

UNEA-2 FACT SHEET:

SAND AND DUST STORMS

Why sand and dust storms matter

Sand and dust storms are a global environmental problem that affects the health and livelihoods of millions of people across the world. These storms, which have increased in frequency, intensity and geographical range in recent decades, have an immense impact on the global economy, forcing airports and schools to close, interrupting supply chains, destroying crops and overwhelming hospitals.

Fine particles of dust can travel thousands of miles on the back of these storms, which may also carry pathogens and harmful substances, causing acute and chronic respiratory problems. Dust storms also increase desertification, drought and soil salinity while reducing water supplies and impeding renewable energy sources. Dust storms can also be triggered and exacerbated by climate change, drought, land degradation and un-sustainable management of land and water resources.

The state of play

- In the Middle East and North Africa, about **\$13 billion** in Gross Domestic Product (GDP) are lost every year due to dust storms.
- Dust storms contribute to poor air quality. The World Health Organization estimates that **seven million** people die from poor air quality every year.
- Dust storms damage crops and remove the fertile top soil, which reduces agricultural productivity. Much of Iraq's fertile lands have been literally blown away as desertification intensifies. The Iraqi government recorded **122 dust storms** and **283 dusty days** in a single year. Within the next ten years, Iraq could witness **300 dust events** per year.
- About **two to three billion tonnes** of fine soil particles leave Africa every year in dust storms, draining the continent of its fertility and biological productivity.
- Labour productivity and household incomes drop sharply during these storms: millions of people can't reach work; factories and offices close.
- Great Britain has suffered dust storm disasters **17** times since 1900. A single Saharan sand storm deposited as much as **10 million tonnes** of dust particles on Great Britain in one go.
- Each spring Japan is plagued with "yellow sands" as a result of dust storms that originate in northeast Asia. These storms decrease visibility, increase soil-derived and anthropogenic metals and are believed to be responsible for worsened symptoms in asthmatics, heightened cases of respiratory issues and meningitis, instances of skin irritation, and widespread distribution of fungi.
- Saharan storms are thought to be responsible for spreading lethal meningitis spores throughout central Africa, where up to **250,000** people contract the life-threatening disease every year.
- In China, as much as **330,000 tonnes** of sand fell on Beijing in a single night in 2006.

- Primary dust storm regions are the Sahara Desert, the Middle East, the Taklamakan Desert in northwest China, southwest Asia, central Australia, the Etosha and Makgadikgadi basins of southern Africa, the Salar de Uyuni in Bolivia and the Great Basin in the USA.
- Sand storms increase silt in water, blocking sunlight to coral reefs and spawning toxic algal blooms.

The benefits of action

- By reducing air pollution levels, countries can lower the risk of strokes, heart disease, lung cancer and respiratory diseases like asthma.
- Early warning systems, at the national and regional level, could prepare people for dust storms, giving them time to take cover, seal doors and vacate the streets, thus preventing car accidents.
- Early warning would give farmers time to bring in livestock, farm equipment and, if warned far enough in advance, allow them to harvest all or a portion of a crop before the onset of a storm.
- Regional and international cooperation among countries will lead to greater understanding of the transportation paths of dust storms, particle content and their impacts.
- Regional and international cooperative action on tackling the root causes of dust storms and restoring ecosystems will lead to reduced occurrence of dust storms and ensure healthier ecosystems.
- When tackling health crises, policymakers can use information from better monitoring systems to determine whether or not disease outbreaks are the result of transported sand and dust or the result of human transport.

Change across the globe

- China has been monitoring dust storm events since the 1950's, allowing scientists to make better predictions about how land will be affected when a dust storm occurs.
- Both the Korea Meteorological Administration and the National Weather Service in the USA provide dust storm warning information to some cell phone providers, which then communicate the information to subscribers via text message.
- A website hosted by the National Centre of Meteorology and Seismology in the United Arab Emirates warns citizens about dust conditions and visibility.
- China's Great Green Wall project has reduced the frequency and intensity of dust storms, research suggests. By 2006, China will have planted more than **100 billion** trees since 1978.
- Senegal has planted **12 million** trees covering **40,000 hectares** as part of a pan-African scheme to combat desertification in the Sahel.