

A Regional SDI in the HKH Initiatives at ICIMOD

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FOR MOUNTAINS AND PEOPLE



International Symposium

Benefiting from
Earth Observation

Bridging the Data Gap for Adaptation
to Climate Change in the HKH Region

Spatial Data Infrastructure (SDI)

- a collection of technologies, standards, policies, and human resources needed to improve access to and utilization of **spatial data**



SDI in the HKH region

- SDI at global, regional and national levels are being advocated to fulfill the gaps in **data, data standards and data sharing protocols** so that resources can be saved from duplications and societies can benefit from the easy access to data
- considerable growth in awareness of SDI in the region and some initiatives are already underway for developing national SDIs

SDI in the HKH region

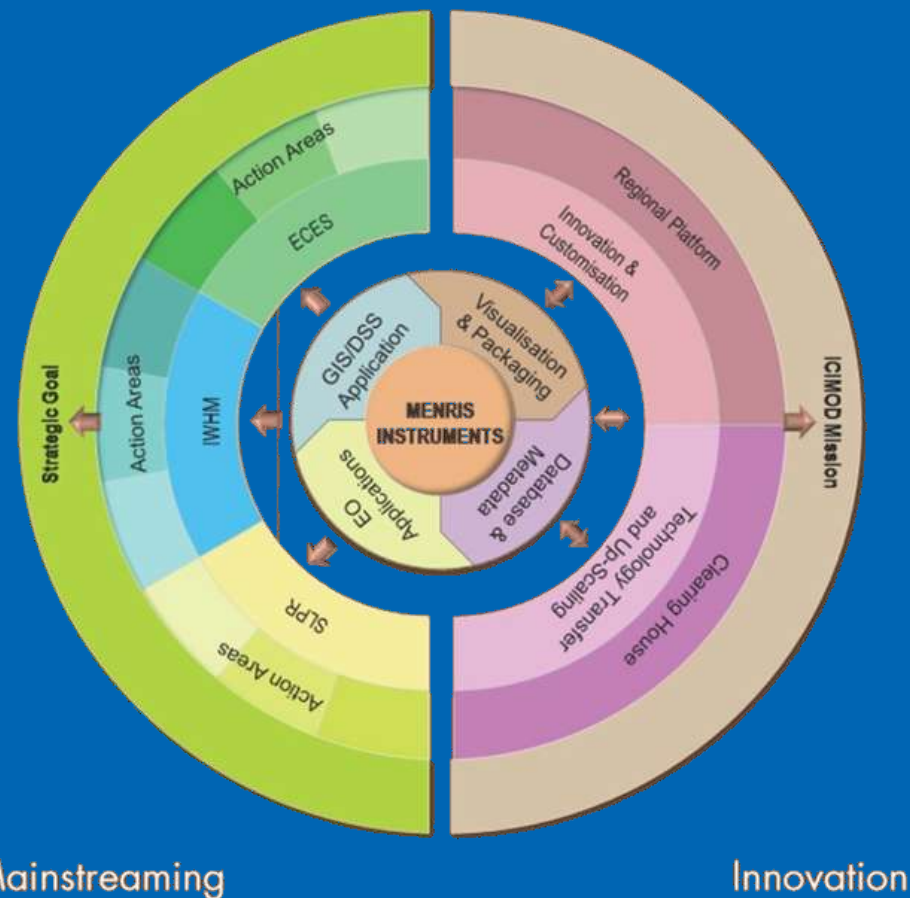
- countries are at different stages of development in terms of information technology and use of spatial data
- available data are still fragmented, heterogeneous and not easily accessible to the people
- data sharing is still difficult



- ICIMOD - a Knowledge, Learning and Enabling centre
- HKH reality
 - global datasets miss the required details to define the mountain geography and ecosystems
 - national datasets are fragmented and do not provide a complete picture
 - a strong need to develop datasets that are useful for regional applications.

- Promoting applications of geo-information and earth observation through its MENRIS division
- Regional SDI to facilitate development of basic data layers at regional scale, a common framework for sharing data and knowledgebase, through the partnership with national institutions

MENRIS Instruments and Functional Areas



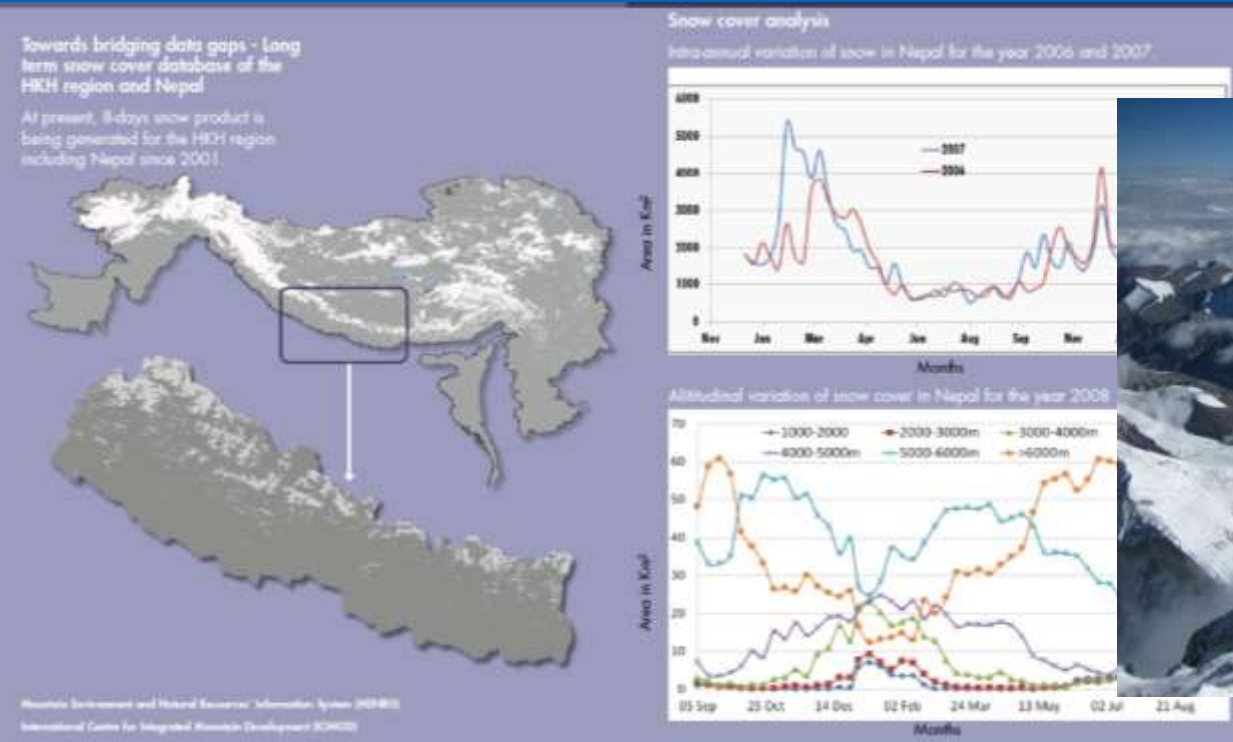
R-SDI Components

- to promote consistent awareness on the utility of spatial data and data sharing, and application of national and international standards;
- to facilitate co-operation of groups with similar data needs such as cryosphere, disaster, natural resources;
- to facilitate Data Discovery through improved national catalogues;
- capacity building of the human resources for enhancing the technical and methodological knowhow in the national institutions

R-SDI

Facilitating regional databases

- Regional snow cover mapping, inventory of glaciers and glacial lakes, harmonized land cover mapping

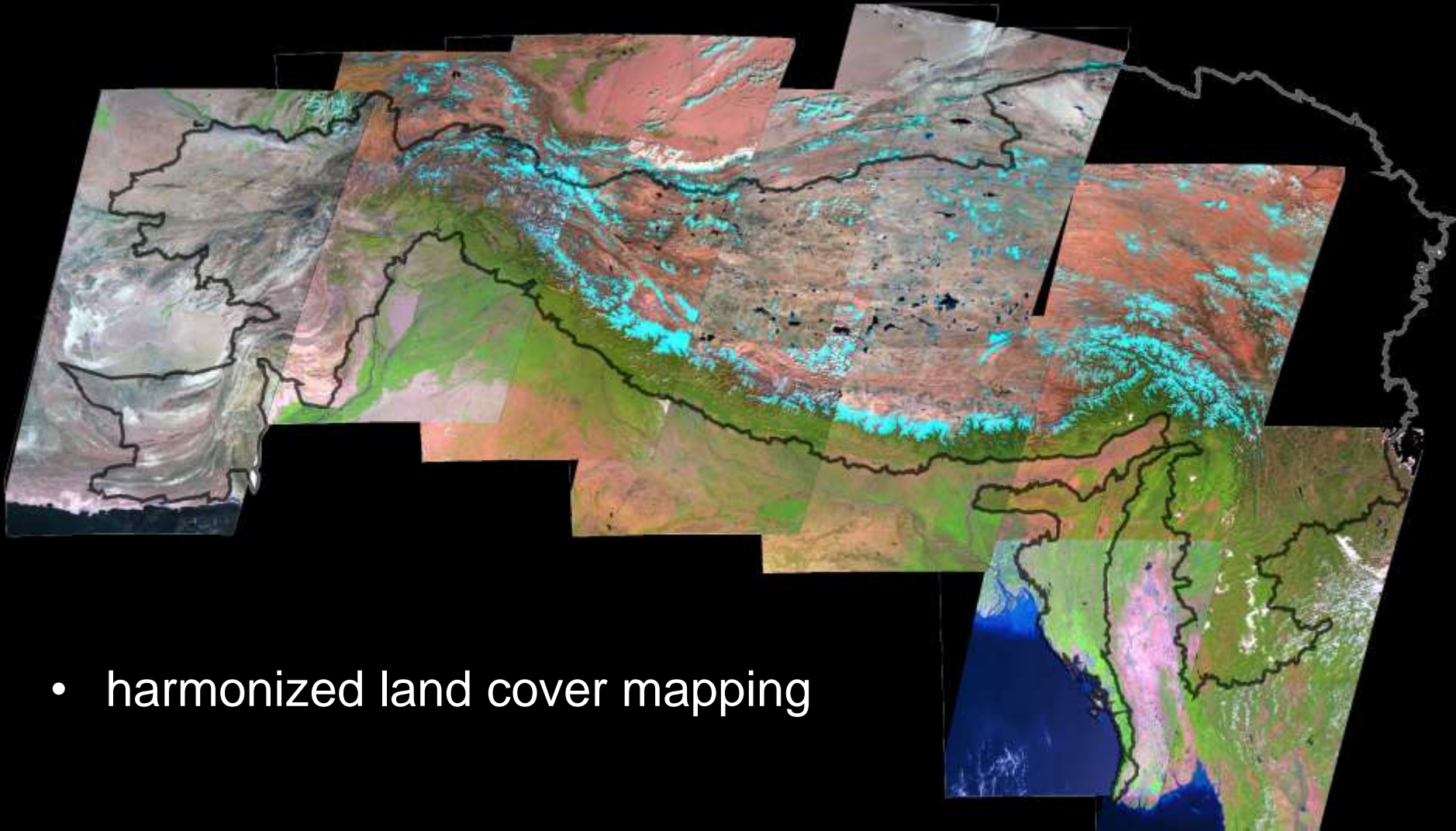


R-SDI

Facilitating regional databases

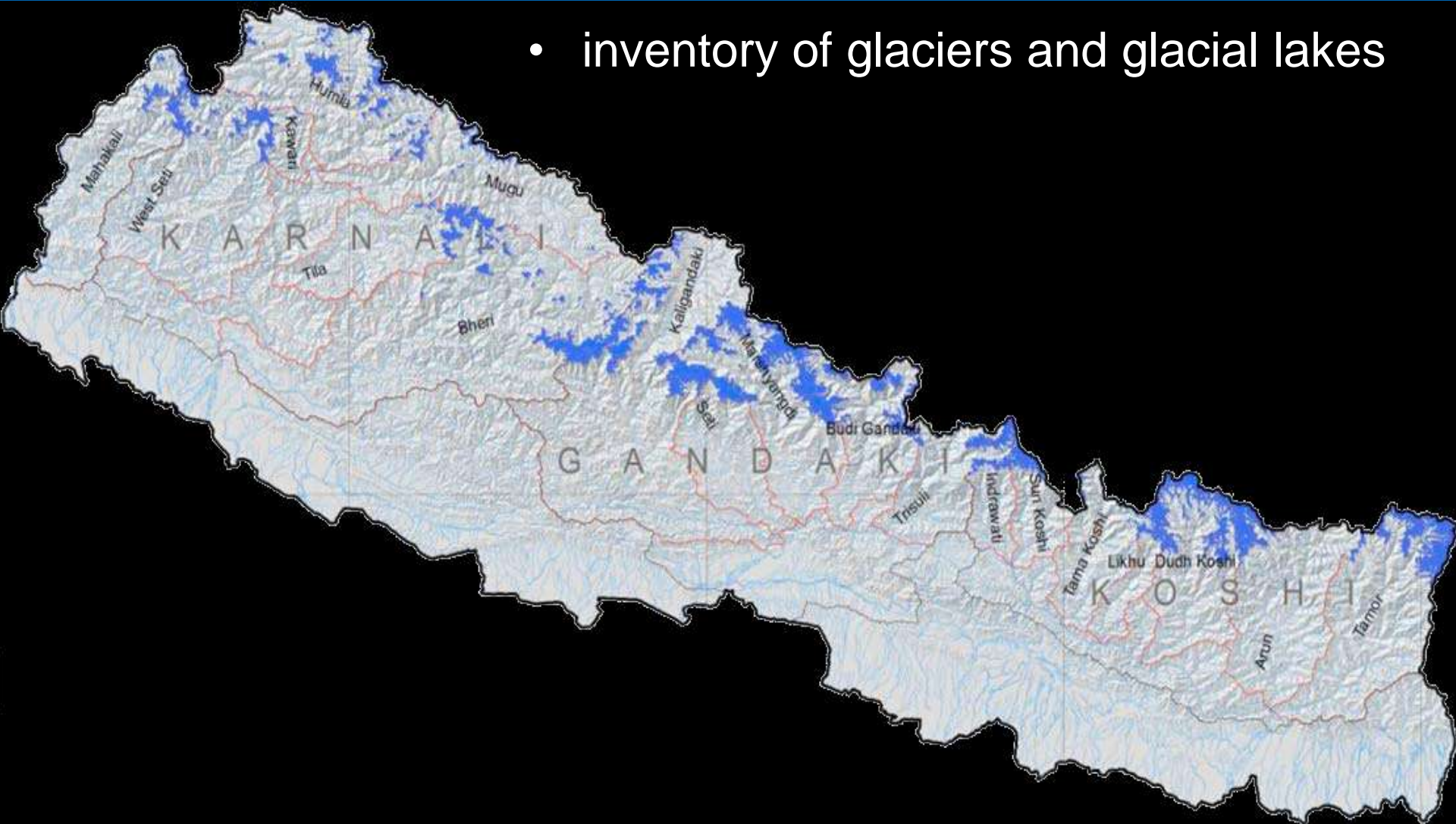
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- harmonized land cover mapping

- inventory of glaciers and glacial lakes



R-SDI

Promoting data sharing

- standard metadata development and sharing through Mountain Geo-Portal and Geo-Network nodes in the national institutions

The screenshot displays the Mountain GeoPortal website interface. At the top, there is a header with a mountain landscape image, the text "Mountain GeoPortal", and the ICIMOD logo. Below the header is a navigation bar with links for "About ICIMOD", "Programmes", "News & Events", and "Information Resources". A search bar is also present. On the left side, there is a vertical menu with categories such as "Mountain GeoPortal Home", "Applications", "Methods and Tools", "Geo-data Services" (which is highlighted), "Education and Training", and "Resources and Services". The main content area features a section titled "Geo Data Services" with a sub-section "Mountain GeoNetwork". This section includes a world map and text describing the system as a metadata management system developed by ICIMOD. Below this, there are sections for "Data Services" and "Web Map Service", each with a small image and descriptive text. On the right side, there are two boxes: one for "Mountain GeoNetwork Leader" and another for "Links" containing "OGC Services list", "OGC Website", and "ESRI Database". At the bottom of the page, there is a footer with the year "© 2006 - 2010" and a row of small icons representing various countries.

R-SDI

Capacity building

- Capacity building and training have been continued activity to bring awareness and skills on new technologies and methodologies



R-SDI

International Partnerships

- GEO Participating Organization - Nov 2008



Members- 81 countries + the European Commission

Bangladesh, China, India, Nepal and Pakistan from the region

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International Partnerships

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- Global Biodiversity Information Facility (GBIF) – Aug 2009

SPECIES COUNTRIES DATASETS OCCURRENCES SETTINGS ABOUT

```
<?xml version="1.0" encoding="UTF-8"
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  <software name="TapirLink" version="0.2(re
```



... free and open access to biodiversity data

 **Search**
species/country/dataset

Search

Welcome to the GBIF Data Portal

Access 216,970,036 data records shared via the GBIF network.
To learn how to use this site, please see *About*.
To tune this site for smaller displays, see *Settings*.
Version 1.3.1 - [click here](#) to see what is new!



R-SDI

International Partnerships

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- an earth observation, monitoring, and visualization system that integrates satellite and other geospatial data for improved scientific knowledge and decision-making



USAID
FROM THE AMERICAN PEOPLE



SERVIR-HIMALAYA
Regional Visualization and Monitoring System

Challenges

- Regional data development
 - collaboration with national initiatives
 - data validation and ownership
- Adoption of standards in national contexts
- Capacity building – need for effective and sustainable approaches
- Data sharing – policies/ commitments/ practice?
- Applications – responding the real needs for decision makers

Moving forward

- Partnerships with international initiatives – customizing the global knowledge for regional needs
- Partnerships with national institutions for collaboration in the common efforts
- Evolving technologies – continued capacity building
- Small steps but concrete achievements



Thank You...

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