



ICAO EUR/NAT Environment Workshop Hosted by the State Civil Aviation Agency of the Republic of Azerbaijan



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Development of the State Action Plan (SAP) and the path to SAF Implementation





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KAZAKHSTAN'S EXPERIENCE IN DEVELOPING THE SAP: STRATEGY, STAKEHOLDERS, AND INFRASTRUCTURE MODERNIZATION



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INTRODUCTION



Commitment to ICAO LTAG goals.

Strategic importance of developing an SAP for sustainable aviation development.

Key objectives of the presentation: sharing experience in developing the Plan and providing an overview of SAF-related work.



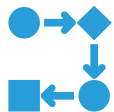
SAP DEVELOPMENT PROCESS



Step 1: Establishment of a National Working Group.



Step 2: Collection of historical data and calculation of the baseline scenario.



Step 3: Gap and needs analysis.



Tools: ICAO DOC 9988 guidance and dedicated tools for calculating the baseline scenario for selected measures.

STAKEHOLDERS ENGAGEMENT

Regulators:
Civil Aviation Administration /
Ministry of Transport

Industry: Airlines, airports, air
navigation service providers.

Fuel sector: Fuel producers
and suppliers.

Government agencies:
Ministries of Ecology,
Energy, and Economy.

Work format: Regular
roundtables and technical
workshops for updating
and issuing SAP v2.

SELECTING EMISSION REDUCTION MEASURES

Selection criteria:

- Technical feasibility.
- Economic efficiency.
- CO₂ reduction potential.

Selected measures

("Basket of Measures"):

- Fleet renewal.
- Rehabilitation of taxiways in airports; reduced taxi time; single-engine taxi.
- Operational improvements (route optimization in departure and arrival procedures).
- SAF implementation (long-term priority).

SAF RESEARCH

Completed study: Assessment of SAF production and usage potential in Kazakhstan.

Study objectives:

Analysis of available feedstock (biomass, waste).

Assessment of refinery readiness.

Supply chain and logistics analysis.

SAF RESEARCH RESULTS AND STAKEHOLDERS

Key SAF stakeholders:

Refineries.

Agricultural sector (feedstock suppliers).

International partners and investors.



KMG & Air Astana initiative: KazMunayGas together with Air Astana and the EBRD completed a preliminary feasibility study for SAF production.

Demand: Market analysis shows that SAF demand in Kazakhstan may reach 70,000 tonnes annually by 2030.



Feedstock: Studies focus on identifying the most promising local feedstocks, including bioethanol and agricultural residues (e.g., oil crops).



ICAO cooperation: Kazakhstan supports ICAO initiatives and actively discusses SAF production and implementation with the ICAO Regional Office.



LanzaJet (USA): KMG partnered with LanzaJet, which develops AtJ (Alcohol-to-Jet) SAF technology — a major step forward.

BioOperations/KFP: A framework agreement was signed with BioOperations (part of KazFoodProducts) to supply feedstock for the future plant.

Transition to Jet A-1

Next steps and strategic goals

- Development of the national SAF Roadmap.
- Growth of the agro-industrial sector through deeper processing and added value.
- Strengthening Kazakhstan's transit potential by becoming a refueling hub capable of supplying cleaner fuel to international flights.

Action and commitment

- Refinery modernization: A full transition to Jet A-1 is essential for SAF blending.
- Plans: Kazakhstan's refineries reported readiness to switch to Jet A-1 production soon, with major capacity expansion projects planned for 2026–2032 (up to 1.7 million tonnes).



The project is being implemented by KMG and LanzaJet, which is a key technology partner. The future plant for the production of sustainable aviation fuel using American alcohol-to-jet technology will be the first in Central Asia.

The city of Rudny, Kostanay region, is considered to be the construction site. The preliminary capacity of the enterprise is 54 thousand tons of jet fuel per year.

The implementation of the project will strengthen Kazakhstan's role as a key international transit hub and strengthen the country's position in the global aviation market.

Transition to Jet A-1

Current situation: Airports are actively involved in infrastructure reconstruction

to support the phased transition to Jet A-1.

Objective: Full transition to the international Jet A-1 standard.

Why this is needed:

- Harmonization with the global market.
- Technical capability for drop-in SAF blending.
- Increased attractiveness for transit airlines.
- Status: Ongoing modernization of airport and refinery infrastructure.

Next steps

- **Approval and submission of the SAP to ICAO.**
- **Completion of refinery modernization for Jet A-1 production.**
- **Development of the national “SAF Roadmap.”**
- **Launch of pilot SAF fueling projects.**



Get In Touch

Contact us for collaboration.



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Thank You

