

## TURKEY

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Turkey has made its acceptance as a member of the EU a top priority and has been steadily bringing its legislative and economic practices in line with those of the EU. It entered into a stabilisation programme with the IMF in 1999 and this has been revised and augmented twice since then with the latest draw-down of the stand-by facility agreed in December 2003. Turkey has been a member of the European Customs Union since 1996 and foreign investment is actively encouraged. Various investment incentives exist, several of which will be available to companies. In particular a company will benefit from the 40% investment allowance available on capital items and is expected to be exempt from import duties and VAT on capital goods sourced both locally and abroad.

Turkey has been a party to several bilateral and multilateral agreements and organisations including: United Nations, NATO (North Atlantic Treaty Organisation), Council of Europe, OECD (Organisation of Economic Co-operation and Development), European Union - Customs Union Agreement, WHO (World Health Organization), WTO (World Trade Organisation), ILO (International Labor Organisation), IMF/World Bank, ECO (Economic Co-operation Organization), OIC (Organisation of the Islamic Conference), Islamic Development Bank, MIGA (Multilateral Investment Guarantee Agency), MAI (Multilateral Agreement on Investments) - party to the negotiations and BSEC (Black Sea Economic Co-operation).

At the level of sub-sectors of industry, manufacturing industry production increased by 22.6%, mining industry production by 19.3%, electricity, gas and water production by 9.6%, in December of 2003, over the same period as the previous year. Total industrial production increased by 9.1% in 2003, and mining industry output decreased by 4.0%, manufacturing industry increased by 9.7%, and electricity, gas and water industry increased by 8.4% (Table 1).

### **Privatisation and Legislative Framework**

The privatisation programme was initiated in 1983 in Turkey, but accelerated with the Privatization Law enacted on November 23, 1994. Turkey's strong commitment to increasing private enterprises and promoting economic growth and development is demonstrated by its market-orientated privatisation philosophy and its new legal framework to speed privatisation transactions with individual investors and purchasing groups. The experience gained through the privatisations carried out since the inception of the programme in 1985/86, means that a variety of approaches can be taken to meet the

differing needs of investors. The main objectives of the privatisation programme are to:

- minimise state involvement in the economy,
- accelerate further establishment of market mechanisms within the context of liberal economic policies,
- confine the role of the state in the economy to areas such as health, basic education, social security, national security, large-scale infrastructural investments and provide a suitable legal and structural environment for free enterprise to operate,
- enhance competition in the economy,
- decrease the financial burden of State Economic Enterprises on the national budget,
- broaden and deepen the existing capital markets by promoting wider share ownership, and
- provide efficient allocation of resources.

The legislation governing foreign investments in Turkey has been shaped by the Foreign Capital Law, which was enacted in 1954, and the Council of Ministers Decree and Communiqué, which were last revised in 1995. The Law and the Decree draws the framework of general principles concerning foreign investment. The detailed application procedures can be found in the communiqué. The application forms needed for company establishment and employing foreign personnel are also supplied. Foreign investors have the same rights as local investors to benefit from investment incentives. Investments are not only secured with the legislation regarding foreign investments - there are many other legal acts and international agreements which guarantee a stable and reliable investment environment.

### **Mineral potential**

Turkey is the crossroads of Europe, Africa, the Middle East and northern Asia - the land bridge between east and west, north and south. Metal mining in Turkey goes back at least 9,000 years. Copper, gold, silver, lead, tin, iron, mercury, and other metals have been mined since ancient times by Phoenicians, Greeks, Hittites, Romans, Ottomans and modern-day Turks.

In January 2003, the new Turkish Government pledged to boost exploration to increase domestic reserves; provide cheap and reliable raw material sources for industry and the power sector; and increase processed mineral product exports. In recent years, there has been increased activity in the mining sector as more foreign companies have turned their attention to Turkey. The country has a well-established mining code and complementary legislation. The new draft mining law is expected to come into effect later in 2004 and this is expected to further encourage foreign investment in the sector.

Turkey possesses an estimated 2.5% of the world's industrial minerals resources, including 62% of global borax resources, 20% of bentonite and more than 50% of perlite. The main products in the minerals sector include

natural borates and concentrates, natural stone, ferro-chromium, chromium ores, copper ores, magnesite, zinc ores, feldspar, pumice stone, kaolin and other clays (Table 2). Currently Rio Tinto, Inco, Newmont, Cominco, Inmet, Anatolia Minerals and El Dorado Gold are active in the country. Newmont operates the Ovacik gold mine north of Izmir, whilst Inmet operates the Cayeli copper/zinc mine in northern Turkey and Rio Tinto has an exploration programme through a joint venture with Anatolia Minerals. Some 180 km to the east of Caldag, El Dorado plans to commence construction of the Kisladag gold project in 2005.

### **Precious metals**

Turkey's first modern gold mine, at Ovacik, about 100 km north of Izmir in eastern Turkey, poured its first gold in May 2001 after more than ten years of exploration, construction and environmental permitting by Normandy Mining and its predecessors. The operation is now 100%-owned by Newmont Mining Corp of the US and in the first six months of 2002 the mine processed some 170,000 t of ore averaging 12.7 g/t for the production of 52,400 oz of gold. Full-year sales were forecast at 100,000 oz and cash costs were estimated at US\$150/oz. Newmont is spending around US\$1.0 million/y on exploration in the mine vicinity. A number of international companies namely Eldorado-Tuprag, AMDL, Rio Tinto, Inmet, Cominco are active and an estimated 509 t of gold resources (including reserves under operation or ready-for-investment) have reportedly been identified in nine deposits.

### **Chromite**

Chromite deposits in Turkey are Alpine (podiform) type and their formation is generally observed in the east-west direction. As a result of intense tectonic activities, various ore types such as massive, banded and noduled (leopard skin) were formed. The accompanying secondary minerals found in Turkish chromite deposits are dunite, harzburgite, olivine, serpentine and talc.

The first chromite production in Turkey began in the region of Harmancik. In 1924 production was started in the second largest chromite occurrence in Turkey. High production capacities in those years made Turkey one of the top countries in the world chromite trade and the country remained the leader until the 1960s. Low-carbon ferrochromium production was initiated in Antalya in 1963 in a joint venture with Etibank and foreign capital. At the moment 11,000 t of ferrochromium and 7,200 t of silica-ferrochromium are produced annually in these facilities which are currently owned by Eti Holding.

A high-carbon ferrochromium plant with a production capacity of 50,000 t/y was established at Elazig in 1977. The production capacity upped to 150,000 t in 1989 by the addition of two new units. For the production of chromium salts such as sodium dichromate and chromium sulphate, the Kromsan plant was established in 1984 in the city of Mersin with a capacity of 71,000 t/y. The export of chromium salts brought an income of US\$22.4 million in 1988. The sum of proven, probable and possible chromite reserves of Turkey has been put at 308.4 Mt - 4% of world reserves, of which 202.2 Mt are classified as proven and probable. Chromite deposits in Turkey are located in seven regions.

### **Boron**

Turkey contributes about 30-35% of world production and is the largest ore producer. The South American countries - Argentina, Bolivia, Chile and Peru combined - account for slightly less than 10%, with the remainder coming from US, China and Russia. The USGS reports world ore production last year at 4.8 Mt (2001: 4.6 Mt), with the US contributing 1.2 Mt, Turkey 1.5 Mt, Russia 1.0 Mt, Argentina 500,000 t, Chile 330,000 t and China 150,000 t. The USGS estimates that Turkey has the largest reserves, with 60 Mt, and a reserve base of 150 Mt, followed by Russia (40 Mt and 100 Mt), the US (40 Mt and 80 Mt) and China (25 Mt and 47 Mt).

World supply is dominated by two companies, Rio Tinto Borax and Eti Holding. Between them, they supply around 75% of the borates used in the world. Eti Holding is a Turkish State Economic Enterprise (SEE), producing borate minerals and refined products from its four mines in western Turkey. Some 90% of production is exported although the company is making efforts to add value to its products and is committed to a substantial investment programme. A third production line at its Kirka sodium borate pentahydrate plant was commissioned in 2001, raising capacity from 320,000 t to 480,000 t/y, and at Emet it is building a new boric acid plant scheduled to produce 100,000 t/y beginning in 2003. During 2002, it was planned to increase capacity at the Bandirma plant from 45,000 t to 60,000 t/y. Eti Holding is also constructing a 240,000 t/y capacity acid plant near Bandirma that will use pyrite to supply sulphuric acid for the boric acid plants at Emet and Bandirma. Construction has been awarded to an SNC-Lavalin/Dogan consortium.

In Eti Holding's 2000 Annual Report, the chairman outlined plans to increase borate refining capacity from 500,000 t to 1.2 Mt/y in line with its policy to produce and market value-added products rather than boron minerals and concentrates for export. In December 2000, Eti Holding was placed in the 'scope of privatisation' in response to calls from the IMF for Turkey to hasten privatization of state-owned industry. However, removal of the borate mines from state control met strong resistance, and the company was returned to its SEE status.

### **Marble**

Marble, the word itself deriving from Marmara Island where ancient marble quarrying first took place about 2,000 years ago, has recently become a driving force in the mining industry with the rapid development it has displayed, and the amount of employment and added value it has created, with export figures of hundreds of millions of dollars. Marmara Island and Afyon, İscehisar were the capitals of marble production and exports in the Roman, Byzantine and Ottoman Turks periods. Stone working techniques, which started with Urartians, reached a peak a peak during Seljukian and Ottoman times. Natural stone miners in Afyon, Balıkesir, Denizli, Bilecik, İzmir and several other cities carry out extensive mining operations. The vision of Turkish natural stone mining is to re-establish the country as the capital of marble, as it was in Roman times. Exports of marble and natural stones and related technologies account for up 60% of Turkey's total mining sector exports.

### Acknowledgements

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**Table 1**

Economic activities	Growth rate in industrial production over the same period as the previous year and average for twelve months (%)			
	December		Average of twelve months	
	2002	2003	2002	2003
Total Industry	13.7	21.1	9.2	9.1
Mining Industry	-14.3	19.3	-9.5	-4.0
Manufacturing Industry	16.5	22.6	10.7	9.7
Electricity, Gas and Water	5.4	9.6	5.4	8.4

**Table 2 (over 3 pages)**

Statistical data - value by mineral product group

	2002 Jan-Dec	2003 Jan-Dec
	US\$	US\$
Salt	2,062,379.0	2,499,589.33
Unroasted iron pyrites	0	8,670.24
Sulphur	232,668.25	123,445.14
Natural graphite	3,121.14	5,984.08
Quartz	4,075,875.18	4,295,423.21
Kaolin and other kaolin clays	5,533,355.18	6,994,576.08
Bentonite	6,137,868.15	8,956,073.38
Other clays	1,528,035.81	2,513,654.92
Natural calcium phosphates	1,350.00	1,683.40
Baryte, witherite	5,820,474.12	5,593,559.61
Siliceous fossil metals and/or earths	193,105.41	625,538.09
Pumice stone	6,457,474.51	8,116,406.37
Emery and other abrasives	1,280,994.92	1,121,962.43
Worked slate	561,444.73	638,204.69
Natural stones	37,659,663.76	38,675,236.44
Chippings and natural stone powders	17,825,561.16	25,593,953.76
Dolomite	1,111.61	44.36
Magnesite	80,511.53	105,286.67

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Gypsum, anhydrite, plaster	62,007.77	143,154.85
Asbestos	348,773.92	720,117.14
Mica	90,478,982.75	83,675,436.09
Natural steatite, talc	43,466,718.04	55,492,410.51
Natural cryolite and chiolite	5,584,614.38	5,625,266.77
Natural borates and concentrates	525	0
Feldspar	4,759,470.26	9,999,286.33
Perlite	49,034.35	127,999.30
Natural magnesium sulphates	4,383,652.00	4,443,780.00
Natural micaceous iron oxide	575,010.49	558,500.01
<b>Total</b>	<b>239,163,784.22</b>	<b>266,655,243.20</b>
Meerschaum	110,005.35	2,182,153.92
Celestite	240,040.00	65.25
Other mineral substances	50,120,392.99	43,024,984.21
Iron ores and concentrates	0	730,651.25
Manganese ores and concentrates	47.80	0
Copper ores and concentrates	40,234.51	346,422.10
Nickel ores and concentrates	6,628,010.00	1,359,498.60
Cobalt ores and concentrates	12,762,581.93	14,547,537.71
Aluminium ores and concentrates	1,807,500.00	2,480,000.00
Lead ores and concentrates	20,647,485.90	28,130,962.55
Uranium ores and concentrates	124,417.36	200,078.00
Thorium ores and concentrates	0	2,805.00
Molybdenum ores and concentrates	0	2,419.34
Titanium ores and products	180,395.00	1,039,254.91
Precious metal ores (gold and platinum)	0	1,452.14
Antimony ores and concentrates	1,022,906.95	1,731,717.04
Tin ores and concentrates	8,601,965.87	5,738,228.48
Other metallic ores and concentrates	24,430.80	0
<b>Total</b>	<b>102,310,414.46</b>	<b>101,518,230.50</b>
Marble, onyx and travertine blocks	413,905.61	3,073,179.48
Granite blocks	58,660,887.71	97,462,804.54
Other monumental or building stones	5,909,211.27	6,347,232.72
Slate	2,127,042.39	3,502,151.91
Marble, onyx and travertine slabs	89,882.17	122,548.79
Granite slabs	3,221,054.44	4,819,714.79
Worked marble, travertine	218,312,951.72	302,731,488.98
Worked granite	9,188,633.74	6,589,206.87
Other worked monumental or Building stones	4,678,962.88	6,079,497.70
<b>Total</b>	<b>302,602,531.93</b>	<b>430,727,825.78</b>
Granulated slag and other waste	1,458,690.18	1,678,132.79
<b>Total</b>	<b>1,458,690.18</b>	<b>1,678,132.79</b>
Precious stones	27,065,696.68	31,213,701.19
Precious semi-precious stones and articles	921,364.19	1,166,034.62
<b>Total</b>	<b>27,987,060.87</b>	<b>32,379,735.81</b>
Metallic ash and residues	5,319,691.37	7,035,724.23

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Other ash and residues	3,818,040.73	5,677,153.52
Mineral oils	7,657.88	123,421.17
Natural or artificial abrasive powder or grains	737,589.97	2,009,149.80
Others	160,102.61	77,251.53
<b>Total</b>	<b>10,043,082.56</b>	<b>14,922,700.25</b>
<b>Total</b>	<b>683,565,564.22</b>	<b>847,881,868.33</b>