

international members of the aviation community.

- assess the effects of aviation on the environment, including remote and Arctic regions.
- recommend means of monitoring and improving the quality of the environment.
- develop educational programs on environmental management.
- develop specialized courses and international seminars, and establish scholarships.
- encourage manufacturers of environmentally friendly products and companies experienced in environmental clean-up or site remediation.

## MAJOR ENVIRONMENTAL PROBLEMS IN AVIATION

Determined to confront the major environmental problems associated with civil aviation as we approach the next millennium, a multidisciplinary group in the **ICAO Secretariat** compiled such an inventory in 1992.

*The world's airlines have travelled some 36,000 billion passenger-kilometres over the past 50 years. One passenger-kilometre is one passenger travelling one kilometre. The total is equivalent to 120,000 return trips to the sun, approximately 150 million kilometres away.*

For this study, it was assumed that the environment includes all those natural and man-made surroundings that may be adversely affected by the presence of civil aviation, but are not directly involved in aviation itself. It is grouped into seven major categories, comprising:

**Aircraft noise** in the vicinity of airports, caused by aircraft operations, plus engine testing and other noise sources at airports. Also sonic boom caused by supersonic aircraft and noise, other than sonic, caused by aircraft en-route.

**Air pollution near airports** involving aircraft engine emissions as well as those from airport motor vehicles. Also emissions from access traffic and from other airport sources.

**Global phenomena** encompassing long-range air pollution such as acid rain, the greenhouse effect, and depletion of the ozone layer.

**Airport/infrastructure construction** in terms of loss of land, soil erosion, impact on water tables, river courses and field drainage, and impact on flora and fauna.

*In 1944, the average speed of a Douglas DC-3 airliner was 200 miles per hour and its range was 2,125 miles. Today, a Boeing 747 jumbo jet flies at approximately 550 miles per hour and can have a range of over 7,000 miles.*

**Water/soil pollution near airports** comprising water pollution caused by inadequate treatment of contaminants in airport waste water, and water and soil pollution caused by leakage from storage tanks.

**Airport waste management** covering disposal of environmentally harmful materials used in aircraft servicing and maintenance, as well as disposal of waste from the airport and incoming aircraft.

**Aircraft accidents/incidents** involving dangerous goods carried as cargo, other environmental problems that might arise from aircraft accidents, and emergency procedures involving fuel dumping.



Reducing pollution in and around airports worldwide is a major priority for authorities.