



How Do Sandstorms Affect the AQI?

As we enter the summer months, the frequency and intensity of sandstorms in the UAE and the wider Gulf region is only expected to become more severe. A common phenomenon in the Arab world, sandstorms can negatively impact the Air Quality Index (AQI) and reduce visibility to just a few metres on roads and walkways.

But what exactly causes such sandstorms to happen? How commonly do they occur? What is their effect on the AQI, and what are the implications for the health of those exposed to them? We examine these questions and more in the following informative article.

What are sandstorms and why do they happen?

Given that the Gulf region is characterised by an arid climate and vast swathes of desert, it's perhaps unsurprising that it suffers sandstorms on a semi-regular basis. Usually, these unpleasant weather events plague other countries such as Iraq, Kuwait and Saudi Arabia more than the UAE, on account of the presence of strong north-westerly winds in those areas.

However, that's not to say the Emirates remain unaffected – and the storms carry with them a lot more than sand when they arrive. They can contain all sorts of contaminants, from silica crystals and particulate matter (PM) to bacteria, viruses and airborne illnesses. According to some experts, they were responsible for spreading meningitis spores throughout Africa and even carrying the foot-and-mouth epidemic all the way to the UK in 2001.

How do they affect the AQI?

Because sandstorms can contain pollutants such as PM, they can negatively affect the AQI in a given region. Indeed, this regularly prompts the authorities in the UAE to issue severe weather warnings, with the term “airpocalyptic” being coined to describe just how hazardous to human health exposure to these sandstorms can be.

In terms of their tangible effects on the human body, the sand particles are normally too large to be inhaled into the lungs. Having said that, they can become lodged in the upper airways and irritate the nose, mouth and throat of the exposed individual. Of course, [the impacts on those suffering from pre-existing health conditions](#) is much worse – an asthmatic person, for example, might experience harsh symptoms after only a quarter of an hour of exposure.



What is being done to tackle the problem?

The Emirati government are well aware of the problem of air quality in the country and have taken steps to address it. In Abu Dhabi, for example, there are two working groups which research the relationship between dust, sand and health – as well as viable policy models on how to improve air quality – which work in conjunction with the World Health Organisation’s Global Air Pollution and Health Technical Advisory Group.

On a personal level, those worried about exposure to air impacted by sandstorms would be best advised to wait indoors (preferably with an air purifier switched on) until the storm has passed. If venturing outside is absolutely necessary, a mask or wet towel should be worn over the nose and mouth to protect the individual as much as possible.