

Landslip Warning

A landslip warning will be issued by the Hong Kong Observatory in conjunction with Geotechnical Engineering Office when there is a high risk of many landslips as a result of persistent heavy rainfall. The Warning is aimed at predicting the occurrence of numerous landslips, and isolated landslips which cannot be predicted will occur from time to time in response to less severe rainfall when the Warning is not in force.

On the issuance of such a warning, a Landslip Special Announcement will be sent to the local radio and television stations for broadcast to the public and the announcement will be updated at regular intervals until the likelihood of landslips has diminished.

The Landslip Warning supplements routine weather forecasts by drawing attention to risk from landslips due to heavy rain. It is intended to prompt the public to take precautionary measures to reduce their exposure to risk posed by landslips, and to assist engineers, contractors and others who are likely to suffer losses from landslips. The warning also alerts the relevant government departments and organisations to take appropriate actions, such as opening of temporary shelters, search and rescue operations, closure of individual schools and relief work. It is issued irrespective of whether other severe weather warnings, e.g. tropical cyclone signals or rainstorm warning signals, are in force.

Like all forecasts, a Landslip Warning represents an assessment of the weather based on the latest information available at the time. There will unavoidably be false alarms as well as occasions when heavy rain which may cause landslips develops suddenly and affects parts of Hong Kong before a warning can be issued.

Rainstorm and landslips

Although heavy rainstorms are not uncommon at any time of the year in Hong Kong, most of them happen during the summer months. Indeed, close to 80 per cent of the annual rainfall occurs between May and September.

Every year heavy or prolonged rain causes landslips in Hong Kong. Property owners, engineers, architects, contractors and others concerned should take all necessary precautions against damage, and the public should take precautions against risk of personal injury. On average, the Landslip Warning is issued about three times every year, and on average two or three hundred landslips occur each year. Most of these are small in scale, but many are large enough to cause injury to people, damage to property and blockage of roads.

Hong Kong has a bad history of landslips. It has steep hilly terrain, intense seasonal rainfall and very dense hillslope development. In particular, many thousands of substandard man-made slopes were constructed in the past, largely during the years of rapid development which followed World War II, and many of these slopes are prone to failure at times of

heavy rainfall. In the past 50 years, a total of more than 470 people have been killed by landslips. On two days alone, during severe rainstorms in July 1966 and June 1972, 86 and 148 lives were lost respectively due to landslips.

Since the introduction of effective geotechnical control in Hong Kong in 1977, and with concerted government effort over the past 20 years to reduce the risk from landslips to the community, casualties and disruption from landslips have been greatly reduced. However, the risk can never be entirely eliminated, and some tragedies continue to occur. The collapse of an old masonry wall in an estate in Kennedy Town after torrential rain July 1994 killed five people and seriously injured three, and caused the evacuation of more than 2,500 people. Heavy rain following the passage of Severe Tropical Storm Helen in August 1995 brought widespread landslips, causing three deaths. 1997 was the wettest year on record to that time, resulting in 548 landslips being reported, with the loss of two lives.

Meteorological watch

In order to issue timely warnings to the public, the Hong Kong Observatory keeps a continuous watch of the weather in and around Hong Kong. Readings from a network of more than 100 automatic rain-gauges covering the whole of the Special Administrative Region are telemetered to the Observatory Headquarters to provide real-time information essential for assessing the likelihood of landslips. In addition to conventional meteorological observations, the Observatory's weather radar system provides a good means to continuously monitor the movement and development of rain-bearing clouds. Meteorological satellite imagery at high resolution are received at frequent intervals, providing a bird's eye view of cloud patterns over Asia and the western Pacific.

Points to note

1. Listen to radio or television broadcasts on the latest warnings. Contact your district office or the nearest police station in emergencies.
2. Take appropriate measures to avoid possible damage or loss of life due to landslips. When the Landslip Warning is in force, you should cancel non-essential appointments, stay at home or in a safe shelter. Pedestrians should avoid walking or standing close to steep slopes and retaining walls. Motorists should avoid driving in hilly areas or on roads with landslip warning signs.
3. If you have received a notice to evacuate because of landslip danger, or if you believe that your home is endangered by an unstable slope or retaining wall, or overhanging boulders, you should make immediate arrangements to move to a safe shelter.
4. Once the Landslip Warning is issued, temporary shelters will be provided by the Home Affairs Department. You may call the HAD emergency hotline at 2572 8427 to locate the temporary shelter nearest to you.
5. For an update on the status of weather warnings, members of the public may call the Observatory's Dial-a-Weather service at 1878200 or browse the Observatory's website (<https://www.weather.gov.hk> or <https://www.hko.gov.hk>).