

# Open geospatial technology and data ecosystem in Bangladesh

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## Abstract

While technology and data leading the world's rapid changes, the open source technology has accelerated the speed. With the relatively recent escalation of the Internet's impact on making and growth of softwares, open source has become a popular vehicle to obtain widespread use and support of some very popular software titles. This global wave has reached the middle-income country Bangladesh which is riding the peak of digital movement nowadays. Bangladesh government has started the Open Government Data (OGD) movement that advocates not for the right, but for the facilitation and availability of data. It requires standards, principles, technology framework and regulatory framework. The general objectives of OGD Bangladesh initiative are:

(i)

Encourage developing innovative solutions; (ii)-Create new jobs and investment opportunities in this country to meet the goal of being a middle-income country by 2021; (iii) Enhance scope of researches on the national issues to identify innovative solutions to way go forward to be developed country by 2041; (iv) Benefits of Bangladesh OGD; (v)Increased service efficiency; (vi) Encouraged entrepreneurship; (vii) Increased tax revenues; (viii) Creation of jobs; (ix) Data transaction Cost reduction; (x) Economic growth, Better decision-making; (xi) Easier interaction with the government; (xii) Modular services industries and the basic key principles upon which Bangladesh OGD are: Complete, Primary, Timely, Accessible, Machine processable, Non-discriminatory, Non- proprietary. The open geospatial technologies and data have great potential to improve public services such as health, education, environment, planning, dealing with disasters and many more. To attain the goal of Digital Bangladesh mission, Government encouraging create and maintain sector specific spatial and non-spatial data and sharing those with public through different spatial and non-spatial open platforms to have the positive reflection from the stakeholders and citizens, such as improved coordination among Government-non government-development partners and aid agencies, increased public service efficiency, accountability of government and empowering citizens through their active participation. Apart the organizational initiatives the voluntary open source geospatial communities have been formed and practices of community-driven geospatial data creation and use are increasing day by day what making a vibrant open source technology and data ecosystem in the country. This article reflecting a comprehensive study has been done on that ecosystem, its approach, impediments in open data sharing, gaps in emergency response data and issues in open data quality and use cases and the identified possible measures.

**Keywords:** OpenData; OpenDRI, OSGeo, QGIS, GeoNODE, OGD, OSM, GIS

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