



AMRITA University's landmark wireless sensor network system for landslide detection deployed at anthoniari colony, munnar, warns of a possible landslide considering the torrential rains that have been falling through this region and the state of Kerala. This wireless sensor system, which is the first in India, has detected certain signals that indicate vulnerability of this region to possible landslides and the signals have been made available online at the website, www.winsoc.org and thereby researchers across the world can study the signal variations and patterns on a real-time basis.

On July 21, the data analysis shows increase in pore pressure and also noticeable soil movements. The authorities and the district collector have been notified accordingly and AMRITA has requested the government authorities to issue an advisory to the people of this region to relocate to another area till the region comes back to normalcy in terms of pore pressure and underneath soil movements. A team of researchers from AMRITA are currently working on exact measurement details on site as well as closely monitoring at the data centre in Amritapuri (Kollam) campus of AMRITA University. Any updates would be informed to the concerned authorities from the state of the art Wireless Sensor Network laboratory at Amritapuri.

AMRITA's system which is deployed at anthoniari colony, munnar, Idukki district of Kerala, consists of 50 geological sensors and 10 Wireless sensor nodes. The system is functional from June 2009 in an area which is very prone to rainfall-induced landslides. In the past, landslides at munnar have caused considerable losses to human life. The deployment of this system has come as a lifeline for this region. This technological breakthrough system was developed as part of the research project "WINSOC" (wireless sensor network with self organization capabilities for critical and emergency applications), which is co-funded by INFOS DG of European commission. The project consists of a consortium of 11 partners from 8 different countries. AMRITA University and ANTRIX (the commercial arm of Indian space research organization) are the only partners participating from India, and all other partners are from Europe.

This system can also be suitably modified for applications to gas leakage detection, avalanche and large scale temperature field monitoring (forest fire detection). Within the next 3 months , AMRITA has plans to extend this network to 150 geological sensors and 25 wireless sensor nodes as part of the research funding provided by Department of Information Technology of the Government of India. These sensors will also be deployed at various sensitive locations in other parts of the country. Dr. Maneesha V Ramesh, head of the centre at amritapuri campus and the principal investigator of this project, is currently in Canada touring universities, and in fact was able to analyze all of the signals live on the internet to arrive at landslide possibility.