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Dear Mr Hilton,

Reputational risk to CSIRO from its aviation emissions reporting

I write with concerns related to replies we have received to our correspondence with your team members, about last year's "Sustainable Aviation Fuel Roadmap", that the CSIRO jointly authored with Boeing*, and the effect they have on the reputation of our esteemed CSIRO.

We are concerned that information, presented by the CSIRO in their replies to us, lacks balance and independence.

Emissions reductions from Sustainable Aviation Fuels

The CSIRO Roadmap has failed to report assessments by international bodies, finding against emissions reductions from the use of so-called Sustainable Aviation Fuels (SAF). ICAO's CORSIA scheme designates as "sustainable" fuels that reduce life cycle emissions by as little as 10%¹. The Court of Amsterdam in probing KLM's emissions reduction claims (including those for offsetting), found that "These measures [SAF & offsets] only marginally reduce the negative environmental aspects and give the wrong impression that flying with KLM is sustainable", and imposed a legal obligation on KLM to in future inform customers "honestly and concretely"².

Information sources

CSIRO Executive Director, Future Industries, Kirsten Rose in her reply, stands by her team's analysis drawn from the ICAO, without reference to the evidence showing ICAO bias in favour of aviation-industry interests. For instance, the thorough and independently investigated Influence Map review of ICAO's corporate capture³ found that by focusing on reporting only raw CO₂ emissions, while dismissing the significant, well-evidenced non-CO₂ heating effects as poorly understood, ICAO have underplayed the climate impact of aviation. ICAO's aviation climate strategy is described as "critically insufficient" to meet Paris Agreement emissions reduction goals, and its greenhouse gas emissions will contribute to a 4°+C world. By not including a balanced assessment of the aviation industry's greenwashing, such as that by Jo Dardenne, Director, Aviation at the NGO Transport and Environment⁴, the CSIRO's report could be said to be misleading the Australian public.



An unrealistic destination

The Roadmap, on our reading, proposes the replacement of a global aviation fleet of planes, growing 4% annually, twice, and in quick time. First to enable 100% bio- or renewables-fuelling of all planes. And then to enable hydrogen fuelling of all planes. Presenting such a scenario as plausible to the public undermines the CSIRO's credibility. The February 2023 report from the Royal Society "Net zero aviation fuels: resource requirements and environmental impacts" concluded that there is no single, clear, sustainable alternative to jet fuel able to support flying on a scale equivalent to present day use⁵. Additionally, the Roadmap's land use scenarios are unrealistically conflicted. How can flight emissions be offset with nature-based planting at the scale required, at the same time as land is allocated at the scale required to grow a new biofuels industry based on monoculture farming? The Roadmap requires expensive investor and taxpayer support for new renewable energy infrastructure to supply alternative aviation fuel right when growing investment in renewables is still needed to replace coal, gas and petrol fuelled transport⁶.

Please do not misunderstand us. We applaud independent CSIRO research. Aviation is a difficult area to decarbonise. Critical thinking from a climate science perspective needs to be applied to aviation at this time of accelerated warming – hitting 1.5°C last year, with an unacceptably high risk of hitting 2°C in the late 2030s⁷. Ice sheets are now losing mass five times faster than they were 30 years ago⁸.

In this reality, overall rapid degrowth of fossil fuel use, while triaging their deployment to the most critical applications, would appear to be the safest way forward⁹.

We would love to see the CSIRO expand its 'aviation and climate' brief to include consideration of the implications of financial and land use constraints to the supply of jet fuel, that Kirsten Rose acknowledged the Roadmap lacked. Without such consideration of the actual real-world feasibility of the SAF production levels it postulates, the public is justified in questioning the usefulness of the Roadmap to the development of public policy. We would like to see our trusted peak science research body make it clear to the public when the commercial concerns of Boeing conflict with the unbiased science researched by the CSIRO.

Our assessment is that integrated research on climate and technological limits to emissions reductions in hard-to-mitigate sectors would make possible a CSIRO recommendation for flight reductions as the only way to quickly enough cut aviation's contribution to warming.



In light of your public defence of independent science research when some politicians attacked the CSIRO recently, we hope to see independent and balanced CSIRO research championing such a prudent future for aviation.

Sincerely,
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* Recent letters from Australian Flight Free pledgers to the CSIRO staff, and their responses, can be found in the left hand sidebar at flightfree.net.au/the-plane-facts/are-sustainable-fuels-emissions-free/

Notes

- 1 https://www.transportenvironment.org/wp-content/uploads/2021/07/2019_09_Corsia_assesement_final.pdf
- 2 <https://www.theguardian.com/world/2024/mar/20/dutch-airline-klm-mis-led-customers-green-claims-court-rules>
- 3 https://seatacnoise.info/wp-content/uploads/IM_Aviation_Report_10-22.pdf
- 4 <https://www.transportenvironment.org/discover/aviations-ivory-tower-may-be-starting-to-fall/>
- 5 <https://royalsociety.org/news/2023/02/net-zero-aviation-fuels-report/>
- 6 <https://royalsociety.org/news/2023/02/net-zero-aviation-fuels-report/>
- 7 <https://www.theguardian.com/environment/2024/jan/08/global-temperature-over-1-5-c-climate-change>
- 8 <https://www.bbc.com/news/science-environment-65317469>
- 9 <https://www.resilience.org/stories/2024-03-15/we-need-a-plan-for-the-transition-to-renewable-energy>