

MICROPLASTICS IN ARCTIC SNOW POINT TO WIDESPREAD AIR CONTAMINATION

Relevant for: Environment | Topic: Environmental Pollution - Air, Water, Soil & E-waste

Fine lines: Microplastic found in ice core samples. | Photo Credit: [Reuters](#)

Minute microplastic particles have been detected in the Arctic and the Alps, carried by the wind and later washed out in the snow, according to a study that called for urgent research to assess the health risks of inhalation.

Every year, several million tonnes of plastic litter course through rivers and out to the oceans, where they are gradually broken down into smaller fragments through the motion of waves and the ultraviolet light of the sun.

The new study, conducted by scientists at Germany's Alfred Wegener Institute and Switzerland's Institute for Snow and Avalanche Research, found that microplastic particles can be transported tremendous distances through the atmosphere.

These particles, defined as shreds less than five millimeters in length, are later washed out of the air by precipitation, particularly snow.

"It's readily apparent that the majority of the microplastic in the snow comes from the air," said Melanie Bergmann, lead author of the paper published in *Science Advances*.

Ms. Bergmann and her colleagues used an infrared imaging technique to analyse samples collected between 2015 and 2017 from floating ice in the Fram Strait off Greenland, visiting five floes by helicopters or dinghies.

They then compared these with samples taken from remote Swiss Alps and Bremen in northwest Germany.

Concentrations of the microparticles in the Arctic were significantly lower than in the European sites, but still substantial.

The team's hypothesis for airborne transportation builds on past research conducted on pollen, where experts confirmed that pollen from near the equator ends up in the Arctic.

Similarly, dust from the Sahara desert can cover thousands of kilometres and end up in northeast Europe.

Ms. Bergmann said little work had been done to determine the effects of exposure to these particles.

"But once we've determined that large quantities of microplastic can also be transported by the air, it naturally raises the question as to whether and how much plastic we're inhaling," she said, stressing the need for urgent research into the effects on human and animal health.

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