

Non-heeding of research causes earthslips

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With floods ravaging various parts of the country, earthslips are becoming a common occurrence and menace to vulnerable villages and their people. On Sunday an entire village and its twenty-five inhabitants were killed in Kalawana

at the hands of an earthslip. Authorities were unable to even recover bodies as the slip enveloped the area.

Countries like China and Hong Kong regularly suffer casualties as a result of tremendous earthslips. But this could be attributed to their hilly terrain which is often lashed with cyclonic

weather. However Sri Lanka has nothing but over-exploitation and excessive cultivation of land to blame. This blatant disregard of Mother Nature leads to the earth tumbling like neatly arranged dominoes. A phenomenon we have nobody but ourselves to blame for as greed and overpopulation creeps in.

It is common knowledge that soil erosion is linked to earthslips. With our forests slowly disappearing and inadequate remedial action being taken, the problem of soil erosion and earthslips is bound to escalate. Deforestation by legal and illegal loggers leaves the earth's top soil vulnerable to the elements. Destructive thunderstorms, like the few we've been experiencing, are the only catalysts needed for the earth to let loose its fury on the unsuspecting.

Poor agricultural methods too lead to soil degradation. Ignorant farmers enthusiastically contribute to the emission of 'green house' gases, raising the earth's temperature which inadvertently leads to a frightful combination of droughts and storms. It is no wonder that the earth is caving in on us!

The National Building Research Organisation (NBRO), which was established in 1984, has been conducting research on landslides for several years including soil testing and slope stability measures.

The organisation's activities include Human Settlement Development, Environmental Management, Structural Engineering and Project Management, Research and Development work on Disaster Mitigation related to Landslides. It is equipped with more than fifty highly qualified professionals from the Geology, Architecture, Engineering, Environmental and Scientific fields. Landslide projects have been carried out by the NBRO since it first began. A 'Mapping Project' of landslide prone areas in Badulla and Nuwara Eliya was conducted in 1995. The project was continued from Ratnapura to Kegalle in 1996/98 and also Kandy to Matale in 1999/2003. With the extreme flooding and continued scattered showers,

NBRO Officials warned residents in Ratnapura, Deniyaya, Kalutara, Hatton and Kotagala areas of the possibility of further earthslips.

"We have been conducting Landslide Hazard Zonal Mapping since 1986 when there were several earthslips occurring", said NBRO Director R.M.S. Bandara. "With funds from the United Nations Development Project (UNDP), we chose seven districts in the beginning starting with Nuwara Eliya and Badulla. We did the mapping on a 1-10,000 km scale and identified key areas that were high risk, medium risk, low risk and safe zones".

"At present we are conducting mapping in Matale and will progress to Kalutara. We hope to conclude the project mapping by 2007 and submit our maps to the relevant Government departments. We have also decided, taking into consideration the latest developments, to include Matara, Hambantota and Kurunagala into the project as they are landslide prone areas as well", he said.

"Landslides occur for two reasons - natural and man-made. The geological formation of the area contributes to earthslips. These are naturally vulnerable areas which should be avoided at all costs by people. These are areas which should not be built upon especially since factors like heavy torrential rain accelerate land slippage", said Bandara. "The second reason which is human activity is the bad land usage practices. When constructing their houses on hilly terrain, builders cut away the slope which technically means they are removing the support for the upper slope. As more and more houses are built on the same slope, the support system is lowered, allowing for the land to collapse when outside

conditions worsen. Also humans building on such a slope do not give much thought to the natural drainage systems. When they build or do cultivation, they unknowingly damage natural water paths. For these reasons the use of retaining moulds and suitable vegetation plantations should be introduced".

"Soil erosion is the starting point of an earthslip. With the degradation of soil, gullies tend to form. All the soil tends to converge at this point leaving deep ravines on the earth's surface. Slowly the land begins to become unstable and vulnerable to landslides", he said.

"The earthslips that have occurred so far come as no surprise to the NBRO. We have already identified these areas as high risk but our reports were not taken into consideration. None of the given recommendations were implemented by the Pradeshiya Sabhas or the local Gramasevekas when construction work began in the various districts", said Bandara.

"The present situation

in Ratnapura is that the water is beginning to recede but it is happening at a very slow rate. Hill areas are still very vulnerable to slips. We have sent two teams to carry out investigations and further identify susceptible areas. The people living in those areas will have to be evacuated if the threat is serious. The villagers have been very cooperative with our teams because they now understand the danger".

"I would suggest that in future our research maps should be consulted by the Government and construction companies before any structures are erected. We have done the necessary and the information is readily available if a calamity of this nature is to be avoided in the future.

The NBRO has conducted various awareness programs in villages and schools of the threats of landslides. We have done programs even for the local Gramasevekas, town planners and engineers. This would be the perfect opportunity for the Government to rethink their strategies when rehabili-

tation work begins. The victims could be relocated to safer areas for resettlement using our zonal mapping system.

The high risk and moderate level areas could be improved for other purposes. In the future we could prevent such a disaster from 'happening', said Bandara.

Having a research organisation like the NBRO serves no purpose if the relevant authorities take no interest in the very important conclusions obtained.

As with all things in this country, we always want to take the shorter and easier way out even if it puts innocent lives at risk. We put our trust in planners and engineers because we expect them to their jobs.

The flooding of Ratnapura and other districts may not have been avoided but if proper measures were taken to safeguard people, so many innocent lives may not have been washed away. Rehabilitation has given us a second chance at undoing past mistakes. We only hope this chance will be utilised to its maximum.



Sri Lankans search for the bodies of flood victims in Ratnapura, 100 kms (62 miles) southeast of the capital Colombo. Sri Lanka fought on Tuesday to feed and clothe more than 200,000 survivors of the worst floods and landslides to hit the island in half a century as the death toll rose to 237, officials said. Estimates of those missing rose above 200 as relief agencies assessed damage to homes, farms and livestock.

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Sri Lankans stand in an area in Ratnapura, 100 km (62 miles) southeast of Colombo, after heavy floods and landslides. Sri Lanka fought on Tuesday to feed and shelter more than 200,000 survivors of the worst floods and landslides to hit the island in half a century as the death toll rose to 237, officials said.

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