### **Background:**

Himalaya is one of the youngest and loftiest mountain chain on the earth (more than 30 peaks exceeding 7,600 m in elevation), which is continuously rising by about 5mm/year, thus making it naturally unstable, fragile and prone to natural disasters. The Himalayan climate varies considerably from tropical at the base of the mountains to perpetual ice and snow at higher elevations. Since its birth during the Upper Cretaceous period (about 50 million years ago) when the movement of Eurasian and Indian plates were completely closed the Tethys sea, Himalaya has profoundly contributed to the climate regime of Indian subcontinent and facilitated the proliferation of diversity across temporal and spatial scales and biotic and abiotic levels. Over the years Himalayan region became the most astonishing landscape with diverse and bountiful ecosystem services and goods to support the most populous human civilizations along its vast fertile river basins.

The Indian Himalayan Region covers an area of 5, 33604 km<sup>2</sup> (about 16.2% of country's total geographical area) and spread across 13 Indian States/Union Territories (namely Jammu and Kashmir, Ladakh, Uttarakhand, Himachal Pradesh, Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, Tripura, Assam and West Bengal). The region stretches over 2,500 km from Jammu & Kashmir in west to Arunachal Pradesh in the east, but its width varies from 160 km to 600 km at different places. Starting from foot-hills in the south (Siwaliks) the region extends to Tibetan plateau in the north (trans-Himalaya) and lies between longitudes 74°50' and 95°40' East covering 95 districts of the country. The region occupies the strategic position of entire northern boundary (North-West to North-East) of the nation and touches the international borders of 7 countries (Afghanistan, Pakistan, China, Nepal, Bhutan, Bangladesh & Myanmar). Nearly 48.6 million (4%) people reside in this region, which is characterized by diverse demographic, economic, environmental, social and political systems. The region supports 30% of the total ethnic group (170 out of 701); 36 % of the total forest cover (2, 50,708 km<sup>2</sup>); 44% of total biodiversity; 63% of the total water-flow budget and 100% of the alpine and glacial systems of the country. Over 9,500 Himalayan glaciers and high altitude lakes form a unique reservoir storing about 12000 km<sup>3</sup> of fresh water and sustain millions of lives in down streams. Being an epicenter of fascinating folklores, mythological stories/linkages, religious epitomes and aesthetics, the region is one of the most sought destination among visiting tourist and pilgrims as it receives an estimated floating population of 90 million people annually.

Despite being ecologically rich, the region is not only highly vulnerable to environmental problems of various amplitudes, such as climate change but also is relatively marginalized from mainstream development process and suffers challenges of poverty. The scenario of marginalization further aggravated due to inaccessibility and poor monitoring infrastructure in the region crucial for generating scientific and evidence based datasets. The usability of such datasets are essential to build an effective decision support system and exploring possibilities /feasibilities of convergence among like departments and institutions necessary for planning and development of the region. In order to address the data gaps and to find options for the

sustainable economic growth, the idea of Himalayan Knowledge Network (HKN) was proposed to strengthen the science-policy- practice interface for addressing the priority Himalayan issues.

# **Problem Statement:**

IHR is often referred as data –deficient (e.g. on long term climate and land-use changes), therefore, knowledge and learning to customize policies and practices to region specific situations are limited. There exist a big gap of synergy and convergence across disciplines, sectors and actors working on the multifaceted issues of IHR. All this highlights the need for establishing a centralized system of data / information management agency (CDMA) for IHR as stressed by NITI Aayog, Govt. of India. HKN (a National Mission on Himalayan Studies, MoEF&CC funded project) is envisaged to address the gap and feed the CDMA with delineated activities /outputs.

## **Objectives:**

- To foster an effective and collaborative network of different constituencies (from policy, science and practice), academic institutions & universities and local communities working within and outside of IHR for sustainable mountain development.
- To create evidence based knowledge and learning that is communicated to influence policies and practices bringing decisions that enhance sustainable development in the IHR region.

#### Vision:

Himalayan Knowledge Network (HKN) has been conceptualized to enhance collaboration and networking among all relevant institutions engaged with Himalaya specific R&D, traditional knowledge institutions, conservation and development practitioners, and policy makers.

#### Activities and outcomes

- Establishment of HKN State Chapters
- State level Workshops for Network Development
- Developing State-specific thematic reports
- Strategic meets/seminars/conferences / etc.
- Development of Youth Forum in HKN States
- Development of HKN on virtual platform connecting to Universities, Research and Development Institutions & Non Government Organizations
- Feed to the process of Centralized Database Management Agency (CDMA) for Himalaya at GBPNIHE

## **Expected Impacts:**

- Sub-national and National mountain focused research and training network fostered
- Science-policy and practice interface strengthened

- State specific thematic documents developed for policy interventions
- Directory of change leaders developed
- Improved synergy and convergence possibilities
- Data management centre strengthened

#### Mission:

HKN would establish synergies between research and academia for addressing pressing environmental challenges for fostering conservation and development outcomes in concurrence with regional, national and international priorities. It will further lead the process of documentation and synthesis of the customary and research based knowledge to benefit stakeholder groups for practice to policy. Being a knowledge network it is envisaged to generate, integrate and collate the data/knowledge to cater the needs of people by providing evidence based actionable solutions, thus in a way reflects the spirit of "Sabka Santh, Sabka Vikas, Sabka Prayas".

Project Details-	
<b>Project Title:</b> Himalaya Knowledge Network <b>Implementation Agency:</b> G B Pant National Institute of Himalayan Environment	
<b>Project Duration:</b> 3 Years	
Principal Investigator:	Dr. G.C.S Negi 'Scientist-G'
Investigator (s):	Dr. Subrat Sharma 'Scientist-F'(Ladakh Regional Centre) Er. R. K. Singh 'Scientist-E'(Himanchal Regional Centre) Dr. Rajesh Joshi 'Scientist-E'(Sikkim Regional Centre) Er. M. S. Lodhi 'Scientist-E' (North East Regional Centre) Dr. Kapil Kesarwani 'Scientist-C' (Co-PI at GBPNIHE HQs)
Project Team:	Dr. Ravindra K. Joshi, Project Coordinator Mr. Shashaank Acharaya, Web Portal Developer Vinod Joshi, Data Assistant (DA) Anjali Tiwari (DA) Himanshu Joshi (DA) Stanzin Zangmo (DA) Anita Sharma (DA) Trishna Tamuly (DA)