EARTH OBSERVATION SYMPOSIUM (B1)
Earth Observation Data Management Systems (4)

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GEO-INFORMATION SYSTEM FOR DISASTER MANAGEMENT IN DEVELOPING COUNTRIES: THE EXAMPLE OF ANTROPOGENIC LAND DEGRADATION ASSESMENT AND ITS IMPLICATION FOR CLIMATE CHANGE.

Abstract

Land degradation is often caused by improper land use. Land degradation arising from climate change or anthropogenic factors has been recognized as one of the major environmental problems plaguing the world today. Land degradation results in reduced biological productivity and is therefore a major of source of poverty especially in the developing countries. The assessment of land degradation in developing countries is greatly hindered by serious weaknesses in our knowledge of the current situation since early efforts on degradation assessment were mainly based on expert opinions.However, some recent fundamental advances in methods and technologies, especially, space technology, have tremendous applications for land degradation assessment. Biophysical indicators of land degradation can now be derived from remote sensing A key land quality indicator for example, is the Net Primary Productivity (NPP) which measures overall land productivity and ecosystem health. It also provides some indications of land degradation and soil productivity, in particular, land use systems. This paper will discuss how remote sensing and GIS technology can be used for developing models to assess land degradation and to establish the link between antropogenic land degradation and its impact o climate change in developing countries. This approach holds a great promise for improving the existing quality and quantity of information on degradation trends in countries as a basis for early warning system or disaster management.