

Afghanistan's gemstones

Afghanistan's turbulent and violent past has left a shattered economy in its wake. **Bob McIntosh** explains how the British Geological Survey is helping rebuild one part of a valuable industry.

Afghanistan and gemstones have been synonymous since the Neolithic Period, 6,500 years ago. Miners would risk their lives in the Hindu Kush, merchants would buy their goods and take them along the ancient trade routes to Mesopotamia, Ur, Egypt and India. These merchants also faced many hazards on their journey to the market places of the Middle East.

Though millennia have come and gone not much has changed. Afghanistan is still rich in precious and semi-precious gemstones, and mining is still an industry steeped in risks. Precious gems include emeralds, rubies and more recently sapphires. Semi-precious include lapis lazuli, tourmaline, aquamarine, kunzite, topaz, garnets, fluorite and varieties of quartz.

All gemstone mining in Afghanistan is small-scale. The miners use primitive tools, often supplemented with recycled high explosives. This can lead to much waste and damage to the gems, and results in low yield. Once mined the gemstones usually leave the country illicitly.

More information

www.bgs.ac.uk/afghanminerals

Emerald

The most precious form of beryl, are found in the Panjshir Valley, the 'Five Lions Valley', in Parwan Province. Local history says a young shepherd found the deposits in the early 1970s, although there are references to emeralds in Pliny's *Natural History*, known as 'smaragdus' meaning 'green stones', coming from this region since the first century AD.

Ruby

Ruby, the 'King of Precious Stones', is mined at Jegdalek-Gandamak in Kabul Province. We know that in 1637 labourers toiled here for marble for the Taj Mahal though there is uncertainty about when they first mined for ruby. The colour of the Jegdalek rubies ranges from nearly colourless to a deep red, often purplish and are some of the best in the world.

Lapis lazuli

Lapis lazuli from Badakhshan is still regarded as the world's premier source in terms of quantity and quality. Its name comes from the Latin, *lapis*, meaning 'stone' and the Persian word *lazzward* meaning 'blue'. It is used to make beads and boxes, and is popular for men's jewellery. It is mined on the 'Blue Mountain' on the right bank of the Kokcha River. The mines occur at well over 11,000 feet on the mountain, and because of the cold temperatures they are worked only between June and September.

Ruby in a marble host rock from Jegdalek, Afghanistan. Inset: polished ruby cabochons.



Merchants in Peshawar, Pakistan, cut low-value stones for the domestic market and send the medium and high quality stones to centres around the world for accurate cutting for the Western markets. This pattern of trade ensures that Afghanistan gains little value from gemstones.

Afghanistan is in desperate need of legitimate, lucrative industries to bolster its dire and turbulent economy. With funding from the Department for International Development (DfID) we are playing a small but essential role in developing the mining industry in Afghanistan. We plan to set up a gem laboratory at the Afghanistan Geological Survey as part of a wider project called 'Institutional Strengthening of the Afghanistan Geological Survey'. We have been examining the geology of the region and now have a good idea of the gem resources in Afghanistan.

There are four main gemstone producing areas: the Panjshir Valley producing emeralds; the Jegdalek area producing rubies and a range of fancy coloured and blue sapphires; Badakhshan producing the world famous and most recognised of Afghan gems, lapis lazuli and Nuristan, producing a wide range of semi-precious gems such as tourmaline, kunzite, aquamarine, spodumene and beryl.

What we are finding is that Afghanistan is a country very rich in gemstones but at the bottom of the value chain – they are not capitalising on their valuable natural resources. Increased security, recent changes to the legal framework for mining and the Afghan government's strategy for legitimising the mining sector will improve the prospects for investment and the consequent increase in yields. Allied to the gradual development of Kabul as a centre for the gem trade and the development within Afghanistan of value-added cutting and polishing centres, the country has the potential to have a major internationally recognised gemstone industry.

We have a number of tasks, foremost is capacity building at the Afghanistan Geological Society. Training is a key component of this as well as promoting Afghanistan's mineral deposits and developing laboratories, archives, libraries and museums.

Bob McIntosh is librarian at the British Geological Survey in Edinburgh. Email: rpm@bgs.ac.uk. Telephone: 0131 650 0239