



# Assistance for Action

## Aviation and Climate Change Seminar

23 - 24 October 2012

ICAO Headquarters, Montréal, Canada



# THE CASE FOR SUSTAINABLE AVIATION BIOFUELS IN MEXICO

- 1. Background and Introduction**
- 2. Flight Plan towards Sustainable Biofuels**
- 3. Actions Taken**
- 4. Perspective**

## Background

- In 2010, aviation emissions accounted for 649 million tons of CO<sub>2</sub>, a 3.5% increase with regards to 2009 (627 million tons), but still lower than the 670 million tons of 2008.
- Aviation accounts for ~2% of global man-made CO<sub>2</sub> emissions (34 billion tons).
- Aviation is responsible for 12% of all transportation emissions.

## Introduction

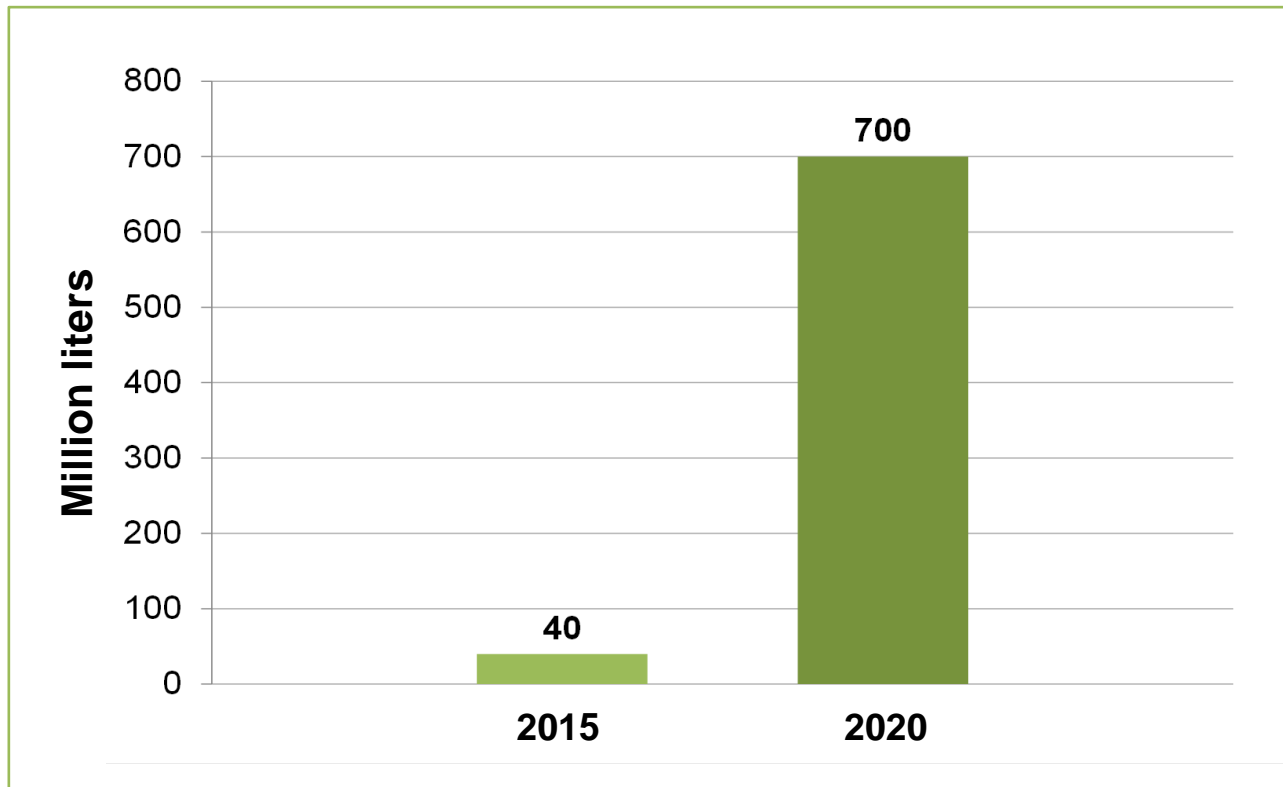
- The aviation industry has come up with several mechanisms to reduce its carbon footprint, among which is alternative fuels.
- In Mexico, the Ministry of Communications and Transport, through Airports and Auxiliary Services (ASA), promotes the development of alternative fuels and coordinates the efforts to create this industry with other federal, state and local government agencies as well as with private and academic/research organizations.



# Introduction

## Goals

- 1% of national demand use by 2015
- 15% of national demand use by 2020



## **Flight Plan towards Sustainable Aviation Biofuels in Mexico**

- The main objective of the “Flight Plan” was to identify and analyze the existing and missing elements in the supply-chain of aviation biofuels (focused on the HEFA track).
- It involved all the stakeholders in the chain of production.
- Goals:
  - Lead the efforts of civil, public, private and research institutions in the development and production of aviation biofuels.
  - Analyze the legal framework, raw materials availability, refining infrastructure and the economic viability of aviation biofuels.
  - Integrate the talents of all participant sectors.

# Flight Plan towards Sustainable Aviation Biofuels in Mexico

8 months of workshops with all involved actors and farmers

A GREAT SOCIAL EXPERIENCE

Several hundreds of interested stakeholders

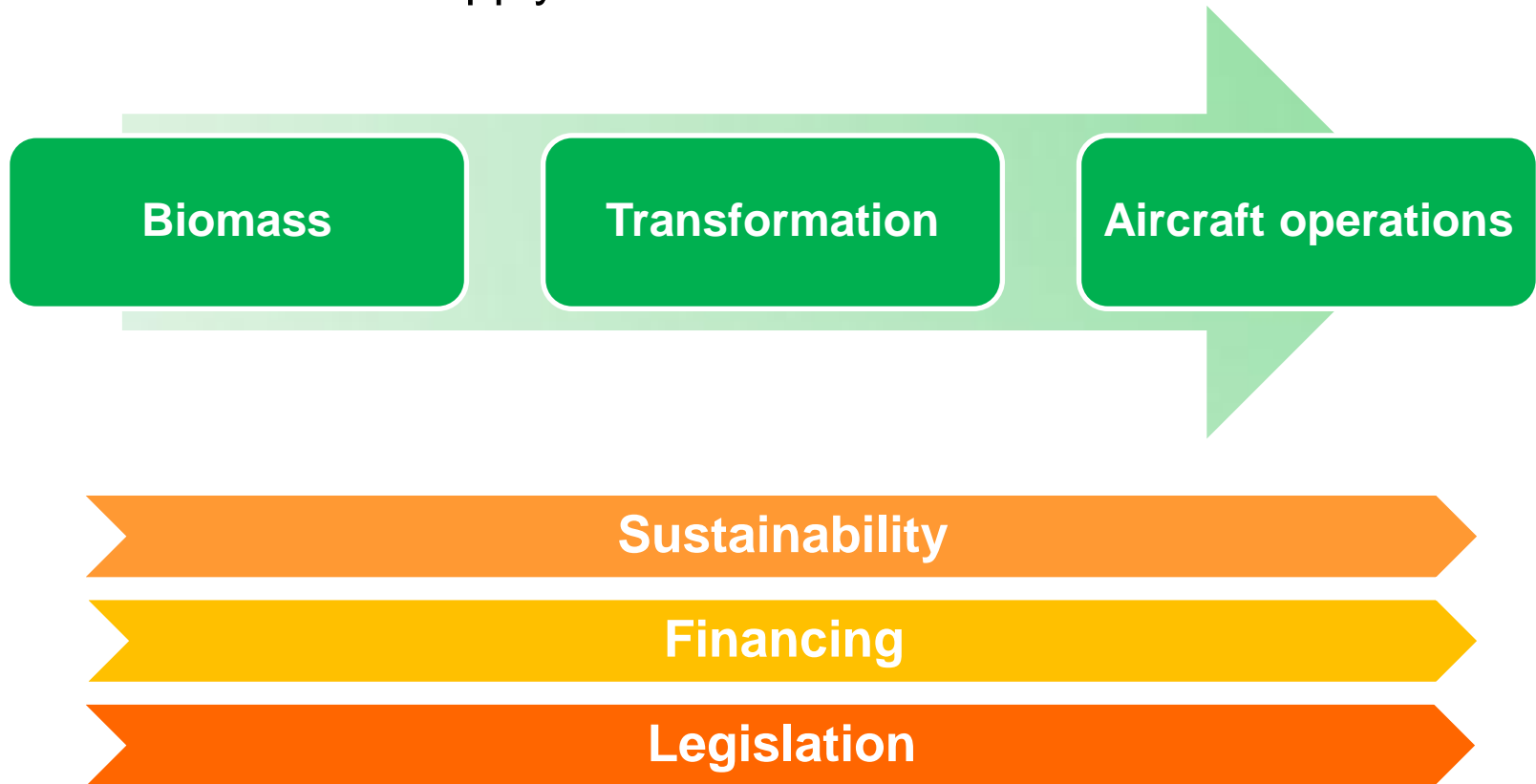


Event	Date
Kick-off meeting	July, 2010
Problematic and Sustainability	August, 2010
Raw materials and Extraction	September, 2010
Refining and Infrastructure	October, 2010
Financing, Legislation and Logistics	November, 2010
Algae and Biofuels	February, 2011
Viability of aviation biofuels in Mexico	February, 2011
Conclusions session	March, 2011



# Flight Plan towards Sustainable Aviation Biofuels in Mexico

A general view of the supply chain:





## Actions Taken

- ASA has provided biofuel in the following flights:




First demonstration flight in Mexico (7<sup>th</sup> worldwide)

*April 2011  
27% Jatropha*




First 2 commercial flights in North and South America

*July 2011  
27% Jatropha*




First transatlantic commercial flight in a wide-body aircraft in the world

*August 2011  
25% Camelina*



First Green Flight in Spain

*October 2011  
25% Camelina*



Green flights program  
Itinerary flights to San José Costa Rica

*Started in September 2011  
25% Camelina*



Flightpath to a Sustainable Future, Rio+20  
3<sup>rd</sup> leg of the series of connecting commercial flights which carried ICAO's Secretary General  
Mexico City-Sao Paulo

*June 2012  
50% Used cooking oil,  
jatropha and camelina*

## **Actions Taken**

- ASA participates in the Commercial Aviation Alternative Fuels Initiative (CAAFI) and in the Sustainable Aviation Fuel Users Group (SAFUG).
- ASA has established collaboration agreements with The Boeing Company, United Oil Products (Honeywell), and with the states of Sinaloa, Chiapas and Veracruz in México.
- ASA represents Mexico in the definition of the international strategy of aviation for climate change.
- ASA has participated in the group of climate change of the Ministry of Foreign Affairs.

## Perspective

- The widespread use of aviation biofuels raises different challenges:
  - Availability of raw materials.
  - A competitive price in comparison with fossil fuels.
  - Biorefining infrastructure.
- The national policies and legislative frameworks represent another challenge.
- With the support of IDB, right now work is in the first phase of the development of the technical feasibility study for a biorefinery construction. With this effort, ASA will have the necessary information to determine the location for its establishment.
- Also, within the next months, the flight plan for aviation biofuels in Hidalgo will start. Hidalgo is a state near Mexico City with refining infrastructure, and a water treatment plant in construction.
- ASA will continue the driving and support of the aviation biofuels industry in Mexico. At the same time, will consolidate its operations and infrastructure for the biofuel delivery.

# Thank you!

