




What kind of hazards can happen in Ebina City?

-  Projected flooding area
-  Mudslide warning area
-  Projected inland flooding area

Storm and Flood hazard (Information)



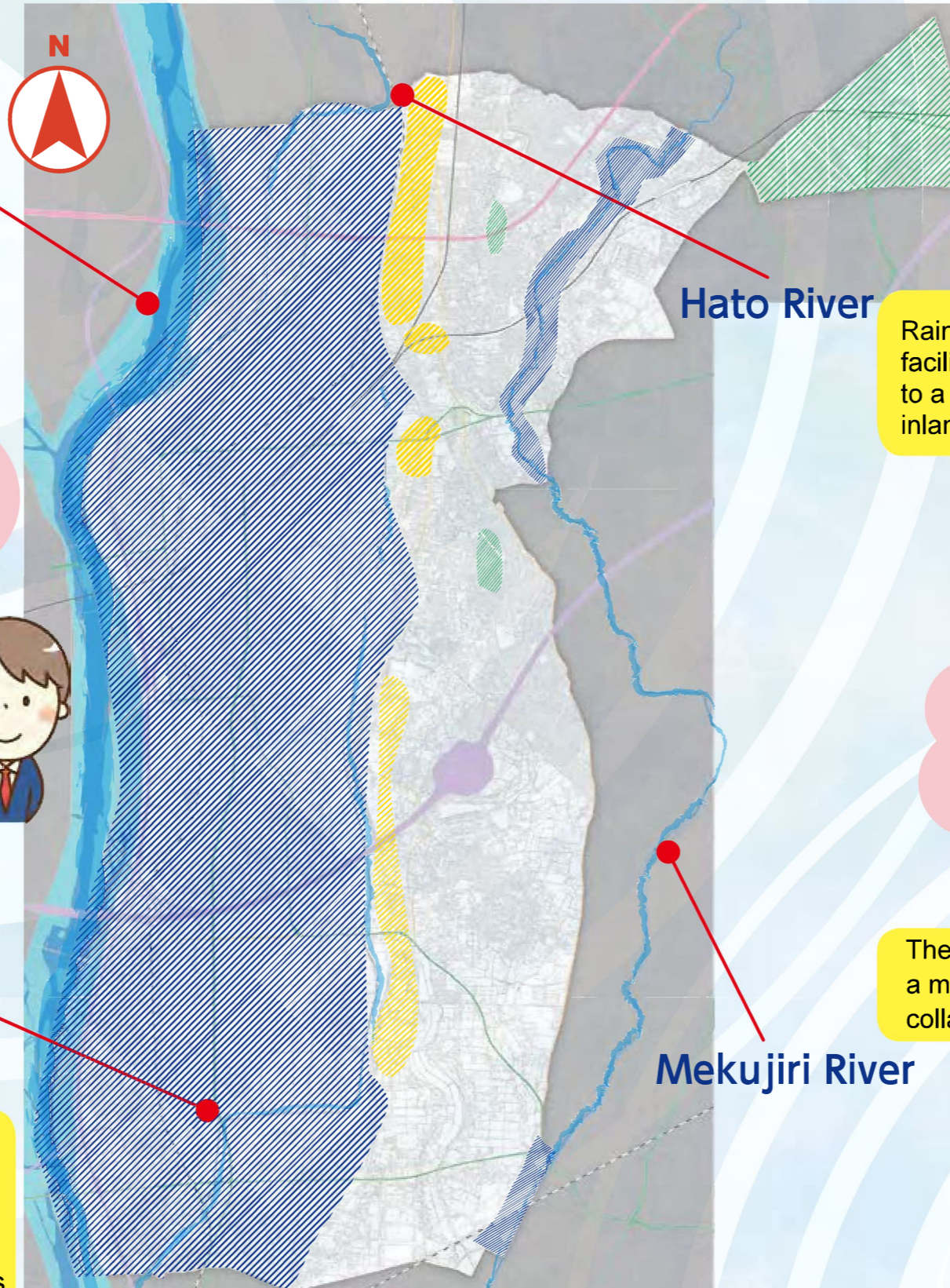
Sagami River

If the Sagami river overflows, most of the west of Ebina City could be flooded.

If you hear warnings, evacuation recommendations or evacuation orders from Ebina City, and you're in the Sagami River's projected flooding area, you might be inundated by emergency releases from the Shiroyama Dam or other reasons. Evacuate quickly to high ground on the east side of the city.

Nagaike River

In addition to the Sagami River, Ebina City also has the Nagaike, Mekujiri, and Hato rivers, with their own projected inundation areas from floods along the rivers.



Hato River

There's also inland flooding risk in Higashikashiwagaya and other residential areas not on the riverside.

Rains exceeding the capacity of drainage facilities, or a failure to drain rainwater due to a rise in river water level can also cause inland flooding.

The east side of the city is at a higher altitude. So this probably means a lesser effect from Sagami river flooding....

The steep slopes have been designated a mudslide warning region, and may collapse during strong rains.

Mekujiri River

Storm and Flood hazard (Information)



Warning levels and evacuation information

<Evacuation info etc.>

Warning level	Evacuation information presented by local overnment	Action to take
Warning level 5	Disaster information	A disaster has already occurred, people must take measures to protect lives.
Warning level 4	Evacuate order (urgent) /advisory	All residents must evacuate from areas the evacuation recommendation or order has been issued to
Warning level 3	Evacuation preparation/start of evacuating elderly people	Older or people with disabilities, and others who take longer to evacuate must evacuate. Others should prepare so they can evacuate quickly.
Warning level 2	—	You should check evacuation procedure.
Warning level 1	—	You should stay on alert for disasters

If you hear an evacuation recommendation or order, do you always have to evacuate?

If you live in one of the affected areas, please evacuate. If the crisis is mudslide-related, the warning will be given to relevant areas. Those in the area should evacuate.

If the order is given to prepare to evacuate, and to evacuate older people etc., who needs to evacuate?

Older or disabled people, anyone carrying an infant, and others who need more time to evacuate should do so. Others can just prepare. That said, please use your own discretion if you feel endangered.

Meteorological anti-disaster information



If there's risk of danger from heavy rain, the meteorological agency will give either a rain 'watch' or 'alert'.
 If there is a high risk of a disaster from rains far exceeding the standards for an alert, a special alert will be issued.
 *It is entirely possible for major damages without a special alert.

Standards for rain alerts etc.

Types		Contents
Special alert for rain		A typhoon or concentrated severe rain is expected to cause levels of precipitation only seen once in a few decades, or else something similar to rainfall from such tropical storms is expected.
Information on record rains in short periods		Announcing during a rain alert that the current level of rain is a rarely-seen amount, which may cause natural disasters in that region
warnings	Rain warnings	When there is a chance that the current rain will cause severe damages
	Flood warnings	When the water levels in the river have increased, with a risk of severe damage
advisories	Rain advisories	When there is suspicion that rain-related disasters will occur
	Flood advisories	When there are predictions that increases in river levels will cause disasters

Wind strength and type

The chart below indicates wind strength and type. Depending on the strength, there will be a watch or alert announced.

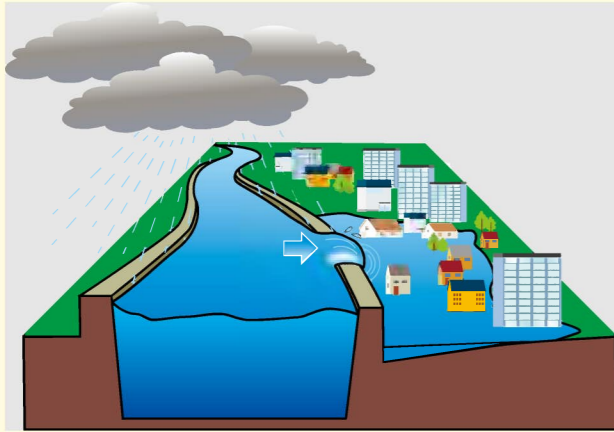
	Somewhat strong wind	Strong wind	Very strong wind	Intense wind
Wind strength and broad benchmarks for speed. Warning terms	10~15 m/s (Car on a standard road)	15 ~ 20 m/s	20 ~ 30 m/s	30-40m/s or more (express train)
Effect on people	Difficult to walk against the wind	Impossible to walk against the wind, and some people will fall over	Need to hold onto something to stay standing	Being outside becomes extremely dangerous

Rain strength and type

The chart below indicates rain strength and how it falls. It's important to routinely watch the rain for yourself, and evacuate voluntarily before an alert or evacuation recommendation if you feel it's dangerous.

	Somewhat heavy rain	Heavy rain	Intense rain	Very intense rain	Extreme rain
Rain amounts and reporting terms	10-20mm or less	20-30mm or less	30-50mm or less	50-80mm or less	80mm or more
Rain image	Raining heavily.	Pouring down.	Rains like it was poured out of a bucket.	Rains like a waterfall. Roaring constantly.	Terrifying. The pressure makes breathing difficult.

What is a flood?



Inundation caused by rivers overflowing or a dam bursting.

In Ebina City, besides the Sagami River flowing on the west side, we anticipate strong rains causing flood from the Mekujiri, Hato and Nagaike rivers as well. We provide flood damage information, expected rain amounts for each river varies, and on the hazard map on P26, Sagami is anticipated to flood at 567mm in 48 hours, Mekujiri at 398mm in 24 hours, Hato at 326mm in 24 hours, and Nagaike at 304mm in 24 hours.

What is inland flooding?



Strong rains overwhelming drainage facilities, or rivers overflowing prevent rainwater from being drained properly, and cause inundation.

This can happen away from rivers too, such as at the bottom of slopes or partially low-level areas. In Ebina City, this can occur on small scales from localized heavy rains ('guerilla rainstorms'), or rains overwhelming the standard drainage capacity of 50mm per hour.

Mudslide warning information

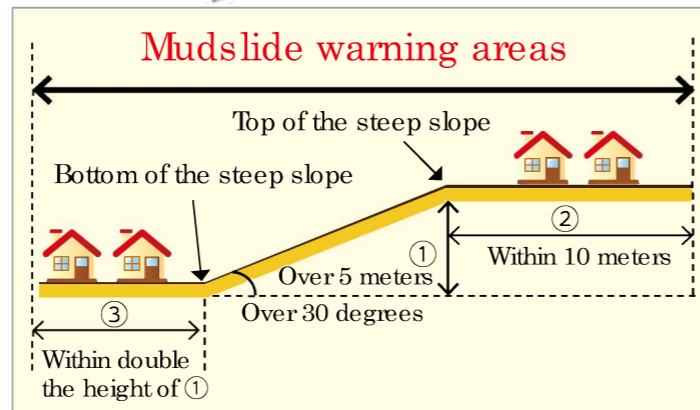
These warnings are given collaboratively by the meteorological agency and the prefecture, to encourage citizens to evacuate or help them in making this decision themselves, in circumstances where a rain alert has been issued and life-threatening mudslides could happen at any time.



Mudslide warning areas

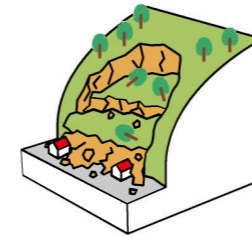
Steep slopes take little time to collapse, and may claim lives near residential areas, as people fail to escape in time. Please use the mudslide hazard map (page 27-33) to confirm which areas face such risks.

- ① Areas with an angle of 30 degrees or more, and elevation of 5m or more
- ② Area within 10m horizontal distance from the top of steep slope
- ③ Areas within double the height of the slope from the bottom of the slope (if above 50m, then 50m)



Types and early warnings of mudslide hazards

Mudslide hazards are caused by long rain during typhoons and rainstorms, severe rains, or quakes. They are very difficult to predict, and can cause vast damage.

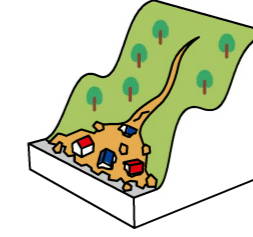


Landslide

Rainwater seeps into slippery layers of a gentle slope, which causes the earth to move.

Look out for these signs!

- It's still raining, but the water in the river is decreasing
- The river is turning muddy or has trees in it
- You can hear trees ripping apart

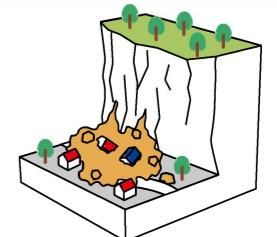


Debris flood

Mountainside or valley debris, rocks, earth and sand etc. are all suddenly pushed out downstream by severe rains.

Look out for these signs!

- Muddy lakes and flowing water
- You can hear trees tearing or making other noises
- Cracked and/or uneven ground
- Water shooting out of the ground
- Cracks in roads, tilted electrical poles



Collapsing cliffs

This is when rain or quakes cause the earth's resistance to weaken, and the slope suddenly collapses.

Look out for these signs!

- Cracks in the slope
- Many small stones falling
- Trees tilt or collapse
- Spring water stops, or shoots out

In Ebina City, our only concern is collapsing cliffs

How to protect yourself from mudslides

1 Leave the warning area

If you think you've seen a sign of a mudslide or some type, or you're worried, don't wait for an evacuation alert to leave the area.



2 You can't evacuate after something already happened

Mudslides carry incredible speed and power. Once it starts, it's already too late to leave. Evacuate before the rain gets too strong.

3 Use extreme caution when evacuating

Evacuating in the middle of the night is dangerous, try to do this while it's light outside. If evacuating to the outside is difficult or impossible under the circumstances, then at least move to the second floor or higher, on the opposite side from the slope.

4 Protect your own life by yourself.

Wear helmets, as well as long trousers and long-sleeved shirts you can move in easily. Wear thick-soled shoes that you're used to moving in.

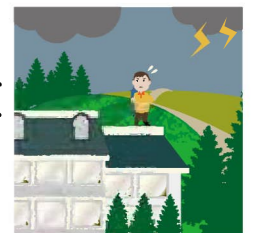


Protect yourself from heavy snow

- Do not leave home more than you need to.
- Try to avoid using cars without studless tires or chains.
- If you must leave on foot, wear boots that you won't slip in, and watch your feet. Do not walk under the eaves of buildings (snow can slide off and fall on you).
- Shoveling snow or removing it from your roof should be done with a lifeline, slip-resistant boots, a helmet, and at least two people.

Protect yourself from lightning

- Do not stand near tall things, such as trees.
- In school grounds or other wide open areas, it's easy for people to be struck. Hide in secure buildings.
- If there's nowhere safe to go, stay away from poles and other tall objects. Keep a low posture and a distance of at least 4m.



Preparing against wind and water hazards

Preparing for the outdoors

Balcony

- Do you have potted plants, laundry poles, or other things that can fall or scatter?

Propane gas canisters

- Are they properly secured so they won't collapse?

Entryway

- Do you have anything there that could block the way, like potted plants or bicycles?

Roof/rainwater pipe

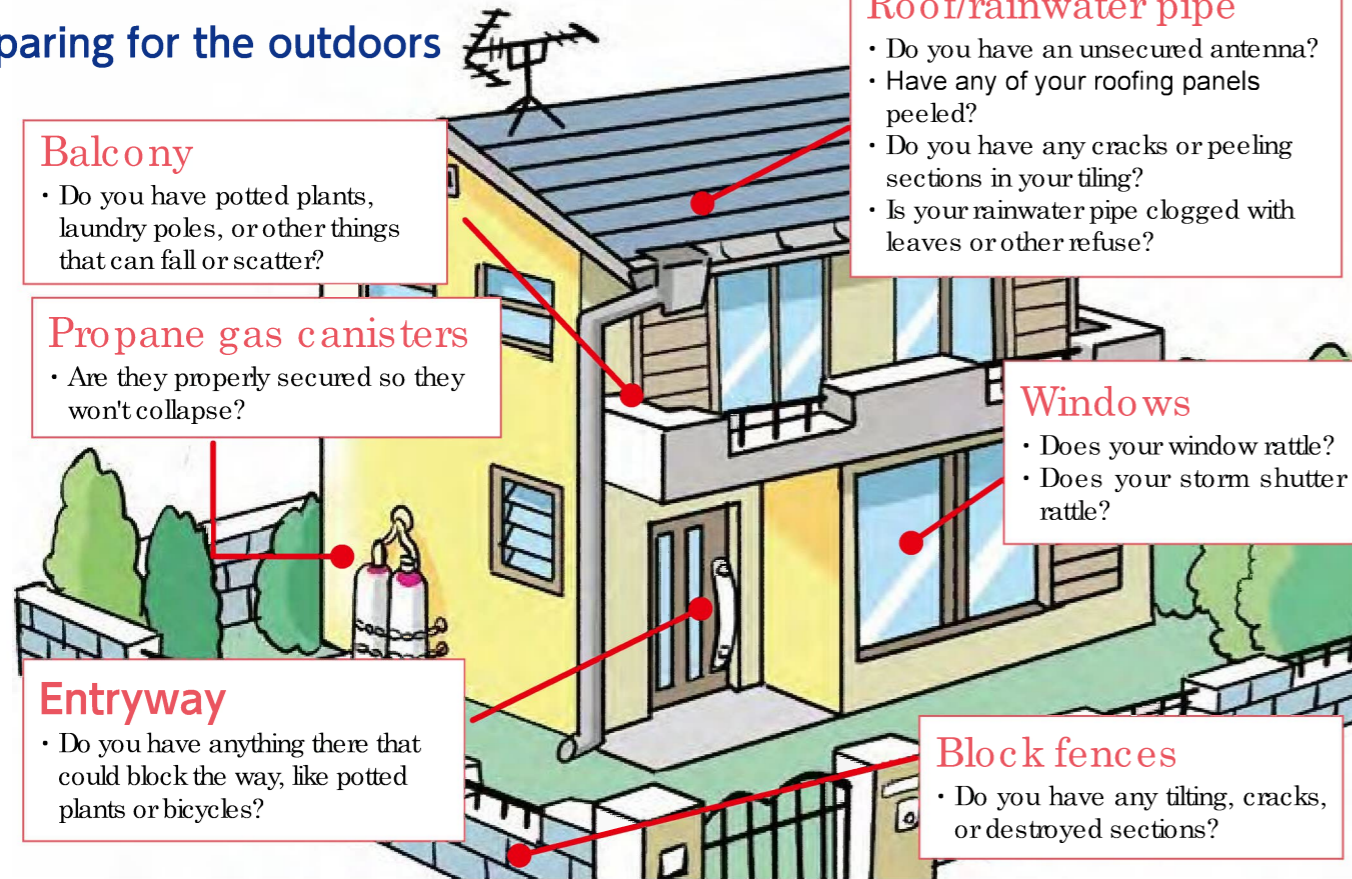
- Do you have an unsecured antenna?
- Have any of your roofing panels peeled?
- Do you have any cracks or peeling sections in your tiling?
- Is your rainwater pipe clogged with leaves or other refuse?

Windows

- Does your window rattle?
- Does your storm shutter rattle?

Block fences

- Do you have any tilting, cracks, or destroyed sections?

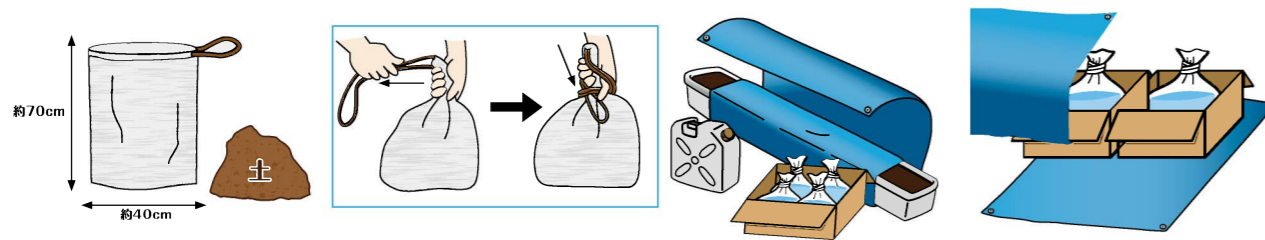


Anti-inundation steps you can follow at home

Simple anti-water measures

In shallow water, you can place sandbags (failing that, bags filled with water) to stop water from getting into the building. As a simple countermeasure, you can also take planters, plastic oil tanks, long boards (even ladders and tables) wrapped in plastic sheeting and place those.

For buildings lower than the road, or basements, placing water stops can be even more effective.



Inspect and clean drainage equipment

Street inlets and ditches filling up with trash can stop rainwater from flowing through it and increase the risk of inundation. Underground and semi-underground areas can be flooded by malfunctioning drainage pumps. Periodically inspect your drainage equipment, check to see if ditches and inlets need cleaning, and so on.



If the wind is strong

On the road

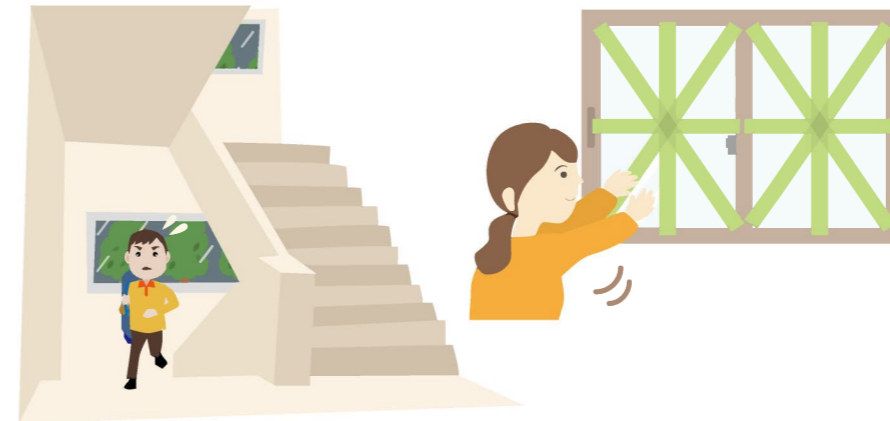
Wind may send signs flying, or knock trees onto the road. Evacuate to a nearby, robust building. However if there is also heavy rain, do not go shelter in basements or underground streets.

Indoors

Wind pressure and flying objects may break windows and scatter shards of glass. Stick tape on it from the inside and close your curtains. While the wind is strong, stay away from windows.

By the sea

There is a risk of falling into the sea or being caught in high waves here. Additionally, rising tides present another risk, so please quickly evacuate to high ground. During strong winds or rain, you may not hear the alert, so please be careful.



Prepare for power outages

Prepare backup batteries for your torch and portable radio.

- Fuel your car in advance.
- Charge your phone in advance.



Prepare for water outages

Secure drinking water. Additionally, fill your bath and take other measures to secure water for laundry etc.



Spread disaster prevention knowledge

A major key in preparing for disasters is that each citizen has an active interest in what needs to be done, and prepares appropriately. Gather people in your area for events etc. to spread this knowledge.



Anti-disaster inspection and surveillance.

The first step is to know your city well. Find potential issues and dangers in your own area, and consider solutions.



In the event of an emergency, evacuate on your decision.

If you sense danger, evacuate immediately

In recent years, there have been cases of residents who did not escape typhoon rains in time being afflicted. Particularly warning yet, but you feel endangered, please evacuate. What's important is to make your own decision. For wind and rain hazards, it's important to get accurate meteorological information beforehand, and evacuate early.



'Evacuate to protect your life': Vertical and horizontal

During extreme rains, the basics are to follow priority 1 and 2 to reach a safe place quickly. (**horizontal evacuation**)
However, during nighttime or extreme rains, if leaving your home seems more dangerous than not, you can move to the second floor or higher, further from cliffs and rivers (**vertical evacuation**)

Points in determining when to evacuate

For rain, better early than late

People living in mudslide warning areas should leave during heavy rain or when mudslide warnings are displayed.



Before it gets dark

If heavy rain is predicted during the dark, it's better to evacuate while there's light. If there are older people or others who need special consideration, consider your timing and move early.



If evacuation-related information has been issued

If the city issues evacuation recommendations, or suggests evacuation preparation, and evacuating older people etc.



Before the water reaches to your knees

During inundation, walking is possible as a rule of thumb until it reaches just under your knees. Even if the water is low, a strong flow can present a problem.



Do not use elevators

If there's a power cut, you can be trapped inside. Try to use the stairs if possible.



Underground facilities are dangerous

Water from above ground can flow underground, making evacuation difficult.



Watch your feet

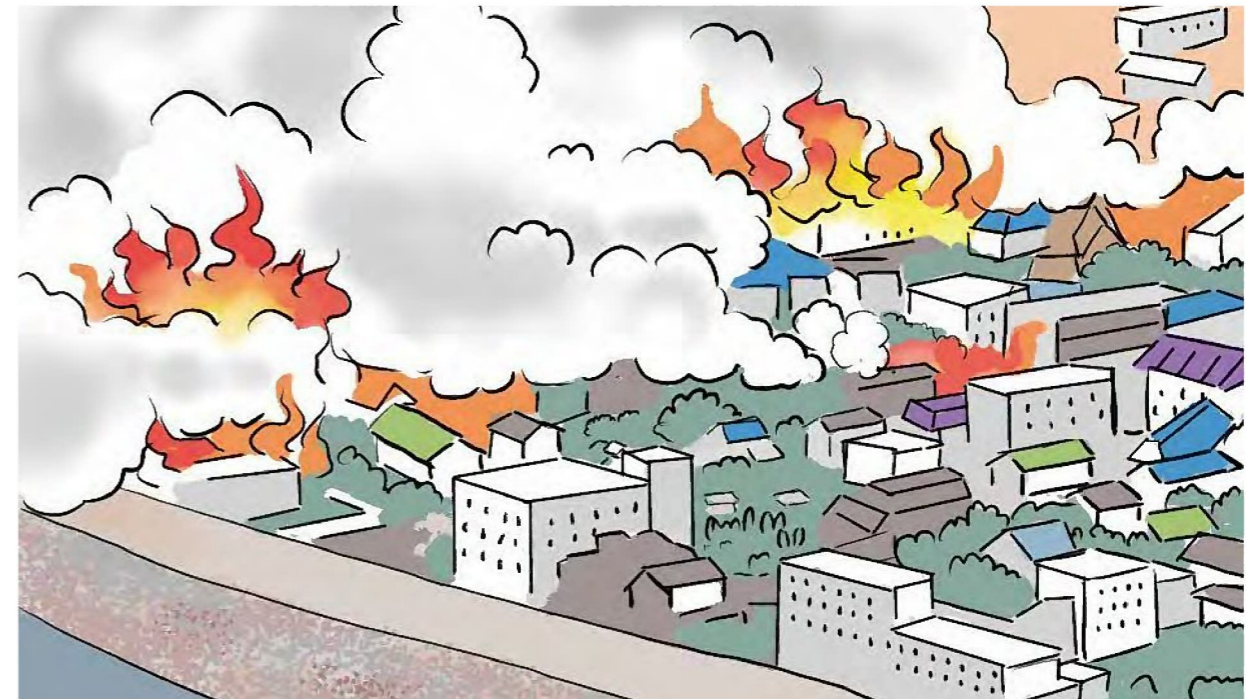
Once water levels rise, you won't be able to see the ground, so use long sticks, canes etc. to watch out for manholes and gutters.



Other disasters

Large-scale fires

If a great quake causes fires, it may be difficult to put out, leading to fires spreading. Ordinary fires may spread due to strong winds. Watch the direction of the wind carefully, and evacuate to windward side evacuation areas.



Protecting yourself from armed attacks, terrorism etc.

If it's determined that orders and emergency announcements are required to protect the lives, bodies and possessions of citizens from armed attacks or large-scale terrorism, the nation will issue this directly.

Ballistic missile countermeasures

- If a JAlert announced: The missile will land in roughly ten minutes. Act quickly.
- If indoors: Close all doors and windows, shut off gas, water and extractor fans, and move to a windowless room if possible.
- If outdoors: Evacuate to a basement or nearby building as soon as possible. If nothing is available, hide behind something, or lay on the ground and cover your head.



Evacuating from armed attacks and terrorism

- Armed attacks: Do not be taken in by rumors or the internet, and instead wait for concrete information from television or radio.
- Terrorism: Avoid unnecessarily leaving the house, and avoid areas where many people gather. If evacuation is needed, you will receive instruction from the city.

If you are afflicted by a terrorist attack while outside

Remain calm and protect yourself. If there is an explosion or fire nearby, follow the instructions of nearby firefighters or police officers, and leave the area quickly.