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Climate mitigation policy as a system solution: addressing the risk cost of carbon

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ABSTRACT

Global 4C is a new international climate mitigation policy that adopts a risk management framework. Global 4C offers a financial reward for mitigation and aims to internalise a *Risk Cost of Carbon* (RCC) into the economy. Carbon taxes (i.e. carbon prices) are essential for internalising the Social Cost of Carbon (SCC), however a SCC-RCC duality is inferred with an epistemological method and is supported with a new hypothesis, called the *Holistic Market Hypothesis*. Based on the inferred SCC-RCC duality, a system of complementary market pricing is proposed as an effective response to emerging climate systemic risk and fat-tailed probability distributions for the Earth's climate sensitivity.

The recommended policy instrument is a currency, called *Complementary Currencies for Climate Change* (4C). 4C should be priced in foreign exchange currency markets (Forex) to mirror the RCC and to incentivise a spectrum of mitigation services, including clean renewable energy and carbon sequestration. A public broadcast message for climate systemic risk should be made each year, in the form of a '100-year advance 4C price alert', which is an assurance of reward prices for carbon mitigation (i.e. the 4C exchange rate) under a *Carbon Exchange Standard* (CES). The CES is a macro-prudential protocol for central banks to provide collective insurability against climate catastrophe and incentives for socio-ecological co-benefits.

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1. Introduction

Climate change poses deep risks to human welfare and ecosystems, and it has been described as a wicked problem (Sun and Yang 2016) for reasons relating to its complex relationships, fragmentation of social responses, and an apparent absence of a policy toolkit for decarbonising the economy to a specific carbon quota (Anderson and Bows 2011; Knutti and Rogelj 2015; Nordhaus 2016; Rogelj et al. 2016). In response to the various challenges of the wicked problem, this exposition confronts the central question of how climate finance could be most effectively mobilised to respond to the 1.5–2°C ambition of maximum global warming as agreed at the 21st Conference of the Parties (COP21) in Paris (UNFCCC 2015).

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