

LCQ20: Measures to enhance slope safety

Following is a question by Dr the Hon Johnny Ng and a written reply by the Acting Secretary for Development, Mr David Lam, in the Legislative Council today (November 8):

Question:

It has been reported that the once-in-a-century torrential rain in September this year caused a number of landslide incidents, in which cases involving unauthorised building works (UBWs) carried out by some private owners on slopes were uncovered. Regarding the measures to enhance slope safety, will the Government inform this Council:

(1) of the current respective numbers of government and privately-owned man-made slopes and natural hillsides in various districts; whether it has conducted regular examination and assessment on the level of risks of such slopes; if so, of the number of slopes with landslide risks (set out in a table), and whether it will carry out comprehensive inspections on such slopes before the advent of the new rainy season; if so, of the relevant work plan and timetable; if not, the reasons for that;

(2) of (i) the respective numbers of landslides which occurred on privately-owned natural hillsides and man-made slopes, as well as the resultant casualties, and (ii) the number of non-compliant Dangerous Hillside Orders issued by the authorities and the main reasons for non-compliance, in each of the past three years;

(3) whether it (i) carried out inspections on private slopes to verify the existence of UBWs, (ii) issued removal orders to and instigated prosecutions against the relevant owners, and (iii) made assessments on the number of such slopes having the danger of collapse, with the relevant owners being required to undertake slope upgrading works, in the past three years; if so, of the details and numbers; if not, the reasons for that; and

(4) in order to prevent the problem of UBWs on slopes, whether the authorities will increase the penalties or even impose criminal liabilities, including imposing progressive penalties against cases of non-compliance with removal orders within the deadline, as well as recovering the costs of repair works from the relevant non-compliant owners?

Reply:

President,

The Government has been implementing an effective slope safety system to improve slope safety in Hong Kong and has kept enhancing the capability in

coping with landslide risk through the following strategies:

(i) carrying out regular inspection and preventive maintenance for government slopes, requiring private owners to fulfill their duties in maintaining their slopes, and exercising geotechnical control on public works and private development projects to ensure slope safety;

(ii) continuing the Landslip Prevention and Mitigation Programme (LPMitP) to systematically carry out slope upgrading works for government man-made slopes, safety screening studies for private man-made slopes and risk mitigation works for natural hillside catchments according to a risk-based approach for strengthening slopes against inclement weather; and

(iii) reviewing the slope management in Hong Kong and advising the Government on technical aspects by international experts regularly, with the aim of continuously improving the quality of slope management.

At present, the overall landslide risk in Hong Kong has been substantially reduced compared with that existed in the 1970s and the 1980s, reaching the international best practice in risk management.

My respective replies to the various parts of Dr the Hon Ng's question are as follows:

(1) As at September 2023, there are about 61 000 registered man-made slopes in different districts in the Catalogue of Slopes kept by the Geotechnical Engineering Office (GEO) under the Civil Engineering and Development Department. Among them, about 45 000 are government man-made slopes and about 16 000 are private man-made slopes.

According to the Guide to Slope Maintenance published by the GEO, relevant government departments are required to inspect their man-made slopes with maintenance responsibility every one to two years, and to carry out necessary maintenance, e.g. strengthening the slope surface cover and improving the drainage system. Meanwhile, the Slope Maintenance Audit Unit in the GEO also provides technical assistance and advice to the maintenance departments. Private owners should also follow the same requirements to carry out inspection and maintenance for all slopes on their private lots and in areas specified under the land lease conditions.

Hong Kong has a hilly terrain with many natural hillsides. Compared with man-made slopes, natural hillsides are mostly located in remote areas with relatively low potential risks. For those natural hillsides closer to existing developments, there is a buffer zone between them and the residential buildings and roads in general. At present, the GEO has identified about 3 300 natural hillside catchments relatively close to existing buildings and important transport corridors for study.

Before every wet season, the GEO will remind private owners to complete all regular slope inspections and the necessary slope maintenance before the onset of wet season through pre-wet season media briefings, letters, social

media posts, television and radio Announcements in the Public Interest, etc. This can reduce the chance of landslides and safeguard public safety.

In addition to routine inspection and maintenance to ensure slope safety, the GEO also continues the LPMitP to further systematically upgrade man-made slopes and natural hillside catchments. Among about 45 000 government man-made slopes, there are about 17 000 slopes with relatively low potential impacts (e.g. locating near lightly used access roads, remote places and country parks); and there are about 15 000 slopes with relatively high potential impacts (e.g. locating near residential buildings, hospitals, and schools) and moderate potential impacts (e.g. locating near major infrastructures, heavily used roads and footpaths) that have been upgraded in the early years. Under the LPMitP, the GEO will deal with about 13 000 remaining man-made slopes with moderate potential impacts. Furthermore, the GEO will select private slopes for safety-screening studies every year. At present, screening has been completed for about 6 400 private man-made slopes. The GEO also implements risk mitigation measures for about 3 300 identified natural hillside catchments in an orderly manner, based on their potential impacts to the surroundings.

Through the above measures, the number of landslides in recent years has been significantly reduced, and the casualties caused by landslides have also been noticeably reduced. In response to the recent Super Typhoon and the torrential rain, the Government will adopt a more pre-emptive and strategic approach, and strengthen the resilience of dealing with landslides as follows:

(i) exploring ways to use big data, artificial intelligence and other technology to improve our risk assessment capabilities; and

(ii) conducting systematic investigations and studies on major landslide incidents triggered by extreme rainstorms and devising focused measures of landslide mitigation for more natural hillsides.

(2) and (3) Owners are responsible for the proper maintenance and repair of all slopes on their private lots and in areas specified under the land lease conditions. To further enhance public safety, the GEO will select private slopes for safety-screening studies under the LPMitP every year, and recommend the Buildings Department (BD) to issue Dangerous Hillside Orders (DHO) to the relevant private slope owners based on the study findings. At present, screening has been completed for about 6 400 private man-made slopes. When a private man-made slope is found to be dangerous or liable to become dangerous by the GEO or the government departments received reports, the BD will serve a DHO on private slope owners under the Buildings Ordinance (BO) (Cap. 123), requiring them to carry out investigation and necessary remedial/preventive works to the slope (slope works).

In the past three years, the GEO did not receive any landslide report in natural hillside within private land. The number of landslide reports on private man-made slopes and casualties involved are tabulated in Table 1 below:

| Table 1 | | |
|---------|---|------------|
| Year | Private man-made slopes | |
| | Number of landslide reports received by the GEO | Casualties |
| 2020 | 12 | 0 |
| 2021 | 13 | 0 |
| 2022 | 6 | 0 |

The number of DHOs issued by the BD and the number of expired DHOs which have not been complied with and the number of prosecutions in the past three years are tabulated in Table 2. The BD does not compile breakdown statistics on inspections of unauthorised building works (UBWs) on slopes or relevant removal orders and prosecutions.

| Table 2 | | | |
|---------|---|--|------------------------|
| Year | Private man-made slopes and natural hillsides | | |
| | Number of DHOs issued | Number of expired DHOs which have not been complied with | Number of prosecutions |
| 2020 | 59 | 16 | 4 |
| 2021 | 45 | 27 | 14 |
| 2022 | 35 | 29 | 21 |

Note: As the handling of a case may straddle different years, the numbers of expired DHOs which have not been complied with and the number of prosecutions in a year may not correspond with the number of DHOs issued within the same year.

It is understood that one of the reasons for non-compliance with DHOs is that, when the slopes are located in the common areas with shared ownership, co-owners may need time to discuss and agree on matters related to investigation and repair works, including appointment of professionals, concrete proposals for the works, estimated expenditure and cost apportionment. In addition, disputes over ownership and maintenance responsibility, owners or occupiers' refusal to grant access to the premises to work staff, financial difficulties and other factors would also impede the progress of compliance with orders. The BD will continue to follow up with non-compliance with expired DHOs, including to consider instigating prosecution against the owners concerned whom without reasonable excuse.

(4) If owners, without reasonable excuse, fail to comply with the DHOs in

carrying out investigation and the slope works required, the BD will consider instigating prosecution against the owners concerned. They shall be liable on conviction to a fine of \$50,000 and to imprisonment for one year; and to a further fine of \$5,000 for each day during which the situation of failure to comply with the order has continued. For failure to comply with removal orders against UBWs without reasonable excuse, the owners shall be liable on conviction to a fine of \$200,000 and to imprisonment for one year; and to a fine of \$20,000 for each day during which the offence has continued. The BD may also carry out the works in the event of default by the owners in accordance with the B0, and recover the costs of such works, together with supervision charges and surcharges of not exceeding 20 per cent of the costs, from the owners concerned upon completion of the works.

As announced in the Policy Address, we will comprehensively review the B0 to strengthen the BD's enforcement power by exploring raising the penalties, considering streamlining the prosecution procedures and lowering the prosecution threshold to effectively combat UBWs and other contraventions of the B0. We will put forward the proposed amendments next year.