

MODELING ACCESSIBILITY AND AVAILABILITY OF GEOSPATIAL DATA FOR SUSTAINABLE MANAGEMENT OF NATURAL RESOURCES: A VGI APPROACH

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Abstract

Natural resources play a key role in the economy of a country such as Pakistan which depend more on land owned resources and less on industry for its economy. Pakistan's natural resources include but are not limited to natural gas, soil, oil, hydro power, coal and limestone etc. However, unplanned urbanization and industrialization, increasing frequency of natural hazards like floods and droughts as well as quickly growing population has caused serious damage to the natural resources of Pakistan. This scenario demands for management of the natural resources. To manage the resources, accessibility and availability to geospatial information of various kinds produced by many public sector organizations is a prerequisite. In Pakistan, no geospatial information sharing mechanism exists, making it impossible to get required information for managing natural resources of the country. This situation demands to utilize free accessible datasets like Volunteered Geographic Information (VGI). VGI is being used in almost all domain applications like education, health, environment, heritage, transportation, urban planning, tourism and water management etc as it can be created, shared and disseminated by anyone, anytime and anywhere in the world. VGI can be very useful in countries like Pakistan where access to geospatial information collected by various public sector organizations is not yet possible. The purpose of this paper is to develop a set of interoperable system models for ensuring smooth and quick supply of VGI to ensure management of natural resources of Pakistan.