

Management of Water in a Changing World: Lessons Learnt and Innovative Perspectives

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Keynote Presentation

GROUNDWATER GOVERNANCE: understanding the resource and proposing implementable management measures

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Abstract

One of the key lessons after ten year experience of the World Bank's GW-MATE* (Groundwater Management Team) learned in contributing to the implementation of pilot projects in a variety of developing nations is that the management measures and instruments utilized should depend upon a diagnosis of the resource setting (hydrogeologic condition and socioeconomic situation), which in essence both define the problem and shape the solution.

This lecture will discuss governance provisions as they relate to the groundwater resource base. It will deal with the assessment of current governance status and identification of future governance needs in relation to the efficient and sustainable use of groundwater resources as a water-supply source and by dependent ecosystems, and their effective management and quality protection against quasi-irreversible degradation. The main message will be that it is possible to counteract the 'tragedy of commons' with technically sound and practical approaches by:

- Recognizing the importance of 'external drivers' on groundwater resource use and pollution pressure.
- Being selective by focusing upon priority 'groundwater bodies' or aquifer systems.
- Basing the aquifer typology for considering groundwater governance status and needs upon a pragmatic classification of 'groundwater bodies'— there being an intimate linkage between the characteristics and status of groundwater bodies and the question of why and how governance needs to be strengthened to achieve effective on-the ground implementation of agreed management and protection measures.
- Implementing a groundwater management and protection plan.
- Using a fine-tuned balanced mix of instruments such as institutional and legal provisions, stakeholder participation, and a groundwater resource administration as close as feasible to the aquifer.

And as a corollary a check-list of 'top-20' benchmarking criteria for the assessment of groundwater governance provision and capacity will be presented.

Finally, the following main issues that must be addressed to avoid frustration in the quest for improved governance will be discussed:

- Economics and politics of groundwater governance.
- Potential impediments to governance reform.
- The critical role of information and communication.

* The sources used in this presentation are the publications produced by GW-MATE, a World Bank/GWP program during 2000-2010. The authors were the core team members of said program, with Dr. Foster as its Director