IAF EARTH OBSERVATION SYMPOSIUM (B1)
Interactive Presentations - IAF EARTH OBSERVATION SYMPOSIUM (IP)

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EARTH OBSERVATION APPLICATIONS FOR DISASTER MANAGEMENT AND EMERGENCY RESPONSE IN AFRICA

Abstract

A disaster is a serious disruption to the functioning of a community or society. Disasters cause human, material, economic and environmental losses that are beyond a community's ability to cope using its resources. Humanitarian aid is material and logistical actions undertaken to help people in need. Earth observation through remote sensing, satellite communications and global navigation satellite systems contribute to more effective disaster risk management and emergency response. It is important to make Earth observation satellite data available to all countries. Before a disaster strikes, remote sensing data provides information for systems and models that can predict disasters and provide early warnings. This helps to provide the spatial information necessary for disaster risk management, prevention, preparedness, early warning, emergency response and reconstruction; In each country. Disaster management aims to reduce the impacts of disasters, by minimizing loss of life and property. Earth observation can contribute to all phases of the disaster management cycle, including prevention, preparedness, early warning, response and reconstruction. Satellites are also reliable and rapid communication, observation and positioning tools, which become particularly vital for rescue and recovery operations when infrastructure on the ground is damaged. Humanitarian aid works to save lives, reduce suffering and ensure the protection of human dignity, even in times of crisis. The United Nations Office for Outer Space Affairs (UNOOSA) has launched the UN-SPIDER ("United Nations Platform for Space-based Information for Disaster Management and Emergency Response") to facilitate the use of space-based technologies for disaster management and emergency response. Earth observation supports disaster risk reduction, disaster emergency. Remote sensing data and space communication technologies, for example, often provide valuable support for logistics planning, rapid decision-making and resource allocation and can thus improve the way humanitarian assistance is designed and delivered. Earth observation can improve through international cooperation between satellite data providers, policymakers, disaster risk managers, emergency responders and users; is also essential to ensure the effectiveness of disaster management operations.