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ENVIRONMENT

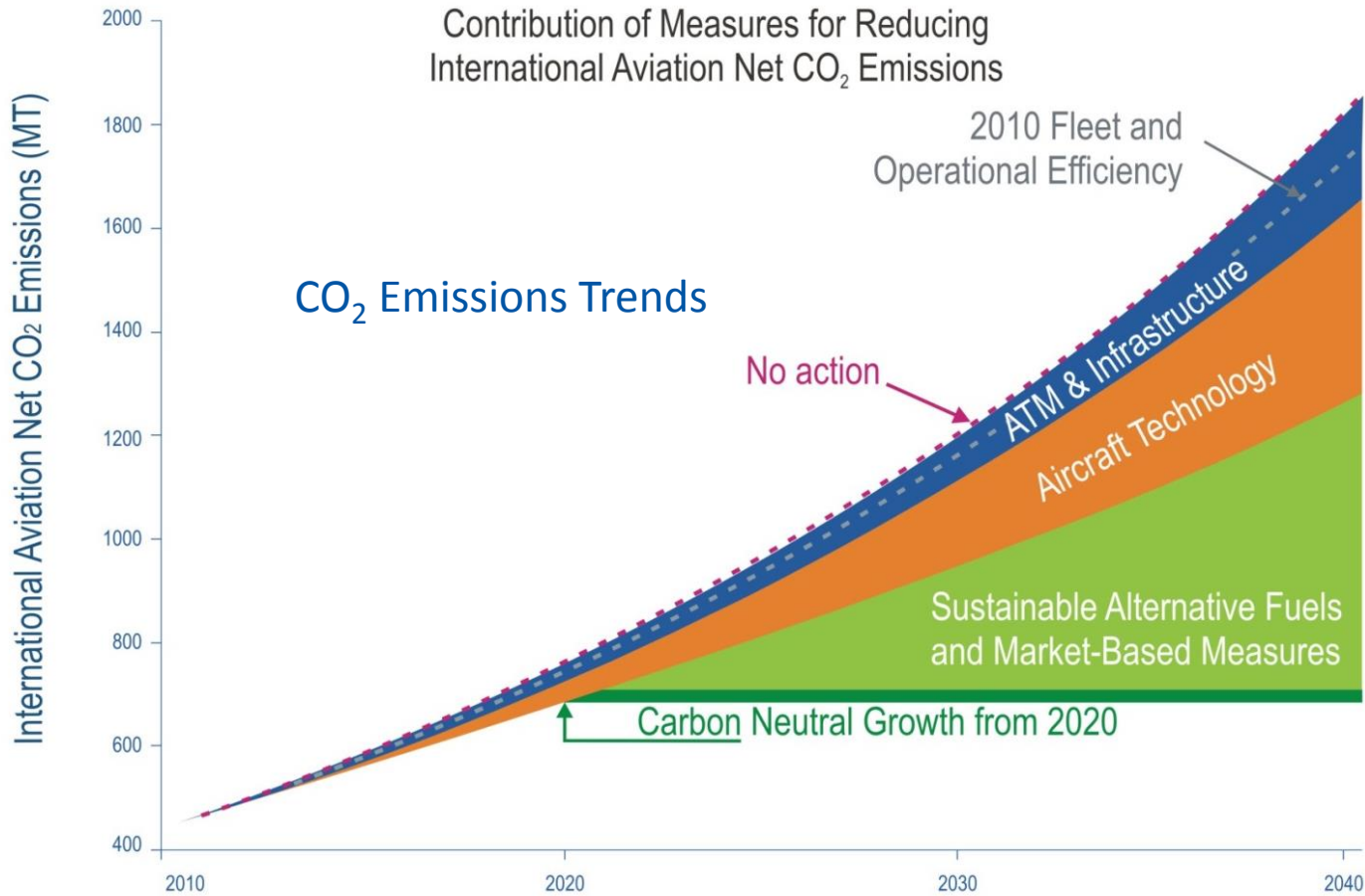


3rd Bioenergy Week Medan (Sumatra), Indonesia 28 May 2015

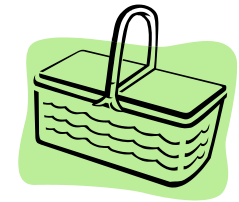
Advanced Biofuels

An overview on international discussions on
Aviation Biofuels

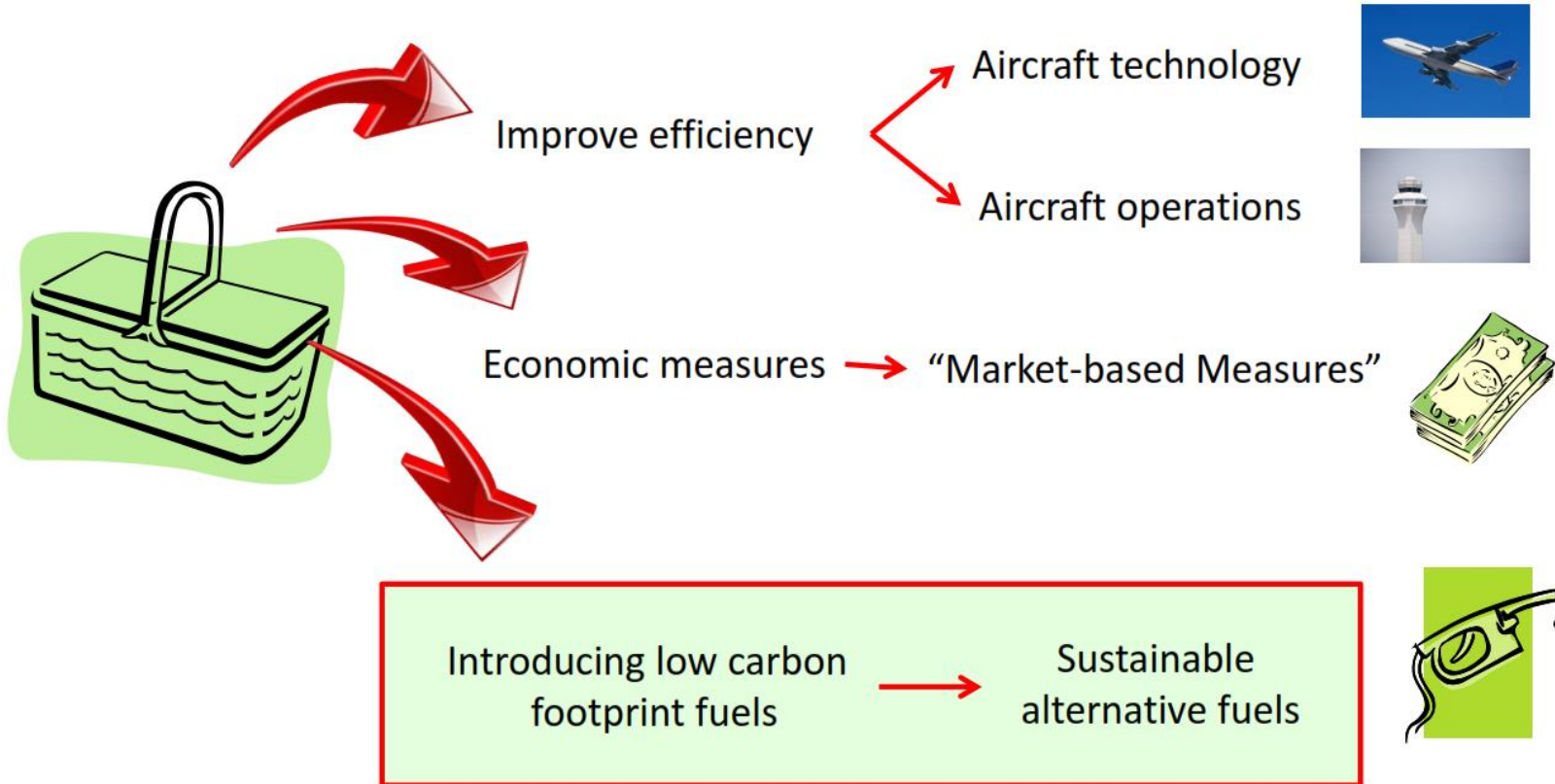




“Basket of measures”



Basket of measures



- **Alternative fuels for aviation need to be drop-in**

Biofuels used in road transportation are not suitable for use in aviation

- **Severe constraints in use on aviation fuels**

- Freezing point (- 47 °C)
- Energy content
- Aromatics
- ...

- **Compatibility with existing aircraft systems**

- **Aviation fuels need to be approved**

- ASTM, DEFSTAN,...
- 3 alternative fuels approved in 2009, 2011 & 2014



- Supporting Member States and stakeholders efforts through fostering exchanges, information sharing and further common work on sustainable alternative fuels



- Alternative Fuels task Force(AFTF)**

- Potential emissions savings from alternative fuels by 2050
- Methodology to assess fuel life cycle emissions

- Information: **Global Framework for Aviation Alternative Fuels (GFAAF)**

www.icao.int/environmental-protection/GFAAF



ICAO ASSEMBLY REQUESTED MEMBER STATES TO:

- Development of coordinated national policy **actions to accelerate the appropriate deployment** of sustainable alternative jet fuels
- Measures to **ensure sustainability** of the fuels that should:
 - Achieve net GHG emissions reductions on a life cycle basis
 - Respect areas of high importance for biodiversity, conservation and benefits from ecosystems
 - Contribute to local social and economic development, and avoid competition with food and water
- Cooperation through ICAO to **exchange information and best practices**
- Need for increased **harmonisation for sustainability**





- **First commercial flights in 2011: More than 1700 flights to date**
 - **Key challenges on the road**
 - **Bringing technologies to market**
 - **Decreasing production cost**
 - **Investing in conversion facilities**
 - **Producing enough sustainable feedstock**
 - **Ensuring sustainable deployment**
- ⇒ **Supportive policy frameworks required**
- ⇒ **Time before large market penetration**





ICAO's contribution to the COP/21 (Paris Dec 2015)

- **“Environmental Global Aviation Partnerships (E-GAP) on Emissions Reductions”**
 - Partnerships for Multiplying Environmental Action
 - Building new and strengthening existing partnerships involving Member States and other organizations
 - Preparation for COP/21
- **E-GAP seminar at ICAO on September, 16-17th**
 - Panel on Sustainable Alternative Fuels
 - Partnerships and Synergies among different stakeholders





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Terima Kasih
Thank you

