



Financing of programs for reductions of CO2 emission in aviation industry through Sustainable Aviation Fuel(SAF), Low Carbon Aviation Fuels (LCAF) and Aviation Cleaner Energy.

Second Arab Forum for Environmental Protection in the Arab Civil Aviation Industry"
Marrakech, 26th to 27th February 2024



SAF development challenges

1. High Initial Costs
2. Economic Viability
3. Market Uncertainty
4. Infrastructure Investments
5. Access to Capital
6. Policy and Regulatory

R



Financing SAF programs: What financial solutions

1. Government Incentives
2. Public-Private Partnerships
3. Green Finance Instruments
4. Carbon Pricing
5. International Collaboration
6. Long-Term Purchase Agreements
7. Technology Innovation Funds

Corporate Sustainability
Initiatives



SAF financing solutions : Role of International Financial Institutions

1. Investment Facilities
2. Loan Guarantees
3. Policy Advocacy
4. Technical Assistance
5. Research and Development Funding



World Bank Report: The Role of Sustainable Aviation Fuels



Key Messages

- 1. SAF will need to play a major role** in the decarbonization mix as it is the only option that can generate significant GHG emissions reduction in the medium-term already.
- 2. Current SAF production plans are dominated by OECD locations**, developing countries are missing out on significant economic, environmental and social benefits of SAF production.
- 3. SAF production can reduce up to 58% of aviation GHG emissions compared to business as usual in 2050** – this will require significant policy support, even more so in developing countries.
- 4. Required investment for the scale-up of SAF is high, but comparable** to current and historical investments in other energy sectors.
- 5. Developing countries risk “being left behind”, when it comes to access to SAF.** There is no systematic effort yet to explore and evaluate SAF potential in emerging countries, despite favorable feedstock endowment both in sustainable biomass and renewable resources and economic development co-benefits such as jobs creation and GDP growth.

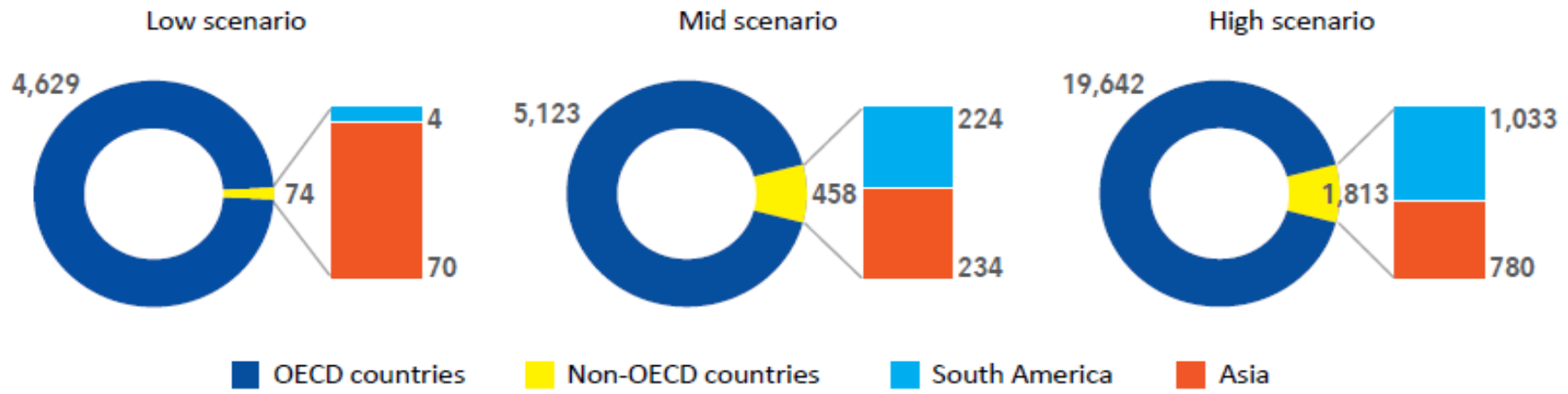


OECD countries dominate current & announced SAF production

Developing countries are underrepresented in short-term SAF production plans... only 10% by 2025

Figure 3.3. SAF Production in 2025, by Scenario, OECD and Non-OECD Countries

Kilotons



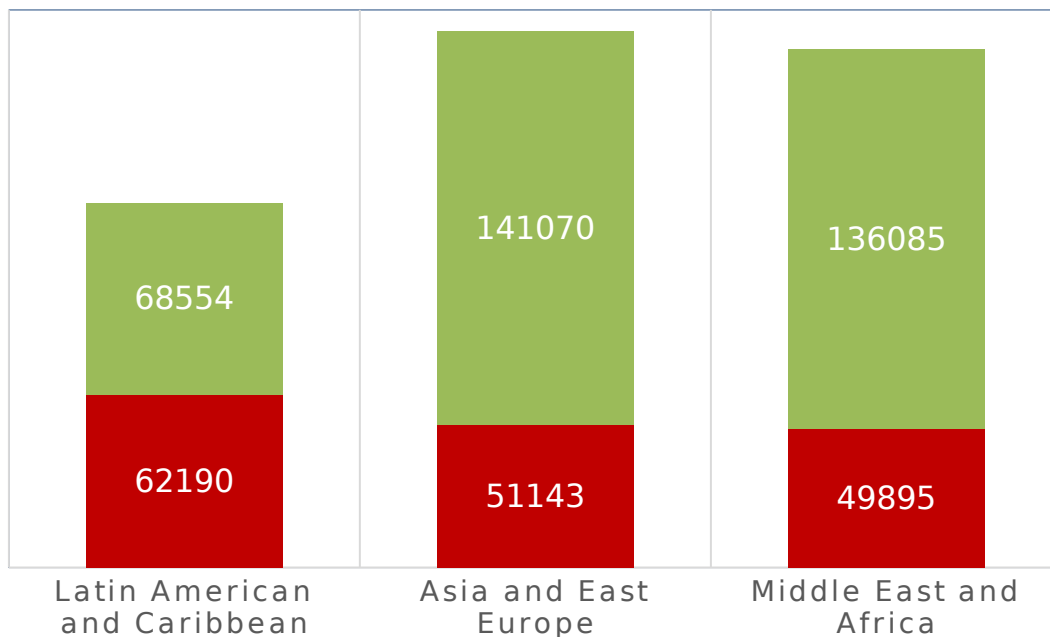
Source: World Bank (2022)



Significant potential for feedstock in non-OECD countries exists

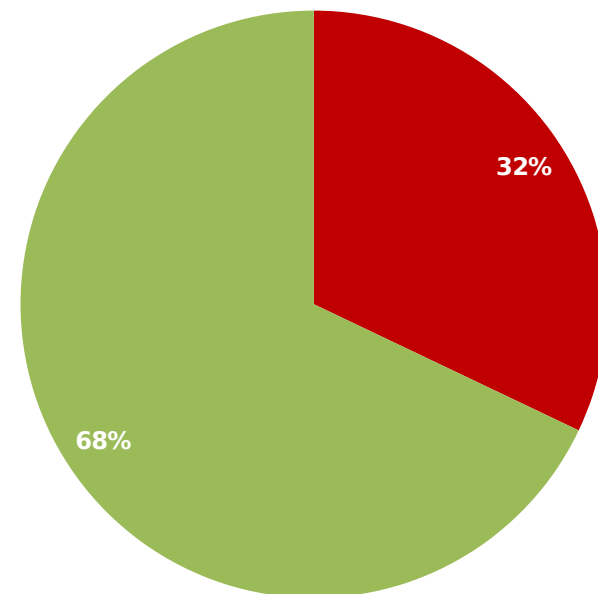
Feedstock Availability by Region

■ Food Crops ■ Non-Food



Total non-OECD

■ Food Crops ■ Non-Food



Source: World Bank (2022)

Note: Data derived from method published in Staples, Malina et al. Aviation CO₂ emissions reductions from the use of alternative jet fuels. Energy Policy. 2018 Mar 1



Ongoing works on air transport decarbonization Activities

Knowledge Products

1. Decarbonizing Aviation Through the Scale-Up of SAF

Component 1: Country and Regional Deep-dives

Component 2: Outreach and Partnership Building

Component 3: Bridging the gap in availability of financing sources for SAF development



2. GHG accounting for Air Transport Sector Investments

3. Paris Alignment of Investments



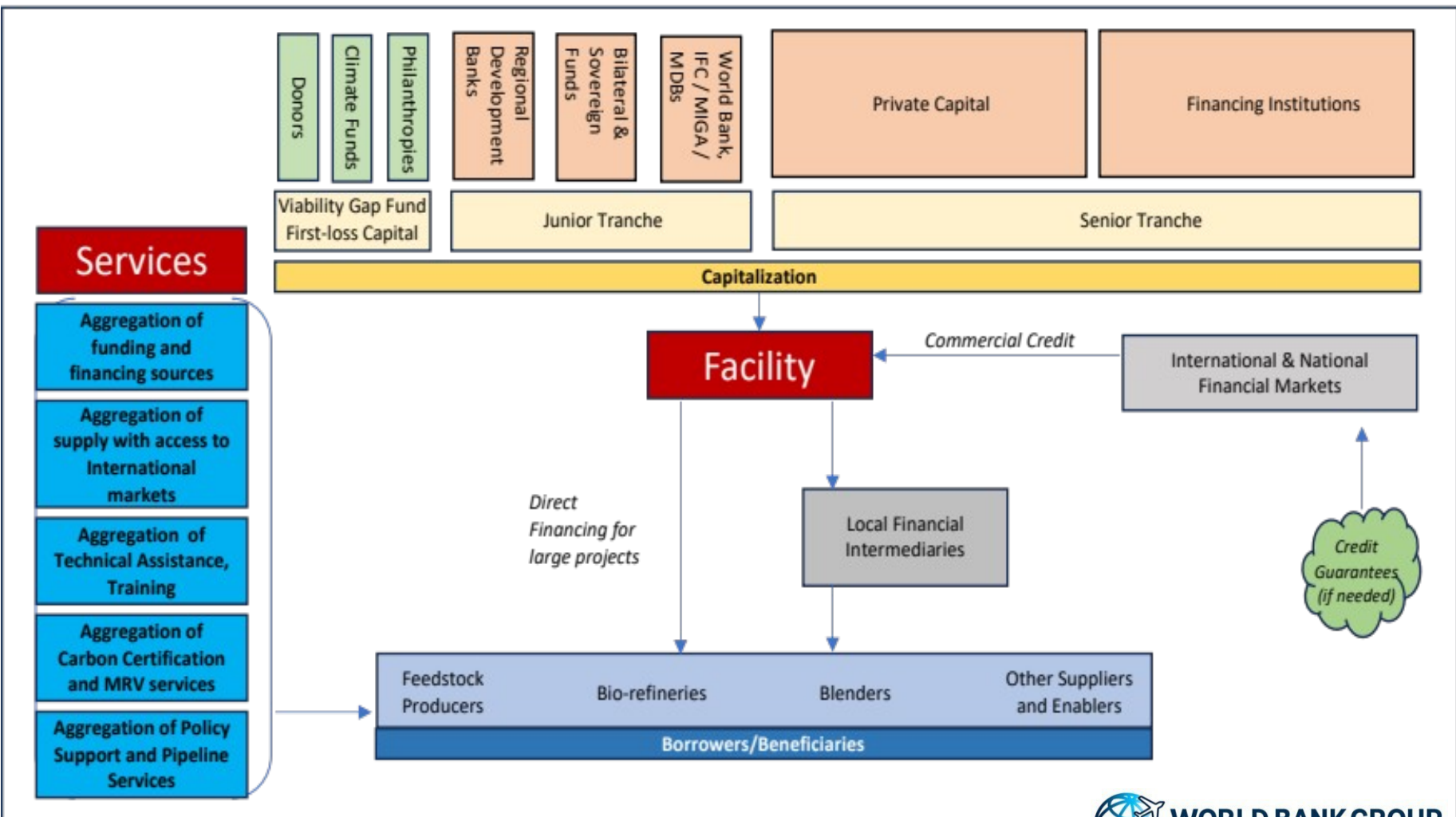
World Bank

Investment

Together with IFC, the private arm of the WGB, we're pursuing opportunities in several countries.

Financing Aviation Decarbonization with a focus on SAF and World Bank client countries

Regional SAF Investment Financing Facility



Developing countries face significant transport financing gap and the WB is striving to fill it

- Developing countries face a **transport financing gap of up to \$944 billion** annually through 2030 (WRI 2016)
- The WB has set up the Global Facility to Decarbonize Transport (GFDT)
- The GFDT will support low carbon mobility and resilient transport solutions in three ways: **Project design and implementation, research and data, and capacity building.**
- **Ambition is to raise \$200 million over a 10-year period** to invest in low-carbon transport solutions.
- Together with our partners **we have raised \$9 million for this initiative.**
- We're yet underway.



THE GOVERNMENT
OF THE GRAND DUCHY OF LUXEMBOURG



Ministry of Infrastructure
and Water Management



Tank you for your attention

