RIO TINTO, A MULTINATIONAL COMPANY

by Paul Sheppard

RIO TINTO is a British and Australian company involved in locating, extracting and processing some of the Earth's most valuable minerals. It is, therefore, a part of the **primary** sector of industry. The company's headquarters are in London, and a management office is located in Melbourne, Australia. Between them they oversee projects involving searching for new metal reserves, mining, and transforming minerals into commodities that people can use. This transformation also means that the company is directly involved in **secondary** industry.

Rio Tinto was responsible for the production of the 4,700 medals awarded at the London Olympic and Paralympic Games in August and September 2012 (Figure 1). This was a secondary activity using metals purchased from a primary supplier. The medals were made from copper and gold extracted from the Kennecott Utah copper mine in the USA and from the Oyu Tolgoi project in Mongolia. Rio Tinto had previously produced the medals for the 2002 Winter Olympics at Salt Lake City.

Rio Tinto is just one of over 37,000 multinational companies (MNCs) or transnational companies (TNCs) in the world today. Of these, the top 100 control over 60% of their total assets. In the case of Rio Tinto it is a relatively small MNC occupying the 263rd position in this list of companies. That said, in 2008 it had a market value of $147 billion. Some individual MNCs and TNCs have an income greater than many of the world's smaller nations, especially those that are classed as less economically developed countries (LEDCs).

Figure 1: **An Olympic Gold Medal as supplied by Rio Tinto, an official sponsor of the Olympic Games 2012**

The origins of MNCs

The origins of companies such as Rio Tinto go back to when many more economically developed countries (MEDCs) such as the UK and the USA, as driving forces behind the world economy, sought to find new markets for their products. They also sought new sources of raw materials to fuel their industry at home. Many European nations at this time had overseas colonies, which were used as extensions of their home market, as well as a source of new resources, especially minerals.

Rio Tinto is one such company founded in 1962 from the merger of two companies, the Rio Tinto company and the Consolidated Zinc Corporation. It became known as the Rio Tinto-Zinc Corporation.

Rio Tinto was founded in 1873 when investors bought a mine complex at Rio Tinto at Huelva in the Spanish province of Andalucia, to exploit its copper reserves. It was bought from the Spanish government for £3.7 million – well below market value – and with a clause stating that Spain forfeited any future right to claim royalties from the mine's production. Meanwhile, Consolidated Zinc Corporation was formed in 1905 to treat zinc-bearing tailings at Broken Hill in New South Wales, Australia.

The pros and cons of multinational companies

Investment by companies such as Rio Tinto can have both advantages and disadvantages for the nations in which they invest. These can be seen in Figure 2.

Rio Tinto's worldwide operations

Rio Tinto's main business is the production of raw materials such as iron ore, copper, gold, salt, gypsum, diamonds and bauxite.

Figure 2: **The advantages and disadvantages of MNCs**

Advantages	Disadvantages
New technology, capital and expertise introduced to the country	Investment creates few local jobs
Enables a country to develop its resources	Low wages given to local employees (feeling of exploitation)
Infrastructure – roads, rail etc. – improved to exploit natural resources benefit local people	Local taxes avoided and profit goes to MNC
Multiplier effect stimulates further economic growth	Resources exploited based on international needs, not those of the host country
Exports increase	Fewer pollution controls
	Health and safety issues not strictly adhered to

It also operates plants converting iron ore into iron, and bauxite into aluminium and alumina. Gold is produced as a by-product of the processing of other minerals, especially the copper-bearing ore. The value of all of these operations is in excess of $81 billion and is based on a worldwide network of operations.

Due to its size, RioTinto is organised into five businesses based upon the mineral being exploited. It can be broken down into:

- Rio Tinto Copper (copper and by-products, i.e. gold and silver)
- Rio Tinto Alcan (aluminium, bauxite, alumina)
- Rio Tinto Energy (coal and uranium)
- Rio Tinto Diamonds and Minerals (diamonds and industrial minerals, i.e. borax, talc, gypsum)
- RioTinto Iron Ore (iron ore and iron).

These operations take place all over the world. Figure 6 on page 4 illustrates the extent of their worldwide operations and names a number of the companies and locations in which Rio Tinto can be seen to operate.

Rio Tinto Copper

Rio Tinto's copper mines are now a worldwide operation. The original Spanish mine at Huelva is no longer owned by the company, but currently it either owns or has percentage shares in copper mines in Chile (Minera Escondida), Papua New Guinea (Grasberg Mine), the USA (Utah, Kennecott Utah Copper), Australia (Northparkes) and South Africa (Phalaborwa). It is the fourth largest producer of copper in the world, producing nearly 700,000 tonnes of copper per year.

Copper is a finite resource, and RioTinto is also involved in the search for new sources of this mineral. Such exploration has seen the company working on the Resolution Copper Project in the USA, the La Granja Mine in Peru and the Oyu Tolgoi reserve in Mongolia.

The actual extraction of the copper from the ore produces a series of by-products which Rio Tinto also sells. These include gold, silver and sulphuric acid. Together, the copper and by-products generated 8% of the company's earnings in 2008 and 16% of its profits.

Rio Tinto Alcan

Rio Tinto Alcan was formed in 2007 when Rio Tinto bought the Canadian company Alcan for $38.1 billion. It is the world's largest producer of bauxite, alumina and aluminium. It mines bauxite at seven different locations in Australia, Brazil, Canada and West Africa and also produces alumina from this raw material at 13 different locations. It later refines the alumina into aluminium in 11 different smelters around the world. These products accounted for 41% of the company's earnings in 2008 and 10% of its profits.

Rio Tinto Energy

This branch of the company deals in coal and uranium, both of which are used as sources of power. Its coal reserves are located in Australia and the USA. The uranium is mined in Australia and Namibia (Figure 3). Rio Tinto is the third largest producer of uranium in the world. It also ensures that uranium is only sold for peaceful purposes – that is, the production of electricity and not nuclear weapons. These products accounted for 12% of the company's earnings in 2008 and 18% of its profits.

Rio Tinto Diamonds and Minerals

Rio Tinto has three diamond mines. The Argyle diamond mine in Western Australia is 100% owned (Figure 4), while the company owns 60% of the Diavik mine in North West Territories, Canada and 78% of the Murowa mine in Zimbabwe. Together these three mines are the third largest producer in the world, producing 20% of the world's annual production of rough diamonds. The company is currently looking for new reserves in Madhya Pradesh in India. This section of Rio Tinto accounted for 1% of the company's earnings in 2008 and 1% of its profits.

Other industrial minerals mined include talc, salt and gypsum. The only mining operation carried out by Rio Tinto in Europe is in southern France where talc is mined by the Luzenac branch of the company. Most operations for salt and gypsum are found in north-western Australia. This sector of Rio Tinto accounted for 6% of the company's earnings in 2008 and 3% of its profits.

Rio Tinto Iron Ore

Rio Tinto is the second largest supplier of iron ore in the world. 153 million tonnes of ore were mined in 2008 in Australia,

Figure 3: **Rossing Uranium Mine, Namibia**

Canada, Guinea, India and South America. The company also mines titanium oxide in Canada, South Africa and Madagascar. Refining of the ore into iron is a small part of the company's operation as this tends to be left to the purchasers. This section of Rio Tinto accounted for 27% of the company's earnings in 2008 and 52% of its profits.

(The remaining 6% of Rio Tinto's income is derived from other sources.)

Best practice

As a company, Rio Tinto is aware of the need to ensure that its worldwide operations deliver 'best practice'. The aim is to ensure that any damaging social, economic and environmental effects as a result of exploitation of a mineral reserve anywhere in the world are kept to a minimum.

Any mineral that is exploited is a finite resource, so in time the resource will run out. In the past many companies simply abandoned mining sites and left them as a scar on the landscape. Today, companies like Rio Tinto are required to restore the land as close as possible to its previous state. In Indonesia, at the Kelian Equatorial Mining operation, 500,000 ounces of gold are produced annually from opencast pits. Once these pits are exhausted, the tailings – the remains of the processed ore which contained the

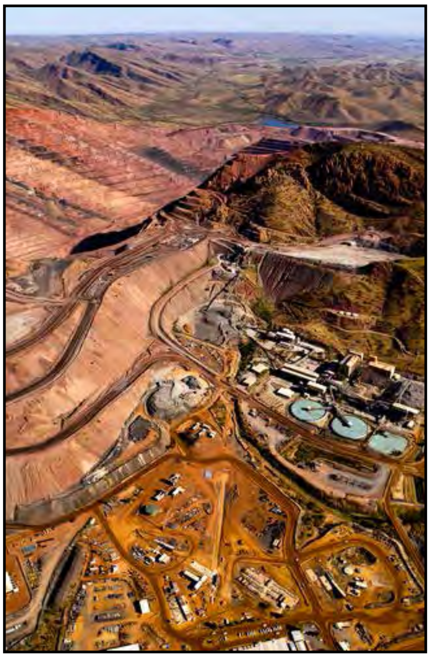

Figure 4: **Argyle Diamond Mine, Western Australia**

gold – are returned to the pits. This avoids scarring the landscape and reduces acid water runoff.

Rio Tinto works with indigenous peoples, local communities and public authorities to ensure that their needs are met. If you are an employee of Rio Tinto, you will expect to gain from many fringe benefits, such as health care, education and housing (see Figure 5).

Wherever Rio Tinto has operations, once the mineral has been extracted the company aims to return the environment to its original state, reducing any impact of its operations on the biodiversity of an area and protecting the ecosystem. Sustainable water management is considered essential, and Rio Tinto ensures that its activities do not pollute the local water supply. This may mean the building of dams to filter the water before it joins the drainage system, as at Kelian in Indonesia. At this mine, ore deposits are covered before gold is extracted, to ensure there is no seepage into the drainage basin.

Such concerns mean that some sites where exploration has been

Figure 5: **Fort Dampton, Madagascar, showing some of the 269 workers' homes and school, close to the titanium dioxide mine**

granted may not actually be developed. This may be a result of local opposition, especially where conservation and environmental concerns outweigh the benefit to the region of opening up a mine or quarry.

Rio Tinto's mission statement indicates that the company operates on a 'shared commitment to be a dependable global partner and good local neighbour'. This refers not only to environmental issues but also to its workforce. Wherever possible a local workforce is employed, and a code of good practice is in force. This also extends to health care: Rio Tinto has developed a global HIV/AIDS strategy in line with that laid down by the International Labour Organisation. A programme of education, awareness and education is in place in all sectors of the company, along with counselling, testing and wellness programmes.

All multinational companies have come a long way since the days of pure exploitation for their own benefit. Rio Tinto now acknowledges its responsibilities and operates accordingly. No longer do companies just take what they can and move on. At one time multinationals were generally based in Europe and North America, but with globalisation multinationals are now developing in India, China and other emerging economies, with operations around the world.

Activities

1 (a) What is meant by a multinational company?
(b) What other name is given to such companies?
(c) Why have companies become multinational or transnational?

2 What type of multinational is Rio Tinto plc?

3 (a) What are the advantages and disadvantages of multinational companies to the countries in which they operate?
(b) Imagine you represent the government of a country with a poor economy but with large deposits of iron ore. The country could mine the ore itself but that would cost a lot, and it would be necessary to take out a loan from the bank. Discuss in groups what your government's strategy would be if it was approached by Rio Tinto.

4 For this activity you will need a blank world map. Refer to Figure 6.
(a) Shade in all the countries listed in the table.
(b) Add a key to your map to indicate what product is extracted in these countries.
(c) For these countries draw:
(i) a red boundary for the MEDCs and
(ii) a blue boundary for the LEDCs.

5 Which branch of Rio Tinto produces gold?

6 Study the text describing the five Rio Tinto businesses. Using information in the text, create bar charts or some other form of graphical representation to show earnings and profits for each of the subsidiaries.

7 Which is the most profitable part of the Rio Tinto plc company?

8 How does Rio Tinto ensure that its operations are eco-friendly and follow a policy of 'best practice'?

9 Describe how the company has changed since its formation in 1873.

10 Multinational companies are no longer based only in MEDC nations. LEDCs are now headquarters to such companies. Investigate the role of the company Tata, looking at its origins and investments, particularly in the UK.

11 Figure 7 lists Rio Tinto's priorities for environmental management. In groups, put these in order of preference, from the most important to the least. Discuss with others in your class your two most and two least important priorities.

- Air pollution – maintaining clean air / minimising air pollution at site
- Biodiversity – maintaining the number of indigenous plants and animals
- Ecosystem conservation – looking after fragile ecosystems
- Energy and climate change – using renewable energy where possible and conserving use
- Land conservation – ensuring that the land that is affected by mining is restored to its former state, once mining is complete
- Effective waste management – making sure waste, rubbish and litter are controlled and have no environmental impact
- Water quality – maintaining local water quality / avoiding water pollution at all costs

Figure 7: **Key performance areas in terms of environmental management for Rio Tinto**

Figure 6: **A sample of Rio Tinto's worldwide operations, their products and locations**

Subsidiary	Main product	Location
Anglesey Aluminium	Aluminium smelting	Wales, UK
Argyle Diamonds	Diamonds	Western Australia
Bell Bay Smelter	Aluminium smelting	Tasmania, Australia
Bougainville Copper	Copper	Papua New Guinea
Corumba Mine	Iron ore	Brazil
Energy Resources of Australia	Uranium	Northern Territories, Australia
Minera Escondida	Copper	Chile
Iron Ore Company of Canada	Iron ore	Canada
Kennecott Utah Copper	Copper	Utah, USA
Murowa	Diamonds	Zimbabwe
Oyu Tolgoi	Copper and gold	Mongolia
Palabora	Copper	South Africa
QIT Madagascar Minerals	Titanium dioxide	Madagascar
Rio Tinto Alcan	Aluminium	Canada
Rio Tinto Energy America	Coal	Wyoming, USA
Rossing Uranium Mine	Uranium	Namibia
Simandou	Iron ore	Guinea
Hathor Exploration Ltd	Uranium	Athabasca Basin, Saskatchewan, Canada