



Databases and training to boost local mining industries

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Staff from the BGS have been actively working on Information Technology (IT)-related projects in several countries around the world. Most of this work has been in collaboration with the Department of Mines and/or the Geological Survey of the host country. Sources of funding include the World

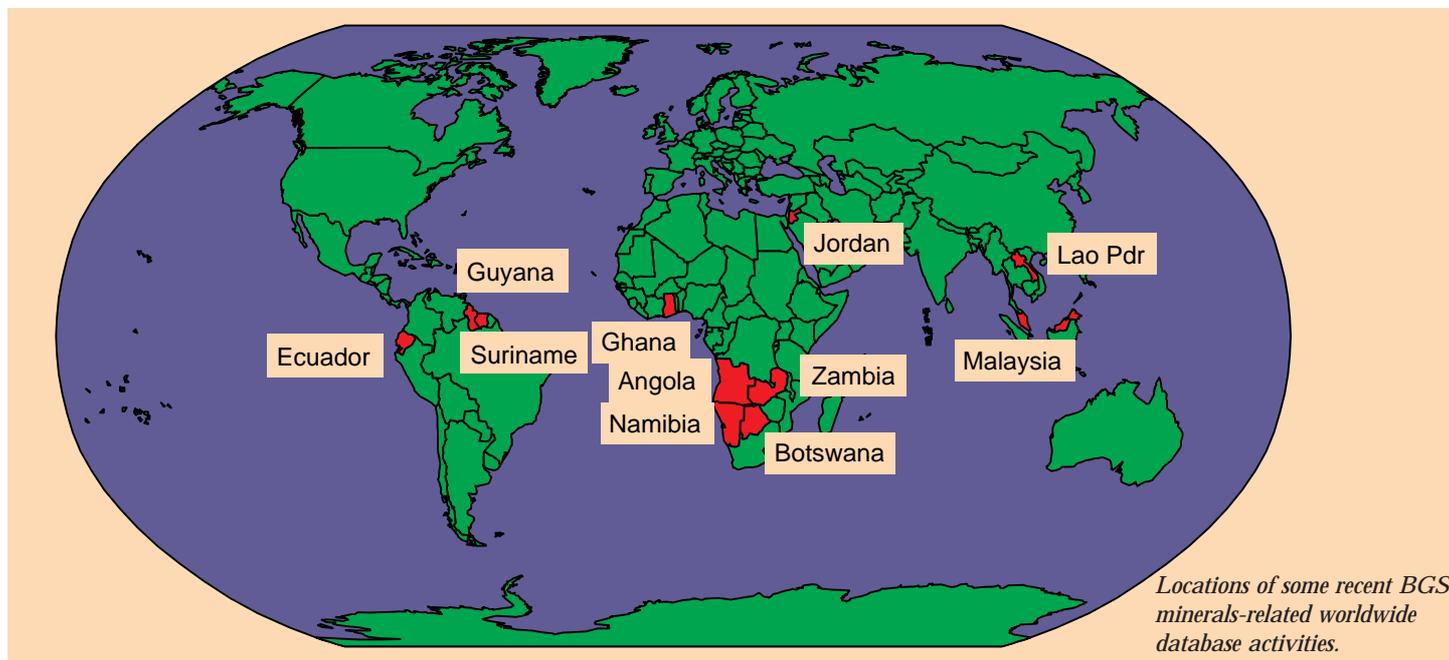
Bank, Asian Development Bank and the British Government's Department for International Development (DFID). The main aim of the donor is to strengthen the government institutions by providing funds for new equipment, training and technical assistance.

In many countries, the Government Departments with responsibility for mining and mineral development suffer from lack of investment, shortage of foreign currency and lack of trained staff. This is especially true in the IT field, where technological change is so rapid. Other pressures on these departments stem from the increased exploration activities of mining companies, following the recent world-wide trend for liberalisation of mining legislation. An active and profitable mining industry can provide a kick start to development for a country; Botswana, for example, derives about one third of its GDP from mining, mostly for diamonds.

The main role of the BGS has been to set up databases and related Geographical Information Systems (GIS), and this has usually entailed installing new hardware such as computers, digitisers, printers, plotters and associated peripherals. The subjects covered by the databases vary widely. In Zambia, the requirement was for the design of a database for mine safety, which involved such features as blasting and explosives licences and

accident records. However, the most common application is a mining cadaster. The expansion of exploration by companies under the newly liberalised mining codes has resulted in a much larger number of prospecting, exploration and mining licences. Handling this increased number has put a strain on existing manual systems, and a move to computer-based cadaster is almost inevitable. Drawing licence boundaries by hand and manually checking for overlap is possible when there are less than 100 licences, but not for several hundred. Companies need to have secure entitlement to areas before they will invest money, and a poorly run and inefficient administration may turn away potential investors.

Another common requirement is for a mineral occurrence database and GIS. Most countries have a wealth of information on the occurrence of economic minerals, but getting access to this may involve many days of effort in libraries and archives. A computer database can speed up this process and be an essential part of the promotional activities of the Mines Department or Geological Survey. An attractive mineral occurrence map and a series of promotional brochures can attract attention to a country's mineral resources. Mineral exploration is a global activity, and all countries are in competition with each other to attract inward investment.



Locations of some recent BGS minerals-related worldwide database activities.