

## **ENVIRONMENTAL PROBLEMS AND NATURAL HAZARDS IN MATALE URBAN AREA**

C.N.B. WIJERATNE, A. PITAWALA AND A. SENARATNE

*Department of Geology, Faculty of Science, University of Peradeniya*

Matale urban area is one of the towns that is suffering from many environmental and social problems arising from both natural causes and human activities. The town is situated in a trough that is underlain by high-grade metamorphic rocks. More than half of the urban area is covered by two marble bands, which are usually highly permeable. Two natural obstacles that restrict expansion of the city are Wiltshire range in the west and the Sudu ganga in the east. Therefore, the town has expanded linearly along a N-S direction.

The steep escarpment slopes of Wiltshire range, which face the urban area, are potentially dangerous rock fall zones. Joint patterns and their intensities show a clear relationship with past rock falls. In addition, people living in the area promote the intensity of the natural hazards by cutting the slopes and altering the drainage systems. For the people with a low income and who live in the hilly areas, sanitary facilities are not adequate. Their sewages are carried downslope with water during the rainy season and they mix up with the surface water of the town area. The waste dumping site that is located on the bank of Sudu ganga is also a major threat to the environment as it is underlain by a highly jointed garnet silimanite gneiss that may permit liquid waste into the ground water. Contaminated water in the town area may also seep through the underlying marble bands to the ground water table.

It is necessary to acquire a knowledge on geology in the urban and regional planning of Matale area which focuses on the topography limitations, foundation conditions, drainage of the area and the supply of water, waste disposal sitting and geologic hazards.