Most water policies reflect some balance of rights and duties. Farmers have right to use water but a duty to leave remaining waters intact for their neighbors. Urban dwellers have the right to receive drinking and wastewater services but a duty to pay for them.
In his 1960 article, “The problem of social cost” (https://en.wikipedia.org/wiki/The_Problem_of_Social_Cost), Ronald Coase discussed how the award of rights to one side of a polluter-pollutee relationship is a necessary first step towards finding the efficient level of pollution. His idea, sometimes called the “Coase Theorem,” was that a property right (to pollute or be free of pollution) could be more effective than a moral right to be free of pollution if one was focused on reaching socially optimal levels of pollution rather than on determining who should win or lose from pollution.

Coase’s observations brought him a well-deserved Nobel Prize, but they came with caveats. The first, which he emphasized, was that a rights-based regime will only work if the “transaction costs” of negotiating an agreement on pollution (or other externalities) are not too high.

A property right (to pollute or be free of pollution) could be more effective than a moral right to be free of pollution.

The second, which he implied, was that property rights could deliver the same results as a regime based on rights and duties. While elegant in principle, this last claim does not hold in the presence of (surprise!) transaction costs.

These two caveats mean that the outcome in a rights-only regime (in which one’s right to pollute is set against another’s right to not be polluted) will be the same as the outcome in a right-duties regime (in which one’s right to pollute comes with a duty to retrain that pollution) if and when transaction costs are low. This equivalency will fail if transactions costs are high by making it harder to reconcile conflicting rights and thus achieve outcomes that are still possible in a rights-duties regime in which self-regulation is unaffected by transactions costs. (This discussion assumes that rights and duties are agreed, clear and enforced. If they are not, then one must turn to third party regulations, which are discussed below.)

We can see how these elements play out with a simple example of upstream farmers whose water use leaves downstream farmers with less water of worse quality. In a world of rights and duties, upstream farmers know that their rights to divert come with duties to not divert too much or discharge too many pollutants. A farmer in this Eden faces a moral, social, and perhaps legal duty to do no (noticeable) harm.

Returning to a world of Coasean property rights, this farmer would have a clear right to commit harm or, if lacking that right, a need to compensate downstream neighbors for any harm. In Coase’s world, the location of rights matters less than the potential for reaching an agreement that balances costs and benefits. Coase’s solution delivers greater efficiency than we’d see in a rights and duties world because it focuses on real harm rather than a duty to avoid an assumed harm, but it comes with greater transactions costs.

A further increase in transactions costs will make it difficult to use either of these solutions, which is why regulations are used to balance the interests of numerous polluters and pollutees.

**A World With Non-trivial Transactions Costs Is A World With Both Rights and Duties.**

We can apply these ideas to water, where the right to use it coexists with the duty to avoid harm; and government plays a role in giving rights and enforcing duties. Although some people assume that “the government” will manage the process in the public interest, there are many ways that this process can go wrong.
Ignoring the most obvious problems with corruption and public choice, it’s also possible for the government to fail due to complexity. Rights and duties will conflict if different branches of government focus on different rights or duties, if underlying conditions change the nature of rights or duties, or when transactions costs change the appropriate balance between rights and duties.

How might that happen? I am pretty familiar with water policies in California (where I earned my PhD) and the Netherlands (where I have lived and worked for over six years). Although each place has entirely different water conditions, I’d say that their different water policies and outcomes reflect different political and social attitudes.

I’d say that California is running on the equivalent of a Windows operating system (OS) that’s backwards compatible with earlier versions of the OS — and thus just as confusing, complicated, and conservative as you would expect from a system dating back decades.

Turning to the Netherlands, I would say that their policies are like Apple’s OS, meaning that they are sensible, simple and secure because they have been entirely restructured quite often over the 800-plus years that the Dutch have managed water.

Each system will bring advantages to different groups, but California’s strong rights give an advantage to opponents of change, resulting in a tragedy of the anti-commons in which worsening underlying conditions are quickly turning into poor outcomes.

Let’s recall a few examples. Groundwater in the state is unevenly regulated, poorly monitored, and vulnerable to agricultural and industrial pollution. Water markets cannot get off the ground because rights reflect pre-1914 conditions of abundance, lack any provision for environmental water flows, and often reside with the water districts formed to help water users cooperate rather than the users themselves, which can lead to abuse of “minority users” who cannot sell their water and exit without facing massive losses. Rights and regulations are enforced according to different administrative or judicial rulings as previously separate jurisdictions and competencies begin to overlap in conflicting ways. (The ongoing “crisis” of the 1922 Colorado River Compact, for example, can be traced directly to its assumption that each state would receive its volumetric right under all conditions.)

California cities are caught in a mish-mash of water quality regulations, extraction rights, infrastructure access, and service tariffs that change with political borders, conflict at the regional level, and often fail to support sustainable service levels.

These examples are not inevitable. They result when a system founded on miners’ and farmers’ 19th-century rights to divert water is joined to a set of 20th-century duties to provide service, reduce pollution, and so on. California, in other words, is not suffering a series of water crises as much as an outdated model of water governance whose paralysis and dysfunction will only worsen if left alone.

What’s To Be Done?

The future of water in California is grim. On one side, you have farmers using every legal means to avoid restrictions on rights that date from a past in which abundant water supported both farmers and ecosystems. On the other, you have environmentalists and citizens pushing for regulations to protect the “natural flows” that keep ecosystems and communities from collapsing.

Both sides have supporters, and contradicting rights and regulations allow each side to claim righteousness while
blocking action. So it seems that neither side will win.

The Bottom Line

Californians — and other citizens of the American West — need to revisit the balance of power between rights and regulations and reformulate their policies to reflect current conditions. Will this process be easy? No. Everyone will claim that their rights should receive preferential treatment.

The only way ahead is to recognize the need for change and agree to promote the community over partisan tactical sabotage that delivers short-term gain at the expense of the long-term cooperation that protects ecosystems, delivers economic value, and supports communities.

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