Sediment Disaster Prevention Act

In order to protect the lives and health of citizens from sediment-related disasters, the Sediment Disaster Prevention Act defines areas where sediment disasters may occur, and stipulates various preventive countermeasures, such as establishing warning and evacuation systems in threatened areas, and restricting certain development by, for example, controlling residential development.

Sediment disaster (special) warning zones

Sediment disaster warning zones

A zone where the lives and health of residents and others are at risk due to land collapses, etc.

Sediment disaster special warning zones

A zone where the lives and health of residents and others are at high risk due to land collapses, etc.

Number of designated zones in Kizugawa City	
	Sediment disaster warning zones: **353**
	Sediment disaster special warning zones: **292**

(As of February 2024)

Sediment disaster warning

Heavy rain warnings include information compiled and announced with the cooperation of Kyoto Prefecture and Kyoto Local Meteorological Observatory. When there is a heightened danger of sediment disasters due to heavy rain, sediment disaster warnings are issued. When there is heavy rain, pay attention to the latest weather reports on television, radio, and internet and also look out for sediment disaster information.

KIKIKURU (Real-time Risk Maps) by Japan Meteorological Agency
URL: https://www.jma.go.jp/bosai/risk

Kyoto Local Meteorological Observatory
URL: https://www.jma-net.go.jp/kyoto/

Kyoto Risk Management Web Site
URL: https://www.bousai.pref.kyoto.lg.jp/dis_portal/

Kyoto Prefectural Multi-Hazard Information Providing System
URL: http://multi-hazard-map.pref.kyoto.jp/top/top.asp

Kyoto Prefecture Landslide Alert Information
URL: https://d-keikai.pref.kyoto.jp/Top.aspx

Learning about Sediment Disasters

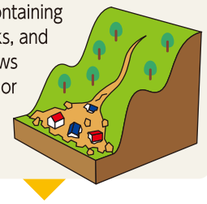
Various kinds of sediment disasters can be expected due to typhoons, concentrated heavy rain, and earthquakes. In particular, extra vigilance is required around artificially formed ground, river basins, and mountainous areas. Pay close attention to sediment disaster warning information.

Slope failure

A steep slope softens and then collapses due to heavy rain, etc.

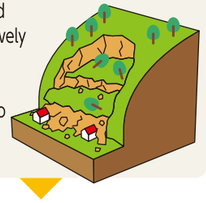
Debris flow

A mud flow containing sediment, rocks, and tree debris flows down a valley or river course.



Landslide

A section of land covering a relatively large area is inundated with rain and starts to slowly move.



Sediment disaster signs

Most of sediment disasters occur during the rainy season or typhoons. Long or heavy rainfall causes large amounts of water to be absorbed into the ground, which weakens slopes and causes collapses. But you can learn how to spot the warning signs.

Slope failure signs

- Small rocks continue to fall down from the top of the cliff or slope.
- Water gushes from the cliff face.
- Fissures appear in the cliff.

Debris flow signs

- You can hear entire mountains rumbling and groaning.
- River water becomes muddy, and carries toppled trees.
- River level drops even through the rain is continuing.

Landslide signs

- Well water becomes muddy.
- Fissures appear in the ground, and some sections sink while others rise.
- The water level of ponds or marshes suddenly changes.

Rain intensity and rainfall pattern

Hourly rainfall (mm)	Forecasting terms	Image of rainfall felt by people	Effects on people	Indoors (assuming a wooden house)	Outdoors	When driving an automobile
10 to less than 20	Slightly strong rain	Rain is pouring down.	The rain bounces off the ground and your feet get wet.	The sound of rain makes it difficult to hear people talking.	Puddles form all over the ground.	
20 to less than 30	Strong rain	A soaking downpour.	You get wet even when holding an umbrella.	About half of the people sleeping are woken by the rain.		Difficult to see even when you turn your windshield wipers on high.
30 to less than 50	Heavy rain	Raining like a bucket has been turned upside down.			Roads become like rivers.	When driving at high speeds, a film of water forms between the wheels and the road, making your brakes ineffective (hydroplaning).
50 to less than 80	Very heavy rain	Raining like a waterfall (rain continues to fall with a roaring sound)	Umbrellas are completely useless.		Water splashing off of surfaces makes the whole area look white and impairs visibility.	Driving a car is dangerous.
80 or more	Torrential rain	Feeling of oppression that makes it hard to breathe. Feeling of fear.				

Note 1: When heavy rain is likely to cause disaster, heavy rain advisories and flood advisories are issued. When there is a risk of serious disaster, heavy rain warnings and flood warnings are issued. When there is an extremely high risk of even more serious disaster, heavy rain emergency warnings are issued to warn people and urge them to be vigilant and careful. Please note that the criteria for warnings and advisories differ depending on the region.
Note 2: When heavy rain in a short period of time that occurs only once every few years is observed and analyzed, record-breaking heavy rain warnings are issued. When these warnings are issued, it means that your area is experiencing torrential rainfall that could lead to sediment disasters, water inundation, and flooding of small- and medium-sized rivers. Please note that the criteria for warnings differ depending on the region.

Wind Strength and Direction

Average wind speed (approximate hourly speed)	Wind strength (forecasting terms)	Speed example	Effects on people	Outdoors/tree conditions	Structures	Approx. instantaneous wind speed
10 to 15 m/s (approx. 50 km/h)	Slightly strong wind	Cars on general roads	Difficult to walk against the wind. Umbrellas cannot be used.	Entire trees begin to sway. Electric wires begin to sway.	Gutters begin to shake.	20m/s
15 to 20 m/s (approx. 70 km/h)	Strong wind		Some people are unable to walk against the wind and may fall. Working at heights is extremely dangerous.	Electric wires begin to make a ringing sound. Signs and tin sheets begin to peel off.	Roof tiles and roofing materials peel off from some buildings. Shutters rattle.	
20 to 25 m/s (approx. 90 km/h)	Very strong wind	Cars on expressways	Impossible to stand without holding on to something. Risk of injury from flying objects.	Thin tree trunks break and trees with no roots begin to fall. Signs fall and fly away. Road signs are bent forward.	Roof tiles and roofing materials fly off from some buildings. Unsecured prefabricated buildings move and fall over.	30m/s
25 to 30 m/s (approx. 110 km/h)					Materials on poorly secured metal roofs are torn off. Poorly protected temporary scaffolding collapses.	40m/s
30 to 35 m/s (approx. 125 km/h)	Fierce wind	Express trains	Extremely dangerous to be outdoors.	Many trees fall. Some electric poles and street lights fall. Some concrete block walls collapse.	Exterior materials are scattered over a wide area, exposing the underlying materials.	50m/s
35 to 40 m/s (approx. 140 km/h)						60m/x
40 m/s (approx. 140 km/h)					Some houses collapse. Some steel structures deform.	

Note 1: When there is a risk of damage from strong winds, strong wind advisories are issued. When there is a risk of serious damage from violent winds, a strong wind warning is issued. When there is an extremely high risk of serious damage, a strong wind emergency warning is issued to encourage people to use great caution. Please note that the criteria for warnings and advisories differ depending on the region.
Note 2: The average wind speed is the 10-minute average, and the instantaneous wind speed is the 3-second average. Wind constantly fluctuates in strength and weakness, and the instantaneous wind speed is often about 1.5 times the average wind speed. However, when atmospheric conditions are unstable, the instantaneous speed can be more than 1.5 times the average speed.
Note 3: Please note the following points when using this table.
1. Wind speed is affected by the terrain and surrounding buildings. Therefore, the wind speed at a certain location may differ significantly from the value at a nearby observation station.
2. Even if the wind speed is the same, damage may differ depending on the wind direction and the condition of the building or structure subjected to wind. This table describes the phenomena and damage that usually occur when a certain wind speed is observed.There are cases where actual damage exceeds the estimate listed here; conversely, there are cases in which only minor damage occurs.
3. The impact on people and objects was created based on the "Relationship between instantaneous wind speed and people and the state of the city" by the Japan Association for Wind Engineering. Going forward, we may change the content if expressions no longer match the actual situation.

Source: Rain and Wind Classification Table (Published by the Japan Meteorological Agency, September 2017)

Evacuate immediately if a sediment disaster warning is issued!

After a Heavy Rain (landslide) Warning is issued, if a life-threatening sediment disaster could occur at any time, this information calls for caution to support the mayor's decision to issue an evacuation order and residents' decision to engage in voluntary evacuation. This corresponds to Warning Level 4, which requires evacuation from dangerous areas.

Disaster prevention weather information issued by a meteorological observatory in the event of heavy rain

Early advisory information (possibility of warning level) Announced before warnings and advisories	Warning level 1	Prepare for the possibility of a disaster
Heavy rain advisory Notice issued when there is the possibility of a warning	Warning level 2	Prepare for the possibility of evacuation
Heavy rain warning Announced when there is a risk of sediment disasters or flooding	Warning level 3	Evacuation of the elderly, etc.
Landslide warning Announced when the risk of sediment disasters has increased even further	Warning level 4	Evacuation instruction
Heavy rain emergency warning Announced when there is an extremely high possibility that a disaster has already occurred	Warning level 5	Emergency safety measures

※Announcements may not be made in this order.