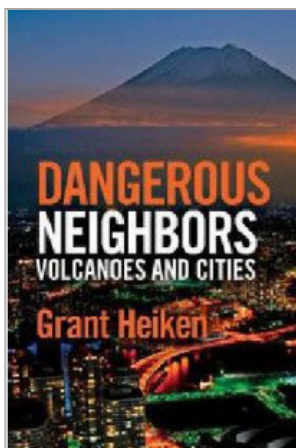


Dangerous Neighbours: Volcanoes and Cities

A book review



By Grant Heiken

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[Dangerous Neighbours: Volcanoes and Cities](#) is an accessible and informative book covering risk and mitigation of volcanic hazards in major global cities. It has been written by volcanologist and urban-studies expert Grant Heiken, whose credentials include being a geology instructor for NASA's Apollo programme, researching geothermal development and urban planning at Los Alamos National Laboratory, and presiding over the International Association of Volcanology and Chemistry of the Earth's Interior between 1995 and 1999. Much of the case studies in the book stem from his personal experience, which is apparent in the way he discusses the locations, and this provides a very topical, relevant and personal reading experience.

Heiken has written the book in language that can be easily understood by the non-scientist. It is written in a conversational tone, and every scientific term is explained. The target audience spans from interested members of the public to professionals who are involved in urban planning and civil protection. For the volcanologist, the book provides excellent examples of how various cities around the world can and do respond to volcanic hazards.

The introduction covers some basic questions – such as 'Why do people live near high-risk volcanoes?' – and also gives a brief overview of some past eruptions in various parts of the world, to provide context for the gravity of such situations.

The subsequent eight chapters each deal with volcanic hazards near big cities in different parts of the world. Naples, in Italy, is discussed in the first chapter. The second chapter tackles a range of volcanic hazards in Mexico City. The third chapter looks at two volcanoes near Quito, Ecuador. The fourth looks at Manila in the Philippines, and the many volcanoes that surround it. The fifth has a number of big-city case studies from Japan, and the sixth examines Auckland in New Zealand, which is host to a massive fifty volcanoes! The seventh chapter takes us to the northwest sector of the United States, specifically Seattle and Portland. In the eighth

chapter, a comparison is made between the islands of Santorini, Greece, and Montserrat, in the Caribbean.

As can be seen from the above, there is a lot of data to chew over, but what is good about the examples given in this book is that, due to the way they are written, they are easy to bring up in conversation with non-scientists when trying to communicate risk.

The final chapter asks the question 'How should a city respond?' This provides a closing overview of the state of science and hazard mitigation today, and discusses potential ramifications of not taking volcanic risk in such locations seriously.

In all, the book tackles some major questions in the fields of volcanology and urban studies, and encourages the reader to think across the boundaries of these fields, all the while putting human communities at the centre of discussion.

One problem that crops up time and time again is the retrofitting of evacuation routes and plans as big cities grow. Naples stands out as a particularly high risk area, due to its narrow and constrictive road design, increasing population and the infrequent recurrence time of eruptions from Mount Vesuvius. Kagoshima in Japan, on the other hand, approaches urban planning slightly differently due to the frequent eruptions of Sakurajima.

The book shows how both eruption frequency and level of activity from nearby volcanoes influences residents' ideas of risk. Generally, awareness is higher in more volcanically active areas. But in some cases, risk perception can, counterproductively, decrease near some constantly active volcanoes as they are considered a 'fact of life'. This brief discourse into the human psychology of such situations adds an extra layer of complexity to the issue of risk management.

The other point Heiken is keen to make is that volcanoes are volatile and large eruptions could disrupt life on a grand scale irrespective of current effective plans. This uncertainty is shown to be present in every case study discussed in the book, and in the last chapter the author makes a compelling case for pushing awareness of such issues, in very human terms.

This book is thoroughly recommended for anyone with an interest in volcanic hazards, and does not require any preexisting knowledge on the subject. It is easily digestible and will prove useful for the enthusiast and professional alike.

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