

Minimising the impact of aviation emissions: what way forward?
An expert meeting aiming to lift off sustainable academic travelling
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“Managing the transition to low-carbon aviation”
by René Kemp
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Biography:

René Kemp (NL) is professor of innovation and sustainable development at the ICIS research institute of Maastricht University and professorial fellow at UNU-MERIT in Maastricht (NL). He is an eco-innovation researcher interested in the interplay of factors behind eco-innovation and the factors that keep eco-innovation back. He wrote a book on environmental policy and technical change and wrote seminal articles on the management of sustainability transitions. The last 5 years, his research agenda shifted to the circular economy, transformative social innovation, urban labs and immaterial needs satisfaction.

He has worked at different universities and research institutes as a visiting researcher and payroll employee and: IPTS in Sevilla (Spain), STEP in Oslo (Norway), University of Twente in Enschede, TNO in Delft and Erasmus University in Rotterdam (The Netherlands), Harvard University in the US, CIRUS in Switzerland and the EIRC in Hobart, Australia.

Information on projects, editorial positions and publications can be found at <http://kemp.unu-merit.nl/>.

Abstract:

Aviation is one of the most unsustainable sectors in the world because of noise problems, NO_x and soot emissions at high altitude and CO₂ emissions, problems which are growing worse because of the big growth in aviation and slow progress in fuel economy. In the EU, air emissions have been brought under the ETS system in 2012 but the system pertains only to intra-EEA movements.

A search for zero emission fuels is underway but the higher costs act as a strong barrier. In my presentation, I investigate the possibilities for a transition to zero emission aviation in the light of the generative mechanisms of the transitions to electric mobility and renewables. Prospects for a quick transition to sustainable aviation are low, but the market for carbon offsets for aviation-based CO₂ emissions is growing.

Apart from examining progress towards alternative forms of propulsion and the evolution of carbon offset markets for aviation-based CO₂ emissions, I examine the possibilities for transition management based on

- Forward looking thinking (visions of alternative systems and new business)
- Innovation activities by actors interested in alternative systems
- Putting pressures on kerosene-based aviation (easier to do in case of well developed alternatives)
- The institutionalization of the transition to Zero Emission Aviation in Europe and other parts of the world.