## 34 – Healing the Achilles' Heel? Or: How to Include Transport Fuels in Emissions Trading Schemes: Design Lessons from California for Germany's New National Fuels ETS Sven Rudolph, Seiji Ikkatai, Elena Aydos, Takeshi Kawakatsu, Achim Lerch

Emissions from the transport sectors are the Achille's Heel not only of climate policy in general but also of Emissions Trading Schemes (ETS). Despite of emissions reductions in industry and electricity sectors in many countries, transport sector emissions have not significantly decreased, and ETS, with some exemptions, have mainly focused on large stationary emission sources. From 2021 onwards, however, Germany will phase-in a national ETS for heating and transport fuels, using a fixed-price escalator for the first years and earmarked revenue recycling to citizens. California has already gathered five years of experiences with fuels treatment in an ETS, which could help improve fuel ETS program design towards a more sustainable approach, in Germany and beyond.

Against this background, we will describe the design of the German National Fuels ETS and evaluate it based on ambitious sustainability criteria for ETS design. We will then analyze the California Cap-and-Trade Program with respect to coverage, cap size, initial allocation, price management, and revenue recycling as well as look at its results in order to derive design lessons for a sustainable German National Fuels ETS. We base our analysis on sustainability economics concepts of environmental effectiveness, social justice, and economic efficiency and, more concretely, on sustainability criteria developed for ETS design and evaluation.

We mainly conclude that ETS can be used for sustainably limiting transport sector emissions, but the respective design has to reflect the specifics of the sector. Germany's new program could greatly benefit from immediately moving to full auctioning of capped emissions and re-distributing all revenues as an equal per capita climate dividend.

## Biographical note

Dr. Sven Rudolph is Associate Professor at Kyoto University's Hakubi Center / Graduate School for Global Environmental Studies, Japan. He holds a doctoral degree in economics from Kassel University, Germany. His expertise is in sustainability economics and political economy. Besides being a passionate university teacher, Sven has given numerous lectures at international conferences and has published his works in four books and a variety of renowned international journals. Sven has work experience as an environmental NGO campaigner, he has informed national governments in Germany and Japan, and he has extensively collaborated across discipline and national borders. Sven has presented annually at GCET since 2007 and has become a member of its International Program Committee. His current research is focused on linking domestic carbon markets in the Pacific region, multi-level governed carbon pricing in Canada, and the political economy of sustainable carbon markets across the globe.