Engineering students learn about erosion prevention

VIENTIANE TIMES

Students from the Faculty of Engineering investigate ways to prevent soil erosion in Kasy district, Vientiane province.

Students from the Faculty of Engineering of the National University of Laos last week visited several areas of Road 13 north in Kasy district, Vientiane province, to see how hillsides are being reinforced to prevent erosion.

The Ministry of Public Works and Transport (MPWT), the World Bank, and the UK's Department for International Development (DFID) are working to prevent soil erosion under the South East Asian Community Access Programme 21 (SEACAP 21).

The aim of the programme is to find solutions to soil instability and erosion problems that cause landslides and continually plague mountainous roads.

"This programme is extremely important because it helps to support local building capacity, labour and materials and indirectly helps to alleviate poverty," said the Director of the MPWT's Local Roads Division, Mr Sengdarith Kattignasack.

He said that during their visit the students were able to gain a better insight into how best to combat landslides which can block rural access for days during the rainy season. They learned about the practical engineering challenges they will face after they graduate.

"Landslides are a major obstacle for rural transport. Even though we have companies to maintain the roads it always takes several days to clear landslides. This means that farmers cannot get to markets to sell their produce and children cannot get to school," said NUOL Associate Professor Nhinxay Visane.

He said Laos was particularly hard hit by landslides as 60 percent of the country was mountainous terrain.

Mr Nhinxay said DFID's support of this type of research was useful because it exposed the problems involved and the causes of erosion.

"This project tries to maintain environmental sustainability while keeping a sound engineering and economic perspective," said SEACAP consultant Gareth Hearn.

Rural access is a key driver in alleviating poverty. The World Bank spends close to a quarter of its loan financing on rural transportation globally. But the roads built to open up isolated communities often cause landslides and cut off impoverished villages to the health, education and economic opportunities they urgently need.

Mr Hearn said mountain slopes were in a state of dynamic equilibrium. "Many of the erosion problems in Laos are not deep-seated so we can consider using bio-engineering methods that are more sustainable," he said.

SEACAP 21 is considering reinforcement of hillsides along the road in Kasy district in two phases. The first undertakes research into bio-engineering and the planting of locally sourced seeds to combat erosion.

The second phase uses a variety of civil engineering techniques. Both phases place a premium on using locally sourced labour, maintenance and materials.

SEACAP runs research programmes in Vietnam, Laos, Cambodia and Sri Lanka, with four ongoing or already completed projects taking place in Laos. The project is jointly funded by the Lao government, DFID and the World Bank with more than 8 billion kip (about US$1million).