

## NORTH KOREA

*By a Special Contributor*

**T**he Democratic People's Republic of Korea (DPRK), or North Korea, covers an area of 120,540 km<sup>2</sup> and comprises the northern part of the Korean Peninsula. It has South Korea to the south and China to the north, and shares a very small border (19 km) with Russia in the far northeast. The DPRK, with its population of 23 million, was founded in 1948 and is governed by the totalitarian and isolationist Kim Jong Il, who operates a centrally-planned, command economy.

Kim's regime is bolstered by Division 39, an unpublicised trading network generating slush funds. These funds constitute the backbone of Kim's hegemony. According to high level defectors and intelligence officials, Division 39 has generated a cash hoard of over US\$5 billion that is stashed away in places as far afield as Macau and Switzerland. Division 39 was set up during the mid-1970s to fund the elder Kim's political career. Headquartered in the main thoroughfare of the capital, Pyongyang, Division 39 has offices throughout North Korea, and these funnel donations extracted under compulsion to Kim. It is believed to have one arm engaged in illegal activities, whilst its other arm is pursuing legitimate activities through the Daesong Group. Daesong has monopolies in the country's gold, silver and magnesium mining activities, and in the export of pine mushrooms, ginseng and seafoods.

The basic economic weakness of North Korea stems from its long-held policy of *juche* or self-reliance. This has prevented the inflow of technology and has burdened industry with outmoded plant and machinery. Military spending, estimated at some 31% of GDP, is also a constraining factor as it diverts funds away from the much-needed investment in other industries and agriculture. There have been acute food shortages for years and there is a constant need for foreign food aid. During 2003, increased political tensions with donor countries restricted food aid and also placed a question-mark over fuel supplies.

Although North Korea has declared that it has now completed the reprocessing of 8,000 spent nuclear fuel rods, there is strong evidence that it has built a second plant for producing weapons-grade plutonium. The main nuclear reprocessing plant is located at Yongbyon, but recent evidence points to a new location for a second reprocessing plant.

The country produces no oil and is wholly-dependent on imports. For its electricity supply it relies on fossil fuel for about 70% of its generating needs and 30% on hydropower. Apart from oil, North Korea's major imports comprise coking coal, machinery equipment, textiles and grain. Exports are chiefly armaments, metallurgical products, fishery products and textiles.

Agriculture contributes about 30% of GDP, industry (including armaments manufacture) about 32% and services 37%.

The country lacks reserves of oil and gas and there are persistent energy shortages. Its two oil refineries have a capacity to produce 3 Mt/y and rely on Chinese crude, the only reliable source. The supply is not adequate, however.

Anthracite is the country's most abundant mineral resource, with reserves estimated at some 1,800 Mt. Reserves of metallurgical or coking coal are limited. Coal mines are mainly concentrated in south Pyongyang Province, and annual anthracite production has been as much as 68 Mt. The Anju District coal-mining complex has been the country's leading production centre, and a large open-pit operation was established there in 1990. In recent years, output in the district has risen by 7 Mt/y as a result of new mines becoming operational at Chili and Soho. Production has also improved as a result of the addition of new equipment at Saebyol and in the southern districts of North Hamgyong Province.

The capacity of the Suncho coal complex increased to 3 Mt/y some time ago. Output of metallurgical grade coal was 1 Mt/y at Kukdon and Yangjong mines. Coal deposits, as yet undeveloped, are known in Ryanggang province.

Apart from coal, North Korea's natural resources include, iron ore, manganese, copper, lead, zinc, tungsten, gold and silver, and industrial minerals such as magnesite, graphite, fluorspar and salt. Official mineral production figures are difficult to come by as data are mostly expressed in percentage terms without any mention of the reference point!

Reserves of iron ore are estimated at some 400 Mt, and there are mines at Musan, Unryul, Songhung, Komdok, Toksong, Tokhyon, Chaeyong, Hason, Tokonsong and Sehaeri. The largest iron-ore complex is at Musan in the northeast, close to the Chinese border. It has the capacity to produce some 10 Mt/y of ore but production in 2002 was reported to be minimal. The ore is low grade and the open-pit operation is believed to have severe environmental problems. Concentrates from Musan were transported via a slurry pipeline to the Kim Chaek steel plant. This plant has the capacity to produce 4 Mt/y of steel but is in dire need of modernisation. Another steel plant at Nampo was expanded from 1 Mt/y to 3 Mt/y a few years ago. South Hamgyong Province has promising deposits of magnetite ore.

A lead-zinc ore-processing complex, with an ore capacity of 15 Mt/y and the capability to produce 100,000 t/y of zinc metal, operates at Komdok in South Hamgyong Province and is the country's leading producer. However, the International Lead and Zinc Study Group estimated that North Korea's total mine production in 2001 amounted to just 32,000 t of contained metal. There have been proposals to modernise the facilities at Komdok, and also to upgrade the extraction technology in many non-ferrous ore-mining facilities.

Recent exports have reportedly included concentrates of copper and molybdenum.

In the west of the country, near the Chinese border, monazite deposits are mined at Chelsan where reserves are estimated at 500,000 t. A 1,500 t/y capacity processing plant is operated by International Chemical Joint Venture Corp, jointly-owned by state-run Korea Ryongaksan General Trading Co and a Japanese company.

In the industrial minerals sector, the chief exports are wollastonite and kaolin. North Korea has substantial resources of good-quality magnesite, and magnesite mines are concentrated in South Hamgyong Province. Annual production is estimated at 650,000 t.

Samchelli Corp of North Korea and Korea Resources Corp (KRC) of South Korea, both state-controlled entities, have entered into a joint-venture agreement whereby KRC is proposing to develop five graphite mines at Yongho in North Korea by 2006 as part of the 'bridge of unification' between North and South Korea. Under the plan, KRC would provide machinery and equipment. Ultimately, annual sales of 9,000 t - 10,000 t/y of graphite to South Korea are envisaged. According to the president of KRC, the first graphite shipments, totalling some 1,850 t, will commence during 2004.