



## Activism as a tool for education and societal outreach: legitimacy, efficiency and complementarity with classic science communication

Sylvain Kuppel<sup>1</sup>, Odin Marc<sup>1</sup>, Riccardo Riva<sup>2</sup>, and Marthe Wens<sup>3</sup>

<sup>1</sup>Géosciences Environnement Toulouse, CNRS - IRD - UPS - CNES, Toulouse, France

<sup>2</sup>Dept. of Geoscience and Remote Sensing, Delft University of Technology, Delft, Netherlands

<sup>3</sup>Institute for Environmental Studies, Vrije Universiteit Amsterdam, Amsterdam, Netherlands

A classic conception held by many scientists is that their role is to produce and provide new and reliable information for use by the rest of society (public, decision-makers, media, etc). In the case of the ongoing climate and ecological crisis, this has been the dominant stance of many scientific actors, including the IPCC and IPBES. It has resulted in producing and making available syntheses of scientific results both on the “natural” processes and “societal” impacts. The relevance of this conception has been seriously challenged through decades of mismatch between expected and observed translation of scientific communication regarding the ongoing crisis into policy-relevant mitigation measures. At the same time, the urgency of current climate and ecological crisis calls more than ever for actionable science with a deep and immediate impact on society.

Effective communication requires that the recipients of knowledge (i) are able to understand, (ii) want to understand, and (iii) are not distracted by contradictory information (Oreskes, 2022). Most of the effort on science communication has focused on (i), ignoring that conditions (ii) and (iii) are often not met. Other cognitive or psychological issues with important political implications must also be carefully pondered, most notably the fact that popularity or acceptability of a discourse is judged by the public in relation to other discourses, and not in absolute terms, (e.g., Overton window, Simpson et al., 2022) and in relation to the position of the communicator (such as emotional state and personal actions in relation the message, e.g., Attari et al., 2019).

Here we contend that scientists joining environmental activist groups, including engaging in direct actions of civil disobedience, have the potential to enhance effective scientific communication on several levels. Indeed, scientists taking their share of discomfort and even breaking the law, is a strong signal of the emotional involvement of the scientists, of the magnitude of the crisis (e.g., the latter largely dwarfs the risk of receiving judiciary sanctions) and of the need to revise the interactions between science, media and politics. In addition to making more acceptable or even legitimizing more moderate ways of communication, such radical propositions of engagement may also raise media attention and therefore audience and support in the general public (Capstick et al., 2022).

We review recent non-violent actions involving scientists, and then discuss the complementary/synergistic aspects that such disobedience and related direct actions bring to the spectrum of scientific outreach, as a renewed way of communication and dissemination, especially about urgent challenges. Besides, the question of its complementarity with common ways

(process of peer review, consolidation of scientific knowledge before dissemination at the University) is also evaluated. The targeted strategy may not replace the "ancient system" with a new one but rather lead to the development of a new system aimed at reinforcing the efficiency of the existing ones.

## References

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