



# ALTA AGM & AIRLINE LEADERS FORUM



BUENOS AIRES  
ARGENTINA  
OCTOBER 16-18  
**2022**





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## Smart Regulations for Sustainable Aviation Fuels

Dr. Prem Lobo



Federal Aviation  
Administration

# Overview

- U.S. Aviation Climate Action Plan
- Sustainable Aviation Fuels (SAF) Policy
- Efforts on developing global SAF supply chains



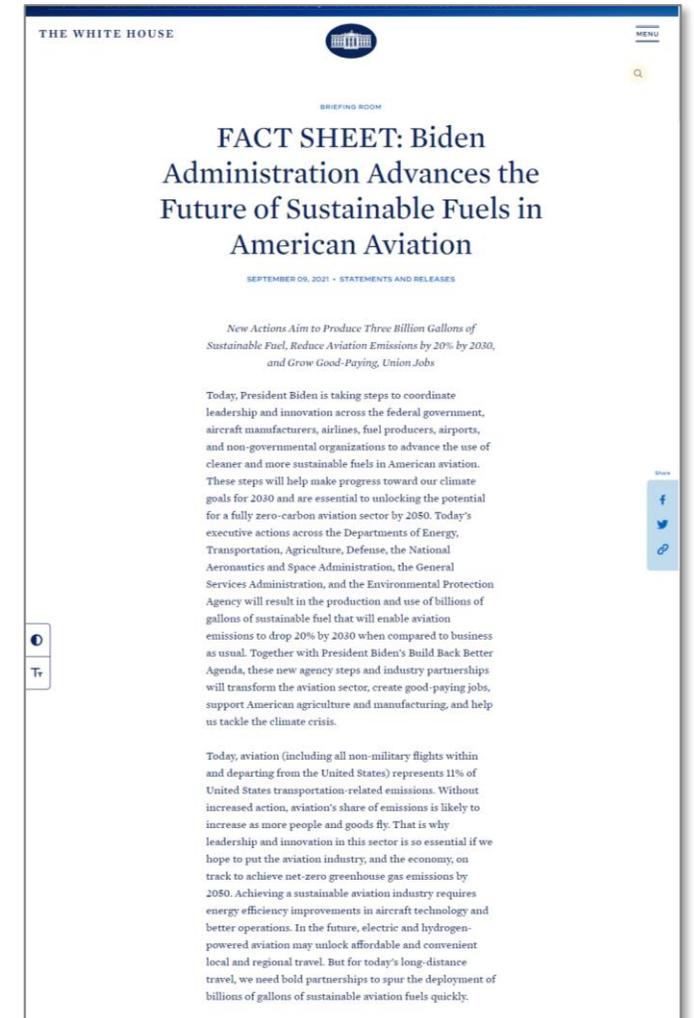
# White House Sustainable Aviation Event

On September 9, 2021, government and industry leaders met to discuss actions and make new announcements regarding efforts to address aviation and climate change in the near-term, with a view to long-term ambition.

Key federal actions include:

- A new Sustainable Aviation Fuel Grand Challenge to inspire the dramatic increase in the production of sustainable aviation fuels to at least 3 billion gallons per year by 2030;
- An increase in R&D activities to demonstrate new technologies that can achieve at least a 30% improvement in aircraft fuel efficiency;
- Efforts to improve air traffic and airport efficiency to reduce fuel use, eliminate lead exposure, and ensure cleaner air in and around airports; and
- The demonstration of U.S. leadership both internationally and through the federal example.

“...the Administration also plans to release an aviation climate action plan in the coming months, which will set forth a comprehensive plan for aviation.”



# Aviation Climate Action Plan

- International Civil Aviation Organization (ICAO) – “State Action Plans”
- Plan builds on ongoing FAA Environment & Energy Program – long-term focus on reducing climate impacts of aviation
- Administration focus on climate – Achieving net zero emissions economy-wide by 2050
- Climate Action Plan Press Release:  
<https://www.faa.gov/newsroom/us-releases-first-ever-comprehensive-aviation-climate-action-plan-achieve-net-zero>
- Climate Action Plan Document:  
[https://www.faa.gov/sites/faa.gov/files/2021-11/Aviation\\_Climate\\_Action\\_Plan.pdf](https://www.faa.gov/sites/faa.gov/files/2021-11/Aviation_Climate_Action_Plan.pdf)



# U.S. Aviation Climate Goal

To be effective, a goal should be clear, achievable, and ambitious with specific actions that can be taken to achieve it. The goal outlined below contributes to the broader objective to achieve net-zero GHG emissions economy-wide by 2050.

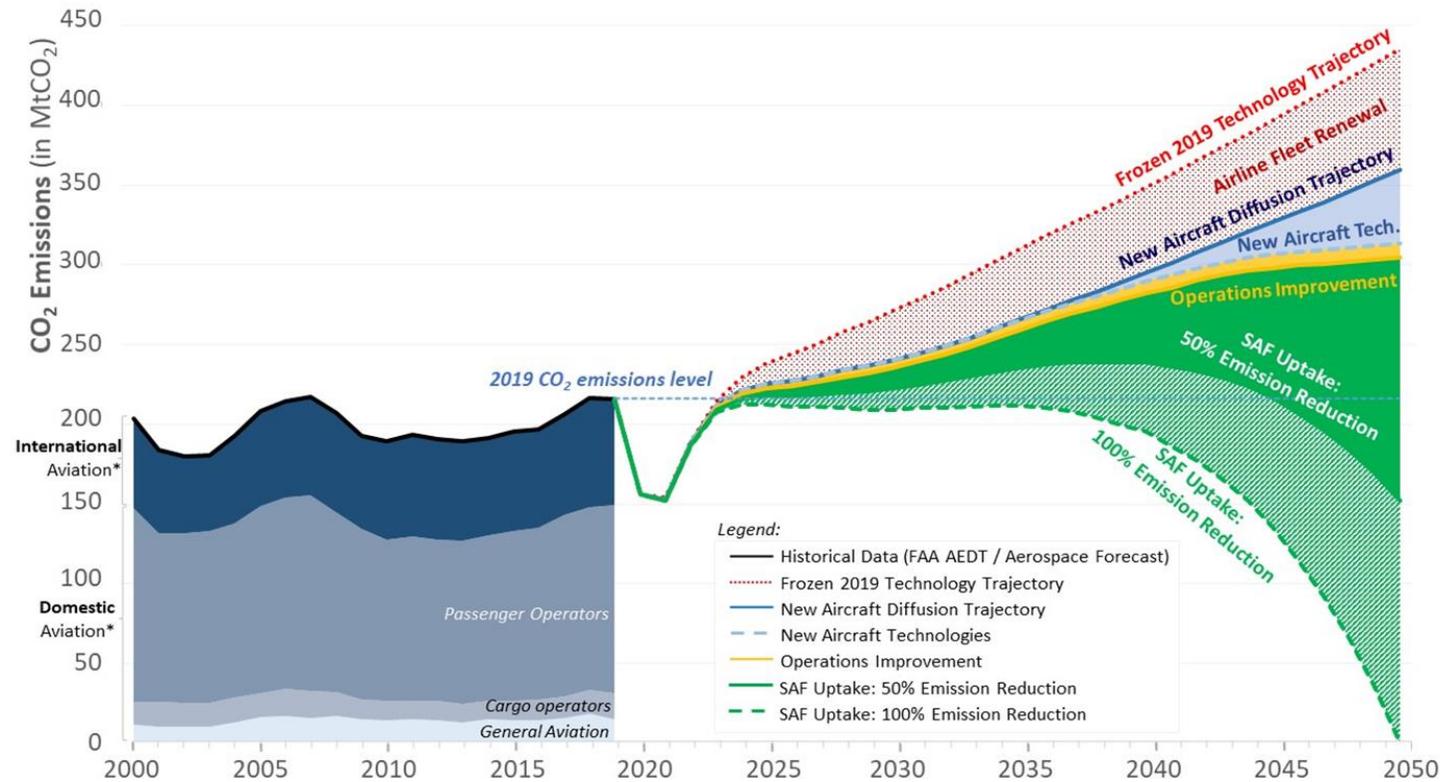
***U.S. Aviation Climate Goal:  
Net-Zero GHG Emissions\* from U.S. Aviation Sector\*\* by 2050***

\* Aviation GHG emissions include life cycle carbon dioxide (CO<sub>2</sub>), nitrous oxide (N<sub>2</sub>O), and methane (CH<sub>4</sub>) emissions. Aircraft engines produce negligible amounts of nitrous oxides and methane, so this plan has a focus on aviation combustion CO<sub>2</sub> emissions and well-to-tank life cycle GHG emissions (CO<sub>2</sub>, N<sub>2</sub>O, and CH<sub>4</sub>). The U.S. Aviation 2050 Goal is based on emissions that are measurable and currently monitored. Research is ongoing into the climate impacts of aviation-induced cloudiness and the indirect climate impacts of aviation combustion emissions (see section 7 for details on the climate impacts of aviation non-CO<sub>2</sub> combustion emissions).

\*\* This U.S. aviation goal encompasses CO<sub>2</sub> emissions from (1) domestic aviation (i.e., flights departing and arriving within the United States and its territories) from U.S. and foreign operators, (2) international aviation (i.e., flights between two different ICAO Member States) from U.S. operators, and (3) airports located in the United States.

# Sustainable Aviation Fuels

Sustainable Aviation Fuels (SAF) will be critical to the long-term decarbonization of aviation. Through a range of policy instruments, including the SAF Grand Challenge, the U.S. Government will work with industry to rapidly scale up SAF production with the goal of meeting the fuel needs of U.S. aviation by 2050.



\* Note: Domestic aviation from U.S. and Foreign Carriers. International aviation from U.S. Carriers.

# SAF Grand Challenge

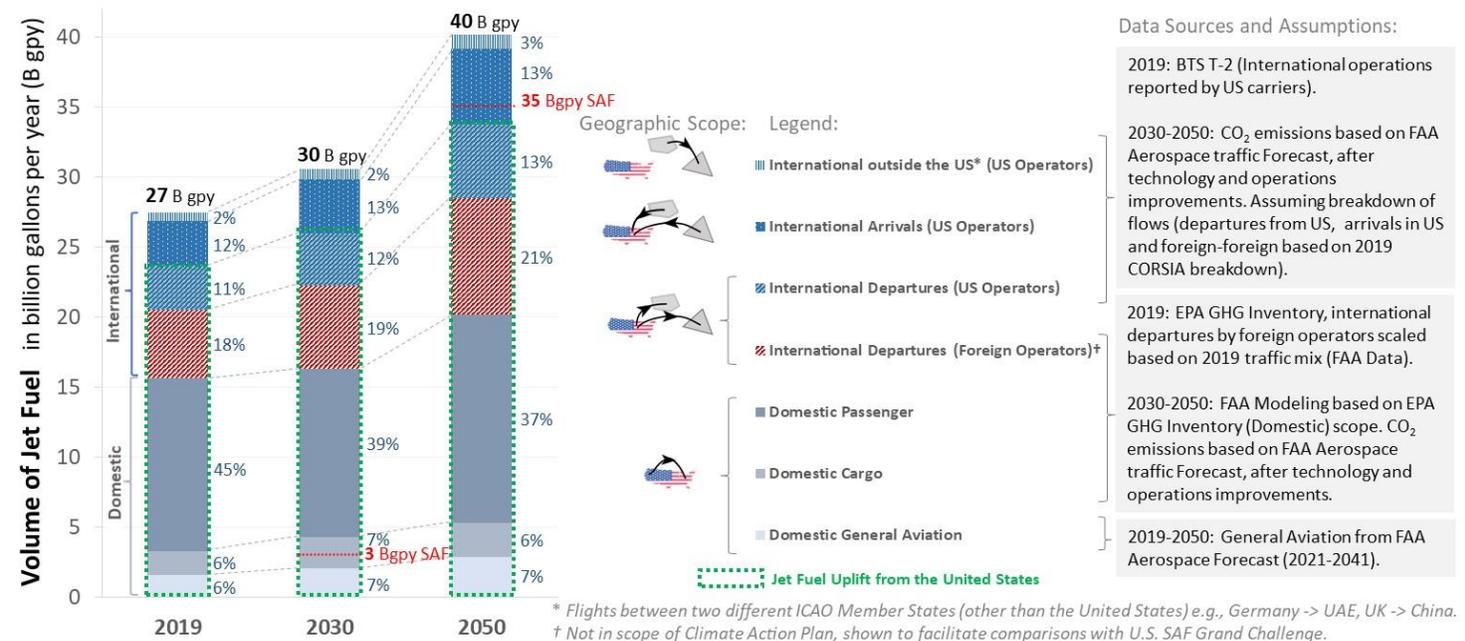
The US Government has established a multi-agency effort led by the DOT, DOE, and USDA to implement the “SAF Grand Challenge”

## Objectives:

- Expand SAF supply and end use
- Reduce cost of SAF
- Enhance sustainability of SAF

## Goals:

- U.S. SAF production of 3 billion gallons per year by 2030
- 100% of U.S. aviation fuel demand by 2050 (projected 35 billion gallons per year)



Potential demand for jet fuel in gallons per year (gpy) across domestic operations (by U.S. and Foreign Carriers)

# SAF Grand Challenge Roadmap

SAF Grand Challenge Roadmap was released on September 23, 2022

The roadmap lays out six action areas:

- Feedstock Innovation
- Conversion Technology Innovation
- Building Supply Chains
- Policy and Valuation Analysis
- Enabling End Use
- Communicating Progress and Building Support



# SAF Policy

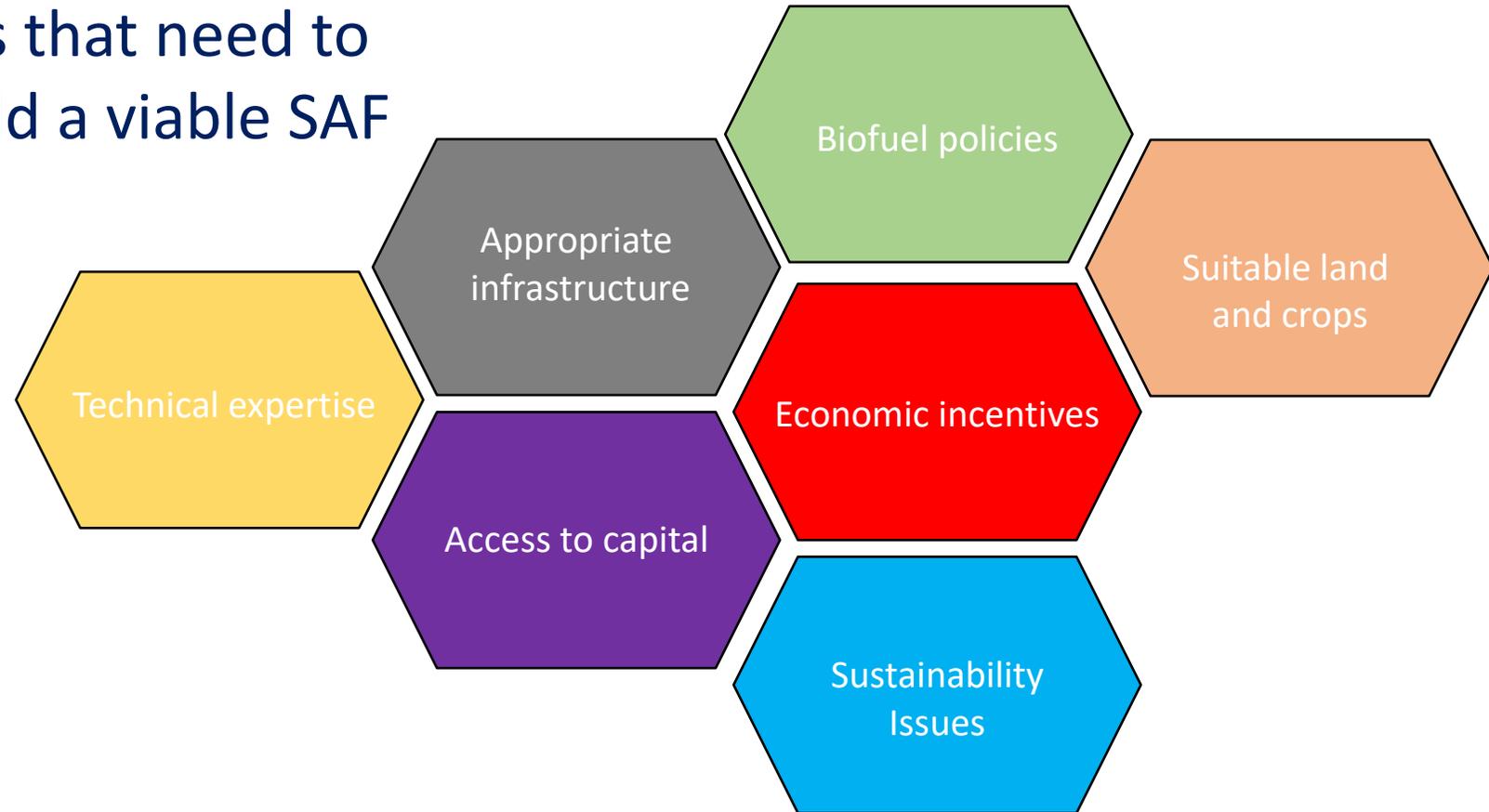
## Inflation Reduction Act (August 2022)

- *Section 13204 SAF Blenders Tax Credit (BTC)*
  - \$1.25 per gallon for blenders that supply SAF with 50 percent or greater lifecycle emissions reductions compared to conventional jet fuel (up to a maximum of \$1.75 per gallon)
- *Section 13704 Clean Fuel Production Credit*
  - After the BTC sunsets in 2024, SAF will be eligible for the new Clean Fuel Production Credit – not exclusive to SAF – until 2027
- *Section 40007: New SAF and Tech Grant Program*
  - Enable production, transport, blend, or storage of SAF, and to develop or apply low-emission aviation technologies

# Global SAF Supply Chain Development

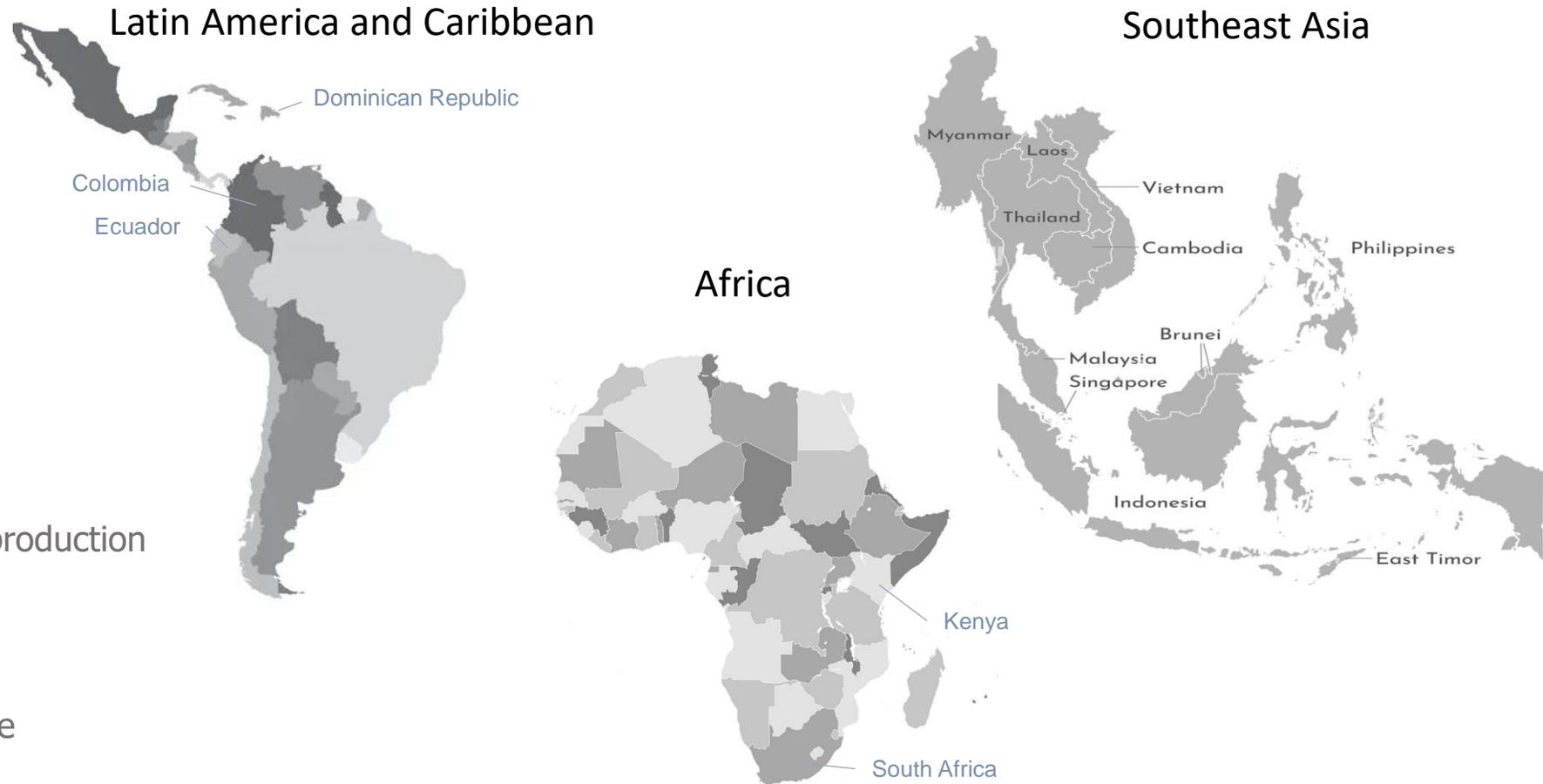


Every country and region has a unique set of challenges and opportunities that need to be carefully evaluated to build a viable SAF supply chain



# Global SAF Supply Chains

ASCENT Project 93 - Collaborative Research Network for Global SAF Supply Chain Development

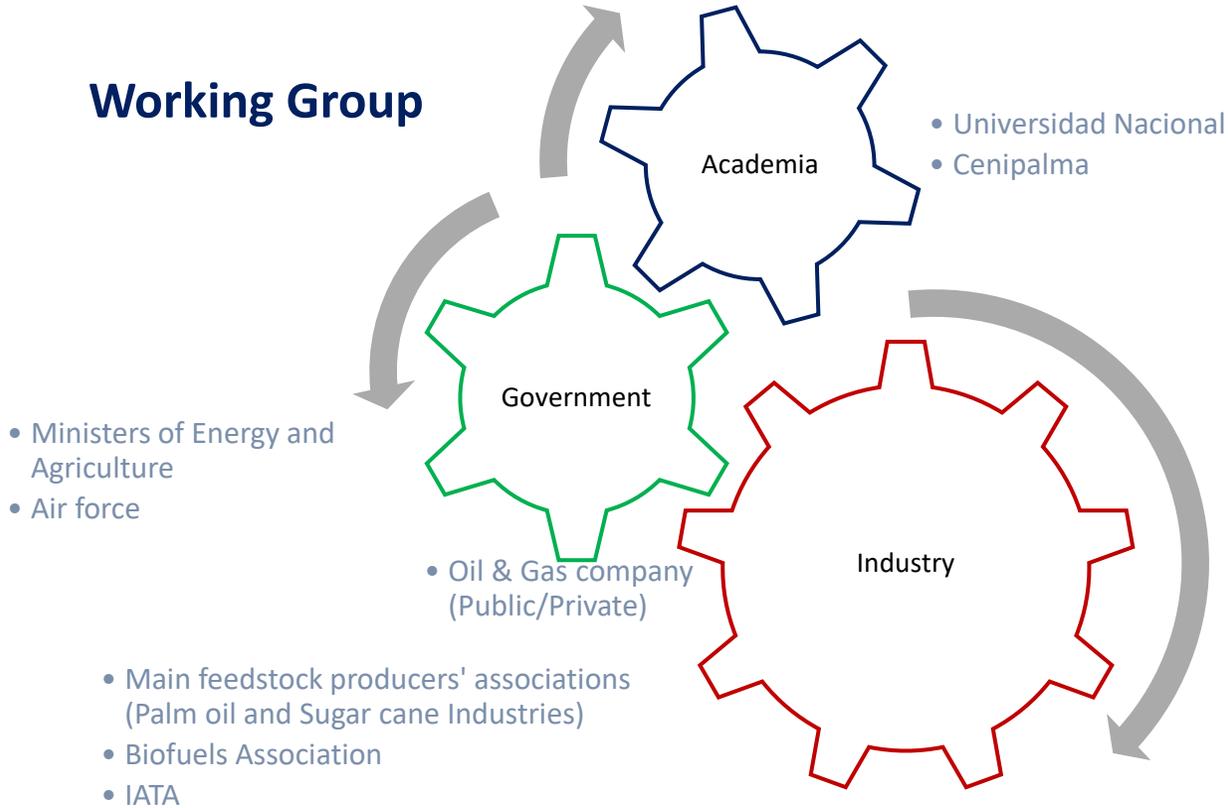


## Research Focus

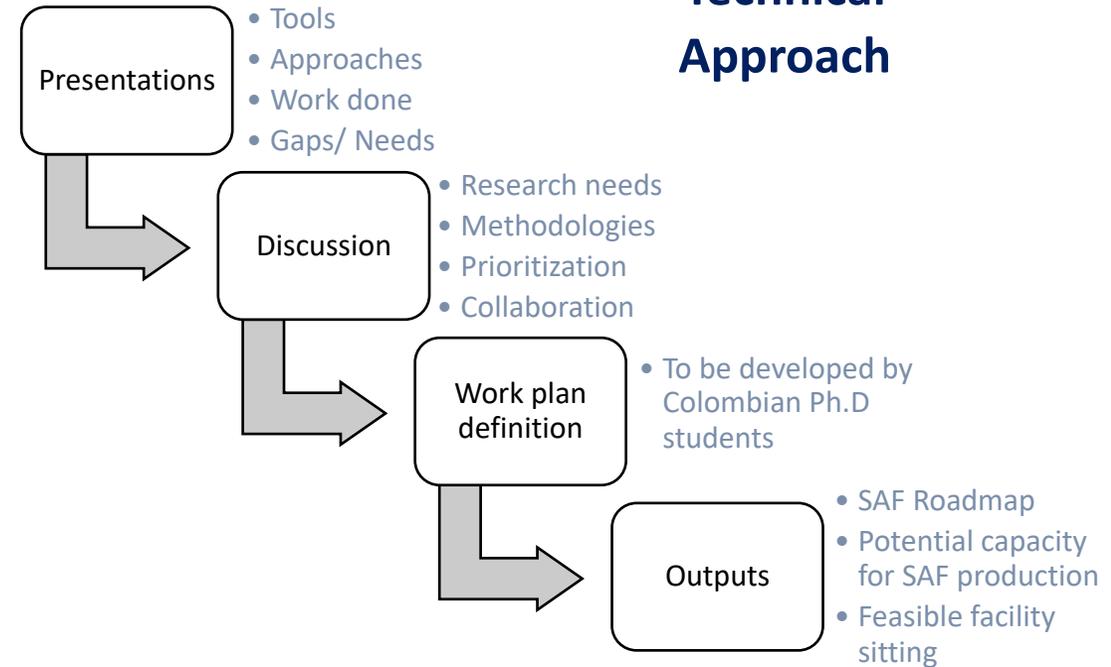
- Economics of SAF production
- Policies
- Finance
- Feedstock Challenge

# Case Study: Colombia

## Working Group



## Technical Approach





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