

Development Bank of Mongolia (DBM) and its contribution to regional development: using mining as an engine of development

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Mongolia Overview

Large land per capita, abundant natural resources, well positioned for rapid economic expansion

Close Proximity to the Largest Global Resource Markets



- One of the fastest growing economies globally
- Large mineral resource base that can be leveraged for industrialization
- Attractive environment for FDI and trade
- Proven fiscal track record augmented by forward looking initiatives
- Strengthening financial sector

Source: World Bank, National Statistical Office of Mongolia

Mongolia's Key Advantages

1 LEADING LAND/ CAPITA

Territory: 1.6 million sq km
Population: 2.9 million

Relatively **YOUNG POPULATION** with a **HIGH LITERACY** rate among emerging economies

2 ABUNDANCE OF UNEXPLOITED NATURAL RESOURCES

Located close to some of the **LARGEST** global commodity **MARKETS**

3 FLOURISHING DEMOCRACY IN THE REGION

Tested with 7 **CONSECUTIVE SUCCESSFUL** democratic **ELECTIONS**

Macroeconomic Snapshot

USD mm	2009	2010	2011	2012	2013	2014Q1
Real GDP Growth	-1.3%	6.4%	17.5%	12.4%	11.7%	7.4%
Nominal GDP	4,552	6,729	7,998	10,478	11,079	2,106
Real GDP	2,723	3,327	3,516	3,972	3,718	646
GDP Per Capita	1,715	2,285	3,181	3,673	3,820	3820*
Inflation	4.2%	13.0%	8.9%	14.0%	12.5%	12.4%
Trade Balance	(252)	(378)	(1,781)	(2,354)	(2,082)	(9)
Export	1,885	2,899	4,817	4,384	4,272	987
Import	2,137	3,277	6,598	6,738	6,354	996

*As of 2013YE

Society: coherence thanks to universal education system



93% of
population are
mongols,
kazakhs 6%,
other ethnic
groups. 4 million
mongols live in
other countries



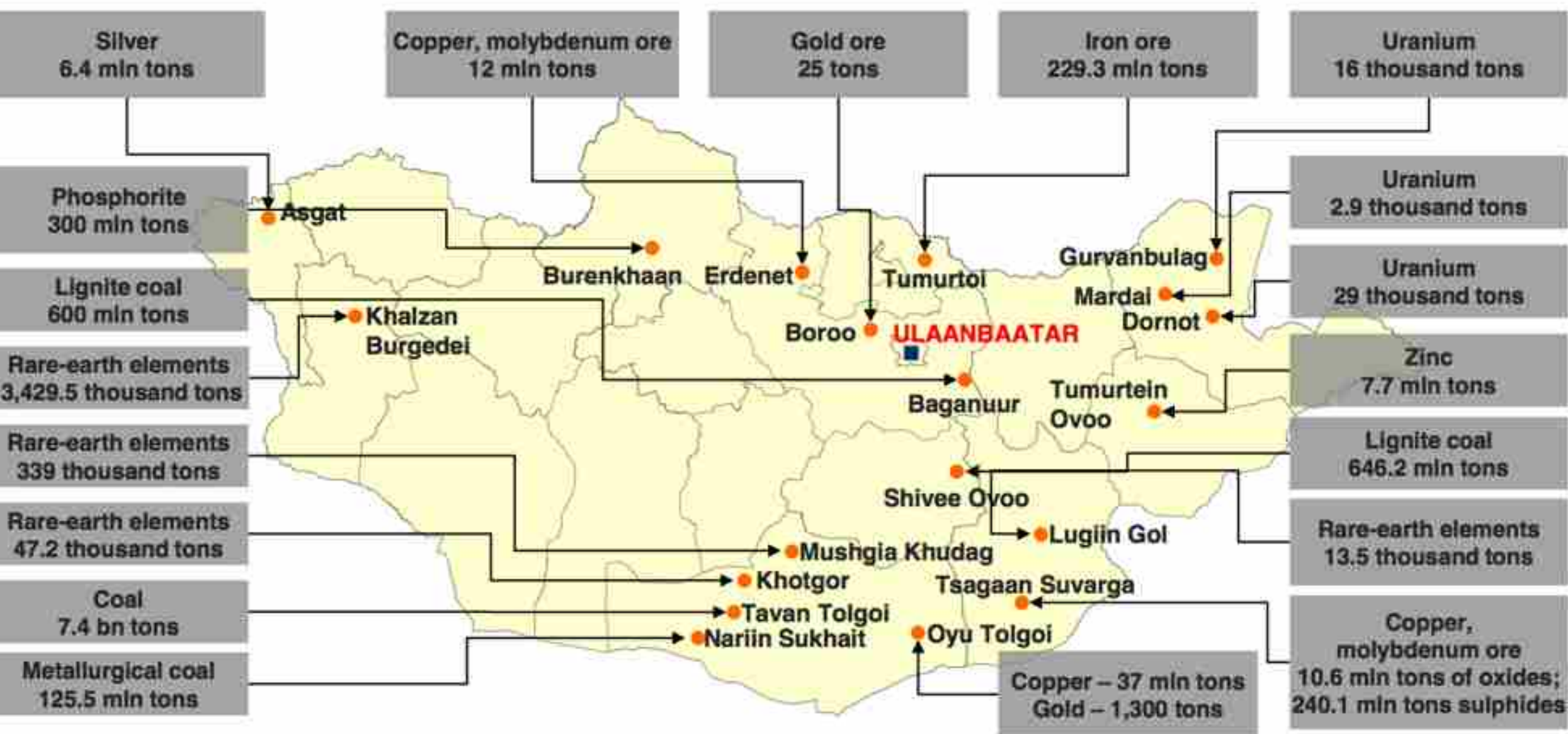
Key factors for growth: dynamic stability of democracy

- Stable yet dynamic political system
- Parliamentary republic since 1992, first in Central Asia,
- most recent parliament elections in 2016, next president's elections in 2017
- Consensus based decision making
- Coalitions (formal and informal)
- The Long term Sustainable Development Vision of Mongolia (2016): example of consensus building

Constitution 1992															
	1993	1996	1997	1998	2000	2001	2002	2004	2005	2006	2008	2009	2010	2012	2016
President	P.Ochirbat			N.Bagabandi			N.Bagabandi			N.Enkhbayar			Ts.Elbegdorj		
Government	MPP	DP				MPP			Coalitions						
Parliament	MPP 71/76	DP 50/76				MPP 72/76			no majority 37/76			MPP 45/76	DP Justice Coalition		

Natural Resource Base That Can be Leveraged for Industrialization (cont'd)

Up to 1.3 trillion dollars of potential assets



Mongolia has vast and diverse under developed mineral deposits, providing the economy with significant long-term upside potential

Some other reserves

- Oil: 332 million tonnes
- Coal bed methane gas: 3.2 billion m³
- Oil shale: 788 billion ton
- Uranium: 11 deposits, 75 thousand tonnes
- Rare earth/rare metals: 5 major locations, 246 deposits, 31 million ton (16.7% of global reserves)
- Many other types of natural resources and energy sources such as sun, wind, geothermal energy sources, etc

Strong cultural heritage: Mongolian nomads

- Mongolian nomads are one of main nomad civilizations in the world



Enter strong agriculture



70 million of livestock, including 3 million horses, 3.4 million cattle, 23 million sheep, 22 million goats

140 thousand private livestock farmer households

A leading world cashmere producer



- More than 30 companies
- Exports to many world destinations
- Italian design, Japanese technology, Mongolia products

Private farms

- Using modern technology as John Deere
- use about 380 thousands of hectares producing 470 thousands tons of grain, 250 thousand tons of potato, 100 thousand tons of vegetables and fully supply domestic market
- new technologies, 80% of tractors are modern
- Fruits, berries increasingly exported



High literacy rate

Table 5. Primary school enrolment, pupils in 1-5 grades, literacy rate

Indicator	1990	2000	2004	2007	2011	2015
11 Net enrolment ratio in primary education	97.5 ^a (1995)	95.0 ^a	91.4 ^a	92.7 ^a	91.5 ^a	100.0 ^a
12 Proportion of pupils starting grade 1 who reach grade 5	91.0 ^a	83.6 ^a	86.8 ^a	89.9 ^a	92.8 ^a	100.0 ^a
13 Literacy rate of 15-24 year-olds	99.0 ^a (1989)	97.7 ^a	97.7 ^a (2000)	97.7 (2000)	97.7 (2000)	100.0 ^a

Source: a. SGH Resolution #13, Approval of Mongolia's MDGs, 2008
b. NSO, MoE/C, 2008
c. Mongolia's population and housing census, 1989, 2000



60 universities and colleges

70 technical vocational training colleges

Hundred thousands educated overseas

Europe: Germany and UK

North America: US

Asia: Japan

Eastern Europe: Russia, Czech Republic

Australia

Real gender equality

Table 6. Sex ratio in secondary and tertiary education

Indicator	1990	2000	2004	2007	2011	2015
14 Ratio of girls to boys in primary education	1.03 ^a (1995)	1.01 ^a	0.98 ^a	0.97 ^a	0.97 ^a	1.0 ^a
15 Ratio of girls to boys in secondary education	1.33 ^a (1997)	1.2 ^a	1.03 ^a	1.09 ^a	1.08 ^a	1.0 ^a
16 Ratio of female to male students in tertiary education	1.56 ^a	1.72 ^a	1.53 ^a	1.57 ^a	1.54 ^a	1.0 ^a

Source: a. SGH Resolution #13, Approval of Mongolia MDGs, 2008
b. NSO, MECS, 2008



Diversification and innovations needs

- Heavy reliance on commodity prices - significant revenue volatility. - one function is to create **additional investment opportunities**
- The diversification of the narrow base of the economy requires **substantial investments in real sectors - real sector support**
- Poverty reduction in rural areas and regional integration require significant investments in **infrastructure**.
- Direct foreign investments in critical industries, particularly in non-mining heavy industries, are often constrained by uncertainty about **potential risks**.
- Underdeveloped domestic capital markets and **absence of medium to long term debt instruments constrain financial sector growth**.

Background needs

- Mongolia in 2008: limited financing options, high need for infrastructure and heavy industry
- Reliance only on budget
- Diversification and innovations cannot be solved by usual budget financing

Share of mining products in total export



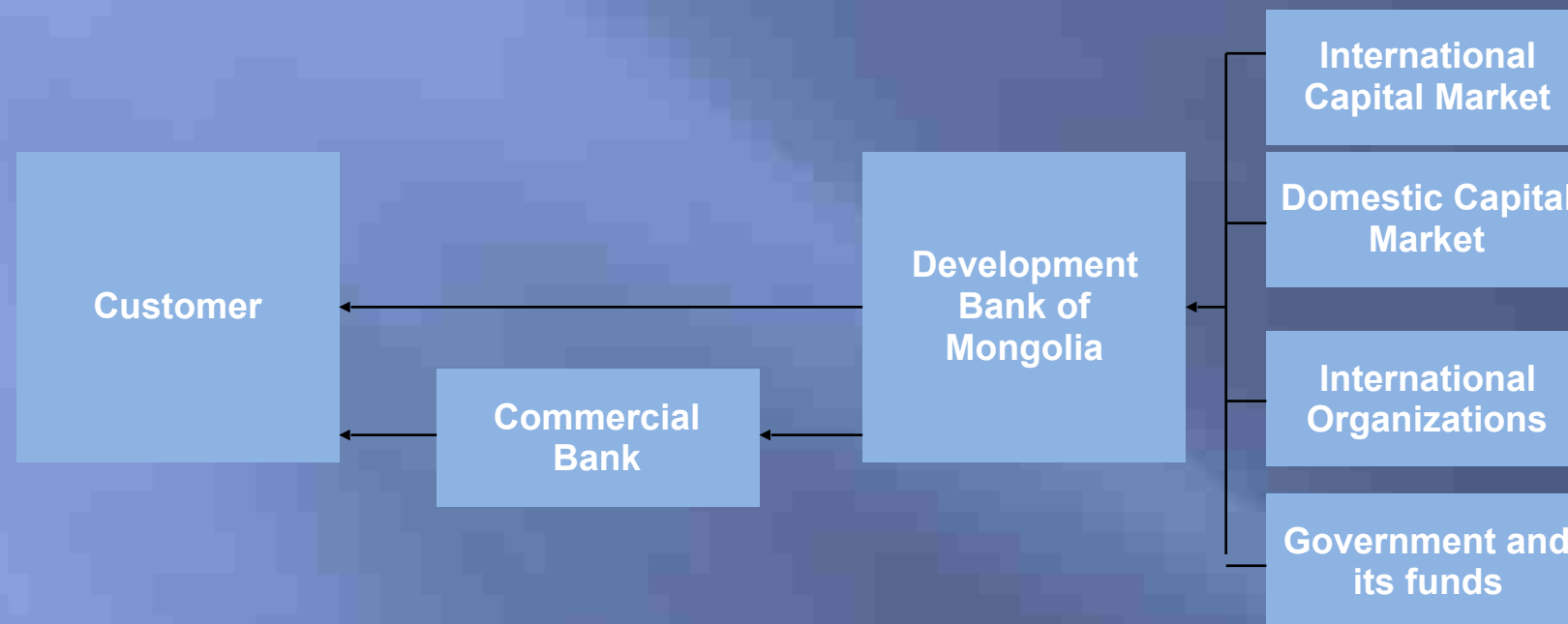
THE DEVELOPMENT BANK OF MONGOLIA: BACKGROUND

The creation of the Development Bank of Mongolia (DBM) under the Action Plan of the Government of Mongolia for 2008-2012 (clause 2.1.31) is vital for Mongolia's economic development

The DBM will address current challenges that Mongolia is facing and will provide **long term solutions** for a sustainable economic development with appropriate policies and actions on real economic sector's reform.

The vision of the Development Bank of Mongolia /hereinafter referred as DBM/ shall be to **finance Mongolia's priority economic sectors** promoting national economic competitiveness in a global arena.

**Figure1. Business Model of the Development Bank of Mongolia (2010):
use mining assets and revenue for transformation of economy**



Bank structure

Main assistance from
JICA (Development
Bank of Japan, JERI)

Assistance from
Germany KFW
(development
financing) and joint
international team with
Korea Development
Bank

First board of directors created in 2010
Capital infusion : initial 16 billion MNT, later 32
billion MNT (approximately 25 million dollars)

**Raised in total 0.580 billion US dollars in
DBM bonds, 1.5 billion dollars of sovereign
bonds, 0.3 billion dollars of Samurai bonds**










THE DEVELOPMENT BANK OF MONGOLIA

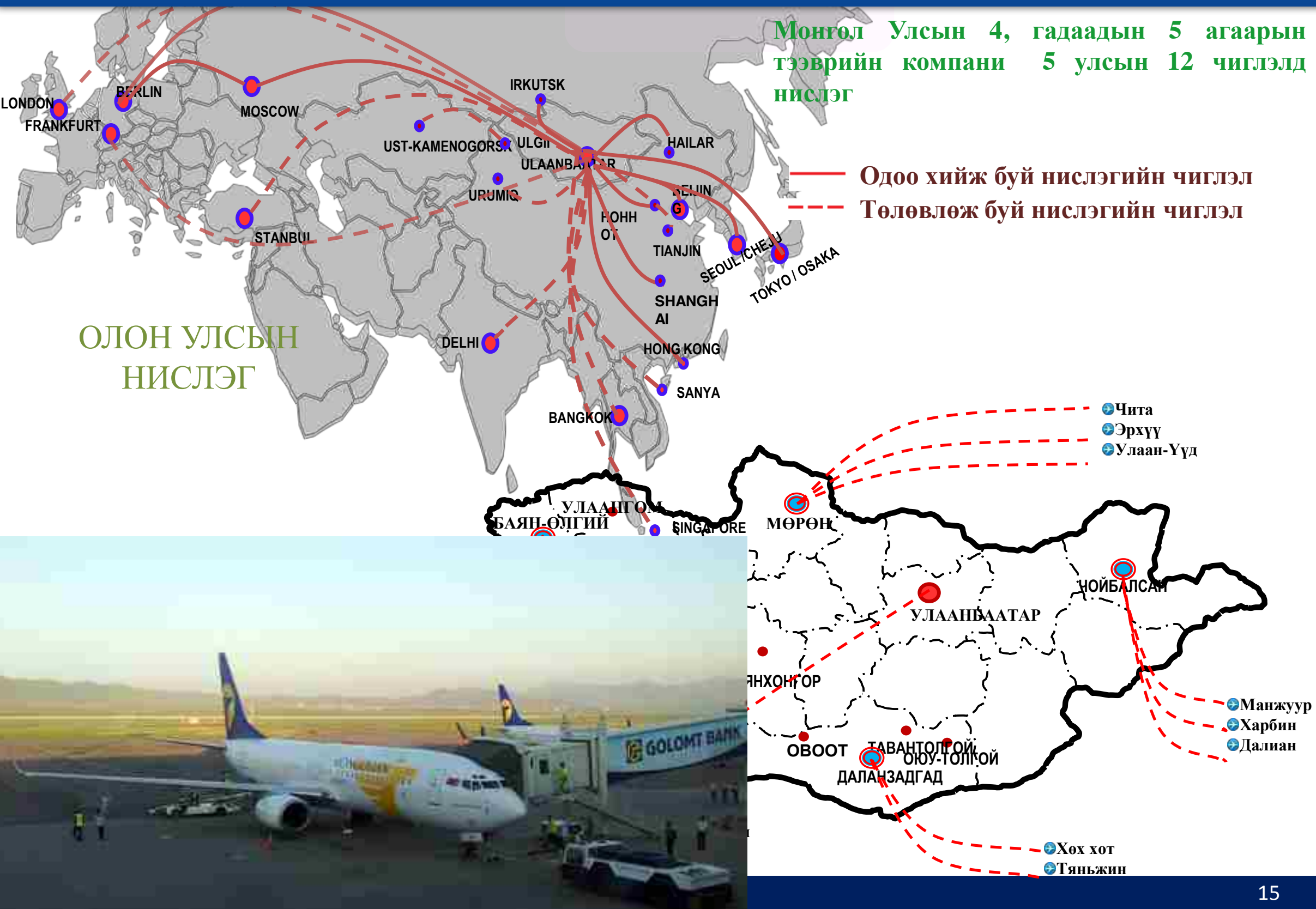


May , 2011

Key projects – Building for the Future

	Sectors	Description
	Mining	The Bank has provided USD200m for the major coking coal project, Erdenes Tavan Tolgoi. Another USD14m has been disbursed for a thermal coal producer and supplier to Ulaanbaatar city
	Auto road	The Bank has financed the construction work of 1,800 km highway
	Construction material	USD75.3m was disbursed to a major cement producer for an expansion of capacity from 0.4 million tons per annum (tpa) to 1 million tpa
	Energy	Provided USD105mm facility for Combined Heating & Power Plant # 4 and # 3 of Ulaanbaatar City for expansion of 100MWt and 50MWt respectively. Started an IPP project in Tavan Tolgoi, with a mezzanine facility
	Railway	Initial funding of USD55m was disbursed for funding of design and survey of 1,800 km 'New Railway' project, and construction work of TT-GS 243km rail is expected to commence with an additional USD200m funding
	Air transportation	The Bank has disbursed USD83.9m to MIAT Mongolian Airlines for the purchase of aircraft
	Engineering utility	USD16.5m has been disbursed to engineering utilities projects in Ulaanbaatar city, including clean & sewage water distribution systems

DBM: Financing of national airline carrier



Huge infrastructure needs: Mongolia's territory larger than France three times

НИЙТ СҮЛЖЭЭНИЙ УРТ 97740 КМ

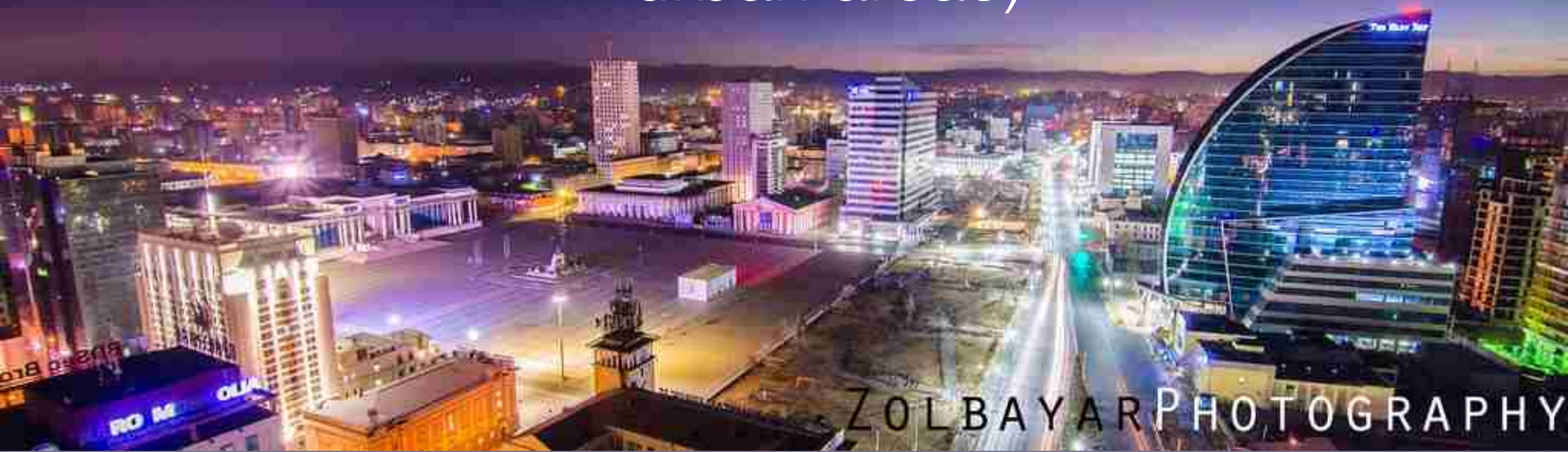


Infrastructure

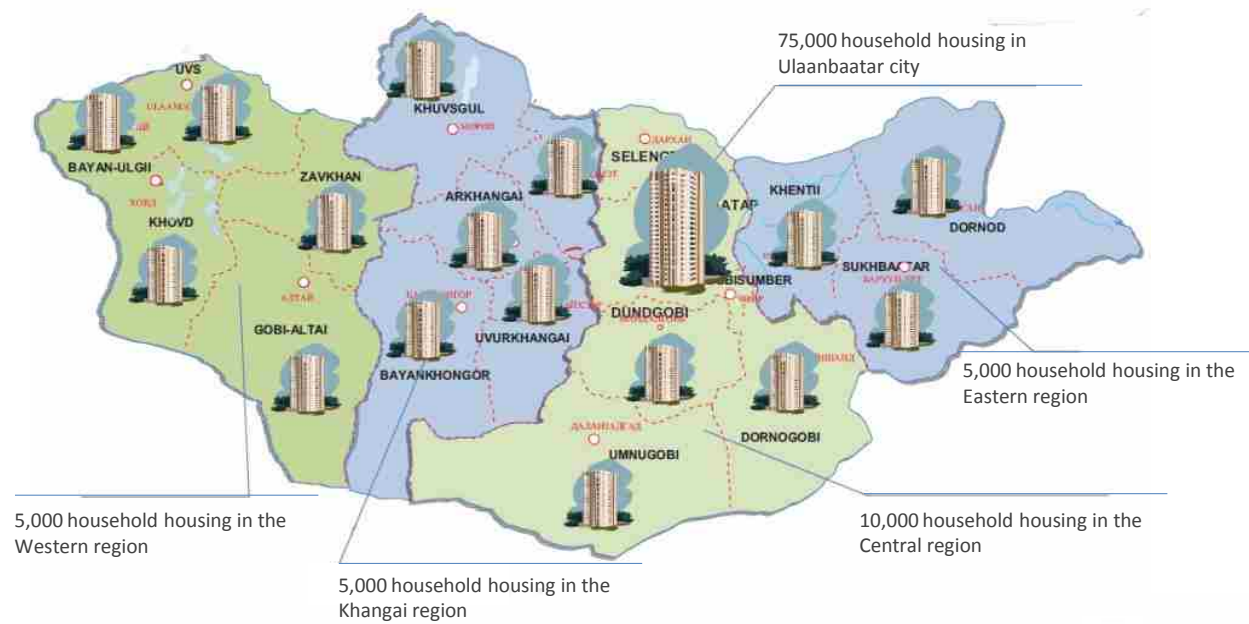




DBM supports urban development
(more than 60% of population lives in
urban areas)



Simultaneous expansion of urban infrastructure is to support the affordable housing program.



- Government of Mongolia considers housing and urban infrastructure to be a high priority area.
- In addition a mortgage program with 8% fixed rate with duration of 20 years has been approved by the Government of Mongolia in 2013, cutting interest rates almost in half.

Project Sponsor

Ministry of Constr
Development of M
Construction

Project Description

- 75,000 household
- 25,000 household centers

Project Amount

\$6.2 bln

- Engineering/Social Infrastructure Work
- Construction

\$2.5 bln

\$3.7 bln

Technology

Concrete, high-ris

Source: Former Ministry of Road, Transportation, Construction and Urban Development



Railways projects: DBM is solving the crucial bottleneck in national railways



Industry: construction materials

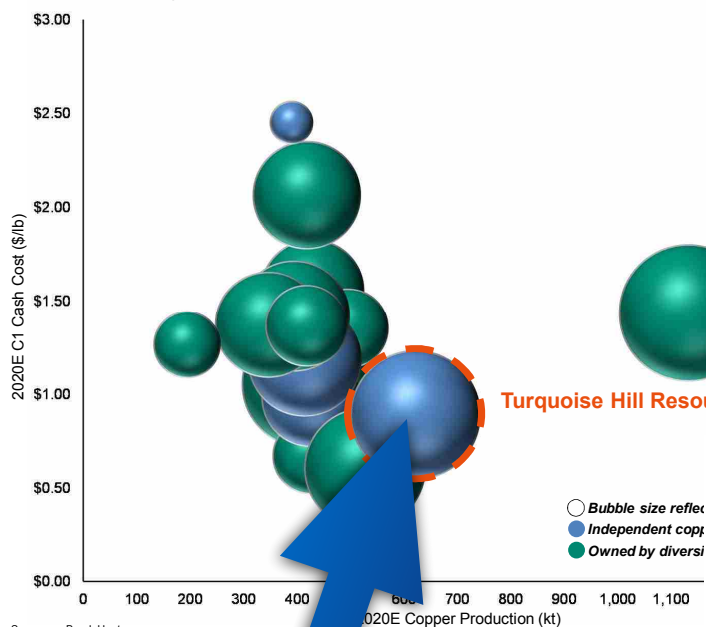
- Production of cement has increased 4 times since pre-DBM days
- now domestic needs are fully met by DBM financed domestic industrial projects
- Total capacity is about 4 million tonnes per annum (Austria, Switzerland)



One of top 10 world copper enrichment plants OT



Top 15 producing copper mines (2020)⁽¹⁾



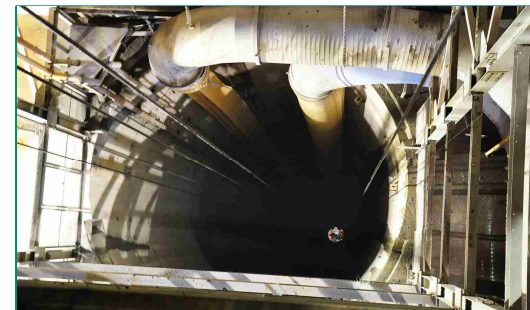
World largest 15 deposits of copper

Phase 1



Oyu Deposit:
✓ 0.5bt reserve
✓ 0.9bt M&I resource
✓ 1.2bt Inferred resource

Phase 2



- Hugo North Deposit :
✓ 0.5bt reserve
✓ 0.9bt M&I resource
✓ 1.2bt Inferred resource

Future phases



- Hugo North (Lift 2)
- Hugo South Deposit:
✓ 0.8bt Inferred resource
- Heruga Deposit:
✓ 2.0bt Inferred resource

OT



200 km of underground mines

FUTURE PHASE UNDERGROUND BLOCK-CAVE MINE

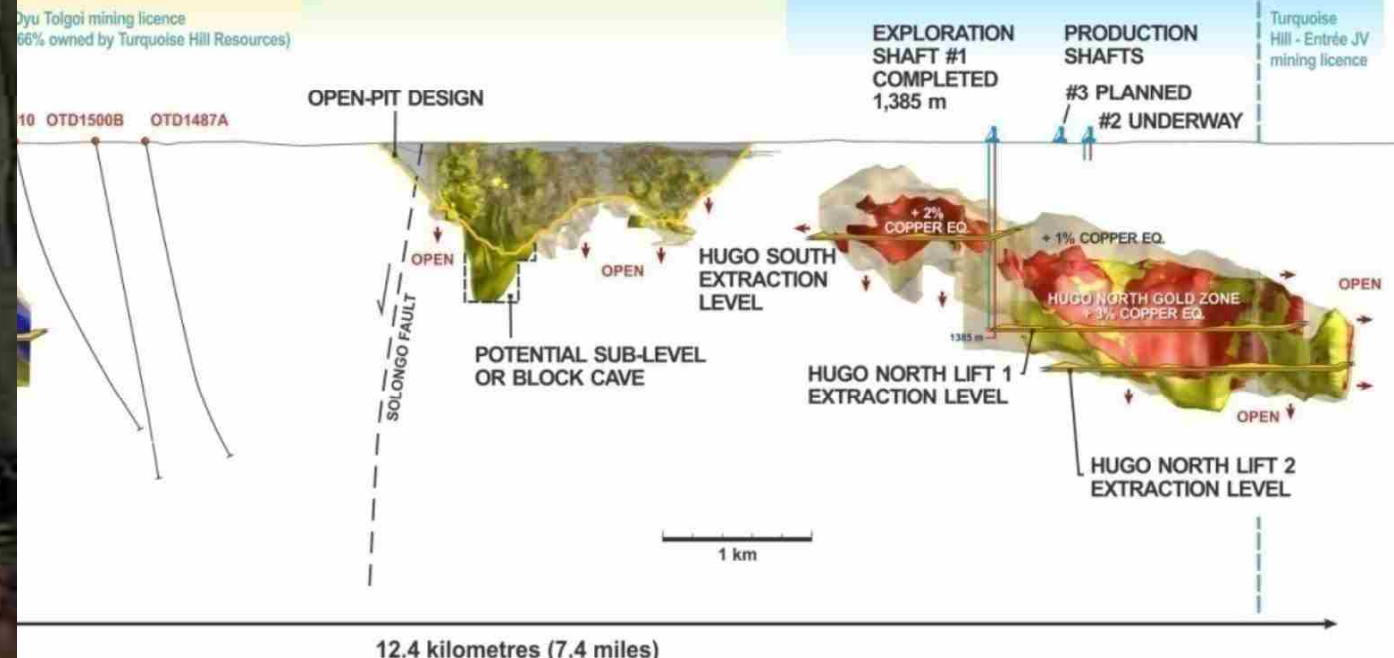
DEPOSIT

Oyu Tolgoi mining licence
(66% owned by Turquoise Hill Resources)

PHASE 1 OPEN-PIT MINE SOUTHERN OYU DEPOSITS

PHASE 2 UNDERGROUND BLOCK-CAVE MINE

HUGO DUMMETT DEPOSIT



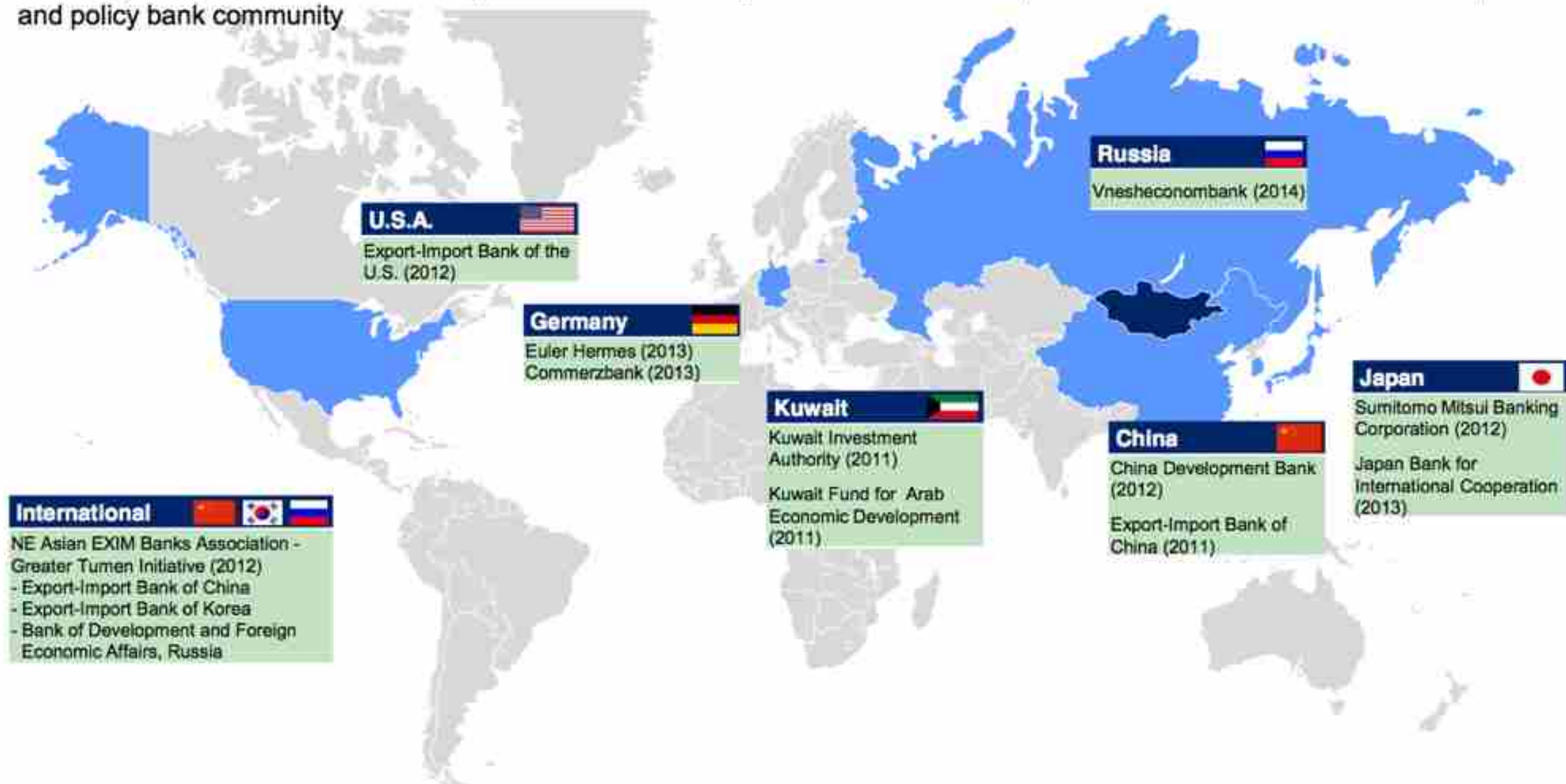
Tavantolgoi coal mine

- One of largest in the world
- coking coal deposit
- incoming power plant project with
- Marubeni, 1 billion dollar project
- DBM is financing railways
- in the area



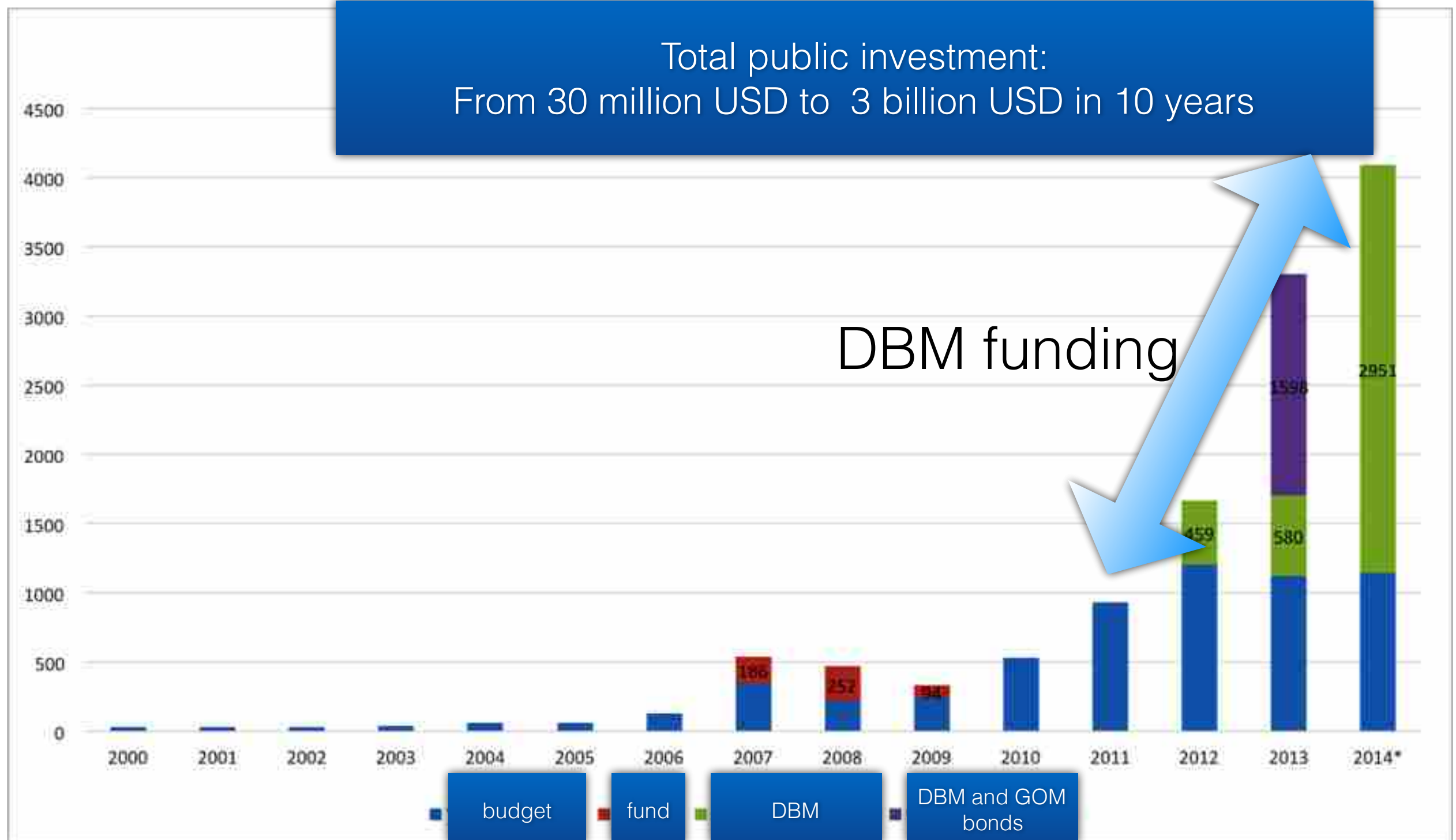
Increasing Connectivity with Foreign Governments

- ❖ DBM has signed a number of Memorandums of Understandings and Cooperation Agreements with various foreign and international developmental agencies and financial institutions, highlighting the Development Bank's additional value-add in promoting Mongolia's foreign economic relations
- ❖ These agreements also allow DBM to gain valuable knowledge on international best practices from the international development and policy bank community



Total Public investment

Total public investment:
From 30 million USD to 3 billion USD in 10 years



MONGOLIA'S SUSTAINABLE DEVELOPMENT VISION (SDV) 2016-2030



Ratified in February 2016

Legally binding by Development Planning Law (approved in 2015, traced back to JICA Midterm Development Strategy and PIP project, 1996-1999)

SDV is legally binding as a platform for elections platforms for all participating parties in the Parliament elections 2016

The new government formed in 2016 and its 4 year midterm program is also based on the SDV

Mining is very important for SDV and its planned further diversification
DBM is a major contributor to the strategy

Mongolia - Wind Resource Map

Wind Power Classification

Resource Potential	Wind Speed (m/s)	Annual Energy (kWh/m ²)	Class
Marginal	1.0 - 2.0	100 - 200	1
Moderate	2.0 - 3.0	200 - 400	2
Good	3.0 - 4.0	400 - 600	3
Very Good	4.0 - 5.0	600 - 800	4
Excellent	5.0 - 6.0	800 - 1000	5

Scale: 0 to 1000 Kilometers

U.S. Department of Energy
Bureau of Reclamation & Energy Research

CHSR
Climate Change Research Center

Map 2011

This quantity constitutes about one-quarter of global electricity demand.

GE, Newcom project,
110 million dollars

Softbank, Newcom plan additional renewable energy stations in Gobi



Tourism: new international airport of Ulaanbaatar

new international airport of UB is being built by Mitsubishi, Japan as a development loan from Japan



2016-2017 completion time
1.5-2 million passenger capacity
Currently on construction stage

Chile: US-Chile free trade agreement was a key

For Mongolia: Japan: free trade agreement
(Economic Partnership Agreement) 2014, ratified in
2015, in full force since 2016



- Shin Mongol Technical Institute (Japan)
- Japanese technical schools: Kohsen network (TVE)
- Japan-financed 1000 engineers program for Mongolia's industry
- 2000 students are studying in Japan;
- Leading Japanese banks opened their representative offices in Ulaanbaatar and JICA provided TSL loans to hundreds of Mongolian SME projects
- Japanese experts are consulting Mongolia on mining and heavy industry, public private partnership PPP, development financing and Samurai bonds, PIP

SUMMARY

- DBM has invested more than 2 billion US dollars in crucial time in various economic sectors such as heavy industry, infrastructure, railways and others. JICA had a crucial assistance in setting up the DBM
- It took 1.5 years from initial concept to opening ceremony and fund raising and it greatly increased public investment in infrastructure
- DBM's net interest margin registered only 2.66% as it generally offers concessionary lending rates for policy-favored industries and projects.
- Despite its strong asset growth in recent years, DBM has maintained a good level of capitalization, because of ongoing capital injections from the government.
- Moreover, the government aims for DBM's total capital level to reach USD200 million by 2016 from its current USD123 million.