# Responses and problems for a local government in Russian tanker oil spill disaster

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## Introduction

The sinking of the Russian oil tanker Nakhodka in the Sea of Japan off Shimane Prefecture on January 2 of this year caused an oil spill disaster of unprecedented scale in Japan. After the ship was stranded and sank, it leaked approximately 6,200 kiloliters of heavy fuel oil (corresponding to Bunker C or No.6 Fuel Oil (ASTM nomenclature )) contaminating the shore of nine prefectures along the Japan Sea coast.

In Ishikawa Prefecture, the first slick reached the coast of Kaga at a southern corner of the prefecture on the night of January 8, and eventually 18 coastal cities and towns, including the northernmost city of Suzu, saw the stranded oil on their coast.

The aggregate length of the polluted coast was roughly 250 kilometers, which makes up 43 percent of the prefecture's total of about 582 kilometers.

The incident unveiled the weakness of the existing oil spill response system in the Sea of Japan. The response system of the Maritime Disaster Prevention Center is based on the principle of putting responsibility on ship owners for the cleanup, and asks private business to do the job on consignment while responsible to the center. It became clear this system has its limits and could not cope effectively with any large-scale oil spills.Additionally, there was a lack of physical capability. Japan has only one ocean-going oil recovery vessel, the Seiryu Maru.

Despite the existence of the indisputable legal obligator, this incident forced local governments to cope with it by themselves in much the same way they deal with natural disasters.

Presumably, in respect to the law and the disaster prevention program, the above fact is ascribed to the vague relationship between the spilt oil response program of the Maritime Safety Agency, based on Law Relating to the Prevention of Marine Pollution and Maritime Disaster and the regional disaster prevention program, which was drawn up under Disaster Countermeasures Basic Act. In particular, it is not clear where the responsibility lies regarding controlling and sharing the role of the stranded oil.

Under the chosen policy "to do whatever we can", Ishikawa Prefecture obtained cooperation from the community people, volunteers and the Self-Defense Force personnel to clean the shore, while being closely coordinated with related local administrations and disaster institutions.

**Initial response or the prefecture**

The prefecture's operations to combat the spilt oil were mainly based on the "contingency plan to cope with oil tanker spills and other disasters," which is part of its regional disaster program. This program, however, did not work satisfactorily because the prefecture and also the national government had never assumed that the coast would have been stranded by such a large quantity of heavy oil.

On January 2, I myself happened to be on night duty. It was on the morning of January 3 when I learned of the incident. The television in my standby dormitory started reporting the rescue operation of the Russian tanker crew by the helicopters of the Self-Defense Air Force's Komatsu Rescue Squadron.

At that moment, I felt some anxiety that the spilt oil might have reached the Noto Peninsula. But an actual oil disaster of such a great scope was beyond my imagination.

I was off duty on January 3 after the night shift. Shortly past 7.30 p.m., I received a call from the chief of the disaster prevention section. I hurried to my office and started preparations for the emergency with the chief, making contact with the prefectural governor and the other officials in charge.

Although during the New Year holidays, officials of related divisions showed up and started gathering information on the morning of January 4. On January 5, we held a liaison meeting within the prefectural government to map out a strategy to cope with the incident.

On January 6, the day when normal work started, there was a liaison meeting for the disaster prevention organs to tighten their guard and reinforce their preparedness. Related officials, including those from coastal cities and towns as well as the Self-Defense Forces, participated in the meeting.

On the morning of January 7, a warning came from the regional Maritime Safety Headquarters that the arrival of the spilt oil in Ishikawa Prefecture would be inevitable. The warning led to the prompt establishment of an Accident Response Headquarters headed by the prefectural governor.

The oil booms and the absorbents were conveyed to the fishing ports in Kaga and Komatsu, escorted by prefectural police patrol cars. This equipment had been stockpiled by the prefectural government for an emergency. Additionally, vehicles equipped with satellite broadcast relay devices were sent to the beach of Kaga. Around 2 p.m. of the same day, the mobile station relayed a live satellite telecast to the Accident Response Headquarters in the prefectural government office. The telecast was displaying the bow section of the broken tanker that had run aground off Mikuni, Fukui Prefecture.

The telecast also was relayed live to the site of a liaison meeting of the central

government, which was attended by related office representatives.

At 6:45 a.m. of January 8, we received of first confirmation that the spilt oil had reached Kaga. On the early morning of January 9, the prefecture upgraded the Accident Response Headquarters to a Disaster Response Headquarters that was based on Disaster Countermeasures Basic Act.

Starting on the Kaga coast, the oil was eventually stranded on the shore of 18 cities and towns in the prefecture. The intensity of the shore contamination varied from place to place, reflecting the different topographical features of the coast. The hardest hit was the coast of the Noto Peninsula centering on the Nagahashi beach in Suzu, rather than the Kaga area.

Following the prefecture's example, the 18 cities and towns hit by the spills established their own Disaster Response Headquarters based on Disaster Countermeasures Basic Act, and went all out to clean their shores

The local response headquarters of 18 municipalities had been disbanded by April 27, and the headquarters of Ishikawa Prefecture ended its mission on April 28, 110 days after it started.

At the same time, the prefecture established a new "liaison Council for Coordinated Responses to the Russian Tanker Oil Spill". My Fire and Disaster Division was picked to play the role of central coordinator for the council. Today the council is still at work, coping with various problems in the wake of the oil spill incident.

**Responses to the oil spill**

Major responses that Ishikawa Prefecture had taken to the spilt oil were as follows:
(1) Smooth establishment and operations of the Disaster Response Headquarters

The prefecture's initial Accident Response Headquarters, which was established on January 7 prior to the arrival of the spilt oil, was immediately switched to the Disaster Response Headquarters on the early morning of January 9 when the first oil came ashore. There was a reason, I believe, for the smooth functioning of the prefecture's initial responses and the response from headquarters. In April of last year, the Fire and Disaster Division started a program with 24-hour work shifts by senior officials. It is obvious that this system helped foster the crisis management consciousness among the prefectural officials.

Unlike with earthquakes, we had time to cope with the oil spill, and in addition, the direct command by the prefectural governor led to the smooth functioning of the Disaster Response Headquarters which assumed full power across divisional boundaries.

Headed by the governor, the Disaster Response Headquarters consisted of six groups, engaged in general affairs/public relations, fisheries response, information gathering! coordination, equipment supply, waste oil disposal/environment measures and police contacts.

While the Disaster Response Headquarters was functioning, its governor held 28 general meetings attended by all members of the headquarters and 16 divisional

meetings were held and chaired by a vice-governor.

(2) Competent information-gathering

After the bow section of the broken tanker ran aground, prefectural police helicopters and the relay station remained at work, conveying real-time onsite information to the Disaster Response Headquarters.

In order to help accelerate the cleanup operations on its entire coast, the prefecture received supplies of aerial reconnaissance pictures and video tape recordings taken from the Self-Defense Force aircraft flying in disaster relief missions.

(3) Civilian ideas in use

As this was their first experience, ideas from the public about oil cleanup were collected using an Internet e-mail operation system and also the headquarters set up a FAX machine receiver, dubbed "Oil 110" (110 was also the emergency number for the oil spill.)

This resulted in a supply of 688 ideas.

Regretfully enough, all but a few of them were practical in use because most of them were found to be unsuitable for the recovery of the heavy oil which was emulsified.

One exception was a suggestion to utilize high-pressure dredging pumps for sludge for the polluted waters. This was a remarkable idea and the activities of these pumps are to be described later in the section "stranded spilt oil and its recovery operation".

We have to express our deep gratitude toward the many people who responded to our calls for ideas.

(4) Activities of volunteers

The activities of volunteers came into the spotlight in the wake of the Great Hanshin Earthquake two years ago. During the oil spill crisis, too, we received numerous volunteers both from the inside and outside of the prefecture to remove the stranded oil.

In harsh conditions, approximately 97,400 volunteers amassed either to skim the spilt oil or separate it from the beach sand.

It was the first time the prefecture received volunteers from elsewhere in the country, and we have to admit that there was some confusion in receiving them.

(5) Extensive assistance and relief operations of the Self-Defense Forces

When the oil spill occurred, Ishikawa Prefecture did not possess any helicopters for fire fighting and disaster prevention operations. (Steps are being taken toward their acquisition).

Based on an agreement on mutual assistance for widespred disaster relief, the prefecture requested helicopters for disaster prevention to watch for the spilt oil, and later the Fire Defense Agency sent those helicopters from Aichi, Mie and Hiroshima prefectures.

The prefecture also requested the relief dispatch the Self-Defense Force personnel to five cities and towns, namely, Kaga, Togi, Monzen, Wajima and Suzu. As the result, the aggregate number of dispatched personnel reached about 15,700 during the period from January 9, when the dispatch was requested, to March 13, the day of their final

pullout.

(6) Supply of equipment

One emergency measure carried out during the oil spill disaster by the Disaster Response Headquarters was the supply of an enormous volume of oil spill response equipment, the acceptance of large amount of relief goods and their delivery to the local governments that had sought the supplies.

The equipment supply group of the headquarters was in charge of these tasks (which they found the busiest and the most difficult ; while trying to coordinate the whole schedule).

When efforts to acquire oil drums had reached their limit, the group resorted to call upon the general public, through the Internet and mass media, for an additional supply of these vital containers. Soon the group received about 40,000 of them, some free of charge, from across the country.

(7) Relations with mass media

As the general affairs-cum-public relations group leader, I was assigned by the prefectural governor to deal exclusively with mass media. I was in charge of both the post of general affairs chief that provided an optimal position to gain an overall glimpse of the cleanup operations, aided me as spokesman, so that I was able to cope with the mass media smoothly and eventually I was fortunate enough to win support from them.

For a local government, a prompt dissemination of exact disaster information among its residents is undoubtedly a vital task.

While city, town and village governments are equipped with wireless systems for such emergency communications, the prefectural government has none of these devices. In order to offer information to its residents as a whole, it has to depend almost entirely on the mass media including television, radio, and newspapers.

In this sense, it is not too much to say that relations with the mass media are an integral part of the prefecture's crisis management.

From my personal experience, how effectively the information is conveyed through the mass media relies on mutual confidence between the information provider and reporters.

Equality and sincerity were guiding principles in my contact with mass media. It was with this belief that I did not hesitate to point out their faults whenever their reports were erroneous.

My attitude, I believe, added to the mutual confidence with the people of the mass media and this experience was invaluable to me.

**The Stranding of Spilt Oil and Recovery Operations**

The Nakhodka incident occurred in the Sea of Japan in the stormy winter, and the recovery operations on the ocean surface encountered extreme difficulties. The result was a large volume of the so-called "chocolate mousse" heavy oil washed ashore.

In Ishikawa Prefecture, numerous people from local administrations on the coast, fishing cooperatives, Self-Defense Force personnel, local communities and volunteers

were engaged in the cleanup operations on the stormy beaches. Their number reached about 202,900 in total.

| People engaged in cleanup operations (approximate figures as of May 16) | |
|---|---|
| Self-Defense Force personnel | 15,700( 7.7%) |
| Volunteers | 97,400(48.1%) |
| Residents and officials | 89,800(44.2%) |
| Total | 202,900(100%) |

One terrible incident took place on January 21. A high school teacher died while engaged in a cleanup operation on the Nagahashi coast in Suzu. (According to a national tabulation, five people died during the cleanup operations.)

A substantial portion of the coast in the neighborhood of Kaga and the north coasts of the Nob Peninsula consists of rocks and cliffs, which made cleanup operations extremely difficult.

As a result, the prefecture made a request to Self-Defense Force personnel for a disaster relief dispatch.

In a variety of fields, the relief operations of the Self-Defense Forces were quite valuable. The operations included massive manual labor, airlifting of bags full of heavy oil removed from the coastal rocks by large helicopters, and aerial surveys from helicopters and reconnaissance jet aircraft.

In another case, there was need for transporting an oil skimmer owned by Petroleum Association of Japan from Muroran, Hokkaido. The device was eventually airlifted by an Self-Defense Air Force transport from Chitose, Hokkaido to Komatsu, Ishikawa.

The total volume of the collected oil in the state of water-in-oil emulsion came to roughly 22,200 kiloliters (equivalent to about 111,000 oil drums).

Collected oil volume (approximate figures as of May 16)

| | | |
|---|---|---|
| Drifted oil | 3,820kl (17.2%) | ( 19,100 oil drums) |
| Stranded oil | 18,379kl (82.8%) | ( 91,900 oil drums) |
| Total | 22,199kl (100%) | (111,000 oil drums) |

Of the total spilt oil collected, nearly 83 percent was stranded on the coast. This ratio shows how enormous the volume of the oil deposits was on the Ishikawa coast.

The contour of the coast also affected the volume of stranded heavy oil as shown by the attached map, the sand beaches attracted less heavy oil than the rocky coast of the Noto Peninsula, which made a difference in the volume of oil collected between cities and towns.

For example, a large quantity of spilt oil was stranded on the rocky coast of the Noto Peninsula, influenced by an ocean current along flue coastline and a strong northwestern seasonal wind.

One highlight of the oil cleanup operation was the use of high-pressure dredging

pumps for sludge.

In much the same way as a sprayer sucks up water, the pumps bring up the emulsified heavy oil and sea water. Free from clogging they pump out the mixture of sea water and oil through hoses.

The idea of their use came from a private business. They suggested to the prefecture's Disaster Response Headquarters that it might be possible to apply the high-pressure dredging pumps for sludge to recover "chocolate mousse-state" heavy oil. Subsequent experiments supported the pump's effectiveness and the idea was instantly adopted.

These pumps were used not only on the ocean surface, but on the coast, whose performance was better than anticipated.

Avoiding heavy weather, the offshore operation was conducted for two days, January 12 and 13. Such pumps were loaded aboard flat barges and operated off Kanazawa Harbor, which eventually sucked up water and 325 drums of oil.

The site of the onshore operation was the Nagahashi beach in Suzu. For 11 days from January 17 to 28, two of those high-pressure pumps collected the volume of 8,700 drums of water and oil mixture.

The oil skimming vessel Seiryu Maru owned by the Ministry of Transport reportedly gathered a total of about 4,690 drums of water and oil mixture in the whole sea area, of which 970 drums of oil were skimmed during its January 14-23 operation off Ishikawa Prefecture. Although the quantity consisted of water-oil mixture which inhibits a definite comparison, the outstanding performance of the makeshift pumps was significant.

It is advised that the central government should take a serious look at the mechanism of such pumps in order to develop a more effective oil skimmer.

It seems that patrol boats and Self-Defense Force ships equipped with those upgraded oil skimmers would be quite effective in possible oil spill incidents in the future.

Of all the oil cleanup operations, the most difficult and dragging problem was the disposal of roughly 18,000 cubic meters of sand mixed with oil clots, which was piled up using heavy machinery at the beach of Kaga.

Most of the oil lumps were sandbagged and put into oil drums to be transported away to the exclusive incineration facilities outside the prefecture. Regarding the disposal of the remaining sand that contained oil lumps, there were talks among Ishikawa Prefecture, Kaga and the Maritime Disaster Prevention Center. As concluded by these talks, the sand was separated from the oil by the volunteers, and then the oil was burnt and the sand was buried in a controlled disposal area within the prefecture in accordance with the criterion of the Ministry of Welfare.

**Present situation and future tasks**

Thanks to the efforts of the people concerned, almost all of the stranded oil on the coast of Ishikawa Prefecture has been removed.

The bow section of the tanker that had run aground off Mikuni, Fukui Prefecture, was moved away on April 20. Concerning the oil leakage from the sunken hull off Shimane Prefecture, the Transport Ministry said on March 27, despite minor leakage from the hull, another major spill is unlikely in the foreseeable future.

On April 27, the prefecture organized a massive cleanup campaign called "Beach Recovery," at which approximately 41,300 people of the prefecture participated to clean the coasts.

The prefecture regards these developments as a virtual end of the emergency response to the oil spill, although there remain numerous things that should be tackled both in the middle and long term, such as compensation problems, probes into environmental damages, the recovery of the natural environment and the rehabilitation of the fishing grounds.

Ishikawa Prefecture has regained its beautiful coastline and the clear expanse of waters beyond. However, it is true that the incident stifled the general mood of residents and potential tourists, damaging its reputation as a tourist spot, which has been reflected in a decrease in hotel reservations. In order to prevent negative rumors from damaging tourism and to generate a positive outlook, the prefecture has initiated a large variety of promotion campaigns with the cooperation of related organizations.

It is our sincere hope that you would make a visit to Ishikawa Prefecture after the scheduled onsite surveys on 12th.

In order to learn from its painful experience, Ishikawa Prefecture has launched two expert committees: the Oil Spill Response Committee and the Environmental Impact Evaluation Committee. Consisting of people of experience or academic standing, the response committee is designed to examine the preparedness of the oil spill response systems in the future. The evaluation committee is to investigate the scope of the oil spill impacts on the environment, particularly the fishing grounds, with the aim of reflecting its findings on future policies.

While coordinating its efforts with Fukui and other prefectures concerned, the response committee has tried to identify "troubled spots" within the response program. Its findings and views were contained in the first report, which was submitted to the related central government offices on June 17.

Among the major proposals in the report were:

(1) The establishment of an institution based on the disaster prevention system, including maritime surveyors, to implement the general coordination of the oil spill response system.

(2) The development of oil-skimming vessels to cope with oil spill incidents in the open sea and their permanent presence on the coast of the Sea of Japan.

(3) The development of the oil dispersants with a minimum impact on the

environment, and the construction of an aerial spraying system.

(4) The establishment of a system to dispatch advisors who specialize in oil spill response activities.

(5) The development of technology for the diffusion-drift models for spilt oils.

Some of the problems stated in the report were as follows:

*The necessity of establishing a place for the general coordination of oil spill response systems*

When Fukui Prefecture (where the bow section of the tanker had run aground) experienced the heavy oil disaster, the on-site headquarters reportedly had fairly smooth liaison coordinating all the people concerned including maritime surveyors. This is mainly because the Transport Ministry and the Maritime Safety Agency gave the Maritime Disaster Prevention Center an official class 1 operational order to the prefecture. Ishikawa Prefecture, however, received almost no guidance from these government offices, and the stranded oil on the coast was disposed of just as ordinary industrial waste would be.

Essentially sided with shipowners, the Maritime Disaster Prevention Center and maritime surveyors remained preoccupied with the task of figuring out the expenses to be shared, and they lacked cohesion with the people concerned with disaster prevention when mapping out a common strategy regarding the oil spill response activities to minimize the damage.

One typical example was the use of the high-pressure dredging pumps for sludge as stated before.

Talks with them on this project proved vain and the prefecture had to decide to start using the pumps without their consent. The prefecture, therefore, bore the expenses of using the pumps and is presently seeking their refund from the International Oil Pollution Compensation Fund.

*The development of technology for diffusion-drift models for spilt oil*

In the oil spill incident, the diffusion-drill predictions of the spilt oil was done by the Maritime Safety Agency, which unfortunately resulted in inaccurate predictive information.

Naturally enough, the forecast had its physical limitations owing to the lack of data, yet the actual oil movements were so different from the predictions that complaints were voiced from the people in the local fishing industry.

If the short-wave maritime radar owned by the Ministry of Posts and Telecommunications was established on the Nagahashi beach in Suzu before the oil stranding, not after, the radar would have been quite effective in the prediction.

It is desired that the Transport Ministry seriously cooperate with the Ministry of Posts and Telecommunications for the development and practical use of short-wave maritime radar.

According to the Transport Ministry's interim report on June 20, regarding the "Oil Spill Response System" in the wake of the Nakhodka incident, the national government frankly admitted that they had not anticipated an oil spill incident of this magnitude and presented a list of formulas to cope with such oil spill incidents.

This list reflects many of our suggestions.

We hope for a sincere approach on the part of the government to put these formulas into practice.

Ishikawa Prefecture learnt invaluable lessons from the incident and now they strongly feel the need for pursuing the following policies:

(1) The renewed recognition of the importance of the initial response.
(2) The clear definition of roles shared by the Maritime Safety Agency and local governments.
(3) The completion of guidelines for the implementation of oil cleanup operations.
(4) The completion of the lists of stockpiles and suppliers of oil spill response equipment.
(5) The completion of manuals for volunteers.

In line with these policies, the prefecture has started writing its own version of the oil spill response manual as a local government. As the working body for this project, the prefectural Antidisaster Council has established the Oil Spill Response Department with expert committees under it.

The response manual is scheduled to be completed by the end of November.

On June 3, the nation's basic antidisaster program was modified, adding a chapter regarding maritime disaster response. In response, there is a fresh need for a review of the prefecture's regional antidisaster program, which is to be studied at the Oil Spill Response Department along with its work on the oil spill response manual.

In terms of the review of the regional antidisaster program, the revision of the maritime disaster section of the program is scheduled to be completed hopefully within this fiscal year, leaving other revisions such as the one related to responses, to large-scale incidents to be worked out later.

It should be noted that Mr. Nishigaki, general manager of the Petroleum Association of Japan, has been with our Oil Spill Response Committee and Antidisaster Council as an expert member.

**Conclusions**

For coastal countries like Japan, South Korea and Russia, the Sea of Japan is an important transportation route for their energy resources.

According to last year's statistics, approximately 9,800 oil tankers of 500 tons or more cruised in the Sea of Japan, of which 4,900 vessels or half of the total did not call at any Japanese ports.

In the Tsushima Straits, especially, there is heavy traffic, including freighters and fishing boats in addition to oil tankers, resulting in a high risk of maritime accidents.

In fact, barely three months after the Nakhodka incident, the ROK tanker Oh Sung No.3 caused an oil leak in the straits.

In such an enclosed sea area like the Sea of Japan, a large-scale oil spill incident caused by leakage from a tanker can cause widespread damage in the coastal countries.

At present, the stern section of the broken Russian tanker settled at a depth of 2,500 meters off Shimane Prefecture has its remaining oil still oozing out, which spreads into the water and disappears.

Although the oil spill incident was a first experience for the prefectural government, the prefecture went all out to fight through the oil incident under the direct command of the governor in the spirit of "doing whatever they could".

Having come through the incident, we now believe there is a definite need to create an international system that will help prevent future oil spills by reviewing the existing international treaties. We also believe that it is essential to reconstruct the oil spill response activities under the cooperation of not only those coastal countries but also through nations worldwide. This is necessary because we need to make the oil spill response measure effective in case a large-scale tanker accident occurs in the Sea of Japan.

In this sense, we strongly hope that the PAJ Oil Spill Symposium '97 will be one of the opportunities to consider such a system.

In concluding my speech, I must thank many people for their help in our fight against the oil spill; the Ground, Maritime and Air Self-Defense Forces that played a major role in the cleanup operations, the Petroleum Association of Japan and the Federation of Electric Companies and many other companies concerned that helped us obtain the oil spill response equipment, volunteers, both inside and outside of our prefecture who participated in the cleanup activities, and many people who made monetary and other contributions. Our thanks go to them all. Lastly, we wish the symposium every success. Thank you.

**Oil spill incident chronology**

Jan. 2 The Russian oil tanker Nakhodka sank.

7 The spilt oil reached the offshores of Mikuni, Fukui Prefecture. The bow section ran aground.

Ishikawa Prefecture established the Accidental Disaster Response Headquarters.

8 Spilt oil, first in the prefecture, was stranded on the beach of Kaga.

9 The prefecture changed the Accidental Disaster Response Headquarters into a Disaster Response Headquarters.

The prefecture requested the Self-Defense Forces to dispatch their personnel for

disaster relief

10 The government established its own Disaster Response Headquarters.
The Internet service and the "Oil 110" fax reception started.
15 Spilt oil was stranded on Nanatsu-jinia Island off the island of Wajima.
16 The extraction operation of residual oil in the bow section was started.
18 The damage resulting from the stranded oil spread to 18 cities and towns along the Sotoura coast.
19 Mr. Hugh Parker of the International Oil Pollution Compensation Fund visited the prefecture.
21 A teacher of Wajima Vocational High School suddenly died during the cleanup operation.
Feb. 1 The damage caused by the stranded oil spread to 8 prefectures.
18 Governors of the prefectures involved submitted an emergency petition to the governmental ruling parties.
19 The Oil Spill Environmental Impact Committee and the Oil Spill Response Committee were established.
20 The original fiscal 1997 budget was made public (Y1.73 billion allotted for the oil spill response)
22 The Kaga Volunteer Center opened.
25 The oil extraction from the bow section ended.
Mar. 10 Kanazawa disbanded its Disaster Response Headquarters (first in the prefecture).
13 Self-Defense Force personnel in oil operations completed their pullout from the prefecture.
M. Jacobsson, secretary-general of the International Oil Pollution Compensation Fund, visited the prefecture.
17 The National Federation of Fishing Cooperative Associations demanded some ¥2.3 billion in damages from the International Oil Pollution Compensation Fund.
31 The prefecture and those cities affected made a demand for compensation to deal with ¥585 million in damages.
Apr. 11 A meeting of the Committee for Monetary Donation Distribution was held.
20 The bow section was moved away from the scene.
27 The Beach Recovery Campaign (concerted beach cleanup by prefectural residents) was conducted.
Kaga and Suzu dissolved their Disaster Response Headquarters (all the headquarters in the local cities and towns involved were disbanded).
28 The prefectural Disaster Response Headquarters was disbanded.
The Prefectural liaison Council for Coordinated Responses to Russian Tanker Oil Spill was established.