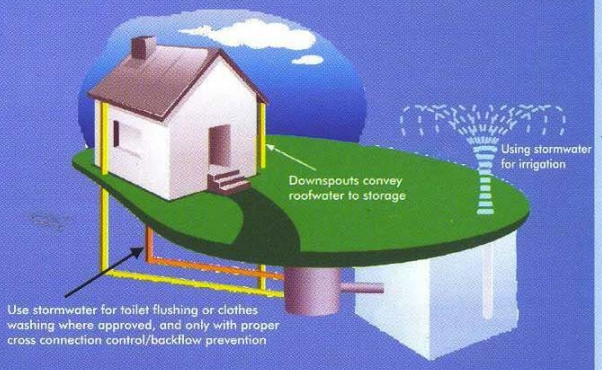
State Level Workshop On Ground Water Management in Uttar Pradesh - Challenges, Priorities & Strategies

Save Ground Water for a Safe World

August 20-21, 2009
Venue: Hotel Dayal Paradise
Vipul Khand-V, Gomtinagar, Lucknow

स्वारा

Organized by
State Water Resources Agency (SWaRA)
&
State Water Resources Data Analysis Centre (SWaRDAC)
Ground Floor,
WALMI Bhawan,Utrethia, Lucknow (UP)



BACKGROUND

The major part of the State of Uttar Pradesh falls in Indo-Gangetic plain, which is not only known to have vast Ground Water Resource potential but also comprises one of the largest aquifer systems in the world. But, over the last 3 decades, Ground Water Scenario in the state has completely changed, mainly because of indiscriminate exploitation and improper & unscientific management practices both in rural & urban segments, leading to the stage of 'Hydrogeological Stress'.

- The fact is that Ground water has attained the position of a 'Democratic Resource' in the state, because it is a dependable & assured resource and can be exploited with greater ease & flexibility. Therefore, the resource has gained a vital position in overall water resource development plans & programmes of the state.
- Around eighties, Uttar Pradesh became the centre of Irrigation Tube Well Revolution in the country. It is noteworthy that more than 40% of private minor irrigation tube wells in the country i.e. about 39 lakhs are located in the state, extracting very huge quantity of ground water. As such, the resource is providing almost 75% irrigation in the state. Besides 80-90% of drinking water and almost all industrial needs in the state are also dependent on ground water resulting into its continuous escalated abstraction and declining water levels, thereby affecting its sustainability in many areas. Whereas, its non- integrated & unplanned use mostly in Canal Commands has led to various geo-environmental problems like water-logging & soil sodicity. The reported occurrence of Arsenic in ground water of some districts has also emerged as a new threat on drinking water front. So, due to such alarming situations, ground water domain of various rural & urban sprawls has reached a critical state, both quantitatively & qualitatively.
- The reason for these ground water problems is poor management. Therefore, effective interventions & suitable ground water management plans are urgently needed in the state of U.P. to over come these critical situations..

Following 4 major ground water related problems have been identified in the State-

- Over-exploitation/indiscriminate extraction of ground water in both the rural & urban areas, resulting into significant decline of groundwater levels, mostly affecting the western U.P.
- Water logging /shallow & rising water levels and soil sodicity affecting the agricultural productivity in Eastern & Central parts of the state.
- Contamination/pollution hazards related to ground water resource are now widely reported from different districts. It is emerging as a major problem.
- Poor availability as well as relatively poor development of ground water in Bundelkhand-Vindhyan area.

OBJECTIVE & SIGNIFICANCE OF WORKSHOP

The imperative need is to initiate, formulate & prepare a long term strategy plan with a sustainable framework for the effective management of ground water resources in the state.

The State Water Resources Agency (SWaRA) along with the State Water Resources Data Analysis Centre (SWaRDAC), established as an Apex Institution in water sector, has already taken initiatives to identify & evaluate different ground water related problems and also finding the possible gaps in resource management process. It has been also discussed at different levels that the findings of various studies and the experiences of various water related departments/organizations should be brought to a common technical platform to identify the priorities for formulating a comprehensive ground water management policy in the state.

With this background, SWaRA/SWaRDAC has taken a positive initiative of organizing an Interactive Workshop on "Ground Water Management in Uttar Pradesh- Challenges, Priorities & Strategies" on 20 – 21 Aug, 2009 at Lucknow, U.P.

- The proposed Interactive Workshop is expected to come-out with some concrete recommendations & suitable strategies for managing ground water resources in U.P., which would be documented as **"SWaRA Resolution- 2009 for Ground Water Management Plans in Uttar Pradesh."**

THEME/SUB-THEMES

During the two day workshop, various issues & problems related to ground water and the respective management options & suitable interventions are proposed to be taken-up for discussion. The different sub themes are-

Sub-theme I: Ground Water Situations & Issues in diverse Hydrogeological Scenarios

- Region wise Ground water resource potential & overview of related problems.
- Over exploitation/Ground Water Stress and effective management options.
  (a) Urban Perspective, (b) Rural Perspective
- Changing Scenarios & present Status of Ground Water resource in Irrigation, Drinking and Industrial sectors.
- Plans for Urban Stressed & Rural Stressed Areas.

Sub-theme II: Water logging, Conjunctive use of Ground Water & Surface Water: Present Status, Planning & Actions

- Status of Surface water logging / Sub-surface water logging & soil sodicity in canal commands.
- Remote Sensing and GIS based extensive mapping and scientific evaluation of water logging and related environmental hazards: Future perspective.
- Interventions for Conjunctive management of surface water & ground water in basin planning.
- Integrated framework for Canal water & Ground water based irrigation systems
- Surface water- Ground water Interaction.
- Area specific changes in Cropping pattern for Over- stressed & Water logged areas.
- Scope of community based Sprinkler/ Drip irrigation practices as promising alternatives.

Sub-theme III: Rain Water Harvesting & Ground Water Recharge

- Guidelines, Sustainable Technologies & Innovations in Ground water Recharge.
- Present status of Rain water Harvesting/ Recharging in Urban, Rural & Industrial areas.
- Need of Maintenance and Impact Assessment of Recharging structures.
- Watershed Approach for Rain water conservation and Ground Water Management in Rocky terrain.
- Relevance of traditional wisdom & practices of rain water harvesting.
- Renovation/ restoration of water bodies in Urban & Rural areas-Initiatives & Prospects.
- Transforming canal irrigation systems into ground water recharge systems.
- Ground water use & conservation practices in Industrial sector.

Sub-theme IV: Ground Water Quality Issues

- Present scenario of ground water pollution & affected areas.
- Emerging challenges & options for potable water supplies.
- Mapping of quality hazard prone areas through GIS.
- Effective mechanism for surveillance, monitoring & mitigation.

Sub-theme IV: Institutional & Regulatory Mechanism for Ground Water Management.

- Ground Water Management: Existing Policies.
- Status of Institutional Mechanism and role of SWaRA .
- Status of Ground Water Act & Regulatory framework.
- Need of Ground Water Governance in the state.
- Integration & sharing of Ground water data as future planning resource.

CONTRIBUTIONS

Invited lectures will be delivered by the subject experts. However, those who are desirous of contributing their research findings, case studies, experiences, useful suggestions on the above sub-themes, may send the same to the Organizing Committee latest by 18 June, 2009 for inclusion in workshop deliberations.

TENTATIVE PROGRAMME

Day1 (Aug. 20, 2009)	**Day 2 (Aug. 21, 2009)**
Registration **Inauguration** **Tea** **Technical Session I** **Lunch** **Technical Session II**	**Technical Session III** **Tea** **Technical Session IV** **Lunch** **Plenary Session** **Valedictory Function**

REGISTRATION

There is no registration / delegate fee. Participation by nomination or individual request should be forwarded to the Organizing Committee latest by 20 June, 2009.

PATRON

Sri Arun Kumar Sinha, I.A.S.
Principal Secretary, Irrigation & Chairman, SWaRA

ADVISORY COMMITTEE

Chairman : **Sri Anurag Srivastava**, I.A.S.
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2. **Sri S.K. Saxena** , Chief Engineer, PACT
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3. **Dr. Yashpal Singh**, Director, Environment, U.P.
4. **Sri Abrar Hussain**, Regional Director, CGWB (NR)
5. **Sri A.K.Arora**, Director, Ground Water Department, U.P.
6. **Sri S.R.Arya**, Chief Engineer, Minor Irrigation, U.P.

ORGANISING COMMITTEE

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Irrigation and Drainage Expert

Co-Chairman : **Sri Ravindra Kumar**
Staff Officer

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Ground Water Expert

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