

Headline **New technology won't let rocks slip through the net**  
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# New technology won't let rocks slip through the net

THOSE using the North-South Expressway need not worry about landslides or rock falls as PLUS Expressways Bhd has installed five debris flow nets in two high-risk areas.

The technology, from Switzerland, is the first ever to be used by a Southeast Asian country and has been installed in Jelapang and Gua Tempurung and cost PLUS RM5 million.

Rings of highly-galvanised steel link together to form a sturdy net to withstand boulders barrelling down at 25 metres per second and weighing three times the weight of the net.

The nets can last for at least 60 years.

PLUS has identified a few other priority areas, including Maokil in Segamat, and expects to complete net installations by year end.

Stressing on preventive and not curative maintenance, PLUS has set aside RM475 million, up from last year's budget of RM400 million, to introduce other technologies to conduct inspections and assessments of the roads.

A real time monitoring system is also part of PLUS' preventive-maintenance target.



**SECURITY:** One of the five debris flow nets installed at Gua Tempurung and Jelapang.

Installed at six locations spanning the North-South Expressway, the system measures the rainfall intensity in the selected areas. The data is transmitted to PLUS headquarters to be analysed for long-term and short-term measures.

The system will be installed at another 64 locations by the end of the year.

PLUS chief operating officer Nik Airina Nik Jaffar said: "Universiti Sains Malaysia, Universiti Putra Malaysia and Nottingham University are constantly conducting research on increasing efficiency and the effectiveness of maintenance methodologies. "Collaboration with local and international universities have produced two robots

called R80 and R600 for drainage-culvert inspection as it is impossible for a person to enter these drains."

PLUS operates 971km, or 64 per cent, of all tolled expressways in the country.

Managing director Noorizah Abdul Hamid said the company was constantly striving to upgrade and upkeep road facilities.