

Ukraine's initiatives to reduce the environmental impact of aviation

By Iryna Kustovska (Ukraine)

Aviation noise pollution

Aviation noise is considered to be one of the most damaging factors for people living and working in the airport area and directly in the area of residential development located near the airport. The State Aviation Administration of Ukraine has developed regulation for establishing the principles of air noise management in airports - "Requirements to the aerodrome operator in terms of space zoning the territory around the airport under the conditions of aviation noise impact" (order of the State Aviation Administration of Ukraine № 381 adopted on March 26, 2019), which is based on the principles of the Directive 2002/49/EC of the European Parliament and of the Council of 25 June 2002 relating to the assessment and management of environmental noise.

According to the above-mentioned Regulation, the results of aviation noise measurements should be periodically published on the official websites of the airport (aerodrome). Aircraft noise contours are an informational basis for summarizing statistical information about the characteristics of aircraft noise at the airport (aerodrome) and in the area around it. At the same time, it is a tool for informing people, state and local authorities about the noise characteristics. Clarification of the actual zones experiencing permanent aircraft noise near the airport (aerodrome) is important to consider while arranging the prospects of development of the residential areas.

To make data on noise contours more accessible and understandable, the State Aviation Administration of Ukraine developed an online system for collecting information about

noise from the aviation infrastructure (using geospatial information) with a visualization (interactive map of Ukraine) - NOMOS¹ (Noise monitoring system).

This is an interactive tool to inform users about the level of air traffic noise near Ukrainian airports and about the conditions and restrictions of construction near the airport area with regard to the impact of air traffic noise. The NOMOS project was implemented by the State Aviation Administration of Ukraine with the support of the "Advisory Fund for EU Association of Ukraine" and GIZ (Deutsche Gesellschaft für Internationale Zusammenarbeit).

The NOMOS portal displays:

- equivalent and maximum noise levels for each airport, measured over different time periods (day, night, 24 hours, week, month, etc.);
- noise contour for different time period (day, night).

Currently, the portal includes information about noise contours from 10 Ukrainian airports: Lviv, Kyiv Antonov, Odessa, Dnipro, Mykolaiv, Boryspil, Zaporizhzhia, Sumy, Poltava and Kharkiv.

Energy Efficiency

Two Ukrainian airports have already been certified under the ISO 14001 system: Boryspil International Airport and Mykolaiv International Airport. Other airports are actively implementing environmental management systems that can reduce costs, increase efficiency and

¹ <https://nomos.avia.gov.ua/>

lower the anthropogenic impact on the environment. As a result, the environmental information became publicly available. In particular, information about the environmental intentions of companies to reduce the negative impact on the environment became accessible to the public on the websites of airports.

State Aviation Administration of Ukraine with the support of the “Advisory Fund for EU Association of Ukraine” and GIZ (Deutsche Gesellschaft für Internationale Zusammenarbeit) has developed the “Fly Green” training course (MOOC), with free access to everyone. This course contributes to the implementation of the sustainable development, particularly in the field of energy efficiency. It contains structured material of environmental management, especially regarding ISO environmental management, green mobility, adaptation to climatic changes, use of clean energy, energy efficiency, review of financial instruments, as well as practical guidelines for the implementation of “green” technology with a description of the benefits of implementation by the world’s leading airports.

The course:

- Provides practical tools for the implementation of “green” technologies in airports, understanding how to reduce the negative impact of airports on the environment, as well as recommendations for the management of financial and natural resources;
- Provides practical information from the experts and engineers of several Ukrainian airports: Boryspil, Lviv, Mykolaiv, Odessa, Zaporizhzhia;
- Is designed for a wide range of stakeholders who want to make the operation of the airports as eco-friendly as possible;
- After the training each participant receives a certificate.

The educational course “Fly Green: The Path to Greening the Aviation” is available on the State Diia.Digital Education portal².

The improvement of energy efficiency will remain our main strategy for the reduction of emissions from civil aviation. Increased awareness, strengthened regulation, capacity building will help Ukraine to achieve these goals.

Emission reduction

In the framework of CORSIA (Carbon Offsetting and Reduction Scheme for International Aviation), State Aviation Administration of Ukraine has developed the Regulation № 1001 “Technical requirements and administrative procedures for monitoring emissions by operators of civil aircrafts” which allowed to start the process of monitoring, reporting and verification of CO₂ emissions.

Currently, 8 Ukrainian operators are monitoring and verifying CO₂ emission. They annually submit to the State aviation Administration of Ukraine consolidated State Reports on emissions.

The next step should be the implementation of the rest building blocks of market-based scheme of emission reduction, particularly CO₂ offsets related to international flights and emission reductions using CORSIA eligible fuels.

Another method of developing a long-term climate change strategy for the international aviation sector is the National Action Plan for reducing aviation CO₂ emissions (Action Plan). It allows to show the specific voluntary actions that Ukraine intends to take to reduce CO₂ emissions and to contribute to the goals set by the ICAO (International Civil Aviation Organization) Assembly.

With this in mind, the State Aviation Administration of Ukraine in 2012 developed the Plan with the involvement of all stakeholders and included the following measures:

- Development of technologies associated with aviation manufacturing;
- Use of alternative fuels;
- Improvement of the operating efficiency;
- Economical / market measures (CORSIA).
- Others.

The goal of the Ukrainian action plan is to calculate and forecast emissions of CO₂ and to take appropriate measures to reduce and prevent pollution, in particular to optimize and improve the management of air traffic and infrastructure.

In 2021, the State Aviation Administration of Ukraine updated the Plan.

² <https://osvita.diaa.gov.ua/courses/flygreen>