The BGS has worked in nearly 100 countries in the past 40 years. **David Ovadia**, Head of BGS International, outlines some of the ways in which we are contributing to economic development, quality of life and the environment, around the globe.

Geosciences and development

It is appropriate that this issue of *Earthwise* should focus on international matters. Prime Minister Tony Blair has stated that Africa and climate change will be priorities during 2005 when the UK holds the presidencies of both the G8 and the European Union. Speaking after the first meeting of the Commission for Africa, Mr Blair said, 'You cannot look at the problems of the economy without also looking at the problems of governance, of natural resources, of human development, and of the culture, heritage, participation of people.' Much of our international work supports the development of natural resources in ways that minimise environmental damage.

The development of natural resources such as coal, minerals, oil or gas usually requires considerable inward investment. This is often predicated on the availability of modern, high quality, reliable digital geological maps and other infrastructural services supplied by the national geological survey of the country. In helping to make these maps, we attach great importance to transferring the technologies and skills to the counterpart staff of the country in which we work. Fieldwork is only one component; much time is spent setting up, and giving training in, digital cartographical systems, geographical information systems, databases and websites.

Training in Mauritania.

Long-term sustainable development depends on the existence of fair but firm mining or petroleum laws, the absence of corruption at all levels, modern health and safety standards and, most importantly, properly trained and motivated national staff. In the end, countries can only raise themselves out of poverty through the crops they grow on their land or the wealth they take out of it. There is no other way — humanitarian aid, important though it is, does not generate economic growth.

Of course, there are many problems to be overcome. Mining has a poor reputation. It is often perceived to damage the environment, encourage corruption, exploit child labour and foster a culture in which HIV/AIDS infection is accelerated. While there are some truths behind these negative perceptions, we can help to mitigate potential harm through our work in environmental impact studies and support for artisanal and small-scale mining.

The tragic events that followed the Asian tsunami at the end of 2004 remind us that humankind remains very exposed to natural hazards, many of them geologically related. As part of the UK's response to the tsunami, the BGS studied the tsunami-generating features,

advised on groundwater protection, helped to plan rebuilding programmes and advised on the availability of sand, gravel and building stones. In the longer-term, our studies of the tsunami and its effects on different types of coastline, will help to minimise future risk although it cannot be eliminated. We continue to monitor natural hazards from volcanoes, in Montserrat and Tristan da Cunha, and from mudslides and ground instability.

In Afghanistan, we are helping to rebuild the geological infrastructure after years of war. This is important to the country, which is potentially rich in minerals and oil, but has seen the near-destruction of all its geological data and equipment and the loss of many of its geologists. We are working closely with the Ministry and the Geological Survey in Kabul to re-equip and train its geologists, and to help promote the country's natural resources.

Tsunami damage, Thailand.

Another important aspect of our international work concerns water. Much of the available water in the developing world is in the ground. This scarce resource is vulnerable to pollution from sewage, waste from towns or industry, saltwater penetration around coasts and estuaries and from over-abstraction. We are working with many countries to find and protect groundwater resources, without which there can be no economic or human development.

We have worked for several decades in the oil and gas sectors, mainly in the North Sea and other parts of the UK continental shelf. In recent years, we have taken that experience further afield offshore in the Falklands, Indonesia and, increasingly, in offshore West Africa. As is the case with our work in the minerals sector, the BGS has an excellent international reputation and is trusted for its impartiality and reliability, with no commercial interest or dependence on any oil or mining companies.

Our work overseas is funded by aid agencies such as the DFID, by various development banks including the World Bank, by foreign governments, by the European Union and others. In almost every case, the work is won after a competitive international tender, and carried out to the highest international professional standards supervised by external assessors. The scientific research that underpins these contributions to international economic development, environmental protection and improving the quality of life of many thousands of people is described in world-class scientific reports, many of which are published in peer-reviewed journals.

Since the 1960s, we have worked in nearly 100 countries across the globe. The pages that follow outline just a few of the many international projects undertaken by the BGS in recent years.

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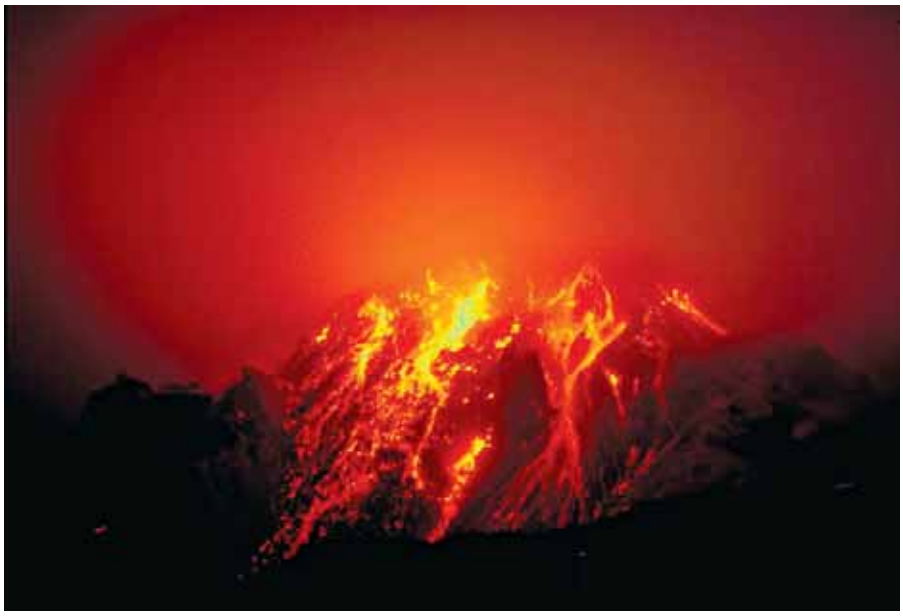

The Soufrière Hills volcano, Montserrat, at night, January 1997.