

Centre for Sustainable Solutions in Practical Hydrogeology

Think Tank dedicated to the sound governance of land, water and ecosystems

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- Sustainable solutions
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Land Water Ecosystems
Biodiversity:
sound governance through
practical application of
hydrogeology

Independent Non Profit Think Tank

The Centre's Think Tank enables practitioners to formulate solutions at the interface between land, water and ecosystem biodiversity.

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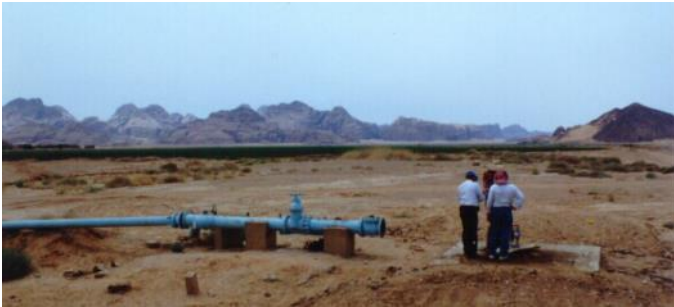
A Think Tank dedicated to *sound governance of land, water and ecosystems* – with hydrogeology as the underlying framework

Practitioners and Advisors

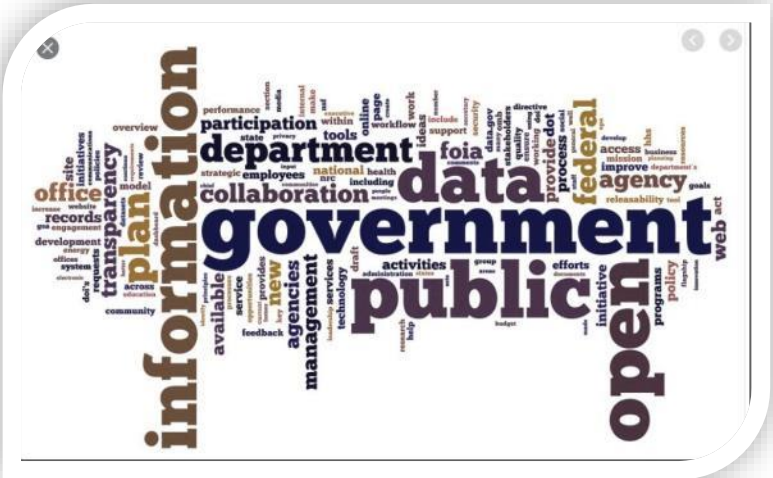


EDITORIAL
Focus on interactions between science-policy in groundwater systems
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Domestic groundwater abstraction in Lagos, Nigeria: a disjuncture in the science-policy-practice interface?
A Healy¹, K Upton², S Capstick¹, G Bristow¹, M Tijani¹, A MacDonald², I Goni¹, Y Bukar¹, L Whitmarsh¹, S Theis¹, K Danert¹ and S Allan¹




Groundwater sustainability: a review of the interactions between science and policy
Ahmed S Elshall^{1,2,10}, Aida D Arik³, Aly I El-Kadi^{1,4}, Suzanne Pierce^{5,6}, Ming Ye¹, Kimberly M Burnett^{1,7}, Christopher A Wada^{1,7}, Leah L Bremer^{1,7} and Gregory Chun^{1,8}



Land- groundwater – ecosystems – aquatic biodiversity

- Converting to a “*low water use*” economy in arid regions
- Converging *soils – run off – aquatic biodiversity – social needs*
- Restructuring post industrial recovery & urban regeneration
- Farming in and around semi arid range lands – economic drivers
- Catchment scale measures – the people, their cattle, their lands
- Post coal mining – converting wastelands into emerging ecosystems



WATER POLICY GROUP

Menu

25/02/2021

2021 Water Leaders Survey – Participant information



COP26 - HOW TO GET INVOLVED

OPPORTUNITIES WITHIN UK GOVERNMENT
MANAGED SPACES AT COP26

GLASGOW 2021



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Ecohydrology & Hydrobiology

journal homepage: www.elsevier.com/locate/ecoehy

Original Research Article

Ecohydrology and hydrogeological processes: groundwater–ecosystem interactions with special emphasis on abiotic processes

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ABSTRACT

This paper presents a review on the integration of hydrological, ecological and hydrogeological processes into Integrated Water Resources Management (IWRM) practice. These processes, for example, interact and take part in the process of creation of groundwater-related wetlands, which are an important part of the Earth's biodiversity. Tools for integrating water and ecosystems are presented, with emphasis on the hydrogeological aspects as often they are poorly considered. Recent pioneering projects (IGCP-604, UNESCO-IHP, GENESIS, and Groundwater Governance) developed models for the future integration of ecosystem health with groundwater exploitation. An IWRM approach where groundwater-related wetlands and the groundwater systems upon which they depend are included in conjunctive water management decisions can be an accepted and workable paradigm that will benefit present and future generations.

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Founder: Dr. Hazim El-Naser



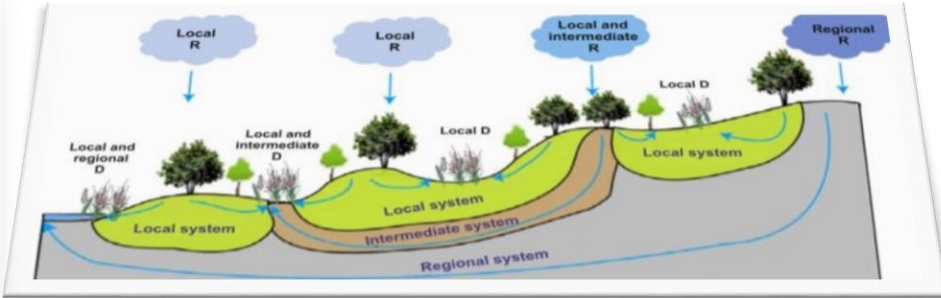
MEWF

Towards Regional Water Security & Public Awareness



Global Hydro-Geo-Eco Opinion Polling:
 Invitation to register as
 Opinion Giver

Your Opinion Matters!



Learning resources

India Collaboration on water land - biodiversity

- Regular joint meetings for hydrological risk reduction, associated with river variability of Ganges
- Joint approach (Ganges) - use of transboundary aquifers in India
- Assessing water quality for the Ganges basin (quality / quantity / sustainability) - use of remote sensing in the Ganges basin for improved data
- Capacity building initiatives to enhance resilience to climate change
- Capacity building to establish water quality objectives in transboundary river basins - including the introduction of water education
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Belarus AAP 2015 Environment & Air Quality Programme Formulation

Shamsher Puri & Shamsher Puri
Former Consultants for EU Delegation, Minsk
The project is funded by the European Union and implemented by DAI

Why does sub surface space matter?

- The "space" ranges from micrometers (soil pores) to huge fertile zones
- Summed up, the "space" creates an immense subsurface store - for fresh water, fossil fuels, geothermal energy
- The space has not only physical connections (such as specific conditions, but also subsurface reservoirs, through which substances migrate, nutrients, various dissolved and suspended matter)
- More permeable, porous and fractured, forming the subsurface space to interact with water, is a more responsive, more productive an "underground"
- The global sub surface space needs better appreciation and a coordinated approach of research and education supporting "the small governance of subsurface space"

Azerbaijan's Secondary Towns Water Supply rehabilitation

Azerbaijan's Secondary Towns Water Supply rehabilitation
Giyechay, Aghdash & the Capital of Azerbaijan

* Unreliable supply, poor quality of water, residents of towns suffering hardships

POLICIES

AQUIFER SYSTEM SIMULATION - THE SCIENCE THAT HELPS TO TAKE BETTER DECISIONS

PRO LECTURE ON AQUIFER MODELLING
Shamsher Puri, Director, International Institute for Environment and Development

The impact of "business as usual"

- And more... grazing, loss of pasture & vegetation, poor quality of livestock
- High water consumption & stress, excess water use, marginal improvement in crop yield
- Waterlogging through self-regulating processes, Limited implementation, Significant groundwater & economic losses

Groundwater in the hydrological cycle:

Groundwater is a key component of the hydrological cycle, linking the atmosphere, the land surface, and the subsurface. It plays a crucial role in maintaining the water balance of the Earth and is essential for sustaining ecosystems and human societies.

TRANSBOUNDARY WATER MANAGEMENT

The interface between hydro diplomacy and hydrology

GLOBAL GROUNDWATER

Groundwater is a shared resource that is essential for sustaining life and supporting economic development. It is a critical component of the Earth's water cycle and is essential for maintaining the water balance of the planet.

SOLUTIONS

ICR Programme Strategy for Assistance to East Asia 2020 - 2031

Developing the Identification Fiche

Shamsher Puri, Advisor to EU Delegation in Minsk

Programme of INWRM activities

INWRM activities include: Assessment of water resources, Development of water management plans, Implementation of water management plans, Monitoring and evaluation of water management plans.

GREATER HAPUO WATER SUPPLY PROJECT (GRWSP)

Update to the Model of the Dan-Rim Aquifer System

Shamsher Puri, Director, International Institute for Environment and Development

POST COVID Era