Workshop on

WATERLOGGING AND SOIL SALINITY IN IRRIGATED AGRICULTURE

3-4 September 2015 at Hotel JW Marriott, Chandigarh

Organised by

ISO 9001 : 2008
Central Board of Irrigation and Power

Central Water Commission

Indian Council of Agricultural Research

Co-organised by

Irrigation Dept. Govt. of Punjab

Panjab University Chandigarh

International Commission on Irrigation & Drainage

Sponsored by

Gwalior Polypipes

Inter-Drain

Co-Sponsored by

Jain Irrigation Systems Ltd.

Rex Polyextrusion Ltd.

Technical Support by

Central Soil Salinity Research Institute

INTRODUCTION

Irrigation is one of the critical components of the Green Revolution that has maintained relatively consistent food production to meet the ever growing demands for food. Water logging and salinization are major impediment to the sustainability of irrigated lands and livelihoods of the farmers, especially the smallholders, in the affected areas in some of the basins in the country. These problems are the result of a multitude of factors, including seepage from unlined earthen canals system, inadequate provision of surface and subsurface drainage, poor water management practices, insufficient water supplies and use of poor quality groundwater for irrigation.

About 6.7 million ha of land in India is affected by different levels and types of salinity, out of which nearly half are under irrigated agriculture. Severely waterlogged saline soils occur in about 2 million ha area in arid/ semi- arid north western states of Punjab, Haryana, Rajasthan and Gujarat and 1 million ha each in the coastal and black cotton vertisol regions. It is projected that about 13 million ha area in irrigation commands of India will be affected by waterlogging and soil salinity by 2025; use of saline/ alkali groundwater and climate change will further accentuate the threats.

Since the early 1960s, several efforts have been made in the country to improve the management of salt-affected and waterlogged soils. These include lowering groundwater levels through tube-well and subsurface drainage systems, leaching of salts by excess irrigation, application of chemical amendments (e.g. gypsum, acids, organic matter), and the use of biological and physical methods. During the past two decades, subsurface drainage projects have been implemented in 50000 ha waterlogged saline soils in Haryana, Rajasthan, Gujarat, Punjab, Andhra Pradesh, Maharashtra and Karnataka. Though quite effective in lowering watertrable, reducing soil salinity and improving crop yields, poor operation and maintenance and non provision of adequate facilities for the disposal of saline drainage effluent have resulted in limited overall success of a number of such projects. This concept note presents an outline of a Workshop to be organized to take stock of the issues related to waterlogging and soil salinity in irrigated agriculture.

SCOPE OF THE WORKSHOP

Sustainability of irrigated agriculture depends on better management of irrigated lands. In order to delve on issues relating to sustainable management of irrigated agriculture and getting an increased understanding of waterlogging and soil salinity mechanisms, a Workshop on "Water Logging and Soil Salinity in Irrigated Agriculture" is proposed. The Workshop will explore new drainage and biological technologies and interventions for reclamation and management of waterlogged saline areas within a broad economic and environmental framework; revisit the concept and practices of conjunctive use of surface and groundwater; and address environmental aspects relating to regional management of saline drainage water. Additional agenda will include appropriate models for funding, institutional governance and implementation of subsurface drainage projects and better coordination among different Central and State government agencies. The Workshop will also address issues related to technical and financial support needed by many irrigation agencies.

WORKSHOP ISSUES

To draw attention to these growing concerns, papers and case studies on the following broad areas are invited for discussion during the deliberations of the Workshop.

- Emerging technologies for characterization and classification of salt affected soils: Remote sensing and GIS based diagnosis, prognosis, mapping and modeling systems
- Innovations in reclamation and management of waterlogged saline soils: Surface, subsurface, tubewell and bio-drainage systems and related tradeoffs
- Bio- saline agriculture, salt tolerant crop and tree varieties, saline fisheries/ aquaculture
- Reuse and management of saline water; micro- irrigation systems
- Regional salinity management and drainage master plans: Social, economic, environmental and policy dimensions
- Institutional and organizational framework for optimal operation and maintenance of irrigation and drainage systems
- Public Private Partnerships (PPP) in subsurface drainage projects, Participatory irrigation and drainage management
- Capacity building through national and international training and collaborations to address emerging challenges in the field of salt affected soils and poor quality waters

DATES AND VENUE

The Workshop will be held on 3-4 September 2015 at Hotel JW Marriott Chandigarh, Plot No. 6, Sector 35B, Dakshin Marg, Chandigarh 160 035

CALL FOR PAPERS/CASE STUDIES

There will be invited presentation only from the professionals. In the exceptional cases where the authors who wish to contribute papers related to the above mentioned themes are requested to send the full text of their papers on any of the above topics, so as to reach the organizers by 17th August 2015 either by e-mail or by post to the Workshop Secretariat.

Paper should contain:

- A descriptive title, the name(s) and affiliation(s) of the author(s).
- The address for correspondence (including telephone, fax and e-mail) and preferred mode of presentation (oral or poster).

- The text must include introduction (objective), methods, result and conclusion.

An important condition of acceptance of paper is that the author/one of the authors in case of multiple authors will attend the workshop and present the paper. The full length paper will only be included in proceedings volume of the workshop if the Registration Fee of an author, as specified, is paid in advance along with the full length paper. The persons intending to contribute paper(s) and or to participate in the workshop are required to fill-up the enclosed Registration Form and return it to the workshop Secretariat with registration fees.

PROGRAMME

3rd September 2015 (Thursday)	
09:00 – 10:00 hrs.	**Registration**
10:00 – 11:00 hrs.	**Inaugural Session**
11:30 – 13:00 hrs.	**Plenary Session** • Sustainable management of salt affected Soils through resource conservation technologies • Overview of water logging and salinization in India – Remedial measures • Sustainable irrigated agriculture in saline environment – The water quality issues
14:00 – 15:30 hrs.	**Technical Session 1 : Emerging technologies for characterization and classification of salt affected soils** • Remote sensing and GIS based diagnosis, prognosis, mapping and modeling systems of soil salinity/Alkalinity and water logging • An overview of water logging and soil salinity problems and remedial in different States
16:00 – 17:30 hrs.	**Technical Session 2: Innovations in reclamation and management of waterlogged saline soils: Surface, subsurface, tube well and bio-drainage systems and related tradeoffs** • Conjunctive use of surface and saline ground waters • Drainage for reclamation of alluvial waterlogged saline soils
4th September 2015 (Friday)	
09:30 – 11:00 hrs.	**Technical Session 3: Bio-saline agriculture, salt tolerant crop and tree varieties, saline fisheries/ aquaculture** • Crop production in saline and waterlogged soils • Environmental impact assessment and economic benefits of drainage system
11:30 – 13:00 hrs.	**Technical Session 4: Reuse and management of saline water; micro-irrigation systems** • Conjunctive water use strategies to control water logging and soil salinity in irrigation commands • Recycling of drainage effluents for crop production • Regional salinity management and drainage master plans: Social, economic, environmental and policy dimensions
14:00 – 15:30 hrs.	**Technical Session 5: Institutional mechanism and Organizational Framework** • Institutional and organizational framework for optimal operation and maintenance of irrigation and drainage systems
16:00 – 17:30 hrs.	**Technical Session 6: Other issues** • Public Private Partnerships (PPP) in subsurface drainage projects • Participatory irrigation and drainage management • Capacity building through national and international training and collaborations to address emerging challenges in the field of salt affected soils and poor quality waters
Morning Tea : 1100 – 1130 Hrs. **Lunch** 13:00 – 14:00 Hrs. **Evening Tea** 15:30 – 16:00 Hrs.	

OFFICIAL LANGUAGE

The official language of the Workshop will be English.

REGISTRATION

The following is the registration fee payable per participants for participation in the deliberations of the Workshop :

Countries	Delegates	Members of NDC-WWC, IWRA
SAARC Countries	INR. 10,000*	Rs. 9,000*
Other Countries	US $ 500*	-

***Service Tax @ 14.0% will be charged extra.**

The registration fee includes the workshop material, registration kit, working lunch, tea/coffee. **The participants will have to make their own arrangements for travel, boarding and lodging,** etc.

The participants, desirous of attending the seminar are requested to fill-in the enclosed Registration Form and send the same along with the registration fee payable through cheque at par drawn in favour of '**Central Board of Irrigation and Power**. The last date for Registration is 30th August 2015. The spot registration facility will also be available/provided these shall be prior intimation.

SPONSORSHIP OPPORTUNITY

The workshop will provide an excellent opportunity to central/state government organizations, Water Resources/ Irrigation Departments, public sector undertakings, industrial organizations, equipment manufacturers, financial and funding institutions, consulting organizations and construction organizations in India and abroad to publicize their services/products by being a co-organizer, sponsor, co-sponsor or supporter of the seminar. The sponsorship fees payable and entitlements are mentioned below:

Co-organizer **US$ 5,000/Rs. 2,00,000**

- Name of organisation in the list of co-organizers
- Organization may nominate Eight delegates
- One full-page black and white advertisement in proceedings volume
- 20-minute time slot for presentation
- Distribution of literature/brochures

Co-sponsors **US$ 3,000/Rs. 1,00,000**

- Name of organization in the list of co-sponsors
- Organization may nominate five delegates
- One full-page black and white advertisement in proceedings volume
- Distribution of literature/brochures

ADVERTISEMENT IN PROCEEDINGS VOLUME

A limited space will be available on first-come-first served basis, for publishing advertisement in the proceedings volume of the seminar. The interested organizations are required to send the advertisement material (Art Work/ Negative/Positive) along with payment as detailed below:

(i)	Inner pages	US$ 500/Rs. 20,000
(ii)	Second or third cover	US$ 1,000/Rs. 25,000
(iii)	Back cover	US$ 1,500/Rs. 50,000

Notes:

1. The rates mentioned in INR are for SAARC countries.
2. The last date for advertisement reservation is 30th June 2015.
3. The advertisement material in the form of artwork/ negative/ positive of maximum size 130 mm × 200 mm is required to be sent before 20th August 2015.

PAYMENTS

1. All payments should be made by Demand Draft drawn in favour of "Central Board of Irrigation and Power", payable at HDFC Bank, Saving Bank Account No: 00031110004411, Branch/RTG/NEFT IFSC: HDFC0000003, MICR Code: 110240001, Swift Code; HDFCINBBDEL, Branch & Address: 209-214, Kailash Building, 26 Kasturba Gandhi Marg, New Delhi
2. Participants will have to make their own arrangement for travel, boarding and lodging, etc.
3. Last date for receipt of Registration Form is 30th August 2015.
4. Spot registration facility will also be available, provided prior information is received.
5. Last date for sponsorship and advertisement is 14th August 2015.

WORKSHOP SECRETARIAT

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Workshop on

WATERLOGGING AND SOIL SALINITY IN IRRIGATED AGRICULTURE

3-4 September 2015 at Chandigarh

REGISTRATION FORM

(To be filled in BLOCK letters)

1. Name: _____
   Surname Name
2. Designation _____
3. Organization/Institution: _____
4. Mailing Address _____
   City _____ State _____ Pin _____ Country _____
   Tel. No. _____ Fax No. _____
   E- Mail _____ Web: _____

Signature