PRESS RELEASE

IIT Guwahati, IIT Mandi and IISc Bengaluru Collaborate on a National Initiative to Develop a Climate Change Vulnerability Map for 12 Indian Himalayan States

For the first time, all 12 Himalayan States used a common framework resulting in the production of comparable vulnerability maps, which will help prioritize resource allocation

MANDI, 14th March 2019: Indian Institute of Technology Guwahati, Indian Institute of Technology Mandi and Indian Institute of Science Bengaluru collaborate in a pan-Indian, multi-institutional initiative to develop a **'Climate Change Vulnerability Assessment for the Indian Himalayan Region Using a Common Framework.' The assessment exercise is unique because for the first time all the 12 Indian Himalayan Region (IHR) States have used a common framework resulting in the production of comparable state level and within state, district level vulnerability maps.** Such comparable vulnerability assessments are useful for the government officials, implementers, decision makers, funding agencies and development experts, to have a common understanding on vulnerability, enabling them to assess which state in IHR is more vulnerable, what has made them vulnerable and how they might address these vulnerabilities.

The Framework and the results were presented here today (14th March 2019) during the National Workshop on 'Climate Change Vulnerability Assessment for States and the Union Territories Using a Common Framework' organized by IIT Guwahati and IIT Mandi with support from IISc Bengaluru, Department of Science and Technology (DST) and Swiss Agency for Development and Cooperation (SDC). This event was marked by the inauguration of the portal, http://himalayageoportal.in/, dedicated to this vulnerability assessment exercise.

The Principle Investigators of the project Dr. Anamika Barua (Associate Professor, Department of Humanities and Social Sciences, IIT Guwahati), Dr. Shyamasree Dasgupta (Assistant Professor, School of Humanities and Social Sciences, IIT Mandi) and the Key Resource Person of the project Prof. N. H. Ravindranath, IISc Bengaluru mentioned, "Based on the common methodology, we came up with a state level vulnerability assessment for the IHR and organized training workshops for the state level officials to carry out district level assessments in all 12 IHR states. Such a coordinated approach and enhanced cooperation between states in the IHR and the departments within the states are assumed to improve resilience to climate change because several adaptation interventions will require coordinated efforts across administrative boundaries".

The 12 states include Assam, Manipur, Meghalaya, Mizoram, Nagaland, Tripura, Arunachal Pradesh, Sikkim and the hilly districts of West Bengal in the eastern part and Himachal Pradesh, Uttarakhand, Jammu and Kashmir in the Western part of IHR.

Highlighting the impact of this project, Prof. Ashutosh Sharma, Secretary, Department of Science and Technology, Government of India, said, "*The adaptation to Climate Change is a collaborative effort between appropriate use of technology, a vision that produces policies, a change at ground level and engaging the local communities. These vulnerability maps will play a crucial role in this effort.*"

Several workshops for need assessment and methodology training were organized over the past year by IIT Guwahati and IIT Mandi as a part of this initiative. Representatives from different State Departments in the IHR participated in the workshops. **The purpose was not only to train them in the common methodological framework but also to brainstorm about the indicators of vulnerability, availability of data, challenges to be faced and ways to overcome those challenges.**

Speaking about the importance of this project, **Prof. Timothy A. Gonsalves, Director, IIT Mandi, said,** "*Being situated in the Himalayan Region, IIT Mandi is proud to be a part of this vulnerability assessment exercise and a leader in technology in this region. The various research projects undertaken by IIT Mandi address this vulnerability, hazard and extreme events in the Indian Himalayan Region.*"

The need for such an exercise is due to the fact that IHR is one of the most sensitive regions to climate change and variability. Most parts of the region underwent significant long-term changes in frequencies and intensity of extreme temperature and rainfall events over the last decades. Realizing the high vulnerability of IHR, Government of India launched the National Mission for Sustaining the Himalayan Ecosystem (NMSHE). DST is coordinating the implementation of NMSHE with support from the Swiss Agency for Development and Cooperation (SDC), under Indian Himalayas Climate Adaptation Program (IHCAP). One of the key areas identified by NMSHE was to build capacities of the 12 IHR States for robust assessments of climate change vulnerability, adaptation planning and implementation.

Addressing the workshop, Ms. Tamara Mona, Deputy Head of Mission, Embassy of Switzerland in India said, "*Switzerland, like India, has a long experience in facing the potential opportunities and risks. Swiss national policy for climate change adaptation has been complemented by local government strategies, based on detailed and locally anchored risks assessment, maps and preparedness, plans and actions. The IHCAP project of SDC, in partnership with DST, is supporting implementation of NMSHE in India with a similar approach*".

The complete Report on 'Climate Change Vulnerability Assessment for the Indian Himalayan Region Using a Common Framework', released in this event today, 14th March 2019, in New Delhi, is accessible here:
https://drive.google.com/open?id=1nGuZ6NPCnIh7dOx7WIepzmYE4_35DiqT

The Executive Summary of this Report is attached.

Captions for the photographs attached:

Photograph 1 - L to R - Prof. NH Ravindranath, IISc Bangalore; Dr. Akhilesh Gupta, Head (SPLICE), DST; Prof. Ashutosh Sharma, Secretary, DST, Govt. of India; Ms. Tamara Mona,

Deputy Head of Mission, Embassy of Switzerland in India; Prof. Timothy A Gonsalves, Director, IIT Mandi, releasing the report

Photograph 2 - Prof. Ashutosh Sharma, Secretary, Department of Science & Technology (DST), Govt. of India, speaking during the National Workshop on Climate Change Vulnerability Assessment for the States and Union Territories

Photograph 3 - Prof. Timothy A. Gonsalves, Director, IIT Mandi, delivering the address during the National Workshop on Climate Change Vulnerability Assessment for the States and Union Territories Using a Common Framework

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About IIT Mandi (http://www.iitmandi.ac.in/)
IIT Mandi is fast emerging as a leader in science and technology education, knowledge creation and innovation. Since the first batch of 97 students joined in July 2009, IIT Mandi has grown to host 1,300 students including 274 PhD, 46 MS and 17 I-Ph.D. research scholars, besides 110 Faculty and 150 staff. The Institute has a growing body of alumni, nearly 850 in number.

The Institute aims to grow to 5,000 B.Tech, M.Tech/M.Sc. and M.S./Ph.D. by 2029. With 1.5 lakh sq.m. currently under construction, IIT Mandi has a fully residential campus, in Kamand, with all students and 95 percent of the faculty residing within it now.

Since 2010, IIT Mandi's faculty has bagged nearly 180 projects worth more than Rs. 85 crore. The campus houses a notable number of laboratories and facilities. The Advanced Materials Research Centre (AMRC) was created in 2013 with an investment of about Rs. 50 crore and houses advanced instruments for characterization of materials with scope for drug delivery, electrical, electronics and biological applications. It has contributed to more than 200 research publications. The Institute also hosts the 'Class 100 Clean Room' facility, a world-class research center that is first-of-its-kind in India. In 2017, Department of Biotechnology, Government of India, selected IIT Mandi to lead the prestigious Rs. 10 crore FarmerZone Project.

The Institute has an Interdisciplinary Academic Culture which is design-oriented. The unique, project-oriented B.Tech curriculum is centred on its 4-year long Design and Innovation stream. It is poised to become the first IIT to offer a B.Tech in Data Science & Engineering. Backed by a strong humanities component, IIT Mandi has brought globally state-of-the-art science and technologies to and consciously served the Kamand Valley, Himachal and the Himalayan region. There are many active MoUs with TU9 in Germany since May 2011. Students from the Worcester Polytechnic Institute, U.S., have been visiting IIT Mandi every year since 2013.

Launched in 2016, IIT Mandi's Catalyst is the first Technology Business Incubator in Himachal Pradesh. EWOK (Enabling Women of Kamand Valley) is another innovative program run by IIT Mandi, which focuses on imparting Skills training to village-scale businesses by village women.

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