



ICAO

ENVIRONMENT

## ICAO Regional Seminar on CORSIA

### Session 4:

# CORSIA CO<sub>2</sub> Information Flow and Registry System Practical Demonstration on Actions and Timelines

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ICAO Secretariat

**C****RSIA**



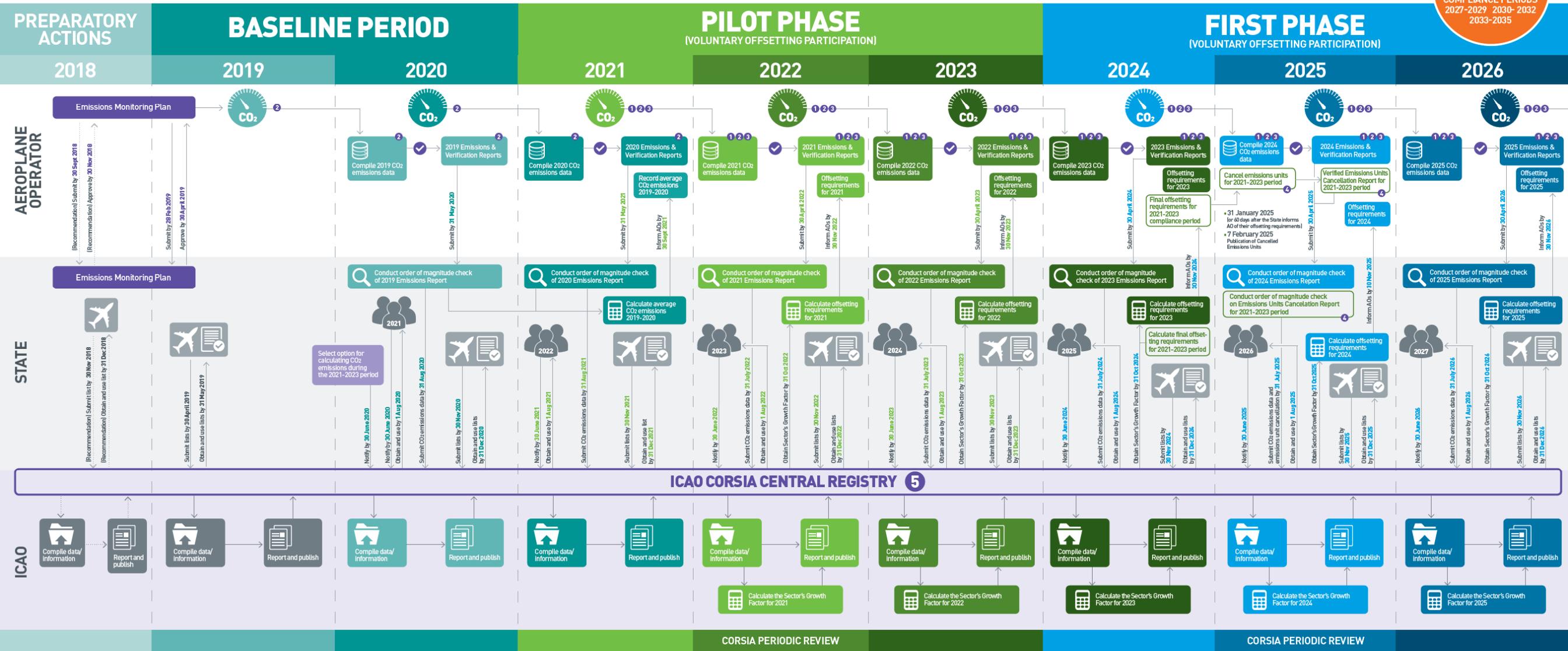
# Objectives

- Provide an overview of the CORSIA CO<sub>2</sub> Information Flow
  - Chronological actions by stakeholders (what and to whom)
    - Monitoring (from Session #2 of this seminar)
    - Reporting and Verification (from Session #3 of this seminar)
  - Timeframes (when)



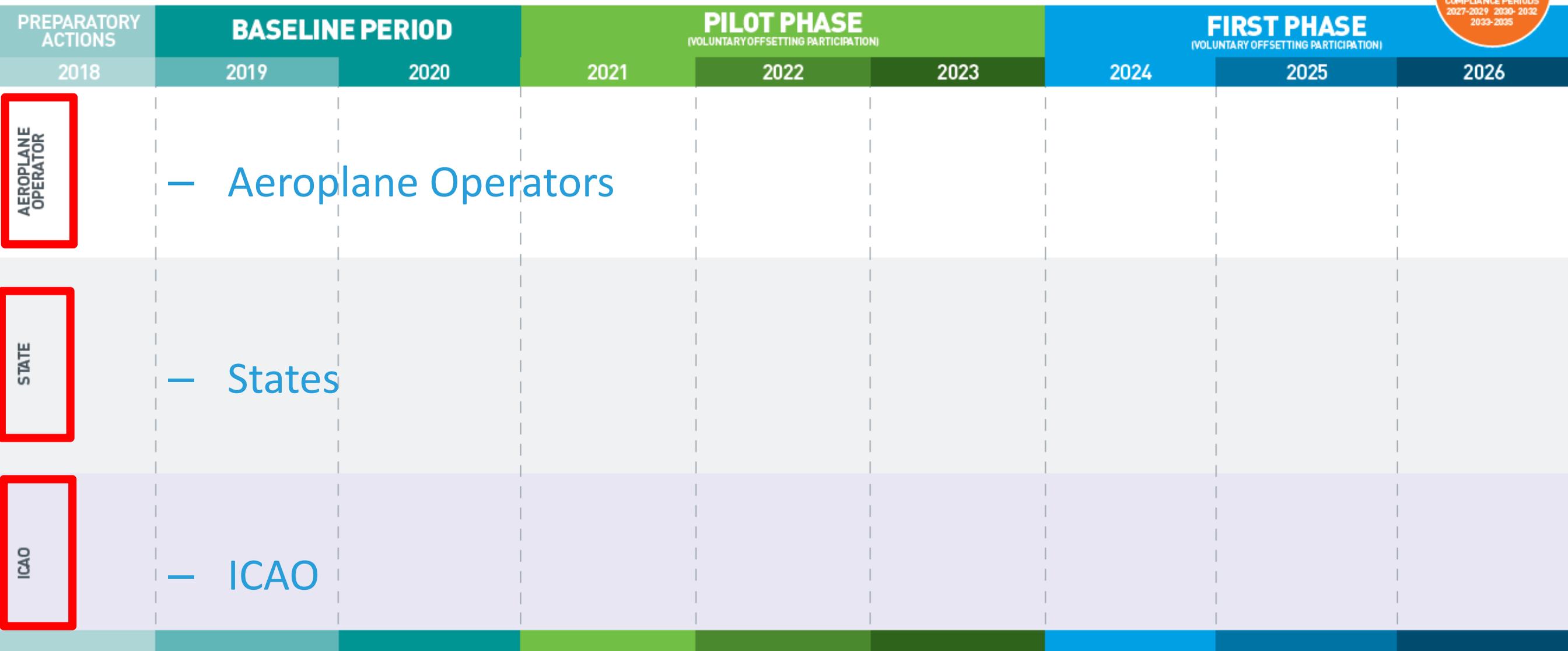
## CORSIA PHASED IMPLEMENTATION DIAGRAM

**SECOND PHASE**  
COMPLIANCE PERIODS  
2027-2029 2030- 2032  
2033-2035



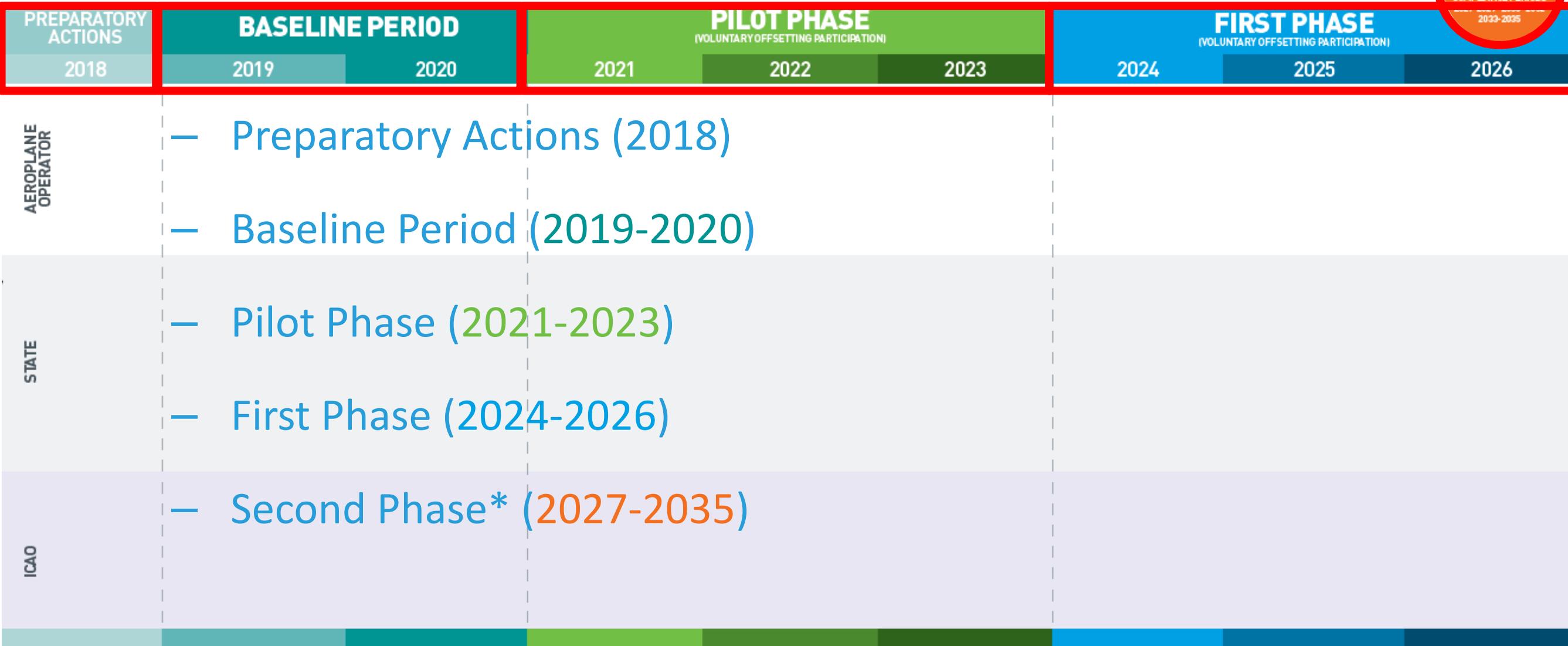


- 3 primary stakeholders:





- Phases or time periods:



\* CORSIA's Second Phase (2027-2035), follows similar process timelines as the First Phase, and its steps are not outline in the diagram.



- Blocks and icons indicate actions performed by that stakeholder:



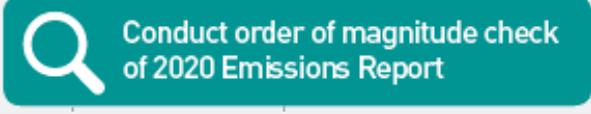
- Aeroplane Operators monitor and compile CO<sub>2</sub> emissions

AEROPLANE OPERATOR



- States conduct order of magnitude checks on Emissions Reports

STATE



- ICAO compiles data and publishes information

ICAO



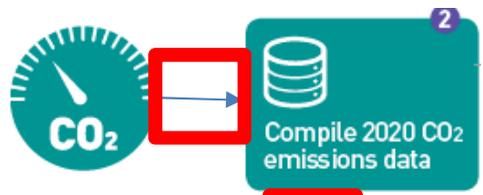


- Arrows indicate the flow of CO<sub>2</sub> information between stakeholders:



- Aeroplane Operators submits compiled CO<sub>2</sub> emissions data to the State

AEROPLANE OPERATOR



- States submits CO<sub>2</sub> emissions data to ICAO

STATE



- ICAO compiles data and publishes information through the CORSIA Central Registry

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- Colors indicate the year of the collected emissions data:



- Aeroplane Operators compile **2020** CO<sub>2</sub> emissions data in **2021**

AEROPLANE OPERATOR



- States check **2020** CO<sub>2</sub> emissions data in **2021**

STATE



- ICAO compiles and publishes **2020** data / information in **2021**

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ICAO CORSIA CENTRAL REGISTRY <sup>5</sup>

• Diagram Legend:



AEROPLANE OPERATOR

– **Numbers** are used to highlight the corresponding CORSIA Implementation Element which is used for that step of the process.

– **Icons** are used to easily identify the step / action on the diagram.

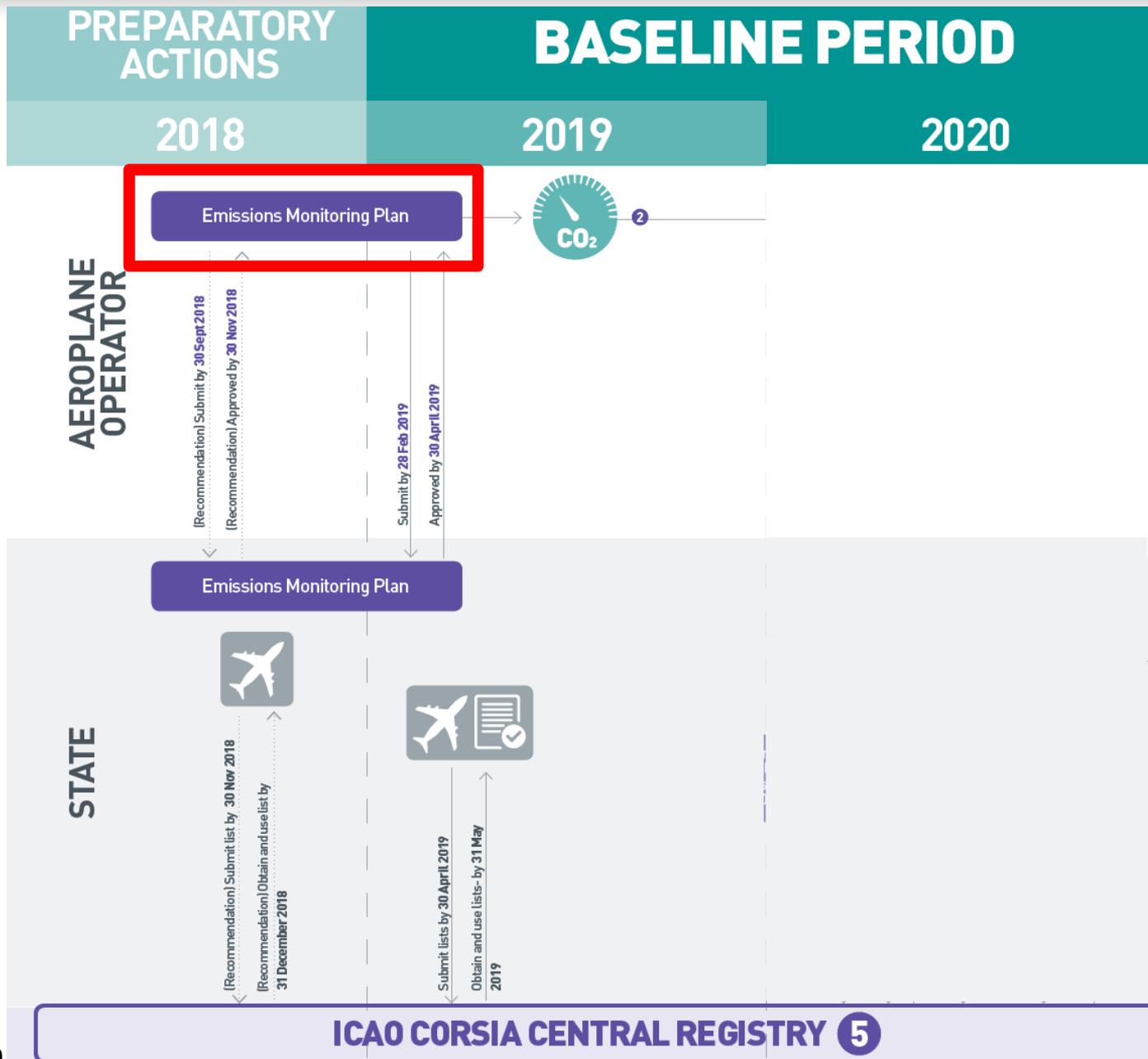
STATE

### CORSIA IMPLEMENTATION ELEMENTS

- 1 CORSIA Offsetting Participation State Pairs/Routes
- 2 ICAO CORSIA CO<sub>2</sub> Estimation and Reporting Tool (CERT)
- 3 CORSIA Sustainable Aviation Fuels
- 4 CORSIA Eligible Emissions Units
- 5 CORSIA Central Registry System

- Monitor CO<sub>2</sub> Emissions from international flights
- State Participation in CORSIA in year 20XX
- Aeroplane operator attributed to the State
- Verification body accredited in the State.
- Verification

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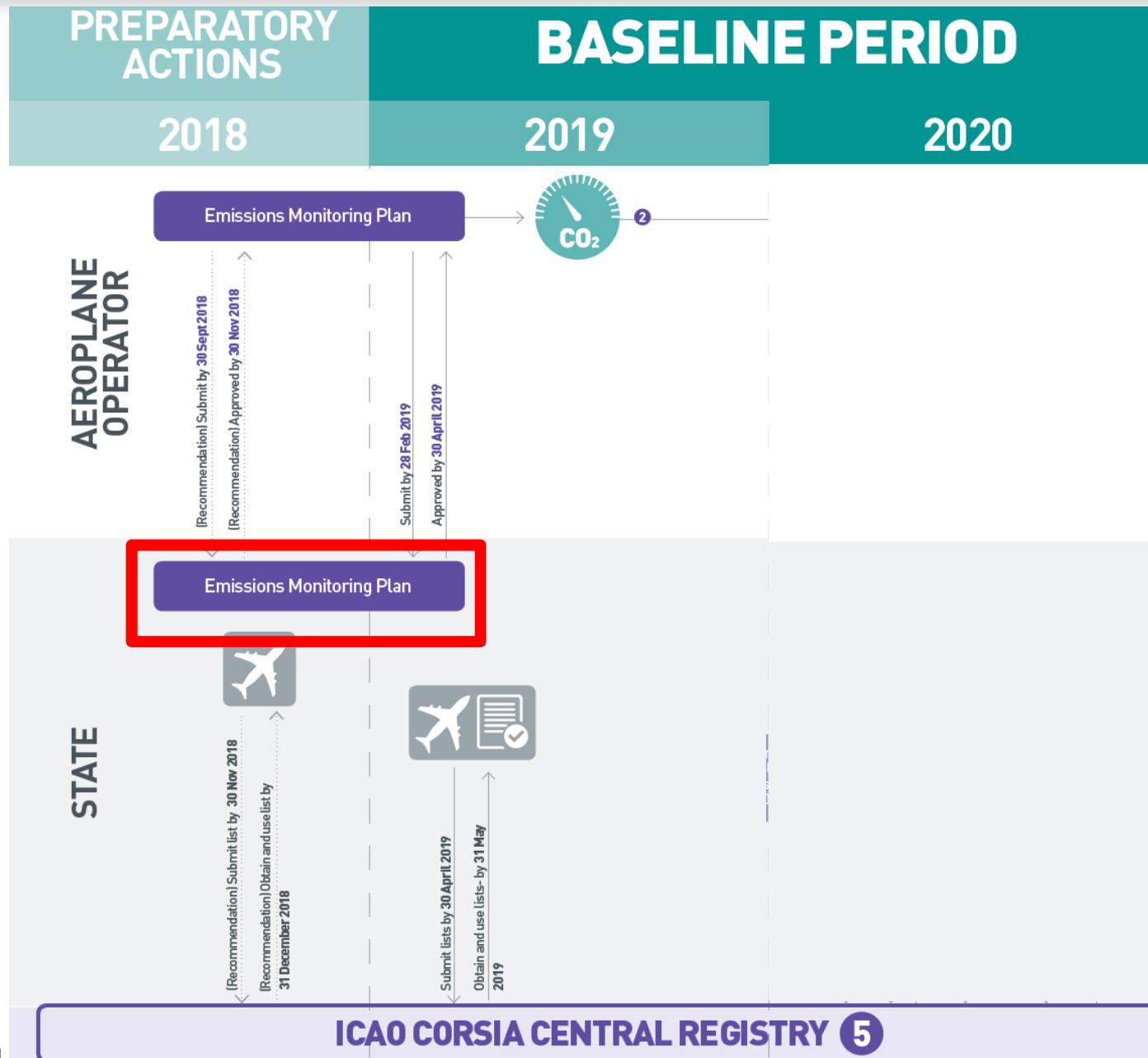


## Emissions Monitoring Plan

### Prepare and Submit:

An aeroplane operator prepares and submits an Emissions Monitoring Plan for review and consultation by the State to which it is attributed.

- Recommended timeframe: submit **by 30 September 2018**.
- Mandatory timeframe: submit **by 28 February 2019**.



## Emissions Monitoring Plan

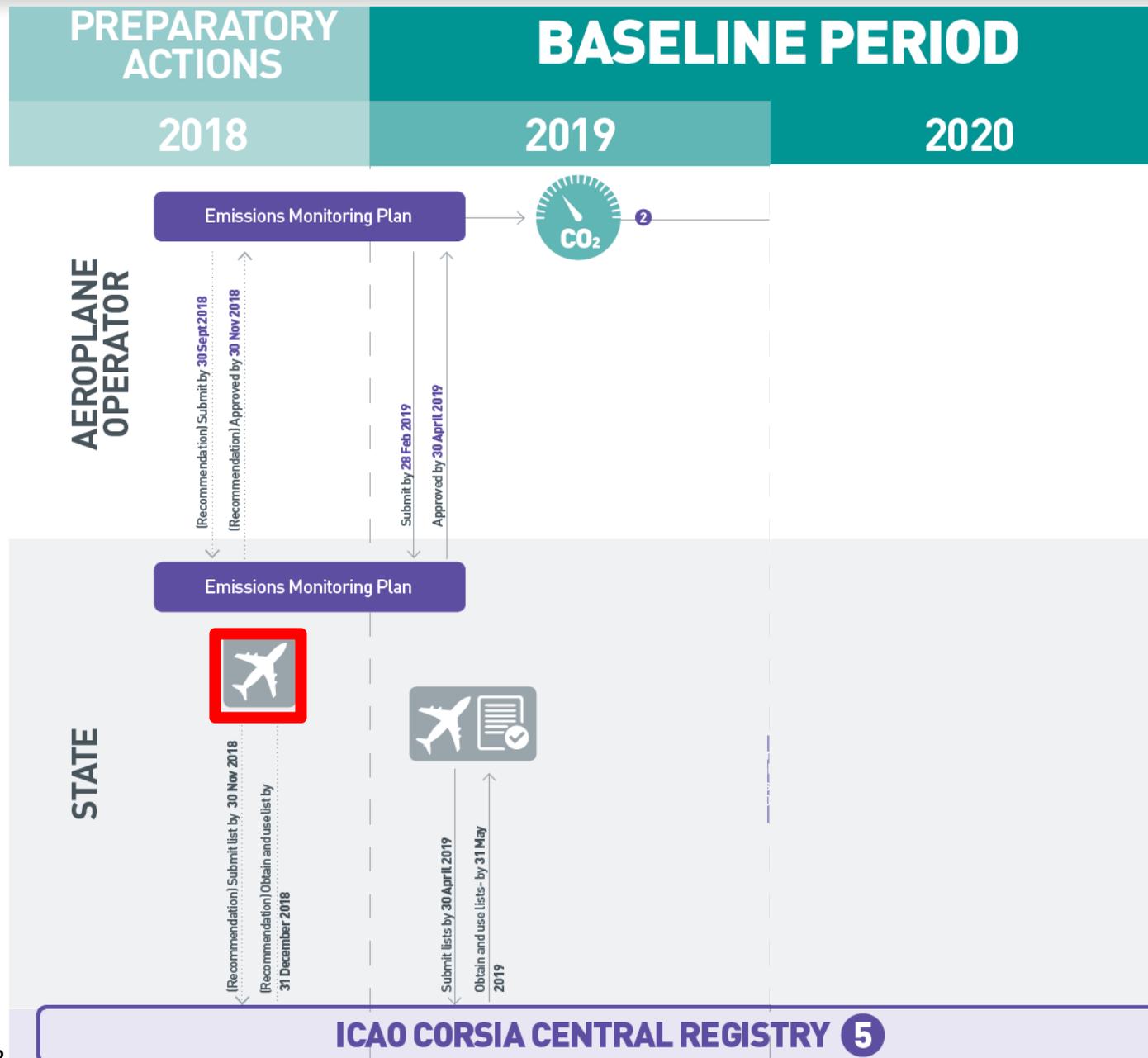
### Review and Approve:

The *State* reviews and approves the Emissions Monitoring Plan.

- *Recommended timeframe:* submit **by 30 November 2018**.
- *Mandatory timeframe:* submit **by 30 April 2019**.



## 2018: ICAO to State



**Aeroplane Operator  
Attributed to the State**

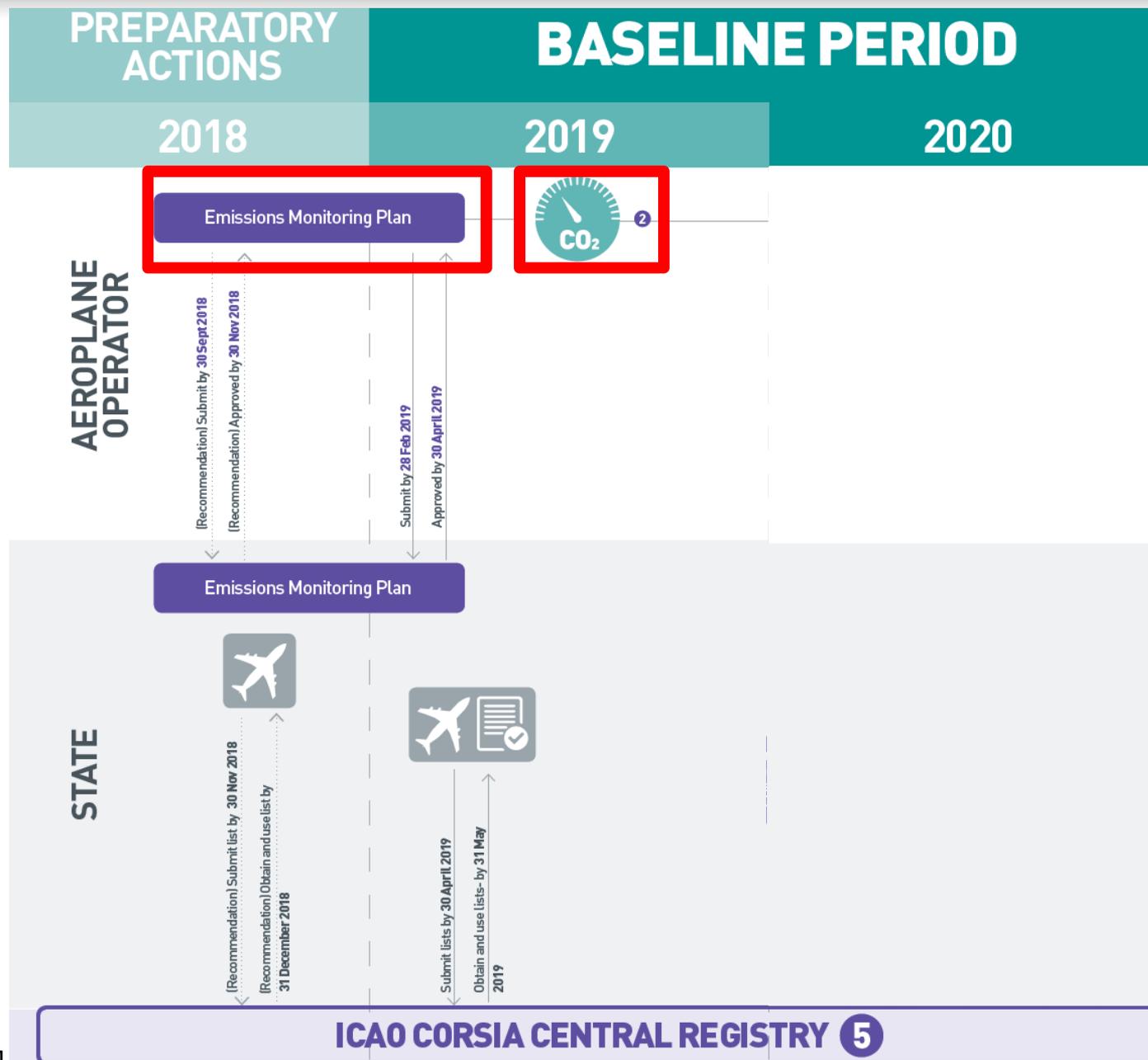
### Compile & Publish:

ICAO compiles the lists submitted by States, and publishes a combined list of all aeroplane operators attributed to their respective States.

–Recommended timeframe:  
obtain and use **by 31 December 2018.**

**ICAO CORSIA Central Registry 5**

# 2019: Aeroplane Operator



## Emissions Monitoring Plan

## Monitor 2019 CO<sub>2</sub> Emissions <sup>2</sup>

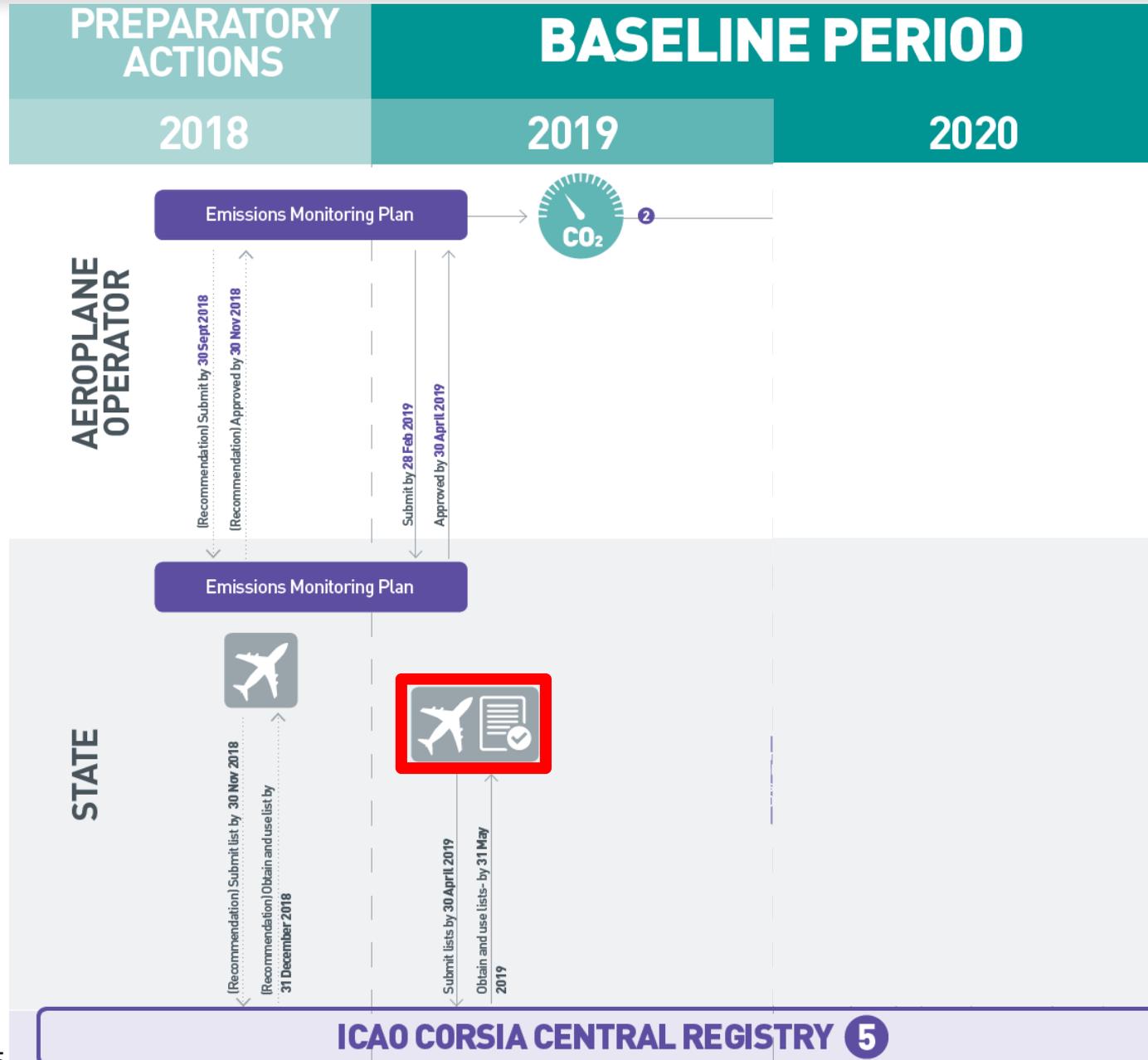
### Monitor:

**All** aeroplane operators shall monitor CO<sub>2</sub> emissions from **international flights**.

- *Mandatory timeframe:* starting **1 January 2019** through **31 December 2019**.

Aeroplane operators can use the ICAO CORSIA CO<sub>2</sub> Estimation and Reporting Tool (CERT) <sup>2</sup>

# 2019: State to ICAO



**Aeroplane Operator List &**  
**Verification Body List**

Submit:

States submit to ICAO a list of:

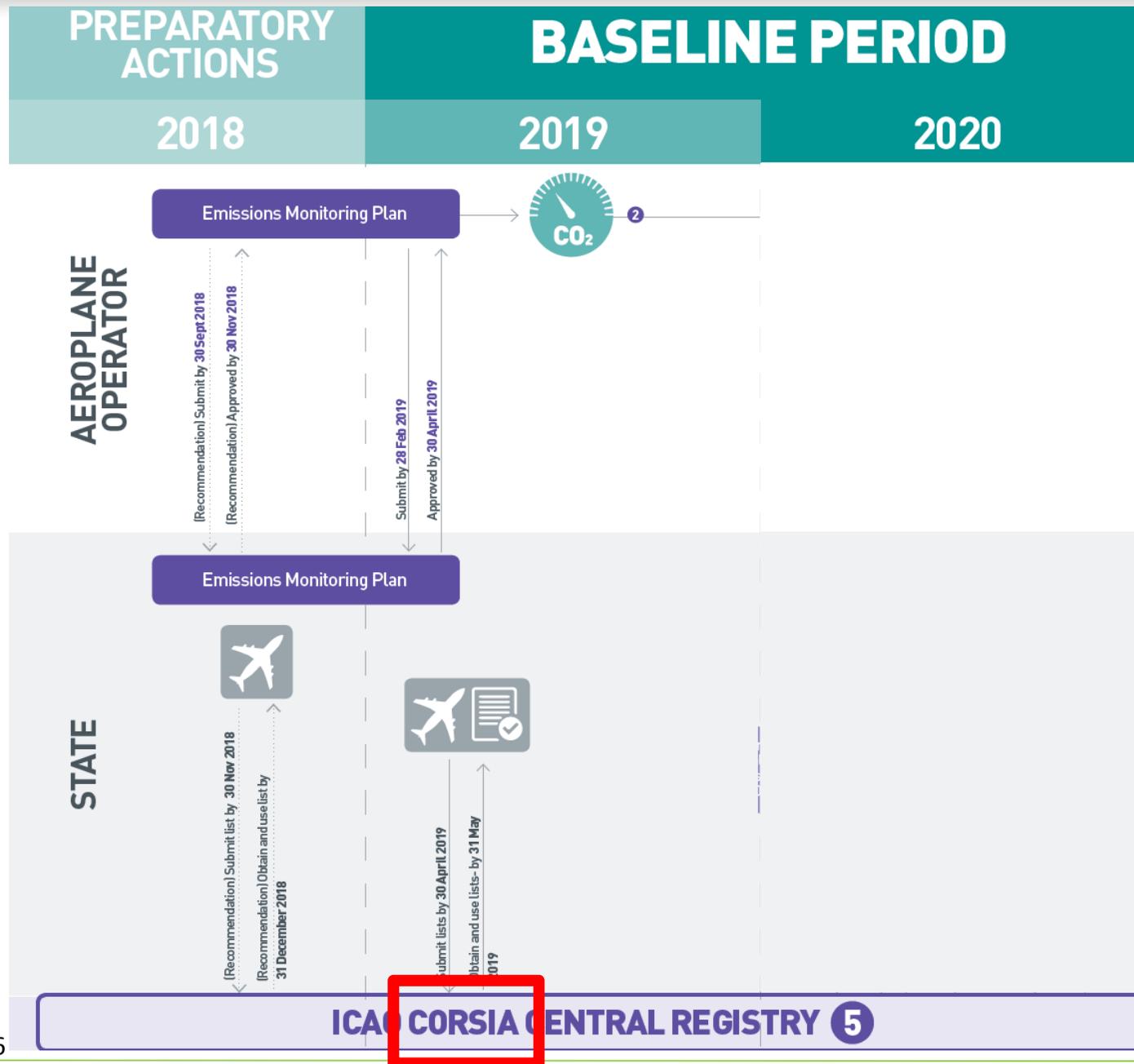
- Aeroplane operators (AO) attributed to the State, and
- Verification bodies accredited to the State

–Mandatory timeframe:  
submit by **30 April 2019.**

**ICAO CORSIA Central Registry 5**



# 2019: ICAO to State



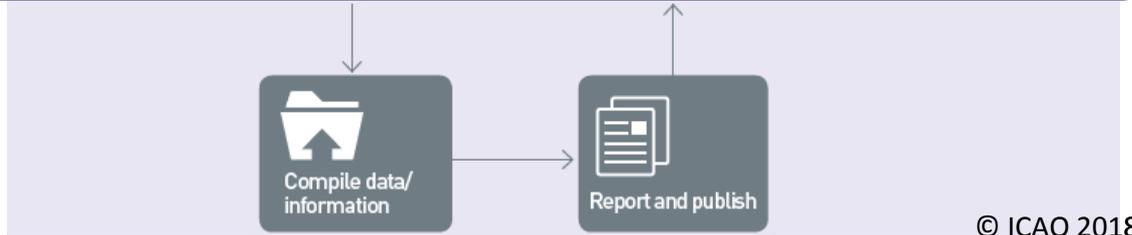
**Aeroplane Operator List &**  
**Verification Body List**

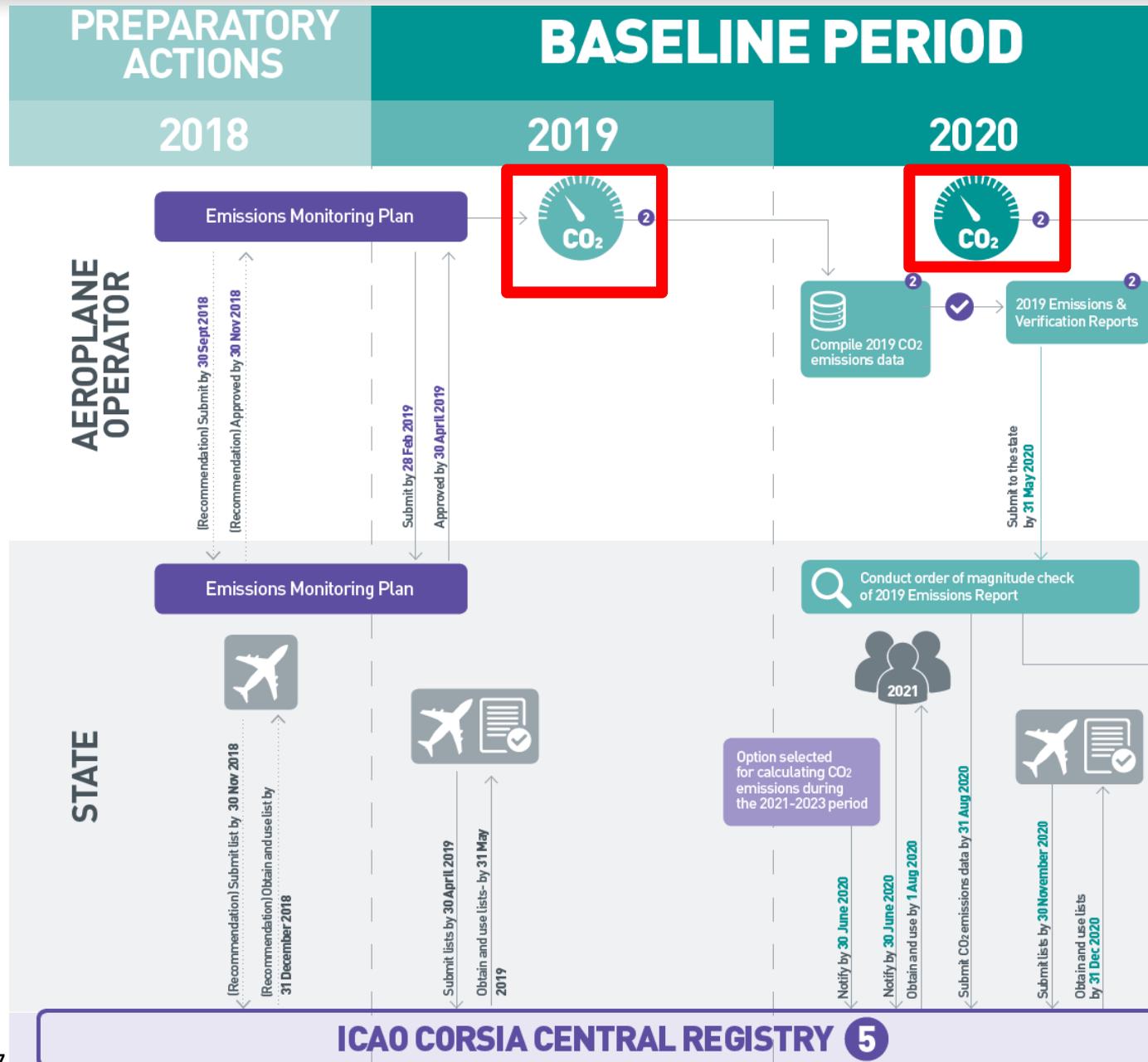
## Compile & Publish:

ICAO compiles the lists submitted by States, and publishes a combined list for all States.

–Mandatory timeframe:  
obtain and use **by 31 May 2019.**

## ICAO CORSIA Central Registry 5





**Monitor 2020 CO<sub>2</sub> Emissions** <sup>2</sup>



**2019 CO<sub>2</sub> Emissions** <sup>2</sup>

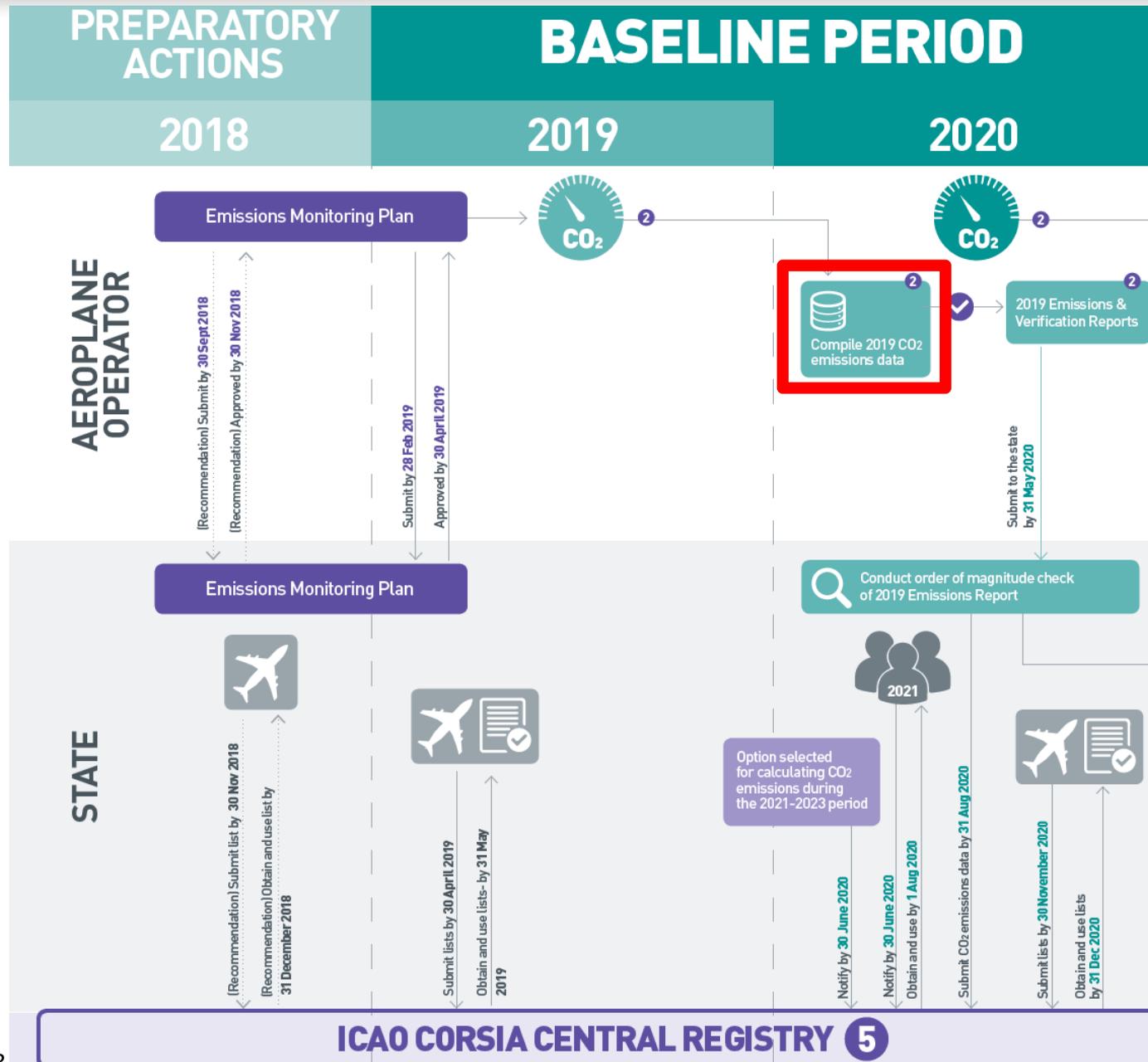
Compile:

*Aeroplane operators compile 2019 CO<sub>2</sub> emissions data from international flights.*

*–Mandatory timeframe: complete by **31 May 2020.***



**Compile 2019 CO<sub>2</sub> Emissions Data** <sup>2</sup>



2 Monitor 2020 CO<sub>2</sub> Emissions



2 Compile 2019 CO<sub>2</sub> Emissions Data

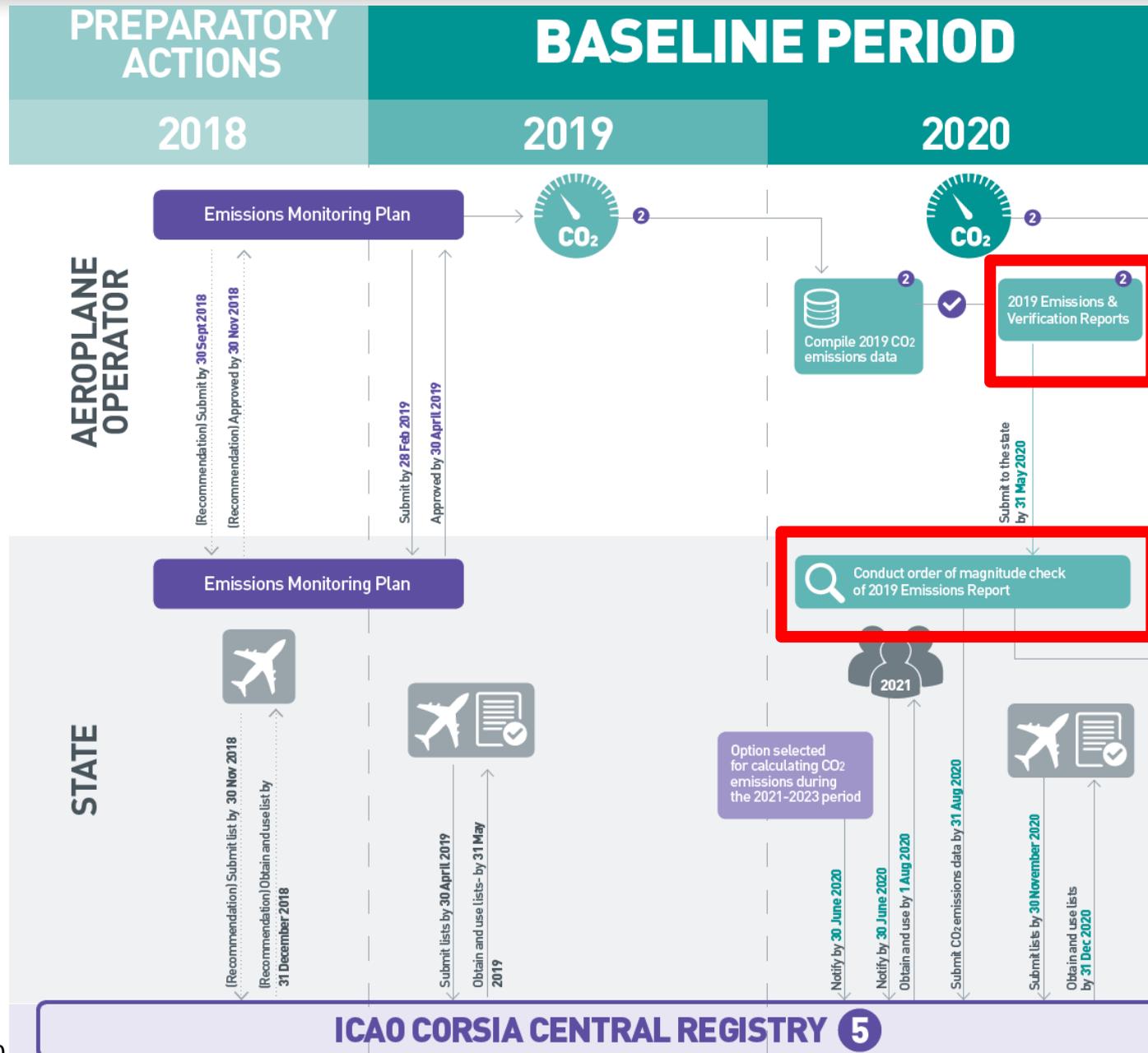
## Generate & Verify:

Aeroplane operators generate their **2019 Emissions Report** and engage a Verification Body to verify the report.

A *Verification Body* performs a verification and generates a **Verification Report**

2 2019 Emissions & Verification Reports

# 2020: Aeroplane Operator to State



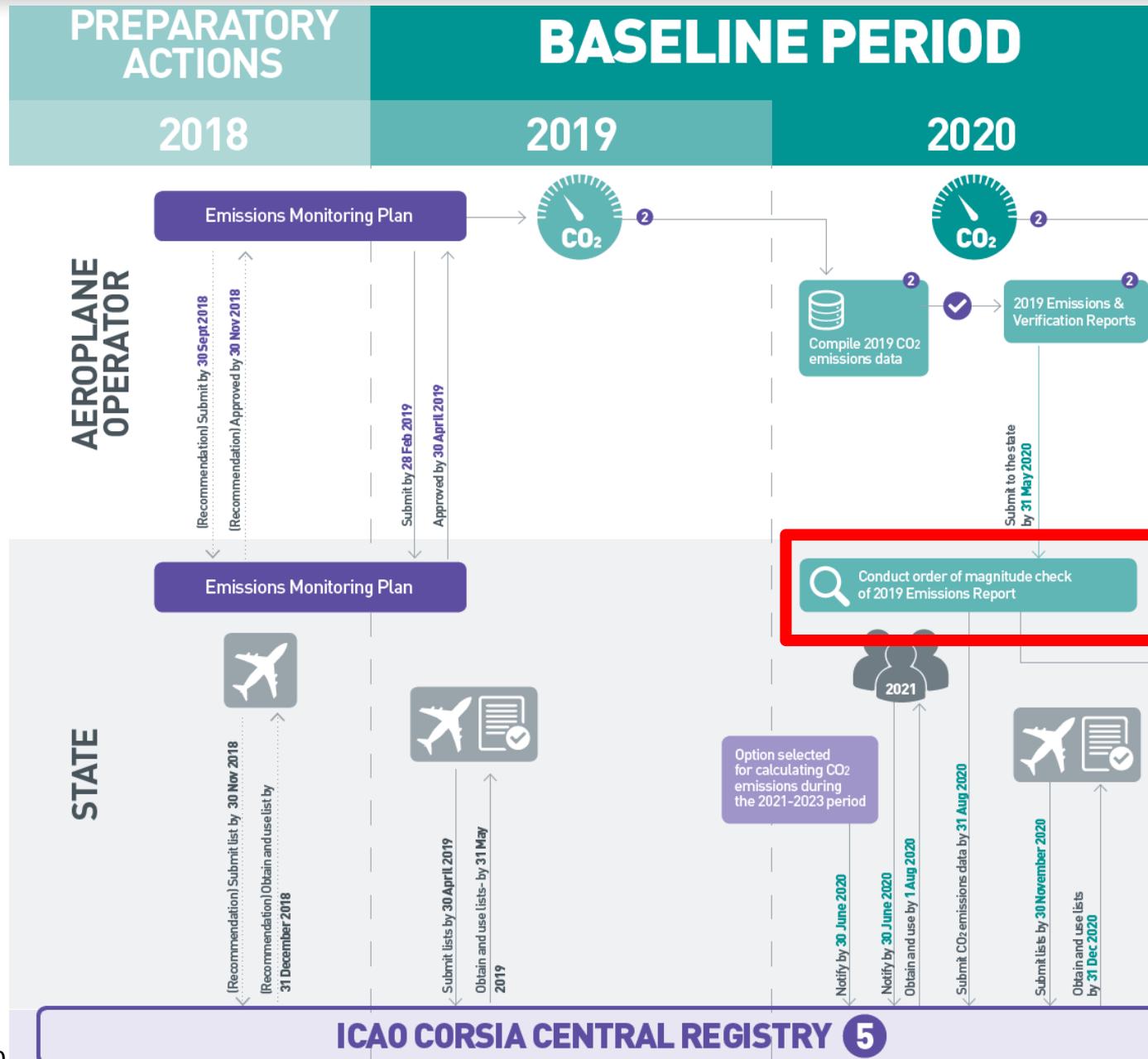
## 2019 Emissions & Verification Reports 2

Submit:  
 Aeroplane operators submit their **2019 Emissions Report and Verification Report** to the State.  
 – *Mandatory timeframe:*  
 submit by **31 May 2020**.

Check:  
 The *State* conducts an Order of Magnitude check of the Reports

## Order of Magnitude Check

# 2020: State to ICAO



## Order of Magnitude Check

### Submit:

States submit the requisite CO<sub>2</sub> emissions data to ICAO.

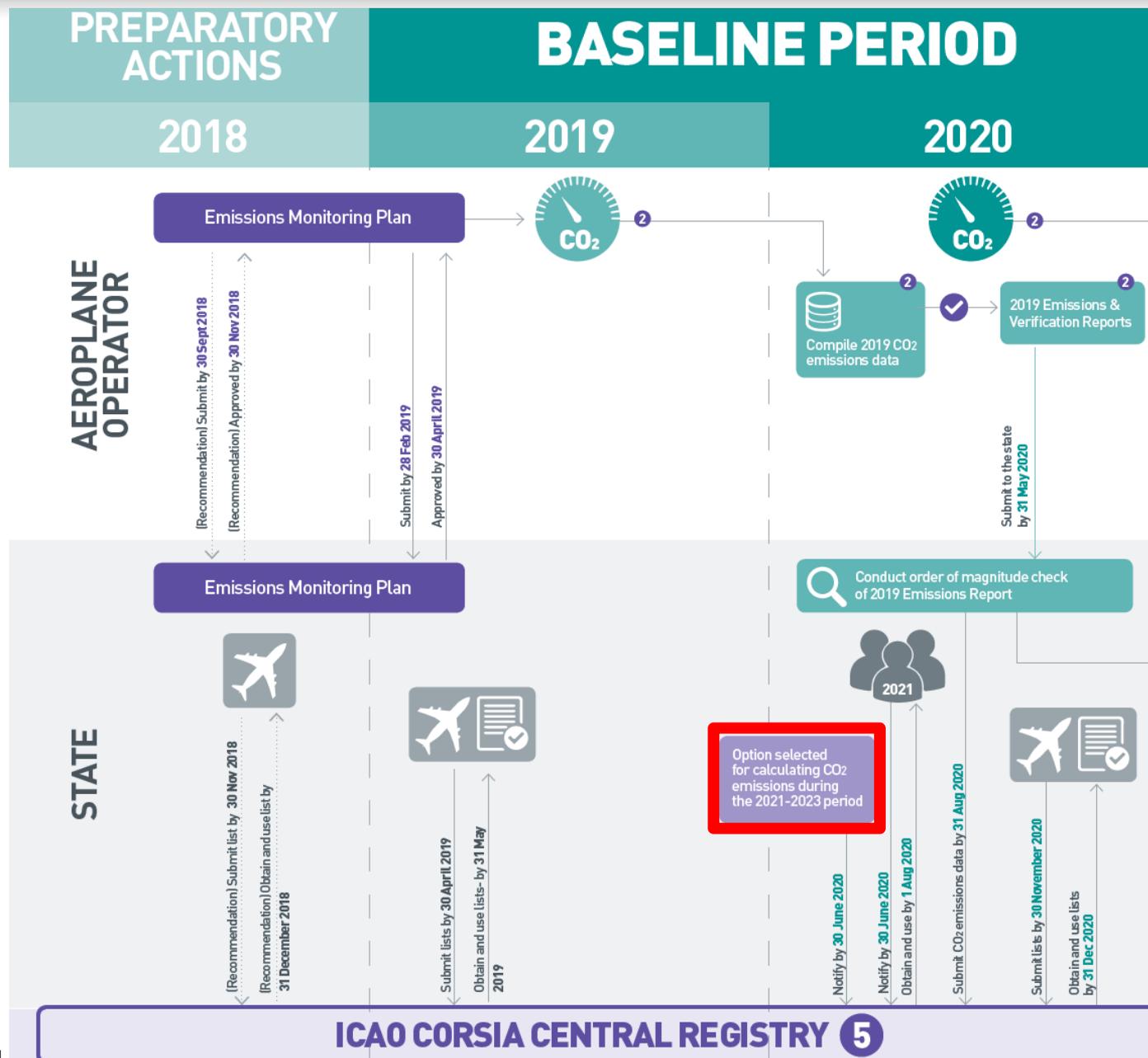
– Mandatory timeframe: submit by **31 August 2020**.

### Compile:

ICAO compiles the States' data to use as a component for the CORSIA baseline.

## ICAO CORSIA Central Registry 5

## 2020: State to ICAO



Select option for calculating CO<sub>2</sub> emissions during 2021-2023 period

Covered in session #5

Select:

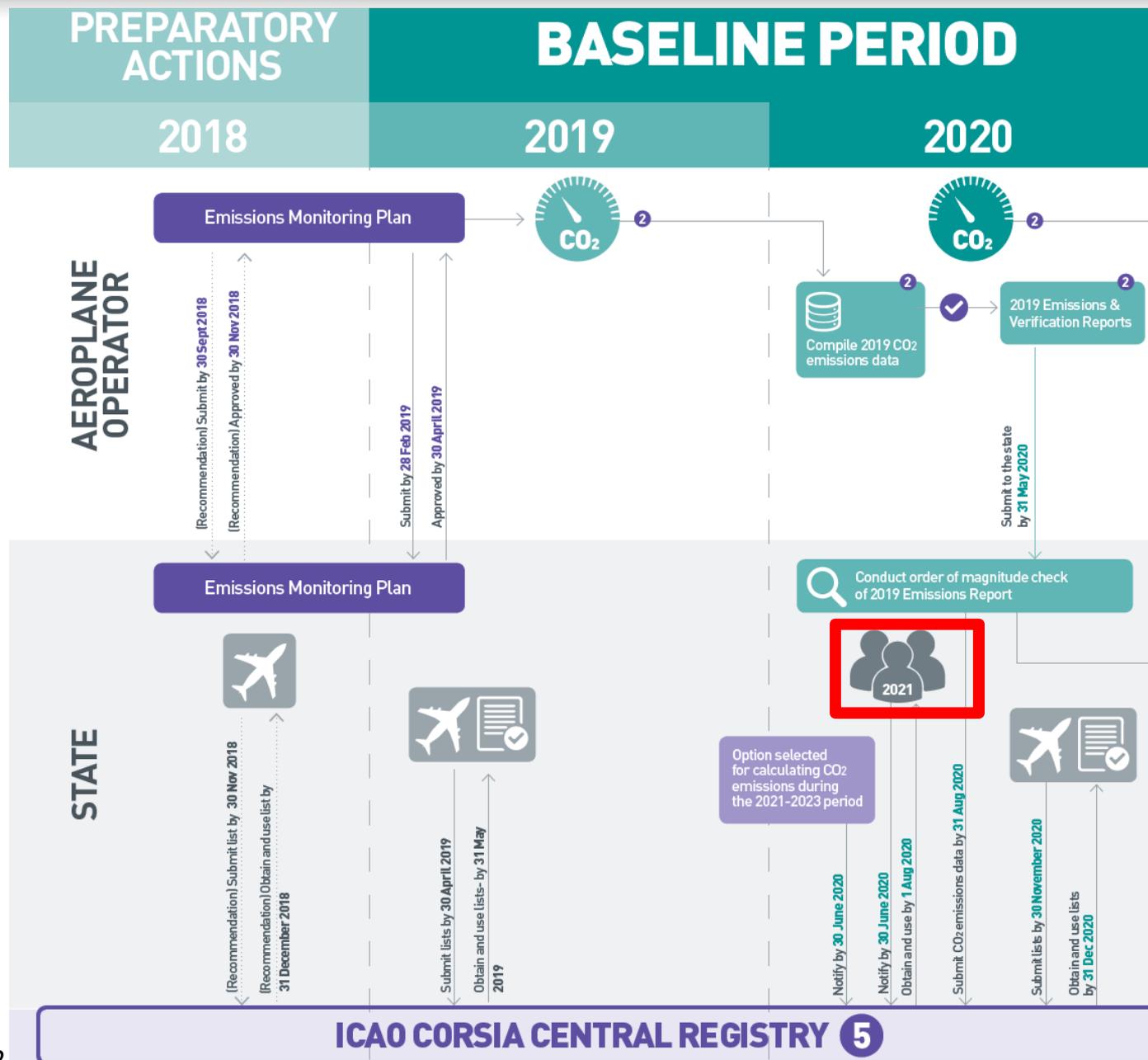
States select which option they will use to have their baseline calculated during the 2021-2023 period (Pilot Phase).

Notify:

States notify ICAO of their option.  
 – Mandatory timeframe: notify by **30 June 2020**.

ICAO CORSIA Central Registry 5

## 2020: State to ICAO



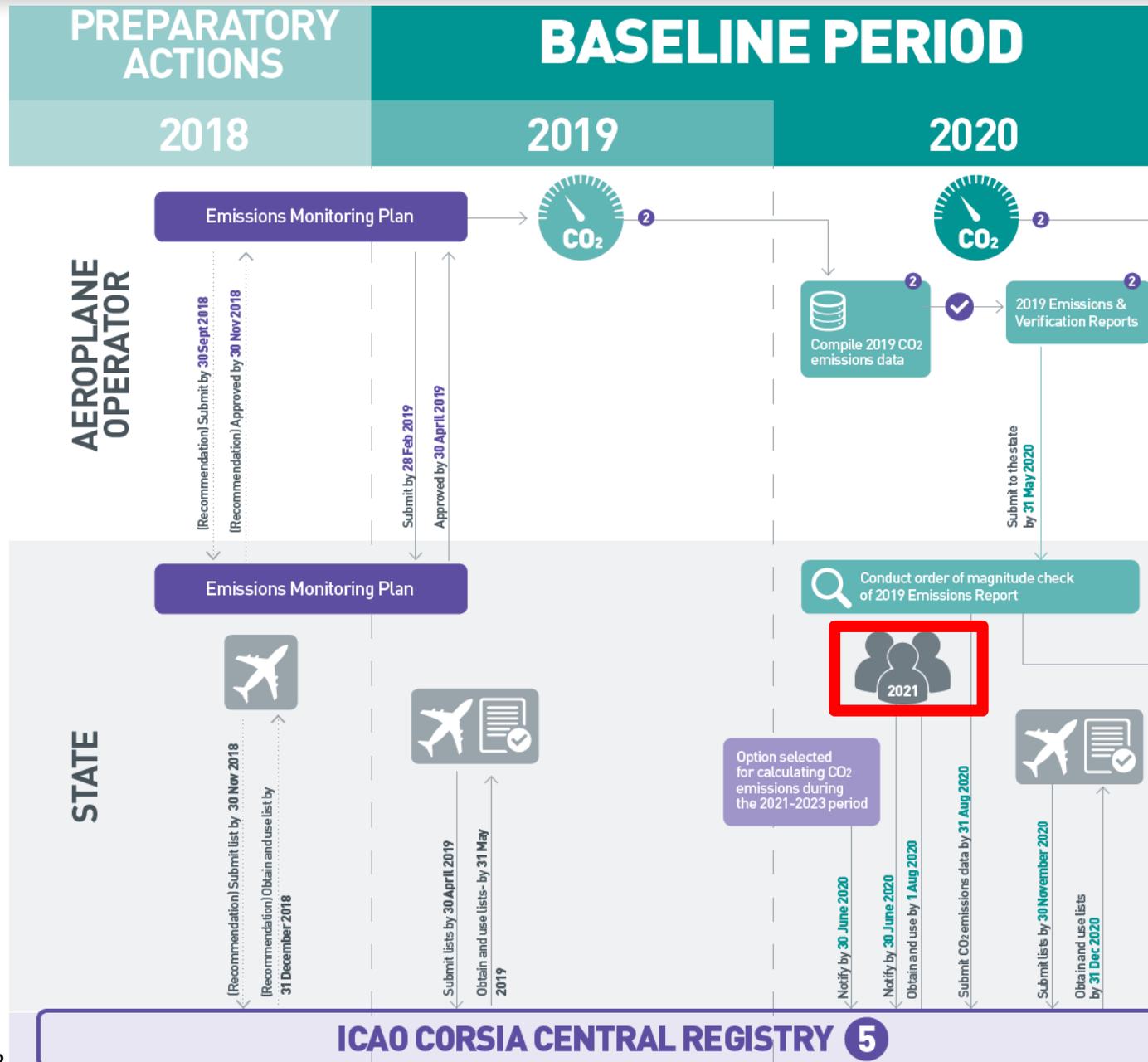
### State Participation in CORSIA in year 2021

Notify: Covered in session #5

States notify ICAO of their participation in CORSIA offsetting in year 2021.  
 – *Mandatory timeframe:* submit by **30 June 2020**.

### ICAO CORSIA Central Registry 5

## 2020: ICAO to State



State Participation in CORSIA in year 2021

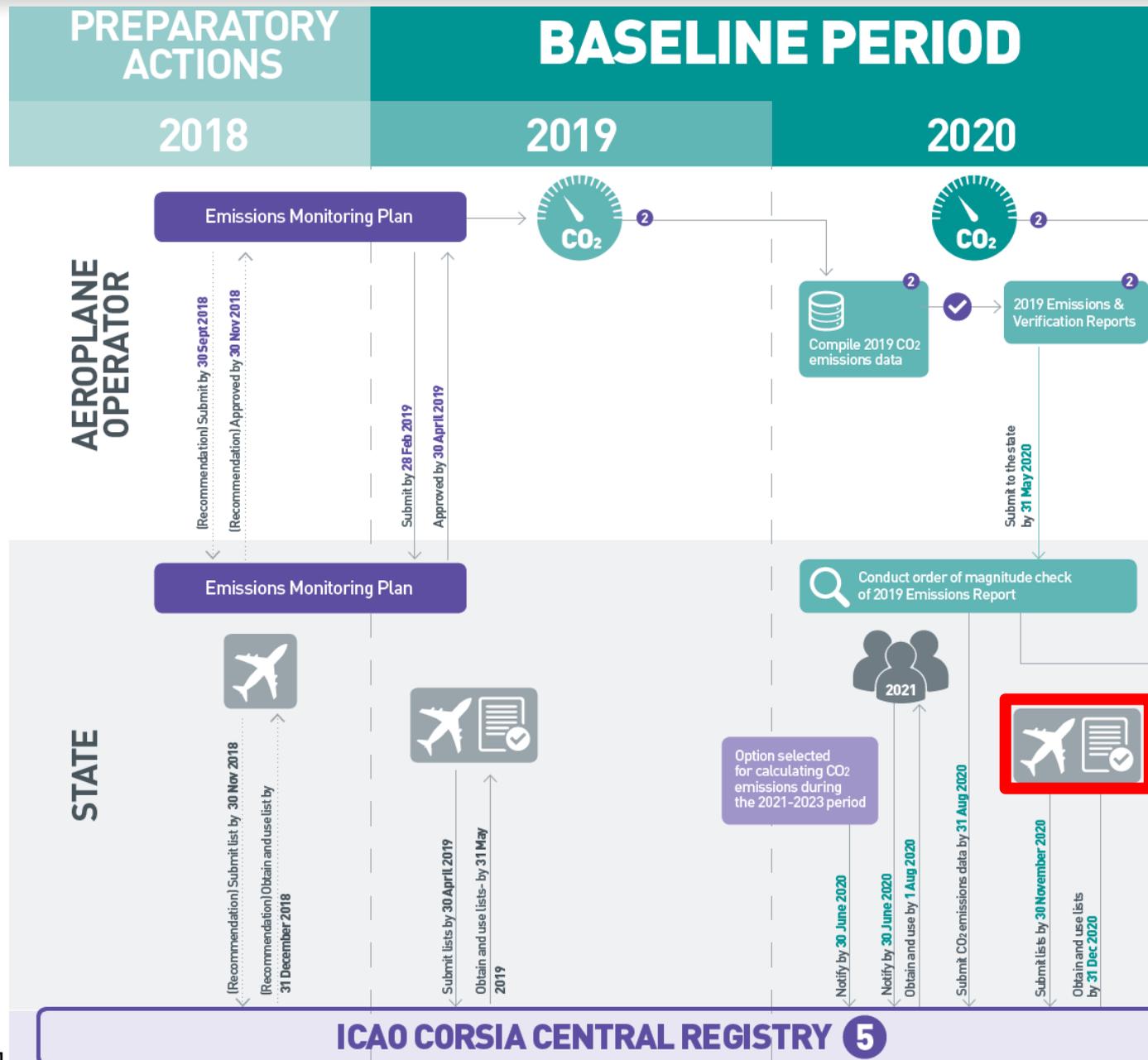
### Compile & Publish:

ICAO compiles a list of States participating in CORSIA for 2021 (), and publishes the list for use by all States.

–Mandatory timeframe: States obtain and use **by 1 August 2020.**

**ICAO CORSIA Central Registry 5**

# 2020: State to ICAO



**Aeroplane Operator List & Verification Body List**

Submit:

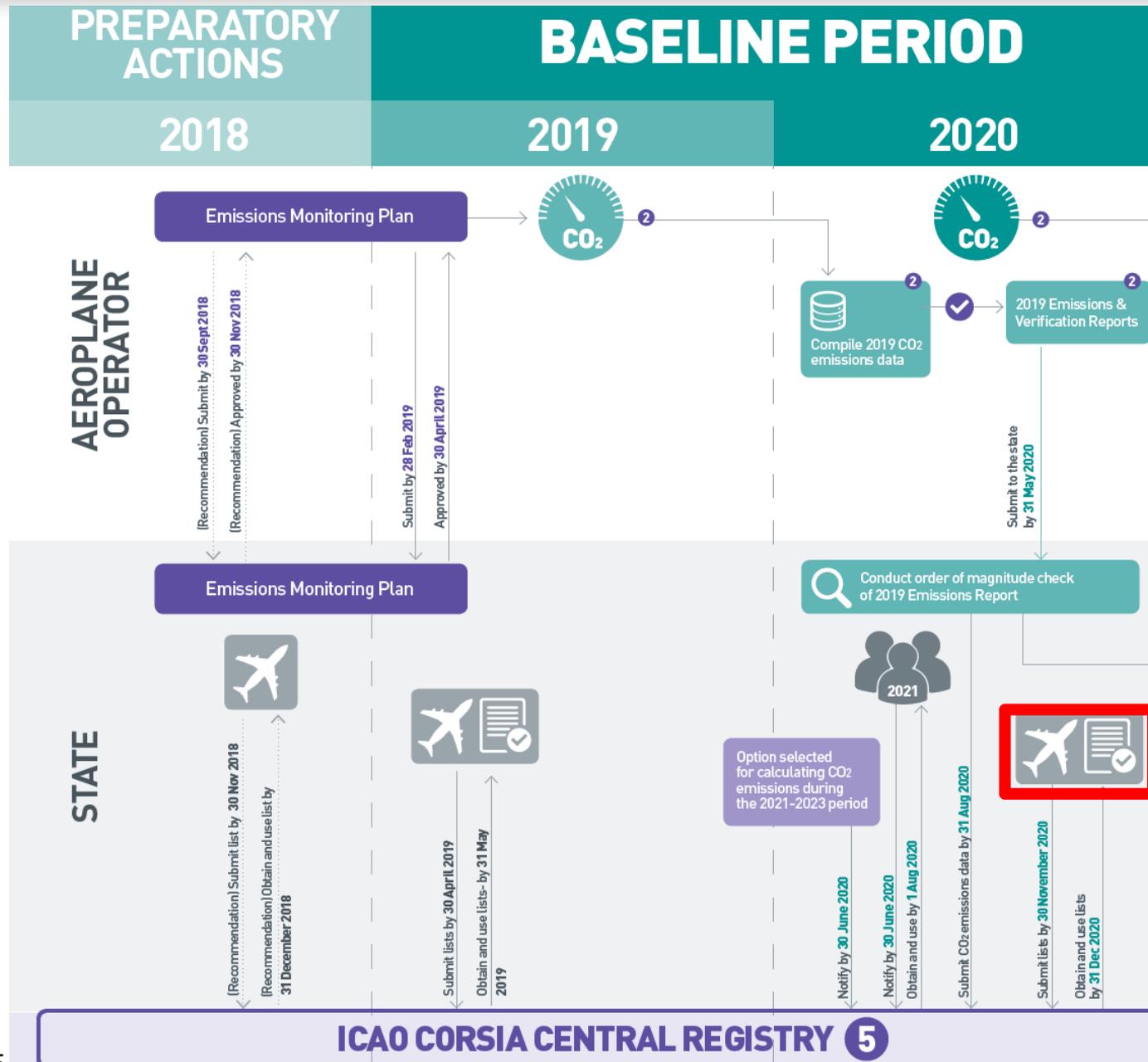
States submit to ICAO a list of:

- Aeroplane operators (AO) attributed to the State, and
- Verification bodies accredited to the State

–Mandatory timeframe:  
submit by **30 November 2020.**

**ICAO CORSIA Central Registry 5**

# 2020: ICAO to State



**Aeroplane Operator List &**  
**Verification Body List**

## Compile & Publish:

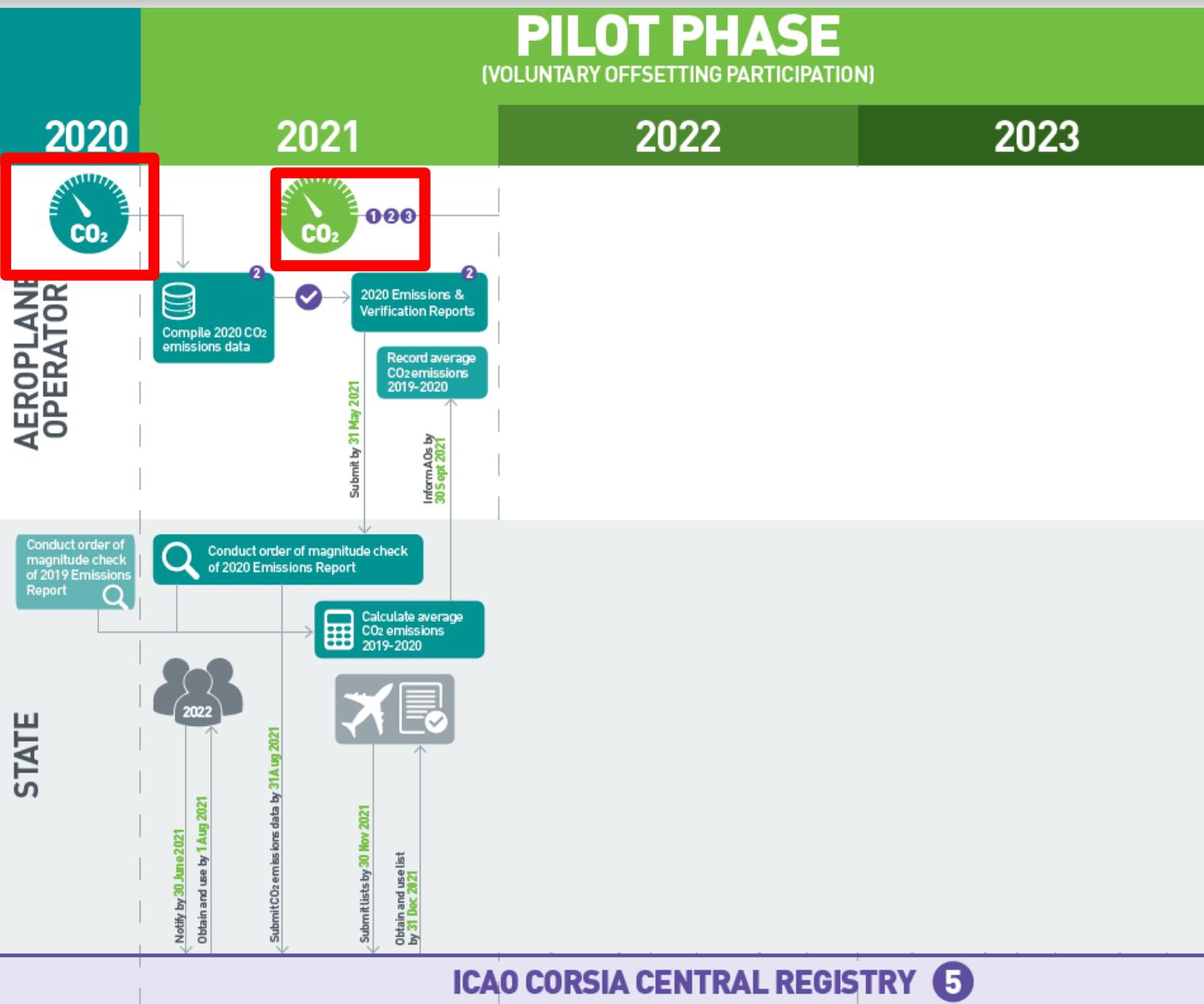
ICAO compiles the lists submitted by States, and publishes a combined list for all States.

–Mandatory timeframe: obtain and use by **31 December 2020.**

**ICAO CORSIA Central Registry 5**



# 2021: Aeroplane Operator



## 1 2 3 Monitor 2021 CO<sub>2</sub> Emissions

- 1 CORSIA Offsetting Participation State Pairs
- 2 ICAO CORSIA CO<sub>2</sub> Estimation and Reporting Tool (CERT)
- 3 CORSIA Sustainable Aviation Fuels

## CO<sub>2</sub> 2020 CO<sub>2</sub> Emissions 2

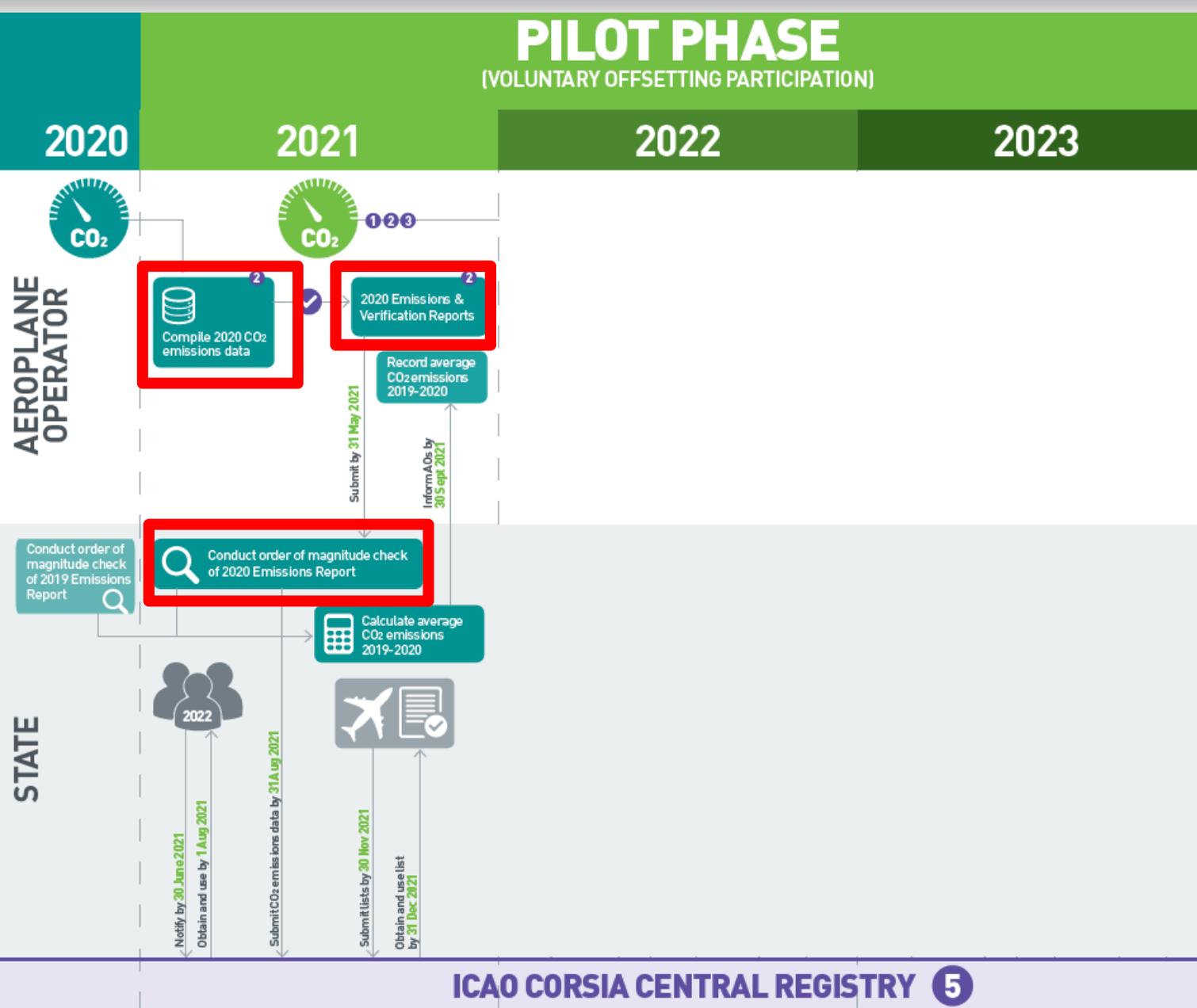
Compile:

AOs compile 2020 CO<sub>2</sub> emissions data from **international flights.**

## CO<sub>2</sub> Compile 2020 CO<sub>2</sub> Emissions Data 2



# 2021: Aeroplane Operator



**2** Compile 2020 CO<sub>2</sub> Emissions Data

**2** 2020 Emissions & Verification Reports

Submit:

- Mandatory timeframe: submit by **31 May 2021**.

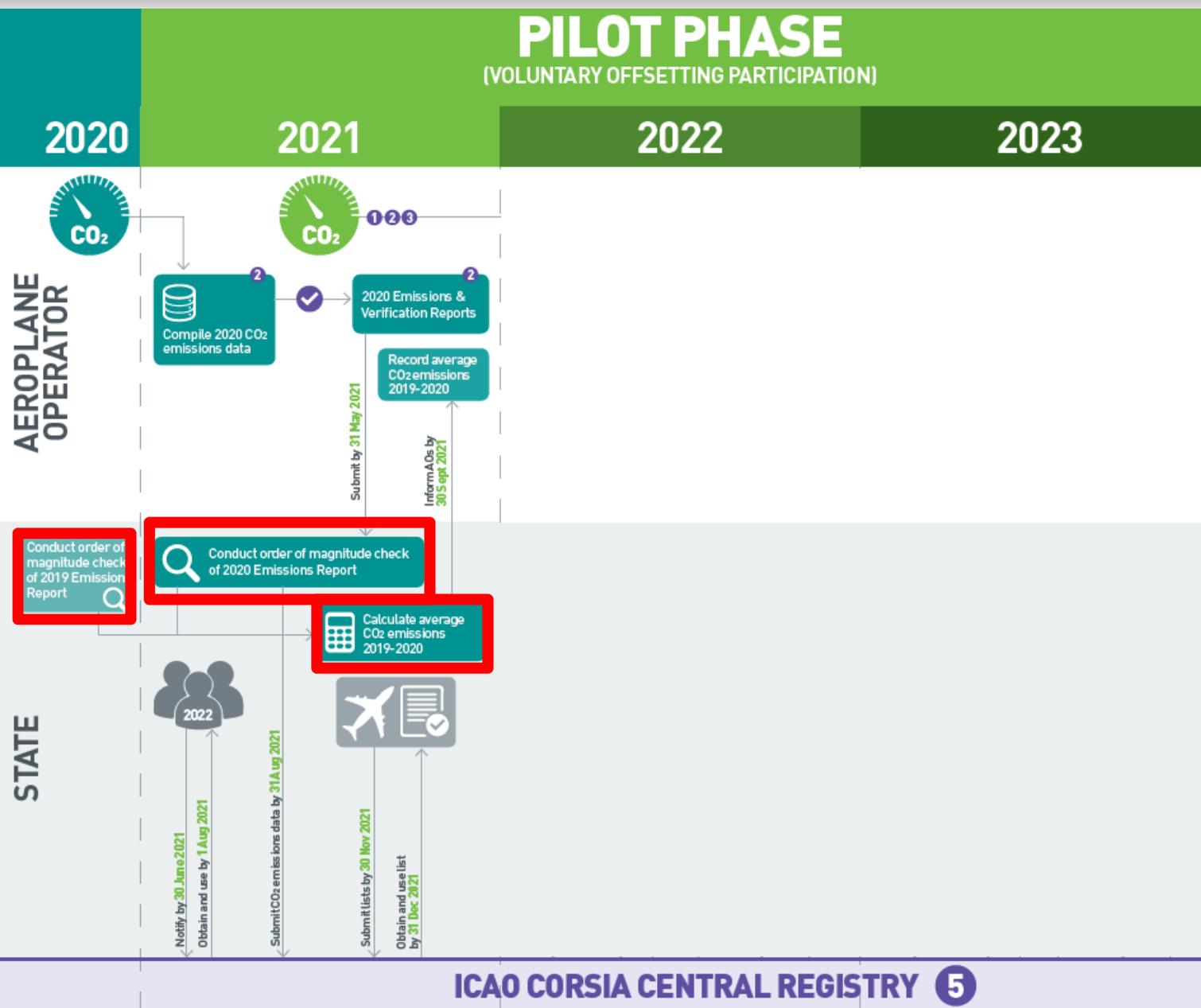
**5** Order of Magnitude Check

Submit:

- Mandatory timeframe: submit by **31 August 2021**.

**5** ICAO CORSIA Central Registry

## 2021: State



Order of Magnitude Check

Order of Magnitude Check

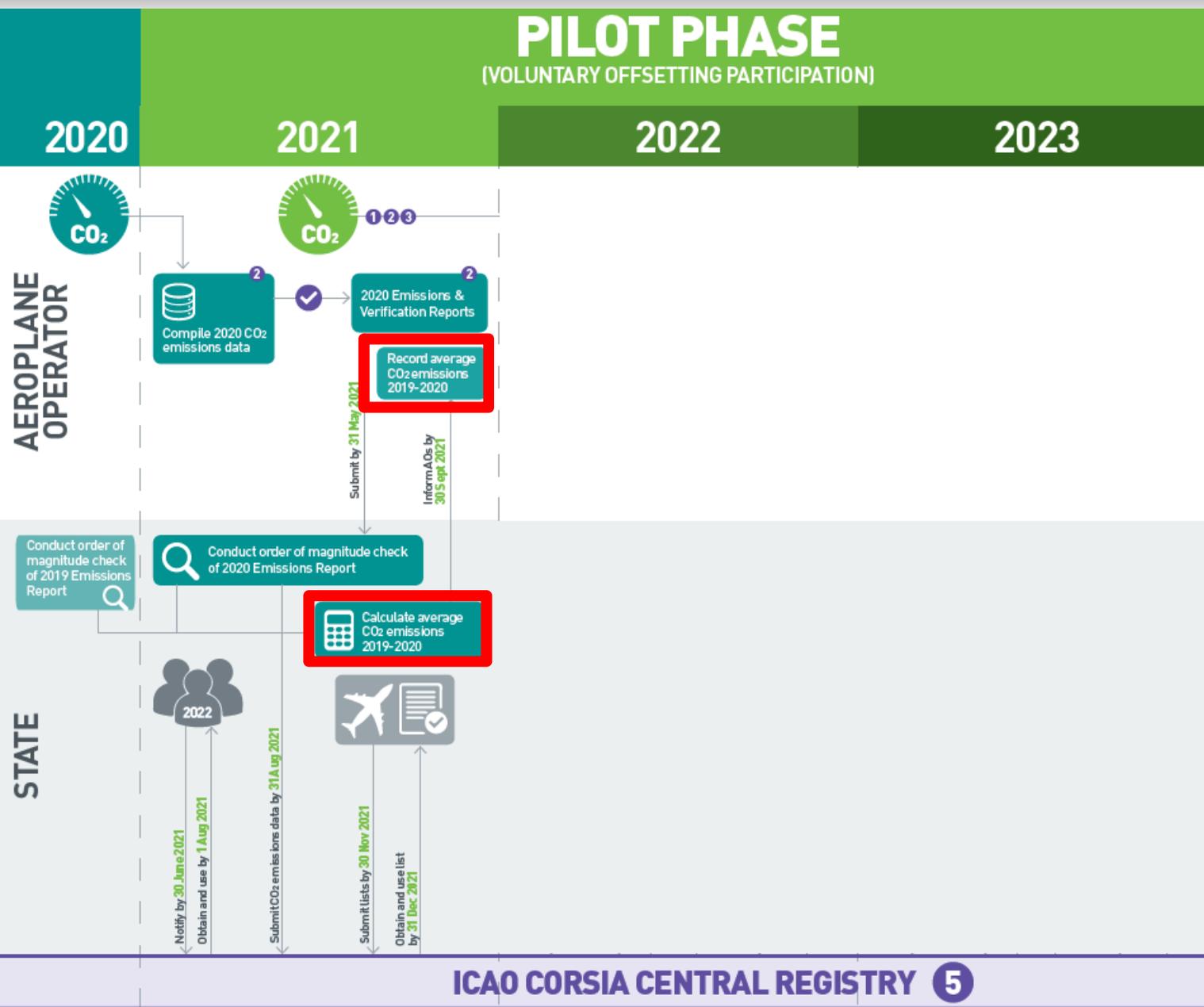
Calculate:

States calculate the average CO<sub>2</sub> emissions of 2019-2020, based on Emissions Reports for those years.

– *Mandatory timeframe:*  
calculate by **30 September 2021**.

Calculate Average CO<sub>2</sub> Emissions

# 2021: State to Aeroplane Operator



## Record Average CO<sub>2</sub> Emissions

### Inform and Record:

States inform aeroplane operators of their average CO<sub>2</sub> emissions for the period of 2019-2020.

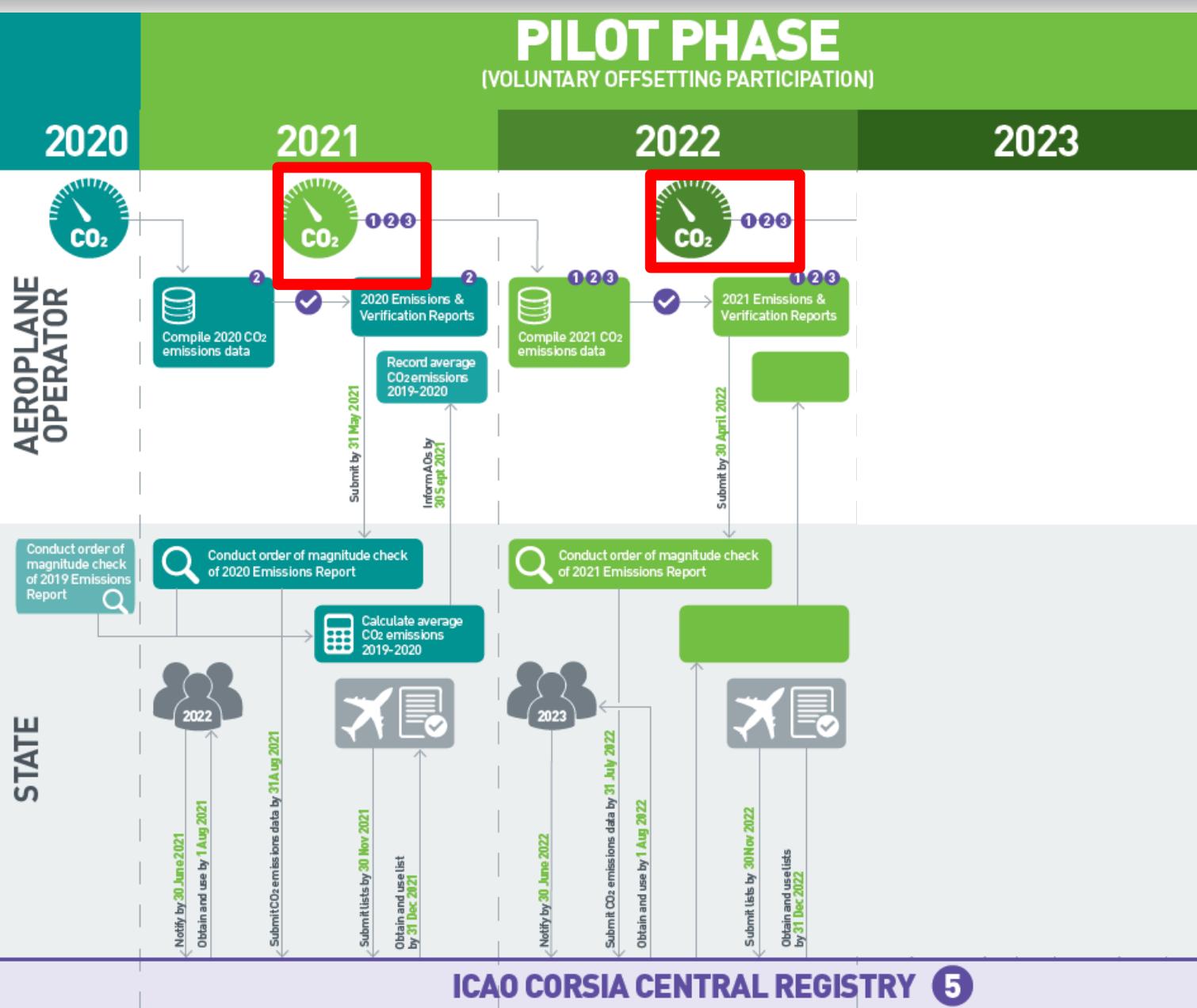
– *Mandatory timeframe:* calculate by **30 September 2021**.

Aeroplane operators record their average CO<sub>2</sub> emissions for the period of 2019-2020.

## Calculate Average CO<sub>2</sub> Emissions



# 2022: Aeroplane Operator to State to ICAO



**1 2 3**  
**Monitor 2022 CO<sub>2</sub> Emissions**

**1 2 3**  
**Compile 2021 CO<sub>2</sub> Emissions Data**

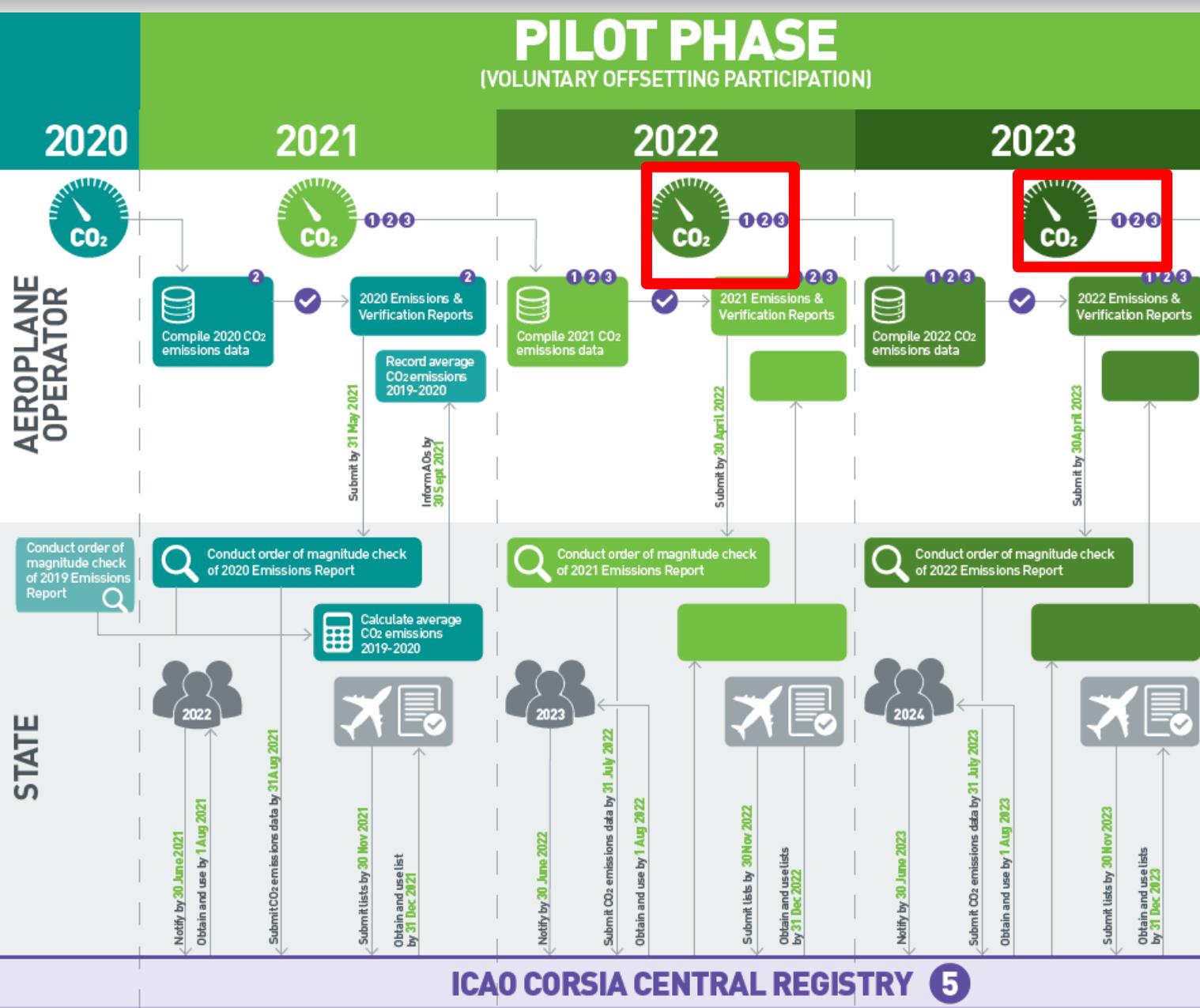
**1 2 3**  
**2021 Emissions & Verification Reports**  
 - submit by **30 April 2022.**

**1 2 3**  
**Order of Magnitude Check**  
 - submit by **31 July 2022.**

**5**  
**ICAO CORSIA Central Registry**



# 2023: Aeroplane Operator to State to ICAO



**1 2 3**

**Monitor 2023 CO<sub>2</sub> Emissions**

**1 2 3**

**Compile 2022 CO<sub>2</sub> Emissions Data**

**1 2 3**

**2022 Emissions & Verification Reports**

- submit by **30 April 2023**.

**Order of Magnitude Check**

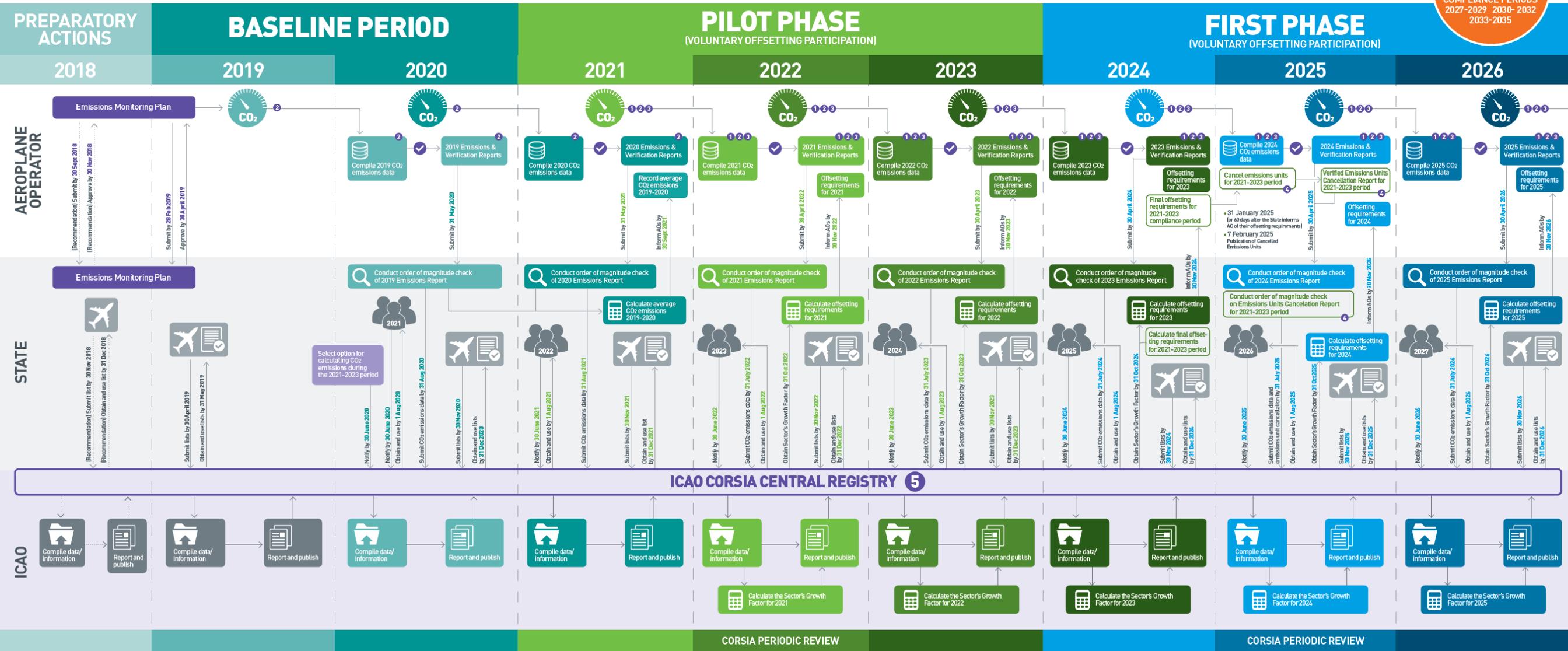
- submit by **31 July 2023**.

**ICAO CORSIA Central Registry 5**



## CORSIA PHASED IMPLEMENTATION DIAGRAM

**SECOND PHASE**  
COMPLIANCE PERIODS  
2027-2029 2030- 2032  
2033-2035





# Questions?



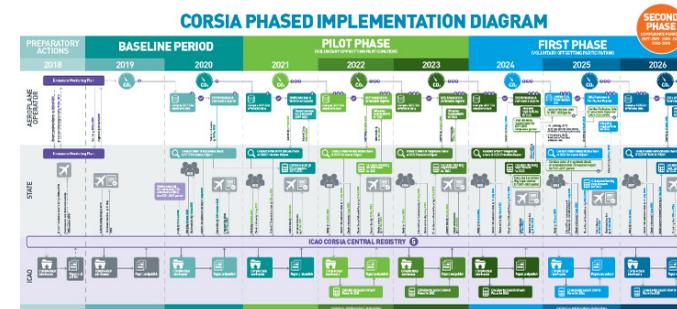
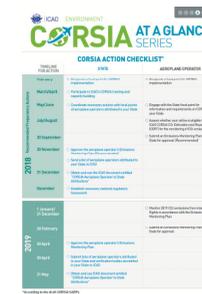
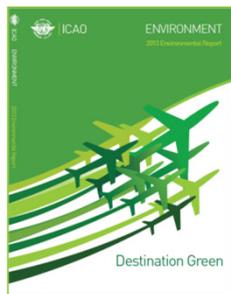
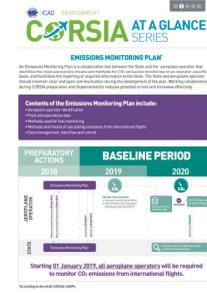
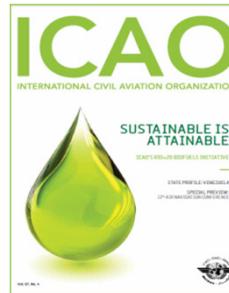
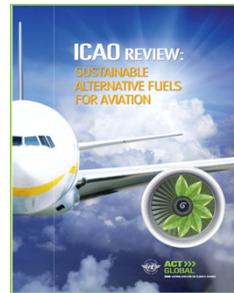
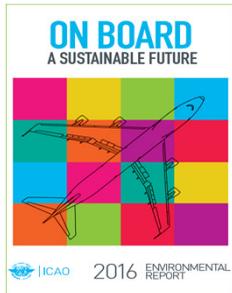
# Session 4

# Small Group Exercise

CORSIA CO<sub>2</sub> Information Flow



# Thank you!



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