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An Example of SAF Assessment in the Philippines

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The Gap Between Policy and Production

APAC is committed to net-zero aviation by 2050. The targets exist. The mandates are coming. The demand is growing faster here than anywhere else in the world.

But SAF today is less than 0.5% of global jet fuel supply. The bottleneck is not ambition. It is not technology. It is not feedstock.

The bottleneck is the evidence base that unlocks investment and policy action at the country level.

What a country-level SAF assessment must answer

1 Is there sufficient feedstock? Where, how much, at what cost?

2 Is the technology proven, certified and available here?

3 Are the economics bankable, if so for whom?

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ICAO ACT-SAF: Building APAC Capacity

ACT-SAF
Assistance, Capacity-building and Training for SAF

Programme Goals

- Support States in developing national SAF roadmaps and policy frameworks
- Build technical capacity in SAF assessment, procurement and certification
- Connect APAC States with SAF producers, technology providers and financiers
- Facilitate achievement of ICAO's net-zero 2050 aviation target

Why Feasibility Assessment Matters

Before any SAF production facility can be built, States and investors need a rigorous feasibility study that answers three questions:

- Is there sufficient feedstock supply?
- Is the technology proven and available?
- Is the project financially viable?

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The Philippines Opportunity

The Philippines presents a compelling case for SAF production. As a major agricultural economy with large corn and sugarcane sectors, the country generates substantial agricultural waste residues that have almost no current use and significant energy value.

2030

Philippine SAF Mandate target effectivity date

15 to 18 million MT

Annual corn stover availability across the Philippines

UN Support

UN ESCAP AGIC programme and GGGI active in Philippines

Why Isabela Province?

- Largest corn-producing province in the Philippines
- 1.04 – 1.25 million MT grain production per year (2021–2025)
- 93,123 registered corn farmers across 132,596 ha
- Established agricultural infrastructure and logistics
- BOI Investment Promotions Authority engagement underway

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Project SAFAL: The Case Study

Ilagan City, Isabela
Philippines

What is it?

A proposed 80,000 MT per year SAF biorefinery in Isabela Province. The project is developed by ALCOM Pte Ltd and assessed by Aveera Energy as part of a UN ESCAP Agricultural Innovation and Circular Economy programme.

Technology pathway

G2.0 cellulosic ethanol from agricultural residues, followed by Alcohol-to-Jet (ATJ) conversion. This is an ICAO-recognised ASTM D7566 Annex 5 pathway, eligible under CORSIA Phase 1.

Support to date

UN ESCAP AGIC programme support delivered in partnership with GGGI. Philippine BOI Investment Promotions Authority engagement. Class IV Pre-Feasibility Study completed June 2026.

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Feedstock Assessment: Corn Residues

Two complementary feedstocks

Corn cob (20% of blend)

The woody core left after grain harvest. High cellulose content (40-45% dry basis). Currently burned or discarded. Collected directly from farmers.

Corn stover (80% of blend)

Leaves, stalks and husks left in the field. 34–38% cellulose dry basis. Partial recovery (35–45%) preserves soil health. Wider geographic availability.

Supply assessment outcome

Metric	Value
Recoverable supply (46 municipalities)	1,002,311 MT/yr
Annual feedstock requirement	~500,000 MT/yr
Supply coverage ratio	202 or 2× required
Zero ILUC classification	Yes (agricultural waste)

ILUC = Indirect Land Use Change. Agricultural residues score zero because no additional land is converted to grow them.

Source: Petron Scientech Pre-Feasibility Study, June 2026 · OPA Isabela · City of Ilagan Agriculture Office

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Technology: From Corn Waste to Jet Fuel

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Step 1: Feedstock

Corn cob & corn stover collected from Isabela Province farms. Dried, chipped and pre-treated.

Step 2: G2.0 Cellulosic Ethanol

Enzymatic hydrolysis and fermentation converts cellulose into ethanol. Advanced 2nd-generation (G2.0) from agricultural waste.

Step 3: Alcohol-to-Jet (ATJ)

Ethanol is dehydrated, oligomerised and hydroprocessed into jet fuel meeting ASTM D1655 specification.

Output: 80,000 MT SAF/year

ASTM D7566 Annex 5 certified ATJ-SPK. Blendable up to 50% with conventional jet fuel.

ICAO Recognition

ATJ-SPK pathway is recognised by ICAO under CORSIA Phase 1. Eligible for SAF credits in international aviation fuel uplift.

EU Eligibility

Agricultural residue feedstock qualifies under EU RED III and ReFuelEU Aviation. Advanced biofuel classification under Annex IX Part A.

Technology Status

G2.0 cellulosic ethanol at commercial demonstration scale globally. Technology licensing negotiations underway with proven providers.

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WHAT THIS MEANS FOR YOUR COUNTRY

The Philippines Example: A Vision for Viet Nam

Your agricultural waste is a SAF feedstock

Rice, sugarcane, palm and corn, is what most APAC nations already produce in residues at scale. Zero additional land. Zero ILUC penalty. The highest carbon credit value under CORSIA.

A feasibility study unlocks capital

International investors and development finance institutions cannot act without evidence. The study is not a cost. It is the instrument that attracts USD hundreds of millions into your economy.

Policy alignment is the accelerator

A SAF mandate, a fiscal incentive, a streamlined permitting process. Each one reduces risk for investors. Together they convert a viable project into a bankable one.

SHARED KNOWLEDGE ACROSS SOUTHEAST ASIA

One project opens the door for the region.

The SAFAL assessment established a replicable methodology: how to survey agricultural residues, how to structure a feedstock supply chain, how to map certification pathways for the ATJ route, and how to present the economics to international capital markets.

Every APAC State that runs a comparable assessment benefits from this work. The groundwork on CORSIA eligibility, ISCC certification and development finance structuring does not have to be rebuilt from zero.

ICAO ACT-SAF aims to accelerate this knowledge transfer across the region. The Philippines is the first. It will not be the last.

What transfers to Viet Nam

- Feedstock survey methodology
- Technology pathway selection criteria
- CORSIA and ISCC certification approach
- Investment Memorandum structure
- Blended finance and DFI engagement model

PAVING THE PATHWAY TO FUTURE FUELS

Thank you

Questions are welcome. For further information on the SAFAL project or on Aveera's SAF assessment services for APAC governments and project developers, please reach out directly.

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