



CONFERENCE ON AVIATION AND ALTERNATIVE FUELS

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Agenda Item 2: Financing and assistance programmes for aviation alternative fuels

ICAO ASSISTANCE PROGRAMMES ON ENVIRONMENT

(Presented by the ICAO Secretariat)

SUMMARY

This paper provides information on the two ICAO assistance projects established with the European Union (EU), and the United Nations Development Programme (UNDP), with financing from the Global Environment Facility (GEF). These projects aim to support selected States to develop their State Action Plans and implement the mitigation measures contained therein, including those measures related to the development and deployment of sustainable aviation fuels.

1. INTRODUCTION

1.1 Since the 37th Session of the ICAO Assembly, held in October 2010, Member States have been invited to submit to ICAO a State Action Plan on CO₂ emissions reduction activities relating to aviation sector, and to submit updated action plans every three years. The 39th Session of the ICAO Assembly in October 2016, reaffirmed its support for the action plan initiative, and called upon Member States to continue to develop and enhance their action plans, taking into consideration the ICAO basket of measures to reduce CO₂ emissions from aviation operations, and reflecting their respective national capacities and circumstances.

1.2 This basket of measures draws on different means to mitigate and reduce aviation CO₂ emissions such as, technology and standards, operational improvements, market-based measures and sustainable aviation fuels (SAFs). The use of SAFs is a key element of the basket of measures, in terms of achieving the global aspirational goal of keeping net carbon emissions from the aviation sector from 2020 at the same level.

1.3 As part of the efforts to provide further assistance to States and facilitate the development and implementation of States' Action Plans, in 2013 ICAO established two partnerships with the European Union (EU), and the United Nations Development Programme (UNDP) assistance project financed by the Global Environment Facility (GEF), respectively.

1.4 The ICAO-EU joint assistance project, *Capacity Building for CO₂ Mitigation from International Aviation*, is a project to assist fourteen selected States from Africa and the Caribbean in the development of voluntary action plans, setup Aviation Environmental Systems (AES) to establish emission inventories and monitor CO₂ emissions from aviation, and implement measures to reduce aviation emissions. The ICAO–UNDP joint assistance project, financed by the GEF, is a global project that includes the development of guidance documents and supporting mechanisms to assist the identification and implementation of measures to reduce aviation CO₂ emissions. This joint assistance project includes a pilot project which entails the implementation of a renewable energy project that could be replicated in other States.

1.5 As a result of these assistance projects, the participating States have developed and submitted an Action Plan to ICAO and are currently in the implementation phase of the mitigation measures selected therein.

1.6 In addition, in response to the request from developing States and as part of the joint assistance projects, ICAO is working to develop a guidance document on the development of SAFs, which is aimed largely at developing States and Small Islands Developing States (SIDS). This guidance document will cover the production, deployment, and use of drop-in SAFs. Further information on these projects is provided as follows.

2. THE ICAO – EU ASSISTANCE PROJECT AND SUSTAINABLE AVIATION FUELS

2.1 In the context of the ICAO-EU joint assistance project, many activities have been undertaken on SAF. Of the fourteen Action Plans submitted to ICAO in the context of the ICAO EU joint assistance project, four States have requested further support from the project funding to finance feasibility studies on the development and deployment of SAFs in their State. After a comprehensive review of all the mitigation measures selected by the States in their Action Plans, the ICAO-EU project Steering Committee decided to provide support for the development and implementation of those measures.

2.2 Four feasibility studies on the potential development and deployment of SAFs have been initiated. Two feasibility studies have been finalized in Dominican Republic and in Trinidad and Tobago, and two other are ongoing in Burkina Faso and Kenya.

2.3 During the preparatory phases of the feasibility studies, the experts hired by ICAO for this purpose were able to meet with Government officials and relevant stakeholders in each State. In particular, these on-site missions enabled the experts to conduct several interviews with government representatives, which allowed the assessment of the national circumstances, the analysis of the available transformation and refining technologies, as well as certification processes, and the identification of the challenges for the production and use of SAF in the State. These missions were also successful in raising awareness on the development of the feasibility studies, in order to mobilize political support from the authorities within each State.

2.4 The feasibility study for Trinidad and Tobago concluded that the deployment of SAFs to power aircraft is not viable at present. However, in the short- to medium-term, the use of alternative fuels for ground support equipment can offer the State an opportunity to not only reduce CO₂ emissions in an economically viable way, but also generate awareness among the local population of the Government's commitment to environmental protection and society's well-being. In addition, it can help to pave the way

for neighbouring States to follow this example and create a regional movement towards environmentally conscious development in the future, that is at the same time economically sound and socially acceptable.

2.5 For the Dominican Republic, the results of feasibility study were more promising and exemplified the strong willingness of the Government and the key stakeholders as entrenched “High Level Declaration of Punta Cana” a collaboration agreement signed in the Dominican Republic in December 2016, which highlights the commitment of key government institutions and stakeholders to the production and use of SAFs.

2.6 Once the feasibility studies are validated, a seminar is to be organised in each beneficiary State to communicate the findings and launch the results of the Feasibility Study on Sustainable Alternative Fuels for aviation. The feasibility studies will be available to the other ICAO Member States as soon as complete and validated by ICAO.

2.7 The primary objectives of these alternative fuels seminars are:

- a) to support the decision-making process with regard to the development of SAFs by showcasing the analysis and key findings of the feasibility studies developed and funded under the ICAO-EU project framework; and
- b) to present a proposal for a strategic roadmap on the development of SAFs based on the findings and results of the feasibility studies.

3. THE ICAO-UNDP-GEF ASSISTANCE PROJECT AND SUSTAINABLE AVIATION FUELS

3.1 As an important element of ICAO’s efforts to provide assistance to, and build capacity of, developing States and SIDS in their efforts to implement aviation emissions mitigation measures, guidance material on drop-in SAFs is being developed under the ICAO-UNDP assistance project.

3.2 The guidance document being produced on SAFs will present guidelines for assisting States and SIDS on the development and deployment of such fuels. The document will further contribute toward efforts to promote SAFs and facilitate the harmonization of processes related to the development and deployment of SAFs. It also aims to make recommendations for developing States and SIDS on the use of SAFs.

3.3 In addition, the document will provide information on the types of sustainable feedstock and relevant pathways, various factors contributing to the development of SAFs, a cost-benefit analysis of fuel options taking into account national capacities and circumstances, sustainability considerations (environmental, social and economic), policies necessary for the development and production of SAFs, supply chain, storage and use of these fuels, testing and certification, price determination, roles of government and industry, research and investment in promoting the development and deployment of SAFs, and case studies and best practices.

3.4 Once finalised the guidance document will be made available to all ICAO Member States.