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WORKING PAPER

ASSEMBLY — 41ST SESSION

EXECUTIVE COMMITTEE

Agenda Item 17: Environmental Protection – International Aviation and Climate Change

ENHANCING INTERNATIONAL COOPERATION IN AERIAL FIREFIGHTING AS A HIGHLY EFFECTIVE FACTOR IN REAL REDUCTION OF GLOBAL GREENHOUSE GAS EMISSIONS AND ACHIEVEMENT OF CARBON NEUTRALITY BY MID-CENTURY

(Presented by the Russian Federation)

EXECUTIVE SUMMARY

Preserving and enhancing the absorption capacity of forests is one of the most important elements of the global efforts to reduce greenhouse gas emissions. However, according to data from the World Wildlife Fund (WWF), more than 300 million hectares of forestland are destroyed annually by forest fires. These fires release almost a fourth of the overall annual volume of global CO_2 emissions into the atmosphere.

The use of aircraft to fight forest fires will allow significant reductions in greenhouse gas emissions and preservation of biodiversity through early detection and location of active combustion zones. And that is thanks to the use of high tech aviation monitoring systems and rapid delivery of fire extinguishing materials to the active combustion zones regardless of the existence or condition of access routes.

International cooperation has the potential to increase the efficiency of aerial firefighting many-fold through joint coordinated action on the part of national aerial firefighting services. Moreover, it is evident that ICAO, relying on its considerable experience in international cooperation, could play a prominent role in developing international technical standards and procedures ensuring efficient collective use of national aerial firefighting services.

Action: The Assembly is invited to:

a) instruct the ICAO Council to conduct a quantitative assessment of the possible contribution of an international distributed aerial firefighting service for combatting wildfires to a reduction in global greenhouse gas emissions as one of the elements of a long-term aspirational goal (LTAG) for international civil aviation CO_2 emission reductions;
b) instruct the ICAO Council to continue the work under the ICAO Flying Forest Fire Fighting (I4F) Dialogue with the objective of developing internationally agreed approaches to combining the capabilities of national aerial firefighting services under the aegis of ICAO; and
c) instruct the ICAO Council to prepare a report to the 42nd Session of the ICAO Assembly on the results of studies envisioned in a) and b) above.

Strategic Objectives:	This working paper relates to Strategic Objectives *Economic Development of Air Transport* and *Environmental Protection*

[1] Russian version provided by the Russian Federation.

Financial implications:	This working paper does not have direct financial implications for ICAO Member States.
References:	A38-WP/250 – *Market-Based Measures as the Factor of an Increase of Greenhouse Gas Emissions in the Sector of International Civil Aviation*[2] *Report on the feasibility of a long-term aspirational goal (LTAG) for international civil aviation CO_2 emission reductions*[3]

1. INTRODUCTION

1.1 According to data from Global Forest Watch,[4] from 2002 to 2021, a total of 437 million hectares of forest were lost due to fire globally, equivalent to an 11 per cent decrease in tree cover since 2000 and 176 gigatons of CO_2 emissions. The total area of humid primary forests decreased globally by 6.7 per cent in the same time period.

1.2 The damage caused by wildfires around the world runs into billions of dollars annually. But, more importantly, wildfires have serious consequences for biodiversity and biogeochemical cycles. Along with the release of gigatons of carbon dioxide, they cause long-term harm to wildlife. For instance, it takes close to 80 years for the numbers of soil animals to return to pre-burn levels after fires in taiga forests.

1.3 In essence, wildfires are a catalyst for climate change at the physical level, provoking a growth in the number and intensity of natural disasters on the planet.

1.4 Taking the above into consideration, it is reasonable to conclude that proactive and coordinated action on the part of the world community to prevent and effectively combat wildfires is a crucial element in the efforts to reduce greenhouse gas emissions at the global level. Moreover, in the majority of cases, airborne firefighting assets are the sole and most effective means for locating fires in remote regions of the planet, where they have the highest recurrence rate.

2. THE ROLE OF ICAO IN ENHANCING INTERNATIONAL COOPERATION IN AERIAL FIREFIGHTING

2.1 Currently, a large number of ICAO Member States have quite limited or non-existent aerial firefighting assets. At the same time, aerial firefighting assets can be deployed anywhere on the planet within 24 hours provided that a special international system has been established for utilization of these assets, which are located in different States, at the request of a State in need of assistance. In order to establish such a system, it is possible that the UN will have to adopt a new Convention, under which the acceding States could work in a rapid and coordinated fashion with other States Parties, without prejudice to their national security and national interests, to respond to requests from States in need of assistance, as well as to obtain access to sources of funding to build up national firefighting assets.

2.2 Taking into account the global nature of international civil aviation, ICAO has already created global information exchange and engagement systems in the interests of the world aviation community. Examples are systems for sharing current aeronautical and meteorological information, a global system for reporting threats and risks posed by unlawful interference with civil aviation, and others.

[2] Translator's Note: Russian translation of the title of this working paper provided by the Russian Federation.
[3] https://www.icao.int/environmental-protection/LTAG/Pages/LTAGreport.aspx
[4] https://www.globalforestwatch.org

2.3 Taking into consideration the fact that the ICAO Member States are actively involved in combatting climate change and are making considerable efforts to reduce the carbon footprint of international civil aviation, it is appropriate to include activities for combatting wildfires in the scenarios for the long-term aspirational goal (LTAG) for international civil aviation CO_2 emission reductions. Moreover, the contribution of international civil aviation to the global decrease in greenhouse gas emissions may be quantitatively assessed using annual statistical data on the reduction of the land area affected by wildfires.

2.4 It is quite evident that ICAO has the potential to develop international technical standards and procedures for coordinating international aerial firefighting operations by national operators affiliated with the future international distributed aerial firefighting service for combatting wildfires and other natural disasters.

2.5 Notably, dialogue has already been launched under the aegis of ICAO through its I4F initiative to address aspects of international cooperation for more efficient aviation use in global wildfire management.

3. THE DISTRIBUTED INTERNATIONAL AERIAL FIREFIGHTING SERVICE INITIATIVE UNDER THE AEGIS OF ICAO

3.1 The proposal to create international aviation forces (an international distributed aerial firefighting service) to combat forest fires and other natural disasters was first tabled by the Russian Federation at the 38th Session of the ICAO Assembly in 2013. It was one of the possible steps that the international aviation community could take towards a **real** reduction in greenhouse gas emissions in the international civil aviation sector. Moreover, this proposal fully reflected both the general principle of common, but differentiated responsibilities (CBDR), and the principle of non-discrimination, which underpins the Convention on International Civil Aviation, as well as cooperation and the principle of voluntariness, which became a cornerstone of the Paris Climate Agreement in 2015.

3.2 During studies conducted in 2020, it was demonstrated that the cumulative reduction in greenhouse gas emissions resulting from investment in aerial firefighting assets was double the result of investment in the development and production of HEFA Camelina biofuel (based on camelina oil). Moreover, there are absolutely no risks from the point of view of food and water security. It is important to add that the majority of aircraft deployed for aerial firefighting can be used at the same time to evacuate people from natural disaster zones.

3.3 The latest research findings of the UN Intergovernmental Panel on Climate Change (IPCC) show that achieving the goal of net zero CO_2 emissions globally by 2050 could provide the best chance of holding the increase in the global average temperature below 1.5°C, and that this goal is only achievable with immediate and significant reduction in emissions in all sectors.

3.4 Most significantly, the use of international aerial firefighting forces will immediately enable global reduction of greenhouse gas emissions, and also, as noted previously, will facilitate the resolution of issues around the preservation of biodiversity and the attainment of the UN Sustainable Development Goals.

3.5 The quantitative reduction in greenhouse gas emissions will depend greatly on the rate of capacity-building of the international distributed aerial firefighting service for combatting wildfires and other natural disasters. This also meets the international civil aviation sustainable development goals.

3.6 Finally, stocktaking on the reduction in greenhouse gas emissions as a result of the use of the international distributed aerial firefighting service will enable full offsetting of the residual emissions shown in the three integrated scenarios for a long-term aspirational goal (LTAG) for international civil aviation CO_2 emission reductions without using out-of-sector market-based measures. This, in turn, will open the way to radical reductions in the cost of activities to achieve the goal of carbon neutrality by mid-century.

4. ACTION BY THE ICAO ASSEMBLY

4.1 The Assembly is invited to:

a) instruct the ICAO Council to conduct a quantitative assessment of the possible contribution of an international distributed aerial firefighting service for combatting wildfires to a reduction in global greenhouse gas emissions as one of the elements of a long-term aspirational goal (LTAG) for international civil aviation CO_2 emission reductions;

b) instruct the ICAO Council to continue the work under the ICAO Flying Forest Fire Fighting (I4F) Dialogue with the objective of developing internationally agreed approaches to combining the capabilities of national aerial firefighting services under the aegis of ICAO; and

c) instruct the ICAO Council to prepare a report to the 42nd Session of the ICAO Assembly on the results of studies envisioned in a) and b) above.

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