

To the ends of the Earth

From the Overseas Geological Surveys to BGS International®

by Tony Reedman, *Keyworth*

The title of our organisation, ‘The British Geological Survey’, belies the fact that for over thirty years its surveying activities have extended far beyond British shores. In 1965, an organisation known as The Directorate of Overseas Geological Surveys was amalgamated with The Geological Survey and Museum of Great Britain to become the Institute of Geological Sciences, later to be renamed The British Geological Survey. Before 1965, the Geological Survey and Museum of Great Britain had almost exclusively applied its skills to unravelling the geology of the UK; with the 1965 marriage, much of the world opened up as potential areas for survey for the new organisation.

Since 1965 the BGS has taken full advantage of its expanded horizons to the extent that it has mapped parts of over forty countries, the total area surveyed amounting to over 1.7 million square kilometres or almost seven times the land area of the UK. Some of these surveys have resulted not only in the production of geological maps but also reconnaissance geochemical maps and geophysical maps. In all, over 1500 years of staff effort have been employed to achieve this impressive output.

An examination of the type of work undertaken by the UK in overseas geology in the last few decades of the 20th century

Field party in the north of the Kenya Rift Valley, where the BGS undertook a comprehensive regional exploration survey for geothermal energy in 1988–92.

reveals an interesting evolution. In the 1950s and 1960s, both before and immediately after the old Overseas Geological Surveys joined with the Geological Survey and Museum of Great Britain, many staff were seconded to the developing Geological Survey Departments of the ex-colonies, particularly in Africa and the Pacific. During the 1970s and 1980s much work was carried out through large Technical Cooperation programmes mainly funded from the UK’s overseas aid budget. These programmes extended to many countries that had not been colonies under British rule and were consequently outside the Commonwealth. Examples include Bolivia (see page 26), Peru, Ecuador, Colombia, Indonesia, Egypt, Jordan and Korea. Within the Commonwealth, numerous countries attracted aid-supported mapping campaigns, some of the most extensive being in Sierra Leone, Botswana, Zimbabwe, Zambia, Swaziland, Kenya, Jamaica and various south Pacific nations.

Of course, in covering these vast areas, the level of detail being recorded could not match that achieved in the surveying programme of the UK during the same

period. With geological mapping products mainly at scales of between 1:50 000 and 1:250 000, a more accurate comparison is with the primary survey of the UK largely carried out in the 19th century.

In spite of the impressive efforts of the 1970s and 1980s, together with those achieved under the aid-funded programmes of many other relatively developed countries, much remains to be done. For example, published geological maps at scales of 1:250 000 or larger are available for less than about thirty per cent of the land area of Africa. Even less is covered by reconnaissance geochemical mapping and such basic data generation remains a priority for most national ‘Geological Survey’ organisations.

In the past decade geological surveying has remained an important overseas task but often with a more specific objective in mind, either in terms of defining a particular natural resource or analysing areas for vulnerability to an individual geohazard. With the development of digital cartography and Geographical Information Systems, the use of the databases established during geological surveying can be oriented much more effectively towards meeting specific user requirements and needs. Such applications, particularly for informing land-use planning decisions, are increasingly influencing the design of overseas surveying programmes and we can expect this trend to continue. There will be a need for faster acquisition of survey data over unmapped areas by increasingly sophisticated remote sensing capabilities, better management and manipulation of the data to extract the most relevant information, and delivery of information in a form users require and can understand. The BGS is pursuing research in all these areas and the results, applied through the programmes of BGS International®, will be of significance to geological surveying worldwide.



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