ICAO Flying Forest Fire Fighting Dialogue

By ICAO Secretariat

Introduction

Forests cover approximately 30% of the Earth's land surface, are the second largest carbon sink and carbon storage, next to the Earth's oceans. Forests are also home to 80% of the world's terrestrial biodiversity. They supply oxygen, protect soils and watersheds. They also provide food, fuel, medicines, and building materials for human activity. They inspire wonder, and provide places for recreation and relaxation.

Yet the Earth's forests are under threat. As outlined in the Intergovernmental panel on Climate change (IPCC) Assessment Report 6 on Climate Change 2021, widespread and rapid changes in the atmosphere, ocean, cryosphere, and biosphere have occurred due to human influence. Climate change is already affecting every inhabited region across the globe, and every year large areas of forest are affected by fires. The number of fires and their size varies from year to year, but the risk of fire is increasing globally due to extreme temperatures (Figure 1). Forest fires devastate ecosystems, threaten the safety of global citizens, and can result into environmental and human disasters.

With increasing awareness of the importance of safeguarding forests, the rapidly growing problem of forest fires has risen over the past years to the forefront of political and public awareness. The 2020 United Nations Summit on Biodiversity highlighted the crisis facing humanity from the degradation of biodiversity and the urgent need to accelerate action on biodiversity for sustainable development. It emphasized biodiversity conservation as a necessary condition for the achievements of Agenda 2030 for Sustainable Development and the fight against climate change.

Emergency responses to forest fire fighting involves both ground and air intervention forces. Although ground forces remain the principal lever of action and

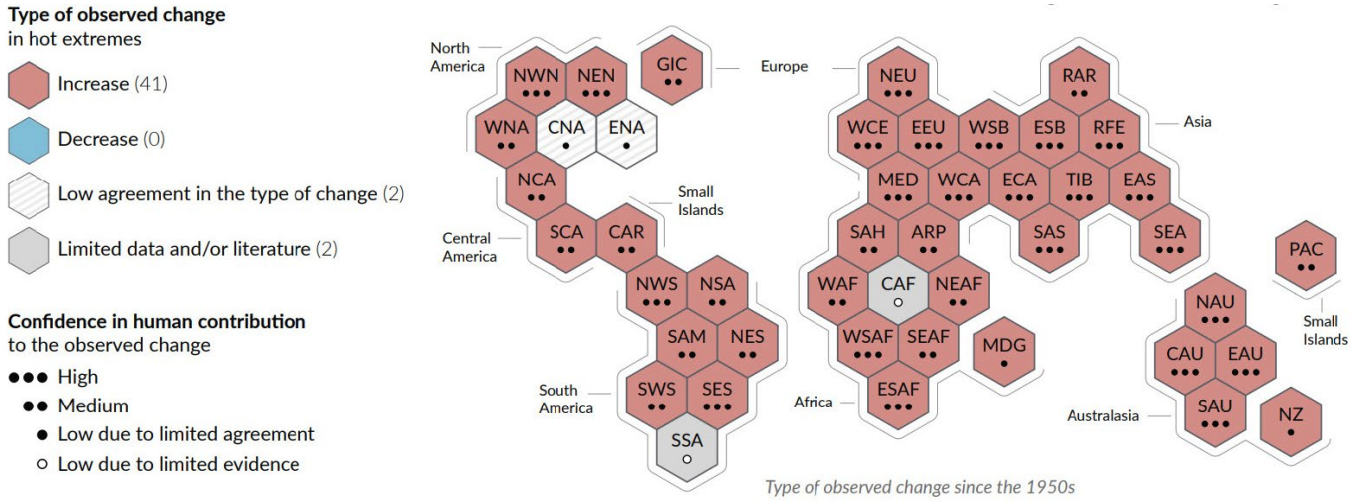

FIGURE 1: The observed change in hot extremes and confidence in human contribution to the observed changes in the world's regions (IPCC Assessment Report 6, Climate Change 2021: The Physical Science Basis).

the coordinator of the overall response, aircraft play a crucial complementary role to control the escalation of fires at the early stages. The aerial response to fires has improved over time, and contributing to this has been the continuous improvements of monitoring tools and early warning systems. However, there are always opportunities for further improvements.

During the Aviation Green Recovery Seminar in 2020, the International Civil Aviation Organization (ICAO) announced the launch of the ICAO Flying Forest Fire Fighting (I4F) Dialogue. It has a goal of exchanging information on existing activities, technologies, arrangements, and facilitating the cooperation on aviation forest fire fighting activities among States and other relevant stakeholders. This will be accomplished through sharing knowledge, experience, and resources, as well as discussing possible areas of improvements and cooperation under the auspices of ICAO.

I4F Dialogue

The ICAO Flying Forest Fire Fighting Dialogue was held on 22 November 2021[1] as an online event, and served as a platform to exchange best practices, initiatives, and by strengthening international cooperation for aerial firefighting action. The first session was dedicated to the scientific background, presented by Ms. Valerie Masson-Delmotte, Co-Chair of the Working Group I of the Intergovernmental Panel on Climate Change.

The second session was focused on an overview of the United Nations (UN) and international action[2]. The participants from the Global Fire Monitoring Center (GFMC), International Fire Aviation Working Group (IFAWG), and Joint United Nations Environment/Office for the Coordination of Humanitarian Affairs (UNEP/OCHA) Environment Unit highlighted the importance of ICAO's role. It also highlighted the need for an informal multi-stakeholder working group with other relevant United Nations bodies and international organizations (Figure 2).

FIGURE 2: Proposal for coordination made by Ms. Charlotta Benedek, Head of UNEP/OCHA Joint Environment Unit.

The third session covered perspectives of Member States on aerial firefighting, international cooperation, and best practices. The fourth session focused on the recent technological solutions, innovations, and partnerships in aerial firefighting. The participants underscored the importance of identifying focal points across ICAO Member States in order to increase awareness and gain support for forest fire fighting efforts. The need for more outreach, certification work, awareness and innovations on fire fighting, forecasting, mitigation and prevention were also highlighted. Specific proposals were made on coordination towards facilitating new international aviation regulations and harmonization across States.

During the discussion session, it was acknowledged that the alarming trends in increasing number of wildfires across the globe are accelerating. The participants and online viewers received extensive information on international firefighting practices, and on aviation solutions, expressing support to these crucial actions worldwide (the recording of the I4F Dialogue is available on ICAO.tv platform[3]).

1 I4F Dialogue Programme: https://www.icao.int/Meetings/I4F/Documents/I4F%20Programme%20v_2021-11-21.pdf
2 I4F Dialogue Speakers : https://www.icao.int/Meetings/I4F/Pages/speakers.aspx
3 Recording of I4F Dialogue on ICAO.tv: https://www.icao.tv/videos/flying-forest-fire-fighting-dialogue

I4F Next Steps

ICAO will engage, through an informal multi-stakeholder working group, with GFMC: International Search and Rescue Advisory Group (INSARAG) and Joint UNEP/OCHA Environment Unit for facilitating international cooperation while also identifying focal points across ICAO Member States. It will also be important to advance in investigating new areas for global cooperation, supporting outreach, certification, and innovations on firefighting. Other parameters will include forecasting, mitigation, and prevention, including coordination on new international aviation regulations, such as facilitating Remotely Piloted Aircraft System (RPAS) regulations to ensure safe and secure RPAS application and integration.