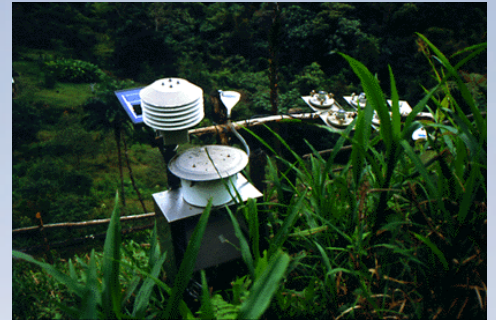


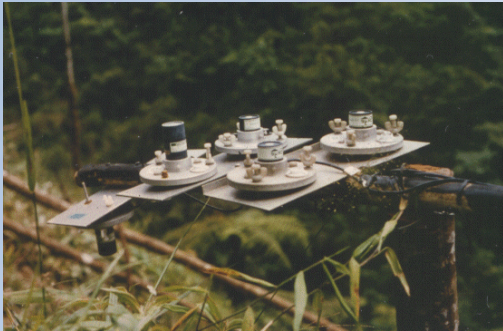


Case Study: HERB Project

The HERB project (Hydrology Ecology and Regional Biodiversity of Colombian Montane Forests) is a collaborative programme between the Department of Geography, King's College London, UK, the Universidad del Cauca, the Instituto de Investigacion de Recursos Biologicos "Alexander Von Humboldt" of the Colombian Ministry of Environment, The International centre for Tropical Agriculture (CIAT) and a number of other research groups in Colombia. The project employs field monitoring, geographical information systems and computer modelling to further understand the structure and function of tropical montane cloud forest (TMCF) ecosystems.



Tropical Montane Cloud Forests are some of the most poorly understood ecosystems on Earth and are characterised by frequent and persistent cloud cover at ground level, high rainfall and low potential evaporation. TMCF ecosystems are very high in biodiversity but are under threat from the impacts of climatic change and the expansion of the agricultural frontier. The ecosystem is hydrologically important as large amounts of water can be stripped from clouds by TMCF. Deforestation, which is occurring at a rapid rate, may lead to much reduced water levels within the TMCF. Their conservation is thus a priority and this can only be achieved with a greater understanding of the structure and function of these unique systems.



The HERB project is therefore building an environmental monitoring capacity at a number of reserves in the Pacific Cloud forest of Colombia, particularly TAMBITO (Cauca), in southern Colombia where preliminary studies have been in operation for three years.

To assist in the project, hourly data is collected for many parameters and a number of Sensors from Skye are being used:

- Solar radiation, both received and reflected using a Skye Silicon Cell Pyranometer.
- Red/far red, also received and reflected, using a Skye Red/Far Red sensor.
- Received blue radiation, using a Special single channel sensor.
- Received PAR radiation, using a Skye Quantum sensor.
- Temperature and Relative Humidity, using a Skye RH/Temperature sensor.

Acknowledgements and Contacts

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For more information please visit the HERB website: <http://www.kcl.ac.uk/herb>

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