

Sustainable Groundwater Management Concepts and Tools

Scope & Target

The GW•MATE Briefing Note Series is produced by the World Bank Groundwater Management Advisory Team, which is also a Global Water Partnership Associate Program. The Series provides a concise introduction to the theory and practice of groundwater resource management and protection.

The primary target audience comprises:

- water resource managers of limited groundwater experience
- groundwater specialists with limited previous exposure to water resource management
- those in international development faced with groundwater management issues in a variety of sectors, such as infrastructure, irrigation, urban and rural development and health.

The series should also be of general interest to all senior executives in water and environmental management.

In view of the multidisciplinary nature of the groundwater resource management challenge, the Series is written in a style that should be intelligible across all professional disciplines working in the water sector. Each Briefing Note aims to answer the 'most frequently-asked questions' on the topic concerned, especially in a developing country context.

The Briefing Note Series is complementary to the GW•MATE Case Profile Collection, which makes available knowledge acquired and lessons learned by GW•MATE experience around the world. Both can also be downloaded from www.worldbank.org/gwmate.

Briefing Note Series

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an introduction to its scope and practice
2. CHARACTERIZATION OF GROUNDWATER SYSTEMS
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5. GROUNDWATER ABSTRACTION RIGHTS
from theory to practice
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12. URBAN WASTEWATER AS GROUNDWATER RECHARGE
evaluating and managing risks and benefits
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14. NATURAL GROUNDWATER QUALITY HAZARDS
avoiding problems and formulating mitigation strategies
15. GROUNDWATER DEPENDENT ECOSYSTEMS
characterization procedures and conservation measures

Sustainable Groundwater Management Lessons from Practice

Scope & Target

The GW•MATE Case Profile Collection is produced by the World Bank Groundwater Management Advisory Team, which is also a Global Water Partnership Associate Program.

The Case Profiles are not meant to be comprehensive descriptions, but rather focus on key management issues that countries, regions or groundwater systems are faced with and are in the process of addressing. The GW-MATE believes that this Collection contributes to the global knowledge base on generic groundwater management issues.

The collection has evolved over the past years and is intended to make available knowledge acquired and lessons learned by GW-MATE experience around the world. This collection now spans cases of groundwater management experience from Argentina and China to Kenya and Thailand.

The primary target audience comprises:

- groundwater resource managers of limited groundwater experience
- groundwater specialists with limited previous exposure to water resources management
- those in international development faced with groundwater management issues in a variety of sectors, such as infrastructure, irrigation, urban and rural development and health.

The collection should also be of general interest to all senior executives, practitioners and academics looking for concise presentations of international experiences in groundwater management.

The Case Profile Collection is complementary to the GW•MATE Briefing Notes Series, which gives an overview of the theory and practice of groundwater resource management and protection. Both can also be downloaded from www.worldbank.org/gwmate.

Case Profile Collection

1. THAILAND — Strengthening capacity in groundwater resources management
2. YEMEN — Rationalizing groundwater resource utilization in the Sana'a basin
3. PARAGUAY — Actual and potential regulatory issues relating to groundwater use in Gran Asunción
4. BRAZIL — Mitigation of groundwater drainage problems in the Buenos Aires Conurbation: technical & institutional way forward
5. BRAZIL, KENYA — Subsurface dams to augment groundwater storage in basement terrain for human subsistence
6. ARGENTINA — Integrated approaches to groundwater resource conservation in the Mendoza aquifers
7. VENEZUELA — Yacambu, Quibor: a project for integrated groundwater and surface water management
8. CHINA — Towards sustainable groundwater resource use for irrigated agriculture on the North China Plain
9. BRAZIL, PARAGUAY, URUGUAY, ARGENTINA — The Guaraní aquifer initiative for transboundary groundwater management
10. MEXICO — The 'Cotas': progress with stakeholder participation in groundwater management in Guanajuato
11. INDIA — Tamil Nadu: resolving the conflict over rural groundwater use between drinking water and irrigation supply
12. NEPAL — Approach to mitigation of groundwater arsenic contamination including new groundwater legislation
13. KENYA — The role of groundwater in the water supply of Greater Nairobi
14. BRAZIL — Groundwater use in Metropolitan Fortaleza: evaluating its strategic importance and potential hazard
15. SUB-SAHARAN AFRICA — Groundwater development: a strategic overview of key issues and major needs
16. BRAZIL — Promoting management of an inter-state aquifer under development for irrigated agriculture: the case of the Chapada do Apodi in Northeast Brazil