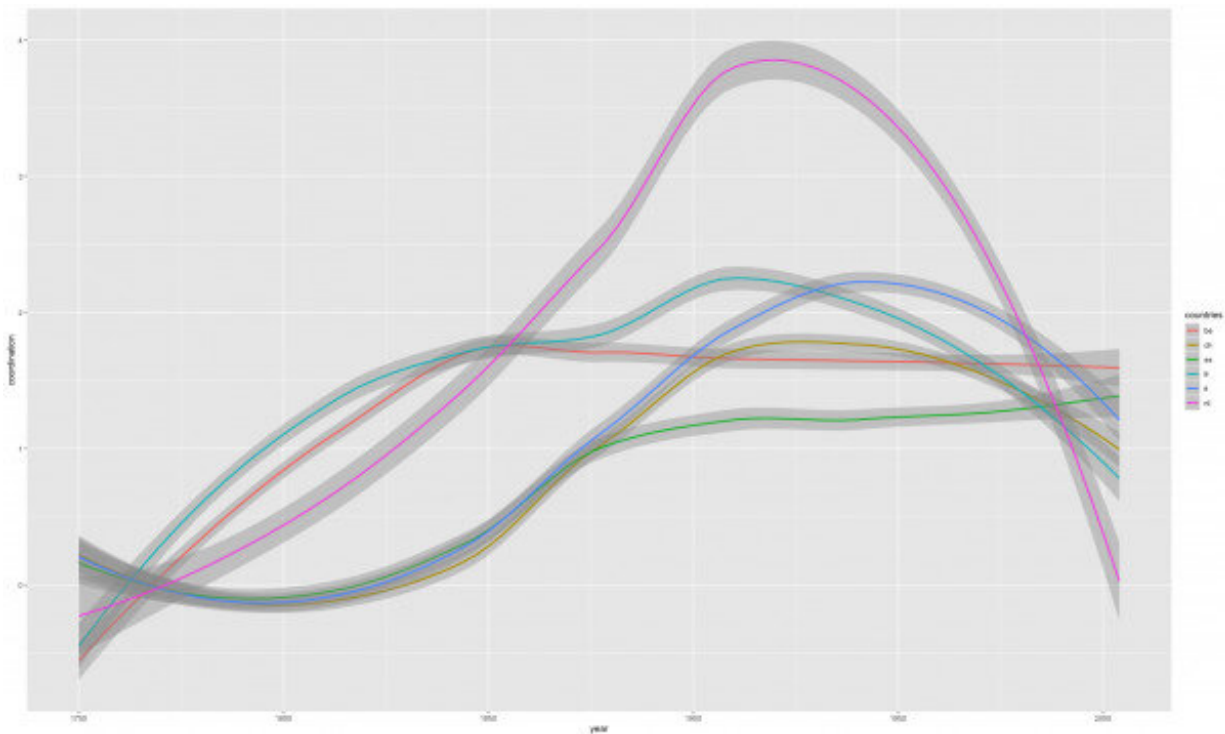


Water governance: could less sometimes be more?

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A diagram showing the contribution of each new rule to the overall capacity for governance coordination over time; i.e. the 'improvement' of governance provided by each new rule. The different phases are visible with an increasingly strong improvement until a turning point, where the improvement then becomes weaker. An example of a reading for the Swiss case (brown curve): From 1850 onwards, each new rule increasingly improves the ability to coordinate. This capacity stagnated at its peak during the first part of the 20th century, only to decline gradually. Thus, in 2006, the capacity to improve the coordination of each new rule returned to a level on the order of that reached in the second half of the 19th century. Credit: UNIGE

Researchers from UNIGE and UNIL analysed water governance in six European countries from 1750 onwards. They demonstrated that there has been an inflationary trend in the number of regulations, and that—far from improving the situation—this has led to serious malfunctions in the system.

The use of environmental resources has been regulated for centuries with the aim of improving the management and behaviour of private and public actors on an on-going basis. But, does the never-ending introduction of new regulations really have a [positive effect](#)? Or, does a surfeit of rules cause malfunctions and lead to disturbing overlaps? In an attempt to answer these questions, researchers from the Universities of Geneva (UNIGE) and Lausanne (UNIL), Switzerland, analysed [water governance](#) regulations in six European countries from 1750 to 2006. Their results, published in the journal *Ecological Economics*, show that rules designed to improve resource management eventually come into conflict in the long run, creating an equal number of positive and [negative effects](#) until the system falls apart. At this point, the only way out is for the state to overhaul [governance](#).

Societies have been making rules to control behaviours and the uses of natural resources such as water for centuries. At the same time, however, the competing interests of state and private actors continue to produce environmental problems. In overall terms, the [scientific literature](#) is in agreement that developments in the way these regulations are structured are, nevertheless, increasingly positive and effective. But to what extent is this really the case in the long run?

"To assess whether a [regulation](#) is positive in the long run, you need to factor in the ecosystem of rules that it is part of, and which it may either reinforce or disrupt," says Thomas Bolognesi, a researcher at the

Institute for Environmental Sciences (ISE) at UNIGE. In fact, a rule that induces a [positive impact](#) on the use that it regulates may cause turmoil once it begins to interact with existing regulations, causing the entire system to malfunction, conceived here as transversal transaction costs (TTCs).

"And over the very long term," adds Bolognesi, "the negative effect of TTCs can grow and end up being equivalent to the positive effect generated by the new regulation, creating what we called an institutional complexity trap." The quality of governance is based, therefore, on two key components: the scope, i.e. the set of uses governed by the rules (quantity); and the consistency, i.e. the fact that the rules are defined and followed correctly (quality).

Successive improvements to the system lead to breaking point

To test their hypothesis, Bolognesi and Stéphane Nahrath, a professor at UNIL's Swiss Graduate School of Public Administration (IDHEAP), scrutinised the water governance systems in six European countries (Switzerland, Belgium, Spain, France, Italy and the Netherlands) from 1750 to 2006. "The aim of the study was to determine whether the increase in the scope of the governance reduced the system-wide coherence, and even went as far as overriding the positive effects intended by the additional regulations," says professor Nahrath. The researchers identified three [distinct phases](#) in the evolution of the governance in the six countries.

The first phase, which lasted from 1750 to 1850 and was followed by around 50 years of stagnation, covered the launch of the governance process, i.e. the production of framework rules that had relatively little impact. From 1900 to 1980, governance developed and the rules, which

grew in precision, generated significant positive effects. But since 1980, we have entered a phase where the negative indirect effect, linked to a drop in the system's coherence, has been reinforced and offsets the previous positive effect, even to the point of supplanting it. "This is due to the creation of a profusion of new rules, especially following the introduction of the New Public Management approach in the 1980s," says Bolognesi. This proliferation of regulations, which were sometimes designed to regulate the same area but along different lines, had an indirect negative impact on governance and resulted in a decrease in efficiency and clarity, leading to a systemic malfunction.

"Consequently, to achieve a positive effect—as slim as it is—more and more rules need to be produced, increasing the risk of malfunction and leading to a vicious circle," says Nahrath.

System reformed by the state

Contrary to the widespread idea that water governance is constantly improving, the study by the researchers from UNIGE and UNIL demonstrates the conflicts instigated by repeatedly introducing new rules designed to increase the system's efficiency. "If we carry on in the same way, we're going to hit breaking point," says Bolognesi. "That's why we think it's important that the state and government policy should take charge of environmental governance issues. That way, we can avoid introducing separate rules that generate frictions and uncertainties, and that could create insurmountable obstacles for coordinating the system."

Professor Nahrath says, "The contractual rules must in no instance take precedence over state rules."

Provided by University of Geneva

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