## Community-based Trail Monitoring Scheme- A Case Study of Shih-pan Trail in Lin-mei

Dau-Jye Lu
School of Forestry & Resource Conservation, NTU
Taiwan
Yu-Fai Leung
Department of Parks, Recreation and Tourism Management, North Carolina State

Department of Parks, Recreation and Tourism Management, North Carolina State
University, USA
Hsiao-Tien Hsieh
School of Forestry & Resource Conservation, NTU, Taiwan
djlu@ntu.edu.tw

## Abstract

Trails on public lands are essential infrastructure in support of nature-based tourism and are, in many cases, an important resource for community development. The responsibilities of trail management often rest with government agencies which are perennially challenged by inadequate funding and staffing. Adopting a participatory approach, we worked with the local community organization and the regional forestry agency to build up a community-based trail monitoring scheme in support of sustainable trail management. The Google Earth mapping and visualization program was the main tool we used as a platform for designing monitoring scheme and communicating information with both primary stakeholders. We focused on trail conditions and facilities along the trail route for the monitoring scheme since no baseline data on local ecology or the pressure of tourists were available. Our results reveal that spatial information, such as the images of trail with locations and conditions of facilities shown accurately in Google Earth, played a key role in empowering locals with the capacity to implement the monitoring scheme. There is a great potential to integrate local efforts in managing trails and other tourism/recreation facilities. On the other hand, our results reveal that there was not a stable community mechanism to support the monitoring scheme in Lin-mei, though the volume of tourists had brought plenty of economic opportunities to the community organization. We argue that insufficient management incentives, i.e. participation without genuine empowerment for the community on trail management may have contributed to this situation.

**Keywords:** participatory GIS, empowerment, community mechanism, management incentive, community forestry, stakeholders