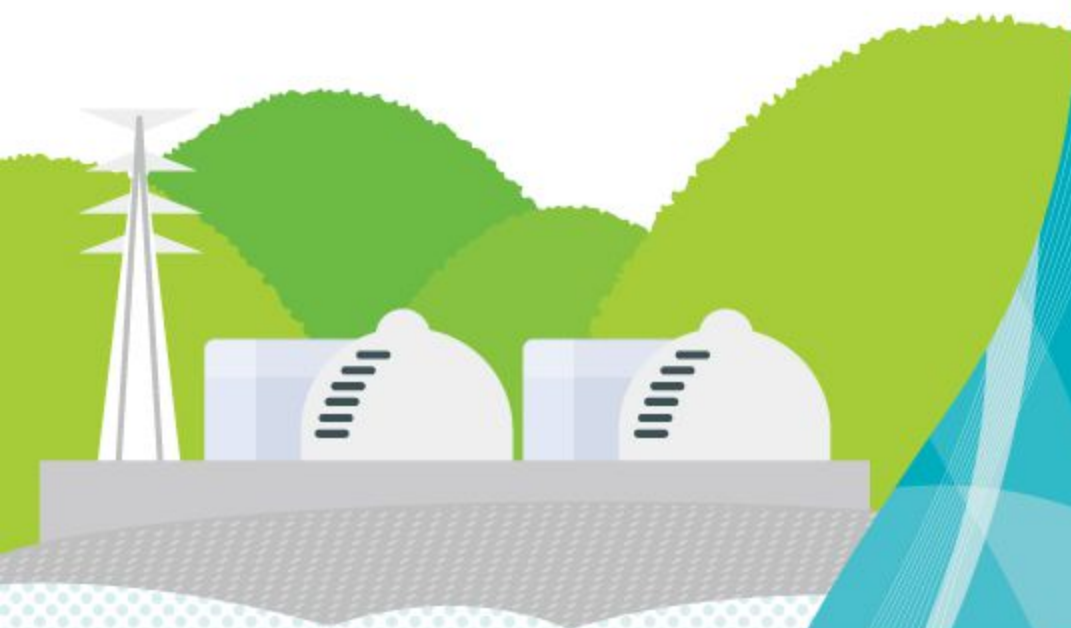


Be informed, be prepared.

Nuclear Disaster Prevention Handbook

Special publication | Revised Dec. 2023



You can also see this information on the prefectural site

Saga Nuclear Disaster Prevention Handbook

Search

This handbook has an 'audio code' printed on the bottom right and bottom left of each page. When scanned with a dedicated reading device, you will be able to hear the information written here spoken out loud.



Introduction

As Genkai Town, Karatsu City, and Imari City fall within 30km of the Genkai Nuclear Power Plant, the prefecture of Saga has drafted prefectural and municipal-level regional disaster prevention and evacuation plans for the unlikely event of a nuclear incident.

Additionally, in order to increase the effectiveness of these plans, we plan to hold annual nuclear emergency response exercises to promote greater ability to respond to and understanding of nuclear disaster prevention. We revise these plans as needed and we reinforce our disaster prevention system by using the lessons learned during our training.

This handbook covers simple and easily understood fundamentals about radiation and nuclear power, as well as nuclear disaster countermeasures. This will be kept to the bare minimum needed to properly defend yourself against nuclear disasters.

Residents of Genkai Town, Karatsu City, and Imari City, but also other regions, are advised to make use of this handbook and prepare for an unlikely worst-case scenario. In a disaster situation, you will only be able to do the things you've practiced and learned in drills. Please work together with your region to prevent disasters.

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If you wish to know more about nuclear power disaster countermeasures, please visit the following site, or call the Saga Prefecture Bureau of Crisis Management, Disaster Prevention Division (TEL: 0952-25-7362)

- Cabinet Home Page
https://www8.cao.go.jp/genshiryoku_bousai/index.html
- JAERO "Nuclear Power Overview Pamphlet Web Version"
<https://www.jaero.or.jp/sogo/>



1

What is a Nuclear Disaster?

We can define a nuclear disaster as damage caused by the abnormal emission of radiation or radioactive material resulting from an accident, etc. at a nuclear facility.

Characteristics of a nuclear disaster

Unlike storms, floods damage, earthquakes, fires and so forth, a nuclear disaster has no discernible smells or visual warnings and such that we can detect with our five senses.

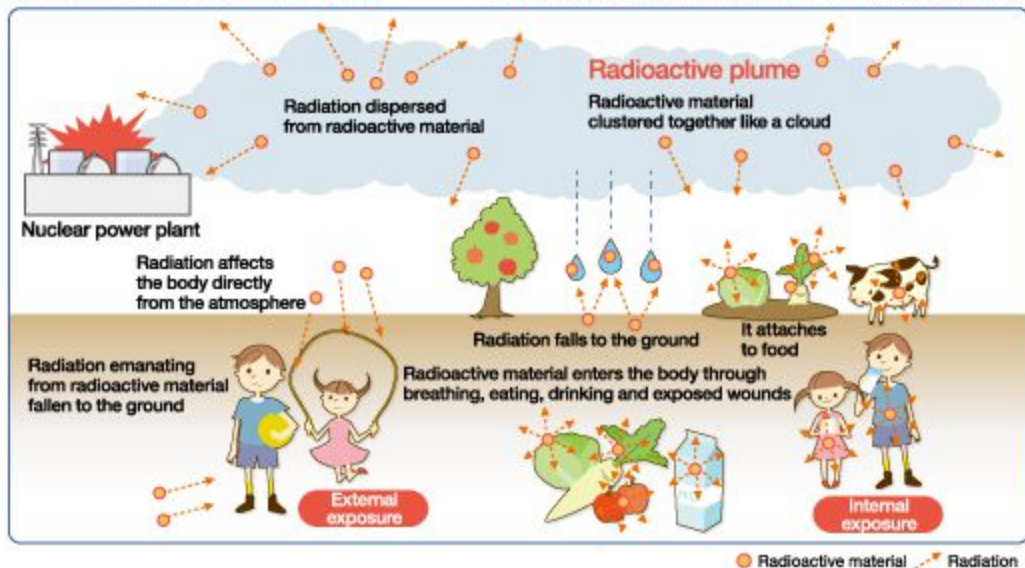
In order to cope with this kind of emergency, it is vital to have the correct information about radiation and radioactive material and follow the instructions provided by the national government, prefecture and municipalities rather than taking action on your own. Above all else, stay calm.

What happens if a nuclear disaster occurs?

- Should an incident occur at a nuclear power plant, radioactive material may be released into the surroundings.
- This radioactive material forms something like a cloud (or "radioactive plume") and begins to spread.

[Depiction of a disaster developing]

* In reality, radioactive material and radiation are invisible to the eye



The difference between "exposure" and "contamination"

Exposure: A person or animal is bathed in radiation

Contamination: Radioactive material adheres to skin or clothing.

Exposed skin and clothing may be washed or wiped to remove radioactive materials (decontamination).



2

Radiation, Radioactivity & Radioactive Materials

- "Radiation" is the particles and electromagnetic waves produced by radioactive materials. "Radioactivity" is the capacity to produce radiation. Finally, "radioactive materials" are substances that are radioactive.

[If we liken this to a flashlight] The flashlight represents **radioactive materials**



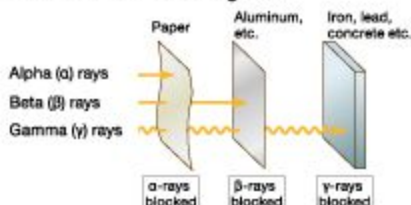
The ability to produce rays of light is

radioactivity

The light is

radiation

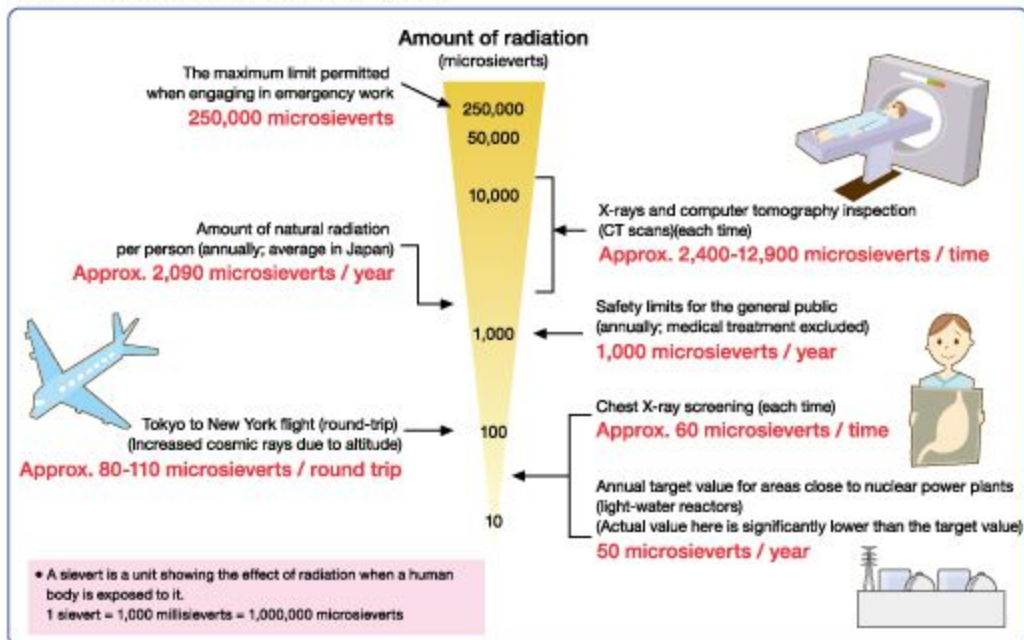
- Radiation includes alpha rays, beta rays, gamma rays, etc., each of which can penetrate substances to different degrees.



Sheltering indoors is effective during a nuclear disaster as radiation can be blocked by iron, lead or concrete.

Daily life and radiation

We receive radiation from nature in our everyday lives. We are also exposed to radiation during medical tests and treatments for diseases.



Source: Based on "BOOKLET to Provide Unified Basic Information Regarding Health Effects of Radiation (2022 Edition)" issued by the Ministry of the Environment

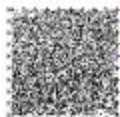
Evacuation criteria during a nuclear disaster

500 microsieverts/hour

People are ordered to evacuate within one day

20 microsieverts/hour

People are ordered to evacuate (temporary relocation) within a week



3

Saga Prefecture Nuclear Disaster Prevention Priority Zone

In Saga Prefecture, three municipalities, Genkai Town, Karatsu City, and Imari City, have been designated as areas where nuclear disaster countermeasures will be prioritized and each city and town has developed an evacuation plan in the event of a nuclear disaster.

PAZ

Zone designed for precautionary protective measures (Precautionary Action Zone)

The area within a roughly **5km radius** from the nuclear power plant.

Target Regions

Genkai Town

Hokawazu, Chikagawachi, Shimomiya, Nakadori, Karidachi, Fuenji, Sea Line Town, Hirao, Hamanoura, Kogakura, Sakae, Hananoki, Ozono, Kariya, Ishida

Karatsu City

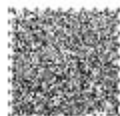
Hizenmachi (Kyodomari), Chinzeimachi (Onigi, Ichido, Nomoto, Motogumi, Akaneyamachi, Hatakenaka, Sako, Mugiwara, Sakube, Urakata, Tonoyama, Sakigata, Furusato, Nakamachi, Amamachi, Kushi, Maeda, Takenouchi, Yokotake, Ishimuro, Ushiodai), Yobukocho (Tononouranishi, Katashima, Kabeshima)

UPZ

Zone designed for emergency protective measures (Urgent Protective action planning Zone)

The area roughly **5km-30km radius** from the nuclear power plant.

- The UPZ target region covers **all of Genkai Town, Karatsu City and Imari City** (excluding the PAZ)



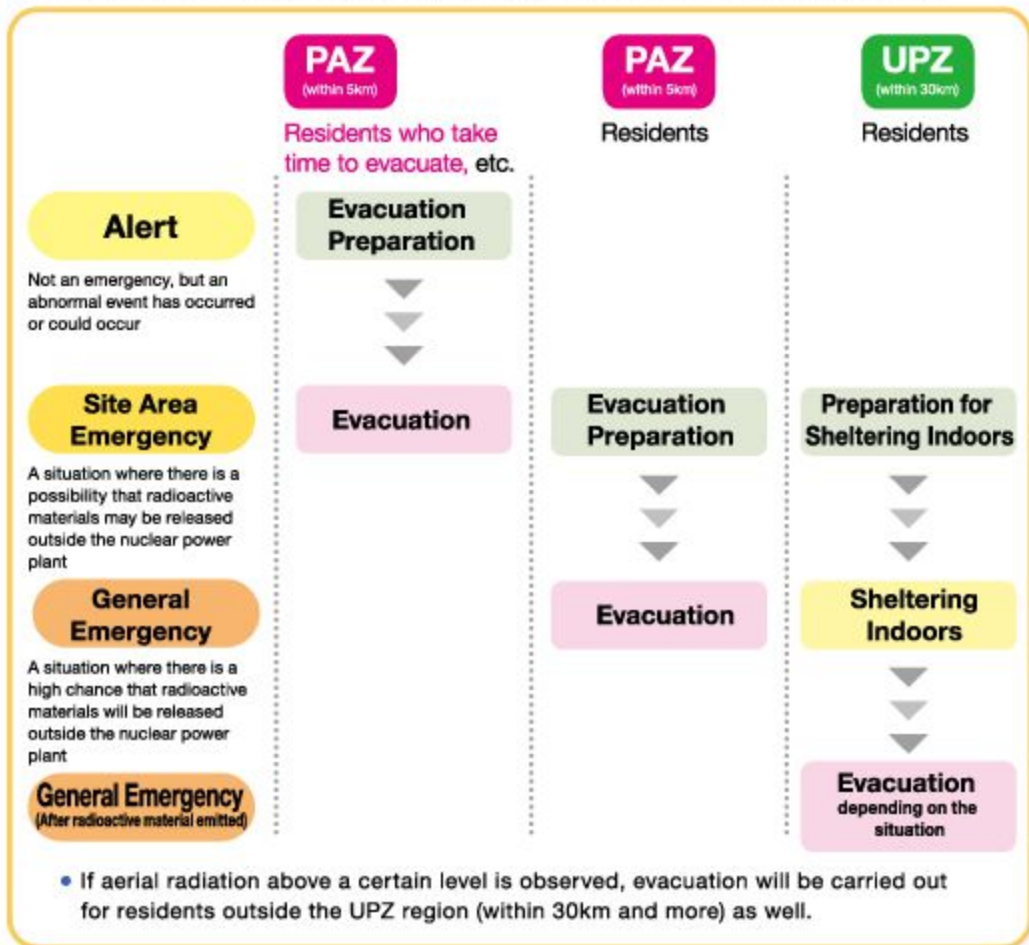
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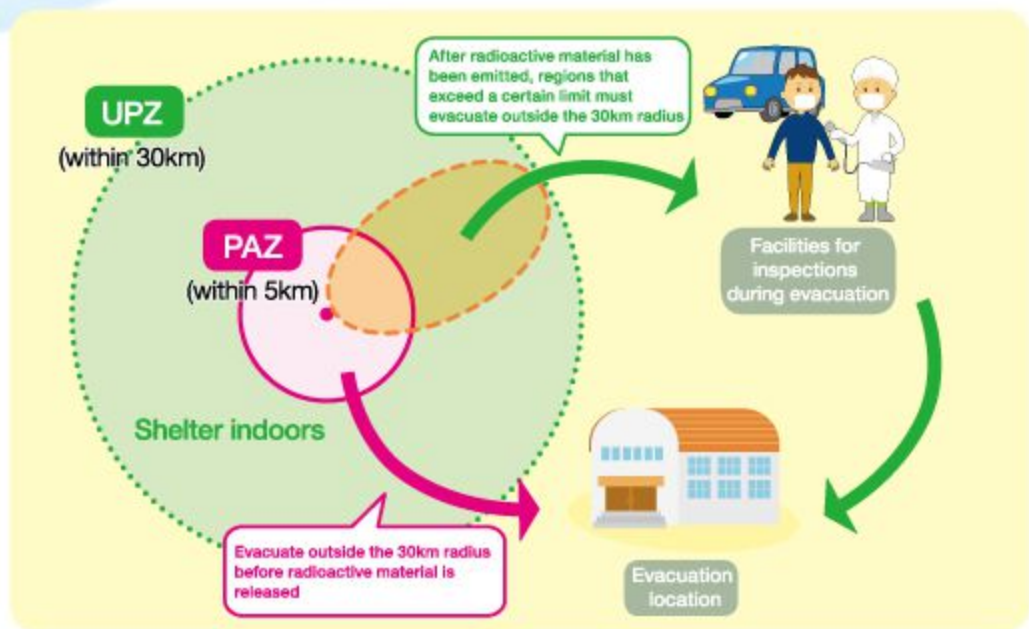
Timing for Evacuation or Sheltering Indoors

If there is an incident at the nuclear power plant, the national government will consider:

- 1 The nuclear power plant situation
- 2 Whether or not radioactive material has been emitted
- 3 If radiation readings are abnormal

These are all used as guidelines for ordering evacuation, or sheltering indoors.





Evacuation timing

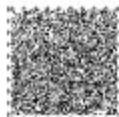
- Those living in the PAZ will evacuate before radioactive material is emitted.
- Of those in the UPZ, those in regions where radiation above the limit is observed will evacuate, while others will shelter indoors.
- For those living outside the 30km radius, evacuation or sheltering indoors may be ordered on a situational basis.

UPZ evacuation decision criteria

Evacuation decision criteria	Recommended protocol
Areas exceeding 20 microsieverts every hour	- Evacuation within 1 week (temporary relocation)
Areas exceeding 500 microsieverts every hour	- Evacuation within 1 day

Evacuation method (shared between PAZ/UPZ)

- As a general rule, evacuation is carried out by personal automobile or carpooling.
- If evacuating in this way is difficult, the prefecture or municipality will dispatch buses etc.



5

Points of Caution for Nuclear Disasters

- Be on your guard for incorrect information, and work to gather correct information while acting calmly.



Watch out for rumors and misinformation!

Be sure to follow the information provided by the national government, prefecture and municipalities via television, radio and the internet, and act accordingly. Information is also available through the prefectural app "Bosai Net An-an".



Go pick up your children.

Children who are in nursery schools, kindergartens, schools or in after-school clubs in PAZ or UPZ should be collected promptly according to the instructions and rules provided by the facilities.



Ensure other residents nearby are informed

It's especially important to reach out to the elderly and physically impaired.



Avoid panic and act calmly

Calmly follow any instructions given by police officers and municipal employees on roads or in crowded areas.

Methods of collecting information

Information through mass media

- TV
- Radio
- Internet etc.



Prefectural information

- Official Website
- Official social media
- "Bosai Net An-an" app etc.



Municipal information

- Official disaster prevention radio
- PR vehicle / Fire brigade
- Emergency notification emails, etc.



Residents (including tourists)

- Please follow the directions provided.
- Get updates during the evacuation using radio, mobile phones, smart phones, etc.



6

If Told to Shelter Indoors

Staying indoors is the first step to staying safe!

When directed to take indoor shelter, stay inside the building (your home, etc.) and close all doors and windows. Buildings are relatively airtight and provide a shielding effect, so sheltering indoors reduces exposure to radiation.



* Concrete buildings are more protective against radiation than wooden buildings.

* Air conditioners that do not take in outside air can also be used while sheltering indoors. Check to see what type of air conditioner is installed at home first.



7

If You Need to Evacuate

Act calmly during the emergency!

In the event of evacuation (temporary relocation), calmly prepare and listen to the information given, then evacuate to the designated location (evacuation destinations).



Obtain accurate information



Shut off the gas valve and the electricity breaker.

Do not forget to close your doors.



Protect yourself from radioactive material

Use a mask or wet handkerchief to cover your mouth and nose, in order to avoid ingesting radioactive contaminants.



Take your own car or a bus to evacuate

○ Clothing to wear during an evacuation

Do your best to wear clothes that fully cover the skin, such as the following.

Something that covers your head
A hat or a top with a hood

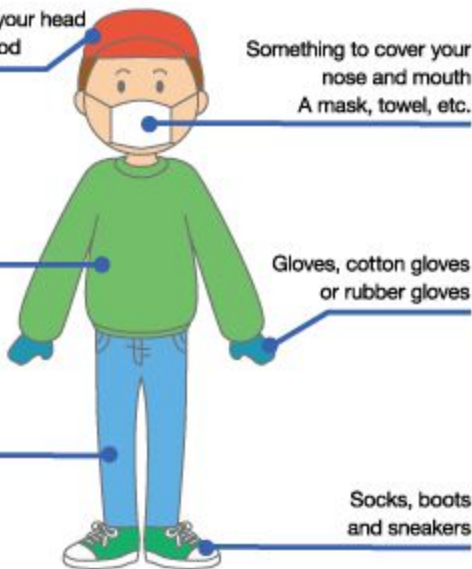
Something to cover your nose and mouth
A mask, towel, etc.

Tops with long sleeves

Gloves, cotton gloves or rubber gloves

Long trousers (slacks)

Socks, boots and sneakers



* Raincoats or similar can also be worn



8

Where Will I be Evacuated to?

- The evacuation plans for Genkai Town, Karatsu City, and Imari City outline evacuation routes and destinations. Please check the site in advance.
- If you live in another municipality, please check what facilities accept evacuees in advance.

(Current as of December 2023)

Cities and towns		Evacuation destinations		QR codes and evacuation routes (They can be checked on the map.)
Genkai Town		Ogi City		
Karatsu City	Former Karatsu	Saga City, Tosu City, Taku City, Ogi City, Kanzaki City, Yoshinogari Town, Kamimine Town, Miyaki Town		
	Chinzelmachi	Kohoku Town, Shiroishi Town	Yobukocho → Ogi City, Shiroishi Town	
	Hizenmachi	Omachi Town, Shiroishi Town	Hamatamamachi → Tosu City, Kiyama Town	
	Kitahata	Ogi City	Ouchicho → Saga City	
	Nanayama	Kanzaki City	Kyuragimachi → Saga City	
Imari City		Takeo City (Okawachi Town [excluding Okawachiyama and Fukuno], Kurogawacho, Hatatsucho, Minamihatacho, Higashiyamashirocho, Yamashirocho) Kashima City (Tachibana district, Okawacho) Ureshino City (Okawachi Town [Okawachiyama and Fukuno], Matsuuracho, Niricho) Arita Town (Imari district, Makishima district) Tara Town (Otsubo district)		

* Those who are unable to read QR codes can use search sites to check.

Inquiries about evacuation plans

Genkai Town Hall General Disaster Prevention and Safety Division
TEL 0955-52-2115
Karatsu City Hall Crisis Management Disaster Prevention Division
TEL 0955-72-9260
Imari City Hall Disaster Crisis Management Division
TEL 0955-23-2130

Medical & Welfare Institutions

There are evacuation plans for the respective **medical & welfare institutions** in Genkai Town, Karatsu City and Imari City. Please contact the required institution for further details.





Where Does My Evacuation Route Go?

Major evacuation routes are planned with the aim of reaching a safe distance from the nuclear power plant quickly and while avoiding confusion.

If the UPZ needs to be evacuated, facilities for inspections will be placed en route or nearby, so please be sure to undergo a radiation examination there.

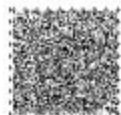


Major evacuation routes

Facilities for inspections during evacuation (candidate sites)

* Actual locations of inspection sites will be given out alongside evacuation orders.

* Please check your municipality's website for the evacuation routes assigned to each district.



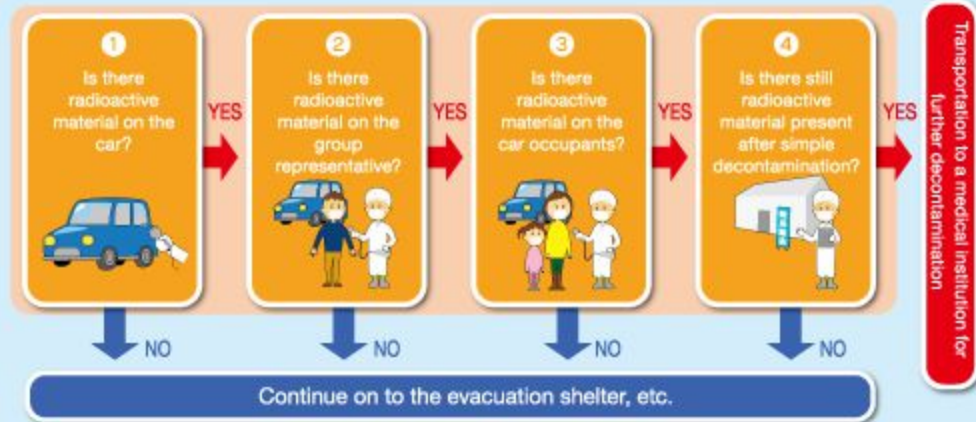
10

Medical Services during an Emergency

Inspections when evacuating each area

- Inspection facilities will be set up along evacuation routes depending on the area targeted for evacuation for residents of the UPZ (within 5-30 km of incident) if told to evacuate.
- Inspection facilities will check whether cars, clothing, or other items are contaminated with radioactive materials. Please make sure to undergo an inspection during the evacuation process.
- People found to exceed the standard value for exposure will be subject to simple decontamination.
- Once inspection and simple decontamination are complete, you will be given a transit certificate. After you have received this, please proceed to an evacuation shelter or other destination.

Facilities for inspections during evacuation



- * If the level is still higher than the standard value after simple decontamination
 Affected people → decontaminated at specialized medical institutions like the Saga-ken Medical Centre Koseikan, etc.
 Vehicles and baggage → held temporarily at the inspection facility.

List of inspection facilities(candidate sites) when evacuating each area (the numbers correspond to the locations shown on the map on Page 10)

- | | |
|--|--|
| ① Arita Chuo Undo Park (Arita Town, National Route 202) | ⑦ Gibizan Park (Kashima City, National Route 207) |
| ② Parking lot adjacent to Rekishi to Bunka no Mori Park (Arita Town, National Route 202) | ⑧ Taku City Athletic Field (Taku City, National Route 203) |
| ③ Kyu Yamaguchi Chosha (Former Yamaguchi Office) (Takeo City, National Route 35) | ⑨ Saga Pref. Shinrin Park (Saga City, National Route 207) |
| ④ Shiraiwa Athletic Park Stadium (Takeo City, National Route 34) | ⑩ Sage City Hall Fuji Office (Saga City, National Route 323) |
| ⑤ Kito Clean Center (Takeo City, National Route 498) | ⑪ Saga Racecourse Off-Track Betting Shop (Saga City, National Route 263) |
| ⑥ Kyu Kitagata Chosha (Former Kitagata Office) Faculty Parking Lot (Takeo City, National Route 34) | ⑫ Kiyama Sogo Park (Kiyama Town, Prefectural Road 17) |

* This information is true at the time of writing. Any changes after December 2023 will be announced on the Saga Prefecture website, etc.



Taking stable iodine agents

- By taking stable iodine agents in advance, you can prevent radioactive thyroid exposure.
- The National Nuclear Regulation Authority will decide whether you should take stable iodine agents, in accordance with evacuation instructions.
- Stable iodine agents have a limited period of effect. Therefore, it is vital to take them as instructed and **at the appropriate time**.
- You must only take the recommended dosage. (Taking more iodine does not increase the efficacy)

<Dosage Guidelines>

Adults (ages 13 and above)	→	2 pills of potassium iodide
Children (aged 3 - 13)	→	1 pill of potassium iodide
Infants (1 month old - 3 years)	→	32.5mg of potassium iodide oral jelly
Newborns (under 1 month)	→	16.3mg of potassium iodide oral jelly



(Potassium iodide pills)



(Potassium iodide oral jelly)

Read before taking

- **Stable iodine agents are only effective against radioactive iodine and no other radioactive materials.**
- **After taking an iodine agent, continue to follow protective measures such as evacuating or sheltering indoors.**
- The younger you are, the greater risk you have of developing diseases such as thyroid cancer following internal exposure to radioactive iodine. Minors and women who are pregnant or breastfeeding are prioritized for administration of stable iodine, so please take it without hesitation when instructed.
- Since it is administered orally in a single dose, the probability of side effects is low.
- **Do not take if you have a history of hypersensitivity to the components of stable iodine agents or iodine.**
- Consult a doctor before taking if you have history of hypersensitivity to iodine-based contrast dye.
- If you are pregnant or breastfeeding, please consult your doctor or pharmacist if you have taken a stable iodine agent.

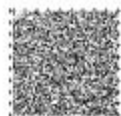
How stable iodine agents will be distributed

PAZ (within 5km) residents

In principle, this medicine will be distributed in advance to persons under the age of 40, so if you receive a notice from your prefecture or municipality announcing a distribution, please make certain to receive your dosage.
(It is also available to those over 40 upon request)

UPZ (within 5-30km) residents

Medication will be stockpiled in local schools and government buildings, and then distributed when needed in Genkai Town, Karatsu City and Imari City at designated locations. (See next page for details)
Additionally, for those who have difficulty receiving distributions in times of emergency due to health reasons, etc., distribution by post is available upon request.



• Emergency distribution sites for stable iodine agents in the PAZ and UPZ

PAZ (within 5km of incident)

UPZ (within 5-30km of incident)

Genkai Town

Assembly point	Hokawazu Fishing Village Environmental Reform Center
	Chikagawachi Community Center
	Shimoneiya Community Center
	Nakadori Community Center
	Karidachi Community Center
	Kyushu Electric Power Otsu Districtary Gymnasium
	Chika Community Center 2
	Genkaizen
	Hanabara Community Center
	Kagakura Community Center
	Saikae Community Center
	Hanasaki Community Center
	Ozono Community Center
	Kariya Community Center
	Ishida Community Center

Assembly point	Arusakari Community Center
	Arusashino Community Center
	Genkai Town Hall
	Civic Hall
	Mukata Community Center
	Toderoki Community Center
	Otori Community Center
	Fujihira Community Center
	Tashiro Community Center
	Sooragawachi Community Center
Yunoo Community Center	



Karatsu City

Emergency distribution sites on evacuation routes	Uwaba Material Center
	Yobukodaiba Minato Plaza
	Hizen Civic Center

Emergency distribution assembly point	Takakoba Elementary School
	Karatsu Kitahata Hospital
	Yobukodaiba Minato Plaza
	Kagami Junior High School
	Karatsu Higashi Junior High and High School
	Kuri Elementary School
	Karatsu Technical High School
	Nagamatsu Elementary School
	Sashi Elementary School
	Yasuraki Yr-Osprit Community Center
	Ouchi Cultural Exchange Center
	Karatsu City Cultural Gymnasium
	Daigo Junior High School
	Elderly Friendship Hall
	Rifure

Emergency distribution sites on evacuation routes	Kitahata Civic Center
	Hizen Civic Center
	Uwaba Material Center
	Roet Race Karatsu
	Aeon Shopping Center Karatsu
	Hinefuri Land
	Karatsu Utsukamon Market
	Yememoto Agricultural Machinery Center
	Sashi Junior High School
	JA Karatsu Minato Office
	Nyurugimachi Health Center
	Nanagasa Community Center

Isolated Island Clinics etc. Elementary and junior high schools	Takashima Clinic
	Kashiwajima Clinic
	Makushima Elderly Center
	Madarajima Clinic
	Kakazushima Clinic
	Matsushima Rijn Isei No ie (Matsushima Clinic)
	Ogawa/ma Clinic
	Daira Elementary School
	Irinno Elementary School
	Nose Elementary School
	Taro Elementary School
	Uchiage Elementary School
	Yobuko Elementary School
	Hizen Junior High School

* As a general rule, anyone in areas not listed should acquire stable iodine agents from one of the above emergency distribution sites on evacuation routes.

Imari City

Community centers in each town (district)	Imari Community Center
	Makishima Community Center
	Otsubo Community Center
	Tachibana Community Center
	Okawachi Community Center
	Kurogawa Community Center
	Hatatsu Community Center

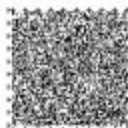
Community centers in each town (district)	Mitsunata Community Center
	Okawa Community Center
	Matsura Community Center
	Niri Community Center
	Higashiyama Community Center
	Yanashino Community Center
	Imari City Hall

* Stable iodine can be obtained from either location

* Elementary and junior high schools in Imari City hold a separate supply for students.

- Stable iodine agents will generally be distributed in advance in the PAZ, but additional supplies will be given to people who have lost their stable iodine agents or been evacuated directly, as well as anyone staying temporarily, such as tourists.
- Stable iodine agents can also be provided at inspection facilities when evacuating each area (Page 11), to people who could not obtain it from a location above.

* This information is true at the time of writing. Any changes after December 2023 will be announced on the Saga Prefecture website, etc.



App

Newly Available

From e-mail to
push notification

Bosai Net An-an has been renewed from
an e-mail service to smartphone app.

- ◆ Easier to register, with no need to send a blank e-mail
 - ◆ Information sorted by category and easier to look at
 - ◆ No annoying configuration like specific reception settings needed
 - ◆ Added a new function (emergency map) that allows for checking disaster status such as inundation on the map
- * The e-mail service will end at the same time as the smartphone app's launch.
* Even if you are already registered to the e-mail service, please register to the smartphone app.

Link up with the
"Saga Prefecture Disaster
Prevention/Emergency Map" to
easily check disaster status
near you.



Download the app and
secure your safety and
peace of mind!

Search "Bosai Net An-An (防災ネット あんあん)"
on various app stores, or scan the QR code
on the right to install from the store.



Bosai Net An-an



What is Bosai Net An-an?

It broadcasts information on disaster/crime prevention so that residents of the prefecture can live safely and feel secure.

Broadcaster information can be specified to match your region of residence, and your purpose. Information about fires or relayed by your municipality is also available, so please make use of it.

What kind of
weather warnings
are there?

I want to know
about a crime
in my
prefecture!

How should I
guard against
disasters?

I want to know
disaster
countermeasure
information from
my municipality!

Was there
a fire nearby?

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The Saga Prefecture Bureau of Crisis Management and Press,
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TEL:0952-25-7362 FAX:0952-25-7262

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Disaster Prevention Saga

