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**Capacity Building for CO₂ mitigation from international aviation - Fourth Seminar
Mombasa, Kenya
12-14 December, 2018**

Aviation Environmental System (AES)

Management and continuation beyond the project

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This presentation aims at answering the following questions:

- What are the next (final) steps for the AES in the scope of the project?
- What will happen when the ICAO-EU Project ends?
- Will there be further developments beyond the project?
- Can the AES be used in relation to the Monitoring, Reporting and Verification (MRV) requirements for CORSIA?





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1. AES BEYOND THE PROJECT





- A final version of the AES (see previous presentation) will be completed by January 2019 and distributed in the selected States.
- The selected States will be expected to continue submitting monthly and annual CO2 reports to ICAO until the administrative closure of the project in June 2019.
 - *At minimum through the new “Synchronize” button in the AES;*
 - *If possible also through submission of the monthly and annual reports by email to ICAO.*
- The project team will continue providing customized assistance on the final version of the AES if necessary until the project ends.
- The final version will include an updated documentation (detailed user manual) that will be usable as support for trained personnel, or as training tool for new staff.





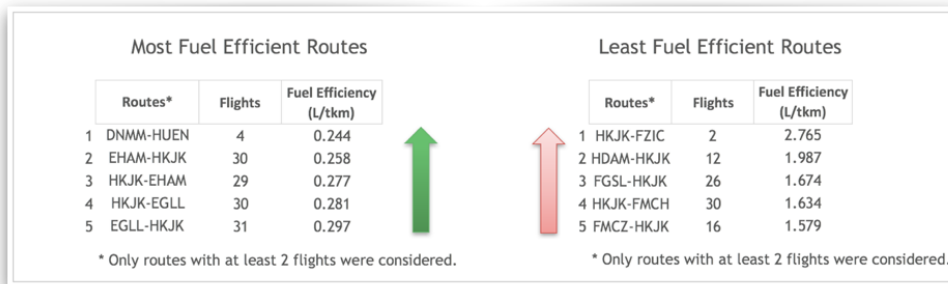
- From the beginning, the AES was designed with the objective to be usable (and useful!) during and after the ICAO-EU Project.
- Sustainability was also one of the main criteria assessed by the EU during the Results-Oriented Monitoring (ROM) reviews.
- Several features were added in the AES because they were useful for the CAA, although not required for the reporting to ICAO:
 - Possibility to import domestic flights in addition to international flights, and generate trends for them
 - Possibility to generate airline-level CO₂ reports
 - Detailed monthly and annual reports with indicators useful for the State (e.g. most and least efficient routes or aircraft)





Possibility to generate a State-level or airline-level report

Detailed indicators useful for the CAA





- The AES does not rely on external resources (e.g. ICAO web server) and the user can update airports, countries and airlines manually in the final version.
- The CAAs will therefore be able and encouraged to continue using the AES after the end of the project to monitor their CO2 emissions.
- Full years of detailed monitored flights data can be used to update the baseline and expected results in future updates of the Action Plans.





- The final AES will be installed in the States by January 2019.
- The updated user manual in PDF and HTML formats will be distributed with the final version of the tool.
- Technical support will remain available until June 2019, by emailing any question to icao-eu-project@icao.int.
- Reporting to ICAO through the AES to be continued until June 2019 by:
 - Clicking on “Synchronize” button in the AES each time new data has been imported;
 - (Optional but encouraged) Submitting the monthly and annual reports generated with the AES by email to icao-eu-project@icao.int.





2. CORSIA-Compatible AES (AES 2.0)





- The adoption of CORSIA has established new Monitoring, Reporting and Verification (MRV) requirements for the States starting from January 2019.
- The AES developed under the scope of the ICAO-EU Project already includes the “embryo” of a MRV system, that was however not designed for CORSIA.
- The current version of the AES was not developed in the scope of CORSIA and does not include all the elements required in the CORSIA SARPS.
- The ICAO-EU project team will explore in 2018 and 2019 the possibility to enhance the AES to make it CORSIA-compatible, leading to the “AES 2.0”



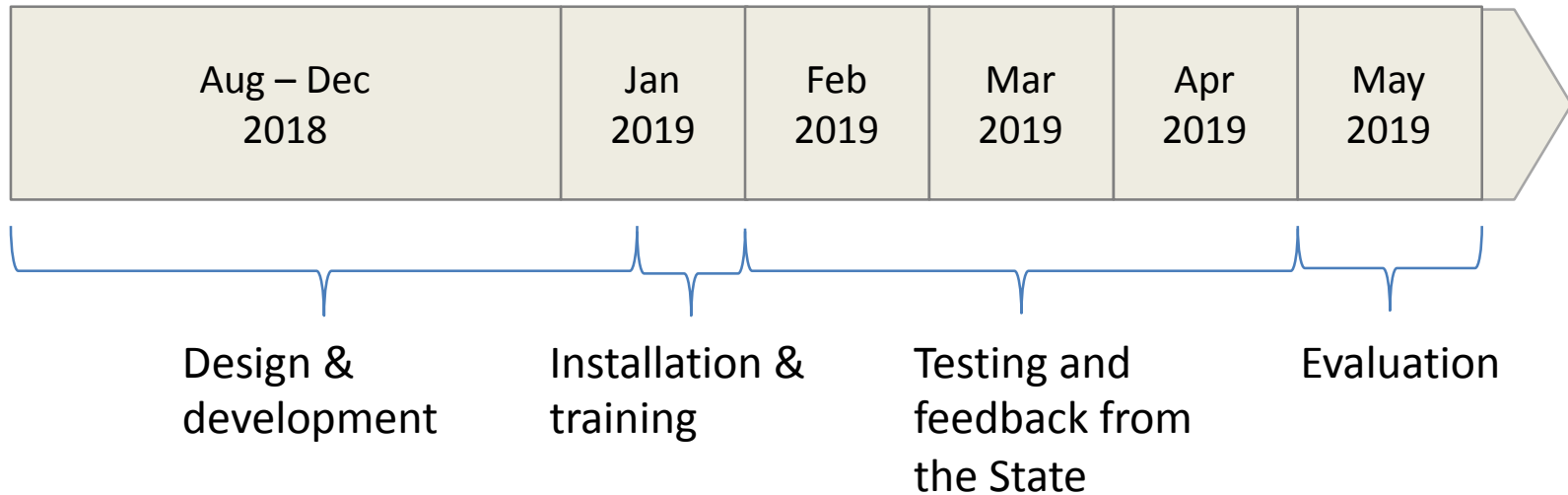


Prototype AES 2.0

- The project team was therefore tasked to develop a “Prototype AES 2.0” in the scope of the ongoing ICAO-EU Project, and to test it in at least one selected State.
- By “Prototype”, we mean a tool with limited functionalities and design, but that is operational (software installed at the CAA) and able to demonstrate the main processes involved in the MRV for CORSIA. Participation of national stakeholders will also be encouraged in the pilot State where the Prototype AES 2.0 will be tested.
- It is envisaged to test the Prototype AES 2.0 in Kenya, who chose to voluntarily join CORSIA from its outset.



- Planned timeline for the development of the Prototype AES 2.0:



AES 2.0



(similar to AES 1.0)

- ✓ Import flight-by-flight data through Form ENV1
- ✓ Export monthly and annual CO₂ reports, as well as Form M for reporting to ICAO
- ✓ Etc.

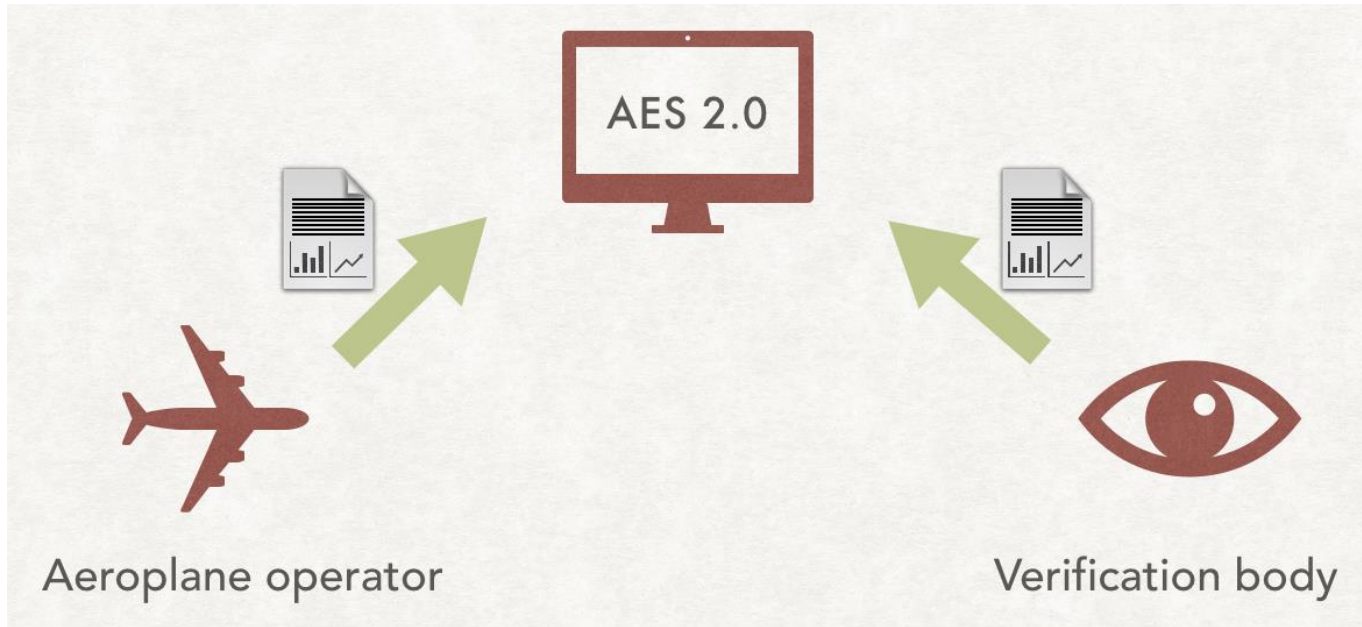


(new in AES 2.0)

- ✓ Administrative tasks related to CORSIA
- ✓ Functionalities for data collection, analysis and verification at the State level in the scope of CORSIA
- ✓ Reporting functionalities (from States to ICAO) in the scope of CORSIA



- Example: Support for the analysis of reports



- Example: Support for the reporting from States to ICAO

1. List of Aeroplane Operators administered by the State

Last reporting: 30 Nov 2022
Next reporting: 30 Nov 2023

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Name	Identifier
AO1	ID1
AO2	ID2
AO3	ID3

+ -

2. List of Verification Bodies accredited in the State

Last reporting: 30 Nov 2022
Next reporting: 30 Nov 2023

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Name	Contact
VB1	Contact1
VB2	Contact2
VB3	Contact3

+ -

3. State level information on CO2 emissions

Last reporting: 31 Jul 2022
Next reporting: 31 Jul 2023

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Year	CO2 Emissions (t)
2019	15,876,354
2020	15,892,987
2021	15,892,698

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The functionalities of the AES 2.0 will be subject to any further decisions by the Committee on Aviation Environmental Protection and/or the Council of ICAO, regarding the CORSIA-related requirements to States, as well as the design of ICAO CORSIA Central Registry and ICAO CO₂ Estimation and Reporting Tool (CERT) and their possible interfaces with States.





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3. CONCLUSION





- The selected States of the ICAO-EU project will be able to continue using the current AES after the end of the project.
- In 2018 and early 2019, a prototype "CORSIA-compatible" AES, or AES 2.0, will be developed by the ICAO-EU Project team and tested in Kenya.
- ICAO will evaluate the results of the prototype AES 2.0 and use it as lessons learnt to design the capacity building methods and tools that could be used in a future capacity building project.





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Nairobi

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(APAC) Sub-office
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(APAC) Office
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THANK YOU

