Enhancing the "P" in Participatory-GIS projects to improve social and human capitals: The use of FOSS4G tools in community-based resource management

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Abstract

In recent years, emphasis has been placed on the importance of local participation in community-based resource management (CBRM) in order to build and improve social and human capitals. Improving these capitals will enable communities in developing countries, to access resources which they can use to address local problems. Participatory GIS (PGIS) is one such approach which advocates the participation of local stakeholders to generate, analyze and communicate spatial information in managing their local environment. However, the prevailing use of commercial GIS softwares in PGIS projects runs contrary to its participatory nature. In this paper, we will present the most recent outcomes of an on-going activity on the use of Free and Open Source Softwares for Geomatics (FOSS4G) tools to address the GIS needs of the upland municipality of Claveria, Misamis Oriental, in the Philippines. We highlight the participation of local stakeholders on the use of various FOSS4G tools in different stages of the project, not only during data collection and validation, but also during the development and management of geodatabases. In developing the social capital of the community, a network of local stakeholders has been formed to encourage the collaboration and sharing of spatial/non-spatial data and other resources. To build human capital, local stakeholders undergo participatory trainings on using FOSS4G tools. The conduct of participatory trainings and iterative consultation dialogues also ensure genuine local custodianship and ownership of the project outputs. We conclude that using FOSS4G at the community-level enhances participation and improves social and human capitals by involving local people in the life cycle of projects, promoting the appreciation of GIS outputs within their community and supporting spatial learning.

Keywords: free, open source, FOSS4G, participatory GIS, social and human capitals, community community-based resource management