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# SENECA project: Climate effects assessment of supersonic aviation

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The expected market (re)entry of supersonic aviation has led the International Civil Aviation Organization (ICAO) to initiate work to define standards on noise and NOx emissions for the advent of this new generation of supersonic aviation. In this context and associated to the European ambitious goal to reach climate neutrality in 2050, the H2020 SENECA project aims at developing beyond state-of-the-art technologies to further reduce the environmental impact of supersonic aviation. SENECA's project data will contribute to the ICAO level discussions in order to scientifically accompany and strengthen the European perspective on the necessary regulations for novel supersonic aircraft. The paper is dedicated to the environmental impact's assessment of the supersonic aviation using numerical methods such as CFD modelling and global chemistry transport models (CTMs). An overview of the work package's structure dedicated to the environmental impact within SENECA will be given as well as first results related to the emission indices and the climate effects calculations for different future supersonic fleet scenarios.