

# Alternative Jet Fuel Supply Chain Analysis - CORSIA Fuels Support

## Purdue University

PI: Farzad Taheripour

PM: Anna Oldani

Cost Share Partner: NESTE Corporation

## Objective:

- Provide data and modeling practices to **estimate ILUC values for alternative SAF pathways**
- Develop required economic analysis to **assess economic feasibility and profitability of SAF pathways**

## Project Benefits:

- Improve ILUC estimation method for SAF pathways
- Develop methodologies to calculate direct land use change (DLUC) emissions
- Improve emissions factor databases and modeling approach

## Research Approach:

Sustainable aviation fuels (SAFs) are essential in achieving carbon-neutral growth in aviation

Biomass-based SAFs may induce global land use changes and associated carbon stock

CORSIA Life Cycle Analysis (LCA) has two components: **Core LCA** and **ILUC**

- Use GTAP-BIO model to **assess induced land use change (ILUC) emissions**
- Use PE models for **economic feasibility analysis**
- Use Techno-Economic Analysis to study supply chain from feedstock production to aviation fuel

## Major Accomplishments (to date):

Provided required data and modeling practices to **estimate ILUC values for alternative SAF pathways** and **developed required land use analyses** to support the Fuels Task Group (FTG) activities and goals.

## Future Work / Schedule:

- Further improve the GTAP-BIO model to assess ILUC values for new pathways and new regions
- Evaluation of ILUC values for new pathways.
- Develop policy analyses to support SAF production