

## SECTION B: BASELINE ASSESSMENT

### CHAPTER B1: INTRODUCTION

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## 1 INTRODUCTION

This section of the ESIA provides environmental and social baseline information related to the Project Area of Influence to enable an assessment of the potential impacts of the Oyu Tolgoi project to be identified and quantified, and appropriate mitigation measures to be developed.

### 1.1 APPROACH AND METHODOLOGY FOR PREPARATION OF BASELINE ASSESSMENT

*Chapter A3* sets out the overall approach and methodology adopted for the preparation of this ESIA. This chapter provides more detail on the development of the environmental and social baseline assessments and the coverage of the specific baseline chapters.

#### 1.1.1 Overall Approach

The baseline assessment has been prepared drawing upon the wide range of internal and independent studies that have been prepared by the Oyu Tolgoi project since 2003. The existing information has been reviewed and assessed for accuracy, consistency and validity. Where additional baseline data became available in 2010 and 2011 prior to the completion of the ESIA, this has been incorporated. Further data collection studies have been commissioned, particularly in relation to biodiversity. Plans for ongoing data collection are set out in the corresponding impact assessment chapters and management plans to ensure baseline data continues to improve and that the results of ongoing monitoring and improved knowledge will be integrated into updated and revised management plans and procedures.

In each baseline chapter the following issues have been considered in order to draw together the data and to provide an overview of the sources, robustness and validity of the original data:

- Ensuring that data sources are explained and that key references are cited to give a clear appreciation of the origin of information used;
- Explaining, where this is necessary, any third-party data verification that has been undertaken by Oyu Tolgoi;
- Describing the methodologies that have been used to develop the baseline data; and
- Identifying where Oyu Tolgoi has commissioned further data collection, or where data collection remains ongoing.

The baseline chapters presented in this ESIA are, necessarily, a summary of an extensive body of research and assessment that has been ongoing over many years.

#### 1.1.2 Biophysical Environment Baseline

The biophysical environment baseline addresses the following topics:

- Climate;
- Air quality;
- Noise and vibration;
- Topography, geology and soils;
- Water resources;
- Biodiversity; and
- Ecosystem services.

#### **Sources of Data**

Environmental baseline data has been derived principally from the detailed environmental impact assessments (DEIAs) that have been prepared by Oyu Tolgoi for the purposes of Mongolian regulatory approvals. This data has been supplemented by additional research and assessment that has been prepared by Oyu Tolgoi as part of its project planning and design activities and also as part of its

stakeholder engagement activities to help manage the community impacts of environmental and design issues (such as water abstraction and road and pipeline construction).

In addition, a range of independent studies have been undertaken during 2011 to improve the knowledge base of the Project in relation to biodiversity issues. As part of this, additional studies have been undertaken to identify the inter-relationship between humans and the natural environment and the intrinsic value of a wide range of services provided by the natural environment using the concept of “ecosystem services”

### 1.1.3 Human Environment Baseline

The human environment baseline addresses the following topics:

- Population and demographics;
- Employment and livelihoods;
- Land use;
- Transport and infrastructure;
- Cultural heritage; and
- Community health, safety and security.

#### **Sources of Data**

While there are scoping and consultation requirements included within the Mongolian environmental approvals process, there are no regulatory requirements for the socio-economic impacts of proposed projects to be assessed and considered as part of the project approvals process.

To support effective project planning and to support Government decision-making related to the Project, Oyu Tolgoi commissioned a socio-economic baseline study for the Omnogovi *Aimag* in 2008. Based on that study, a more focused baseline assessment<sup>1</sup> was prepared for the four neighbouring *soums* considered to be most directly affected by the Project<sup>2</sup> and the *aimag* capital, Dalanzadgad.

#### **Baseline Data Collection Techniques**

This baseline study was focused on the *soum* level and employed a range of commonly-used participatory techniques<sup>3</sup> for primary data collection and analysis including:

- **Focus group discussions (FGDs)** were used to gather common information specific to the impacts caused by large mines in the area and to clarify complex issues to supplement the secondary data. Involving approximately 8-10 people in each, FGDs were organised in all the *baghs* in each *soum* covering a variety of issues: population, cultural heritage issues; employment, health, local governance and budget revenues; natural resources; businesses, income generation and education, with particular emphasis on local perceptions and concerns.
- **Semi-structured interviews (SSI)** were organised in each *soum* with 6-10 respondents - officials and various staff members of *soum* governments and *soum*-based public and private services - to clarify detailed issues and gather supportive information. SSIs were conducted within an open framework to allow for focused and two-way conversational communication.
- **Secondary data** were collected from various organisations in each *soum*, focusing largely on data that are not available from official statistics and closely related to population migration, local budgeting and employment by the mines.

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<sup>1</sup> Oyu Tolgoi Project Social, Economic and Environmental Subset, Centre for Policy Research, Population Training and Research Centre, 2009.

<sup>2</sup> Khanbogd, Bayan-Ovoo, Manlai and Tsogttsetsii. This is a different interpretation of the Project Area of Influence to that used within the ESIA, which has greater focus on Khanbogd *soum*.

<sup>3</sup> Guidelines and Principles for Social Impact Assessment, prepared by the Interorganisational Committee on Guidelines and Principles for Social Impact Assessment, 1994.

Of central importance in the approach and methodology applied in this study was the focus on broad participation in data collection. This was, principally, to reduce the risk of overstating one impact over another, and to ensure that the Project's consequences are correctly assessed or predicted by local communities.

Survey themes discussed with local respondents during the primary field data collection included:

- Local economic and business development and infrastructure;
- Population;
- Employment;
- Education;
- Health;
- Cultural heritage;
- Socio-economic aspects of environmental impacts;
- Natural resources; and
- Local government functions and resettlement.

A range of other studies commissioned by Oyu Tolgoi have been used to prepare the human environment baseline chapters and appropriate references and summaries of these studies are provided within each chapter.

## 1.2 MONGOLIA – SOCIAL AND ECONOMIC BACKGROUND

### 1.2.1 Introduction

Mongolia is a vast, landlocked, resource-abundant country bordering the Russian Federation to the north and China to the south, east and west. The country's borders are mostly formed by natural boundaries; with mountain ranges and the boreal forests of Siberia to the north and the Gobi Desert to south. The terrain consists of expansive mountain ranges, steppe and semi-desert with dry desert to the south.

At 1,564,116 km<sup>2</sup> and with a population of around 2.9 million people, Mongolia is the most sparsely populated country in the world.<sup>4</sup> Of the total land area, less than 1% is considered arable land; 8%–10% forested; and the rest is mainly used for herding, including the semi-desert steppe of the Gobi region.

This section presents an overview of the economic and social setting of the Oyu Tolgoi Project, Mongolia; providing an overview of Mongolia's history and a summary of economic development of Mongolia, including the transitions that have taken place in Mongolia in post-Soviet times and in the recent economic era. The section also introduces the sectoral composition of the Mongolian economy and describes Mongolia's principal sources of export trade and revenue. Finally, the section summarises the social setting of the Project including national, regional and local sub-divisions and the administrative arrangements for their management.

### 1.2.2 Methodology

#### **Primary Data Collection**

Oyu Tolgoi has conducted a number of in-depth studies on the Mongolian economic situation. Key studies are described below:

- *The Development of the Oyu Tolgoi Copper Mine: An Assessment of the Macroeconomic Consequences for Mongolia, 2011.*<sup>5</sup> This study was commissioned by Oyu Tolgoi to better understand the potential economic impacts of the Oyu Tolgoi Project in terms of key financial indicators (Gross Domestic Product (GDP) contribution, per capital GDP contribution, royalties

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<sup>4</sup> Economy Watch, Mongolia Economy. Source URL: [http://www.economywatch.com/world\\_economy/mongolia/](http://www.economywatch.com/world_economy/mongolia/).

<sup>5</sup> By B. S. Fisher, T. Batdelger, A. Gurney, R. Galindev, M. Begg, B. Buyantsogt, E. Lkhanaajav, and B. Chadraaval.

and taxes, real wages and inflation etc); research and reporting was undertaken by the School of Economic Studies of the National University of Mongolia and BAEconomics Pty Ltd; and

- *The Oyu Tolgoi Project Social, Economic and Environmental Subset, Centre for Policy Research, Population Training and Research Centre, 2009.* Research for the Subset was undertaken by the Centre for Policy Research, Ulaanbaatar and the Population Training and Research Centre, Ulaanbaatar. A household survey was undertaken in 2008 and the results published in 2009. In total 1,323 households were sampled for the survey, representing 10% of the total number of households in the *aimag*. A detailed questionnaire was used containing 417 questions. Five focus group discussions (FGDs) were held in each *soum* with around 10 people in each. Interviews were also conducted with stakeholders, officials and other individuals to clarify issues and verify data. The report provides detailed baseline data on a wide range of social, economic and environmental topics.

### **Secondary Data**

Information for this section has also been obtained from a variety of secondary sources:

- The Oyu Tolgoi Investment Agreement: Why It Works for Mongolia. A Report by World Growth International/World Growth Mongolia, April 2009;
- United Nations Development Programme (UNDP): Human Development Report, 2010;
- International Monetary Fund (IMF): World Economic Outlook, 2010;
- World Bank: World Development Indicators, 2010;
- Central Intelligence Agency (CIA): The World Factbook;
- Mongolian National Mining Association;
- World Bank. Southern Gobi Regional Environmental Assessment, 2010;
- World Bank. Mongolia: a Review of Environmental and Social Impacts in the Mining Sector. Washington, D.C. 2006; and
- The U.S. Department of State, Bureau of East Asian and Pacific Affairs.

### **1.2.3 Development History**

#### ***Origins and Early History of the Mongols***

Archaeological evidence dates the history of human habitation in the southern Gobi back to early Stone Age between 100,000 and 200,000 years ago. By the first millennium B.C., bronze-working peoples inhabited the area of modern 'Mongolia'. With the development of iron weaponry by the third century B.C., the population of Mongolia had begun to establish tribal alliances and to threaten China.

The origins of more modern inhabitants are traced back to the forest hunters and nomadic tribes of Inner Asia. They inhabited a considerable area of land extending from the Korean Peninsula in the east, across the northern tier of China to modern Kazakhstan and to the Pamir Mountains and Lake Balkhash in the west. During most of recorded history, this area had been a hub from which emerged numerous migrations and invasions to the southeast (into China), to the southwest (into Transoxiana – modern Uzbekistan, Iran, and India), and to the west (across Scythia<sup>6</sup> toward Europe). By the eighth century B.C., the inhabitants of the greater part of this region were nomadic Indo-European speakers, either Scythians or their kin. Also scattered throughout the area were many other tribes that were primarily Mongol in their ethnology<sup>7</sup>.

The foundation of the Mongol Empire dates back to the thirteenth century. In 1206 A.D., a single Mongolian state was formed based on nomadic tribal groupings under the leadership of *Genghis*

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<sup>6</sup> The area known as *Scythia* in classical antiquity (8th century BC – 2<sup>nd</sup> century AD) comprised modern Kazakhstan, southern Russia and Ukraine; the northern Caucasus, including modern day Azerbaijan; the Baltic part of Poland and part of Romania.

<sup>7</sup> U.S. Library of Congress, as quoted on "Country Studies" – the on-line library of books previously published by the Federal Research Division of the Library of Congress. Source URL: <http://countrystudies.us/mongolia/4.htm>

(Chinggis) *Khan*. Relying on military leadership and tactics using fast-moving cavalry, Genghis Khan and his immediate successors conquered large parts of Asia and European Russia and sent armies as far as Central Europe and South-East Asia. Khan's grandson, *Kublai Khan*, conquered China and established the Yuan dynasty (1279-1368 AD).

### **Middle Ages and Modern History**

The strength of the Mongolian Empire declined rapidly after the Mongol dynasty in China was overthrown in 1368. The *Manchus* – a tribal group which conquered China in 1644 – formed the Qing Dynasty whose administration policy then divided Mongolia into an Outer and Inner region separated by the Gobi Desert.

The country was brought under Manchu control in 1691 as Outer Mongolia when the *Khalkha Mongol* nobles swore an oath of allegiance to the Manchu emperor. In 1727, Russia and Manchu China concluded the Treaty of Khyakta, delimiting the border between China and Mongolia that exists in large part today.

Outer Mongolia was a Chinese province (1691-1911), an autonomous state under Russian protection (1912-19), and again a Chinese province (1919-21). In 1921, during the civil war in Russia and with the support of Bolshevik Soviet troops, Mongolian nationalists in Ulaanbaatar defeated the Chinese. On November 26th, 1924 (Mongolian Independence Day), Mongolians established the world's second communist regime of the time - the Mongolian People's Republic, and starting from 1925 the Mongolian People's Revolutionary Party (MPRP) was consolidated. Following Soviet military victories in the early 1920s and the occupation of the Mongolian capital *Urgoo* in July 1921, Russia became the major source of outside influence on Mongolia.

During World War II, the Soviet-Mongolian army defeated Japanese forces that had invaded eastern Mongolia in the summer of 1939, and a truce was signed setting up a commission to define the Mongolian-Manchurian border in the autumn of that year. Following the war, the Soviet Union reasserted its influence in Mongolia.

Mongolia became a member of the United Nations in October 1961.<sup>8</sup> In 1962, Mongolia joined the Soviet-sponsored *Council for Mutual Economic Assistance* (Comecon<sup>9</sup>). After the Fifteenth Party Congress had approved new economic plans in June 1966, Mongolia continued to expand its industrial sector. Economic problems, however, persisted coupled with extreme weather conditions, in 1967, for example, blizzards caused a severe loss of livestock.

Planned increases in agricultural and industrial production did not materialize, and the lack of raw materials continued to hamper even light industry. Some economic progress was achieved between 1971 and 1974, with some Soviet and Comecon aid, a period during which gross industrial production rose by nearly 45%. By the mid-1970s, direct business and other collaboration links had been established between corresponding Mongolian and Soviet ministries, departments, research institutes and industries, and regional cooperation ties were also set up between neighbouring Mongolian *aimags* and Soviet *oblasts* (sub-regions).<sup>10</sup>

Despite the long-standing ties to the Soviet Union, in 1989 Mongolia moved away from the communist system through a gradual democratic movement. The beginning of this period was marked by the Soviet Union's introduction of *perestroika* and *glasnost* which also led to tentative reforms in Mongolia. The initial reforms began at the state level in 1986 with a restructuring of economic policies and reforms of state bureaucracy.

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<sup>8</sup> *Ibid.* Source URL: <http://www.state.gov/r/pa/ei/bgn/2779.htm#history> .

<sup>9</sup> Also abbreviated *CEMA* and *CMEA*, the organisation was established in 1949 to promote economic cooperation among socialist bloc countries and was headquartered in Moscow. Its members as of 1989 included the Soviet Union, Bulgaria, Cuba, Czechoslovakia, German Democratic Republic (East Germany), Hungary, Poland, Mongolia, Romania, and Vietnam. Source: *Library of U.S. Congress, Federal Research Division, Country Studies – Mongolia*.

<sup>10</sup> The Library of U.S. Congress, Country Studies, Mongolia History, Socialist Construction under Tsedenbal, 1952-84. Source: [http://www.workmall.com/wfb2001/mongolia/mongolia\\_history\\_socialist\\_construction\\_under\\_tsedenbal\\_1952\\_84.html](http://www.workmall.com/wfb2001/mongolia/mongolia_history_socialist_construction_under_tsedenbal_1952_84.html)

## **Current Political System**

Mongolia separated from the Soviet Union by means of the peaceful Democratic Revolution in 1990, which was followed by the introduction of a multi-party system and a market economy. A new constitution was proclaimed in 1992, and the "People's Republic" was dropped from the country's name. The transition to a market economy witnessed high inflation and food shortages through the 1990s.

Since 1990, Mongolia has advanced rapidly to implement deregulation, privatization, and market-liberalization measures. At present, Mongolia continues to build a democratic and free market economy. An empowered civil society is also contributing to improved governance, transparency and accountability. The intensification of mining activities has created opportunities for industry, government and civil society to collaborate in natural resources policy-making and decision-making.<sup>11</sup>

Mongolia's current political system comprises a combined parliamentary/presidential democratic republic. Executive power is divided between a President<sup>12</sup> (elected through popular election), and a Prime Minister<sup>13</sup> who nominates the cabinet. The legislative system hinges on the State Great *Khural* (the parliament), and the judicial branch is represented by the Supreme Court and the Constitutional Court (that is empowered to supervise the implementation of the country's Constitution). Mongolia accepts International Court of Justice jurisdiction. There were 17 registered political parties in 2010.<sup>14</sup> The Mongolian People's Revolutionary Party renamed itself the Mongolian People's Party in 2010.

## **1.2.4 Economic Development**

### **Economic Overview**

Economic activity in Mongolia has traditionally been based on herding and agriculture. The country also holds copper, gold, coal, molybdenum, fluor spar, uranium, tin, and tungsten deposits, which now account for a large part of foreign direct investment and government revenues. The country's labour force totalled 1,068 million in 2008 with livestock herding still forming the mainstay of the economy.<sup>15</sup> Around 35% of Mongolia's workforce is dependent on herding for a substantial part of their livelihoods and about 63% of rural household assets are livestock.<sup>16</sup>

### **Economic Indicators**

The 2010 Global Human Development Report<sup>17</sup> indicates that Mongolia's international ranking in terms of Human Development Index (HDI) was 100 out of 169 countries.<sup>18</sup> Mongolia's relatively low global ranking in the Human Development Index is primarily due to its low per capita GDP.<sup>19</sup>

In 2008, Mongolian per capita GDP was US\$1,991 and Gross National Income (GNI) per capita was \$3,619. In the last decade, real income per capita in Mongolia has more than doubled, but still remains about one-tenth of the global average. The percentage of population living under the national poverty line

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<sup>11</sup> Rebecca Darling, Asia Foundation, Mongolia: "Developing a Responsible Minerals Sector that Benefits All Mongolians: A Multi-Stakeholder Approach". International Conference: Contemporary Mongolia - Transitions, Development and Social Transformations. November 14-17, 2008, Vancouver. Source: <http://www.iar.ubc.ca/programmes/innerasia/contemporarymongoliaconferencenov2008/conferenceabstracts.aspx>

<sup>12</sup> The incumbent President of Mongolia – Mr. Tsakhiagiin Elbegdorj – was elected on May 24, 2009 and sworn in on June 18, 2009. <http://www.president.mn/>; the next elections are due June 2011.

<sup>13</sup> The current Prime Minister is Mr. Sükhbaataryn Batbold, also the Chairman of Mongolian People's Party (MPP).

<sup>14</sup> The U.S. Department of State, Bureau of East Asian and Pacific Affairs. Mongolia – Government and Political Conditions. Source URL: <http://www.state.gov/r/pa/ei/bgn/2779.htm#gov>

<sup>15</sup> 2008 data. Central Intelligence Agency, The World Factbook: Mongolia. Source URL: [www.cia.gov](http://www.cia.gov)

<sup>16</sup> Source URL: <http://blogs.worldbank.org/eastasiapacific/dzud-a-slow-natural-disaster-kills-livestock-and-livelihoods-in-mongolia>

<sup>17</sup> Human Development Report, 2010. United Nations Development Programme.

<sup>18</sup> 168 UN member countries plus Hong Kong Special Administrative Region of China.

<sup>19</sup> Gross Domestic Product: A measure of the total output of a country that takes the gross domestic product (GDP) and divides it by the number of people in the country.

was reported at 36% in 2008.<sup>20</sup> Distance from markets, lack of infrastructure, limited opportunities to access education, healthcare and information, and the resulting unavailability of jobs all have negative impacts on rural living standards. *Table 1.1* illustrates GDP change from 1992-2009 (as reported) together with projections to 2015.

**Table 1.1: Real GDP in Mongolia, Annual per cent change**

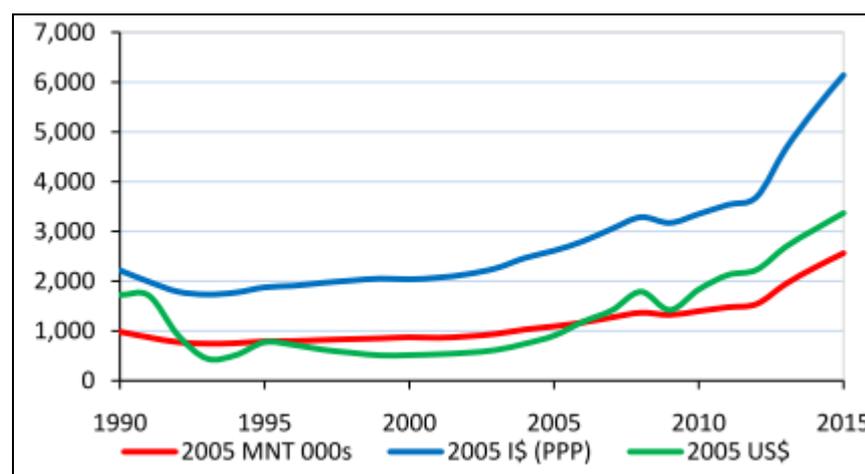
Average 1992-2001	2002	2003	2004	2005	2006	2007	2008	2009	Projections		
									2010	2011	2015
1.2	4.7	7.0	10.6	7.3	8.6	10.2	8.9	-1.6	8.5	7.0	12.8

Source: IMF 2010<sup>21</sup>

Mongolia's economic performance has been strong since the early 2000s (with the exception of a marked dip in 2009), with real GDP growing at nearly 7% on average to 2008 (see *Figure 1.1*). In 2010, Mongolia's GDP was generated from the following sectors<sup>22</sup>:

- Agriculture: 21.2%;
- Industry: 29.5%; and
- Services: 49.3%.

**Figure 1.1: Mongolian Annual Real GDP per person**



\* I\$ in PPP terms is 'international dollar' denomination<sup>23</sup>

Source<sup>24</sup>: IMF: *World economic outlook 2010* and World Bank: *World development indicators & global development finance database*. Figures from 2010 are projections.

The recent global crisis of 2008-2009 had a significant impact on the Mongolian economy, with the country's GDP falling into negative growth (-1.6%) in 2009. Mongolia was affected by the global financial crisis transmitted through the collapse in commodity prices. The country's economic downturn was a

<sup>20</sup> Human Development Report, 2010. United Nations Development Programme.

<sup>21</sup> International Monetary Fund. *World Economic Outlook: Recovery, Risk and Rebalancing*, October 2010

<sup>22</sup> 2009 estimate. Central Intelligence Agency, *The World Factbook: Mongolia*. Source URL: [www.cia.gov](http://www.cia.gov)

<sup>23</sup> The "International dollar" is a hypothetical currency unit that has the same purchasing power as the U.S. dollar has in the United States at a given point in time. It shows how much a local currency unit is worth within the country's borders. Conversions to international dollars are calculated using purchasing power parities (PPP). It is used for - namely gross domestic product (GDP) - comparisons both between countries and over time.

<sup>24</sup> As quoted in "The development of the Oyu Tolgoi copper mine: an assessment of the macroeconomic consequences for Mongolia", School of Economic Studies, National University of Mongolia / BAEconomics, February 2011.

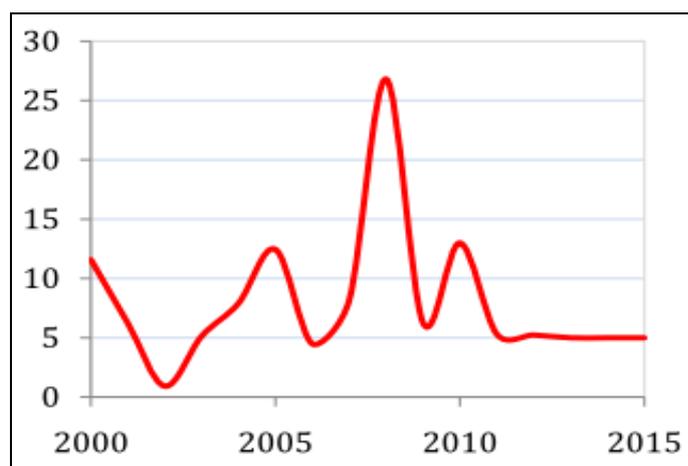
result of the combination of falling prices and a recession in the economies of its major trading partners, and particularly that of China. The slump in copper prices and trade affected Mongolia harder than the other major copper producers because of the country's strong dependence on the commodity. The recent rebound in commodity prices contributed significantly to economic recovery. Mongolia's medium-term growth outlook will be determined by a combination of the large mining investments in Oyu Tolgoi and Tavan Tolgoi together with its macroeconomic policy (see *Chapter C7: Economic Impacts*).<sup>25</sup>

Prompt policy response measures instigated by the Mongolian authorities, coupled with financial support from the international institutions and donor countries as well as a rising trend in copper prices on the world market, have eventually yielded a viable prospect for future growth of the country's economy. In 2010, GDP growth was projected to reach 7.5%, primarily thanks to the increase in copper prices and investment inflows.<sup>26</sup>

Mongolian national currency is *tögrög* (Tugrug, coded as MNT). Inflation has been one of the most consistent concerns of the Mongolian economy after commencing market-based reforms in the early 1990s with annual inflation averaging 117% between 1991 and 1997. Since 1998 however, inflation has been much lower with an annual average of only 8.9% to 2009 (see *Figure 1.2*). Although the inflation rate was not particularly high during the boom years and authorities are tolerant of inflation in the range of 10%, the economy remains vulnerable to inflationary pressures<sup>27</sup>.

Mongolia is still undergoing major economic changes as the economy stabilises after the recent global economic crisis, and per capita GDP should rise as Mongolia begins to receive significant economic benefits from increased foreign direct investment – principally into the minerals sector.

**Figure 1.2: Annual Inflation in Mongolia, Percent change**



Source: IMF: *World economic outlook 2010*, and Bank of Mongolia 2011. Figures from 2011 are projections.

Mongolia has extensive and diverse mineral wealth and inward investment from mining projects (such as the Ukhaa Khudag project<sup>28</sup> and the Tavan Tolgoi project<sup>29</sup> in Tsogttsetsii *soum*) is already having a

<sup>25</sup> "The development of the Oyu Tolgoi copper mine: an assessment of the macroeconomic consequences for Mongolia", School of Economic Studies, National University of Mongolia/ BAEconomics, 2011.

<sup>26</sup> Mongolia: Banking Sector/Discussion Paper No. 1004e for Economic Research Institute for Northeast Asia (ERINA). By Tsolmon Erdene, Supervision Department, Bank of Mongolia. December 2010: Niigata, Japan.

<sup>27</sup> "The development of the Oyu Tolgoi copper mine: an assessment of the macroeconomic consequences for Mongolia", School of Economic Studies/ BAEconomics, 2011.

<sup>28</sup> Ukhaakhudag Coal Mine is currently operated by Leighton Asia for the mine's owner Energy Resources LLC. Mining commenced in March 2009 and is expected to finish in December 2014. The contract value is US\$1.04 billion (as at 31/12/2010). The open cut mine sits adjacent to Tavan Tolgoi in the South Gobi.

Source URL: [http://www.leighton.com.au/about\\_us/projects/ukhaakhudag\\_coal\\_mine.html](http://www.leighton.com.au/about_us/projects/ukhaakhudag_coal_mine.html)

<sup>29</sup> Tavan Tolgoi is the biggest coal deposit in Mongolia, and is one of the 10 biggest deposits in the World. The coalmine reserves are 6 billion tons of coal, of which 2 billion are coking coal. The coalmine is located in Tsogttsetsii *soum*. Source URL: <http://tavantolgoi.mn/>

significant effect on local and regional economic development in southern Mongolia. Both the formal mining sector and informal sector (artisanal mining) play an important part in the Mongolian economy (further details are provided in *Chapter B9: Employment and Livelihoods*).

The primary growth drivers for 2011 will be the US\$2.3bn capital budget (over one-third of Mongolia's GDP in 2010) allocated by Ivanhoe Mines and Rio Tinto for the Oyu Tolgoi Project, strong and growing investments across the mining sector, the substantial increase in government expenditures, the positive outlook for commodity prices, rising export values driven by strong Chinese demand and growth in personal income underpinned by inflows of foreign capital and the expansion of government social payments.

## 1.2.5 Mining Contribution

### *Mining Sector*

The Mongolian mining industry plays a major role in the country's economy, especially in the total output of the industrial sector. For the last 6-7 years the mining sector has emerged as a main driver of economic growth. The industry's share in the total GDP more than tripled in 5 years, increasing from 10% in 2002 to 33% in 2007. During the period preceding 2008, world prices for metals and minerals reached historic peaks. Similarly to many other resource-rich economies, Mongolia adjusted its tax and mining regulations with the aim to increase public revenue over the short-term.

Companies running mining and exploration businesses in Mongolia make substantial contributions to the economy by paying over 20 types of taxes, fees and charges to the state and local budgets. 3.1 billion Mongolian MNT in 2002 rising to 19.2 billion MNT in 2005 were paid to the state budget in the form of exploration and operation licence fees. Mining and exploration companies paid over 270 billion MNT, which accounted for nearly 30% of the total state budget revenue, as income taxes (62 billion MNT), royalties (24 billion) and land and water use fees (7.2 billion MNT) and other taxes, fees and charges. As of 2007, the contribution of the mining and mineral sector to the state budget exceeded 40%.<sup>30</sup> As of October 2008, Mongolia's mining and minerals sector was generating more than three quarters of its total export revenues.

The mining sector and the associated rise in commodity prices together with import demand from China over the period of 2004-08 were key factors in determining recent growth in the Mongolian economy. The sector was responsible for providing 43% of fiscal revenues in 2008 and 85% of exports in 2009.

With its annual production averaging 130 thousand tonnes since 1994 (see *Table 1.2*), copper remains one of the critical mineral resources for the Mongolian economy. Since mid-1970s Erdenet – the Mongolian-Russian joint venture producing copper concentrate – has been the main economic driver, contributing almost a quarter of the total industrial output. The Oyu Tolgoi Project will be the country's largest copper producer when it moves into production.

**Table 1.2: Copper Mining Industry Performance, 2005-2009**

	2005	2006	2007	2008	2009
Copper production, (thousand tonnes)	127	130	130	130	127
Copper export, 2005 US\$ Bn	326	615	764	N/A	N/A
Share of mineral products in exports, %	74	75	79	84	N/A

Source: "The development of the Oyu Tolgoi copper mine: an assessment of the macroeconomic consequences for Mongolia", School of Economic Studies, National University of Mongolia/ BAEconomics, 2011.

Over the past 18 years Mongolia's **gold** mining sector has seen significant growth, experiencing almost a thirty-fold increase in production. In addition to the significant contribution of the Gold Programme launched in mid-1990s<sup>31</sup>, the sector saw a big leap forward in 2004. Almost all of this increase was a

<sup>30</sup>Source: Mongolian National Mining Association. Source URL: [http://www.miningmongolia.mn/en/index.php?option=com\\_content&task=view&id=20&Itemid=38](http://www.miningmongolia.mn/en/index.php?option=com_content&task=view&id=20&Itemid=38) .

<sup>31</sup> Within the framework of the "Gold Programme", which was initiated by the first president of Mongolia and commenced in 1992, the state budget revenue increased year by year and reached 55.1 billion Tugrugs in 2006. As a result of the Programme, the

result of Centerra's Boroo gold mine, which produced 7.5 tonnes of gold after launching commercial operations in March, 2004. Gold production, however, started to drop since 2006 after the Parliament amended the Minerals Law and adopted a Law on Gold and Copper Windfall Profits Tax.<sup>32</sup>

**Coal** is a prime commodity source for power generation in Mongolia. Mongolia possesses over 300 coal deposits of which 200 are exploited as open pit mines, producing 7.8 million tonnes in 2006. Coal extraction has been steadily growing over the last years, and is likely to increase to a greater extent in the near future thanks to high coal prices coupled with increasing demand for energy in China. Coal is expected to become a major mineral when production from the Tavan Tolgoi coal mine commences.

**Fluorspar** is predominantly produced by the mines of "Mongolrostsvetmet", a Mongolian-Russian joint venture. The output is exported to Russia and Ukraine. Emergence of small fluorspar producers contributed to the increase of metallurgical fluorspar, which diversifies export destinations onto China, South Korea and other countries. In 2007 Mongolia exported over 360 thousand tons of fluorspar.<sup>33</sup>

### **Oyu Tolgoi Project**

Oyu Tolgoi has emerged as one of the largest and highest-grade copper-gold deposits in the world. Terms for proceeding with an Investment Agreement (IA) for Oyu Tolgoi were agreed by Mongolia's Cabinet, and the proposed Agreement was subsequently sent for a review by the State Great *Khural* on 19 February 2009. On October 6, 2009, the IA was signed between the Mongolian Government and Ivanhoe Mines Mongolia Inc (now Oyu Tolgoi), which holds the Oyu Tolgoi mining licences and operates under the framework of parental companies Ivanhoe Mines Limited and Rio Tinto International Holdings Limited. The Agreement covers the construction and operation of the Oyu Tolgoi copper-gold mining complex. The overall capital expenditure required over the life of the mine is estimated to exceed US\$18.6 billion.<sup>34</sup> Oyu Tolgoi has an estimated mineral reserve (proven + probable) of 1,393 Mt of ore with a copper and gold grade of 0.93% and 0.37 g/t respectively.<sup>35</sup> Total production is expected to reach almost 24 million tonnes of copper, 874 tonnes of gold, and a further 5,589 tonnes of silver during the mine life of 59 years<sup>36</sup> (see *Figure 1.3* and *Figure 1.4*). Full production planned is 450,000 tonnes of copper per year with significant gold by-products.

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number of people working in this industry reached 5,600 in 2008. Source URL: *Business Mongolia* <http://www.business-mongolia.com/mongolia/2008/03/03/will-renew-%e2%80%9cgold%e2%80%9d-programme/>

<sup>32</sup> Source: Mongolian National Mining Association. URL: [http://www.miningmongolia.mn/en/index.php?option=com\\_content&task=view&id=20&Itemid=38](http://www.miningmongolia.mn/en/index.php?option=com_content&task=view&id=20&Itemid=38)

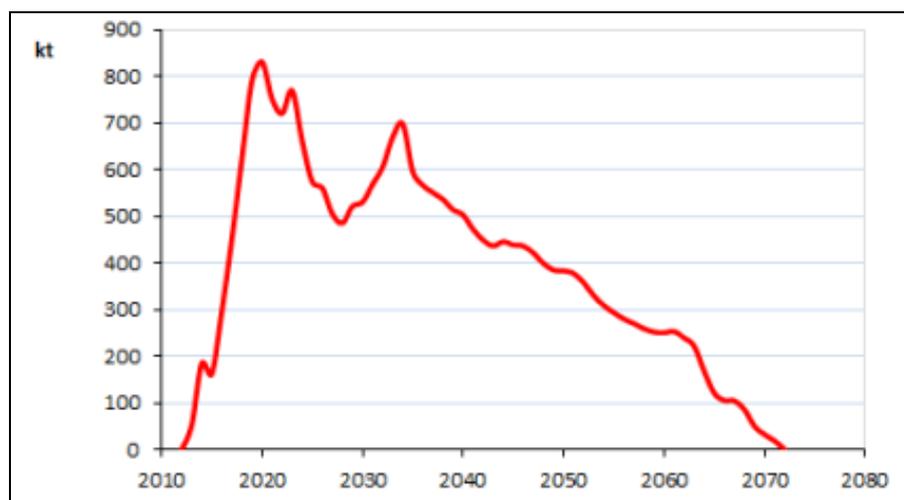
<sup>33</sup> *Ibid.*

<sup>34</sup> "The development of the Oyu Tolgoi copper mine: an assessment of the macroeconomic consequences for Mongolia", School of Economic Studies, National University of Mongolia/ BAEconomics, 2011.

<sup>35</sup> AMEC Minproc Limited. Oyu Tolgoi Project. Technical report for Ivanhoe Mines Limited, Perth: 2010

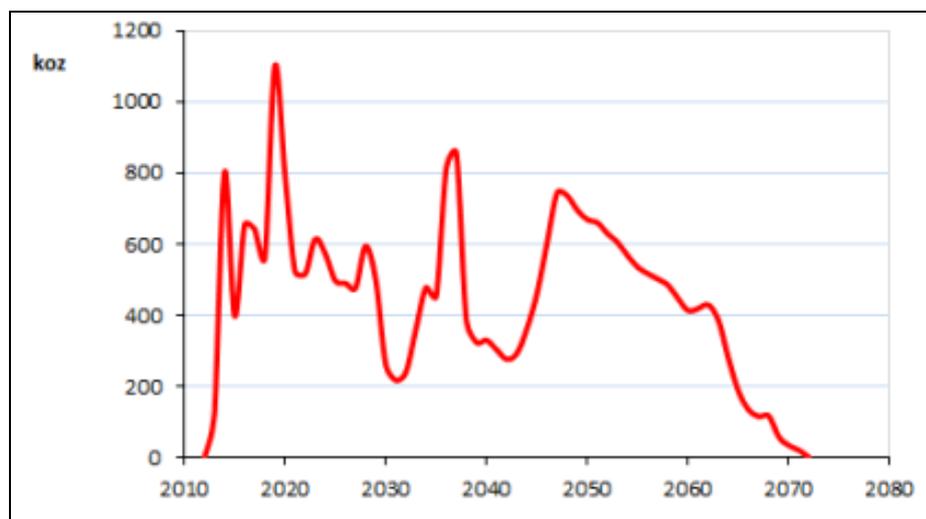
<sup>36</sup> Note that this figure has been taken from a macroeconomic study<sup>27</sup>, which took a longer-term view of project economics than the current defined 27 year mine life

**Figure 1.3: Projections of Oyu Tolgoi Copper Concentrate Production, 2013-72**



Source: Oyu Tolgoi estimates.

**Figure 1.4: Projections of Oyu Tolgoi Gold Production, 2013-72**



Source: Oyu Tolgoi estimates.

### **Economic Outlook**

Mongolia has staged an impressive recovery from the steep recession of late 2008 and early 2009. Moreover, the economic recovery is becoming broad-based. Strong demand for copper and coal from China are fuelling the recovery, and are also helping to substantially improve the external balance of trade. The exception to this trend is the agriculture sector, due to the devastating impact of the *dzud* during the winter months of 2009-10<sup>37</sup>.

Consumer prices show a rise in the headline inflation to 11.1% in August 2010. The recent export ban in Russia and weather disasters elsewhere have led to resurgence in the international prices of grains, which are mostly imported by Mongolia. Secondly, the 30% wage and pension increase for public sector employees planned for October 2010 will help to keep demand-side inflation pressures strong.

Fiscal balances have improved strongly in step with mineral-related revenues. Mongolia's public finances are improving: on a 12 month rolling basis, the fiscal deficit fell to just 0.4 % of GDP, down from 10.6 % in August 2009. In large part this recovery reflects the support to government revenues from buoyant

<sup>37</sup> Mongolia Quarterly Economic Update – October 2010. World Bank.

commodity prices. The bulk of the increase in revenues was accounted for by the Windfall Profits Tax and domestic corporate and indirect tax revenues.

However, and as fiscal balances improved, pressures to increase spending also mounted. One round of cash transfers to redistribute the mining wealth has already taken place: MNT 70,000 per person in February 2010. This is being followed by another round of MNT 10,000 per person per month beginning in August 2010 and lasting until December 2010. In July 2010, Parliament approved Government proposed amendments to the original 2010 budget which envisaged a substantial increase in government expenditures. Parliament recently passed a Fiscal Stability Law, which forces 2011 revenues to be based on long-term copper and coal price trends, and starts setting the resulting savings aside in a stabilization fund.

Southern Mongolia, including the *aimags* where mining activity is concentrated, are poised to experience a boom in economic activity as a result of a range of factors including:

- Planned development of new mines at Tavan Tolgoi, Oyu Tolgoi and Tsagaan Suvarga;
- Expansion of existing mining operations at Naryn Suhayt and Oyu Tolgoi and at other locations;
- Development of associated power stations and transport (road, rail and air) infrastructure; and
- Strengthening of trade corridors with China through the border town at Zamyn-Uud in Dornogovi, and through crossing points of Gashuun Sukhait and Shivee Huren in Omnogovi, and Hangi in Dornogovi.

### 1.3 SOCIAL ADMINISTRATION, GOVERNANCE AND CIVIL INSTITUTIONS

#### ***National Administrative Division***

Mongolia's administrative structure is a complex system reflecting the history of nomadic culture, the vastness of the country and its sparse population. The highest administrative levels are the Ministries and State Departments. The second tier administration is at the level of the *aimag* government with further levels represented in the *soums*, *baghs* and *horoos* administrations, respectively.

Mongolia is divided into 21 *aimags*. Each *aimag* is further subdivided into *soums*. The Oyu Tolgoi Project sits within the Omnogovi *aimag* (also known in transliteration from Cyrillic as *Omnogovi*) – in the *soum* of Khanbogd. Khanbogd *soum* centre is located approximately 220 km from the *aimag* capital of Dalanzadgad and 42-km northeast of the Oyu Tolgoi Project, connected by a gravel road. The total population of Khanbogd *soum*, including rural areas, was estimated to be slightly over 3,500 persons in 2010<sup>38</sup> (see *Chapter B8: Population and Demographics*). Khanbogd *soum* centre is the nearest town to the Oyu Tolgoi Project.

*Figure 1.5* illustrates the administrative sub-divisions of Mongolia. *Figure 1.7* illustrates divisions by *soum*. *Bagh* boundaries are illustrated in *Chapter B10: Land Use*.

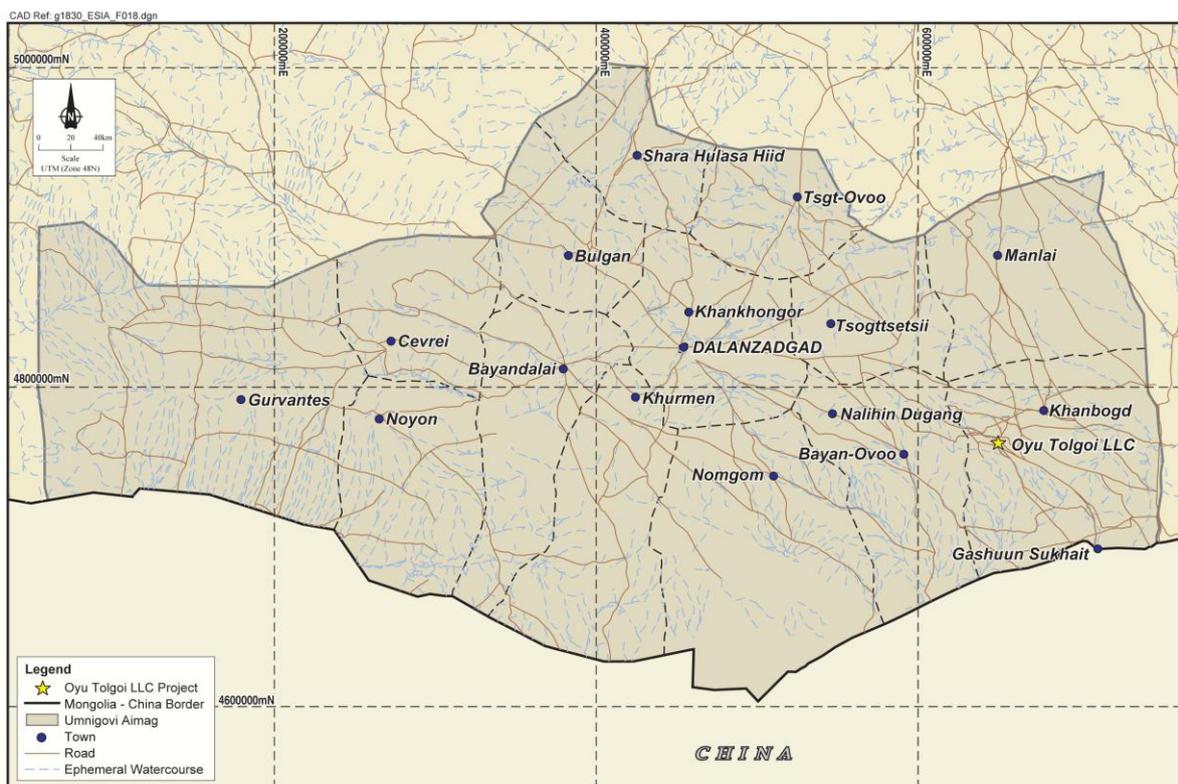
<sup>38</sup> According to the Khanbogd *soum* population database, 1,455 persons were registered as *soum* centre residents in 2010, with the total population of 3,522 in the entire *soum*. Verified through the 2010 Census (National Statistics Office).

**Figure 1.6: Administrative Division of Mongolia (Aimags)**



Source: Nations Online Project.

**Figure 1.7: Boundaries of Omnogovi Aimag and Constituent Sums**



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### **Governance and Civil Society Interaction**

Governance of administrative and territorial units in Mongolia is organised on the basis of a combination of both self-government and central government. Below the national Parliament level, the government structure in Mongolia involves an *aimag Khural* (Assembly, or the self-governing body) of Citizens' Representatives elected for a term of four years, and a *Soum Khural* of Citizens' Representatives at *soum* level. The *bagh* level is the lowest level of a local administrative unit. The self-governing body on a *bagh* level is a General Meeting of Citizens.

State power is exercised through the territories of *aimags*, *soums* and *baghs* by their respective governors. Governor candidates are nominated by the Khurals of respective administrative units. Governors of *aimags* and the capital city are appointed by the Prime Minister; soums and district governors – by the governors of *aimags* and the capital city; and governors of *baghs* are appointed by the governors of *soums* for a term of four years.<sup>39</sup>

The formal decision-making process at the local level involves discussion and agreement at *bagh Khurals*, which are community meetings led by the *bagh* Governor. There is a requirement to hold a *bagh Khural* once every quarter. The main issues discussed include pasture use and protection, water well digging and repairing, job creation, livelihoods, etc. The *bagh Khurals* experience difficulties in relation to limited budgets, and there are also problems for people to attend meetings because of the remoteness of locations relative to where herders live and work.<sup>40</sup> Informal decision-making, for example on family issues, household financing, use of water wells, pasture land, moving livestock etc, is normally taken through discussion and agreement between family and relatives.

### **Civil Society Organisations**

Alongside businesses, there are numerous social, economic, political, and cultural organisations in Omnogovi *aimag*. Such organisations are typically involved in issues related to women, youth, the elderly, students, children, the disabled, trade unions and environmental protection. Examples include the Mongolian Youth Association, the Women's Federation, the Children's Organisation and the Red Cross Society. Women's organisations are reportedly the most active and have branches in all *soums* in the Project Area. (*For more detailed information the organisations operating in the Project Area of Influence, please refer to Chapter A6: Community Consultation; additional information on local organisations is provided in the relevant baseline chapter*).

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<sup>39</sup> The Constitution of Mongolia, Administrative and Territorial Units of Mongolia and Their Governing Bodies (Articles 57-60), as quoted in Helpline Law: Source URL: [www.helpline.law.com/law/mongolia/constitution/constitution04.php](http://www.helpline.law.com/law/mongolia/constitution/constitution04.php)

<sup>40</sup> Evidenced through the CRSD consultation process.