

## Policy relevant research and advice in a time of urgency

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As the sun rose on 08 of October 2018, decision makers across the world woke to the urgency of climate actions. ‘Emissions of CO<sub>2</sub> need to fall by 45 percent by 2030, reaching Net Zero by 2050[1] to keep warming to 1.5oC’ says the IPCC report, written by scientists and approved by world governments. This message was soon amplified by the heartfelt voice of the School Strikers and their sincere demands of politicians, in their clear emergency message and meme ‘We have 12 years to save our planet’.

The clock is ticking and even for the best-intended politicians, the road to Net Zero is obscure at its best, a minefield at its worse. Climate-friendly policies are frequently met with public protests. France, Norway, Ecuador and the Netherlands all have had major protests in response to rising carbon prices, threatening the governments in place and leading to dilution of policies. Elections could be lost or won on climate policies, a political trend I am convinced will grow this decade and could dominate major elections.

Questions about climate emergency now pour into my climate research community. We are asked to shed light on what a climate emergency means, what works, and how to proceed. Theory helps us only to a point. In theory, it is possible to limit climate change to 1.5°C; to set a high and rising carbon price across the economy; and to capture carbon and store it underground.

The science of policy implementation now needs to step up and meet real world challenges. This modern-day research needs to draw widely across disciplines and practices inside and outside of academia, with methods of rigorous testing and evaluation.

What does implementing successful climate policy involve in practice? Almost certainly a mix of good policy design that incorporates the starting point, rate of change needed, costs, and fair distribution of effort across society.

Almost certainly it requires stable signals that enable investments and managed risk-taking. Almost certainly it requires experimentation and safety nets to revise actions over time.



Evaluation is critical. Climate is not a policy domain to be done on the hoof. New forms of Governance are needed, to raise and broaden the levels of responsibilities, give a voice to citizens and future generations, and protect firmly the environment through the shields of law.

My own research suggests that setting policies in motion, even imperfect policies, is a good way forward. My team looked at the factors that explained decarbonisation in the 18 countries where emissions decreased the most, to find out what works. We found that countries that had most energy and climate policies in place generally had the biggest decreases in emissions. The exact reasons behind this correlation are yet to be elucidated, but the take home message to get on with implementation was clear.

Learning from experience is vital to ramp up climate policy actions at all scales. Researchers have a big role to play in partnerships for thinking-up and understanding real-world decisions and their effects for what works.

It is wonderful to wake into this new world, where the Tyndall Centre has helped shed light and identify pathways that work in this policy complex and messy but beautiful world.

[1] Note these objectives are for CO<sub>2</sub> alone, assuming emissions from other greenhouse gases such as methane decrease through time.