Land Cover Land Use studies in the Hindu Kush Himalaya

Land Cover/Land Use Change SARI International Regional Science Meeting in South/Southeast Asia
Chiang Mai, Thailand 17-19th, 2017

Birendra Bajracharya
Regional Program Manager, MENRIS
Chief of Party, SERVIR-HKH

International Centre for Integrated Mountain Development
Kathmandu, Nepal
Hindu Kush-Himalaya Region
Land cover change in HKH
Land cover change in HKH
Land cover change in HKH
Land cover change in HKH
Land cover change in HKH
Pragati, Janapragati and Nibuwater Community Forest
Regional Programmes

- Adaptation to Change
- Transboundary Landscape Management
- River Basin Management
- Cryosphere and Atmosphere
- **Mountain Environment Regional Information System**
- Himalayan University Consortium
Land cover activities in ICIMOD - driven by application needs

Workshops on harmonization of classification
Application example: Land use and cover change and forest fragmentation in Kangchenjunga Landscape

Legend
Land cover
- Forest
- Grassland
- Barren land
- Water bodies
- Shrubland
- Crop land
- Built-up area
- Snow/glacier
- KL boundary
Application example: Habitat suitability modelling for conservation planning
Application example: Estimation of Soil Erosion Dynamics in the Koshi Basin

Application example: Flood damage assessment
A flagship NASA-USAID partnership to improve environmental management and resilience to climate change by strengthening the capacity of governments and other key stakeholders to integrate Earth observation information and geospatial technologies into development decision-making.
Agriculture Atlas of Nepal

Digital agriculture atlas of Nepal provides free access to vital information for agriculture planning, research and overall economic development of the country. It covers vast issues including statistics on cereal crops, cash crops, legume, vegetables, fruits and livestock.

READ MORE

REDD information system

The application allows users to view and monitor of Kayar Khola watershed covers an area of 8,002 ha at an elevation of 245 to 1944 m in Chitwan district in the central development region of Nepal. Mainly swiping tools allow visitors to see the changes spatially and social profile of each community forest level.

READ MORE

Forest Fire Detection and Monitoring in Nepal

ICIMOD, in close collaboration with the Department of Forests of Nepal, has developed a forest fire detection and monitoring system for Nepal based on Moderate Resolution Imaging Spectroradiometer (MODIS) data. The work was supported by the United States Agency for International Development (USAID) and the National Aeronautics and Space Administration (NASA) under the SERVIR-Himalaya initiative.

READ MORE

Rangelands decision support system in Pakistan

This application has been developed to help decision makers in rangeland management in Pakistan. The application allows visualization of various layers such as bio-climate, phenology, grazing pattern, and biomass & productivity. In addition, the application allows viewing of suitability ranking map for rangeland based on productivity, area, greening/browning or overall.

READ MORE

Historic Changes in Snow Cover in the HKH Region

The snow cover data is presented for 92 sub-basins from the 10 major river basins of the HKH. Users can view basin/sub-basin wise statistics of the snow cover for different elevation zones, slopes and aspects. The snow cover maps can be displayed for a particular date or a specified time period using a time-slider tool.

READ MORE

Climate change vulnerability and adaption strategies of forest ecosystem

The web app on climate change vulnerability of forest ecosystems provides information about the current relationships between climate variables and biophysical variables depicting functioning of forests. The application also provides VDC level information on the projected relationships between climate and forest functioning that gives us a better idea about impacts of future climate change, along with this the app also provides forest areas falling under different degrees of human dependence.

READ MORE

Glacial Lake Inventory of the HKH Region

Glaciers and glacial lakes in the Hindu Kush-Himalayas have been essential natural resources providing fresh water to about one third of the world population. In the HKH also, as in many other parts of the world, glaciers are shrinking and glacial lakes are being formed due to the current climate warming.

READ MORE
Dissemination of data and applications

- Mountain Geoportal
- Regional Database system
Current approach and strategy

- MoU with Global Forest Watch
- Collaboration with SilvaCarbon and UMD
- Land cover information as a “service”

Team up with SERVIR Mekong on RLCMS
Thank You....