

Aviation growth in a climate of change

Projected growth in aviation over the next 20 or 30 years could have severe implications for global temperature changes as the effects of greenhouse gases (GHG) take their toll.

Other modes of transport, including cars, are currently reducing their emission levels, yet the aviation industry looks set to move in the opposite direction unless mitigating steps are taken.

One such initiative has been a 12-month Omega-funded study at Manchester Metropolitan University (MMU) which is assessing the impact of aviation growth on global temperature changes. Headed by Dr Sarah Rxxxxx, the study is building on previous research in this area and synthesising information to create an up-to-date picture in the context of various GHG emission scenarios up to the year 2050.

Commenting on her team's work at MMU, Dr Rxxxxx emphasised that their findings pointed up the consequences of aviation growth in a sequence of 'what if?' scenarios:

"The results of our study so far confirm that mitigating action will need to be taken at policy-making level if our projections of aviation growth are correct."

Reducing GHG emissions in an aviation context may require some radical re-thinking of aircraft design, fuels and associated emissions. Criteria affecting these and other elements are being analysed by researchers using the internationally respected MAGICC model (Model for the Assessment of Greenhouse Gas Induced Climate Change).

MMU have used various time horizons – 2020, 2030 and 2050 – to assess their findings in the context of various climate mitigation scenarios, including those compatible with the EU's 2°C climate change target.

Results will provide invaluable data, not only for the wider scientific community but also for government authorities and aviation industry stakeholders. The aviation growth scenarios and their impact on climate change will enable informed decision-making on the future of aviation policy and investment strategies in the industry.

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