

Abstract

Significance of Space Technologies for Multi-hazard Disaster Risks

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Many countries are exposed to multiple hazards due to the climate change, variable geo-climatic conditions, young geology, unplanned settlements, desertification, drought, deforestation environmental degradation and increasing population. Climate change is one of the key factors for the occurrences of multiple hazards including floods, landslides, dry lands, drought and desertification. On the one hand, drought and desertification is taking place in various parts of the world due to the loss of perennial water flow in a number of snow fed rivers and on the other hand, flood risks are in increasing trend due to erratic and intense rainfall. The volume of snow and snow fall are in decreasing trend because of global warming. Losses from disasters are increasing mainly due to the minimal use and application of space technology and lack of proactive disaster management planning and policies. Data collection, dissemination and use through the application of space technology are still in basic stage. Therefore, the use and application of space technology are highly necessary for an effective disaster management system. This paper aims to identify the problems of multi-hazard disaster risks and suggest appropriate policy and technological measures for disaster mitigation and management. This is high time to realize that the need for a sound policy on space science and its application for disaster mitigation are of prime importance. It is also necessary to create awareness among decision makers about the application of space technology and its importance in decision making procedures which will help to formulate policies for the promotion of space technology and earth observation. On the other hand, efforts should also be made to formulate a strategy for the development and application of space science at the national level in order to get full benefit from currently available opportunities. Cooperation and collaboration with the international stakeholders are highly necessary for the technological advancement.

Key Words: Multiple hazards, climate change, application, technology, international stakeholders.