

About CWPRS

Established in 1916, the Central Water and Power Research Station (CWPRS), Pune, is the premier National Institute devoted to water and power resources development and water-borne transport. The scope and magnitude of the services offered by CWPRS caters to the research and development needs of the country. As the UN recognized Regional Laboratory for ESCAP region, CWPRS has offered its services in the following major disciplines.

- River Engineering
- River and Reservoir System Modelling
- Reservoir and Appurtenant Structures
- Coastal and Offshore Engineering
- Foundation and Structures
- Applied Earth Sciences
- Instrumentation, Calibration & Testing Services

For more details about CWPRS, please visit www.cwprs.gov.in

River and Reservoir System Modelling, CWPRS

The River and Reservoir Systems Modelling is one of the major disciplines of research at CWPRS. Under this discipline, wide variety of studies are carried out on applied hydrology and hydraulics, design of hydraulic structures, flood management, flood training methods, flow measurement in canals, sediment dynamics, sediment flushing in reservoirs, water quality assessment, Nala diversion and Dam break studies. The studies are carried out using various numerical and physical modelling techniques along with desk and field-based studies to address the complex water resources problems.

Venue and Date

The course will be held during 6th-7th August 2024 in online mode through webtool from Central Water & Power Research Station (CWPRS), Khadakwasla, Pune - 411024.

Target Group

The training course is intended for practicing Engineers, Research Scientist, Students, Academician and Consultants involved in Water Resources, Numerical modelling and GIS

Participation

The nomination of the participants and registration can be done through the given Google form link or manually by 2nd August 2024. The registration fee for this online training course is NIL. However, only approved list of the participants will be allowed to attend the online sessions. A digital certificate of participation will also be issued for the registered participants. The link for joining the online training course will be shared to the registered participants only. Confirmation of nominations will be intimated by 5th August 2024.

<https://forms.gle/2fRfnfWStjynf8SP6>

For any further information, please contact:

- 1) **Course Coordinator:**
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- 2) **Co-Coordinator:**
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- 3) **Training Management Cell:**
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E-mail: cwprstraining@gmail.com



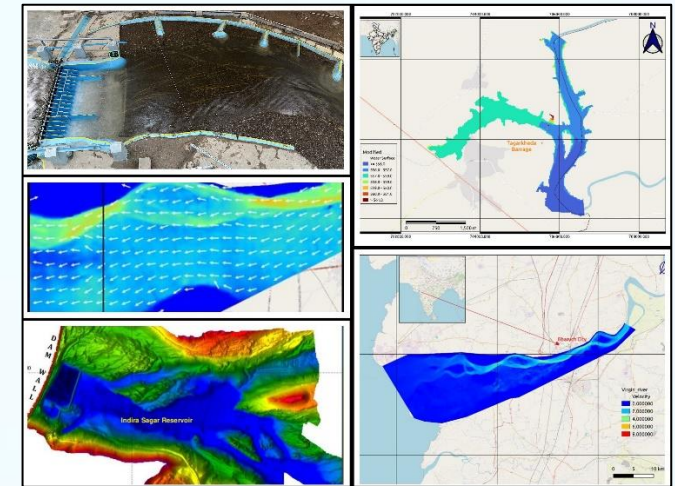
सत्यमेव जयते

An online Training Course

on

“Application of GIS & Numerical Modelling in Flood Management”

6th – 7th August 2024



**Government of India
Ministry of Jal Shakti**

Department of Water Resources
River Development and Ganga Rejuvenation
Central Water & Power Research Station
Khadakwasla, Pune-411024

Dr. R. S. Kankara
Director

Preamble

Floods poses significant challenges to communities worldwide, impacting infrastructure, livelihoods, and even human lives. However, with the advancement of technology and the development of sophisticated and powerful tools, innovative methods are available to predict and manage flood events. CWPRS is carrying numerous studies related to flood estimation and flood disaster management using hydrological and hydro dynamic models.

GIS has been extremely useful in identifying the flood prone areas. Knowledge of GIS is also essential in setting up the numerical models for flood estimation and routing. GIS is also used for the conversion of datasets into suitable formats for hydrological and hydrodynamic models.

In this course, participants will get the basic introduction to GIS and its application in the pre-processing and post-processing of data required for numerical model studies. Information on various GIS applications specific to flood risk assessment, floodplain mapping will be provided in the course.

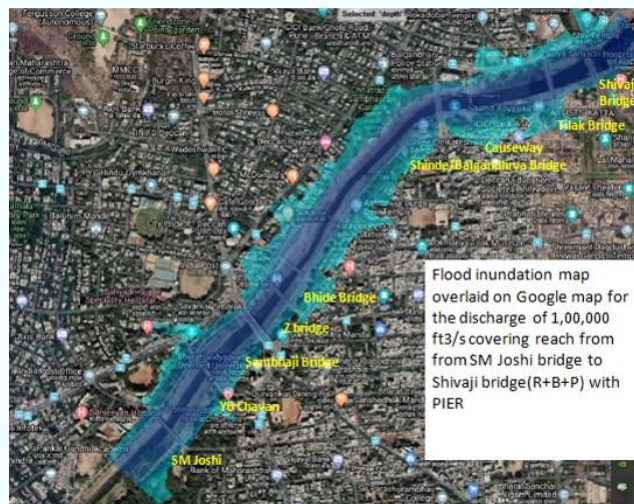
Participants will also be introduced to setting up of hydrological and hydrodynamic models for flood risk management.

Course Objective

The training program is designed to equip the participants with the knowledge and skills necessary to effectively utilize Geographic Information Systems (GIS) and numerical modeling techniques in the field of flood management.

In addition, participants will be introduced to the basics of numerical modelling, estimation of

design flood and application of 1D/2D numerical model in flood management. On the completion of course, the participants will become familiar with different types of numerical models used in flood management, understand their underlying principles, and gain knowledge in utilizing these models to simulate floods, assess flood risks, and evaluate flood mitigation measures



Course Content

The course consists of lectures by the experts from Central Water & Power Research Station. The lectures will cover theory as well as demo of GIS, ID/2D model in flood management

- Basics of GIS
- Basics of numerical modelling
- Estimation of design flood
- Application of GIS in pre-processing and post-processing of data with demo
- Application of ID/2D numerical model in flood management
- Preparation of flood hazard maps

Registration Form

Name (in capitals): _____

Designation: _____

Organization: _____

Responsibilities (in brief): _____

Full Postal Address: _____

Tel No. (with STD Code): _____

Mobile: _____

Fax No: _____

E-mail: _____

(Signature)

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