

UNESCO New Delhi

GWADI Activities

1. Worked with UN system-wide Solution Exchange Program to prioritize research and capacity building need in the area of “Climate Change and Water Resources Management for Arid and Semi Arid Region”. A synopsis of the exercise will be discussed and presented during a regional conference “Climate Change and Water Resource Management” At Roorkee in november 2009.
2. In collaboration with UNESCO, TERI organized the 1st School Environment Educators’ Conference to enable teachers to play a more proactive role and be the key drivers in the essential process of enhancing environment education knowledge, followed by positive action in Arid and Semi Arid areas. Other than the e-proceedings, a Resource Book on Climate Change and was published following this conference.
3. UNESCO NDL is working with NMS Sadguru Foundation (www.nmsadguru.org) to develop a center for excellence for capacity building for Dryland Development within the broader framework of G-WADI. A project is currently underway to establish a feasibility to establish such a center and also prepare a detailed donor profile to acquire funds for future activities. The activities to be undertaken by the center will focus the tribal region of India.
4. Organized “International Conference on Groundwater Dynamics and Climate Change” in March 19-22, 2008 in Jaipur India. Over 300 participants from 32 countries participated at the conference. The conference was organized within the framework of G-WADI to highlight the importance of groundwater in the natural water cycle in the context of increasing dependency on groundwater for many human activities. With increasing human interference with the water cycle the groundwater is at risk. The conference not only highlighted the plight of groundwater due to climate variability both at local to global level, but also discussed the dynamics of such changes. The conference provided policy recommendation to intensify focused research to identify and assess climate change impact on groundwater and understand the role of groundwater in the climate change adaptation process. A papers presented at the conference will soon be published as a major book by MacMillan, India/Advanced Water Digest Publications.
5. Organized “International Symposium on Rainwater Harvesting: Bringing Green Revolution to the Dryland”, June 23-25, 2008 in Coimbatore, India. The symposium

organized as a follow up to the International Conference on Drylands held in Tunis in June 2006 (where G-WADI organized a special session) highlighted the fact that collecting and storing rainwater alone is not sufficient and that its wise use is important to grow crops, raise livestock, plant perennial trees and support other rural activities. It brought together more than 200 international scientists from 13 countries to review the status of water harvesting technologies and policies in the drylands world-wide and in India and developed a holistic approach and multi-pronged strategies for water harvesting to facilitate sustainable development in the drylands.

6. Published “Rainwater Harvesting: Low Cost Indigenous and Innovative Technologies” [Singh, P.K (2008), MacMillan pp:179]. The book collects information on indigenous and proven innovative technologies of soil and water conservation and water resource development. Aimed at prompting policy review and research as well as developing future strategies for water harvesting programmes, this book is expected to be useful both as a reference manual and a guidebook for programme managers, students and field workers. The book is published as part of the Water for Life International Decade for Action 2005-2015 and GWADI.
7. Published “Rainwater harvesting is a proven and promising technique for sustainable water resource management, and has been in existence for over five thousand years in the South Asian region. It has recently gained prevalence amongst scientific and development communities, and it has become imperative to understand the technologies in the context of the South Asian climate.
8. Published a refereed compendium on “Rainwater Harvesting Practices” based on a National Seminar on Rainwater Harvesting and Water Management in Nagpur. This special edited volume consists of selected papers presented during the seminar, and as such builds on research into water harvesting from around the world in the last fifty years. The book attempts to provide practical guidance and mechanisms to plan, implement and maintain water harvesting systems, exploring in great detail a number of traditional and recent methodologies across a variety of sectors and environments.
9. A study has been completed to estimate the climate change impact on Agriculture. The project aims at developing vulnerability indicators to assess the vulnerability and develop a methodology including selection of variables for the construction of vulnerability index and to rank the different regions of a country based on their vulnerability to CC; assess the impact of climatic change on production of major crops in 2030, 2050 and 2080 ; study and document the adaptation strategies being

followed in different regions; study the socio economic impact of CC and derive policy prescriptions for implementation. This study has been submitted as a contribution to the panel on CC adaptation in India. The study was completed in Tamil Nadu State in India. With FAO, the project (proposal included) will be expanded to other arid states of India.

10. A study was undertaken on Indian Youth's Perspective on Climate Change: A Study of Attitudinal Change among Students in two UNDAF states Uttar Pradesh (UP) and Madhya Pradesh (MP) in India. The study reviewed the status of social ecology and environmental pollution in the arid and semi arid region; discussed various types of environmental pollution, their causes, consequences and impact on living beings and non-living things; studied the status of climate change and its implications on society and economy; reviewed the policies, programmes, schemes and legislations for mitigation and management of climate change in the states; examined the awareness levels regarding different issues of climate change among the youth; examined the environmental problems, and constraints and challenges in management of environment in India; and suggested measures.
11. In collaboration with UNESCO, National Institute of Hydrology organized the International Conference on "Water, environment, Energy and Society (WEES-09) held from 12 to 16 January 2009. Water resource Management in Arid and Semi Arid region was discussed and resources.
12. Undertook a research on Impact of groundwater extraction on groundwater systems in Central Gangetic Plain. This modelling-based research aimed at quantifying the CO₂ emission as a result of groundwater depletion, energy subsidy, and changing cropping pattern.
13. A research has been undertaken within the framework of G-WADI on the "Geomorphic Analysis of drainage for optimization of water conservation and recharge structure in Nimbahera Watershed in Rajasthan." The research aimed at developing a strategic guideline to develop recharge structures based on the geomorphic analysis of the basin and through the quantification of non-committed water supply, groundwater balance and its development status. A tool kit is being prepared and is expected to be launched in 2010 World Water Day.
14. UNESCO NDL has developed a position paper to link UNESCO's new flagship initiative with the IAH MAR-NET and GWADI. UNESCO NDL is also a candidate to host the secretariat of the network.
15. UNESCO NDL has signed an MOU with the Columbia University and CIP Trust to initiate an India Water Forum which will be a cooperative platform to work with

corporate sector in India to promote sustainable water resource management practices.