

Government Response to Large-scale Oil Spills in Japan

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scale Oil Spill Accidents
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Crisis management of Japanese Government

Recent disasters moved the Japanese Government to strengthen its crisis management.

Hanshin-Awaji Earthquake in 1995

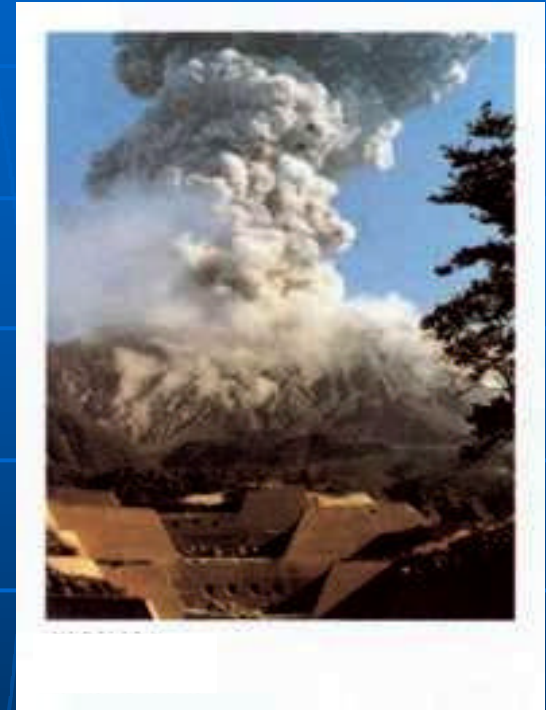
Sarin Attack in Tokyo Subway in 1995

NAKHODKA Oil spill in 1997

...etc.



Ship Grounding
Petroleum Association of Japan (PAJ) HP



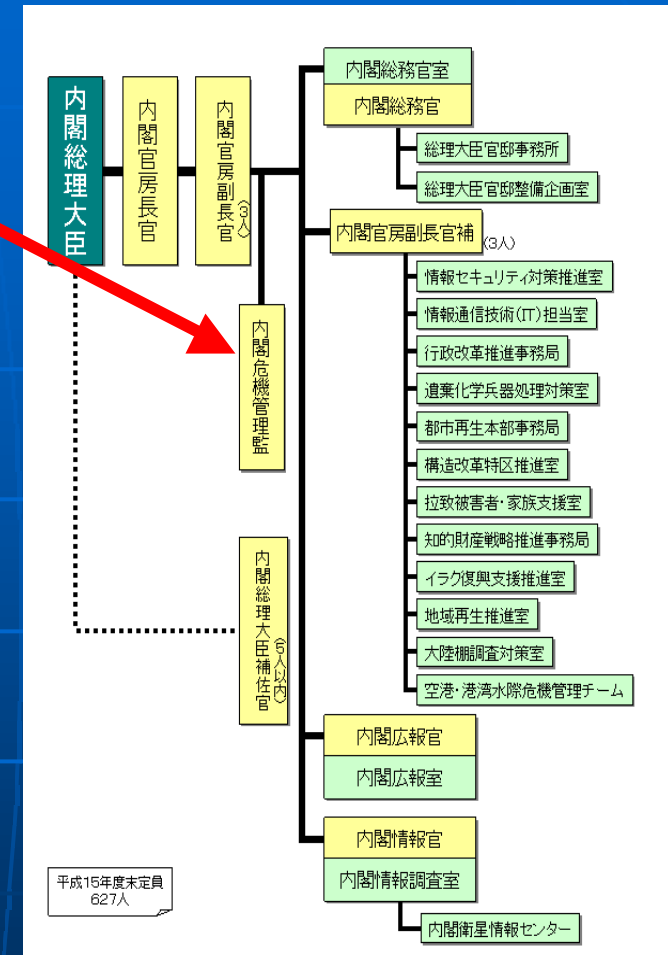
Volcano Eruption
Cabinet prefecture (prevention of disasters) HP

2. Strengthening Crisis Management System

- 1) DEPUTY CHIEF CABINET SECRETARY FOR CRISIS MANAGEMENT set up in 1998, who coordinates with government departments.
- 2) CRISIS MANAGEMENT CENTER in the New Prime Minister's Office, to handle the initial stage response.
- 3) Manuals for various types of emergency.



View of the new Prime Minister's Office operational from 2002



Organization of
CABINET SECRETARIAT

However

New types of emergency such as cyber-terrorism, SARS, 9.11 suicidal terrorism etc. required more comprehensive and flexible response of the government.



Bombs terrorism
in Bali island
(Police agency HP)

Training for
NBC terrorism
(Police agency HP)



so ...

Japanese government reviewed its
crisis management system and made it
applicable to all situations.

3. The New Cabinet Decision “Clarification on Emergency Response” in November 2003

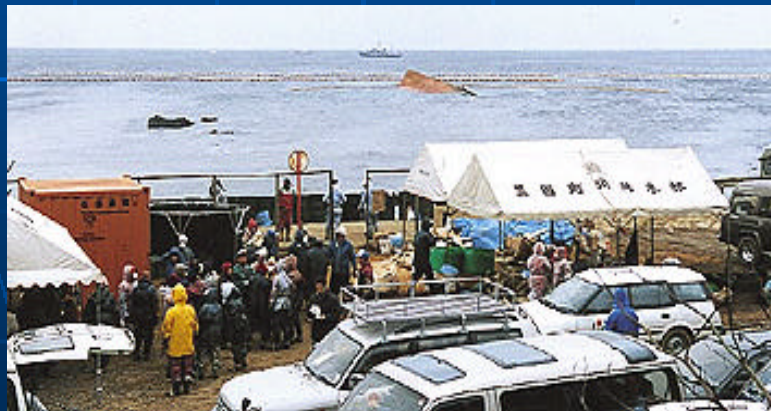
1) The new definition of an emergency

a situation causing or may be causing damage to life, property of the nation or the National land.

2) An uniformly applied decision procedure

Emergency Response Team Concerned Ministers’ Conference
Headquarters for Emergency Response

Large-scale oil spill accidents like NAKHODKA or DAIAMOND GRACE will handled by this framework.



NAKHODKA Accident

PAJ HP



DAIAMOND GRACE Accident

JAPAN COAST GUARD(JCG)

Responses to Large-scale Oil Spills by Japanese Government

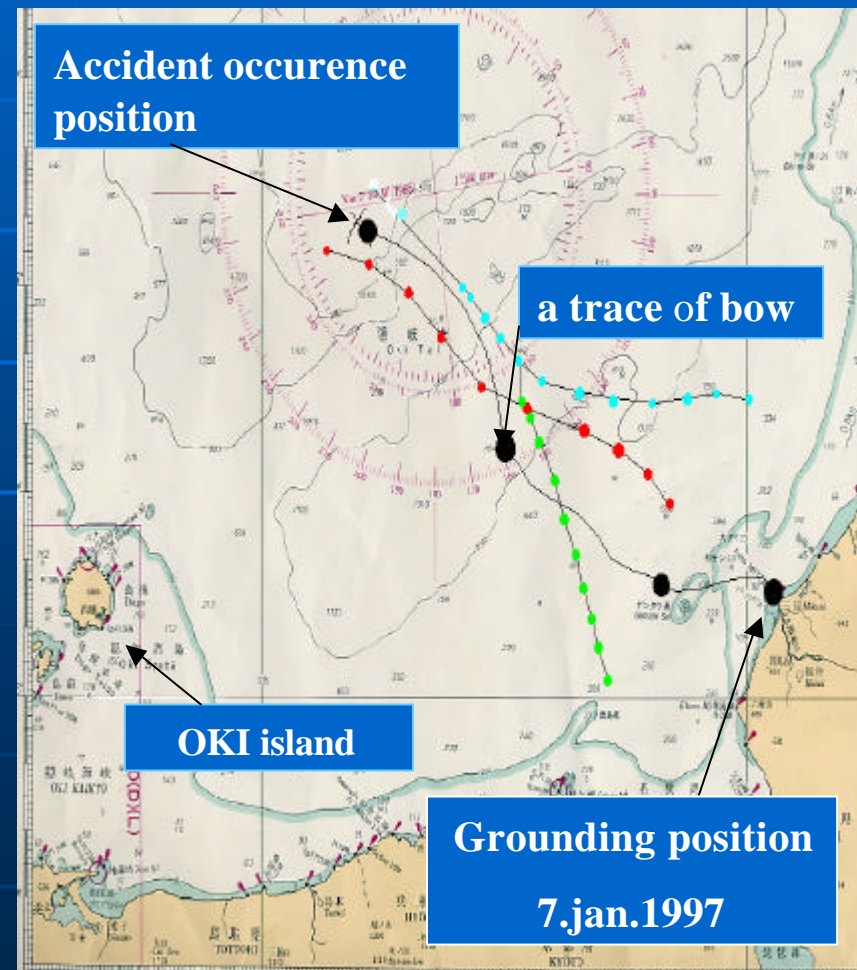
1 .NAKHODKA Accident

Presented by JCG

(1) Summary of Accident

Date and position
2.Jan.1997 / about 106km NNE
from OKI island SHIMANE Prefecture.

Vessel
name :NAKHODKA
type :oil tanker
tonnage :13,157 tons
cargo :C-heavy oil about 19,000 kl
crews 32



Damage

On the way from SHANG-HAI to Petro-pavlovsk, she was broken in her body. The stern sank under the sea, and the bow drifted and grounded on the coast of MIKUNI-town FUKUI prefecture on 7.Jan.1997. About 6,240kl C-heavy oil was spilled from the broken tanks, and the spilled oil grounded on the coastline of 9 Prefectures, more than 1000 Kms.

Oil prevention and recovery

JCG, Japan Self-Defense Force (JSDF), Ministry of Transport, Maritime Disaster Prevention Center (MDPC), fishery organizations etc. recovered the oil on the sea.

MDPC, JSDF, municipal governments and volunteers recovered the grounded oil on the coast.



The Bow of NAKHODKA
In MIKUNI-town (left)
PAJ HP

Recovery measure by
volunteers (right)
PAJ HP



Comparison of NAKHODKA and PRESTIGE

NAKHODKA Oil Spill

PRESTIGE Oil Spill

2, JAN. 1997	Date	13. Nov. 2002
JAPAN Sea	Position	NW Off Spain
NAKHODKA	NAME	PRESTIGE
13, 157GT	Tonnage	42, 820GT
Single hull tanker	Type	Shingle hull tanker
Russian	Flag	Bahama
32	Crew	27
25	Age	26
C heavy oil 19, 000kl	Cargo	heavy oil 77, 000 t
About 6240kl	Volume of spill	About 9000t
From Akita to Shimane	Polluted	Spanish west coast
Cutting of body by rough weather	Cause	Cutting of body by rough weather
Sinking body keeps in the deep sea in 2500 depth		Sinking body in the deep sea in 3600 depth spills oil

1. Lessons from the accident of NAKHODKA

Immediate Initiation of Government's
Crisis Management

Accurate Forecast of Oil Drifting
Means to Respond Spills on Outer Ocean
under Severe Weather

Preparation for Spills outside the
Territorial Sea

Response when the Shipowner does not
Respond Enough

Preparation for Environmental Damage

Reinforcement of Vessel Structure

International Cooperation

Predetermined Roles of Agencies and
Periodic Drills

2 .The Improved Measures since NAKHODKA Accident

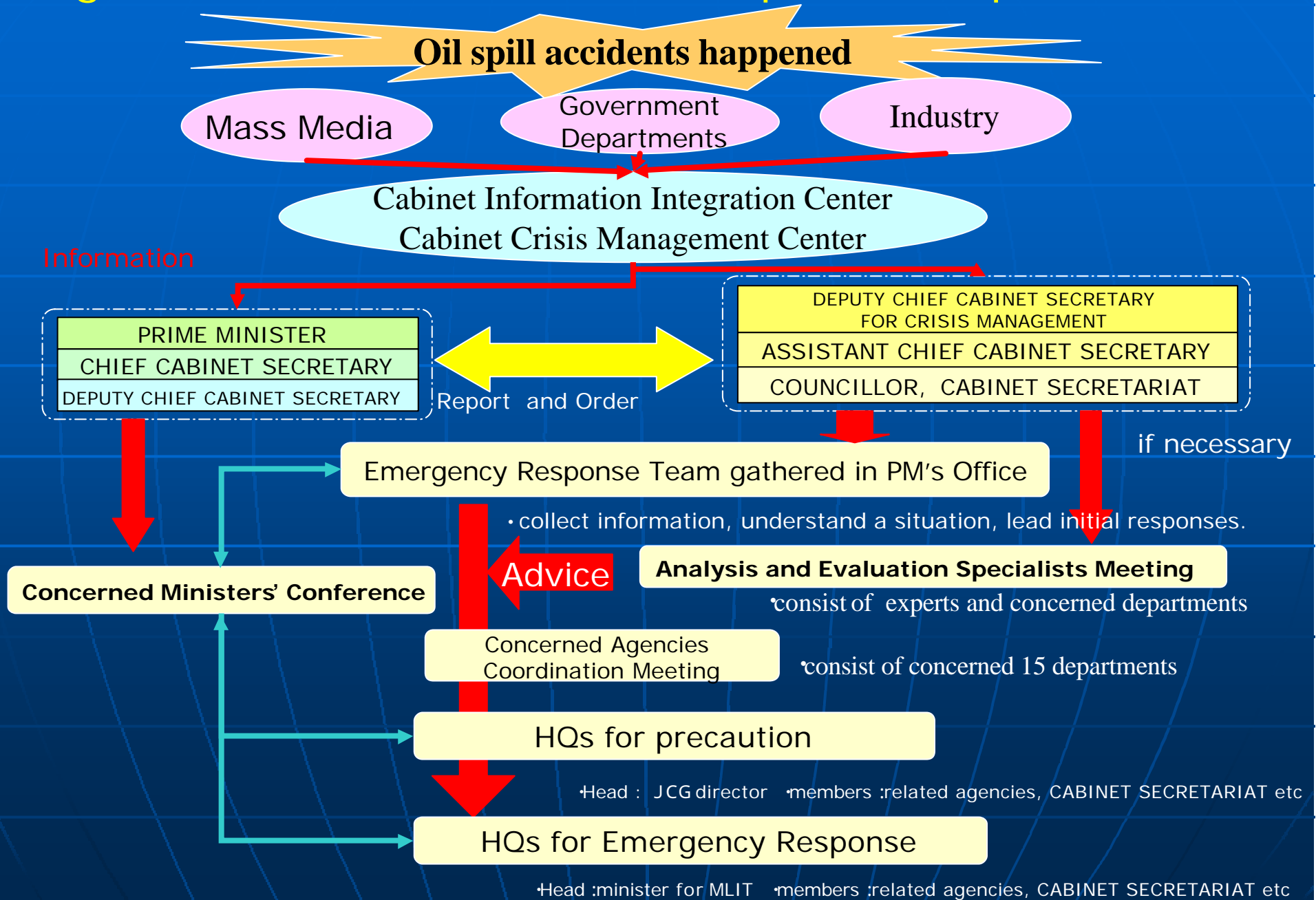
Strengthening of Government's Crisis Management at Initial Stage

The part of accidents including oil spills was added to the Basic Plan for Disaster Prevention and Response, which formerly dealt with natural disaster.
June, 1997

For oil spills, the procedure to set up HQs for Precaution and Disaster Response was stipulated in the above Basic Plan.

Analysis and Evaluation Specialists Meeting was established as an advisory body to Deputy Chief Cabinet Secretary for Crisis Management.
October, 1998

Organizational Framework to Respond Oil Spills



Strengthening of Oil Drift Prediction

JCG's drifting prediction system was versioned up, by including real time and on site data on weather and the spreading effect.

The Meteorological Agency (MA) deals with long term Drifting Prediction using its weather forecast models, when required.

Ministry of Education and Science provide satellite observation of oil spreading and drifting making use of the experiences in the NAVODTKA.

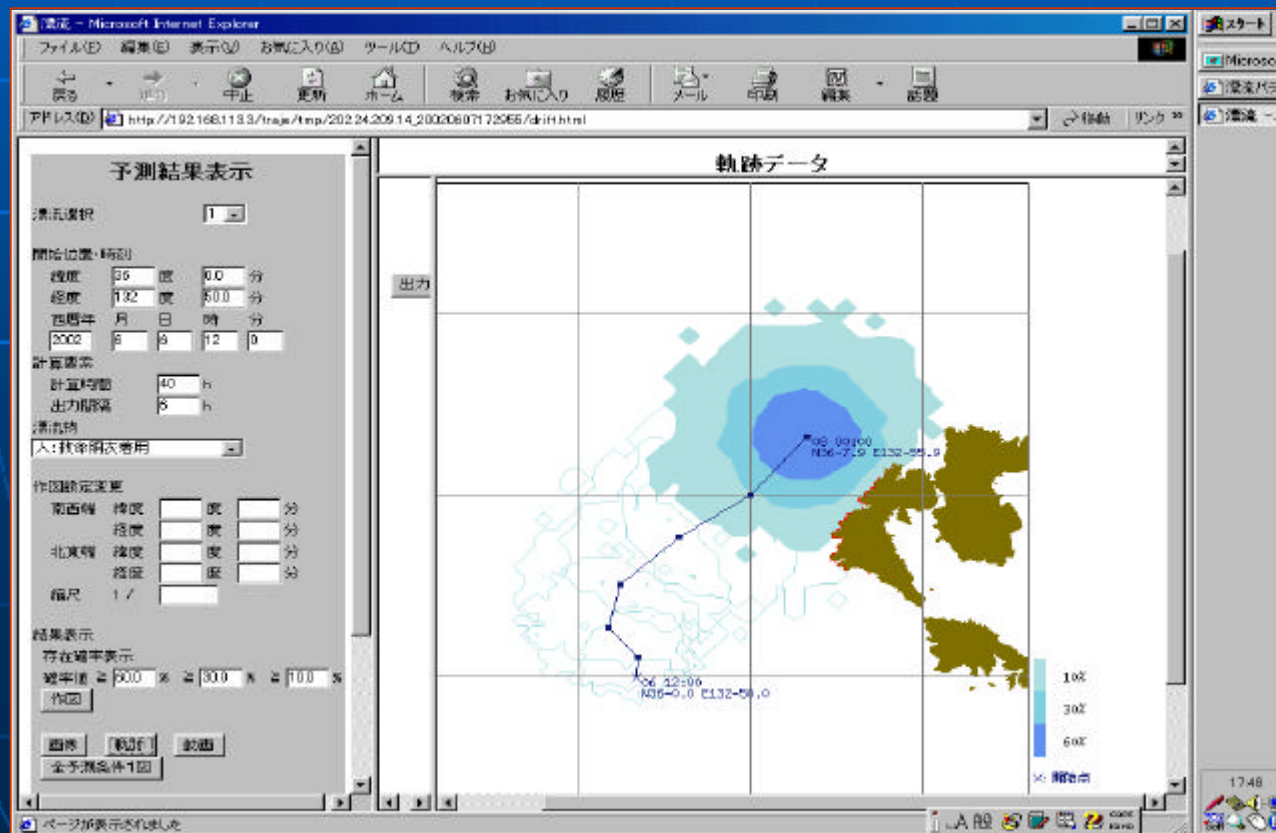
< Improvement of JCG 'S Drifting Prediction >

1 .Unification of real time data on weather and sea conditions

2 .On-line provision of drifting prediction

3 .Map Presentation of prediction

Example : the result of Trajectory Prediction JCG



Presented by
JCG

Reinforcing Organizations and Equipments



A large-size dredger cum oil recovery ship deployed at NAGOYA, NIIGATA, and KITA-KYUSHU ports

MLIT HP



Oil Skimmer (Transrec 250) deployed by PAJ,MDPC

PAJ HP



Offshore type Oil Boom stocked at NIIGATA and HAKODATE

PAJ HP

Lowly Side Collector (LSC) at MIKUNI, FUSHIKI etc,
And Large-sized Vacuum Skimmer at ABASHIRI.

JCG

Strengthening National Strike Team

3 teams 12 members

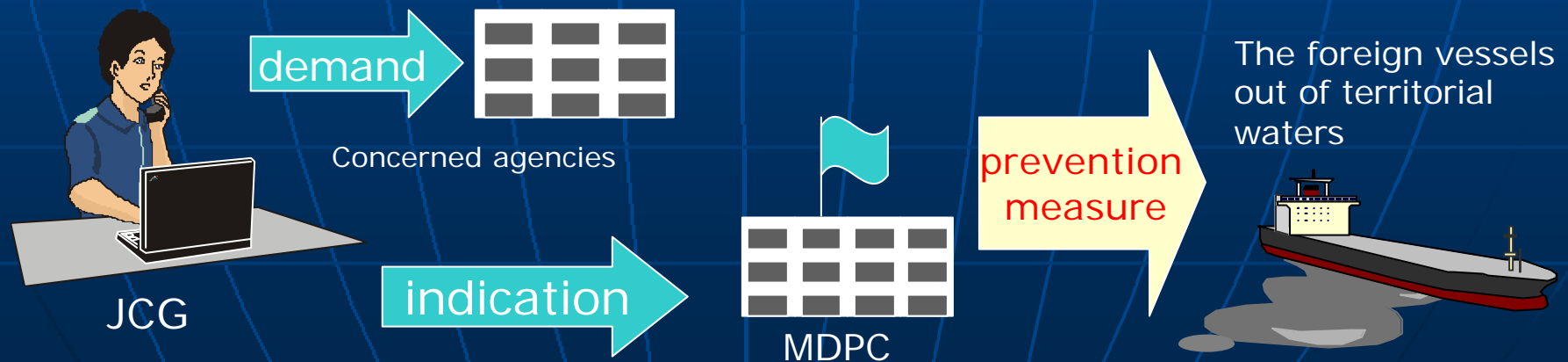


Enlarging the responsible area for Regional Spilled Oil Prevention Groups, consisting of JCG regional hqs, local governments, shipowners, oil industries fishing industries, salvage companies etc.

Revision of 'Law Relating to Prevention of Marine Pollution and Maritime Disaster'

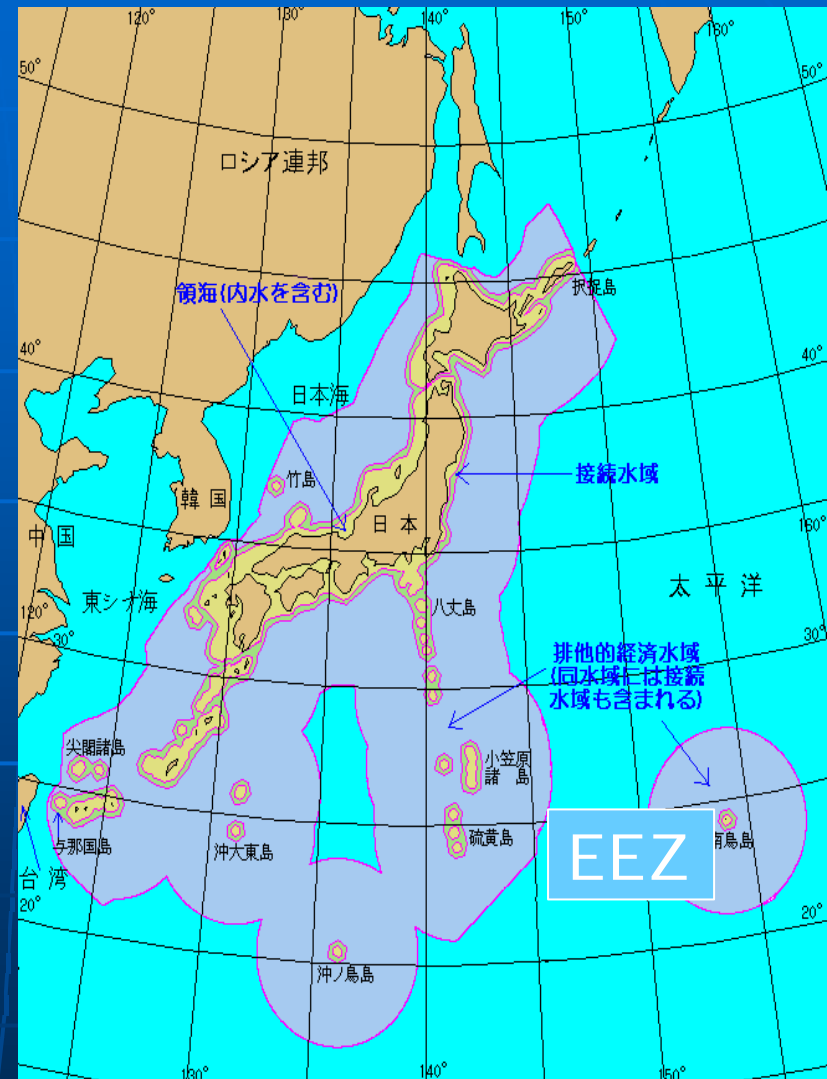
Added was an article that the Commandant of JCG can demand concerned authorities such as local governments to take oil prevention measures.

Added was an article that the Commandant of JCG can order MDPC to take measures against oil spills from foreign vessels out of territorial waters.



Review of Regional Oil Spill Contingency Plans (1998)

Measures for EEZ were
added to all 16 plans.



JAPAN'S Exclusive Economic Zone (EEZ)

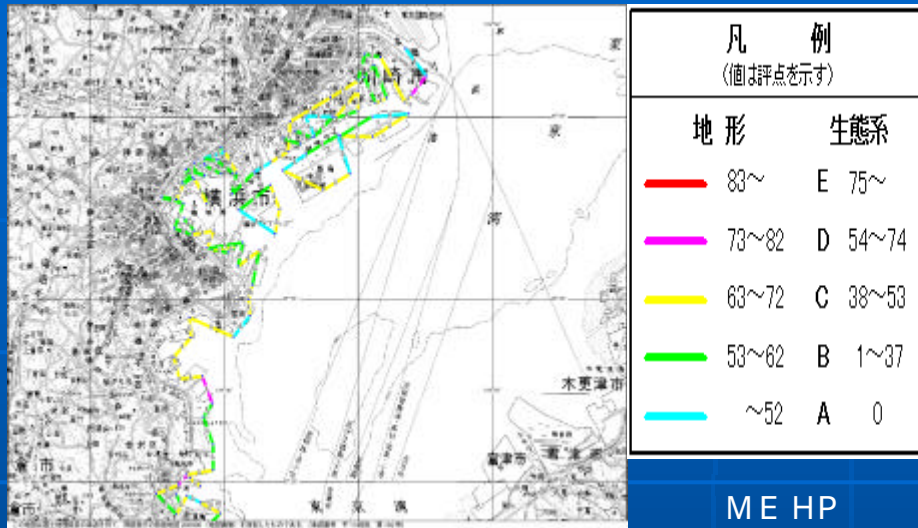
Arranging Social and Environmental Information on Coastal Area

Ministry of Environment (ME) has made 'Environmental Sensitivity Index MAP' and published it on its HP.

The Fisheries Agency (FA) has made 'Oil Pollution Fishery Influence Information Figure'. FA will version up in the future. If an accident happens, the figure will be made public.)

JCG has made 'The Information of Environmental Protection at Coastal Area' which is available on the internet .

Environmental Sensitivity Index MAP (by ME)

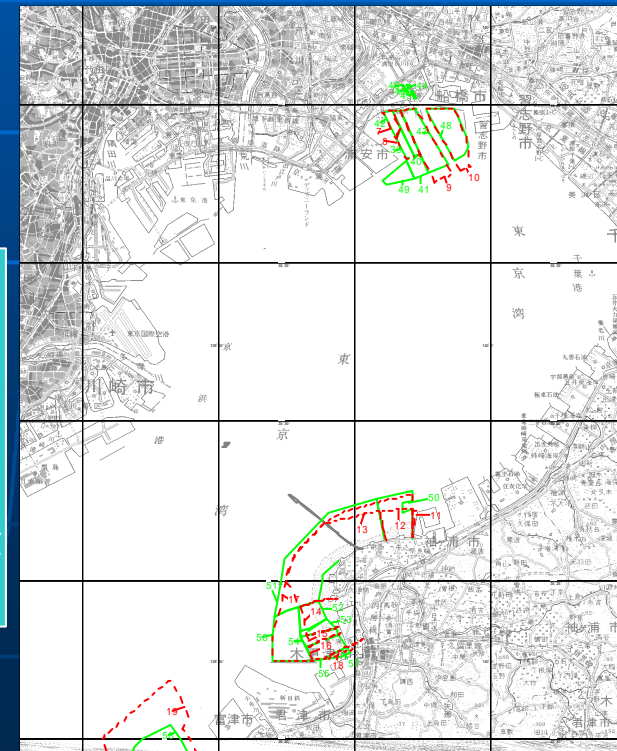


The map shows the environmental Sensitivity Index (geographical features, distribution of life etc) to evaluate the effect on the ecosystem of oil grounding.

Oil Pollution Fishery Influence Information Figure (by FA)

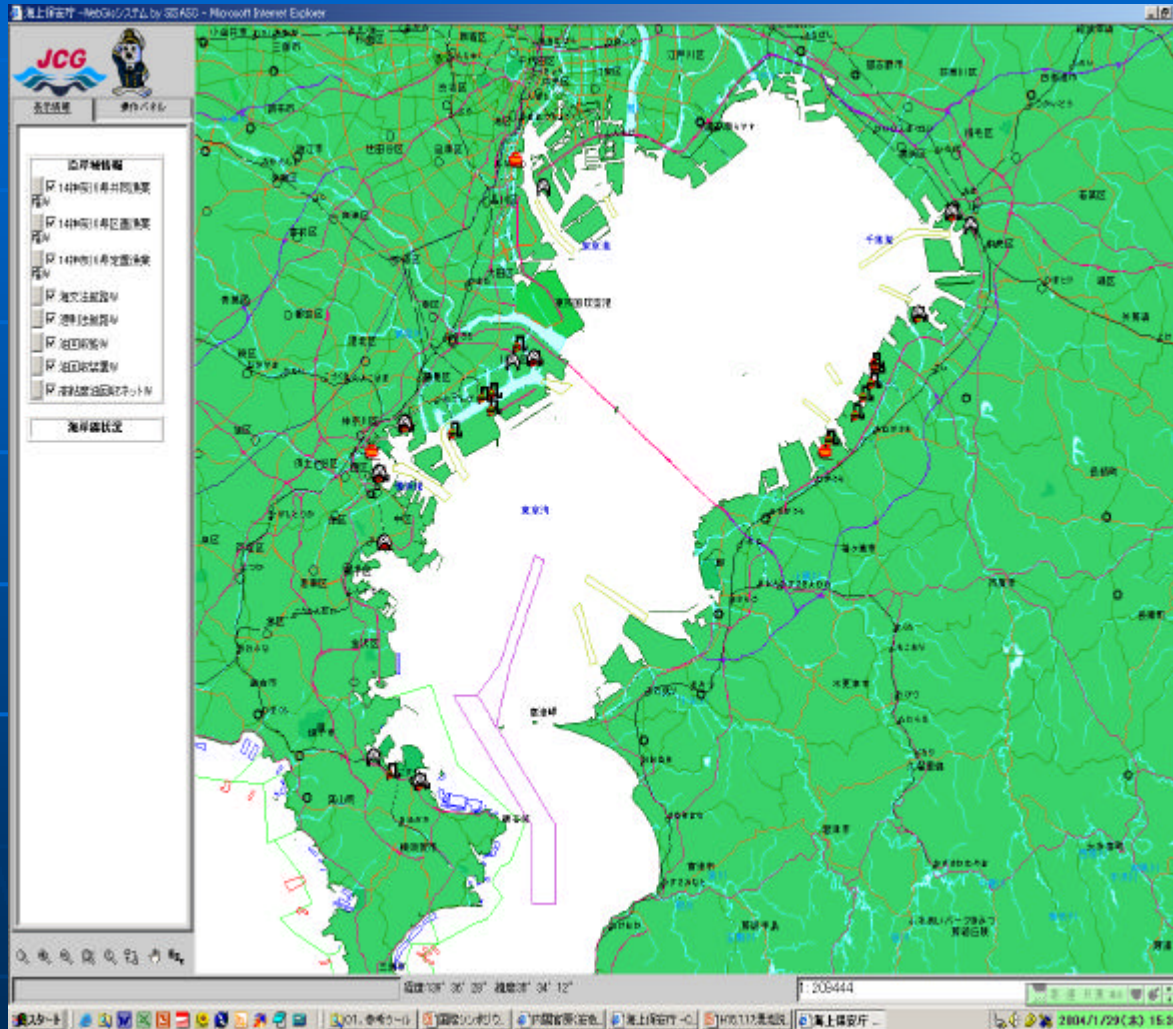
The map shows the fishery information (fisheries, aquaculture etc) to protect fishery resources from oil spills.

The map was delivered to the concerned departments only and will be opened if an accident happens.



Oil pollution fishery influence information figure (TOKYO bay)
Presented by FA

The Information of Environmental Protection at Coastal Area (by JCG)

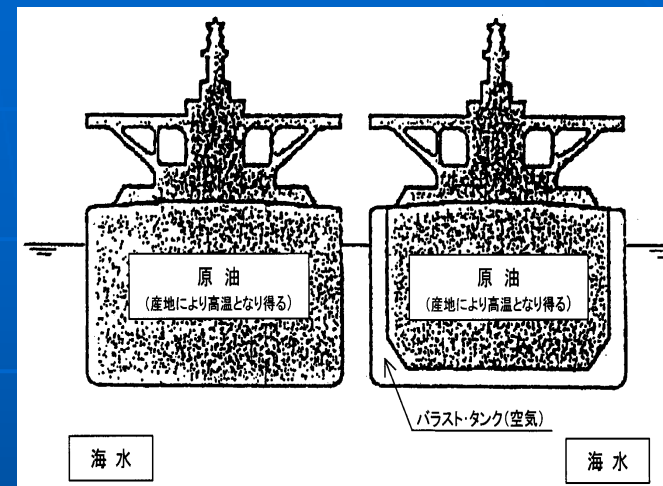


The map indicates of geographic, natural, social and anti-disaster information necessary for response to oil spills.

JCG has plan to develop Environmental Sensitivity Index and by March,2007 Include it to the system.

Regulation on Tanker Body Structure

Ministry of Transport proposed strengthening of regulation on tanker and facilitated the use of Double hulls. It also tightened PSC.



Structure of double hull tanker
Maritime Research Institute HP



PSC for foreign vessel
MLIT CHUGOKU branch HP

International Cooperation

Participation in **NOW PAP** that was proposed by UNEP.

Holding **expert meetings on marine pollution** with KOREA, RUSSIA, and USA.

Joint oil spill prevention exercises with KOREA and RUSSIA.



International Meetings

JCG HP



Joint training

JCG HP

Defining the Roles of Agencies and Periodic Drills

Roles of agencies were clearly defined in Disaster Prevention and Response Plan or National Oil Spill Contingency Plan.

Communication exercise and Simulation with concerned departments were done in Nov.2000 and Dec.2003.

A drill involving local governments, field responders and private parties is planned for 2004.

Exercise with concerned departments



(collection of information)

• collection of accidents and damage information using airplanes, vessels, satellites etc. = Cabinet office (prevention of disasters), National Police Agency(NPA), Defense Agency(DA), Fire Defenses Agency(FDA), JCG, MA, MLIT, MEXT etc

(protection of residents)

• PR, refuge and guide of resident = NPA, FDA etc

(prevention and recovery)

• prevention and recovery on sea and land = JCG, DA, MLIT, FA, FDA etc

• provision of equipments and materials = JCG, DA, Resources and Energy Agency(REA), MLIT, FDA etc

• transport and support of equipments and materials = NPA, FDA, DA,

• disposal of recovered oil = ME MLIT, JCG

(evaluation of environment)

• Evaluation of effects on wildlife and fisheries = ME, FA, JCG

• Research for residents' health = the Ministry of Health, Welfare and Labor(MHWL)

(another)

• Keeping communication means = The Ministry of Management and Coordination(MOMC)

• Cooperation with foreign government = The Ministry of Foreign Affairs(MOFA)

• Safety for schoolers = MEXT

Conclusions

- ✍ The large-scale oil spill accidents are national emergency that government should mobilize its all resources.
- ✍ The crisis management system of Japanese government was strengthened since NAKHODKA accident in many aspects
- ✍ The cooperation between national and local agencies and private parties is essential to respond large-scale oil spills.
- ✍ Periodic drills or training should be done to check the system and recognize the roles of parties.