

# Field Papers Workshop

Participatory Mapping

# Community Mapping

Hutsulshchyna, Carpathian  
Mountains Ukraine

**Question:** What are the stories of  
change from a Hutsul  
perspective?

**Background:** key threats →  
logging, climate change, illegal  
harvesting etc.

**Purpose:** Indigenous voices to  
inform policy, stewardship



# Community Mapping



# Field Papers?

## Good practices in participatory mapping

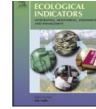
A review prepared for the  
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Contents lists available at [ScienceDirect](http://ScienceDirect)

## Ecological Indicators

journal homepage: [www.elsevier.com/locate/ecolind](http://www.elsevier.com/locate/ecolind)



### Original Articles

## Community mapping of ecosystem services in tropical rainforest of Ecuador



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### ABSTRACT

Tropical forests provide a wide range of ecosystem services (ES), and their continuous supply depends on efficient and effective management against deforestation and forest degradation. In Ecuador, indigenous communities are highly dependent on the forest and therefore on forest ES. However, there is a lack of knowledge about their demands concerning ES. In order to better understand how local and indigenous people use the forest and to facilitate its management, this study completed a spatially explicit assessment of ES using participatory mapping in the Sumaco Biosphere Reserve (Napó province, Central-Northern Ecuador). The Biosphere Reserve is suitable as a case study because it is a protected area with high land-use and population pressure and therefore requires the development and monitoring of management plans.

First, semi-structured interviews were conducted with experts ( $n=15$ ) in order to identify the most important ES used by the communities in the study area. In a second step, members ( $n=208$ ) of 24 communities were asked to indicate on a 3-D map where they utilize the different ES (food, wood, water, tourism, hunting). The highlighted localities were digitized and then analyzed with statistical and GIS techniques. The results showed that the ES locations were not randomly distributed, but were most abundant four kilometers or less from roads. Spatial pattern analysis identified hotspots of ES provision, and the evaluation according to administrative units allowed us to identify five municipalities where demand for all assessed ES was high. In conclusion, the combination of participatory mapping of ES and GIS-based analysis can facilitate the identification of priority protection areas, provide guidance for developing specific forest management strategies, and also support monitoring systems to detect forest degradation.

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### 1. Introduction

by non-experts (e.g. Entenmann and Schmitt, 2013). Forest disturbances such as deforestation and degradation cause changes