Two-Week Training Program

on

CLIMATE CHANGE AND HYDROLOGICAL IMPACT ASSESSMENT

(December 02 – 13, 2019)

Image Source: https://earthobservatory.nasa.gov

Organised by

NATIONAL INSTITUTE OF HYDROLOGY
JAL VIGYAN BHAWAN
ROORKEE – 247 667
UTTARAKHAND, INDIA

INTRODUCTION:

The changing climate is projected to impose significant changes on various components of the hydrological cycle, influencing the spatial distribution of water resources. From earlier studies, it is well understood that the hydrological phenomenon of Indian watersheds is highly complex and spatially variable, and so the changing climate could have a significant impact on the available water in the future. Major rivers with nival-pluvial regime, originating in the Himalayan Mountain Ranges meet water demand of more than 6 million people. Although Himalayas are the largest storehouses of snow and glaciers outside Polar regions, the hydrological processes in this region are projected to be influenced substantially by the changing climate and land-use. In addition, nearly 171 million people living along the 7,500 km long Indian coastline are vulnerable to the detrimental effects of changing climate.

Several studies from the past few decades indicate a significant shift in the temporal and spatial patterns of monsoon rainfall with consequences on surface runoff, surface and groundwater storage, and water quality. In particular, the projections from various climate models indicate significant changes in the characteristics, i.e. magnitude, intensity, frequency, and spatial & temporal variability of extreme hydroclimate. The knowledge of the shifts in characteristics of extreme hydroclimate is vital for an effective planning, design, and operation of water resources infrastructure for efficient distribution and management of available water. Therefore, the engineers (decision makers) and policymakers should be well equipped with the knowledge of the hydrological impacts of climate change, which allows them to take preventive measures in order to reduce or mitigate the adverse impacts.

COURSE STRUCTURE:

The training course will consist of lectures by experts on Climate Change, Climate Modelling and Downscaling, Hydrological Modelling, Uncertainty Analysis, and Hydrological Impact Assessment, from National Institute of Hydrology, Indian Institute of Technology, and other premium institutes from across India. This training gives an overview of the impact of changing climate on various components of the hydrological cycle and the participants will be introduced to various tools available to project and assess these impacts. In particular, the participant will be directed to the sources of future climate data from several global/regional climate models (GCMs/RCMs) and a hands-on training will be provided on data pre-processing, downscaling (statistical downscaling) and hydrological modelling using Variable Infiltration Capacity (VIC) model. In addition, the participants will be presented with various case studies, to get a better understanding on the hydrological impacts of climate change. At the end of this training, the participants will be able to access/download, pre-process and downscale the GCM projected climate data and generate hydrological scenarios relevant to their region and/or watershed.

WHO CAN PARTICIPATE?

The training is intended for professionals (engineers, scientists, policymakers, and academicians) of various government and private organizations actively working in water resources sector, and agencies concerned with the impacts of changing climate and land use on water resources and their management. Post graduate students and research scholars are encouraged to attend this training program.

REGISTRATION:

The registration fee per participant including GST is **Rs. 20,000/- for private organisations and individuals; Rs. 15,000/- for Govt. Departments/PSUs, and Rs. 12,000/- for bonafide students**. The fee includes the registration, course material, working lunch on all working days, tea during sessions, and one course dinner. The stay arrangements in twin sharing basis will be made in NIH guest house on payment basis as per the institute rates. The participants will have to arrange for TA/DA from their own organization. A course completion certificate will be given to all participants.

The seats are limited to 30 participants and the registration shall be done on the first come first served basis after the registration fees has been paid. The intending participants are requested to register themselves by filling and mailing the attached registration form **along with the proof of online payment for registration fee latest by 30th October 2019**. The registration fee has to be transferred online to the following bank account.

Name of Account: NIH Project
Account Number: 4044000100174852
Name of the bank: Punjab National Bank, IIT Roorkee
IFSC: PUNB0404400

VENUE:

The training course is proposed to be held at the National Institute of Hydrology (NIH), Roorkee. NIH, an autonomous society under the Ministry of Jal Shakti, Govt. of India, is the country's premier research institute in the field of hydrology. The institute has organised a number of training courses on various aspects of hydrology. For more details, please visit nihroorkee.gov.in. Roorkee is a medium-sized town situated in Haridwar District of Uttarakhand and is well connected by road and rail from Delhi, Dehradun and Haridwar. During the first 2 weeks of December, the weather is pleasant during day and cold during night.

COURSE COORDINATOTR(S):

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For more information about NIH, please contact:

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Email: director.nihr@gov.in

All correspondence related to the course should be made with the course coordinator(s).

REGISTRATION FORM

Two-week Training Program on

"CLIMATE CHANGE AND HYDROLOGICAL IMPACT ASSESSMENT"

December 02 – 13, 2019 at NIH Roorkee

Name & Designation: ……

Name of the Dept./Organisation: ……...

Address: …….

…….....

Tel. No./Fax: ……..

Email: ……

Qualification: …….

Field of Specialisation: ……..

Experience: …..……..

Is accommodation required? Yes / No

Registration Fee of Rs. …… transferred on …… (date) (Please email the proof/details of the online fee transfer along with this form)

(Signature of the Candidate)

SPONSORSHIP CERTIFICATE

Certified that Mr./Ms./Dr. …… has been officially deputed for the above mentioned training to be conducted by NIH, Roorkee.

Signature of the Sponsoring Authority
with Office Seal and Date.