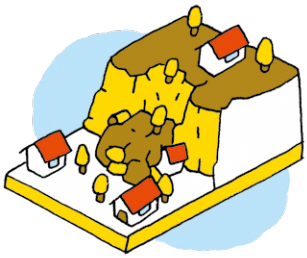
Premonitory Phenomena of Sediment-related Disaster

Slope failure



The subsurface of a slope becomes loose due to rainwater permeation or an earthquake and suddenly fails. The time until the slope fails is very short.

Premonition

1. The earth rumbles.
2. Water springs up from the slope surface.
3. Spring water stops or becomes turbid.
4. Cracks appear on the slope surface.
5. Pebbles are s prinkling down.

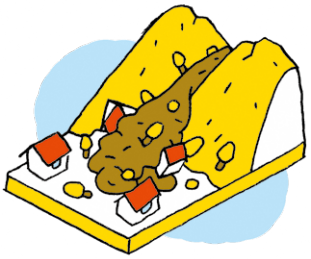
Landslide

Part or all of the slope gradually moves downward because of the influence of groundwater and by gravity (movement of earth mass is very big).

Premonition

1. The earth or mountain rumbles.
2. Well water or mountain stream water becomes turbid.
3. The ground cracks or caves in.
4. Cracking or level differences occur.
5. Trees slant.
6. Water gushes out from a cliff or slope.

Debris flow



Stones or sediment on a mountain slope or the bottom of a river are suddenly pushed downstream in one go because of a long spell of rain or concentrated rainfall.

Premonition

1. The mountain rumbles.
2. The sound of standing trees snapping or stones hitting each other is heard.
3. The river water suddenly gets muddy, and woody debris starts to be seen.
4. A rotten soil smell occurs.
5. The water level decreases despite continuing rainfall.