

Environmental Sustainability in the Aviation Industry

This is the third editorial under the IFALPA vision to Rethink, Reimagine, and Reset the aviation industry. Sustainably rebuilding the aviation industry as it emerges from the devastation of the COVID-19 crisis will be vital for the future. This editorial will focus on Environmental Sustainability.

Commercial aviation has a long and proud history of steadily improving safety and efficiency. These two principles are at the core of a successful, sustainable industry in which professional pilots serve a vital role. The International Federation of Air Line Pilots' Associations (IFALPA) strongly supports the ongoing efforts to further reduce aviation's overall environmental impact while preserving its economic viability. These goals are complementary - as fuel and operational efficiency continue to improve, airline economics are enhanced, and the environmental impact further reduced.

Airlines safely move billions of passengers and millions of tons of freight around the world at great speed each year with no greater impact on the environment than any other mode of transportation. As public awareness of climate change has grown, consumers have become increasingly concerned with aviation's impact on the environment, with anti-flying movements gaining momentum around the world. As a result, airlines have come under increased scrutiny for their environmental impact. The aviation industry needs to do more to inform the public of its environmental achievements and its continued efforts to make the future of flying more sustainable.

Over the years, not only has the airline industry been successful in developing a safer, faster, and more economical mode of transportation, it has also excelled in lessening its impact on the environment. Because of the industry's efforts, which include proactive operational procedures performed by airline pilots to reduce fuel burn, airline carbon dioxide (CO₂) emissions per seat mile have dropped 80% since the first jet aircraft. Commercial aviation currently accounts for only 2% of human activity-caused global emissions.

The airline and aerospace industries have jointly made continual improvements to airframes and engines, resulting in quieter, more powerful, more efficient, and less polluting air travel. This trend will only continue with future airframe and engine improvements promising continued fuel efficiency gains and noise reductions.

Technological advancements in navigation and surveillance have also contributed tremendously to improved capacity and operational efficiency, which has led to growth in operations without a corresponding increase in aviation's carbon footprint.

Aviation and the airline industry also provide significant economic and social benefits around the globe, whether directly or indirectly. According to the Air Transport Action Group (ATAG), the global commercial aviation industry makes up about 3.6% of the world's GDP, contributes significantly to national economies, and perhaps even more importantly, is a vital link in supply chains.

Airlines have voluntarily adopted numerous programs to reduce their environmental impacts including tree-planting programs, new electric-powered tugs to reduce fuel consumption by aircraft and ground vehicles while taxiing, aircraft operating procedures which reduce fuel consumption, and many more. According to the International Air Transport Association (IATA), the industry has achieved a 50% reduction in carbon emissions per passenger since 1990 and fuel efficiency has increased 2.3% each year since 2009.

Alternative fuels have a significant advantage as they can reduce CO₂ emissions and do not require many adjustments in the supply chain and operation. IFALPA supports the initiatives nationally and globally to certify new conversion processes and feedstocks. It is recognized that huge investments are needed to increase the volume from 0.2%, currently used in international aviation.

In 2016, the International Civil Aviation Organization (ICAO) created a global market-based measures (GMBM) scheme in the form of the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) which will help achieve carbon-neutral growth from 2020. IFALPA supports CORSIA as a means of standardizing and centralizing market-based measures in lieu of each ICAO State developing their own market-based measures in a patchwork fashion across the world.

Is there more work to be done to reduce aircraft emissions? Of course. The aviation industry acknowledges this and is working with governments and other stakeholders to map out future strategies and alternative solutions for further reduction of GHG emissions. The solutions include measures to increase the average aircraft fuel efficiency each year by 1.5%, cap net aviation CO₂ emissions starting this year, and reduce net aviation emissions by 50% by 2050, as compared to 2005 levels. Within ICAO, even more stringent global goals are being formulated.

Airline pilots are proud to be part of an industry that drives a truly global economy and enables anyone to do business and connect in any corner of the globe, an impossibility just a few decades ago. The industry is poised to make further strides in reducing emissions.

The best way to achieve the desired results is the same way such significant advances have been made thus far, through investments in increasingly advanced technology, alternative fuels, and enhanced operational procedures. The net result will be an even safer, more efficient, and environmentally sustainable industry where airline pilots are proud to safely transport travelers to their destinations and deliver high-value cargo around the world.

REFERENCES

Rethink, Reimagine, and Reset for Tomorrow's Aviation Industry

<https://www.ifalpa.org/publications/library/irt-editorial-social-sustainability--3330>

Financial Sustainability

<https://www.ifalpa.org/publications/library/irt-editorial-financial-sustainability--3341>

Social Sustainability

<https://www.ifalpa.org/publications/library/irt-editorial-social-sustainability--3330>

ALPA White Paper, Airlines and the Environment

<http://www.alpa.org/-/media/ALPA/Files/pdfs/news-events/white-papers/aviation-environment.pdf?la=en>