

Minutes of Online Meeting of Research, Academic Institutions and User Departments in the field of water held on Feb 11, 2021 at IIT Roorkee

PRESENT

List attached.

In continuation to the meeting of Directors of research and academic institutions, and Heads of User Departments in the field of water, along with their teams, held on Feb 20, 2019 at IIT Roorkee, the second meeting was held on Feb 11, 2021 using the online mode. In the meeting issues, problems and projects in which complementary strengths of the academic and research institutions and user departments which can be leveraged was discussed so that research, studies, designs etc. which possibly cannot be done by one organization alone, and which may have a bigger impact, are carried out.

Prof Ajit K. Chaturvedi, Director, IIT Roorkee welcomed the Heads and senior representatives from different research, academic institutions and user departments of the states of Uttarakhand, Uttar Pradesh, Haryana and Punjab. He, thereafter, asked Prof Arun Kumar, HRED to present the agenda.

- **Session 1100 – 1200 Presentation by each academic and research institution**

1100 – 1110 Welcome and address By Prof Ajit K. Chaturvedi,
Presentations were made by the IITR, Wadia IHG, IIRS, NIH, GBPNIHE, UPRSAC, GBPUA&T and FRI during the meeting.

IIT Roorkee – Prof Arun Kumar presented the work being done in various water related areas by departments of hydrology, water resources, civil, hydro and renewable energy and earth science in IIT Roorkee.

Wadia Institute – Dr Santosh Rai presented about their research work being carried out especially in glaciology.

Indian Institute of Remote Sensing – Dr. Prakash and Dr Agarwal presented about Geospatial technology for water resource management and IIRS initiatives.

Director, NIH presented about the research areas and activities of NIH.

G. B. Pant National Institute of Himalayan Environment and Sustainable Development, Almora – Dr. Kireet Kumar discussed about various research areas like watershed management, spring rejuvenation etc. and current and future projects.

UP State Remote Sensing Centre – Mr. A K Agarwal presented about use of remote sensing in flood management and their other work.

G B Pant University of Agriculture and Technology - Dr. A S Nain, Dr, Gurvinder Singh and Dr R K Srivastava discussed about their research work for efficient water management practices in irrigated ecosystem.

ICFRE / FRI - Dr. Parmanand Kumar talked about forest hydrology related projects and role of forests in water resource management.

- **Session 1200 – 1230 Presentation by User departments on their water related problems and requirements**

Representatives of Uttarakhand Urban Sector Development Agency, Uttarakhand Environment Protection and Pollution Control Board, Uttarakhand Peyjal, Jal Sansthan, Uttarakhand Jal Vidyut Nigam Ltd., Punjab Water Supply and Sewage Board, Irrigation Department of Uttarakhand, Irrigation Department of Haryana, Haryana Public Health Engineering Department while expressing their happiness for such initiative of networking of different institutions working in the water subject for leveraging the strength of each other, shared the issues and problems they faced under their departments domain.

Uttarakhand Urban Development Authority – Shri Vinay Mishra discussed about the integration of small hydro power with water supply and also issues related to water supply management in the urban areas.

Uttarakhand Environment Protection and Pollution Control Board – Member Secretary Dr. Subudhi discussed about water pollution, water quality management, inadequate dilution of river water during lean season and also possible knowledge networking.

Jal Sansthan and UK Peyjal Nigam - Ms. Neelima Garg, General Manager and Dr. K.K. Rastogi, General Manager talked about water resources depletion and achieving sustainability, Uttarakhand drinking water supply especially in rural areas.

UJVNL- Sh. Pankaj Kulshreshtha, General Manager talked about the turbine erosion especially in Sharda and Bhagirathi rivers in Uttarakhand and DRIP (dam rehabilitation implementation program).

Punjab Water Supply and Sewage Board – Shri V K Garg, Advisor discussed about the issues of good quality of water and possibility of rejuvenation of ponds in villages.

Irrigation Department, Uttarakhand - Sh. Naveen Singhal, SE discussed about water sustainability and water testing and modelling.

Haryana Irrigation Department - Dr. Satbir Singh Kadian, Chief Engineer discussed about the problems associated with ground water depletion and possibility of creating the storage in the Yamuna River in Haryana

▪ **Session 1230 – 1320 Breakout groups**

Four breakout sessions were held covering the following areas

- **Group A:** Irrigation, River Basin, water resources assessment, irrigation efficiency, river training, flood protection, river morphology, sedimentation
- **Group B:** Water supply, treatment, wastewater treatment, sanitation, pollution assessment
- **Group C:** Forecasting of flows, flow modelling, flood estimation, hydropower, GHG assessment
- **Group D:** Watershed management, Rural supply, spring rejuvenation, ground water recharging, carbon stock, Land mapping and management

▪ **Session 1320 – 1340 Concluding session**

Presentation by each break out group with identified and outline of projects (multi-institutional – title, broad objectives and outcome, time frame and partner institutions)

Breakout Groups presented following suggestive Studies based on deliberation made.

Group A: Irrigation, River Basin, water resources assessment, irrigation efficiency, river training, flood protection, river morphology, sedimentation - presented by Prof Ashish Pandey

- **Identifying suitable mining area in river stretches**
To assess river health, sediment yield, satellite images of river stretch
- **Issues in Punjab related to depleting ground water and canal infrastructure deterioration**
To estimate the crop water requirement, to change the cropping patterns, to educate the farmers regarding ground water management and recent technologies like IOT, to improve irrigation efficiency by land levelling
- **Failure of flood protection and river training works**
 - To identify the causes of failure like river encroachment and toe erosion of structures.
 - A collaboration between IIT Roorkee and IRI Roorkee has been proposed for a model and prototype study for boulder bed and scour modeling.

Group B: Water supply, treatment, wastewater treatment, sanitation, pollution assessment coordinated - presented by Prof M.L. Kansal

- Water quality issues such as the presence of ammonia in water.
- Discussion on water management in rural areas, especially the sustainability of sources and data availability for DPR preparation. It has been suggested that IITR/ NIH should share the unclassified information on a common platform.
- It was suggested that BIS codal provisions for different water management practices either be revised or some new codes be developed. IIT R can transfer this information to various committee members of BIS.
- Need to explore temperature independent sewage treatment technologies especially for hilly regions.
- Other construction materials be explored instead of RCC. Research should be carried out for suitable material for hilly areas.
- To enhance public acceptance of wastewater reuse, the ULBs should play an active role public education.
- Due to lack of accessibility in certain areas, focus on decentralized wastewater treatment systems must be done.
- Septic management in terms of awareness and accessibility through small vehicles be suggested/ explored.

Group C: Forecasting of flows, flow modelling, flood estimation, hydropower, GHG assessment - presented by Prof N.K. Goel

- To develop the following two study for possible funding from National Disaster Management Authority and/or State Disaster Management Authority:
 - Enabled early warning system for river Ganga up to Haridwar - Development of alarm / warning system in case of disaster/ likely occurrence of disaster and availability the same to all stakeholders. Dissemination of right information & SOP to all
 - Identification of climate change induced geomorphological hot spots in Uttarakhand

- Erosion of underwater parts due to silt
- To make people understand the utility of Hydropower. These are not responsible for disasters rather help in mitigating the effects. Also provide water & power.

Group D: Watershed management, rural supply, spring rejuvenation, ground water recharging, carbon stock, Land mapping and management - presented by Dr H J Shiva Prasad

- Demystifying the science of spring systems and conversion of knowledge for sustainable decision support system.
 - Quantifying the impacts of LULC, climate change, road construction, etc.
 - To identify the recharge zone and flow path of drying/dried up springs using Stable Isotopes, Hydro-geochemical, Geomorphological, and Electrical Resistivity Tomography.
 - Identifying potential geomorphologically sustained locations and structures for harvesting rain water to rejuvenate the springs.
- Developing the capacity building of stakeholders towards the sustainable spring shed management.
- Collaborative research/consultancy studies in the field of glacial studies, Watershed management, spring rejuvenation and management etc.

Prof Chaturvedi while thanking each and every participant attending the workshop, hoped such meetings where several areas of studies have been identified and outlined shall be undertaken jointly with the research and academic institutions and shall be supported by the user departments singly or jointly.

Prof Arun Kumar proposed vote of thanks to chairman and all participants.

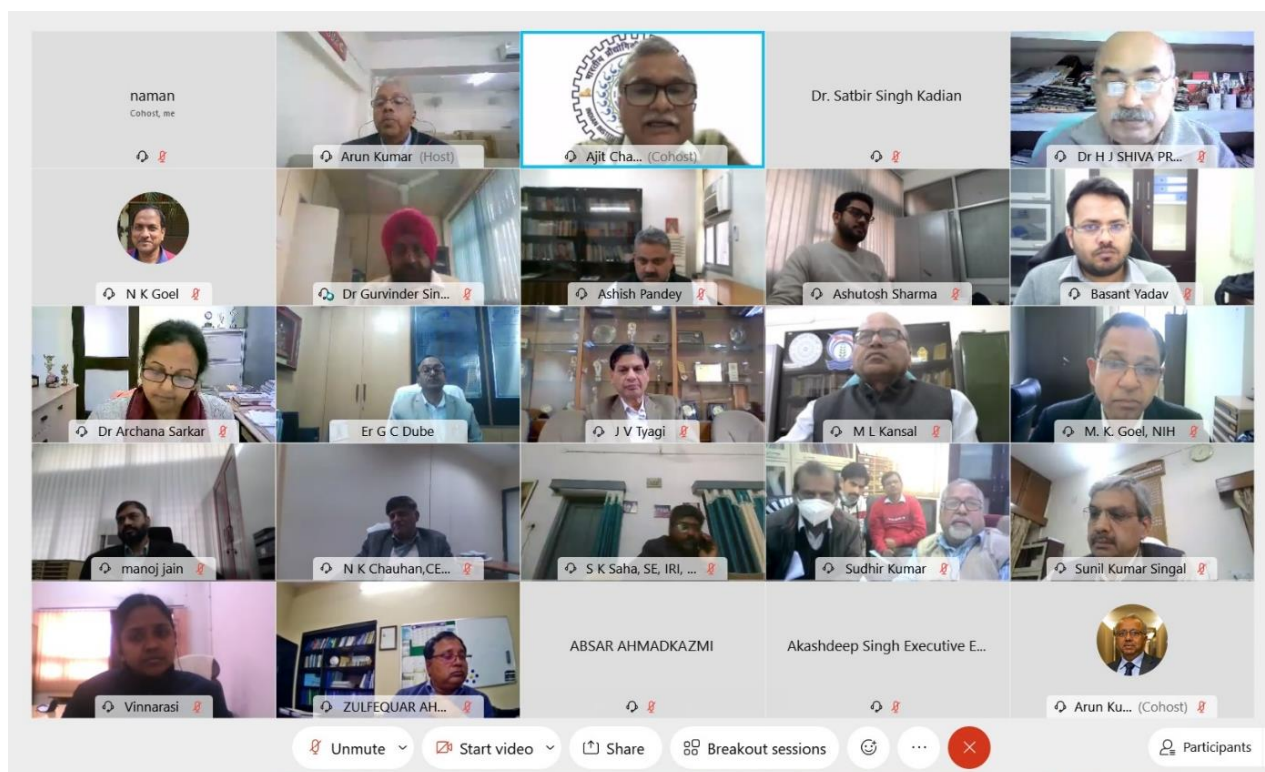
Online Meeting to Discuss Enhancement for the Collaboration in the Area of Water at IIT Roorkee on Feb 11, 2021




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86.	Ms Chandni		
87.	Shri Dheeraj		
88.	Shri G C Dube		
89.	Shri Gagandeep Singh		
90.	Shri M Someshwar Rao		
91.	Shri Purnanjali		
92.	Shri Rahmatullah Dost		
93.	Shri Rahul Mohan		
94.	Ms Rama Kumari		

Photographs taken during online meeting



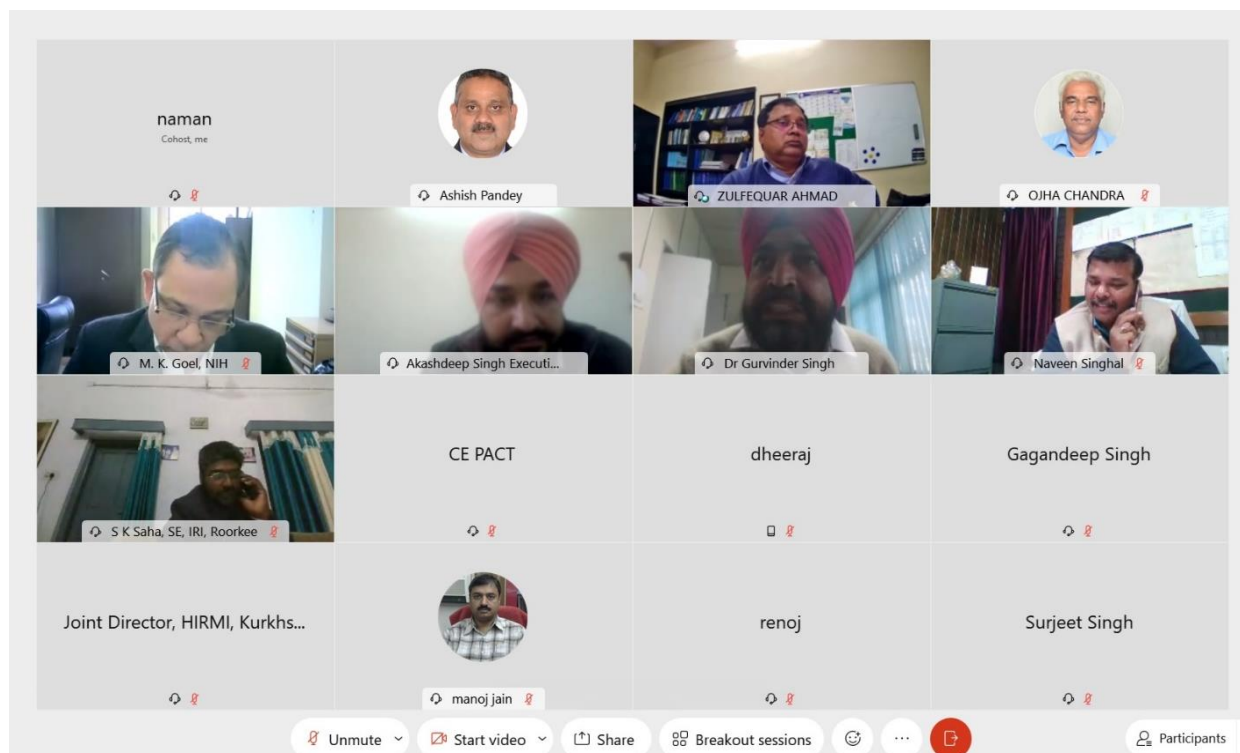
 Basant Yadav	Bhaskar Jyoti Deka	CE PACT	CE PACT	dheeraj
Director, SECCCD, Uttarakhand	Dr Parmanand Kumar	Dr Sanjay Kumar Jain	Dr V C Goyal	Dr. Anil Kumar Lohani
Gagandeep Singh	hp	Joint Director, HIRMI, Kurkhse...	KK Rastogi CE UKPJIN	 M L Kansal
M. K. Sharma	m.k.singhal	ms ukpcb	Mukesh singhal	naman Cohost
Naveen Singhal	Neelima Garg	 OJHA CHANDRA	P.K. Johari, ground water dep...	PHED HARYANA

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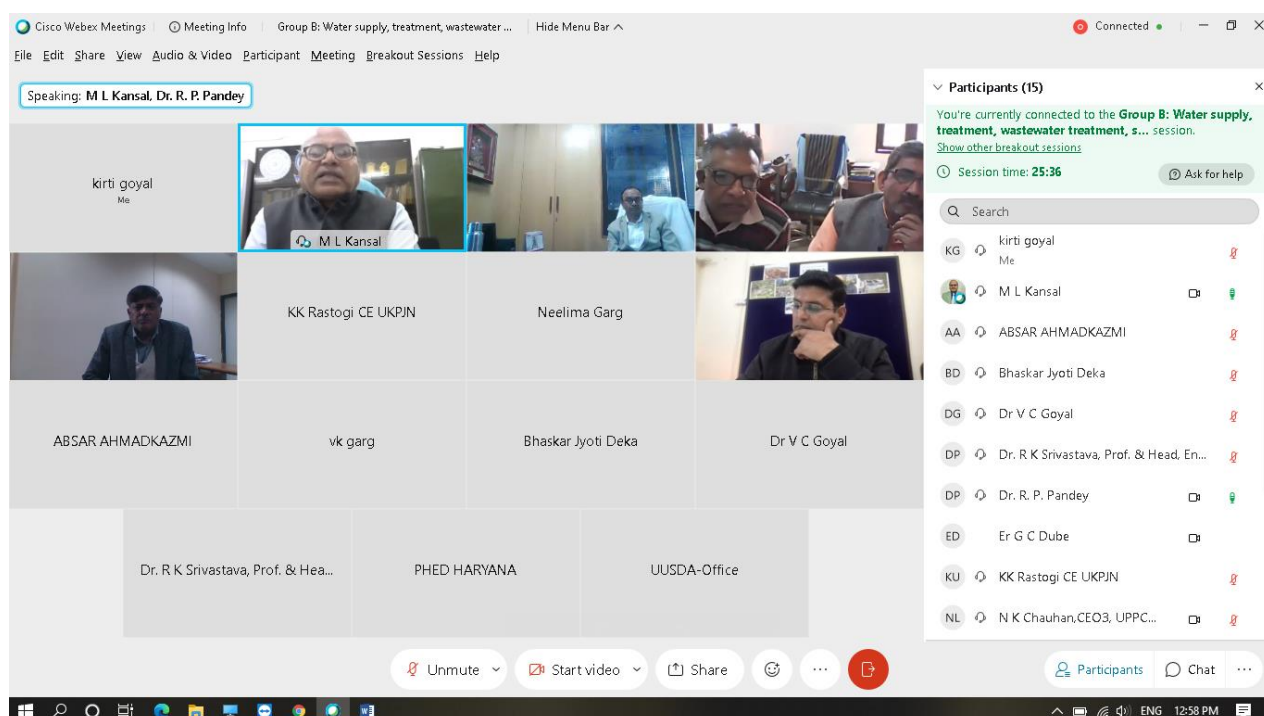
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Mukesh singhal	naman Cohost	Naveen Singhal	Neelima Garg	 OJHA CHANDRA
P.K. Johari, ground water dept...	PHED HARYANA	Rahul Mohan	Raj Deva Singh	renoj
Sanjeev Kumar	Sanjeev Kumar Verma	Saumya Cohost	Sharad Jain	 Sunil Kumar Singal
Surjeet Singh	vaibhav gosavi	Vidya Shanker Singh	Vinay Mishra	vk garg

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Breakout Group – B



Breakout Group – C

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Director, SECCCD, Utt...

Dr Archana Sarkar

Dr Sanjay Kumar Jain

N K Goel

Mukesh singhal

Vinnarasi

Dr. Anil Kumar Lohani

manoj jain

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Breakout Group – D

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Sudhir Kumar

Dr Parmanand Kumar

Kireet Kumar

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SK Sudhir Kumar	Microphone Off
BY Basant Yadav	Microphone Off
DP Dr H J SHIVA PRASAD	Microphone Off
DK Dr Parmanand Kumar	Microphone Off
KK Kireet Kumar	Microphone On
SJ Sharad Jain	Microphone Off
SI Sushant, IFS	Microphone Off
VG vaibhav gosavi	Microphone Off

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