

BGS in Afghanistan

The BGS is assisting the Afghan Geological Survey, focusing on their mineral-related capabilities. *Clive Mitchell* of the BGS explains and highlights the country's industrial mineral interests

AFGHANISTAN POSSESSES a wealth of mineral resources that are largely undeveloped, including precious metals, base metals, precious stones, coal, oil, gas, industrial minerals and construction minerals. Given the significant minerals potential of the country it is hoped that this may be exploited in order to generate revenue to help revive the economy and rehabilitate the country. The geographical location of Afghanistan is well suited for exporting these minerals to rapidly growing markets in China, the Indian sub-continent, and the Persian Gulf.

Like all government institutions in Afghanistan, the Afghan Geological Survey (AGS) has been severely weakened by a long-term lack of investment and skills development, and no active work programme. The rehabilitation of the AGS and Ministry of Mines and Industries (MMI) is seen as a high priority in the overall strategy for trying to promote and support the minerals sector.

With this in mind, the UK government's Department for International Development (DfID) commissioned the British Geological Survey (BGS) to undertake a capacity-building

project for the Institutional strengthening of the Afghan Geological Survey. This began work in Kabul in October 2004 and has a planned initial duration of three years. The main focus will be in training, generating mineral databases, helping to develop the mineral economy, and encouraging good governance.

The BGS is also helping to rehabilitate and re-equip the minerals laboratories of the AGS in Kabul. To that end, the BGS is seeking from the international industry any laboratory scale crushers, mills, sieve shakers, drying ovens, muffle furnaces, digital balances, or other laboratory equipment (either good condition used or new) that can be donated to the AGS (see below for contact details).

Mineral interests

There are a small group of relatively high-value industrial

minerals, which occur in significant quantities in Afghanistan and have considerable export potential.

An estimated 8.8m. tonnes of **fluorspar** (46.7% CaF₂) occurs in a carbonate hosted hydrothermal deposit at Bakhud in Oruzghan Province, central Afghanistan.

A volcanic hosted hydrothermal deposit of **barytes** occurs at Sangilyan in Herat Province in western Afghanistan. This deposit has been worked previously on a small scale and contains some 1.5m. tonnes (80-98% BaSO₄). This deposit is well positioned to supply proposed hydrocarbon developments in Afghanistan and elsewhere in central Asia.

Afghanistan has considerable potential as a source of high quality **dimension stone**, particularly marble. A range of polished products are manufactured in Kabul from green, white and black varieties of marble quarried in Wardak, Kabul and Nangahar provinces. There are major potential markets for these products in the Gulf.

Other industrial minerals with export potential include **talc** from Ghunday in Nangarhar province, which is currently being worked on a small scale. Deposits of talc can also be found at Achin in Nangarhar province, as can **magnesite**. A **celestite** deposit near Kunduz in Kunduz province is also of interest.

Post-conflict reconstruction and development in Afghanistan has led to very strong indigenous demand for **construction minerals** such as aggregate (river sand and gravel and crushed hard

Afghanistan

Afghanistan has a contrasting landscape of deserts and mountains with the rugged Hindu Kush occupying the central-eastern provinces. Neighbouring countries include Iran, China, Pakistan, Turkmenistan, Uzbekistan and Tajikistan. The population is estimated to be 28.5m., comprising mostly the Pashtun and Tajik ethnic groups. It is divided into 32 provinces with the central government being based in Kabul (pop. 4m.). The recent history of Afghanistan has been one of almost constant conflict with the government of President Hamid Karzai coming to power after the defeat of the Taliban in late 2001. A new constitution was adopted in 2004 followed by relatively peaceful elections and in December 2004 a new cabinet of Ministers was sworn in.

Afghanistan remains extremely poor and dependent on aid with living standards amongst the lowest in the world. However, growing political stability and continued international commitment to Afghanistan's reconstruction create an optimistic outlook for maintaining improvements to the economy over the coming years.

rock), bricks (fired clay and concrete blocks) and cement. Most of the demand for bulk minerals is met from local sources, although there is a clear need to improve the quality and consistency of these vital raw materials. 

Contributor: Clive Mitchell, Industrial Minerals & Mineral Processing Specialist, BGS; tel. +44 (0)115 936 3257; fax. +44 (0)115 936 3520; cjmi@bgs.ac.uk; www.bgs.ac.uk; www.mineralsUK.com



Terrazzo manufacturer with mineral stockpiles in Kabul. Courtesy Clive Mitchell.