

Fog

Overview

- ≡ Fog can be defined as a type of low-lying cloud resulting in visibility below 1000m. Mist is when visibility is above 1000m.
- ≡ There are 3 categories of fog:
 - ≡ Aviation fog: visibility <1000m
 - ≡ Thick fog: visibility <200m
 - ≡ Dense fog: visibility <50m
- ≡ Fog is composed of water droplets and occurs when air is at or near saturation. This occurs when the air is cooled or when air moves over a moist surface.
- ≡ Classifications of fog depend on the physical process leading to saturation, the main types of fog are: radiation fog, valley fog, advection fog, upslope fog, evaporation fog.
- ≡ Freezing fog is composed of supercooled water droplets that deposits rime (ice) onto surfaces e.g. walls, roads, pavements and cars.
- ≡ Forecast fog related to visibility forecasts. It is important to consider factors such as the synoptic situation, time of year, stability, temperature change expected, wind, dew-point temperature, movement of air of favourable underlying surfaces.

Impacts

Fog impacts are a result of reduced visibility and disorientation. They include disruption to:

Transport due to reduced visibility causing travel disruption. Motorists drive more slowly to prevent accidents, this causes delays. Airports experience delays and cancellations due to the reduced visibility. Trains breakdown when freezing fog affects the overhead power lines.

Infrastructure networks due to freezing fog on power lines which can lead to power failure in extreme situations.

Industry as shipping and oil platforms can be affected by the reduced visibility.

Health due to the increased likelihood of accidents on the roads. Reduced visibility in hazardous environments such a mountainous areas can lead to accidents.

Notable fog events

November 2015 - Multiple airports affected including 129 flights cancelled at Heathrow Airport (10% of departures).

December 2012 - Fog and ice across the UK. Flights cancelled at London airports and a section of the A1M closed causing delays.



Fog in the UK

Fog is one of the most common weather conditions in the UK, particularly throughout Autumn and Winter and can be seen to affect inland areas of England and lowlands of Scotland in high-pressure conditions. Coastal fog (resulting from advection) regularly occurs along the East coast in Spring and Summer.

More information can be found at: www.naturalhazardspartnership.org.uk/hazards/fog