

Role of geospatial technology in visibility forecast in the Ghat Regions of India

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VISIBILITY

- Visibility affects visual orientation
- Reduction of visibility reduces the distance at which objects are detected and recognized (including wrong identification).

Colour and details

- The main impacts are on transport and (tourist attraction)

Visibility is defined as the distance at which a black object is distinguished against the sky

It is estimated by an observer at the meteorological station.

It varies between 2-10km in Indian cities; upto 100-600km in exceptional situations.

It is determined by brightness of the object, background and foreground.

The physical process affecting visibility in the atmosphere are absorption and scattering of visible light.

Aerosols(pollutants, dust, etc), water droplets.

Main factors reducing visibility are:

Fog, Dust, Atmospheric pollution and Rain

The purpose was to determine possibilities for using geospatial technology in visibility forecasting in the Ghat Regions.

It is found that fog, dust and pollutants in North India

In the Ghat regions rain, fog, clouds and pollution are the main factors.

Observations are available for airports.

Otherwise visibility data is available for IMD observatories.

A chart of horizontal distribution based on station data was not possible.

Satellite observations : NOAA, MODIS and INSAT 3D. Could not verify.

The problem therefore at present is:
How to generate information suitable for the study.

Models, Reanalysis

Satellite data

GIS – for designing and planning observations

Making customised products

Estimating whether the efforts are worthwhile