Yemen Water

The Political Economy of Groundwater Governance

By

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Three big problems

- Groundwater is running out
- No mechanisms for transferring water to higher value uses
- Poor performance in supplying water to rural and urban communities

Root cause of the problems

All are connected to the basic fact of Yemeni water management –

- The government controls little or nothing
- Water ownership and management is in the hands of 100,000 (or 200,000) individual well owners…
- …who have appropriated the water by the law of capture…
- …and who have no incentive to conservation

Because if they don't take the water their neighbor will…

…so they are engaged in a 'race to the bottom'

The result is:

A free-for-all of random drilling and competitive over-pumping

A framework for analyzing and assessing groundwater governance

Political Economy

Groundwater policies within overall water policy e.g.:

Sustainability in quantity and quality

Efficiency in allocation and use within and between sectors

Equity by ensuring fair access and protection of water rights

Through an interactive process, water policy and the policies of other water using sectors are aligned

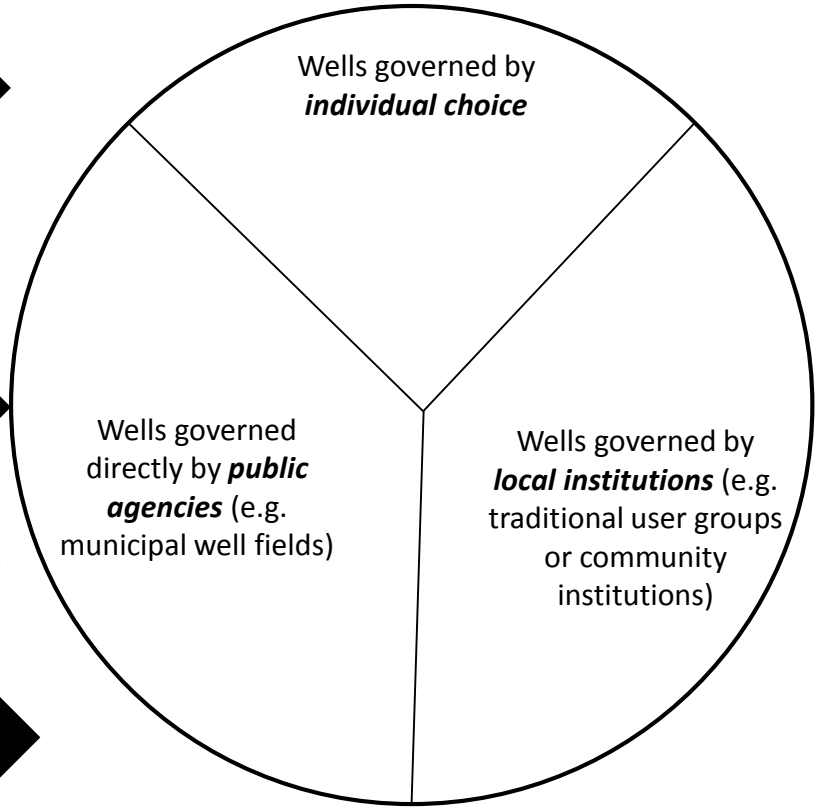
An ***IWRM planning function*** capable of allocating water in line with society's policy goals

A framework of ***laws, rights and regulatory instruments*** adapted to the context

An ***incentive framework*** (prices, subsidies, trade controls etc.) that supports good groundwater management

A framework for ***subsidiarity and support to local water management***

Acquisition and management of ***information and knowledge, and communications*** with stakeholders

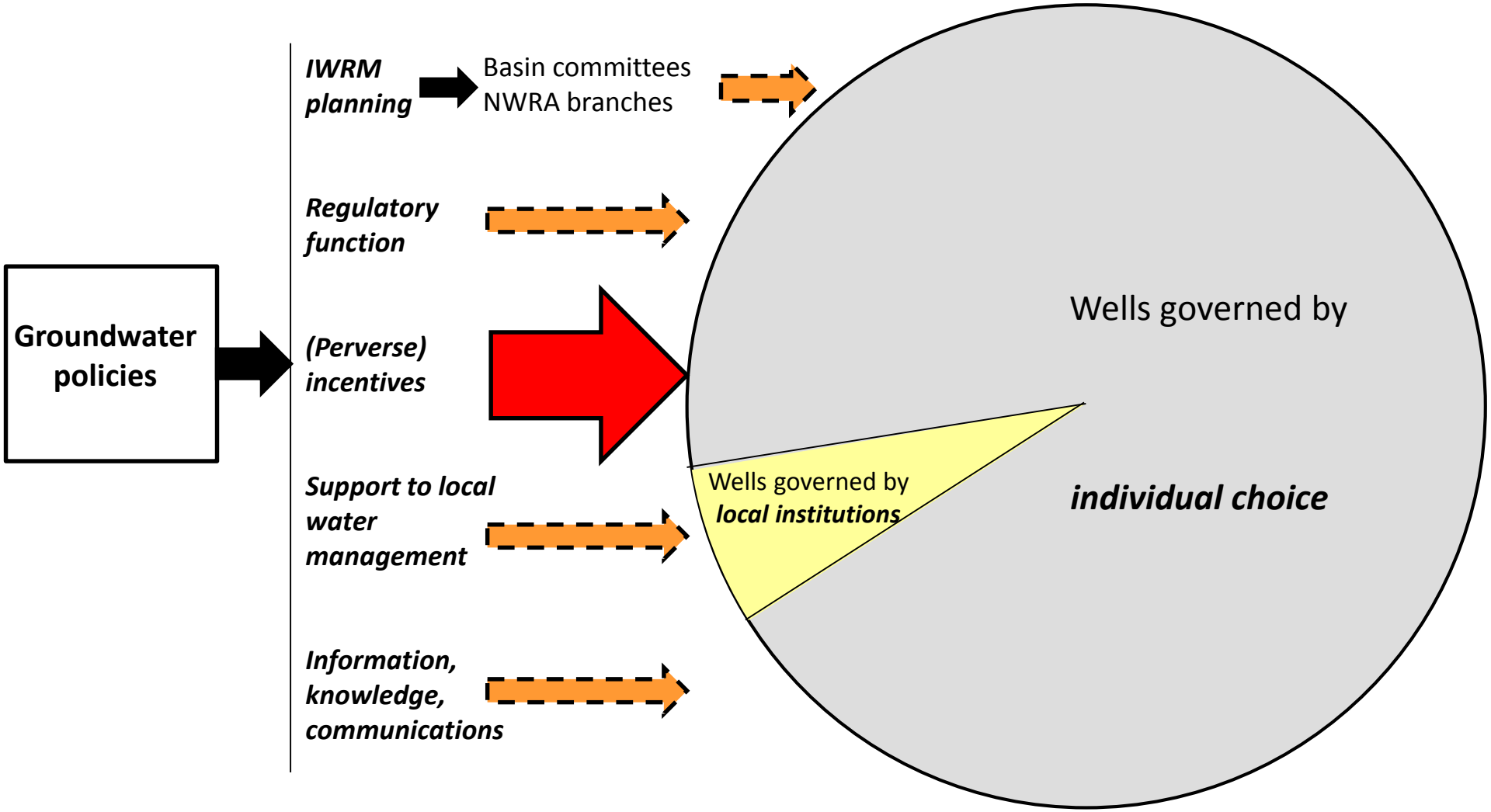


Setting policies:
the nation sets its objectives for groundwater

Strategic level governance functions:
setting up the institutions and instruments to align stakeholder behavior and actual outcomes with policy objectives

Local level governance:
organizations and institutions that control actual outcomes on the ground and which respond in varying degrees to the rules and incentives from the strategic governance level

Groundwater Governance: the Yemen Case



Wells governed by local institutions: Example of self-help: **Khrabat Muhyab, Bani Matar, Sana'a**

Alerted by water conflict in a nearby area, the community set up a WUA to regulate groundwater through well-spacing rules

The WUA now covers eight villages

This experience shows that:

- WUAs can be set up by local people without any partnership with an official agency
- It was conflict amongst neighbours that acted as the 'decisive push' for this community to organize for water management
- Through such an 'indigenous' WUA, local people can adopt – and adapt – water management rules for the new situation
- Local social capital can be capable of imposing quite strict regulations to control drilling

Next steps are to empower the WUA with better knowledge – and to link their water management into broader equitable management of the aquifer

Examples of partnership:Qarada

Rapid development of groundwater led to decline in the water table and in water quality

Faced with scarcity and with growing competition from neighbours and from Sana'a city, and under the threat of regulation, local people hastened to drill deeper

Eventually, a public project offered support to increase recharge and enhance water use efficiency, plus support to setting up WUAs

The WUAs have developed rules to prevent further drilling, and they work with NWRA to enforce these rules

These first steps show that:

- There is a huge degree of awareness and concern about falling water tables
- Some technical solutions for enhancing water resources and for obtaining more income per drop exist
- WUAs set up in partnership between an official agency and local people ***can*** embark on water resource management
- Where many local people share the water resource – and not just a few well-off farmers – there are good chances of cooperative action
- Local people can devise innovative approaches to controlling drilling

Next steps are to strengthen the WUAs' capacity for water resources management, and to invest in 'more income per drop'

What farmers said they would agree to in the Sana'a Basin

The deep Tawilah sandstone aquifer should be reserved for drinking water, and certain areas should be declared 'green belt' areas for farming and environmental protection

- Adopt a 20-25 year, five year and one year planning time frame, and establish M&E accordingly
- Plan at sub-basin level, as well as for the basin as whole. Data should be split out by sub-basin, published and shared with stakeholders, and used as a tool for participatory planning at the sub-basin or district level
- Adopt different approaches for four groups of sub-basins with different characteristics: (1) urban, (2) urbanizing, (3) rural overlying the deep aquifer, (4) rural greenbelt/farming area.
- Design in detail a planning process along the lines discussed above:
  - ❖ Set up a small but effective IWRM basin planning unit in NWRA Sana'a Branch, assisted by a decision support system and modeling capability, to set water management goals and objectives and to prepare a long term plan and five year and annual action programs.
  - ❖ Develop a three part governance structure (Basin Committee – local councils – water user associations.

Bank's role to date

LWCP/GSCP

- If done on an individual rather than collective basis, does it really save water?
- Equity: it is a subsidy to the better off 25%

IIP

- The model seems to have worked…
- …but then it was dropped

SBWMP

- ✓ A 15 year program
- ✓ Basin focus
- ✓ Water and agriculture integrated
- ✓ Some approximation of a working institutional structure
- ✓ End of first phase with a workable plan
    - Then…***nothing***

Bank's role to date (cont.)

UWSSP

During the most recent Bank urban water supply project, water supply in the four big cities covered actually declined

The ICR questioned whether the business model was the right one

> *'The question arises whether the current business model of providing relatively high levels of piped water service to a relatively small group of customers that require significant government subsidies and that essentially benefit richer households is the best way to provide water supply and sanitation services'.*

RWSSP

- Pushed the DRA model successfully
- Now generalized
- Coverage apparently up

Recommendations for Yemen

Back the partnership approach – e.g. a community-based water management project

Go with the basin committees and strengthen the NWRA branches

Link in water and agriculture:

Continue 'GSCP' but ***ONLY within collective management arrangements***

Push hard on ***rainfed*** and ***alternative incomes***
[*don't worry about qat*]

Look at market-based water transfers

For urban, add new business models…

- pro-poor localized water supply e.g. the OBA
- partnerships with the local private sector

…and look at lower cost technological innovations

…and for the Bank

Clarity on what we want to achieve (a strategic approach)

Realism (accept it won't be very perfect)

Continuity (evaluate and revise, but don't stop and start)

Knowledge and communications

- Constant, interactive dialogue with government, stakeholders, donors
- Build alliances, find champions