

## **A future for tradable water rights**

When faced with relative scarcity, a system must become relatively efficient or face breakdown. In the recent past, we have observed such breakdowns of centrally-planned and interventionist governments. Given these lessons, we would expect a “demonstration effect” in which other governments will tend toward more efficient fiscal, legal, and regulatory structures.

The diffusion of efficiency-bearing ideas is slowed down when it is not obvious which element of observed policy is responsible for success. This may be occurring in the case of Water Law in South Africa. The law and economics of water are relatively complex, which not only explains the resistance to new ideas within the South African government, but also the dearth of clear examples from overseas law that would assist the demonstration effect.

### **Trading Water – Some Experiences**

Tradability of water rights is not really a new idea, but the body of ideas explaining its effects and supporting its implementation is new. Some countries, such as Chile, have permitted tradability, as have some states in the USA. The latter case is particularly interesting in that tradability and the doctrines for determining rights emerged over one hundred years ago in the more arid states. It was precisely the scarcity of water in the west that induced a shift in the law toward greater efficiency. With recognition of the potential gains from trading water rights, and of separating water rights from land title, the appropriate changes emerged through the common law.

### **Water Rights and Land Rights Differ**

States in the eastern USA tend to have a relative abundance of water and simply retained the type of water law that prevailed in England. This included the doctrine of riparianism, which links water rights to ownership of the land adjacent to the water source. Where riparian rights were held, the water rights could be transferred to a new owner only if the land was also sold. In the water-scarce western states, however, this placed limitations on progress, and created pressures for change.

The break with riparianism allowed those who required water for developments on properties not adjacent to a water source to use water (not already appropriated) from that source on a first-come-first-served basis. It also allowed those who had already appropriated water rights to sell those rights to newcomers or expanding developers who valued the water more.

This movement toward a more streamlined and precise specification of water rights, and their tradability, was a natural response to the relative *scarcity* of water. Government regulation, which came later, put limitations on this movement toward efficiency, and prevented a market in water from emerging. It is ironic that the perception of water scarcity in South Africa is now used as an argument for the elimination of private water rights and for the increase in the government’s powers.

### **Nationalising Water?**

It is argued, by those who would further nationalise water, that water is a special case: it is essential to life. No reference is made to the fact that *food* is also an essential, and that nationalisation of the food supply invariably makes food scarcer. “Scarcity” is an argument for more private property and economic freedom, not less. If it is agreed that water is a scarce resource, essential to life, then it is unwise to consider experimenting with a more centrally administered system than we have now. If there is to be any change, it should be toward extension and definition of property rights. This would bring the benefits of focused ownership and decentralised decisions.

### **But Water is Special?**

It is also argued that the interconnectedness of water in the hydrological cycle makes central control necessary. But this argument ignores the context in which people are also interconnected across several dimensions. What each of us does has some impact on someone else, but this is not an

argument for government intervention. It is precisely those systems burdened with the most interventionist governments that are failing.

“Interconnectedness” is not the defining issue in water supply; and even if it were, there does not automatically follow a need for government’s active custodianship. Although water usage does present broad externality<sup>1</sup> problems, these can be dealt with through an evolving set of legal and physical technologies. There is a natural incentive to reduce and internalise<sup>2</sup> the costs associated with water usage, which is what will happen in a suitably unrestrictive legal framework. In contrast, resort to active government involvement in the water market changes the perceived cost structure: different decision-makers face different alternatives and incentives. Political costs (spoken of as “social costs”) would take precedence over private costs.

### **Efficiency and Consumer Needs**

A difficulty with government interference in an economic sector is the associated belief that it provides a straight-line solution to any problem. Such a belief can be maintained only by (again) dropping the context. It requires not noticing the side-effects, the unintended consequences that result from government’s attempts to take straight-line short-cuts in a non-linear world.

Such short-cuts can be gotten away with if the sector is small, or if people are unaware of any alternative. If water is a small portion of consumers’ budgets, or if consumers are not aware of the full cost, then there is less likelihood of resistance to the imposition (or maintenance) of an inefficient system.

Greater efficiency would mean that a given water source would satisfy more users’ needs. And to achieve significant gains in efficiency will require the emergence of legal structures that allow *both* the private ownership and tradability of water rights. **This means that water rights must be well-specified: they must be clearly defined, enforceable, and transferable. Water rights should also be severable from land title.**

### **Common Water or Private Water?**

A water right must be clearly defined so that the owner knows, with some certainty, what it is that is owned. Problems arise, for example, when several persons each act as a sole owner of the groundwater in the same basin. This is not a problem born of privately-owned water rights, as such. Lack of definition in the property rights can lead to behaviour that is similar to that on common property: over-grazing, over-fishing, over-exploitation. This can occur whether the water is public or private. If everyone can draw from the same aquifer without restriction, then no one has a tangible incentive to conserve water. Well-specified rights would give each owner a defined property right to protect.

A water right must be enforceable to ensure that the owner can actually capture the benefits of ownership. Otherwise there will be no incentive to purchase the rights, nor to make any investment to develop the resource. This is why there will always be an incentive to find efficient enforcement methods (private or public).

Transferable rights lead the owner to take into consideration the opportunity cost of the water, namely its value in alternative uses. If other uses are more valuable, there is an incentive either to sell the right or to supply water to other users. Thus, transferability is essential for a fair and efficient allocation, to allow the resource to find its most valuable use.

### **A Market in Water**

Proper specification of property rights is a necessary step toward market development. In the absence of such private rights, decisions become separated from incentives, which also results in a loss of information flow. Thus, without private rights, there is no reliable way of determining what the most valued uses are; there is no way of ensuring an efficient allocation. Resort to a governmentally administered system means increased subjectivity in judgement and arbitrariness in decisions.

To achieve and maintain efficiency a water-supply system must also be flexible. As demand and supply change, users and suppliers should be able to adapt according to their mutual benefit. This process should not be impeded by the need to seek centralised decisions, or to seek further changes in the law or regulations. Thus, water law should build in flexibility by allowing decentralised decision making.

Any change in the Water Law should assure continuity of rights. Confidence in an economic system is largely based on security of property rights, which is inextricably linked to the other human rights. If, for example, the riparian doctrine of water rights is considered inadequate, then it must be superseded by a doctrine that ensures the preservation of the quantitative content of those rights.

Interpretation of current water rights as having been acquired through *prior appropriation*<sup>3</sup> would allow for continuity of the rights while severing them from land ownership. Thus the content of the rights could be retained while increasing the flexibility of future transfers: the water rights could be sold without selling the land.

Increasing flexibility in this way will reduce institutional distortions and increase the value of water and water rights. By increasing the exposure to market discipline, incentives to use water wisely would also increase. Thus, a shift toward well-defined water rights would have an effect similar to increasing the amount of water. It can, with confidence, be predicted that the supply of *utilisable* water would increase, and the incidence of wastage would be reduced.

Tradability of water rights is an idea increasing in practice around the world. Despite political resistance, some hybrid form of tradability could be allowed for in the new South African Water Law.

<sup>1</sup> A negative externality or “external cost” is a burden imposed on someone who is not involved in the decision or action that creates that burden. For example, if I draw water from my borehole to fill my Olympic-size swimming pool, then there is less groundwater available for my neighbours.

<sup>2</sup> To internalise costs is to make the person whose actions create external burdens to take those burdens into consideration before deciding on an action. This will encourage decisions that impose lower external burdens. For example, if I must compensate my neighbours when I infringe their water rights by taking more than my share of groundwater, then I will take less water.

<sup>3</sup> The prior appropriation doctrine would interpret ownership of a water right as having been derived from first use of the water source concerned, or legal transfer from the first user. For conversion from a riparian system, at the date of conversion the current owner of the land will continue to own the water rights, but the land title and water title become separate. Thus, continuity of property rights is respected, and the water rights can trade separately.

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