

Executive summary

Chapter 1

Comparing 20th century trends in US and global agricultural water and land use

- ◆ During the 20th century, huge gains in the efficiency of use of cropland for food and fibre were achieved.
- ◆ During the same period, similar gains were not achieved in the efficiency of use of water.
- ◆ The disparity can be explained largely by differences in the degree to which land and water were subject to private ownership.
- ◆ Most cropland was privately owned; whereas most water was state property.
- ◆ Private ownership encourage responsible and intelligent use of resources, leading to improved agricultural productivity and environmental conservation.

Chapter 2

Incentives matter

- ◆ For private ownership to be effective, property rights must be “3D”:
 - definable (capable of clear definition),
 - defensible (capable of being defended in courts of law), and
 - defeasible (capable of being transferred to others)
- ◆ 3D property rights enable adaptation to dynamic changes through market processes.
- ◆ Markets enable people to discover the value of water of differing quality at different times and in different places.
- ◆ Markets are a superior way to generate and transmit information, at a low cost, thereby enabling greater productivity and better satisfaction of people’s needs and wants.

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- ◆ Competition in water markets creates incentives for private companies and individuals to respond to changing supply and demand by developing new technologies and utilising water more efficiently.

Chapter 3

Reforming water policies in Latin America

- ◆ A case study of urban water provision in Quito, Ecuador, shows that public management of water tends to be inequitable and unsustainable.
- ◆ Poor people in Quito are not well served by the municipal water supplier.
- ◆ Meanwhile, subsidised irrigation throughout Ecuador benefits well-off farmers but perpetuates environmental problems.
- ◆ The poor are harmed most by the government's inadequate recovery of investments in water provision.
- ◆ The dire situation in Ecuador is contrasted with that of Chile, which enacted a property-rights-based water policy in the 1980s.
- ◆ Underpinned by legally secure and transferable property rights, Chile's system has achieved nearly universal access to water for both urban and rural users, including the poor.
- ◆ Farmers in Chile have benefited immensely from being able to trade water.

Chapter 4

Poor provision of household water in urban India

- ◆ India is blessed with more than adequate hydrological resources, but there is an artificial water shortage in urban areas.
- ◆ Since water is practically free, public sector providers have no incentive to prevent waste or ameliorate existing infrastructure.

- ◆ A case study of an illegal squatter settlement (“basti”) in New Delhi shows that informal sector entrepreneurs are solving water scarcity for poorer urban residents. Compared to the public sector, they service the poor more efficiently, more conveniently and more widely.
- ◆ India’s water still needs to be used more efficiently. Enabling the private sector to process, transmit and distribute water would improve human health and enable investments in infrastructure.

Chapter 5

The rain catchers of Saurashtra, Gujarat

- ◆ The peninsula of Saurashtra, Gujarat, is a region whose geographical conditions create acute water scarcity.
- ◆ Government solutions in the form of reservoirs have largely benefited urban, but not rural, populations.
- ◆ Farmers and others have created more water, for themselves and others, with water harvesting devices such as check-dams in streams and rivers, well recharging, and other methods of “rain catching.”
- ◆ The lesson for other parts of India is that informal, decentralized arrangements can play a major role in solving water scarcity, even if the outside world perceives them to be chaotic and disorganized.

Chapter 6

Water governance in China

- ◆ China’s water governance has been characterised by a “top-down” approach.
- ◆ This has led to huge inefficiencies in water use and extensive water pollution.
- ◆ For instance, the Huaihe River remains polluted in spite of expensive clean-up efforts, while government agencies were

incompetently handled a recent pollution incident on the Songari River.

- ◆ The solution to China's water scarcity is to establish a legal framework that respects individual property rights.
- ◆ In combination with other local arrangements, this would enable and lead to respect for individual and community decision-making.

Chapter 7

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- ◆ Across Africa, governments largely have deemed that water provision is the responsibility of the state.
- ◆ In practice, public sector water systems suffer huge losses, are politically driven and largely have been incapable of extending the network to peripheral urban areas.
- ◆ Some aspects of privatization in Senegal, Cote d'Ivoire and Guinea successfully resolved such problems.
- ◆ In many urban areas – especially areas not formally recognized by government planning systems – informal (“illegal”) entrepreneurs are helping to solve the water and sanitation gap created by governments.
- ◆ Inadequate institutions prevent entrepreneurs of all sizes from delivering water and sanitation services through markets. Poorer Africans suffer most in this environment.
- ◆ Reforms to extend formal property rights and other institutions that support markets would both solve artificial water scarcity and enable economic growth more generally.

Chapter 8

How not to reorganise an industry

- ◆ National government ownership of goods and service industries leads to inferior outcomes compared to private ownership with competitive markets.

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- ◆ The 1989 privatisation of the water and sewerage industry in England and Wales has produced enormous benefits for consumers, although it still has flaws.
- ◆ However, Scottish Water remains nationally owned, with millions of captive customers and little possibility for competition.
- ◆ Recent reforms may help to improve the service offered by Scottish Water, but the only way genuinely to ensure efficiency, quality and sufficient investment is a combination of privatisation and market liberalisation.