

Putting the ash clouds into perspective

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(PhysOrg.com) -- New research from the University of Leeds suggests that we shouldn't expect another major ash cloud event from an Icelandic volcano for another 50 years.

An analysis of ash fallout over the past 7,000 years suggest that although ash clouds are a relatively common occurrence throughout history, they have only reached northern Europe every 56 out of the past 1,000 years on average. The research is published in the journal *Geology*.

Lead author of the study Dr. Graeme Swindles, from the University of Leeds School of Geography, said: "The ash cloud resulting from the 2010 Eyjafjallajökull eruption caused severe disruption to air travel across Europe, but as a geological event it is not unprecedented.

"While the aviation industry and the travelling public will welcome the news that another large-scale ash event isn't expected in the immediate future, they shouldn't breathe a sigh of relief just yet.

"The difficulties in obtaining a comprehensive ash record mean that our figures are likely to be a conservative estimate of the frequency of major ash fall events, so Mother Nature may have some surprises in store for us yet."

Dr. Swindles and his team analysed documented historic ash falls along with microscopic ash layers found in lakes and peatlands in the UK, Ireland, Germany, Scandinavia and the Faroe Islands. Using statistical modelling of these ash records, they found that the probability of an [ash](#)

[cloud](#) hitting northern Europe over the course of a decade is 16%.

Although in the past 1000 years, volcanic ash clouds reached northern Europe with average return interval of 56 years (plus or minus 9 years), this interval varied and can be shorter or longer. A minimum of 6 years and maximum of 115 years between events was recorded for the last 1,000 years.

The research was carried out by Dr. Swindles with University of Leeds colleagues Ian Lawson and Ivan Savov, in collaboration with Chuck Connor from the University of South Florida and Gill Plunkett of Queen's University Belfast.

More information: The paper: A 7000 yr perspective on volcanic ash clouds affecting northern Europe by Graeme T. Swindles, et al. is published in *Geology*, [doi: 10.1130/G32146.1](https://doi.org/10.1130/G32146.1)

Provided by University of Leeds

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