AIRCLINS

Aviation Impact Reduction through Climate Intelligence for Sustainable ATM

30 Months | TRL1 | Aviation Green Deal

Challenge

Non-CO_2 GHGs and contrails majorly contribute to climate change, but are not operationally integrated

Weather-related hazards increasingly disrupting all branches of aviation

Unmet need for **UAS environmental impact assessment frameworks** for emissions and noise alike

Approach

ATM Climate Impact Toolbox

- **Wind Shear Resilience**
- **Climate-Aware Operations**

Common Integration Framework

- **Eco-Metrics Validation**
- **Hazard-Cast Integrated Platform**

U-space Eco-Safety Toolbox

Methodology

Climate & Environmental Intelligence System

- Scientific Foundations
- Data & AI Integration
- Environmental Metrics
- Simulation Testing

Integration & Communication Backbone

- Modularity with interoperable tools
- Scalability in size and complexity
- Cross-domain integration

Expected Results

Enhanced hazard awareness and resilience in ATM/U-space

Environmental sustainability and climate-neutral operations

Paving the way to integration in the Digital European Sky and operational safety

Setting the scene for standardisation and regulatory alignment in climate-intelligent ATM

Project coordinator

INCAS National Institute for Aerospace Research "Elie Carafoli"

Partners

AGILE

CIRA Italian Aerospace Research Centre

DLR Deutsches Zentrum für Luft- und Raumfahrt German Aerospace Center

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The project has received funding from the SESAR 3 Joint Undertaking under the European Union's Horizon Europe research and innovation programme under grant agreement No 101289570.

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or SESAR Joint Undertaking. Neither the European Union nor the granting authority can be held responsible for them.

SUPPORTED BY sesar JOINT UNDERTAKING

Co-funded by the European Union