

Toward a Trans-Pacific Carbon Market: Politically Feasible and Sustainable (ToPCaPS)

Climate change is a major threat to modern global society, but also a unique chance for transforming our society into a more sustainable one. Carbon markets offer a promising answer to that challenge, and Pacific abutters are amongst the biggest polluters in the world. Using an inter- and transdisciplinary approach I will (1) analyze technical and political challenges of establishing a sustainable transpacific carbon market as the major means of climate policy in the region, (2) develop a model for sustainable linking, and (3) advance the respective politico-economic theory.



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Purpose

Climate change is one of the greatest challenges facing humanity in the 21st century, but also a great chance to make our society more sustainable. Carbon markets offer a promising answer to that challenge. And Pacific abutters are amongst the biggest polluters.

Against this background the project intends to support (inter)national climate policy by elaborating sustainable and politically feasible policy solutions for the transpacific region. It will investigate the requirements, chances, and barriers of establishing a transpacific carbon market and explore carbon market design, as well as societal, political, institutional, and technical prerequisites for linking existing and including upcoming domestic carbon markets in North America, Northeast Asia, and Oceania. Of key importance is the necessity of truly sustainable solutions, which not only comply with economic and environmental criteria, but also consider justice. Only such solutions would be in line with the 2015 UN Sustainable Development Goals and have a chance of societal acceptance.

In order to reach its goals, the project will follow an inter- and transdisciplinary approach. I will apply economics, political science, and political philosophy theories and discuss results in a timely manner with stakeholders in practice. Traditional analytic tools will be expanded and a politico-economic sustainability-based approach will be newly developed and confronted with empirical data.

The project will thus provide an innovative framework

for evaluating linked carbon markets against sustainability criteria and for judging their political feasibility. And it will also offer a design model for linking carbon markets across the Pacific. The project thus advances politico-economic theory and provides immediately applicable guidance for truly sustainable (inter)national climate policy.

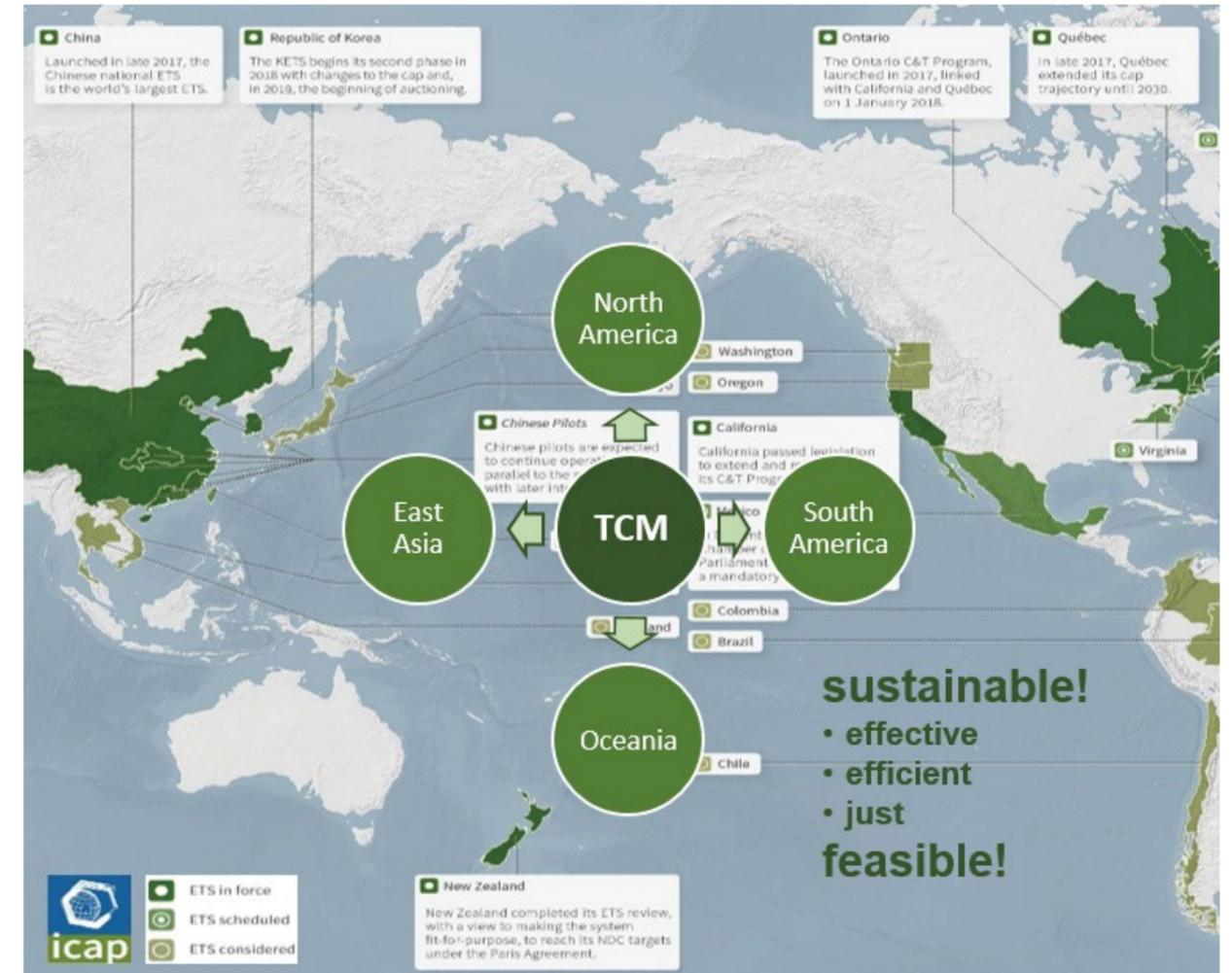
Research Steps

- (1) refine sustainability criteria for carbon market design and linking such as accuracy in reaching the target and innovation incentives, cost-efficiency and the polluter-pays-principle, inter- and intragenerational justice as well as inter(national) redistributive justice and equality (Year 1).
- (2) compare the design and evaluate the performance of domestic carbon markets such as the Tokyo, South Korea, China, California, New Zealand ETS and policy proposals in Australia, Mexico etc. with respect to sustainability criteria and make recommendations for program reform (Year 2).
- (3) analyze the linking-readiness of domestic carbon markets in the respective region, estimate the impacts of transpacific carbon market linking on market performance with respect to the sustainability criteria, and make recommendations for market integration (Year 3).
- (4) improve politico-economic theory with respect to the specifics of climate policy such as the multitude of

(inter)national actors and to differences in the socio-cultural, politico-institutional, economic-technological setting in Western and Asian countries etc. (Year 4).

- (5) analyze the political process that led to the implementation of domestic carbon markets in the respective jurisdictions, evaluate chances for carbon market integration and expansion to other jurisdictions, and make recommendations for politico-institutional reform (Year 5).

ToPCaPS in a Nutshell



Preparatory Publications

- Sven Rudolph, Elena Aydos, Takeshi Kawakatsu, and Achim Lerch (2018) How to Build Truly Sustainable Carbon Markets. In: *Solutions* 9(1) (<https://www.thesolutionsjournal.com/article/build-truly-sustainable-carbon-markets/>)
- Sven Rudolph, Achim Lerch, and Takeshi Kawakatsu (2017): Developing the North American Carbon Market – Prospects for Sustainable Linking. In: Weishaar, Stefan et al. (eds.) *The Green Market Transition: Carbon Taxes, Energy Subsidies and Smart Instrument Mixes*. Cheltenham, UK/Northampton, US: Edward Elgar, 209-230
- Sven Rudolph and Friedrich Schneider (2013): Political barriers of implementing carbon markets in Japan – A Public Choice analysis and the empirical evidence before and after the Fukushima nuclear disaster. In: *Environmental Economics and Policy Studies*. 15(2), 211-235

Selected Collaborations

- Dr. Elena Aydos, Senior Lecturer, University of Newcastle Law School, Australia
- Prof. Dr. Achim Lerch, FOM Hochschule für Oekonomie und Management, Germany
- Takeshi Kawakatsu, PhD, Assoc. Professor, Faculty of Public Policy, Kyoto Prefectural University, Japan