

Integrated Spatial Data for Scientific Research

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ABSTRACT

Global environmental change is bringing out serious problems and complex challenges to humanity such as water shortage, deterioration of ecosystem, extreme natural disaster, and food security. Current evidence demonstrates that integrated data, which includes spatial and in-situ Earth observation, natural hazards, socio-economic, health, and political datasets, is the fundamental element for scientific research on global change, disaster mitigation, and sustainable development. China is becoming one of the most important forces in the world providing Earth observation data from space and has collected the long-term nationwide data from the various different sources which relate to China's sustainable development strategy. This paper presents an overview of the work of integrated data for the scientific research in China with specific emphasis on spatial data activities.

The paper provides the roadmap analysis of spatial data sharing in China and discusses the relationship between the development of China's data facilities and the principle of GEO's data sharing and technical architecture reference. Three levels of the integrated data activities in China (i.e., national level facilities, institution level services, and cross-discipline level activities) are further introduced. Several projects such as on-going IRDR-CHINA scientific programme, which includes FORIN-CHINA, DATA-CHINA, IND-CHINA, and Young Scientist sub-projects, are also presented.