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# INTERNATIONAL CIVIL AVIATION ORGANIZATION

A UN SPECIALIZED AGENCY



# Airports and Environmental Management

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**02** Environmental impacts and  
management measures-  
Aircraft noise

**03** Air quality and GHG  
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**05** Wastes at airports

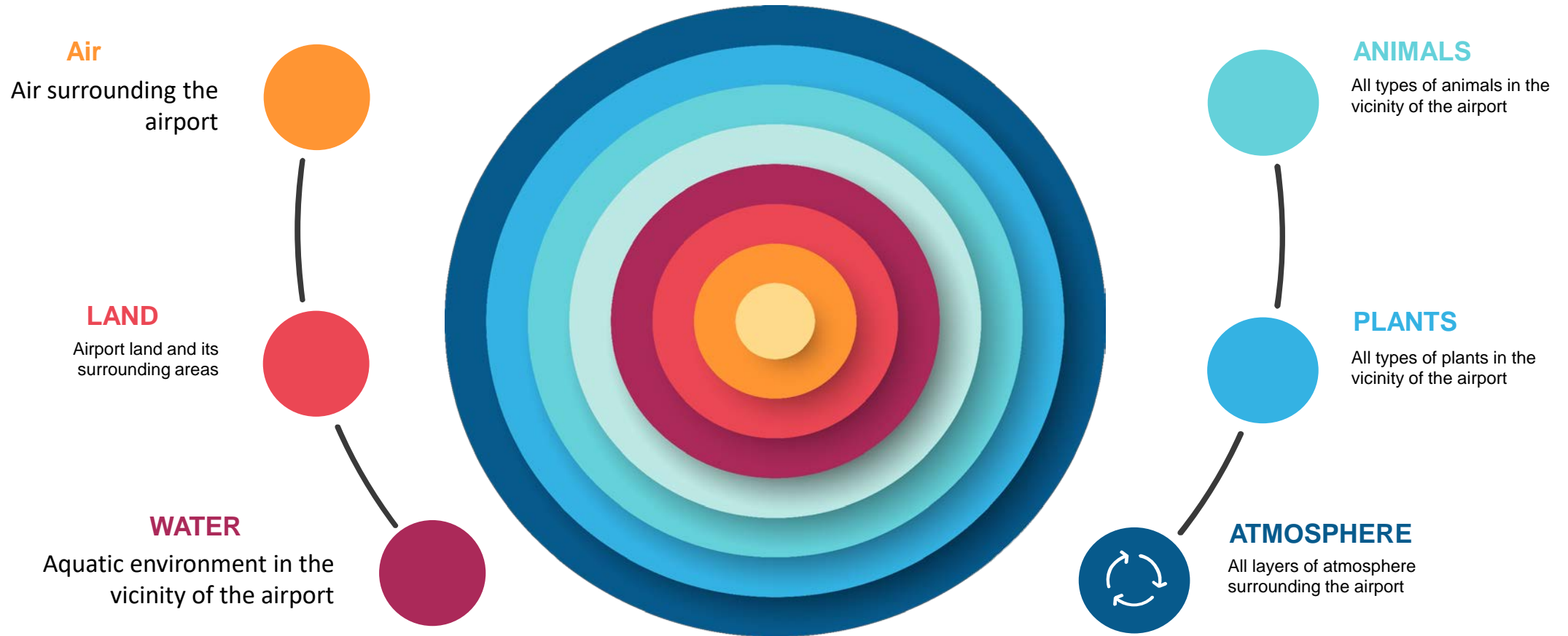
**06** Key messages

01

# Airport and its environs

# Components of the natural environment at airports

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02

Environmental  
impacts and  
management  
measures-  
Aircraft noise

## Aircraft noise

Noise is considered to be the most important local environmental impact associated with civil aviation.

Noise levels in the vicinity of airports are affected by two opposing trends:

- the replacement of noisy aircraft by quieter ones and
- the increasing number of aircraft movements.

**Other noise sources:** aircraft engine testing, APU, GPUs and GSE.

**What solutions?** Reduce noise at the source, Land use planning and management, Noise abatement procedures, Acoustical barriers, Sound insulation, Operational restrictions...

Guidance on the Balanced Approach to aircraft Noise Management (ICAO Doc 9829)

# 03

## Environmental impacts and management measures- Air quality and GHG emissions



## Air quality and GHG emissions

Air quality in the vicinity of airports can be impacted by sources such as :

- road traffic,
- aircraft engine emissions,
- emissions from airport motor vehicles and
- emissions from other sources (e.g. heating/power plants incinerators and construction).

Air quality also depends on local climatic conditions

What solutions?

Operational Opportunities to Reduce Fuel Burn and Emissions (ICAO Doc 10013)

Airport Air Quality Manual (ICAO Doc 9829)

04

Environmental  
impacts and  
management  
measures-  
Water and soil  
pollution

## Water and soil pollution

Water pollution can result from direct or indirect discharge of substances into the aquatic environment, leading to alterations in the properties of the natural ecosystems and water chemistry.

Surface water is most often affected, as pollutants run off the airport pavements and enter into the streams, rivers and lakes. Subsurface water may also become contaminated when leaks or spills of fluids seep through the soil into the groundwater.

But how could this be dealt with?

- Waste water, Rain water harvesting
- Petroleum and chemical management
- De-icing management

05

Environmental  
impacts and  
management  
measures-  
Wastes at  
airports

## Wastes at airports

Daily activities at airports are sources of airport industrial waste:

- movement of aircraft and ground vehicles,
- fuelling operations,
- aircraft maintenance and repair work (including painting and metalwork),
- engine test cell operations, and
- ground vehicle maintenance.

The disposal of environmentally harmful materials used in aircraft servicing and maintenance (e.g. oils, cleaning fluids and paints) and of waste from the airport and incoming aircraft should be managed effectively.

# 06

## Key messages

# Key messages

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1. Appropriate planning and infrastructure decisions at airports help to facilitate good environmental management
2. More stringent legislation and economic policies to foster environmental protection
3. Need of Environmental Management Systems (EMS)
4. Enhanced awareness of environmental issues among aviation professionals and society at large.



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Thank You!