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ICAO SEMINAR ON
ALTERNATIVE FUELS 2017
ICAO Headquarters, Montréal, 8-9 February 2017



ICAO CAEP work on Policy Guidance for the Deployment of Sustainable Alternative Fuels for Aviation

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What is Policy?

- An intervention to change or steer behaviour to achieve a different outcome to what the market would otherwise deliver.
- The private sector (or the market) is unlikely to solve the climate change problem in the necessary time without policy guidance.





Aviation environmental targets

GOAL 1

PRE-2020 AMBITION

1.5% ANNUAL
AVERAGE FUEL
EFFICIENCY
IMPROVEMENT
FROM 2009 TO
2020.

T O I

GOAL 2

IN LINE WITH THE NEXT
UNFCCC COMMITMENT PERIOD

STABILISE NET
AVIATION CO₂
EMISSIONS AT
2020 LEVELS
WITH CARBON-
NEUTRAL
GROWTH.

T O I + M

GOAL 3

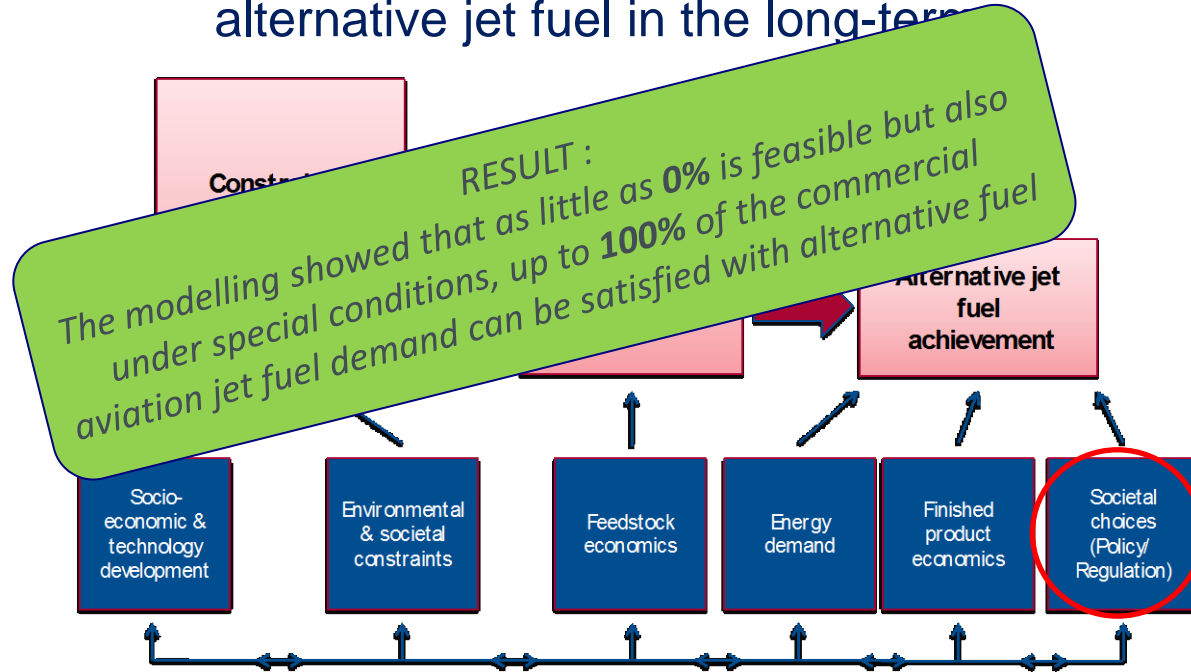
ON THE 2°C PATHWAY

REDUCE
AVIATION'S NET
CO₂ EMISSIONS
TO 50% OF WHAT
THEY WERE IN
2005, BY 2050.

T O I

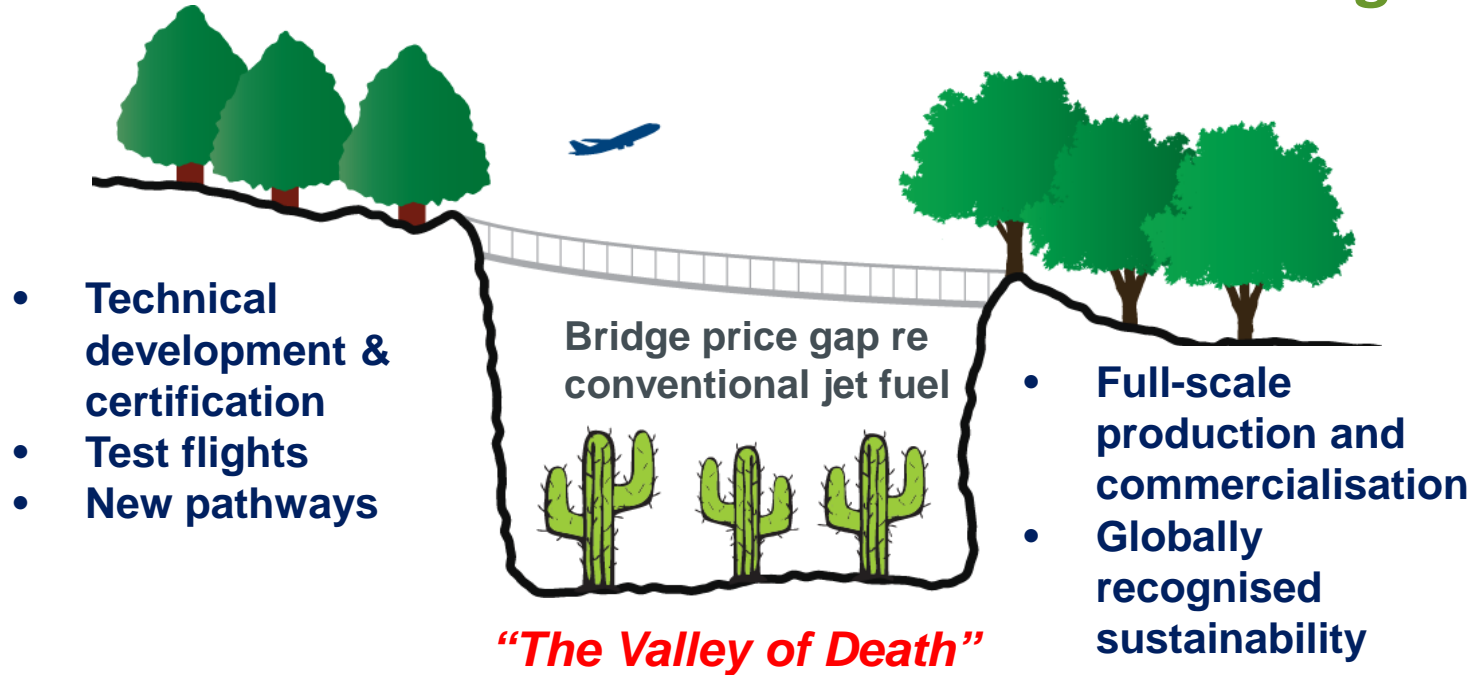


Three step approach to modelling the potential for alternative jet fuel in the long-term





Sustainable Alternative Jet Fuel - Challenges





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Background

- There is an need of States in including aviation alternative fuels on their policies, but little information and best practices to look at.
- ICAO CAEP decided to to
 - Outline existing policy instruments incentivizing deployment of sustainable alternative fuels, as well as barriers or disincentive mechanisms.
 - Identify “potential policies” which have been demonstrated to be feasible, effective, and practical.
 - Elaborate guidance to facilitate the implementation of those policies and incentive mechanisms by Member States.



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Task Group Work Program

- 
- ✓ Perform a literature review and develop a **repository of policy options**
 - ✓ Develop a **qualitative metric** to assess the effectiveness of policies, presented as a “check-list” instrument for States to evaluate the potential impacts from their policy decisions.
 - ✓ Perform quantitative project level modelling of policy options and evaluate specific case studies.
 - ✓ Develop a final report of guidance material.



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Literature Review

- 58 research papers from US or EU, Brazil, Australia, China and Canada.
- Policy options have been initially clustered into macro categories. These include:
 - Volume linked support
 - Subsidy
 - Assistance for establishment of production
 - Assistance for research and development





Qualitative Metric

- The initial identified elements for a qualitative metric for assessing policy effectiveness are:
 1. Flexibility
 2. Certainty
 3. Financial Costs and Benefits
 4. Price Sensitivity to Externalities
 5. Ease of Implementation
 6. Contribution to Sustainable Alternative Fuel Deployment and GHG reduction
 7. Unintended consequences
 8. Robustness of the policy



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Final Report

- Identified policy options based on literature review.
- Set of qualitative metrics as a “check-list” instrument form States.
- Policy analysis gathered /collected in a compilation
- Summary “matrix” of the analyses and lessons learned.





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North Atlantic
(EUR/NAT) Office
Paris

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(MID) Office
Cairo

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Southern African
(ESAF) Office
Nairobi

Asia and Pacific
(APAC) Sub-office
Beijing

Asia and Pacific
(APAC) Office
Bangkok



THANK YOU