**APPLICATIONS OF RS AND GIS FOR**

**URBAN LAND USE CHANGE STUDIES**

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## ABSTRACT

In recent years, cities all over the world have experienced rapid growth because of the rapid increase in world population and the irreversible flow of people from rural to urban areas. Specifically, in the larger towns and cities of the developing world the rate of population increase has been constant and nowadays, many of them are facing unplanned and uncontrolled settlements at the densely populated sites or fringes. To prevent from the rapid urban expansion, urban planners and decision-makers need to regularly evaluate the current development procedures using updated urban planning maps.

Over the past few years, RS platforms, techniques and technologies have been evolutionized. System capabilities have been greatly improved. Now the highest spatial resolution image can be acquired with a few cm-accuracy, while the ordinary high resolution images can be acquired with a few meter accuracy. It means that it is possible to extract from RS images, different thematic information of varying scales depending on the resolution of the image elements and integrate the extracted information with other historical data sets stored in a GIS and conduct sophisticated analyses.

The aim of this study is to analyze urban land use changes occurred in Ikh toiruu area of Ulaanbaatar city, Mongolia during a centralized economy and market economy using RS and GIS data and compare the socio-economic reasons for the changes. For the basic preparation of spatial and attribute databases 1:5000 scale topographic maps of 2000 have been used. To update the database of 2000 up to the year of 2013, land use information extracted from the very high resolution Quickbird images of 2013 and a ground survey have been used. The final analysis was carried using ArcGIS and Erdas Imagine systems and different RS and GIS techniques were applied.

Presenter: M.Ganzorig

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