

The Role of Information in Environmental Regulation: Science in the Service of Society?

Rónán Kennedy

Law School, National University of Ireland Galway

In the only comprehensive article on the application of information and communications technology (ICT) for environmental regulation, Professor Dan Esty is very optimistic about the potential of these new tools to achieve better outcomes. However, he does acknowledge that we need a more nuanced understanding of their application. This paper is a first step towards that greater nuance, highlighting how the increasing reliance on ICT in this particular domain, and the consequent use of “information”, is problematic.

First, the paper examines the consequences of the fact that the information used in environmental regulation comes principally from the physical sciences. The connection between science, policy and law is not as linear or as coherent as it should be. It is not always the case that legislators, policy-makers and the general public are sufficiently scientifically literate to understand the basis of a regulatory scheme. “Bad science” can displace “good science”.

In addition, the scientific models used in legislation may not be accurate or can often lag behind the state of the art. Indeed, the models themselves are only that: an attempt to understand a system rather than the system itself. The creation and choice of models can have important social, political and legal consequences. Both a misplaced reliance on models as infallible oracles or an excessive scepticism about their validity can have significant negative impact on the policy-formation process.

Finally, the data collected in order to apply these models may not itself be accurate. It may not be verifiable or consistent. Any regulatory system based on the analysis of information, particularly information expressed in numerical form, can be manipulated so as to avoid thresholds or other triggers for regulatory intervention. These are problems which law alone cannot resolve. It needs to understand the role and function of science in society.

If these problems can be overcome, there are a number of significant thematic issues that must be borne in mind with these new tools. The greater availability of information can lower costs for government and NGOs. It can create new flexibility and improve enforcement efforts. If properly managed, it can lead to a more informed public and a better deliberative process. It can also impact negatively on individual privacy. This requires us to ensure that systems and data are kept as open as possible, pay attention to new possibilities in institutional design, and balance these aims with the need to protect personal data.

The application of ICT makes possible “informational governance” and “informational regulation”. This abstraction of environmental realities into information spaces provides new transformative power. However, we should not assume that this is an entirely positive development: inequalities of power persist in new media and information networks; state regulation remains relevant; and the need for local infrastructure can limit its effectiveness in, for example, developing countries. We must therefore be careful to critically evaluate the results of applying ICT for environmental regulation: in practice, the results do not always match the promises.