



UAE Cloud Seeding Improves Weather Across the Gulf

For the last few years, the UAE has implemented an increasingly aggressive cloud-seeding policy, aimed at combating rising temperatures and increasing rainfall in the country. And the beneficial effects of its scheme are being felt not just in the Emirates themselves, but all across the neighbouring region, according to meteorological expert Dr Said Al Sami.

The global effects of climate change are being just as keenly felt in the Gulf as other parts of the world, with annual temperatures on a steady rise for the last few decades. However, the cloud-seeding programme has helped to boost cloud precipitation by approximately a third, according to government statistics.

Serious issues

Water scarcity has always been a concern in a climate as arid and unchangeable as that found in the UAE. However, the onset of global warming has exacerbated the problem, with lack of rainfall creating difficulties in cultivating vegetation and meeting the drinking water needs of its 9.4 million populace.

What's worse, the little water that can be gleaned from the Emirati climate is subject to [a variety of different types of water pollution](#), including groundwater pollution, microbiological pollution and oxygen-depletion pollution. Though the government insist that the tap water provided by the authorities is safe to drink, improper maintenance of water tanks could lead to its contamination at the point of storage.

Using science to help nature

In a bid to overcome these challenges, the National Centre of Meteorology (NCM) has been pursuing methods of geoengineering to artificially manipulate the area's climate. As well as injecting substances into the air in order to encourage cloud condensation, the NCM has also hosted the International Rain Enhancement Forum (IREF) for the last four years, the latest incarnation of which took place in Abu Dhabi last month.

Meanwhile, the NCM is also responsible for awarding the UAE Programme for Rain Enhancement Science (UAEREP), which is an international research initiative aimed at advancing knowledge and development of cloud-seeding techniques. Each year,



the NCM awards a total of \$5 million to as many as five different products over a three-year period.

Remarkable results

The outcome of all that investment has not gone unnoticed. While it's nigh-on impossible to quantify to what extent cloud-seeding technology is responsible for the increased precipitation that the UAE and the surrounding area has enjoyed in recent years, the best estimates place its improvement at between 30% and 35%.

The headquarters of the cloud-seeding operation is located at Al Ain Airport. This is due to its strategic location near the mountain range in neighbouring Oman. The geology and geography of the surrounding area make it easier to conduct cloud-seeding operations, while the effects are being felt all across the Gulf region, in the UAE, Oman and beyond.