Applications of land cover mapping
As you know land cover change is a significant contributor to environmental change. LULCC plays a major role in climate change at global, regional and local scales. At global scale, LULCC is responsible for releasing greenhouse gases to the atmosphere, thereby driving global warming.
Biodiversity is often reduced dramatically by LULCC. When land is transformed from a primary forest to a farm, the loss of forest species within deforested areas is immediate and complete. Changes in land use and land cover are important drivers of water, soil and air pollution. Vegetation removal leaves soils vulnerable to massive increases in soil erosion by wind and water, especially on steep terrain, and when accompanied by fire, also releases pollutants to the atmosphere. This not only degrades soil fertility over time
Applications of land cover mapping

- Local and regional planning
- Disaster management
- Vulnerability and risk Assessments
- Ecological management
- Monitoring the effects of climate change
- Protected area (PA) management.
- Alternative landscape futures and conservation
- Environmental forecasting
- Environmental impact assessment
- Policy development
Applications of land cover mapping

Local and regional planning
Applications of land cover mapping

Disaster management

Flood recession and rise areas of Bangladesh, 2017 between (a) April and June, (b) June and August

Applications of land cover mapping

Vulnerability and risk Assessments

Applications of land cover mapping

Vulnerability and risk Assessments

Soil erosion map of Nepal

Priority areas for erosion control in Koshi basin


Applications of land cover mapping

Ecological management

Habitat suitability map for (a) Himalayan black bear b) Leaf dear in far Eastern Himalayas, Nepal

Applications of land cover mapping

Monitoring the effects of climate change

Distribution and habitat use pattern by 20 threatened species in Kosi Tappu Wildlife Reserve (KTWR) as a result of LULC change

Applications of land cover mapping

Protected area (PA) management

State of major ecosystem service in 1978 and 2010 as a result of LULC change

Applications of land cover mapping

Alternative landscape futures and conservation

Habitat connectivity of Leaf Deer showing low to high suitability regions
Applications of land cover mapping

Environmental forecasting

Step 2: Land cover change analysis and prediction

- Satellite images
- Image segmentation
- Assigned condition
- Land cover (LC) maps

Step 3: Analysis of forest fragmentation

- Predicted LC map
- Change prediction
- Driver variables
- Land change modeler

- LC reclassification
- Forest, non-forest
- Fragmentation analysis
- Fragmentation maps

Land cover of the Kailash Sacred Landscape—Nepal for 1990, 2009, and 2030

Applications of land cover mapping

Policy development
Satellite mapping fights corruption

By Alfred Hermida

Digital maps of Bangladesh are proving invaluable in the fight against sleaze in a country branded as one of the most corrupt in the world.

The maps are used together with a computerised national database to decide where new roads or schools should be built.

The aim is to ensure that tough decisions about development priorities and spending are governed by local needs rather than the whim of politicians.

"It has become an excellent planning tool to plan and identify priorities," said Quamrul Islam Siddique, who pioneered the scheme. "This..."
Thank you

Let’s protect the pulse.