RISK DOCTOR BRIEFING

EYJAFJALLAJÖKUL – A PERSONAL VIEW

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david@risk-doctor.com

Why has everyone started talking about volcanoes and trying to pronounce the name Eyjafjallajökul? I've just returned to England from a business trip to the USA which was eight days longer than planned, because the Icelandic volcano with the unpronounceable name erupted on 14 April, sending tons of volcanic ash into the sky. As a result the aviation authorities across much of northern Europe grounded all commercial planes, stranding about five million passengers across the globe who wanted to fly into or out of affected airports. Chaos followed, with European airspace being closed for eight days. Towards the end of this period the authorities were widely criticised for having over-reacted, prohibiting flights unnecessarily.

There had been a few previous occasions when planes had been badly affected by volcanic ash, including a British Airways flight from London to Auckland in 1982, which lost all four engines after flying through the ash cloud from Mount Galunggung, a small volcano which had erupted on the island of Java. Fortunately the crew were able to restart the engines and land safely at Jakarta. But was the decision this time to close European airspace justified?

In fact the Eyjafjallajökul volcano had erupted 26 days earlier on 20 March, which was the first activity since the eruptions of 1821-23. There were also fears this time that Eyjafjallajökul could trigger a similar eruption in the nearby Mount Katla which is much larger. The March eruption resulted in the risk of disruption to flights from volcanic ash appearing in the Risk Registers of some European aviation authorities. However there was no data on what levels of volcanic ash might be safe for aircraft, and so the aviation authorities had previously adopted a zero tolerance policy, saying that the presence of any ash was unacceptable. Now they decided that it was better to stop all planes until they obtained test data from reconnaissance flights. When this data was available and analysed, the advice on safe levels of volcanic ash was modified to allow commercial flights to resume. The new advice also stated that "airlines are required to conduct their own risk assessment and develop operational procedures to address any remaining risks."

This is a good example of the precautionary principle in action. This says that protective action should be taken in any situation where there is a threat of severe or irreversible harm, and if there is no positive proof that harm would not result. Decisions are taken to protect people from the worst-case scenario. The only way out is to provide "positive proof that harm would not result." The aviation authorities had no alternative, they had to stop flights until there was clear data on the vulnerability of plane engines to volcanic ash. Any other action would take unacceptable risks with the lives of passengers.

As a frequent flier and one of the delayed passengers I believe that the decision was right. I preferred the certainty of delay to the possibility of crashing. I know my judgement was affected by cognitive biases (including controllability, dread and propinquity), as well as affective factors (such as anxiety). But when lives are at stake it is clearly important to be very sure that risk is minimised. Delaying thousands of people is better than allowing even one plane to crash.

Most of us do not usually face life-or-death risks in our businesses or projects. But we are often required to make tough decisions in the face of considerable uncertainty. The lesson from the Eyjafjallajökul volcano is to be clear about what really matters, and not to be pressured into taking unacceptable levels of risk. In extreme circumstances the precautionary principle is appropriate, and we should choose the safe option, at least until we have better data. At most other times we will need to accept a degree of risk in order to keep operating. The difficulty is knowing how much risk is acceptable and where to draw the line. This will always be a matter of judgement and people will disagree over what should be done. We need to know how to take risks safely, and sometimes that means not taking the risk at all.