

Slope Safety for All
(formerly under the then Works Bureau)

Detailed Progress

I Improve slope safety standards, technology, and administrative and regulatory frameworks

To achieve results in this area, various initiatives have been undertaken in the past years. Details are set out below —

Initiative *	Target #	Present Position †
To investigate serious landslides in 2000 and derive improvement measures (Civil Engineering Department (CED))	To complete examination of all reported landslides which occurred in 2000 and produce a report on improvements to slope engineering practice by December 2001 (2001)	(Action Completed)
To introduce the use of digital technology in geotechnical field mapping (CED)	To apply geographic information system, digital photogrammetry and mobile computing techniques for landslide investigations and natural terrain studies by December 2002 (2001)	(Action Completed)
To introduce a risk management strategy to combat natural terrain landslide hazards (CED)	To formulate a natural terrain landslide risk management strategy for trial implementation by April 2002 (2001)	(Action Completed)

* the bracketed information denotes the agency with lead responsibility for the initiative

the bracketed information denotes the year in which the target was set

† the bracketed information denotes the status of the target

Initiative	Target	Present Position
<p>To improve the technology in slope improvement works</p> <p>(CED)</p>	<p>To develop effective non-destructive means for measuring the lengths of installed soil nails by December 2002</p> <p>(2001)</p>	<p>(Action in Progress : On Schedule)</p>
<p>To enhance experience sharing amongst geotechnical practitioners</p> <p>(CED)</p>	<p>To publish and maintain in the Hong Kong Slope Safety Website (http://hkss.ced.gov.hk) an up-to-date list of geotechnical publications and technical papers on geology and geotechnical engineering in Hong Kong for free public access in 2002</p> <p>(2001)</p>	<p>(Action Completed)</p>
<p>To integrate the updated Housing Department's estate-based slope records into the Housing Department Intranet System</p> <p>(Housing Department)</p>	<p>To update and digitise all the existing slope data into the format complying with the Housing Department Intranet System by mid-2002</p> <p>(2001)</p>	<p>(Action Completed)</p>
<p>To introduce a risk management strategy to combat natural terrain landslide hazards</p> <p>(CED)</p>	<p>To publish guidelines on practice and procedures for natural terrain hazard study by December 2001</p> <p>(2000)</p>	<p>(Action Completed)</p>

Initiative	Target	Present Position
<p>To enhance the geotechnical control of building developments</p> <p><i>(Buildings Department/ CED)</i></p>	<p>To review the Buildings Ordinance and introduce legislation to the Legislative Council by the 2001-2002 legislative session to establish a Register of Geotechnical Engineers</p> <p><i>(2000)</i></p>	<p>The proposal for registration of Geotechnical Engineers has been agreed with the relevant professional bodies and the building industry. Detailed legislative proposal is being prepared. The proposal will be processed together with other proposals for amendments to the Buildings Ordinance under an omnibus bill. As the issues involved in the bill are complex, more time than expected is required to work out the details. The current schedule is to introduce the bill into the Legislative Council in 2003.</p> <p><i>(Action in Progress : Behind Schedule)</i></p>
<p>To publish a new reinforced fill design guide for Hong Kong</p> <p><i>(CED)</i></p>	<p>To publish the new design guide by December 2002</p> <p><i>(1999)</i></p>	<p><i>(Action in Progress : On Schedule)</i></p>

2 Ensure safety standards of new slopes

To achieve results in this area, various initiatives have been undertaken in the past years. Details are set out below —

Initiative	Target	Present Position
To enhance the effectiveness of site auditing of new geotechnical works <i>(Civil Engineering Department (CED))</i>	To develop a site auditing system using mobile computing technology by December 2002 <i>(2001)</i>	<i>(Action Completed)</i>
To enhance the standard of supervision of geotechnical works <i>(CED)</i>	To increase the number of inspections of active construction sites by the Geotechnical Engineering Office from 1 300 to 1 700 per year <i>(2001)</i>	<i>(Action Completed)</i>
To enhance the effectiveness of checking new slopes <i>(CED)</i>	To extend the computerised District Information System established for Hong Kong Island to cover all sites in Kowloon, the New Territories and outlying islands by June 2002 <i>(2000)</i>	<i>(Action Completed)</i>

3 Rectify substandard government slopes

To achieve results in this area, various initiatives have been undertaken in the past years. Details are set out below —

Initiative	Target	Present Position
To reduce the landslide risk posed to the public <i>(Civil Engineering Department (CED))</i>	<ul style="list-style-type: none"> To upgrade 250 government slopes close to buildings and major roads under the Landslip Preventive Measures (LPM) Programme in 2002 <i>(2001)</i> 	<ul style="list-style-type: none"> <i>(Action in Progress : On Schedule)</i>
	<ul style="list-style-type: none"> To publish the Annual Report on Government Slope Safety Works for the Year 2001 by April 2002 <i>(2001)</i> 	<ul style="list-style-type: none"> <i>(Action Completed)</i>
	<ul style="list-style-type: none"> To upgrade 250 government slopes close to buildings and major roads under the LPM Programme in 2001 <i>(2000)</i> 	<ul style="list-style-type: none"> <i>(Action Completed)</i>
To improve the aesthetic aspects of upgraded government slopes <i>(CED)</i>	To landscape every slope upgraded under the LPM Programme in 2001 <i>(2000)</i>	<i>(Action Completed)</i>

4 Maintain all government man-made slopes

To achieve results in this area, various initiatives have been undertaken in the past years. Details are set out below —

Initiative	Target	Present Position
<p>To improve government slopes not covered by the Landslip Preventive Measures Programme to reduce the landslide risk posed to the public</p> <p><i>(Agriculture, Fisheries and Conservation Department (AFCD)/ Architectural Services Department (Arch SD)/ Drainage Services Department (DSD)/ Highways Department (HyD)/Housing Department (HD)/Lands Department (Lands D)/ Water Supplies Department (WSD))</i></p>	<ul style="list-style-type: none"> ● To improve the stability of 300 government slopes by prescriptive measures by March 2003 <i>(2001)</i> ● To improve the stability of 300 government slopes by prescriptive measures by March 2002 <i>(2000)</i> 	<ul style="list-style-type: none"> ● <i>(Action in Progress : On Schedule)</i> ● <i>(Action Completed)</i>
<p>To improve the maintenance of government slopes</p> <p><i>(AFCD/Arch SD/DSD/ HyD/HD/Lands D/WSD)</i></p>	<p>To complete the routine maintenance inspections and necessary maintenance works on the additional slopes identified through the new slope cataloguing exercise by March 2002</p> <p><i>(2000)</i></p>	<p><i>(Action Completed)</i></p>

Initiative	Target	Present Position
<p>To complete the systematic inspection and repair of all government underground drains and water pipes which may affect the stability of adjacent slopes</p> <p><i>(the then Works Bureau)</i></p>	<ul style="list-style-type: none"> ● To complete the systematic inspection and necessary repair works of underground water pipes, sewers and drains within government buildings and affecting slopes by 2001 	<ul style="list-style-type: none"> ● <i>(Action Completed)</i>
	<ul style="list-style-type: none"> ● To complete the systematic inspection and necessary repair works of underground water pipes affecting slopes near buildings and major roads by 2002 	<ul style="list-style-type: none"> ● <i>(Action Completed)</i>
	<ul style="list-style-type: none"> ● To complete the systematic inspection and necessary repair works of underground sewers and drains affecting slopes near buildings and major roads by 2004 <p><i>(1998)</i></p>	<ul style="list-style-type: none"> ● <i>(Action in Progress : On Schedule)</i>

5 Ensure that owners take responsibility for slope safety

To achieve results in this area, various initiatives have been undertaken in the past years. Details are set out below —

Initiative	Target	Present Position
To require owners of private slopes to rectify their substandard slopes (Civil Engineering Department (CED)/ Buildings Department (BD))	<ul style="list-style-type: none"> ● To complete safety-screening studies of 300 man-made private slopes in 2002 and, where necessary, serve orders on the owners to rectify deficiencies (2001) 	<ul style="list-style-type: none"> ● (Action in Progress : On Schedule)
	<ul style="list-style-type: none"> ● To complete safety-screening studies of 300 man-made private slopes in 2001 and, where necessary, serve orders on the owners to rectify deficiencies (2000) 	<ul style="list-style-type: none"> ● (Action Completed)

Initiative	Target	Present Position
<p>To provide assistance to private owners to maintain their slopes (CED/BD)</p>	<ul style="list-style-type: none"> ● To step up advisory services to private owners on slope maintenance defects and necessary follow-up actions in 2002 (2001) ● To prepare a training video and Model Slope Maintenance Plan for use by private slope owners and property management companies in 2001 (2000) ● To set up a training course on private slope maintenance on the Internet in 2001 (2000) 	<p><i>(Action Completed)</i></p>

Initiative	Target	Present Position
<p>To require owners to inspect and repair private underground drains and water pipes which may affect the stability of slopes</p> <p>(BD)</p>	<ul style="list-style-type: none"> ● To complete screening studies of underground services affecting 500 slopes in 2002 and, where necessary, serve orders on the owners to rectify deficiencies <p>(2001)</p> <ul style="list-style-type: none"> ● To complete screening studies of underground services affecting 500 slopes in 2001 and, where necessary, serve orders on the owners to rectify deficiencies <p>(2000)</p>	<ul style="list-style-type: none"> ● <i>(Action in Progress : On Schedule)</i> ● <i>(Action Completed)</i>

6 Promote public awareness and response in slope safety through public education, publicity, information services and public warnings

To achieve results in this area, various initiatives have been undertaken in the past years. Details are set out below —

Initiative	Target	Present Position
To enhance private owners' acceptance of their responsibility for slope safety through the work of the Community Advisory Unit <i>(Civil Engineering Department (CED))</i>	To stage nine roving exhibitions on slope safety by December 2001 and meet private owners and owners' corporations to advise them on slope safety issues <i>(2001)</i>	<i>(Action Completed)</i>
To identify squatter huts at high risk from landslides so that clearance actions can be initiated <i>(CED)</i>	To inspect the areas near streamcourses and subject to natural terrain landslip risk in 90 major squatter villages in the New Territories by September 2002, make clearance recommendations and advise residents on safety precautions <i>(2001)</i>	<i>(Action in Progress : On Schedule)</i>
To enhance the response of the public to Landslip Warnings <i>(CED)</i>	To prepare new warning messages to enhance communication with the public during Landslip Warnings by April 2002 <i>(2001)</i>	<i>(Action Completed)</i>

Initiative	Target	Present Position
<p>To enhance public education on slope safety</p> <p>(CED)</p>	<ul style="list-style-type: none"> ● To set up a Slope Safety Island in the Hong Kong Slope Safety Website (http://hkss.ced.gov.hk) for free dissemination of educational materials on slope safety by July 2002 ● To conduct three seminars in schools on slope safety in 2002 <p>(2001)</p>	<p>(Action Completed)</p>
<p>To enhance the response of the public to landslip warnings</p> <p>(CED)</p>	<p>To step up public education on signs of landslip danger in 2001</p> <p>(2000)</p>	<p>(Action Completed)</p>
<p>To reduce the extent of unauthorised cultivation on hillsides</p> <p>(CED)</p>	<p>To step up public education on the risks of unauthorised cultivation in 2001</p> <p>(2000)</p>	<p>(Action Completed)</p>

7 Enhance the appearance and aesthetics of engineered slopes

To achieve results in this area, various initiatives have been undertaken in the past year. Details are set out below —

Initiative	Target	Present Position
To improve the aesthetic aspects of upgraded government slopes <i>(Civil Engineering Department (CED))</i>	To landscape 250 slopes upgraded in 2002 under the Landslip Preventive Measures Programme <i>(2001)</i>	<i>(Action in Progress : On Schedule)</i>
To improve aesthetic aspects of newly formed government slopes <i>(Agriculture, Fisheries and Conservation Department/ Architectural Services Department/CED/ Drainage Services Department/Highways Department (HyD)/ Home Affairs Department/Housing Department/Territory Development Department/Water Supplies Department (WSD))</i>	To landscape every newly formed government man-made slope constructed in 2002 <i>(2001)</i>	<i>(Action in Progress : On Schedule)</i>
To improve aesthetic aspects of private slopes <i>(CED)</i>	To produce a layman's guide on landscape treatment for man-made slopes and retaining walls by July 2002 <i>(2001)</i>	<i>(Action in Progress : On Schedule)</i>

Initiative	Target	Present Position
<p>To improve the technology in greening slopes (CED/HyD/WSD)</p>	<p>To conclude trials of growing new vegetation mixes and applying new planting techniques on steep slopes by December 2003 (2001)</p>	<p>(Action in Progress : On Schedule)</p>