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POLICY BRIEFING

Governance and innovation in addressing climate change

“Given the shortcomings of the Kyoto Protocol, how should the world address the challenge of climate change?”

The Institute for Science and Civilization focuses on finding ways to understand how society can shift from one socio-technical trajectory to another that is more desirable. A particular area of research and activity is breaking the world’s current carbon-intensive path dependency.

Background

The Kyoto Protocol has failed to produce any demonstrable reductions in emissions or even in anticipated emissions growth. This is because the type of treaty regime it uses – more stringent targets and timetables, involving more countries – is ill-suited to the complexities of climate change. As a result, there is little sign that a stable, global carbon price will be established over the next 5-10 years.

Climate change is not amenable to an elegant solution because it is not a discrete problem. It is better understood as a symptom of a particular development path and its globally interlaced supply-system of fossil energy. Together they form a complex nexus of mutually reinforcing, intertwined patterns of human behaviour, physical materials and the resulting technology. It is impossible to change such complex systems in desired ways by focusing on just one thing.

Recommendations

We must radically reconsider international climate policy by taking into account six considerations:

- ◆ *Focus mitigation efforts on big emitters:* the reality is that fewer than 20 countries are responsible for about 80% of the world’s emissions. Building global consensus must start by building agreement amongst these countries. Otherwise, in the early stages of building emissions mitigation policy, the other 150 countries will get in the way.

- ◆ *Allow genuine emissions markets to evolve from the bottom up:* history has shown it is politically difficult to establish a carbon tax at a sufficient level to encourage new energy investments. A cap-and-trade scheme is an alternative to putting a price on carbon, but must start regionally. Regional markets are likely to be more stable, and can eventually be linked into a global scheme in the long-term.
- ◆ *Put public investment in energy R&D on a wartime footing:* the technologies needed to disrupt a new cycle of carbon-intensive infrastructure will only be delivered with large-scale public R&D funding. We believe Governments should make the same commitments to clean energy R&D as they do to current military research: this means US \$80 billion per year in the United States and GBP 40 billion per year in the United Kingdom. The International Energy Agency has recently said that investment needed over the next half-century will total US\$45 trillion to prevent energy shortages and greenhouse gas emissions from undermining global economic growth.
- ◆ *Increase spending on adaptation:* We need to fund adaptation investment on the same scale as mitigation investment outlined above. The ethical imperative to mitigate climate change for future generations should equally apply to the ethical imperative to protect current generations from the near-term repercussions of climate change, especially in poorer countries who depend on marginal ecosystems.
- ◆ *Work the problem at appropriate scales:* Climate change is a multi-level governance problem. We must learn from US federalism models by experimenting with local and/or regional policies to build credible institutions which markets endorse, rather than a top-down universalism approach as the Kyoto Protocol adopts.
- ◆ *Accompany policies with indirect measures:* The above policies must be accompanied by indirect measures: these range from informational instruments, such as labelling of consumer products; market instruments, such as emissions trading; and market stimuli, such as procurement programmes for clean technologies; to a few command-and-control mechanisms, such as technology standards.

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