

For the safety of tourists

Manual on Initial Responses to a Nuclear Disaster

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Introduction

The area within a 30-km radius of Tomari Nuclear Power Station of Hokkaido Electric Power Co., Inc. has been designated as an Emergency Planning Zone based on Japan's Basic Disaster Management Plan and Guide for Emergency Preparedness and Response. To prepare for the event of an accident at Tomari Nuclear Power Station, the Hokkaido Government and related municipalities have formulated nuclear disaster management plans, including an evacuation plan, and are striving to enhance management measures through emergency exercises and other efforts.

This area encompasses the Kutchan/Niseko area, a major international resort destination in Hokkaido, and the Shakotan Peninsula area, whose tourist resources, such as delicious food and breathtaking scenery, attract many tourists.

For this reason, accommodation and tourist facilities in this area are required to consider tourists in their responses to any accident at Tomari Nuclear Power Station.

This manual describes key points to be addressed in the initial phase of an accident at Tomari Nuclear Power Station so that accommodation facilities and those involved in tourism in this area can calmly provide tourists with evacuation guidance and information.

To address the increasing numbers of overseas tourists, this manual includes a selection of model sentences in English, Chinese, Korean and Vietnamese for appropriate guidance in the first phase of an accident.

A system that enables tourists to act calmly in a nuclear disaster is sure to improve the safety of tourism in this area and to increase the number of visitors. We hope this manual is helpful in this regard.

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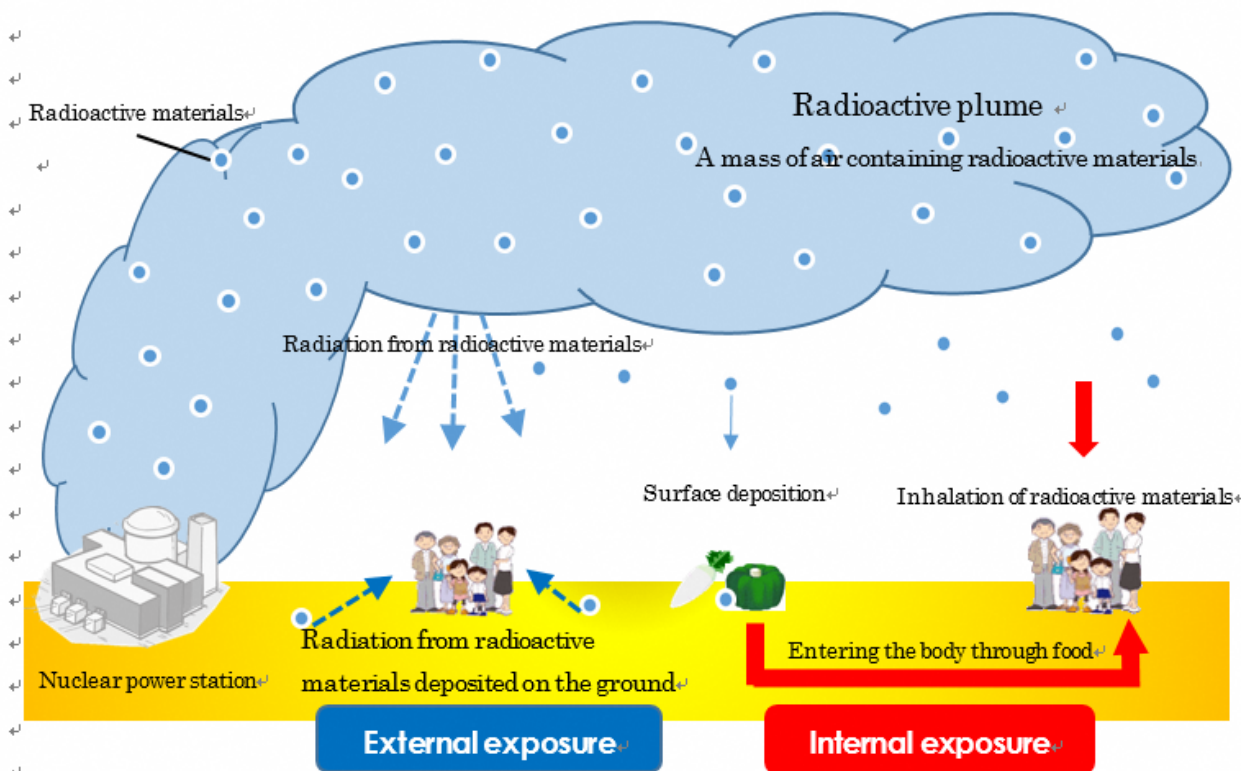
1. What is a nuclear disaster?

A nuclear disaster occurs when an unusually high level of radioactive materials or radiation is released from a nuclear power station.

Such a disaster has the following characteristics.

- People are not able to determine exposure to radiation with their five senses.
- People cannot determine the extent of exposure on their own.
- Disaster response requires a knowledge of radiation.

Visual representation of a disaster

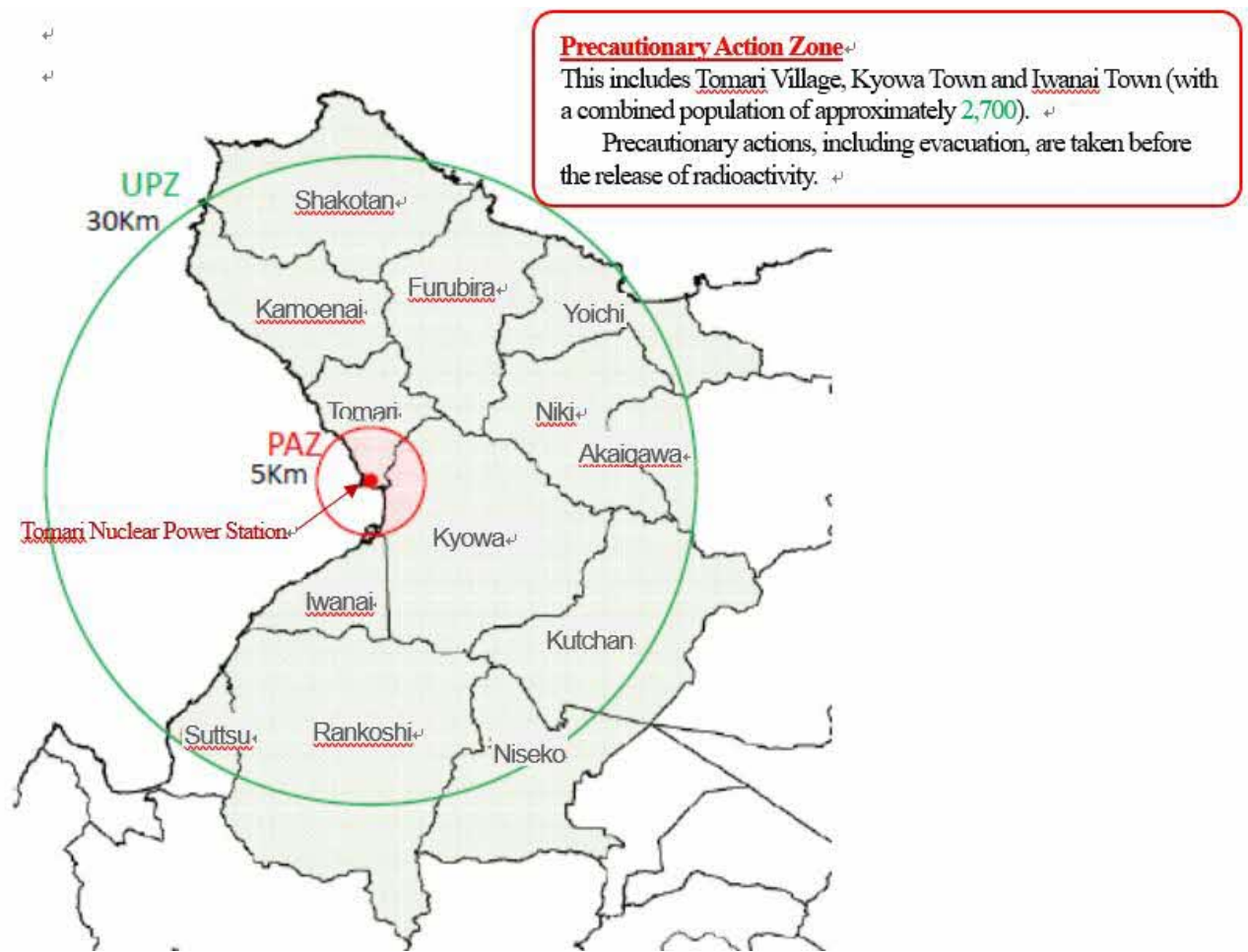


2. Emergency Planning Zones

For the smooth implementation of protective actions in the event of a nuclear disaster, Japan's Guide for Emergency Preparedness and Response sets two zones as high-priority areas where countermeasures should be taken: the Precautionary Action Zone (PAZ) and the Urgent Protective Action Planning Zone (UPZ).

The 13 municipalities included in these two zones have formulated nuclear disaster management plans and evacuation plans based on the National Government's guidelines.

In the event of a nuclear disaster, these municipalities will take protective actions based on the plans, such as to help people take shelter, evacuate and temporarily relocate.



Urgent Protective Action Planning Zone

Tomari Village, Kyowa Town, Iwanai Town, Kamoenai Village, Suttu Town, Rankoshi Town, Niseko Town, Kutchan Town, Shakotan Town, Furubira Town, Niki Town, Yoichi Town and Akaigawa Village (with a combined population of approximately 71,000) are in the zone.

Precautionary actions are taken, people take shelter or are evacuated, and other step-by-step actions are taken.

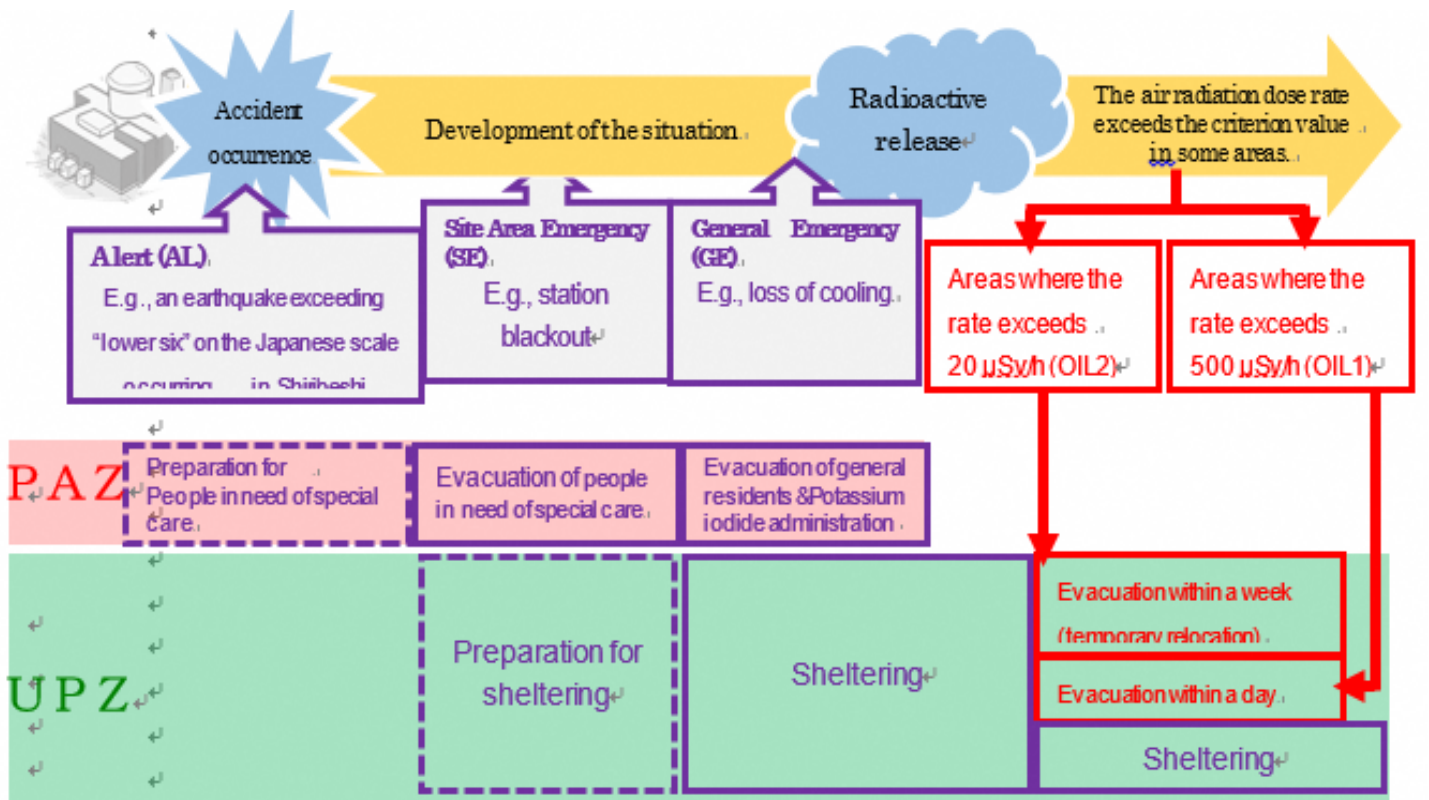
Glossary

- ◆ Sheltering: entering one's home or a public facility to avoid inhaling radioactive materials and to shield oneself from radiation
- ◆ Evacuating: quickly leaving a location where the air radiation dose rate is high or may become high
- ◆ Temporarily relocating: leaving an area for a week or so after the accident to avoid unnecessary exposure to radiation although the air radiation dose rate in the area is below the level at which emergency evacuation is necessary

3. Outline of nuclear disaster management

In the event of a nuclear disaster, the National Government will determine the protective actions that are to be taken, such as sheltering and evacuation, based on the situation of the accident at the power station and measurements of radiation obtained by emergency monitoring. It is important to remain calm and follow instructions from the National Government, the Hokkaido Government and municipalities, rather than to make decisions on one's own.

To minimize radiation exposure, step-by-step protective actions corresponding to the category of Emergency Planning Zone (PAZ or UPZ) are taken for the smooth implementation of these actions.

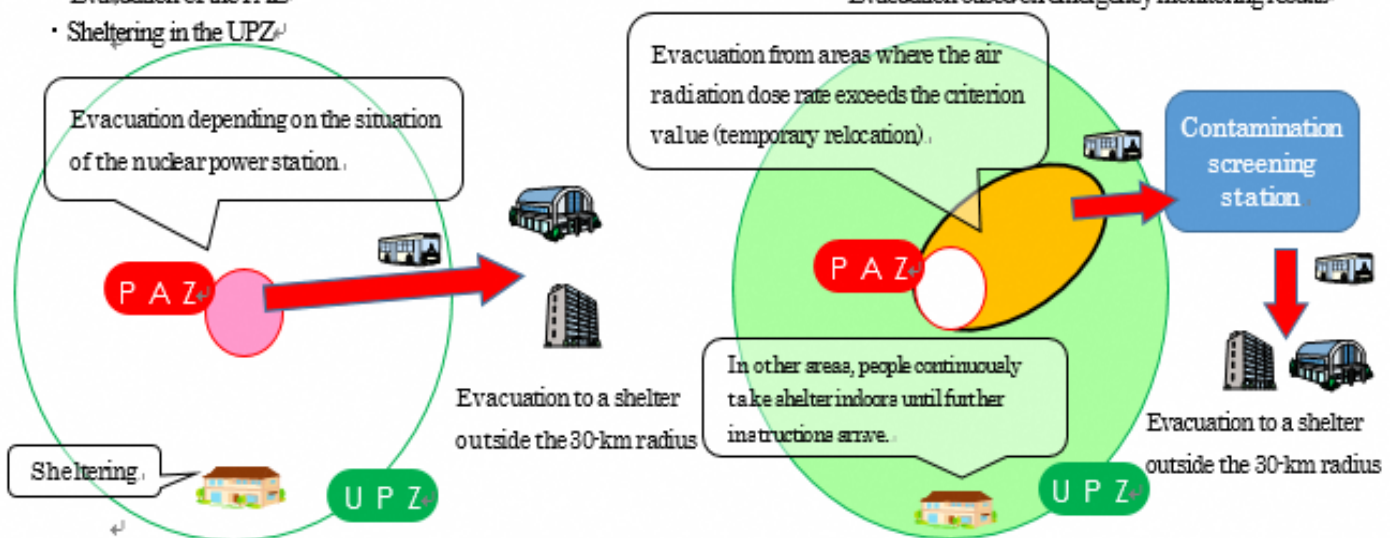


○ **Before radioactive release**

- Evacuation of the PAZ
- Sheltering in the UPZ

○ **After radioactive release**

- Evacuation based on emergency monitoring results



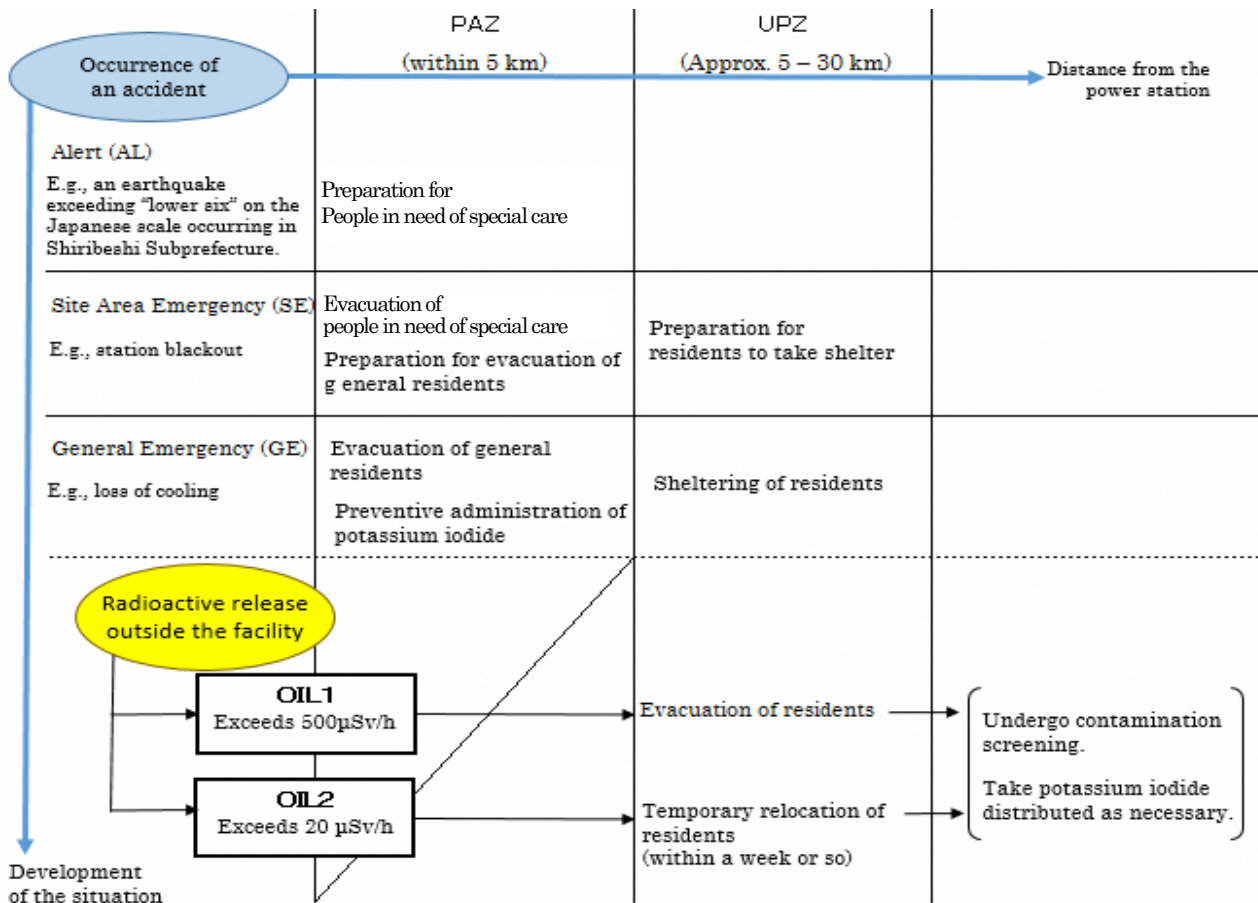
Glossary

- ◆ People in need of special care : people who need special consideration for evacuation , such as taking more time than usual to evacuate is , (Elderly , disabled persons , infants , expectant or nursing mothers , those who are ill or hospitalized , etc.)
- ◆ Air radiation dose rate: the air radiation dose per hour (unit: micro Sieverts per hour ($\mu\text{Sv/h}$))
- ◆ EAL (Emergency Action Level): level for determining the emergency category (three levels) depending on the situation of the power station
- ◆ OIL (Operational Intervention Level): level for determining protective measures after radioactive release based on measurable values
- ◆ Potassium iodide: a medical agent administered to inhibit the accumulation of radioactive iodine in the thyroid gland. In the General Emergency stage, people in the PAZ need to take a preventive dose of potassium iodide. In the UPZ, the Nuclear Regulation Authority (NRA) determines the need for people to take the medical agent in emergencies, so that people there may take it as instructed when evacuating.
- ◆ Contamination screening: examinations of whether radioactive materials are attached to residents and others who evacuate after radioactive release but before they arrive at shelters. If radioactive materials exceeding the criterion values are detected, simple decontamination (undressing, wiping, etc.) is conducted.

4. Basic patterns of evacuation and other actions

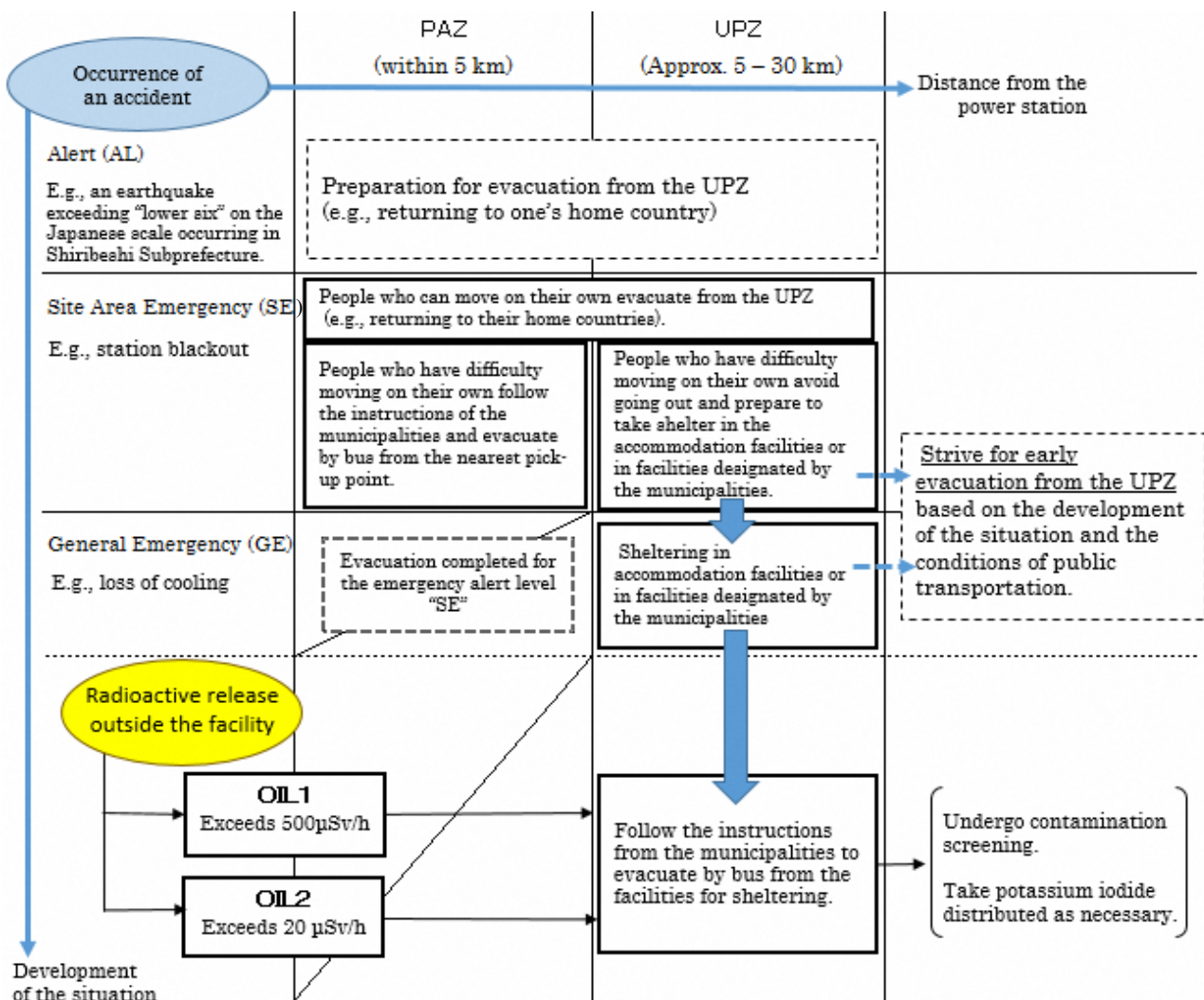
(1) Evacuation and other actions to be taken by local residents

- In the PAZ, people requiring assistance evacuate first, because they need extra time; then general residents evacuate if the situation worsens.
- In the UPZ, residents take shelter indoors. If radioactive materials are released, the areas where the air radiation dose rate exceeds the criterion value will be identified through the results of emergency monitoring, and residents in those areas will evacuate or take other actions.
- Residents evacuate to the destinations specified in municipal evacuation plans (e.g., to Sapporo or the Iburi area).



(2) Evacuation and other actions to be taken by visitors such as tourists

- In the Site Area Emergency stage, visitors such as tourists in both the PAZ and the UPZ are requested to return home or to otherwise evacuate from the UPZ.
- Visitors who have difficulty in moving on their own are requested to evacuate by bus with residents in the PAZ and to prepare to take shelter at accommodation facilities or facilities designated by municipalities in the UPZ.
- If the situation worsens, they will be requested to take shelter indoors. The Hokkaido Government will strive to take measures necessary to evacuate visitors as soon as possible (before radioactive release) in cooperation with the municipalities and related organizations.
- If visitors who are taking shelter are instructed to evacuate or take other actions, they will be requested to follow the instructions of the municipalities.

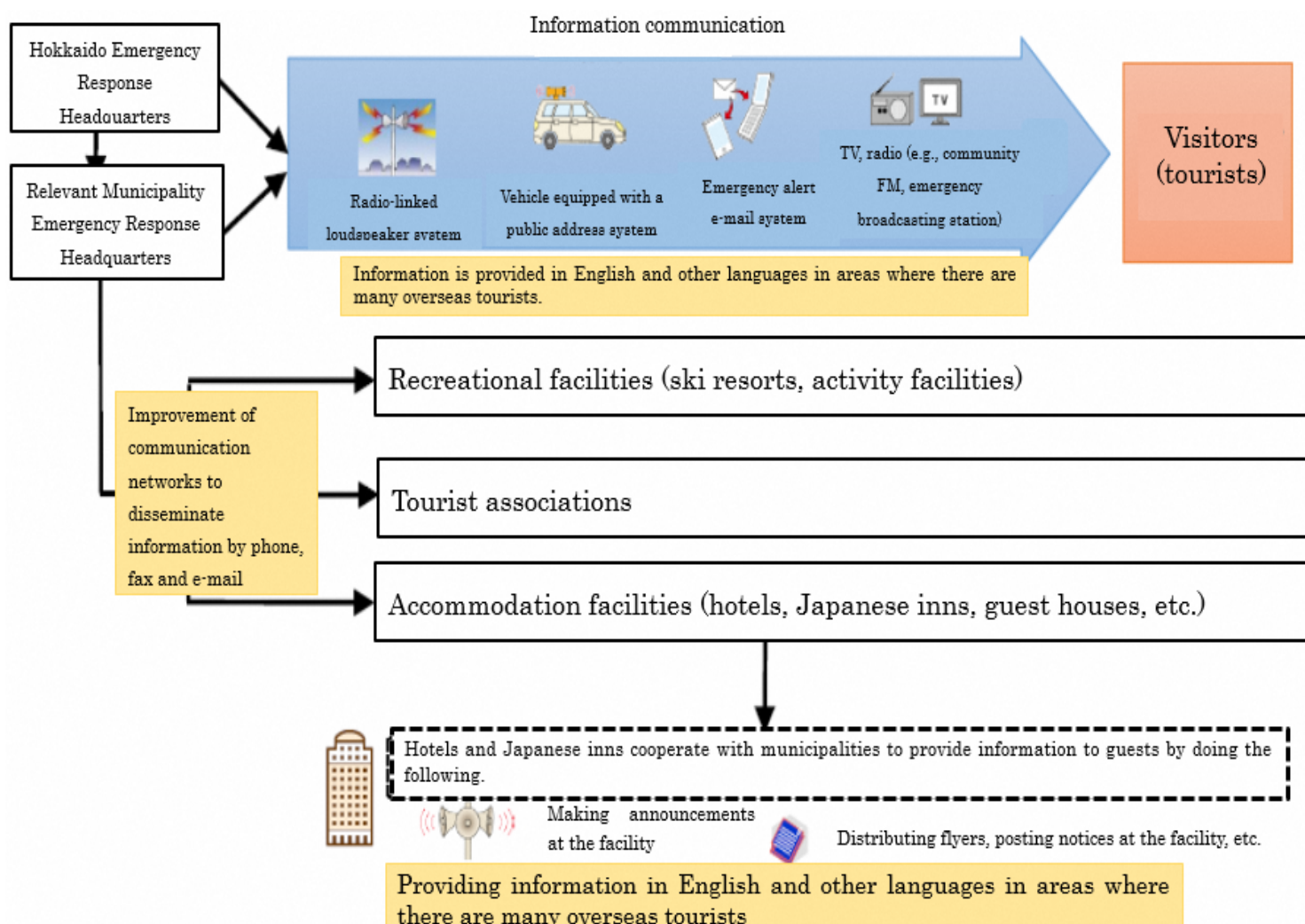


5. Information communication in emergencies

In the event of an accident at Tomari Nuclear Power Station, information on the situation of the accident, instructions and requests to local residents and other matters will be provided by the National Government and the Hokkaido Government by means of TV, radio and the Internet, as well as by municipalities using the emergency alert e-mail and radio-linked loudspeaker systems and vehicles equipped with a public address system.

With regard to instructions and requests directed at visitors, municipalities will separately provide necessary information via phone and fax based on the instructions of the National Government and the Hokkaido Government. Visitors will be requested to evacuate as instructed.

Communication methods to provide information to accommodation facilities in municipalities



Responding to questions from tourists

- If there are any questions from tourists regarding the situation surrounding the nuclear accident, evacuation routes or other safety information, be sure to check with the municipality first, then provide accurate information.
- Make an effort to gain a deeper understanding of the basics of nuclear disaster management by attending training courses on the fundamentals of radiation and the practices for nuclear disaster management, provided by the Hokkaido Government.

6. Key points to be addressed at individual facilities in the initial phase of a nuclear disaster

(1) Response procedures at facilities in the PAZ

Flow

Emergency Action Level	Example situation	Requests and instructions directed at residents (municipality)	Responses to visitors at facilities
Alert (AL)	An earthquake exceeding “lower six” on the Japanese scale occurs in Shiribeshi Subprefecture.	○Preparation for People in need of special care.	○ Give alerts to visitors (including a request for preparation to return to their homes).
Site Area Emergency (SE)	It becomes impossible to externally provide electricity to the power station.	○Evacuation of people in need of special care ○ Prepare to evacuate general residents.	○ Request that visitors who can move on their own return to their homes. ○ Lead visitors who have difficulty moving on their own to evacuate using busses arranged by the municipality.
General Emergency (GE)	It becomes impossible to cool the reactors.	○ Evacuate general residents. ○ Take a preventive dose of potassium iodide.	Evacuation completed for the emergency alert level “SE”

Checklist for persons in charge

If a notification of Alert (AL) is made by the municipality...

- Request that visitors monitor the latest information and prepare to return to their homes.
- Let visitors know that there is no radiation release at present, and ask them to act calmly.
- Check transportation for visitors. (For groups of tourists, contact travel agencies.)
- Count the number of visitors who cannot return to their homes on their own, report this to the person in charge of disaster management in the municipality, and check the nearest pick-up point for evacuation by bus.

7. Selection of model sentences
(1) Model sentences #1

**For visitors who can move on their own and wish to return to their homes or who wish to evacuate from the zone, it is not necessary to forcibly shelter them.*

If a notification of Site Area Emergency (SE) is made by the municipality...

- Request that visitors who can move on their own return to their homes or evacuate from the UPZ.
- Lead visitors who have difficulty moving on their own to the nearest pick-up point for evacuation by bus.
- Let visitors know that there is no radiation release at present, and ask them to remain calm.

7. Selection of model sentences
(2) Model sentences #1, #2

**Report the movements of visitors to the person in charge of disaster management in the municipality.*

→ Keep the contact information of the person as follows on a routine basis:


Contact information

_____ in charge of disaster management, _____ Section, _____ Town
(Village)

Tel. ○○○○—○○—○○○○ Fax ○○○○—○○—○○○○

(2) Response procedures at facilities in the UPZ

Flow

Emergency Action Level	Example situation	Requests and instructions directed at residents (municipality)	Responses to visitors at facilities
Alert (AL)	An earthquake exceeding “lower six” on the Japanese scale occurs in Shiribeshi Subprefecture.	○ Stay alert.	○ Give alerts to visitors (including a request for preparation to return to their homes).
Site Area Emergency (SE)	It becomes impossible to externally provide electricity to the power station.	○ Prepare to take shelter.	○ Request that visitors who can move on their own to return home. ○ Request that visitors who have difficulty moving on their own prepare to take shelter in accommodation facilities or facilities designated by the municipality.
General Emergency (GE)	It becomes impossible to cool the reactors.	○ Take shelter.	○ Request that visitors take shelter in accommodation facilities or facilities designated by the municipality.
	 <p>Areas where the air radiation dose rate is equal to or lower than the criterion value</p> <p>Case (1) →</p> <p>Areas where the air radiation dose rate exceeds the criterion value</p> <p>Case (2) →</p>	○ Give instructions for evacuation and other actions.	○ Evacuate using the bus arranged by the municipality. <ul style="list-style-type: none"> ▪ Undergo contamination screening. ▪ Take potassium iodide distributed as necessary.

Efforts to ensure the security of tourists
(e.g.)

- ▷ Request buses for early evacuation.
- ▷ Provide appropriate information on the Emergency Action Level, radiation and other matters.
- ▷ Request relief goods.

Checklist for persons in charge

If a notification of Alert (AL) is made by the municipality...

- Request that visitors monitor the latest information and prepare to return home.
- Let visitors know that there is no radiation release at present and ask them to remain calm.
- Check transportation for visitors. (For groups of tourists, contact travel agencies.)
- Collect information on the conditions of public transportation.

**For visitors who can move on their own and wish to return home or who wish to evacuate from the zone, it is not necessary to forcibly shelter them.*

7. Selection of model sentences
(1) Model sentences #1

If a notification of Site Area Emergency (SE) is made by the municipality...

- Request that visitors who can move on their own return home or evacuate from the UPZ.
- Count the number of visitors who have difficulty moving on their own and report this to the person in charge of

- disaster management in the municipality. Just in case, check the nearest pick-up point for evacuation by bus.
- Request that visitors who have difficulty moving on their own prepare to take shelter. (If it is difficult to shelter them in the facility, guide them to the facility designated by the municipality.)
 - Let visitors know that there is no radiation release at present and ask them to remain calm.
 - Continue to collect information on the conditions of public transportation.

7. Selection of model sentences
(2) Model sentences #1, #3

**In addition to the above basic responses, continue to discuss the early evacuation and security of visitors with the municipality and related organizations.*

If a notification of General Emergency (GE) is made by the municipality...

- Request that visitors in the facility take shelter indoors.
- Let visitors know that there is no radiation release at present and ask them to act calmly.
- Continue to collect information on the conditions of public transportation.

7. Selection of model sentences
(3) Model sentences #1

**In addition to the above basic responses, continue to discuss the early evacuation and security of visitors with the municipality and related organizations.*

After radioactive release

Case 1) If sheltering continues (areas where the air radiation dose rate is equal to or lower the criterion value)...

- Let visitors know that radioactive materials have been released, and ask them to follow the instructions of staff members and remain calm.
- Let them know that their safety is ensured as long as they stay in the facility.
- Continue to collect information on the conditions of public transportation.

7. Selection of model sentences
(3) Model sentences #2

**In addition to the above basic responses, continue to discuss the early evacuation and security of visitors with the municipality and related organizations.*

Case 2) If an evacuation instruction is given by the municipality (areas where the air radiation dose rate exceeds the criterion value)...

- Guide visitors who are taking shelter indoors to the nearest pick-up point for evacuation by bus. (If the bus stops at the facility, wait there.)
- Let visitors know that they will undergo contamination screening.
- With regard to potassium iodide, follow the instructions of the municipality, and let visitors know how to take it as necessary.
- Ask them to follow the instructions of staff members and act calmly.

7. Selection of model sentences
(3) Model sentences #3

**Report the movements of visitors to the person in charge of disaster management in the municipality as needed.*

➔ Keep the contact information of the person as follows on a routine basis:

Contact information

_____ in charge of disaster management, _____ Section, _____ Town (Village)

Tel. ○○○○—○○—○○○○ Fax ○○○○—○○—○○○○

**Response during Times of Complex Disaster
(For example: Natural Disasters such as Earthquakes, Tsunami, or Blizzards)**

- If imminent danger due to natural disaster(s) occurs during a complex disaster, protection of life should be the utmost priority.
- For example, if there is a blizzard (or notification of Blizzard Warning or Blizzard Emergency Warning), taking shelter until the weather improves takes precedence, and evacuation or other actions should be implemented promptly once the weather allows.
- In any case, always follow the instructions of the local municipal government.

7. A selection of model sentences for communicating with overseas visitors

(1) Model sentences for an Alert (AL))

Model sentences 1): When asking visitors in the PAZ and UPZ to prepare to return home.

日：泊発電所でトラブルが発生しました。

英：An accident has occurred at Tomari Nuclear Power Station.

中：泊核能發電站發生了事故。

中：泊核能发电站发生了事故。

韓：도마리 원자력 발전소에 문제가 발생했습니다.

越：Đã có vấn đề xảy ra tại Nhà máy điện hạt nhân Tomari.

Legend for translations

日: Japanese

英: English

中: Traditional Chinese

Simplified Chinese

韓: Korean

越: Vietnamese

日：発電所の状況が悪化した場合、避難していただく場合があります。

英：If the situation worsens at the power station, you may be asked to evacuate.

中：發電站情況發生惡化時，有可能會要求避難。/
发电站情况发生恶化时，有可能会要求避难。

韓：발전소의 상황이 악화되는 경우, 대피해야 할 수도 있습니다.

越：Nếu tình hình tại nhà máy điện xấu đi, các bạn có thể phải đi sơ tán.

日：新しい情報に注意しつつ、避難の準備をお願いします。

英：Please prepare to evacuate while paying close attention to the latest information.

中：請注意最新資訊，同時準備避難。/
请注意最新信息，同时准备避难。

韓：새로운 정보에 주의를 기울이면서 대피 준비를 하십시오.

越：Vui lòng chú ý đến thông tin mới, đồng thời chuẩn bị cho việc sơ tán.

日：現在、放射性物質の放出はありません。落ち着いて行動してください。

英：No radiation is released. Please remain calm.

中：現在沒有發生放射性物質泄漏。請大家冷靜行事。 /
现在没有发生放射性物质泄漏，请大家冷静行事。

韓：현재 방사성 물질은 방출되지 않고 있습니다. 침착하게 행동해 주십시오.

越：Hiện tại, không có sự phát tán chất phóng xạ. Hãy bình tĩnh hành động.

(2) Model sentences for a Site Area Emergency (SE))

Model sentences 1): When asking participants of bus tours to evacuate from the PAZ and UPZ zones

日：泊発電所でトラブルが発生しました。バスに戻ってください。

中：泊核能發電站發生了事故。請大家回到大巴上。 /
泊核能发电站发生了事故。請大家回到大巴上。

韓：도마리 원자력 발전소에 문제가 발생했습니다. 버스로 돌아가 주십시오.

越：Đã có vấn đề xảy ra tại Nhà máy điện hạt nhân Tomari. Vui lòng quay lại xe buýt.

日：念のため、安全な地域に退避させていただきます。

英：To be on the safe side, we are asking you to relocate to a safer place.

中：以防萬一，請大家到安全的地方。 /
以防万一，請大家到安全的地方。

韓：만일을 대비해 안전한 지역으로 피난하겠습니다.

越：Để đề phòng, vui lòng trú ẩn ở khu vực an toàn.

日：現在、放射性物質の放出はありません。落ち着いて行動してください。【再掲】

英：At present, no radioactive materials have been released. Please respond calmly.

中：現在沒有發生放射性物質泄漏。請大家不要慌。 /
现在没有发生放射性物质泄漏，請大家不要慌。

韓：현재 방사성 물질은 검출되지 않고 있습니다. 침착하게 행동해 주시기 바랍니다.

越：Hiện tại, không có sự phát tán chất phóng xạ. Hãy bình tĩnh hành động.