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# States' Action Plans Seminar

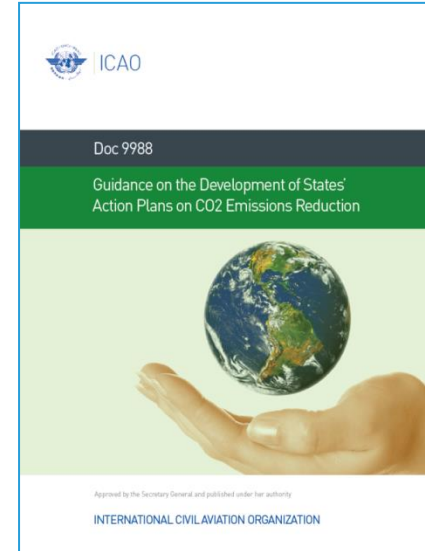
## 2. The States' Action Plan Process

ICAO Secretariat



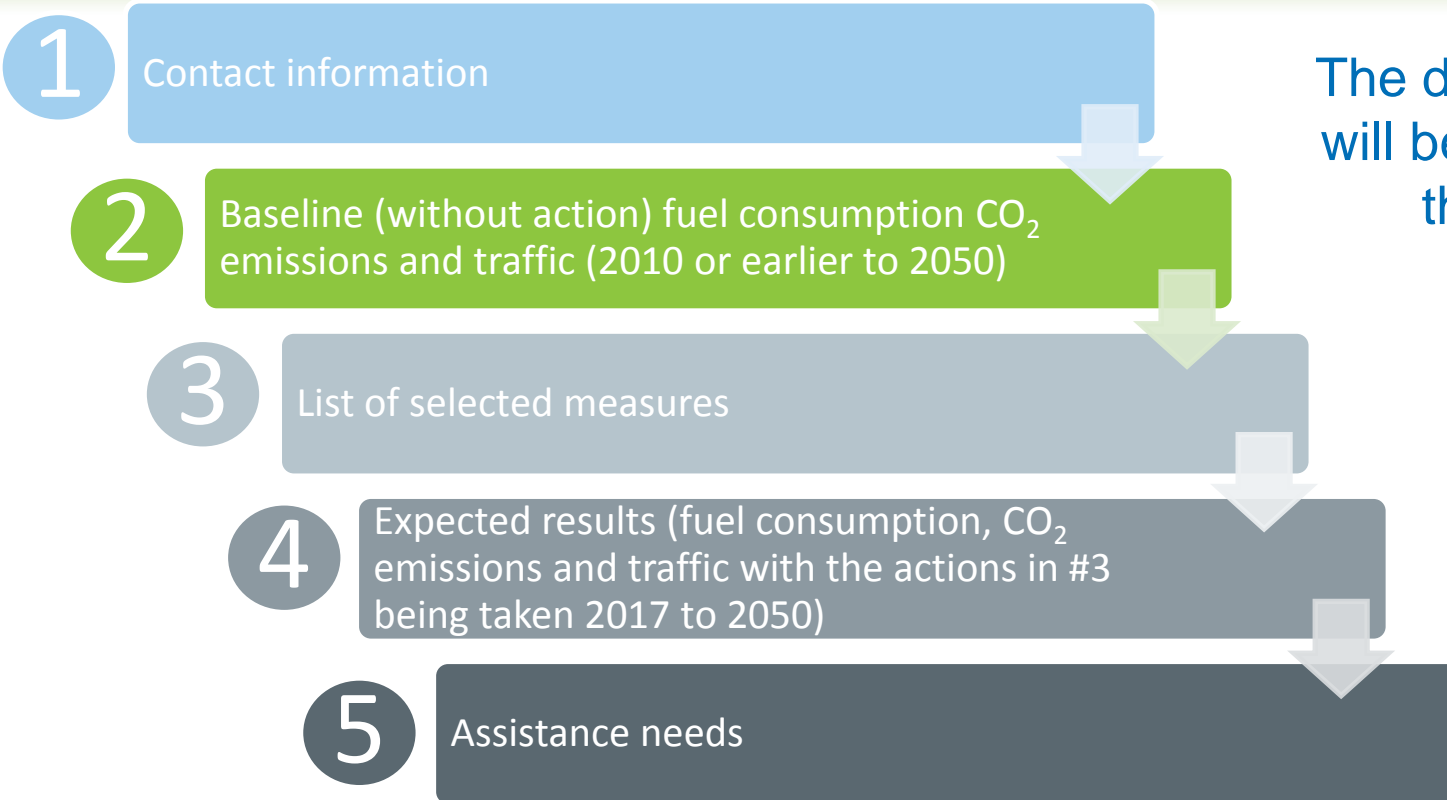
# Overview

- Action Plan Components
- Focal Point
- Action Plan Team
  - Stakeholder involvement
  - Mitigation measures
- APER website
- ICAO Support
- Project management
- Data collection and reporting



Important chapters:  
**2.6, 3.3 and 4.3**

# Minimum Content



The different elements  
will be presented over  
the next days

# Baseline

- The baseline describes the ***historic*** evolution of fuel consumption, CO<sub>2</sub> emissions, and traffic in the State and the expected future evolution ***in the absence of action***
- It should contain:
  - Annual historic fuel consumption and traffic from international aviation from 2010 or earlier
  - Projected future fuel consumption and traffic to 2020 and if possible to 2050
  - Data for the years 2010, 2020 and if possible 2050 should be provided

- Accounting for current and future (without action) traffic, fuel consumption and CO<sub>2</sub> emissions data
  - Differentiating between international and domestic emissions
  - Collecting or estimating historic aircraft activity and fuel consumption data
  - Forecasting future baseline aircraft activity and fuel consumption
  - Verification of estimates

- Selection of measures and quantifying their expected results
  - Review of the basket of measures, their feasibility and emissions reduction potential
  - Prioritization and selection of mitigation measures
  - Quantifying the effects on fuel consumption and CO<sub>2</sub> emissions from the measures selected

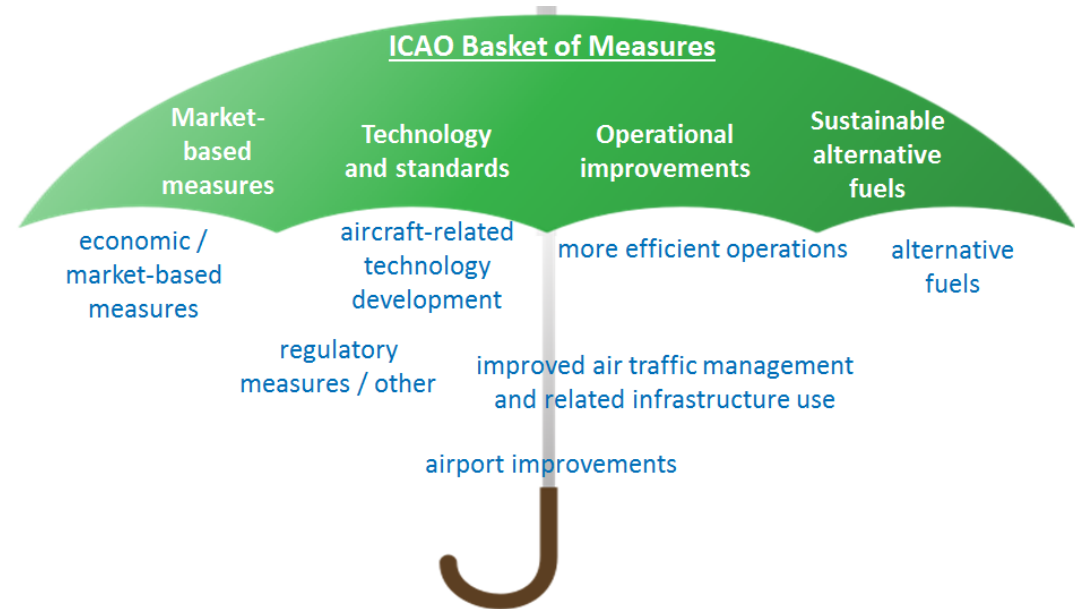


# The Action Plan Focal Point

- The role of the Focal Point is to:
  - lead the development of the Action Plan
  - coordinate amongst national stakeholders
  - liaise with ICAO
- The Focal Point is the only person authorized to submit the Action Plan and to access the ICAO APER website
- The Focal point is critical and plays a critical role in the successful development of an Action Plan. He/She:
  - Builds momentum
  - Drives various interests towards a common goal
  - Possess the leadership skills to get people on-board and motivate them
  - Is a “do-er”

# The Action Plan Team

- Mitigation measures are many and so are the stakeholders involved
- Depending on the exact measures chosen, these can be:
  - Airlines
  - Airports
  - ANSPs
  - Fuel providers
  - Airframe/engine manufacturers
  - Other Government entities
  - Academia and research institutions
  - Community groups
  - etc.



More information on mitigation measures will follow



- At a minimum, consultation with the operator and manufacturer is advised
- If new aircraft types are to be introduced, other stakeholders such as the airport and operator may also need to be involved
- For new avionics, the ANSP should be consulted as well
- As an example, one Action Plan highlighted that air carriers could be expected to achieve an annual fuel efficiency (2005-2020) improvement of 0.7 percent.

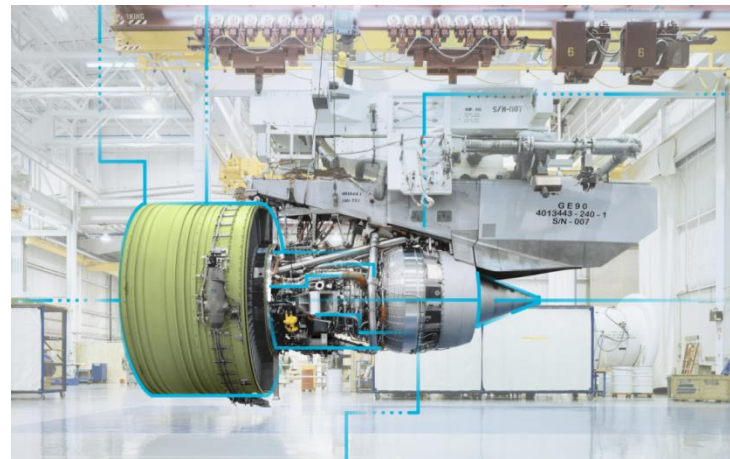


Photo credit: GE Aviation

- A broad range of stakeholders may require consultation:
  - Operators
  - Airports
  - Fuel providers
  - Other government offices (i.e. environment and agriculture)
- As an example, one Action Plan highlighted that Sustainable Alternative Fuels could contribute to a 45 percent reduction of greenhouse gas emissions.



Photo credit: Avinor

# Improved Air Traffic Management

- Often collaboration is needed among
  - Operators
  - ANSP
  - Airport
- Depending on the improvement consultation may be needed with
  - Other airspace users
  - Aircraft / Avionics manufacturers
- As an example, one Action Plan highlighted that a new collaborative approach has seen an average reduction of five minutes flight time between city pairs. Equating to approximately 40,000 tonnes reduction in of CO<sub>2</sub> per year.



Photo credit: NATS

# More Efficient Operations

- Often implemented by the operator
- May require coordination with
  - Airport
  - ANSP
  - Aircraft / Avionics manufacturer
- As an example, one Action Plan highlighted reductions of an average of 14,300 CO<sub>2</sub> tonnes per year from 2018 through more efficient operations.



Photo credit: ACI Europe

# Airport Improvements

- Coordination with airport is required
- May also require coordination with operators



Photo credit: Fraport AG



- Depending on the measure collaboration could be required with many stakeholders, including:
  - Operators
  - Airports
  - ANSPs
  - Other government agencies



## Site overview



→ Follows the main parts of the Action Plan

# Step 1 – APER website

## Step 1

### Contact Info

- Main contact
  - State Focal Point for the Action Plan
  - Same Focal Point than for the ICAO-EU project in some States
- Other contacts
  - Individual points of contact for different parts of action plan
  - Usually members of the Action Plan Team



## Step 2 – APER website

### Step 2 Baseline

- Comprehensive baseline by year
  - Fuel consumption and CO<sub>2</sub> emissions in the absence of action
- Metrics used to measure progress
  - Volume of fuel per RTK
  - Net CO<sub>2</sub> emissions
- Methodology used in the Action Plan for differentiating between international and domestic emissions
  - ICAO Methodology – ( Country of registration)
  - IPCC Methodology - ( Country of departure)
- Supporting documents

## Step 3 – APER website

### Step 3

#### Identification of Mitigation Measures

- Identification of proposed measures
  - Description of the action
  - Date of implementation (start date) and date when benefits start
  - Anticipated change in fuel and/or CO<sub>2</sub> emissions
  - Economic Cost
  - Co-benefits
  - Barriers to implementation (if any)
  - Reference to relevant legislation (if appropriate)

## Step 4 – APER website

### Step 4

#### Expected results

- The expected results represent the projected fuel consumption and CO2 emissions after the implementation of the measures selected.
- Projected fuel consumption, CO2 emissions and traffic for the same future years as the baseline should therefore be shown.
- Only aggregate expected results need to be submitted, but the guidance allow the incremental benefits of each measure to be calculated.
- **Rules of Thumbs** are provided by ICAO to estimate the expected benefits of the measures in the basket of measures.

# Step 4 – APER website

## Step 4 Expected results

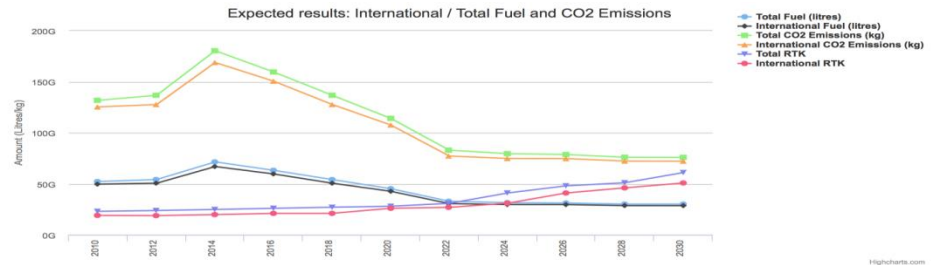
### Expected Results

Expected results represent the projected fuel consumption and CO<sub>2</sub> emissions (i.e. after implementation of mitigation actions) that the State envisages to reach.

Show Chart

Year	Total RTK	International RTK	Total Fuel (litres)	International Fuel (litres)	Total Fuel Efficiency	International Fuel Efficiency	Total CO2 Emissions (kg)	International CO2 Emissions (kg)
2010	22,986,382,000.6	18,986,382,000.6	52,192,112,670.5	49,620,459,480.8	2.3	2.6	131,816,399,770.3	125,321,432,480.2
2012	23,790,905,001.0	18,790,905,001.0	54,143,306,370.5	50,571,653,180.8	2.3	2.7	136,744,334,580.2	127,723,767,290.1
2014	24,790,905,001.0	19,790,905,001.0	71,442,554,290.5	66,870,901,100.7	2.9	3.4	180,435,315,120.7	168,889,147,830.6
2016	25,986,382,000.6	20,986,382,000.6	63,192,112,670.5	59,620,459,480.8	2.4	2.8	159,597,999,770.3	150,577,432,480.2
2018	26,986,382,000.6	20,986,382,000.6	54,143,306,370.5	50,571,653,180.8	2.0	2.4	136,744,334,580.2	127,723,767,290.1
2020	27,986,382,000.6	25,986,382,000.6	45,192,112,670.5	42,620,459,480.8	1.6	1.6	114,137,199,770.3	107,642,232,480.2

Click the icon to calculate the annual improvement



highcharts.com

## Step 4 – APER website

- Last part of the Action Plan, important to create new partnerships and mobilize support for the implementation of mitigation measures.
- ICAO can facilitate access to the required assistance.
- Can be added on the APER website as supporting document.

### Supporting Documents

Upload New Document

File Name

Assistance Request - Alternative Fuels.pdf

## Step 5 – APER website

### Step 5

Review Input and Submit to ICAO

- Review inputs  
Opportunity to review all inputs
- Submit to ICAO

**Only the Focal Point can submit**



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# Information Flow

## States

Action Plans submitted to  
ICAO

ICAO Secretariat follows-  
up with State focal point  
regarding any questions

Annual reporting on  
fuel consumption

Action Plans submitted are  
made available to the public,  
if requested by the  
authoring State

Results from all States are  
aggregated to estimate  
future progress toward  
Assembly goals

Council and Assembly are  
informed of results

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# ICAO Tools

- Carbon Calculator for States
- IFSET
- Environmental Benefits Tools (EBT)



Additionally  
available as  
Apple and  
Android  
applications



→ Will be covered in the next presentations





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# ICAO Support

## ☐ APAC Focal Point

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## ☐ ESAF Focal Point

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## ☐ EUR/NAT Focal Point

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## ☐ MID Focal Point

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## ☐ NACC Focal Point

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## ☐ SAM Focal Point

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## ☐ WACAF Focal Point

Mr. Akoa Benoît OKOSSI

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## ☐ Action Plan Team

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# Project Management

- Developing and implementing an Action Plan resembles the execution of any project:
  - Defines an objective and a timeline
  - Identifies and mobilizes the resources needed to meet the objectives
  - Involves a range of stakeholders and necessitates interaction and consultation

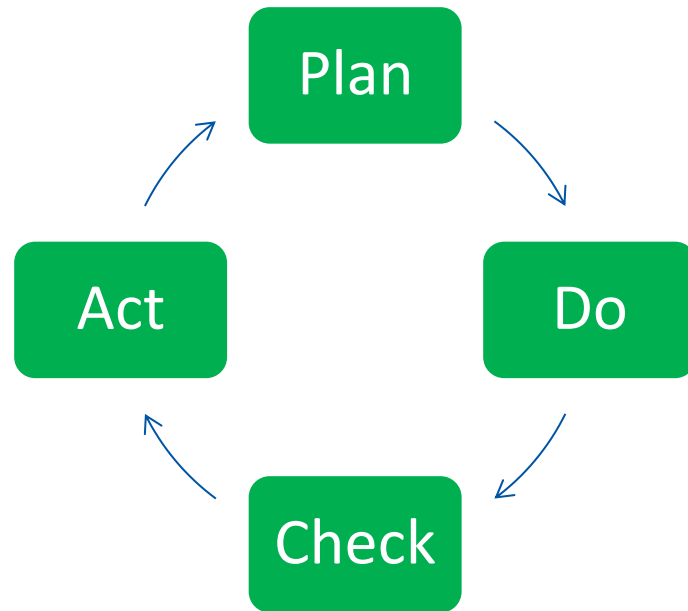
**Stakeholder involvement and thorough planning is key to success**

**PLAN:** Assemble team → collect data → establish baseline → select mitigation measures → quantify expected impact of measures → Identify assistance needs

**DO:** Implement the Action Plan and monitor progress towards established goals

**CHECK:** Analyze results (i.e. fuel burn and emissions) and compare against established goals in Action Plan

**ACT:** Make adjustments according to results and reflect this in updated Action Plan





# Data confidentiality

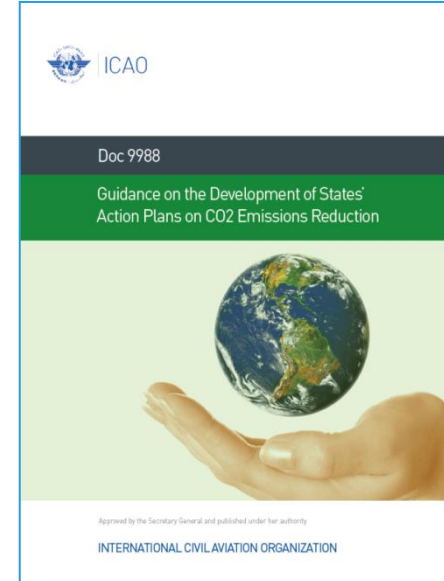
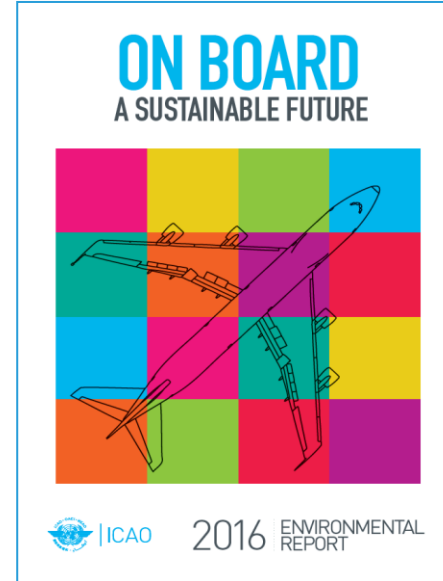
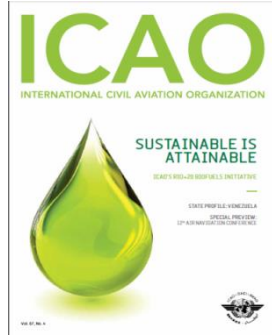
- To protect confidentiality, the State may elect not to make certain data publicly available, or aggregate/de-identify the data before including it in the action plan
- In the event that confidential data is collected (e.g., from individual air carriers or on specific international routes), appropriate procedures should be followed by the State for the designation and treatment of such information in accordance with the applicable national legislation and regulations
- A State could improve transparency by explaining in its action plan how confidential information has been treated
- Action plans are submitted to ICAO on a confidential basis. They are **only published on the ICAO public website at the request of the State**
- Assembly Resolution A39-2 “*Encourages States (...) to make the submitted action plans available to the public, taking into account the commercial sensitivity of information contained in States’ action plans*”, in which case States can anonymize data, e.g. by aggregating/de-identifying the data before including it in the action plan



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# Additional Information



For more information, please visit our website: <http://www.icao.int/env>