

To  
The Convener  
Watershed Management and Efficient Micro Irrigation  
in mountainous Indian Himalayas (WMEMIMIH)  
The Institution of Engineers (India)  
Uttarakhand State Centre, Saharanpur Marg, Mazra (Near ISBT)  
Dehradun - 248 001

## About IE (I), Uttarakhand State Centre

The Institution of Engineers (India) was established during 1920 with a mission to provide quality education, training and applied research in the fields of technology and management to assist the engineering fraternity to be innovative and advanced to meet the challenges in the unbounded world of tomorrow and to be the front line interface between academia, research, industry and other sectors in advanced Engg/ Tech application and Key enabler in fostering high and thrust area programmes. It was registered under the Indian companies act 1913 & was granted the Royal Charter Incorporation 1935 during 1935. Presently it has 15 engineering disciplines and about 50 lakh members. The Institution of Engineers (India); IS (I), Uttarakhand State Center came into existence with the formation of State of Uttarakhand. Earlier it was a chapter under Uttar Pradesh state Centre.

## About Dehradun

Dehradun, the capital of Uttarakhand is situated in the foothills of Himalayas, about 230 Km from Delhi. It is well connected by air from Delhi and by road and rail from major cities of India. Several research and development institutions of international and national repute namely Forest Research Institute (FRI), Indian Military Academy (IMA), Wadia Institute of Himalayan Geology and Oil and Natural Gas Corporation (ONGC), to name a few are located here. Mussoorie, the famous hill station and Rishikesh and Haridwar are within 70 Km. from Dehradun. It has a pleasant weather through out the year.



View of Tehri Dam

## Important Dates

Submission of abstract	: 15 <sup>th</sup> June, 2009
Acceptance communicated	: 20 <sup>th</sup> June, 2009
Submission of full length paper	: 30 <sup>th</sup> June, 2009
Registration fees	: 30 <sup>th</sup> June, 2009
Dates of Seminar	: 1st - 2nd, August, 2009

## Patrons

Rear Admiral K.O. Thakare, President IEI  
Er. D. V. Nagbhusan, Chairman, Agricultural Engineering  
Division (AGBD, IEI)  
Dr. J. S. Samra, CEO, NRAA, Govt. of India  
Prof. D. S. Chauhan, V.C., UTU, Dehradun  
Prof. B. S. Bist, V.C., GBPUAT, Pantnagar  
Prof. S. C. Saxena, Director, IIT Roorkee  
Dr. Rajendra Dobal, Director, DST, Govt. of Uttarakhand

## Organizing Committee

Er. R. P. Jamloki, Chairman, IEI, UKSC, Dehradun.  
Er. S. K. Shukla, Director Technical, THDC, Uttarakhand  
Dr. V. N. Sharda, Director, CSWCRTI, Dehradun  
Dr. R. D. Singh, Director, NIH, Roorkee  
Dr. P. C. Maithani, Director, Ministry of New &  
Renewable Energy, GOI, New Delhi  
Dr. V. C. Goyal, Director, Science and Society  
Division, DST, GOI, New Delhi  
Sri Madan Lal, Director (Agriculture) Govt. of Uttarakhand  
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Prof. Shailendra Mishra, Hon. Sec IEI, UKSC  
Er. K. P. Tripathi, EC Member IEI, UKSC  
Er. Anup Kumar, Director (Tech), ONGC  
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Prof. Satendra Mittal, IIT Roorkee  
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Er. R. K. Jain, EC Member IEI, UKSC  
Er. C. P. Sharma, EC Member IEI, UKSC

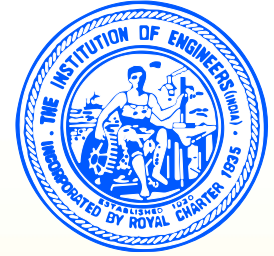
## Seminar Secretariat

Convener : Er. K. P. Tripathi  
Co Convener : Prof. Shailendra Mishra

## Correspondence Address

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## All India Seminar

on

**Watershed Management  
and Efficient Micro  
Irrigation in Mountainous  
Indian Himalayas (WMEMIMIH)**

1<sup>st</sup> - 2<sup>nd</sup>, August, 2009



Organized by

**The Institution of Engineers (India)  
Uttarakhand State Centre,  
Dehradun**



## Background

The proverb cited most often by most of us that the health of plains lies with the wealth of hills is an exact meaning of as why the mountainous Himalayas are so respectfully acknowledged in old epics of our country. The degradation of natural resources of the mountainous Himalayas is one of the major causes of the problems down in the plains. The solution of the problems in the down plains thus lies in the proper and meaning full management of the degraded Himalayas. While searching the remedial measures for control of degradation in the mountainous Himalayas, the need of the habitants of the region has to be focused attentively. When we talk of the degradation of the natural resources and the problems of the habitant residing within it, it is rather difficult to prepare and execute a most acceptable and amicable plan on macro level. Thus a micro level area or region referred as WATERSHED can be suitably planned in a most acceptable manner which is manageable both socially and technically.

As agriculture is the back bone of any densely populated and climatologically favored region as of India, it is desirable that the management of the major sector of water *i.e.* agriculture is given prime attention. The water management for agriculture is a sequential management under storage, conveyance and then application of rainwater/ground water.

Watershed management/development is aimed to treat the watershed in such a manner that sustained production of agriculture and other vegetation is achieved by managing the natural resources (water *i.e.* rain, soil and habitant) thus uplifting the life of the habitant without further deteriorating the ecosystem.

The total geographical area (TGA) of Indian mountainous Himalayas is about 18 percent (59.4 m ha) of the TGA of India and which produces about 4.5 percent of the total food grain production and accounts for about 6.2 percent of the total population of the country. The normal rainfall of these areas varies between 895.8 mm (Himachal Pradesh) to 2304.50 mm (sub-Himalayan west Bengal and Sikkim). The percent net irrigated area (NIA) to net cultivated area (NCA) varies from 4.36 in Assam to 44.2 percent in Uttarakhand with an average of 24 percent. Though these areas receive good rainfall however, as the case of whole of India is, these areas also receive about 70 to 80% of the total rainfall during monsoon. This results in reduced soil moisture for most of the non rainy period. The source of irrigation is generally the perennial streams and river which are either fed by glacier-snow melt flow or are fed from the sub-surface flow resulting from percolation of rainwater at geologically favorable locations.

Most of the rivers are at deep valleys thus making it difficult to divert it through gravity in the agriculture fields. The perennial streams are thus tapped and diverted through open unlined/lined channels to the agriculture fields through gravity flow.



This results in higher conveyance losses. Surface storage of rainfall excess during monsoon for subsequent use during lean period is also very limited due to unavailability of suitable site for construction of irrigation reservoir at viable cost due to highly undulating terrain.

Government of India is funding the through several programme *i.e.* NWDPR, IWDP, DPAP, HADP, RVP, FPR and several others under watershed management programme. However it still needs to be properly understood so as to derive desired results. At times the policy environment is also not conducive for deriving desired results though technology is available. The unavailability of funds, skilled and trained manpower, technology for mountainous Himalayas and the poor policies are at times seen as few of the several constraints.

Climate change is expected to be more vulnerable to the mountainous eco system than any other adversary. Timely understanding of the problem and its mitigation strategies will help to maintain the ecosystem in a desired manner.

It is therefore aimed through this seminar to discuss the policies, available knowledge of watershed management, its limitations and suggest remedial measures so that the mountainous Himalayas can be ecologically preserved.

## Themes

### 1. Policy issues

- Policy measures regarding land consolidation in Himalayas.
- Management of the resources developed under watershed management programme.
- Involvement of rural unemployed youth and traditional social institutions in the development programme.

### 2. Status and Inventory of degradation

- Assessment of land degradation, water resources including glaciers and biodiversity
- Appraisal of climatic change/variability and its mitigation through various options.
- Appraisal of soil health and water quality
- Appraisal of special problems as land slide/slip, cloud burst, shifting cultivation, stream bank erosion, mining and earth quake etc.

### 3. Technological options

- Rain water management for efficient domestic, agricultural and industrial use.
- Micro irrigation
- Measures for rehabilitation of degraded lands.
- Alternate land use system for the mountainous Himalayas.
- Multiple use of water.

### 4. Regional Experiences and Future Thrust

- Institutional involvement in community organization.



- Fund generation through community and elected democratic institutions
- Success stories and lesson learnt.
- Traditional knowledge and its refinement in the present context.

## Call For Papers

Abstract of the paper to be presented in the seminar is invited from the interested delegates. The abstract of about 600 words in Times New Roman (12 fonts) may be sent to the convener preferably by email by 15<sup>th</sup> June, 2009. **It is requested that the abstract and paper may please be send through email.**

## Dates And Venue

The seminar is scheduled to be held during 1st - 2nd, August, 2009, at The Institution of Engineers (India) Uttarakhand State Centre Saharanpur Marg, Mazra (Near ISBT) Dehradun -248 001

## Registration Fees

The registration fee is Rs. 800 for students and senior citizens, Rs. 1000/- for members and Rs. 1500/- for non members. Payment may be made in cash or in the form of demand draft drawn in favour of Institution of Engineers (India), IE (I), Uttarakhand State Centre payable at any bank in Dehradun.

## Advertisement In Souvenir

A souvenir is proposed to be brought during the seminar for the distribution to the delegates. Interested organizations may send their advertisement of their product in a soft copy as per the following tariff:

Back cover (outside) in colour	:Rs. 15,000.00
Back/front cover (inside) in colour	:Rs. 10,000.00
Full page in colour	:Rs. 8,000.00
Full Page in B/W	:Rs. 6,000.00
Half Page B/W	:Rs. 4,000.00

## Post Seminar Tour

A one day paid tour shall be organized for the delegates in and around Dehradun including Mussoorie to the places of tourist interest on 3<sup>rd</sup> Aug 2009. Interested delegates may kindly give their option for the tour.

## Accommodation

Accommodation arrangements for delegates shall be made on request and payment basis in the nearby guest houses and hotels on first come-first served basis. The delegates are requested to send one day tariff in advance to enable us to make accommodation arrangements. The tariff varies from Rs. 500 .00 to Rs. 5000.00 per head per day

## REGISTRATION FORM

### All India Seminar on Watershed Management and Efficient Micro Irrigation in Mountainous Indian Himalayas (WMEMIMIH)

**1<sup>st</sup> - 2<sup>nd</sup>, August, 2009**

Name : \_\_\_\_\_

Designation : \_\_\_\_\_

Organization : \_\_\_\_\_

Mailing Address : \_\_\_\_\_

Phone : \_\_\_\_\_

Fax : \_\_\_\_\_

E-mail : \_\_\_\_\_

Registration Fee \_\_\_\_\_

D.D. No. \_\_\_\_\_ Date \_\_\_\_\_ for Rs. \_\_\_\_\_

(Rupees \_\_\_\_\_)

Name of the bank: \_\_\_\_\_

Note: The bank draft should be made in favour of **"Institution of Engineers (India), IE(I) , Uttarakhand State Centre"** payable at any bank in Dehradun.

Title of the paper(s) \_\_\_\_\_

The paper be considered for discussion under theme \_\_\_\_\_

Interested only in attending the seminar : Yes/No

Interested in presenting a paper : Yes/No

Enclosing an abstract : Yes/No

Interested in Post Seminar Tour : Yes/No

Date:

Signature