



🕅 Kagawa Prefecture

Disaster Preparedness Guidebook English Version

inglish version

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Introduction

Natural disasters, such as earthquakes and typhoons, occur frequently in Japan. We cannot predict when earthquakes and typhoons will happen. In March 2011, there was a huge earthquake and tsunami in the Tohoku region of Japan. A large earthquake (a Nankai Trough Earthquake) could happen in Kagawa as well. In addition, typhoons and heavy rain (torrential rain) cause damage in Kagawa every year.

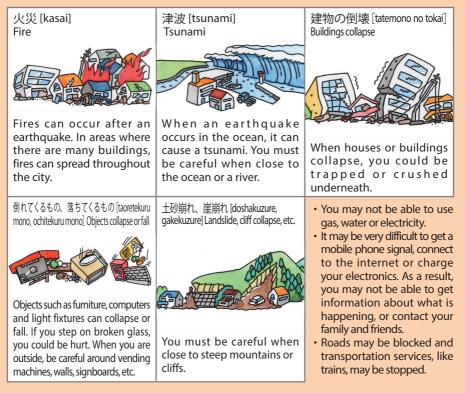
Please read this guidebook thoroughly and prepare yourself in advance.

Earthquakes

1 Frightening earthquakes

Many earthquakes occur in Japan. We never know when or where earthquakes will happen.

When there is a large earthquake, the following things can occur.



2 Understanding Nankai Trough Earthquakes (Major earthquakes in Kagawa)

Many thick sheets of rock cover the surface of the Earth. These sheets of rock are called plates. As the plates move gradually, they collide with each other at their boundaries. When the plates collide, they bend with the pressure. An earthquake occurs when the plates can no longer bend to withstand the pressure, and break. Kagawa prefecture is on the north-eastern (upper right) side of the island of Shikoku. Shikoku sits on the Eurasian Plate. The Philippine Sea Plate in the Pacific Ocean to the south of Shikoku is slowly sliding underneath the Eurasian Plate. The movements of the Philippine Sea Plate are pulling the Eurasian Plate downwards. There is a large trench in between the boundaries of these two plates. This trench is called the Nankai Trough, and the earthquakes that occur there are called Nankai Trough earthquakes.

Nankai Trough earthquakes occur once every 90 to 150 years. There is a 70-80% chance that a Nankai Trough earthquake will occur within the next 30 years.

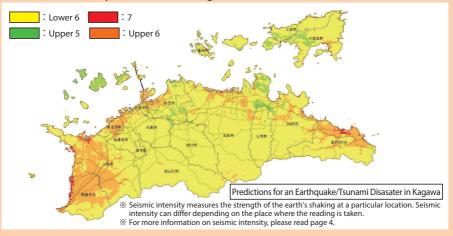


Predictions for a large-scale Nankai Trough earthquake in Kagawa

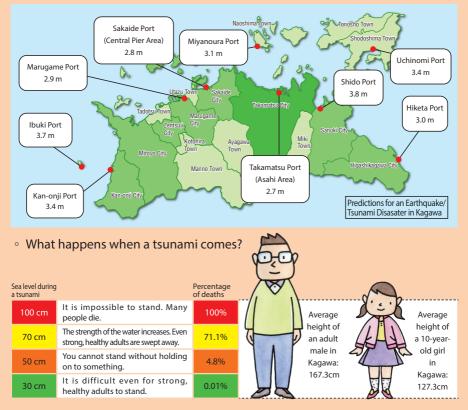
Japanese Seismic Intensity Scale	7	Number of deaths	6,200
Tsunami height	Over 3 meters	Number of injured	19,000
Number of buildings destroyed	35,000		



Seismic Intensity Predictions in Kagawa



• Tsunami Height Predictions in Kagawa



Magnitude measures the size of an earthquake from its center (called the epicenter). The Japanese seismic intensity scale (震度 [shindo]) indicates how much the earth shakes. Measurements are based on readings taken in several places. The scale runs from 1 to 7. Level 1 is the weakest type of earthquake and level 7 is the strongest. Even if an earthquake's magnitude is large, places that are far from the epicenter and places where the earth's surface is hard can be given a low reading on the seismic intensity scale.

3	Most people inside buildings detect shaking. Some people may detect shaking while walking. Some people are woken from sleep. Tableware may rattle.	Lower 6	It is difficult to stand. Items such as shelving units may move and doors may not open. Wall tiles and windowpanes may break and fall.
4	Most people are startled. Many people may detect shaking while walking. Most people who are asleep wake up. Suspended items, such as lights, shake violently. Plates and other items on	Upper 6	It is impossible to stand. Most large, unsecured items topple over. Many concrete- block walls and walls of buildings break and collapse.
	shelves may clatter. Unstable items may topple over.	7	It is impossible to stand. Almost all large, unsecured items topple over and move
Lower 5	Many people feel scared and want to cling to things around them. Windowpanes may shatter.		may crack. There may be landslides.
Upper 5	Most people cannot walk without holding onto something. Many items fall off shelves. Televisions may topple over. Some people may stop their cars because driving becomes difficult.		





4 What to do in the event of an earthquake

(1) If you are at home...



1 Protect yourself first! Protect your head with a cushion and duck under a desk or table.



3 Open doors!

Open your door to secure an escape route. Closed doors can become warped in an earthquake, making them inaccessible.



5 Check before you go outside!

Don't leave the house right away. Check the surrounding area first. In particular, watch out for falling objects.



2 Prevent fires!

Turn off fire sources, such as stoves, heaters and gas ranges in the kitchen once the shaking stops.



4 Prepare an emergency kit!

Prepare a package of emergency supplies that you can take with you in case you have to evacuate.



6 Evacuate to a safe place! Go to a safe place, such as an evacuation center. (2) If you are not at home...



Protect your head from falling objects. Watch out for collapsing concrete and falling signs.



Duck under a desk or table. Protect your head from falling objects. Evacuate according to the instructions of the person in charge.



3 If you are on a cliff or riverbank Quickly get as far away from these areas as possible. The ground can become unstable during an earthquake.



4 If you are near the sea

Evacuate to higher ground far from the sea to avoid tsunamis and high waves.



5 If you are in an elevator

Press the buttons for all of the floors. When the door opens, exit the elevator quickly.



6 If you are in a car, train or bus

If you are driving, pull over on the left side of the road and exit the vehicle. If you are on a bus or a train, follow the instructions of the person in charge.

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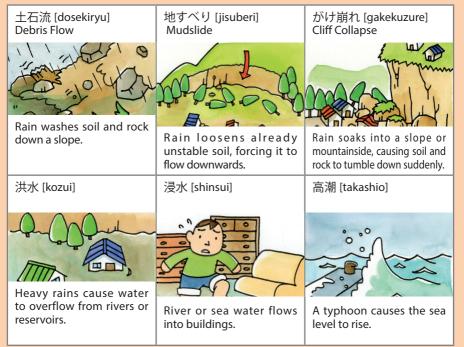
Typhoons and Heavy Rain

1 Understanding typhoons and heavy rain

There are many typhoons between July and October. Most come from the south-western side of Kagawa. Typhoons bring strong winds and heavy rain. Heavy rain can cause landslide disasters, such as debris flows, mudslides, or cliff collapse, as well as flooding, inundation and storm surge damage. You must be careful during a typhoon.



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Localized Torrential Rain

In recent years, there have been instances when extremely heavy rain has fallen over a short period of time and within a concentrated area. In July 2017, torrential rain caused significant damage in the prefectures of Hiroshima, Okayama and Ehime, which are close to Kagawa. There is a possibility that torrential rain could happen in Kagawa as well. In order to protect yourself in case of emergency, it is important to prepare in advance.

2 Advisories and Warnings

Advisories, Warnings, and Emergency Warnings

The Japan Meteorological Agency issues advisories, warnings and emergency warnings.

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Advisory...Winds become strong, and there is a lot of rain. Be careful.

Warning…The situation is particularly dangerous. There are fierce winds and torrential rain. You must be very careful.

Emergency Warnings…A major disaster is predicted to happen. Immediately follow the evacuation order for the city or town where you live.

Main advisories and warnings, and their meanings

大雨警報(注意報) [oame keiho (chuiho)]	Storm Warning (Advisory)	Watch out for heavy rainfall, landslide disasters and flooding.
洪水警報(注意報) [kozui keiho (chuiho)]	Flood Warning (Advisory)	Watch out for flooding due to rising rivers and reservoirs.
暴風警報・強風注意報 [bofu keiho kyofu chuiho]	Gale Warning/Strong Wind Advisory	Watch out for flying objects due to strong winds. Stay inside.
波浪警報(注意報) [haro keiho (chuiho)]	High Surf Warning (Advisory)	Waves will be high. Avoid the sea.
高潮警報(注意報) [takashio keiho (chuiho)]	Storm Surge Warning (Advisory)	The sea level will rise. Move away from the sea towards higher ground.

Evacuation Orders

When there is danger of a natural disaster and evacuation becomes necessary, evacuation orders are issued. Evacuation orders differ depending on the severity of the situation.

Alert level	Situation	Action to be taken	Take action when you receive this message
5	5 Disaster occurrence/ Danger to life. Take security Disaster impending measures immediately!		Emergency Safety Measures
		<be 4!="" alert="" by="" evacuate="" level="" sure="" to=""></be>	
4	High risk of disaster	General evacuation from dangerous areas	Evacuation Orders
3	Risk of disaster	Evacuation of the elderly and vulnerable from dangerous areas	Evacuation of the Elderly and Vulnerable
2	Weather worsening	Check your evacuation plan	Heavy Rain, Flood, or Storm Surge Advisories (Japan Meteorological Agency)
1	Risk of weather worsening	Remain alert to changes in the situation	Probability of Warnings (Japan Meteorological Agency)

3 What to do in the event of a typhoon or heavy rain



Stay away from danger! Stay away from mountain slopes or cliffs. There is danger of a landslide or cliff collapse.



Stay inside!

If you are outside, you could be blown over by strong winds. You could be hurt if you are hit by flying sign boards or debris. Do not go outside unless it is absolutely necessary.



Stay informed!

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Check the television or internet regularly for the latest information regarding heavy rain advisories and warnings. Make a calm, informed decision on whether you will evacuate or wait out the storm at home.

4 How to evacuate



1. Check! Extinguish all flames and turn off the gas. Lock all doors and windows.



2. Do you have the right clothing?

It is dangerous to wear rubber boots or walk in bare feet. Take sneakers, gloves and a helmet.



3. Watch out!

Be careful not to fall into ditches while you are walking. Protect your head from flying objects.

Stick together in groups of two or more when you evacuate. Be helpful and considerate to children and elderly people.



Preparing for a Disaster

1 Preparing for earthquakes

We never know when earthquakes will happen. Take the following steps to ensure that you can evacuate quickly if an earthquake occurs.



Did you know?



This sign marks an emergency exit (非 常 口 [hijoguchi]). In the event of an emergency, please use routes marked with this sign to evacuate.

After an earthquake, you can find out the intensity and where it happened by watching TV reports. You can also confirm the likelihood of a tsunami.

2 Preparing for typhoons and heavy rain

In the house



Prepare an emergency kit to take with you in case you have to evacuate. Put it near the front entrance so you can pick it up and leave immediately.



Fill the bath up with water so that you will be prepared in case the water supply is cut off.



Tape up the windows, draw all the curtains and close the storm shutters, in case the windows break.

Outside the house



Find out where your family members are. Please be aware that they may not be able to return home if the trains have been stopped.



Bring flower pots inside and tidy up anything that might be blown away. Your bicycle is less likely to be damaged if you lay it on the ground.



Clean drains and gutters.

3 Emergency items (items to carry with you and items to store)

Emergency items	
 [Food and drink] Emergency food (for at least 3 days) %Choose foods that will not spoil easily, such as instant foods, canned foods or biscuits Water (3 litres per person, per day) 	
[Everyday supplies] Clothing (including underwear) Towel Tissues Sanitary products Plastic bags Toiletries (toothbrush, soap, etc.) Cooking utensils (pots, kettle, etc.) Cutlery (disposable knives, forks, spoons, paper plates, paper cups, etc.) Cellophane wrap Wet wipes Toilet paper Face masks Emergency blanket (thermal blanket) Slippers Work gloves or leather gloves Emergency water bag Raingear (raincoat, boots, etc.) Picnic blanket Portable toilet	
[Items to access information] Mobile phone (including charger) Hand-held radio (including spare batteries) Family photos (to locate family members if separated) Emergency contact information for family, relatives and friends Map of evacuation centers in Kagawa (pocket-sized map is okay) Writing utensils	
[Valuables] Bank book Personal seal Passport Residence card Money (include 10 yen and 100 yen coins for public telephone use) Copy of your health insurance card Spare keys for your house or car Spare eyeglasses or contact lenses	
[Miscellaneous] Flashlight Whistle or buzzer (something that makes noise to indicate your location) Emergency headgear or helmet Multi-purpose pocket knife Lighter or matches Your regular medicine Disposable hand warmers Table-top stove Gas cylinder Solid fuel Bedding (blanket, sleeping bag) Newspaper	
Items for special circumstances	
[If you have a baby] Powdered milk Baby bottle Baby food Obsposable) diapers Towel Maternal health record book [If you are pregnant] Items for a new born baby Soap Maternal health record book [If you have relatives who require special care] (Disposable) diapers Regular medicine Physical disability certificate	

Please think about any other items that might be necessary.

4 Evacuation centers

In the event of an earthquake or a typhoon, please evacuate to designated evacuation centers. Many schools and community centers are used as evacuation centers. If you are unsure where evacuation centers are located, please ask your city or town hall. Decide where you will meet family and friends in advance to avoid confusion when you need to evacuate.

Evacuation centers are free to use for anyone, regardless of nationality. Food, drink and a place to sleep are provided. You will be given a variety of information regarding the situation of the disaster and life in an evacuation center. Please listen carefully to this information.

At an evacuation center, many people stay in the same space together and there are many rules to follow. It can be very different from the living conditions you are used to. If you have any questions or concerns, do not hesitate to ask.



[Interior of an evacuation center]



[Water provisions]

Help in an Emergency

1 Telephone numbers for emergency services

110 (police)

119 (fire department/ambulance



If you are involved in a traffic accident, fall victim to a crime, etc.



If there is a fire, if you are injured or suddenly fall ill, etc.

2 Safety Tips (セーフティ・チップス)

Safety Tips is a free application that you can use while you are in Japan to receive earthquake, tsunami and heavy rain warnings, as well as heatstroke information and civil protection information (regarding missile launches, etc.). It has many functions that are useful in the event of a disaster. Information is provided in 15 languages: English, Chinese (traditional or simplified), Korean, Japanese and so on. If you have a smartphone, you can download the app.

[Japanese] http://www.rcsc.co.jp/safety

[English] http://www.rcsc.co.jp/safety-tips-en

3 Natural disaster message board

(災害用伝言板 [saigaiyo dengonban])

Natural disaster message boards are created when there is a big natural disaster such as an earthquake or a typhoon. They can be accessed via telephones, mobile phones and computers. You can use them to send messages to your friends and family and to check messages.

[How to use natural disaster message boards]

How to input messages	How to check messages
①Select 'Natural Disaster Message Board'	①Select 'Natural Disaster Message Board'
(災害用伝言板) on the message board	(災害用伝言板) on the message board
home page.	home page.
②Select 'safety register' (安否の登録).	②Select 'safety confirm' (安否の確認).
③Select 'message' and input comments.	③Input the sender's telephone number.
④Select 'register' (登録) again.	④Select 'search' (検索).

% The instructions above are only an example. For detailed instructions, please check the following internet addresses.

• =====

NTT docomo	【Japanese】 https://www.nttdocomo.co.jp/info/disaster/disaster_board/ 【English】 https://www.nttdocomo.co.jp/english/info/disaster/index.html
au	[Japanese] https://www.au.com/mobile/anti-disaster/saigai-dengon/ [English] https://www.au.com/english/mobile/anti-disaster/saigai-dengon/
SoftBank	【Japanese】 https://www.softbank.jp/mobile/service/dengon/boards/ 【English】 https://www.softbank.jp/en/mobile/service/dengon/

[Internet addresses for natural disaster message boards]

NTT docomo	【Japanese】 http://dengon.docomo.ne.jp/top.cgi 【English】 http://dengon.docomo.ne.jp/Etop.cgi
au	【Japanese • English】 http://dengon.ezweb.ne.jp
SoftBank	【Japanese • English】 http://dengon.softbank.ne.jp

【Natural disaster broadband message board (web 171) 災害用ブロードバン ド伝言版 [saigaiyo burodobando dengonban]】

This message board allows users to check on people who live in disaster-stricken areas using the internet. https://www.web171.jp/

【Disaster telephone message service 災害用伝言ダイヤル [saigaiyo dengon daiyaru]】 This service is only provided in Japanese. ※ Instructions

[Japanese] https://www.ntt-west.co.jp/dengon/way/

[English] http://www.ntt-east.co.jp/en/saigai/voice171/

To leave messages	dial 1711 + (your phone number) and leave a message.
To listen to messages	dial 1712 + (the sender's phone number) and check for messages.

4 Early Warning System

Even if cellular networks are busy, you can still receive notifications from the Japan Meteorological Agency, such as earthquake early warnings, tsunami warnings, and emergency warnings regarding the weather, as well as disaster and evacuation information (such as J-ALERT civil protection information) from national and local governments and Kagawa Prefecture. You can receive notifications regardless of network congestion in the following two ways.

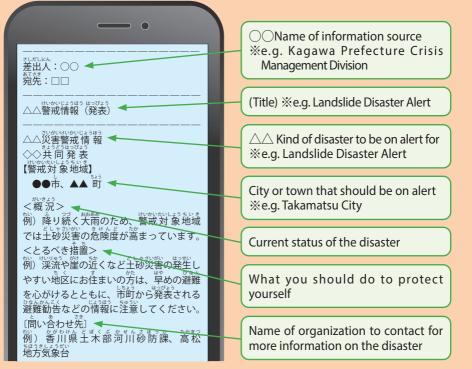
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- ① Kagawa Disaster Prevention Information Mail System (※ registration required) https://www.pref.kagawa.lg.jp/kikikanri/sogo/bosaijoho/main.html
- 2 Area Mail Disaster Information Service (% registration not required)

NTT docomo	(Area Mail Emergency Information Service) http://www.nttdocomo.co.jp/service/safety/areamail/
au	(Emergency Information Mail Service) http://www.au.com/mobile/anti-disaster/kinkyu-sokuho/
SoftBank	(Emergency Information Mail Service) http://www.softbank.jp/mobile/service/urgent_news/

(1) Kagawa Disaster Prevention Information Mail System (e.g. Kagawa Disaster Prevention Information Mail Service)

Information sent to mobile phones (example)



(2) Early warnings distributed by cities or towns (e.g. Kagawa Disaster Prevention Information Mail Service)

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Information sent to mobile phones (example)



(3) Points to Remember: Early Warning System (Area Mail)

If the 'Emergency Alerts' setting on your mobile phone is 'ON', you will receive early warning notices even if you do not register for the service. When you receive a notification, your mobile phone will display a pop-up window and a special alarm will sound. Remain calm and read through the information carefully.

Be aware that early warning notifications are sent to all areas of Kagawa. You may receive disaster information for cities and towns where you do not live. Be sure to confirm whether or not the disaster information is applicable to the city or town where you live.

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Japanese	English	Meaning
津波 [tsunami]	tsunami	a very large, fast wave flowing inland from the sea
余震 [yoshin]	aftershock	small earthquakes that occur after a big earthquake
警戒 [keikai]	caution	an announcement encouraging people to prepare for danger
避難する [hinan suru]	to evacuate	to move away from a dangerous area
給水 [kyusui]	water provisions	water given out at evacuation centers; e.g. Evacuation centers give out water provisions to evacuees.
救援物資 [kyuenbusshi]	relief supplies	items or food given out at evacuation centers
危険 [kiken]	dangerous	not safe
断水 [dansui]	water is cut off	water supply has been turned off, and there is no running water
停電 [teiden]	power outage	electricity has been cut off, and cannot be used
安否を確認する [ampi o kakunin suru]	to confirm the safety of	to check if family members and friends are safe
火の元を確認する [hi no moto o kakunin suru]	to check all potential fire hazards	to turn off any sources of fire, (gas stoves, electric heaters, etc.)
もぐる [moguru]	to get under	to duck under a table, etc.
あふれる [afureru]	to overflow	when there is too much water, and it spills over; e.g. The dam overflowed due to heavy rainfall.
崩れる [kuzureru]	to crumble	to break up (into smaller pieces); e.g. The mountain is crumbling.
懐中電灯 [kaichu dento]	flashlight	portable light source you can carry in your hand; e.g. You can find your way in the dark with a flashlight.
傾く [katamuku]	to lean over	a building or structure slants to the side and may fall
傷 [kizu]	injury	to suffer physical harm to the body
救急車 [kyukyusha]	ambulance	a vehicle that helps people who are sick or injured
汲む [kumu]	to draw (water)	to obtain water; e.g. He draws water from a well.
グランド [gurando]	playing field	large grassy area for playing sports or exercising
煙 [kemuri]	smoke	the grey or black gas mixed with carbon produced when something burns; e.g. If you see smoke, beware of a fire close by.
叫ぶ [sakebu]	to shout, cry out	to make loud noises; e.g. I shouted for help.
下敷き [shitajiki]	trapped under	to be trapped under a fallen object and unable to move; e.g. He was trapped under a falling rock.
消火器 [shokaki]	fire extinguisher	a tool used to stop a fire from burning
地割れ [jiware]	crack in the ground	when the surface of the earth breaks and lines or holes appear in the ground
震度 [shindo]	earthquake intensity	measures the effect of an earthquake on the earth's surface; e.g. the strength of shaking felt by people, or the degree of destruction to buildings
スピーカー [supika]	speaker	a piece of electrical equipment that plays recorded sound; e.g. The speakers played an emergency broadcast.
助かる [tasukaru]	to be saved	to be rescued from a dangerous or life-threatening situation; e.g. He was saved from the burning building.
破片 [hahen]	fragment	a small piece that has broken off from a larger whole; e.g. After the earthquake, there were fragments of glass everywhere.
震える [furueru]	to shake	to move up and down, or side to side rapidly; e.g. The earthquake caused the buildings to shake.
ボ ラ ン テ ィ ア [borantia]	volunteer	a person who offers to help others without asking for money in return; e.g. Volunteers handed out relief supplies at the evacuation center.
マグニチュード [magunichudo]	magnitude	measures the size of an earthquake from its center (epicenter)

6 Emergency information and contacts

Name	Fire Department/	
Nationality	Ambulance: 119	
Blood Type A B O AB	(If there is a fire or if you are injured, etc.)	
Passport Number	Police: 110	
Residency Card Number	Emergency telephone message service: 171	
Address in Japan	Where to meet with your family in the	
Telephone Number Home : Mobile/Cell :	event of a natural disaster Place name : Address : Telephone Number : Map :	
Family members' names		
Workplace, training institute, school Name : Address :		
Telephone Number :		
Emergency contact in Japan Name : Address : Telephone Number :	Evacuation Centre Name : Address : Telephone Number :	
Emergency contact abroad Name : Address : Telephone Number :	Contacts Water Supplier: Electricity: Gas: Others:	
Immigration Bureau Address : Telephone Number :	Embassy or Consulate Address : Telephone Number :	

7 Useful links

Crisis Management Division, General Crisis Management Bureau, Kagawa Prefectural Government (Japanese)	https://www.pref.kagawa.lg.jp/bosai/ Disaster preparedness in Kagawa.	
River and Sediment Control Division, Civil Engineering Department, Kagawa Prefectural Government (Japanese)	https://www.pref.kagawa.lg.jp/kasensabo/bosai/dosha/ index.html Information about landslide disasters in Kagawa.	
Takamatsu Local Meteorological Observatory (Japanese)	http://www.jma-net.go.jp/takamatsu/ Information about the weather in Kagawa.	
Shikoku Regional Development Bureau (Japanese)	http://www.skr.mlit.go.jp/ Disaster preparedness in Shikoku.	
Japan Meteorological	[Japanese] http://www.jma.go.jp/jma/index.html	
Agency	[English] http://www.jma.go.jp/jma/indexe.html	
Fire and Disaster	【Japanese】http://www.fdma.go.jp/	
Management Agency	[English] http://www.fdma.go.jp/en/	
Disaster Preparedness and	[Japanese] https://www.fdma.go.jp/relocation/e-college/	
Crisis Management e-college	[English] https://www.fdma.go.jp/relocation/e-college/english/	
Immigration Services Agency	Information for Foreign Nationals Living in Japan (Web Portal) https://www.moj.go.jp/isa/support/portal/index.html	
The Council of Local Authorities for International Relations	Information on support for non-Japanese residents during natural disasters (with multilingual sections) http://www.clair.or.jp/j/multiculture/index.html	
NHK WORLD-JAPAN	https://www3.nhk.or.jp/nhkworld/en/multilingual_links/	

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Useful Information

You can check which hospitals in Kagawa offer services in foreign languages through the Emergency Medical Information System 医療ネットさぬき [iryo netto sanuki]

⇒ https://www.qq.pref.kagawa.lg.jp/ir37/qqport/kenmintop/ Register for this service to receive emails on your mobile phone with information about evacuation advisories issued by your local authority. Evacuation Information Mailing List:

⇒ https://www.pref.kagawa.lg.jp/kikikanri/sogo/bosaijoho/main.html



If you are in trouble, please contact the following organizations.

- ⇒ The International Affairs Division, General Affairs Department, Kagawa Prefectural Government TEL: 087-832-3029
- ⇒ Kagawa International Exchange Center TEL: 087-837-0411





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English Version

Published and edited by the International Affairs Division, General Affairs

Department, Kagawa Prefectural Government ADDRESS: 4-1-10, Bancho, Takamatsu TEL: 087-832-3027 FAX: 087-837-4289



WEBSITE: https://www.pref.kagawa.lg.jp/kokusai/index.html