to change from containment and recovery to dispersant spraying and shoreline protection when weather become bad, disadvantageous	
5.9	Identifying high sensitive areas to protect	
5.10	Ordering vehicles, equipment for in/onshore team	
5.11	Mobilizing in/onshore team when oil reach near shore areas	
5.12	Direct in/onshore team to conduct shoreline cleaning operations	
5.13	Choose temporary storage areas	
5.14	Transporting waste to treatment plant	
5.15	Updating information to report to VINASARCOM	
6. Providing information to public media		
6.1	General information of incident	
6.2	Response operations	
6.3	Recommendations for habitants in coastal areas	
7. Estimating response cost		
7.1	Number of mobilized equipment, vehicles, personnel	
7.2	Rate of each kind	
7.3	Total cost	

OBSERVATION CHECK LIST FOR OFFSHORE RESPONSE GROUP

No.	Required actions	Played actions
1	Receiving incident information from offshore coordinator	
2	Requiring offshore coordinator to provide equipment, personnel and vehicles	
3	Loading equipment	
4	Mobilizing response team to the scene	
5	Informing incident information to command board from the scene	
6	Deploying boom to contain and skimming oil	
7	Evaluating response operations	
8	Checking storage capacity	
9	Informing to command board about the disadvantageous condition for containing & recovering oil	
10	Proposing other response operation: dispersant spraying operation	
11	Updating the effectiveness of response operation, requiring to standby for inshore response and beach cleaning operation	
12	Conducting dispersant spraying operations	
13	Updating the effectiveness of dispersant spraying operation	
14	Continuing maintaining response team to contain and recover leaking oil	
15	Transporting recovered oil from deployment vessels to the PTSC Supply Base: order small tanker	
16	Summarizing response activities for reporting	
17	Be forbidden to provide any information of incident or response operation to public media	

OBSERVATION CHECK LIST FOR IN/ONSHORE RESPONSE GROUP

No.	Required actions	Played actions
1	Receiving incident information from in/onshore coordinator	
2	Requiring in/onshore coordinator to provide equipment, personnel and vehicles	
3	Loading equipment	
4	Mobilizing response team to the scene	
5	Informing incident information to command board from the scene	
6	Deploying boom to contain and skimming oil	
7	Evaluating response operations, checking storage capacity	
8	Informing to command board about the disadvantageous condition for containing & recovering oil	
9	Conducting shoreline protection operations, and standby for shoreline cleaning operations	
10	Mobilizing equipment, personnel to the scene for shoreline cleaning operations	
11	Conducting a site survey to mapping the shore	
12	Choosing cleaning methods	
13	Conducting shoreline cleaning operations	
14	Choosing temporary storage areas	
15	Transporting waste to treatment plan	
16	Summarizing response activities for reporting	
17	Be forbidden to provide any information of incident or response operation to public media	

List of expense items

No.	Items
1. General preparations	
1.1	Expenses for participating the exercise
1.2	Meeting room
1.3	Documents
2. Equipment, tool and others	
2.1	Small rough models
2.2	Small models of equipments, personnel, vehicles…
2.3	Communication system
2.4	Video
2.5	Interpreter
2.6	Transport of ASEAN guests
2.7	Publish media
2.8	Others

海上油濁防止机上訓練オープニングセレモニー
チョム・イァック公共事業運輸次官スピーチ

2006年2月24日　プノンペン

ご来賓の皆様
お集まりの皆様

本日、公共事業運輸省を代表して、日本財団の支援による日本海難防止協会と公共事業運輸省の共催で行う海上油濁防止机上訓練に臨席できたことを大変うれしく思います。

開催に先立ち、在カンボジア日本大使館の惟住書記官、CMV プロジェクトのリーダーであられる惣田様をはじめ、ご来賓の皆様を心より歓迎申し上げます。また、日本からのプレゼンテーションをされる講師、タイ、シンガポールからの専門家、そして関係省庁及び民間企業からお越しくださった皆様を歓迎いたします。

この場をお借りして皆様にお伝えしたいのは、CMV プロジェクトは日本海難防止協会と日本財団の支援により 2003 年に始まったプロジェクトで、これまで 3 回にわたってカンボジアの関係省庁・機関の担当官合計 15 人に対し、日本の海上災害防止センターにて人材育成訓練をしてきました。1 回目は「海上に流出した油の検証」、2 回目は「油流出の予防と防除」、3 回目は「流出した油の防除」がテーマでした。この日本での訓練以外にも、カンボジアにおいて国家セミナーが開催され、更に多くのカンボジアの専門家に知識を伝え、油流出の検証と防除、国家緊急時計画の準備に関する訓練、海上油濁による被害に対する補償についてなど、2004 年、2005 年まで毎年セミナーが実施されてきました。そしてこの 3 年目に、CMV プロジェクトは最も重要な訓練を迎えようとしています。すなわち、これまでの 3 回にわたる訓練参加者が実際に机上訓練を行い、ASEAN の専門家からの評価を受けることになっています。

カンボジア公共事業運輸省としまして、カンボジアの海上運輸に関わる担当官支援の目的で、彼らに油流出事故の経済的、社会的、観光、環境などからの影響を理解させ、緊急時計画の作成を促し、カンボジアの海上で起こりうる油流出事故に備えるためのこれまでのプロジェクトに多大なる支援をいただきました日本海難防止協会ならびに日本財団に感謝を申し上げます。

お集まりの皆様。

ご来賓の皆様、そしてこの訓練に参加することになった皆さんが、どうかこれから始まる訓練に関心を持って取り組み、持っている能力と経験を最大限に発揮して、本日の訓練をその専門性を強化する場とするよう努力していただきたいと思います。そしてこれを通じて国家が事故に備えた防除対策をきちんと整えるきっかけとなることを期待しています。

わがカンボジア王国では、船舶による環境に影響を及ぼす事故はまだ起きていません。ですが、現在では海上輸送を通じての輸出入活動が日に日に盛んになっています。また、近い将来には、カンボジア王国の領海内で油田の開発が行われます。これらの要因は、いつの日か海上で起こる油流出の原因にならないとも限りません。よって関係する担当官は皆、知識と経験を持ち、その起こりうる油流出事故の防除に備える必要があるのです。

お集まりの皆様。

訓練参加者がその能力と経験を発揮して人材育成を受け、また来賓の方々、プロジェクト主催者及びASEANのオブザーバーから経験を学び、またこれまで多くの時間と資金を使って経験と知識を教授し緊急時計画の作成を促し、本日の机上訓練実施に導いてくれたCMVプロジェクトの集大成を示していただきたく、強く願っております。

この油流出防除の机上訓練が成功し、実り多いものとなる事をお祈り申し上げます。

これをもって、訓練の開会を宣言いたします。

ありがとうございました。

運輸省副大臣ウーペータンのご挨拶

本日机上訓練の開催にあたり、一言ご挨拶させていただきます。
運輸省の代表及び自分自身として本日参加していただいた皆様へ挨拶の機会をいただき誠にありがとうございました。
現在の経済分野で人々は海を利用し海上運送業による品物を国から国へ運送しております。
海上は食料品、エネルギー、運送、貿易、通信分野の基本であり海上の保安や汚染防止は永遠に必要です。

ミャンマーの海岸の長さは 2230 キロあり天然資源がある海岸地域、マングローブ、さんご礁と天然資源が豊かなバージンアイランドがたくさんあります。それゆえ、天然資源を管理することや守ることが大事です。

しかし、海洋汚染は海上環境に悪影響を与えることになります。特に油と化学剤の流出による海洋汚染は危険です。

海上油流出事故は海岸地域の経済発展や海洋天然資源を探し出すため悪い影響与えます。油流出は漁船の資機材やエビの養殖にも悪い影響を与えます。

それゆえ、自然の環境を守ることは国民の義務です。この義務を果たすために海事に関係する関係機関や NGO 団体、地元の業者が油流出による海上汚染防除対策するための知識や技能と経験などと十分な資機材が必要であり、事故が発生した場合短期間内に油防除実施対策が行えると思います。

本日行った油流出机上訓練は油流出事故が発生したときに役に立つと思います。

この CMV プロジェクトは油流出防除対策による人材育成のためのプロジェクトで ASEAN-OSPAR へ通いるものです。

アセアン加盟国内に HNS による流出防除対策の成果のためアセアン加盟国との協力と日本のサポートは必要です。

この油流出机上訓練の参加者はミャンマー海上に油流流出による海上汚染になった場合、実施対策方法の演習できると信じております。

最後に運輸省の代表として今般の机上訓練にご出席の皆様日本大使館の関係者、日本財団、日本海難防止協会の皆様へ大変感謝しております。

CLOSING REMARK

Distinguished Guests

Ladies and Gentlemen,

Let me wish you a pleasant afternoon. I have every confidence that this Oil Spill Table Top Exercise will conduct in an extremely friendly and co-ordeal atmosphere. After this Table Top Exercise, I sincerely hope that new and fruitful ideas will emerge in respective departments of the Union of Myanmar and can fulfill their obligations and responsibilities as well.

OSPAR (Oil Spill Preparedness and Response) Project was initiated in 1993 by the Ministry of Transport of Japan (currently the Ministry of Land, Infrastructure and Transport of Japan) and financially assisted mainly by the Nippon Foundation. Its main objective is to improve the marine oil spill combating capability of then ASEAN countries, namely Brunei, Indonesia, Malaysia, the Philippines, Singapore and Thailand.

The Project entered a new stage in May 2002. The name of the project was changed to ASEAN-OSPAR Project (Oil Spill Preparedness and Response in the ASEAN Seas Area). The scope of the activities were expanded, dealing with not only oil spill incident but also HNS (Hazardous Noxious Substance) spill incidents. Invitation has also been extended to cover the newer ASEAN member countries like Cambodia, Laos, Myanmar and Vietnam.

Myanmar attended second and third ASEAN-OSPAR meeting as an observer in 2003 and 2004 respectively. I hope that before the fourth ASEAN-OSPAR meeting, Myanmar will become one of the member countries of ASEAN-OSPAR project.

This oil spill table top exercise is part of the human resource development aspect to develop capabilities of the members in oil and HNS spill response through training and seminar organized by JAMS (Japan Association on Maritime Safety) and sponsored by Nippon Foundation.

The three phase training program, were already conducted by Nippon Foundation, where 15 trainees from Myanmar were attended in Japan.

Therefore, I would like to express our appreciation to Nippon Foundation, JAMS for their cooperation and support for the trainings and successful convening of this Oil Spill Table Top Exercise.

Also many thanks to country paper presenters from Malaysia, Brunei Darussalam and Thailand for their contribution and sharing of their expertise which would contribute towards developing human resources for national Oil Spill response capabilities in Myanmar.

I wish you all the best for the nice journey to your countries. Thank you for the kind co-operation.

VINASARCOM（ベトナム捜索救難国家委員会）　　様、
日本海難防止協会国際室長　惣田様、
日本財団リーダー　中村様、

私は、在ホーチミン日本国総領事館の貴志と申します。本日「アセアン地域内三カ国における海洋汚染防止体制の充実・強化支援」事業の開会式にお招きいただき、ありがとうございました。在ホーチミン日本国総領事館を代表して、一言御挨拶申し上げます。

本日より、油防除の緊急時計画を想定した、机上訓練とプレゼンテーションが行われると聞いております。有意義な成果を残されることを期待しております。この事業は、油防除における緊急時計画の向上と人材育成に資する有意義な事業であり、高く評価しております。

ご存じのとおり、ブンタウは、沖合に海底油田があることから、石油タンカーが多数航行する商業的価値が高い地域であるとともに、美しい海岸を有するベトナム南部を代表する景勝地でもあることから、環境的配慮が特に求められ場所でもあります。この地で油防除体制の整備を検討することは大変意義深いものと認識しております。

本年、この事業は、３年間の最終年を迎えると伺っております。この事業に携われてこられた、VINASARCOM、海上保安庁、日本財団、日本海難防止協会、海上災害防止センターをはじめとする関係機関の御尽力に敬意を表します。

最後に、御列席の皆様の益々の御発展と御健康をお祈り申し上げます。御静聴ありがとうございました。

KINGDOM OF CAMBODIA

Nation Religion King

MINISTRY OF PUBLIC WORKS
AND TRANSPORT

No: 053 MPWT

February 24, 2006

Mr. Yasushi Soda
Director
CMV project

Dear Mr. Soda,

On behalf of the Ministry of Public Works and Transport, I would like to take this opportunity to express my deepest thanks to Japan Association of Maritime Safety and Nippon Foundation for providing technical and financial assistance to the Kingdom of Cambodia in the field of Human Resources Development for Oil Spill Preparedness, Response and Management.

I also wish to extend my sincere thanks to you and your colleagues for your hard work in the implementation of the CMV project with success, thereby providing both knowledge and experience to Cambodian staff to be able to prevent and protect future oil spill, thus, limiting damage to the environment of the Kingdom of Cambodia.

Your further cooperation and assistance would be most grateful.

Sincerely Yours,

Chanthol Sun

Sun Chanthol
Minister of Public Works and Transport

Norodom Blvd. Phnom Penh

Tel & Fax : (855) 23 426 640, (855) 23 427 862

5　新聞記事
（1）カンボジア
　イ　原文

ជប៉ុនជួយកម្ពុជាលើការហ្វឹកហាត់ទប់ទល់និងការពារការកំពប់ប្រេងលើដែនសមុទ្រ

ភាគីតំណាងជប៉ុន និងកម្ពុជា ចូលរួមសិក្ខាសាលា ការពារការកំពប់ប្រេងលើផ្ទៃសមុទ្រ (រូបថត:មូល សម្បត្តិ)

ការផ្ទុះនាវាសមុទ្រមួយនៅកោះ-ប្រទេសហ្វីលីពីន កាលពីឆ្នាំកន្លងមក

ភ្នំពេញ : ដោយមានការគាំទ្រពីសមាគមសុវត្ថិភាពសមុទ្រនៃប្រទេសជប៉ុន ក្រោមការឧបត្ថម្ភរបស់មូលនិធិជប៉ុនផង បានធ្វើឱ្យមន្ត្រីកំពង់ផែទាំងពីរ(កំពង់ផែក្រុងព្រះសីហនុនិងកំពង់ផែក្រុងភ្នំពេញ) រួមទាំងភ្នាក់ងារក្រុមហ៊ុនប្រេងឯកជននិងអង្គភាពកប៉ាល់មួយចំនួនរបស់ខ្មែរយើងបានទទួលការហ្វឹកហ្វឺនអំពីវិធីទប់ទល់និងការពារការកំពប់ប្រេងចេញពីនាវាសមុទ្រជាយថាហេតុនៅលើផ្ទៃសមុទ្រកម្ពុជា ។

លោកជុំអៀក រដ្ឋលេខាធិការក្រសួងសាធារណការនិងដឹកជញ្ជូនបាននិយាយក្នុងសិក្ខាសាលាមួយកាលពីព្រឹកថ្ងៃទី២៤ខែកុម្ភៈ នៅសណ្ឋាគារភ្នំពេញថា ទោះបីកម្ពុជាយើងនៅពុំទាន់ធ្លាប់កើតមាននូវការបំពុលបរិស្ថានដោយគ្រោះថ្នាក់ការធ្លាយឬកំពប់ប្រេងក្តី តែយើងត្រូវតែបង្កើនការយល់ដឹងនិងមានវិធានការទប់ស្កាត់ជាមុនឱ្យបានល្អផងដែរ ព្រោះប្រទេសយើងនាំប្រេងចូលតាមផ្លូវសមុទ្រដឹកតាមនាវាចរណ៍ច្រើនលានតោនគួរឱ្យកត់សម្គាល់ ។ ម្យ៉ាងទៀតអនាគតនៃប្រទេសកម្ពុជានឹងមានការខួងអណ្តូងប្រេងជាច្រើនកន្លែងដើម្បីទាញយកធនធានប្រេងពីបាតសមុទ្រ ។ ដូចនេះមិនអាចចៀសផុតបានពីករណីកំពប់ប្រេងចូលក្នុងផ្ទៃសមុទ្រយើងនៅពេលណាមួយនោះឡើយ ។ ហេតុនេះវាតម្រូវឱ្យយើងដែលជាអ្នកអនុវត្តផ្ទាល់ត្រូវចេះវិធីបង្ការទប់ទល់ទៅនឹងការកំពប់ប្រេងនេះទៅតាមក្បួនខ្នាតដែលប្រទេសជឿនលឿននៅក្នុងអាស៊ានយើងធ្លាប់មានបទពិសោធន៍អនុវត្តកន្លងមក ពិសេសប្រទេសជប៉ុន ដែលជាប្រទេសមួយមានបទពិសោធន៍ច្រើននិងការពារអភិរក្សបរិស្ថានសមុទ្របានល្អជាងគេ ។

លោកយ៉ាស៊ុយស៊ី សូដា (Yasushi Soda) ប្រធានគម្រោងប្រចាំប្រទេសកម្ពុជា ភូមា និងវៀតណាម CMV Proget) បាននិយាយឱ្យដឹងថា ធនធានមនុស្សគឺជាបង្គោលធំសម្រាប់ការងារការពារការកំពប់ប្រេងនៅលើផ្ទៃសមុទ្រនៃប្រទេសនីមួយៗ ។ ប្រទេសជប៉ុននឹងជួយទៅលើគម្រោងការនេះនៅក្នុងតំបន់អាស៊ាន ដើម្បីផលប្រយោជន៍រួម ពិសេសជួយដល់កិច្ចការពារបរិស្ថានសមុទ្រកម្ពុជា ។ ការងារនេះជំហានដំបូងត្រូវគិតគូរយកចិត្តទុកដាក់ទៅលើការបណ្តុះបណ្តាលធនធានមនុស្សជាមុនសិន ។

លោកតូម៉ូអាគី កូរេស៊ុយមី (TOMOAKI KOREZUMI) តំណាងស្ថានទូតជប៉ុនប្រចាំនៅកម្ពុជាក៏បានលើកឡើងថា ឆ្នេរសមុទ្រប្រទេសកម្ពុជាបានលាតសន្ធឹងប្រវែងជាង៤០០គីឡូម៉ែត្រ ជាតំបន់ឆ្នេរមួយសម្បូរផលត្រី និងពោរពេញទៅដោយធនធានសមុទ្រ ។ សមុទ្រកម្ពុជាមានកំពង់ផែអន្តរជាតិមួយនិងជាតំបន់ពាណិជ្ជកម្មមួយយ៉ាងសំខាន់ ប្រសិនបើកើតមានកត្តាអវិជ្ជមានដែលបង្កឡើងដោយការកំពប់ប្រេងជាយថាហេតុណាមួយគឺវាគ្រោះថ្នាក់ខ្លាំងណាស់ដល់សេដ្ឋកិច្ចកម្ពុជា ។ ដូច្នេះយើងត្រូវចេះត្រៀមលក្ខណៈសម្រាប់ដោះស្រាយនូវភាពអាសន្នណាមួយទុកជាមុន ។

កម្ពុជានឹងត្រូវបង្កើតឱ្យមានយន្តការមួយច្បាស់លាស់សម្រាប់ដំណើរការជាក្រុមជំនាញពិសេសដើម្បីទប់ទល់បង្ការសង្គ្រោះពេលកើតមានអគ្គិភ័យ ឬធ្លាយកំពប់ប្រេងលើនាវាណាមួយជាយថាហេតុ។ការហ្វឹកហ្វឺននេះមានគ្រូជប៉ុនគ្រូសិង្ហបុរីជួយបង្ហាត់បង្ហាញរួមមានទាំងឧបករណ៍ សម្ភារៈសម្រាប់អនុវត្តទៀតផង ។ មូលសម្បត្តិ

ロ　日本語訳

日本：海上油濁防止訓練の支援

日本の海難防止協会から協力を受けて、プノンペン、シアヌークビルの港湾当局および石油会社、その他関連局の職員が、カンボジアの海上で起きたと想定した油流出事故対応の机上訓練を行った。

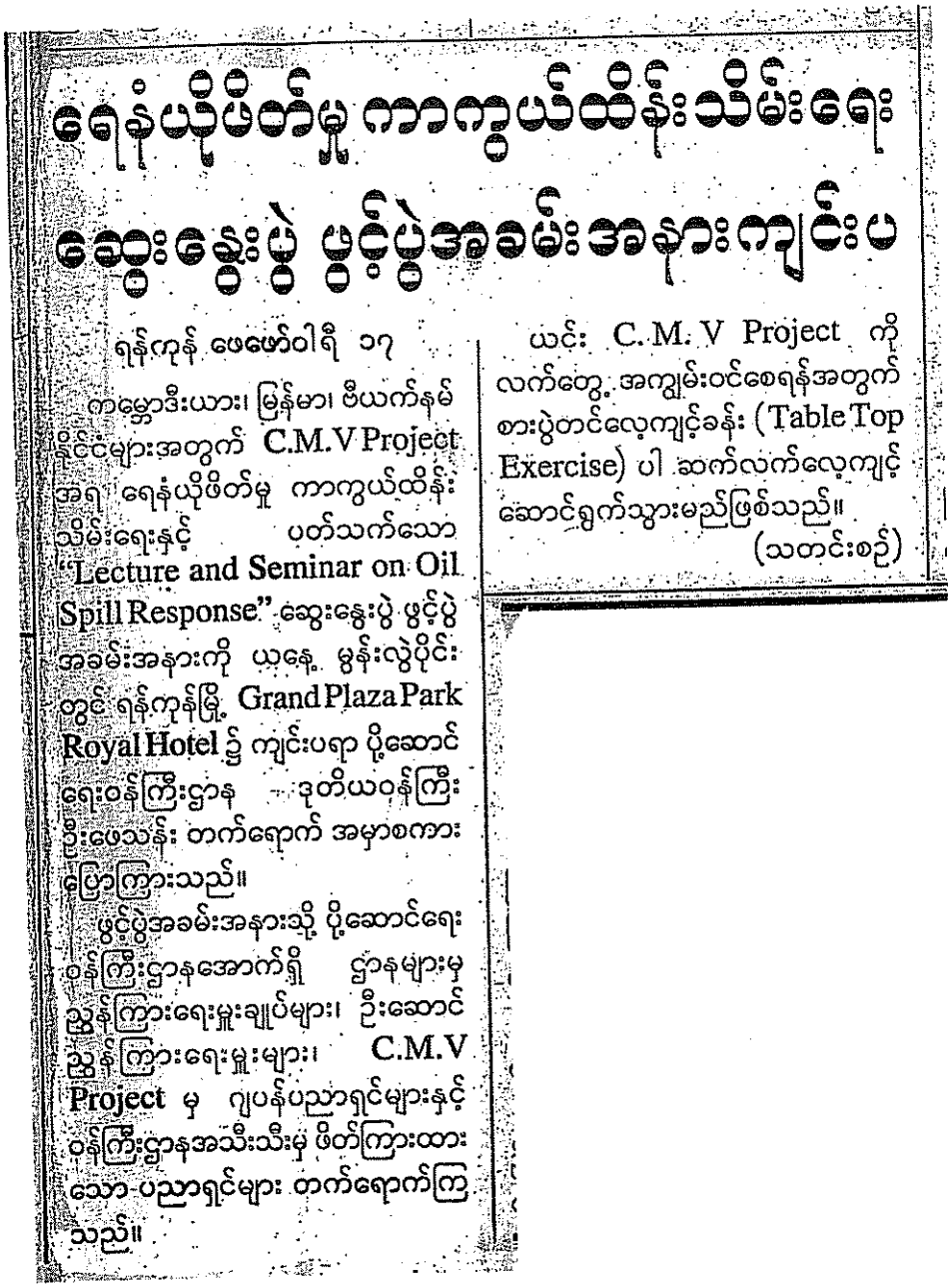
2 月 24 日にプノンペンホテルで行われた式典には、チョム・イァック公共事業運輸次官が出席し、「カンボジアでは海上での油流出事故は起きていないものの、この事故は一度起きれば環境に大きな影響を及ぼすものである。よって事前に担当者の能力を高め、対応できる準備を整えておくことが大切である。なぜなら観光船の往来も日に日に増えているからである。また、将来カンボジアには油田が開発され、改定からの原油確保が期待されている。このように、いつどのような事故が起きるかもわからないのである。このことから、我々担当者がその知識と能力を高め、規定の方法に基いた油濁防除を行い、ASEAN がこれまで経験した問題、特に海上環境保護の面で多くの経験を持っている日本から学ぶ必要がある」と述べた。

カンボジア、ミャンマー、ヴェトナムを対象に行っている CMV プロジェクトのプロジェクトリーダーである Soda Yasushi 氏は、「人材は各国の海を流出油から守る、最も中核となるものである」とした。日本は今後、ASEAN の枠組みの中でこの計画を広げ、共通の利益、特にカンボジアの環境保護業務に対する支援を行う。そしてその最初の取り組みの中で、人材育成に力を入れることが大切なのである。

日本大使館から出席した Tomoaki Korezumi 氏は、「カンボジアの海岸線は 400km あり、水産資源に恵まれている。国際港は商業的にも重要な場であり、油流出による事故が起きると経済的にも大きな打撃となる」とした。このため、非常時に備えて事前に対策を講じることは重要なことなのである。

カンボジアはこの特殊な船の事故に対応するために、対策専門家を育てることを目的とし、この机上訓練を実施した。この訓練には、日本、シンガポールの専門家が指導にあたり、また機材が供与された。

（2）ミャンマー
イ　原文



ရေနံယိုဖိတ်မှု ကာကွယ်ထိန်းသိမ်းရေး ဆွေးနွေးပွဲ ပွင့်ပွဲအခမ်းအနားကျင်းပ

ရန်ကုန် ဖေဖော်ဝါရီ ၁၇

ကမ္ဘောဒီးယား၊ မြန်မာ၊ ဗီယက်နမ် နိုင်ငံများအတွက် C.M.V Project အရ ရေနံယိုဖိတ်မှု ကာကွယ်ထိန်းသိမ်းရေးနှင့် ပတ်သက်သော "Lecture and Seminar on Oil Spill Response" ဆွေးနွေးပွဲ ဖွင့်ပွဲအခမ်းအနားကို ယနေ့ မွန်းလွဲပိုင်းတွင် ရန်ကုန်မြို့ Grand Plaza Park Royal Hotel ၌ ကျင်းပရာ ပို့ဆောင်ရေးဝန်ကြီးဌာန ဒုတိယဝန်ကြီးဦးဖေသန်း တက်ရောက် အမှာစကား ပြောကြားသည်။

ဖွင့်ပွဲအခမ်းအနားသို့ ပို့ဆောင်ရေးဝန်ကြီးဌာနအောက်ရှိ ဌာနများမှ ညွှန်ကြားရေးမှူးချုပ်များ၊ ဦးဆောင် ညွှန်ကြားရေးမှူးများ၊ C.M.V Project မှ ဂျပန်ပညာရှင်များနှင့် ဝန်ကြီးဌာနအသီးသီးမှ ဖိတ်ကြားထား သော ပညာရှင်များ တက်ရောက်ကြ သည်။

ယင်း C.M.V Project ကို လက်တွေ့ အကျိုးဝင်စေရန်အတွက် စားပွဲတင်လေ့ကျင့်ခန်း (Table Top Exercise) ပါ ဆက်လက်လေ့ကျင့် ဆောင်ရွက်သွားမည်ဖြစ်သည်။

(သတင်းစဉ်)

油流出防除対策のセミナー開催

ヤンゴン市おいて 2006 年 2 月 17 日の午後に Grand Plaza Park Royal Hotel において日本財団の主催で行われたカンボジア、ミャンマー、ベトナムのための CMV プロジェクトの油流出防除対策に関する“Lecture and Seminar on Oil Spill Response”セミナーの開催にあたり運輸省の副大臣ウーペータン氏がオプニングのスピーチを述べました。

セミナーに運輸省の管轄である海事局の局長、副局長、ディレクターと CMV プロジェクトの在日ミャンマー日本大使館、日本海難防止協会、日本の専門家、各省の技術者が参加しました。

この CMV プロジェクトに関する机上訓練を続けて行う予定です。

チェーモン新聞掲載（2006 年 2 月 18 日）

BÀ RỊA - VŨNG TÀU
Cơ quan của Đảng bộ Đảng Cộng sản Việt Nam tỉnh Bà Rịa - Vũng Tàu
Trụ sở : 28 Trần Hưng Đạo, Vũng Tàu. ĐT: 064.856115. Fax: 064.856094. Email: baobrvt@bdvn.vnd.net

Tổng Biên tập:
PHẠM QUỐC TOÀN

ỦY BAN QUỐC GIA TÌM KIẾM CỨU NẠN:

DIỄN TẬP ỨNG CỨU SỰ CỐ TRÀN DẦU

Thứ tư, 1/3/2006, 08:09 GMT+7

Ngày 28-2, tại khách sạn Palace (Vũng Tàu), Ủy ban quốc gia tìm kiếm cứu nạn đã tổ chức diễn tập ứng cứu sự cố tràn dầu.

Tình huống giả định sự cố tai nạn giao thông hàng hải diễn ra là hai tàu Delta 01 (quốc tịch Singapore, có trọng tải 32.000 tấn, đang chở 30.000 tấn dầu, hành trình từ Bangkok đi Hải Phòng) và tàu Viễn Dương 03 (quốc tịch Việt Nam, có trọng tải 10.000 tấn, đang chở 10.000 tấn gạo, hành trình từ TP. Hồ Chí Minh đi Singapore) đã va đâm vào nhau tại tọa độ 10 độ Bắc, 107 độ 05 phút Đông, cách bờ biển Vũng Tàu 20 hải lý theo hướng Nam.

Sau sự cố, các đơn vị tham gia sẽ diễn tập trên sa bàn: Tàu Delta 01 ứng cứu an toàn 2 thủy thủ rơi xuống biển, ngăn chặn cháy nổ do tàu nghiêng 3 độ, thủng hai khoang, gây tràn ra biển 1.000 tấn dầu IFO. Đồng thời, Cảng vụ Vũng Tàu thông báo kịp thời tai nạn trên cho các cơ quan, đơn vị liên quan điều động nhân lực và trang thiết bị như: Phao quây dầu, máy thu gom dầu, thiết bị chứa tạm thời, vật liệu thấm dầu, thiết bị phun chất phân tán dầu, tàu ứng cứu trên biển, gần bờ, xà lan chứa dầu… nhằm ngăn chặn kịp thời sự cố tràn dầu và bảo đảm vệ sinh môi trường trên biển, trên sông và ven bờ.

Kiến Giang

CÁC TIN KHÁC
- THÁNG 4-2006: TIÊM VẮC XIN PHÒNG BỆNH CÚM GIA CẦM ĐỢT 1-2006 (01/03/2006)
- 60 CÁN BỘ CƠ SỞ ĐƯỢC TẬP HUẤN NGHIỆP VỤ KHUYẾN NGƯ (01/03/2006)
- HUYỆN CHÂU ĐỨC: THU HOẠCH 50% DIỆN TÍCH TIÊU, ĐẠT NĂNG SUẤT 1,6 TẤN/HA (28/02/2006)
- ĐỒNG CHÍ NGUYỄN KHOA ĐIỀM: CHỦ ĐỘNG, SÁNG TẠO VÀ ĐỔI

TỈNH BÀ RỊA - VŨNG TÀU
- Địa lý - Lịch sử
- Văn hóa
- Tiềm năng kinh tế
- Các địa phương trong tỉnh

THÔNG TIN VỀ BÁO BÀ RỊA - VŨNG TÀU

DU LỊCH BÀ RỊA - VŨNG TÀU

KHÁCH DU LỊCH CẦN BIẾT

CÁC KHU CÔNG NGHIỆP VÀ CƠ HỘI ĐẦU TƯ Ở BRVT

DẦU KHÍ

Cập nhật 23:36 ngày 01-03-2006 In bài

Diễn tập ứng phó sự cố tràn dầu

Trong hai ngày 28-2 và 1-3, tại thành phố Vũng Tàu (Bà Rịa - Vũng Tàu), Ủy ban Quốc gia tìm kiếm cứu nạn đã tổ chức diễn tập ứng phó sự cố tràn dầu với sự tham gia của các chuyên gia Nhật Bản và khu vực cùng các cơ quan chức năng.

Các đơn vị tham gia diễn tập đã được các chuyên gia huấn luyện ứng phó sự cố tràn dầu ở các cấp độ: cơ sở, khu vực, quốc gia và quốc tế. Đồng thời tổ chức diễn tập trong tình huống đặt ra sát với quốc tế. Đây là hoạt động nhằm kiểm tra mức độ sẵn sàng ứng phó trong trường hợp sự cố tràn dầu xảy ra, thông qua diễn tập phát hiện những điểm chưa phù hợp để hoàn thiện kế hoạch ứng phó và giúp cho cá nhân, đơn vị, tổ chức làm quen với hoạt động ứng cứu sự cố tràn dầu.

- Xây dựng nhà máy sản xuất bột mầu đi-ô-xít ti-tan (15-3)
- Khống chế bệnh viêm não mô cầu ở TP Hồ Chí Minh (15-3)
- Đón nhận danh hiệu Anh hùng (14-3)
- Liên hoan thông tin tuyên truyền hướng về Đại hội toàn quốc lần thứ X của Đảng (14-3)
- Đẩy nhanh tiến độ xây dựng cầu Bãi Cháy (14-3)
- Chủ động xử lý những diễn biến nảy sinh trong hoạt động xuất bản (14-3)
- "Má mì" Trần Thị Phố lãnh sáu năm tù giam (14-3)
- Hà Nội có thêm một điểm đăng ký xe mới ở số 2 đường Long Biên (14-3)
- SITC đã thu khoảng 1,5 triệu USD của các học viên tại Hà Nội (14-3)
- BIDV được phát hành 6.000 tỷ đồng trái phiếu tăng vốn (14-3)

< Quay lại ^ Về đầu trang

Nhân Dân
Tổng biên tập
ĐINH THẾ HUYNH
Vài nét về báo Nhân Dân
Sitemap
Fonts tiếng Việt

Địa chỉ liên hệ: **toasoan@nhandan.org.vn**

CHÍNH TRỊ - XÃ HỘI

Diễn tập huấn luyện ứng phó sự cố tràn dầu

28/02/2006 -- 22:02(GMT+7)

Bà Rịa-Vũng Tàu (TTXVN) - Trong hai ngày 28/2 và 1/3, tại Bà Rịa-Vũng Tàu, Ủy ban Quốc gia tìm kiếm cứu nạn tổ chức diễn tập xử lý thông tin ứng phó sự cố tràn dầu, với sự tham gia của gần 100 cán bộ, công nhân viên, học viên thuộc các đơn vị trong ngành hàng hải và tìm kiếm cứu nạn.

Các cán bộ, nhân viên và học viên đã được nghe các chuyên gia Nhật Bản giới thiệu về công tác chuẩn bị, ứng cứu sự cố tràn dầu và hướng dẫn lập kế hoạch ứng phó sự cố tràn dầu.

Các học viên cũng đã diễn tập thử trên sa bàn theo 3 giai đoạn, nhằm nắm được toàn diện phương án ứng phó sự cố tràn dầu, chủ động ứng cứu nhanh, linh hoạt và hiệu quả trong trường hợp xảy ra sự cố.

Vùng biển khu vực miền Đông Nam Bộ là cửa ngõ lưu thông đường biển của Nam Bộ, nơi có đường vận tải biển quốc tế đi qua nên thường xảy ra sự cố tràn dầu. Ngoài khơi khu vực này còn có các điểm quan trọng dễ xảy ra tràn dầu lớn là các mỏ dầu Bạch Hổ, Ruby, Rạng Đông, Rồng, Đại Hùng, từ vịnh Thái Lan, ven bờ Vũng Tàu và từ các cảng Côn Đảo, Phú Quốc.

Theo báo cáo của Xí nghiệp dịch vụ ứng cứu sự cố tràn dầu thuộc Tổng công ty dầu khí Việt Nam, trong 10 năm qua, vùng biển và ven bờ Việt Nam đã xảy ra 20 vụ tràn dầu với khối lượng khoảng 5.500 tấn, trong đó 70-80% số sự cố xảy ra tại các vùng biển thuộc Bà Rịa Vũng Tàu và Thành phố Hồ Chí Minh./.

Các tin đã đưa

- Nước Mỹ phải có trách nhiệm về cuộc chiến tranh Việt Nam
- Báo Bỉ: Du lịch Việt Nam cất cánh
- Chủ tịch Quốc hội kết thúc chuyến thăm Nam Mỹ và Cuba
- Đoàn Đảng Cộng sản VN dự đại hội Đảng PCM
- Lâm Đồng: 6,25 tỷ đồng cho công tác dạy nghề

Xem tiếp

Nhà cung cấp thông tin: Thông Tấn Xã Việt Nam, Số 5, Lý Thường Kiệt, Hà Nội, Việt Nam
Cơ quan chủ quản: Thông Tấn Xã Việt Nam
Người chịu trách nhiệm chính: Phó TGĐ Nguyễn Duy Cương
Giấy phép số: 599/GP-INTER do Bộ VH-TT cấp ngày 09/04/1998
Tel: 04-8252931 / Fax: 04-8252984 /Email: btk@vnanet.vn

ロ　日本語訳

Ba Ria-Vung Tau　（地方紙）

救難国家委員会
海難事故対策机上訓練

2006 年　3 月 1 日

2 月 28 日、ブンタウの PALACE ホテルにて、VINA SARCOM が海難事故対策机上訓練を実施した。

訓練は DELTA01 号（シンガポール船籍、32,000 トン、30,000 トンの油を搭載してバンコクからハイフォンを航行中）と VIEN DUONG03 号（ベトナム船籍、10,000 トン、10,000 トンの米を搭載してホーチミン市からシンガポールへと航行中）の２隻が、北緯 10 度、東経 107 度 5 分、ブンタウから南に２０海里の位置で衝突したという想定で行われた。

机上訓練では、DELTA01 号が海に転落した乗組員 2 名を無事に救出、３℃傾斜、２箇所が破損した船の爆発・炎上を防ぎ、1,000 トンの IFO の海への流出を阻止した。同時に、ブンタウの港湾局は関連機関に事故を速やかに報告、人材や器具（boom、オイル回収機、臨時タンク、油浸透物質、油分解物質散布ポンプ、救助船、オイルボートなど）を配置し、油流出事故を阻止し、海上、河川、沿岸の衛生環境をまもった。

Nhan Dan
2006 年 3 月 1 日　23:36 更新

海難事故対応訓練

2 月 28 日と 3 月 1 日の 2 日間、ブンタウ市において VINA SARCOM は、日本や周辺国の専門家、関連機関の参加を得て海難事故対応机上訓練を行った。

訓練の参加者は専門家から様々な角度で（基本、地域、全国、国際）流出事故対応のレクチャーを受けた。同時に、国際的な事故状況を想定した訓練を行った。実際に事故が起こった場合にどの程度準備できているかを知るためで、訓練の結果、対応計画の不具合も見つかり、個人や組織が海難事故の救難活動に慣れるのに役立った。

VNANET
海難事故対応机上訓練

バリアーブンタウ（ベトナム通信社発）2月28日、3月1日の2日間、ブンタウで、VINA SARCOMは100名近くの航海・救難関連の幹部、職員、学生たちの参加を受け、海難事故対応机上訓練を実施した。

参加者は、日本の専門家から準備や対処法、海難事故対策プランの作成に関するレクチャーを受けた。

また、3段階に分かれた机上訓練をし、海難事故対応の全体を理解し、事故が発生した場合に速やかに対応できるようにするためである。

南部ベトナムの東の海域は、南部海路の交差点で、海外の大型運搬船が航行する海域であるため海難事故が発生しやすい。また、タイ湾、ブンタウ沿岸やコンダォ島、フークォック島周辺にはバィクホー、ルビー、ザンドン、ダイフン油井が点在しているため、大きな海難事故が発生しやすい。

PETRO　RIMEXに属するPV Drillの報告によると、ベトナムでは過去10年間にベトナムの海域・沿岸で20件の油流出事故（トータル5,500トン）が発生し、うち70-80%がブンタウおよびホーチミン市の海域で発生している。

社団法人　日本海難防止協会

東京都港区虎ノ門一丁目 15 番 16 号
〒105-0001　海洋船舶ビル 4F

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ＦＡＸ　０３（３５８１）６１３６