

e-Gram Suvidha : A geomatics approach for facility planning for sustainable development in Rural Areas

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Abstract

Electronic governance, among others, includes all aspects of physical planning, management of social and physical infrastructure, and enhancement/restructuring of existing facilities, facility management and land use planning. In all these areas, there is a special emphasis on spatial dimensions. In the present age of emerging technologies, Geomatics, which is the synergy of multiple disciplines, has evolved as a separate discipline dealing with spatial and non-spatial information, its method of acquisition, organization, classification, analysis, management, display and dissemination. It provides not only the answers for macro-level planning but also state-of-the-art models to the government in the context of Decentralized Planning for sustainable development in rural areas.

There is an increasing urbanization taking place in India as a result of rural masses migrating in large numbers from villages to towns, for want of better facilities and in search of better opportunities. This is expected to accelerate further in the future unless there is a concerted effort to arrest this migration through development of the villages. In this connection, application of modern ICT tools is being increasingly recognized to provide an efficient & effective means towards the preparation & implementation of appropriate development plans, via, for creation of the required facilities / infrastructure (Education, Health, Road etc) in villages.

This paper describes a pilot study undertaken at the instance of the Zila Panchayat, Chhatarpur District, Madhya Pradesh, India towards the development of a suitable Geomatics-based Facility Management Information System - e-Gram Suvidha. Development of the system-involved digitization of various village-level base maps, generation of thematic maps and suitability maps for facility creation based on certain prescribed decision criteria. The pilot study covered about 20 facilities, conveniently organized under 10 major sectors. These include Education, Health, and Communication & Roads. However, e-Gram Suvidha offers a seamless integration of additional facilities/sectors owing to its open-ended design.

Several special features characterizing e-Gram Suvidha are also discussed in the Paper. These include built-in traverse-aid, distance computation and optimized identification of a suitable location meeting specified criteria. Application of e-Gram Suvidha for facility planning could help achieve not only the desired transparency and easiness in planning process but also enable a faster response to the changing ground realities in the development planning, owing to its in-built scientific approach. It demonstrates that Geomatics approach provides efficient & effective solutions for facility planning for sustainable development in rural areas.

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