

Project acronym: WILDSENS

Project title: Sensing Wild Spaces -Integrated Participatory Mapping for Understanding Community Relationships to Dynamic Mountain Landscapes

Project leader: Alice Eldridge, University of Sussex, Brighton, UK

Discipline: Information & Communication Technologies

Station(s): Abisko Scientific Research Station (Sweden)

The primary objective of this 10-day field work was to run a pilot of an ambitious novel, multi-sensory participatory methodology for mapping wilderness landscapes. This methodology aims to comprehensively capture, in situ, stakeholders' perceptions of, knowledge about and attitudes towards dynamic Arctic environments, and to integrate these with ecological and geophysical data from the same environment. Traditionally, research methods that attempt to capture the diversity of complex knowledge about wilderness areas have relied upon standard methodological tools from human and physical geography (e.g. GIS, PPGIS, etc.). Our key innovation is to integrate participatory mapping methodologies with ecological, geophysical, cartographic, anthropological and phenomenological data. Our work will generate 3 principle outcomes: a) structural equation models to analyse the relationships between human perception, cartographic, geological and ecological data; b) ethnographic data and analyses to qualitatively map the human impact of participation on responses; and c) synthesis of these methods to develop a replicable, multidisciplinary framework for capturing land-user values. Data for exploring the research ideas linked to (a) were collected as follows: pre-identified groups of diverse local community land-users were guided along a transect across landscape and ecological gradients. At predetermined survey points, a combination of quantitative questionnaires and unstructured mini-interviews were tested to record knowledge and perception of the surrounding landscape. Ecological data in the form of rapid habitat assessments and acoustic surveys were also carried out at the same points. During the participatory ethnographic component (b), participants were observed during the walks and a before and after method was used to assess how their ideas about landscape, biodiversity and wilderness shifted through engagement with these mapping and auditory methods. These data from (a) and (b) were collated and reviewed so as to begin the development of (c), a comprehensive framework for assessing human perceptions, experiences and understandings of mountain spaces. These multi-sensory research methodologies will contribute to the co-production of sustainable strategies for the future management of dynamic Arctic wild spaces and species.