# Excursion to Mongolia Geology, Mining, Soil, Gobi-Desert Plant Species, Agriculture, and Land Use

## 23. July 2018 to 07. Aug 2018

#### **INTRODUCTION**

The 2018 Tour-Excursion in Mongolia will be hosted by our Mongolian specialists. Approximately 130 participants from Australia, Portugal, Spain, France, USA, Poland, Hungary, Germany, Austria, Vietnam, China, Malaysia and Mongolia have participated in our field trip since 2012.

Students, researchers and teaching professionals from all over the world are invited. This tour may be interesting to specialists making their own or joint research with Mongolian colleagues, as well as to non-specialists wishing to get acquainted with Mongolian nature, history, and also habits and ways. The bus tour with camping stops (camping in tents, Ger-Camp) and visits of museums and famous historical sites is explained in English and German. This is already 6<sup>th</sup> year of the team organizes International Excursion to Mongolian countryside.

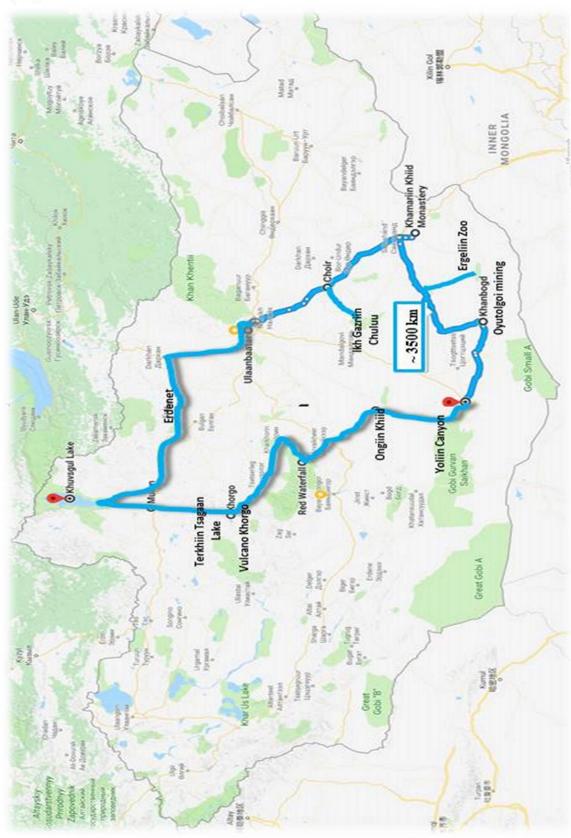
The excursion focuses on Mongolian soil, Gobi-Desert plant species, agriculture and geology. The trip is adventurous. We will visit one of the biggest gold, copper, molybdenum mining companies in the world. Together with altitude and natural zones differences, we will drive approximately 3500 km through Mongolian beautiful landscape. We will make soil profiles during the excursion and describe the soil types. Plant species can be collected for herbarium after defining them.

We are the initiators of Central Asian Soil Science Society (CASSS) in cooperation with Kirgiz and other Central Asian countries.

Our soil scientist worked in European countries over 10 years and specialized in WRB soil classification. The geologist also has working experience in foreign countries such as USA and he is excellent at professional English language.

The Gobi Desert plant species will be explained by one of the skilled botanists from Mongolia who is a rehabilitation expert in Mongolian biggest mining company. She will join our excursion in the southern part of Mongolia.





#### **COORDINATING TEAM**

#### **Undrakh-Od Baatar**

Soil Scientist Research Institute of Animal Husbandry and Grassland Soil Division Mongolian Academy of Science

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Soil Monitoring Professorship Team Mongolian University of Life Sciences Ulaanbaatar, MONGOLIA

#### Munkhbileg Namsrai

Geologist School of Arts and Sciences Mongolian National University of Mongolia Ulaanbaatar, MONGOLIA

#### REGISTRATION

Registration deadline: March 20, 2018

Pre-Registration must be sent to e-mail:

undrakhod.baatar@gmail.com (cc to: monkhas@gmail.com)

The applicant will receive an e-mail indicating whether the applicant received an available place or is on the waiting list.

After receiving this e-mail, the applicant is requested to do the payment. The details for the payment procedure, you will receive with the confirmation email. Please note that only after paying the participation fee your place is guaranteed.

PAYMENT - (includes all expenses in Mongolia: transport, meal, guesthouses, Ger-Camp.)

Adult 1500 € (10 person); 1400€ (15 person); 1300€ (20 person)

Students 1400 € (10 person); 1300€ (15 person); 1200€ (20 person)

The airline tickets to Mongolia, insurance, and visa fees are not included.

### **PROGRAM - Route**

Day	Date	
1	22.July.2018	Arrival in Ulaanbaatar After freshening up from your flight, we start our first day around Ulaanbaatar starting from Gandan Monastery, the largest and most important monastery of Mongolia with 500 monks. From here we will go to the museum of dinosaurs of Mongolia. The heart of Ulaanbaatar, Chinggis Square, is just a short walk away. Here we will see the Parliament House, National Opera and City Hall. Afterwards, we will visit Zaisan Hill, which offers great views of the city.  17:00 - Presentation about Mongolia (Scientific Hall, Research Institute of Animal Husbandry, Mongolian University of Life Sciences) 19:00 Reception dinner  Overnight in guesthouse Ulaanbaatar
2	23.July.2018	Ikh Gazriin Chuluu - 300 km (Dundgobi province)
		- Granite batholites of late Paleozoic - Soil profile - Geology Ikh Gazriin Chuluu is one of many interesting places in Mongolia. Ikh Gazriin Chuluu is a mountain of granite rock in the Gobi desert with a peak of 1706 m high. Ikh Gazryn Chuluu is afforded opportunity to visit this interesting site. These rocky mountains are situated in Gurvansaikhan sum of Dundgov aimag. They spread out from west to east covering about 20 kilometers.  **Overnight in Ger-Camp**
3	24.July.2018	Khamriin Khiid (Dornogobi province) – 350 km - Geology - Gobi Desert Plant species
		One of the geo-Energy centers of Central Asia and ancient temple of Buddha.  The original Khamriin Khiid monastery was founded in 1820 by Danzanravjaa, known as the Terrible Noble Saint of the Gobi, who observed the location's tremendous energy. Danzanravjaa was a great scholar and practitioner of the arts, as well as a social reformer. He set up a theater at the monastery for people to develop their singing and acting skills, and a public school, which encouraged education for both men and women.  **Overnight in Ger-Camp**

4	25.July.2018	Ergeliin Zoo (Dornogobi and Umnugobi provinces) – 220 km Cenozoic fossil carrying ridge mid of valley - Soil profile - Geology - Gobi Desert Plant species This Nature reserve is located in Khatanbulag sum of Dornogobi province. Distinctive natural formation plateau of the Gobi plain terrain that is containing remaining of ancient world dated to 30 million years. Purpose of keeping natural virgin formation, the nature reserve was proclaimed in 1996 to protect the land of 60,900 hectares, which preserving the "nature art" - numbers of imprints of ancient animals.  Also some skeletons of giant dinosaurs were discovered in Ergeliin Zoo Natural Reserve. The rocks of Ergeliin Zoo Natural Reserve are World famous for its paleontological remains of fossils of the Cenozoic Era. Ergeliin Zoo is named by Altan Uul /Golden mountain/.  **Overnight in tent**
5	26.July.2018	Khanbogd – Oyutolgoi (Umnugobi province) – 240 km Camel riding - Soil profile - Geology - Gobi Desert Plant species Khanbogd is a village (sum) of Umnugovi Province in southern Mongolia. Khanbogd is the site of the Oyutolgoi mine, which is 40 kilometres from the sum centre. Khanbogd is also home to Demchigiin Khiid, a monastery built by Danzan Ravjaa. The monastery was destroyed in 1937, but has since been rebuilt by funds from the company that operates the Oyu Tolgoi mine. About 13.000 people are employed in the mine.  We will visit one of the biggest copper, gold and molybdenum mine in the world. Then we will visit to the Ecomineral LLC where the seed Gobi Desert plant species are propagated.
6	27.July.2018	Dalanzadgad – Yoliin Am (Umnugobi province) – 300 km Canyons with glaciers at middle of the Gobi Desert - Geology - Gobi Desert Plant species Travel to Yolyn Am, or 'Eagle Valley', located in the foothills of the Altai Mountains. The valley's remnant streams create ice formations which you may find in the mouth of the valley as late as July. The mountains surrounding the valley also provide habitat for Argali wild sheep (one of the last wild great horned sheep) and ibex, which may be spotted in the early morning as they walk along the mountain ridges. Visit the Gobi museum and trek through the valley.  **Overnight in Ger-Camp**

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7	28.July.2018	Ongiin Khiid (Dundgobi province) - 260 km -Geology
		-Sighseeing History
		Ongi Monastery is the collective name for the ruins of two monasteries
		that face each other across the Ongi River in Saikhan-Ovoo
		district of Dundgovi Province, in south-central Mongolia. The Barlim
		Monastery is located on the north bank of the river while the Khutagt
		Monastery sits on the south bank. The older southern complex
		consisted of various administrative buildings as well as 11 temples.
		The northern complex, built in the 18th century, consisted of 17
		temples - among them one of the largest temples in all of Mongolia.
		The grounds housed also 4 Buddhist universities. Founded in 1660, it
		was one of the largest monasteries in Mongolia and housed over 1000
		monks at its height.
		Overnight in tent
8	29.July.2018	Ulaan tsutgalan (Uvurkhangai province) – 325 km
	-	(One of the biggest Water Fall in Mongolia and remnants of fissure
		Volcano)
		- Geology
		- Soil profile
		- Hot water spring
		- Horse riding
		It is a waterfall on the Ulaan River which cascades from an impressive
		height of 20 meters, and extends for 100 meters from the Orkhon
		River. The Orkhon River flows through basalt rocks from the Gyatruu
		range to Karakorum soum.  Spend a day of leisure around the waterfall. You can just relax and
		discover its scenic beauty or take the exciting opportunity to swim,
		fish and hike.
		Overnight in tent
9	30.July.2018	Ulaan Tsutgalan (Uvurkhangai province)
		See above
		Overnight in tent
10	31.Aug.2018	Khotont (Arkhangai province) via Kharkhorin - 160 km
		Ancient capital city of 16 <sup>th</sup> and 17 <sup>th</sup> century Mongols and Historical
		Center of Early Buddism in Central Asia
		-Mongolian Herdsman Family – Mongolian Culture
		-Soil profile
		-Geology  Travel to Karakarum, the former capital city of world's greatest land.
		Travel to Karakorum, the former capital city of world's greatest land empire, established by Chinggis Khan. Here we will tour the oldest
		Buddhist Monastery Erdenezuu, religious complex spanning over 400
		sq. meters surrounded by 108 stupas. It was first built on the ruins of
		Karakorum in 1586 by Abtai Sain Khan. The site has some of the best
		works of religious art and architecture in Mongolia. Visit Karakorum
		museum.
		Overnight in tent, or Mongolian nomadic family

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11	01.Aug.2018	Khorgo (Arkhangai province) via Chuluut Canyon and Terkhiin
		Tsagaan Lake – 250 km
		Remaining cones of Late Mesozoic and Early Cenozoic Volcano
		-Geology
		-Soil prfile
		-Plant species
		-Agriculture - Grassland management
		The Khorgo is a volcano in Tariat village in the Arkhangai
		Province of Mongolia. The Khorgo lies east of the lake Terkhiin
		Tsagaan Nuur and together they are the core of the Khorgo-Terkhiin
		Tsagaan Nuur National Park. Notable geological features are solidified
		lava bubbles, which the locals have named "basalt yurts".
		This national park is the highlight of Arkhangai province and famous
		for its attractive scenery.
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		It is situated in 580 km northwest of Ulaanbaatar. It has been protected
		since 1965, fully in 1997, to safeguard spectacular mountain scenery
		and endangered flora and fauna. It's surrounded by the Khangai
		Mountains, which reach as 3000 meters above the sea level. The most
		area of the National park is covered by poplar and peach forest, where
		grow wild berries, rare herbs and great variety of berries and flowers.
		There are lots of animals such as deer, wild goat and other animals, as
		well as various kinds of birds. Khorgo volcano crater is situated at an
		altitude of 2210 m, 200 m wide and 100 m deep. Near the crater there
		are dozens of small caverns with stalactites hanging from their ceiling
		and walls. Because of volcanic eruption, the nature has very unique
		formation. One of them was deep ground cave with ice inside, which is
		called "Yellow dog's hell". The ice is left even in the hottest summer of
		the some years. Some of 13 stone shelters reach 1.7 m high, are
		formed with the lava flow.
		Another spot in this National Park is Lake Terkhiin Tsagaan which is
		16 kilometers wide, 20 kilometers in length 20 meters in depth, and 61
		square kilometers in this area. The Lake is extremely beautiful with
		fresh water and rich species of fish and birds.
		On the way to the National Park, we will visit to the Research Station
		of Grassland Science Institute of Mongolian Academy of Science.
		Overnight in tent
12	02.Aug.2018	Murun city (Khuvsgul province) – 350 km
12	02.Aug.2010	
		-Regional project on Value Chain - Agriculture
		The Aimag is largely mountainous. The south and southwest are
		dominated by the round-topped Tarvagatai, Bulnain and Erchim sub-
		ranges of the Khangai massif. The areas west and north of Lake
		Khövsgöl are formed by the alpine Khoridol Saridag, Ulaan Taiga,
		and Mönkh Saridag mountains. The center and east are less
		mountainous, but still hilly.
		Within Mongolia, the region is well known for its natural environment,
		and Lake Khövsgöl is one of the country's major tourist attractions.
		The largest forest areas of Mongolia are located around and to the
		north of the lake, extending the south-siberian Taiga.
		The aimag was founded in 1931. Khatgal was the administrative center
		until 1933, since then it has been Murun.
		Overnight in hotel
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13	03.Aug.2018	Khatgal – Khuvsgul fresh water Lake – 100 km
		-Geology
		-Soil profile
		-Edelweis rich plant population
		Lake Khuvsgul also referred to as <i>Khuvsgul dalai</i> or <i>Dalai Eej</i> is the largest fresh water lake in Mongolia by volume and second largest by
		area.
		Khuvsgul nuur is located in the northwest of Mongolia near
		the Russian border, at the foot of the eastern Sayan Mountains. It is 1645 metres above sea level, 136 kilometres long and 262 m deep. It is
		the second-most voluminous freshwater lake in Asia, and holds almost
		70% of Mongolia's fresh water and 0.4% of all the fresh water in the
		world. The town of Khatgal is at the southern end of the lake.
		Its watershed is relatively small, and it only has small tributaries. It is
		drained at the south end by the Egiin Gol, which connects to
		the Selenge and ultimately into Lake Baikal. Between the two lakes,
		the water travels a distance of more than 1000 km, and falls 1169 m,
		although the line-of-sight distance is only about 200 km. Its location in
		northern Mongolia forms one part of the southern border of the great
		Siberian taiga forest, of which the dominant tree is the Siberian Larch ( <i>Larix sibirica</i> ).
		The lake is surrounded by several mountain ranges. The highest
		mountain is the Burenkhaan / Munkh Saridag (3492 m), which has its
		peak north of the lake exactly on the Russian-Mongolian border.
		Overnight in Ger(House)-Camp
14	04.Aug.2018	Erdenet Mining Corporation – 450 km
		-Geology
		Erdenet Mining Corporation - mining corporation is located in Erdenet
		city of Mongolia. The city was built in 1974 to exploit Asia's largest
		deposit of copper ore and has the fourth largest copper mine in the
		world. The "Erdenet Mining Corporation" was a joint Mongolian-
		Russian venture, bit it was recently given back to Mongolia. It
		accounts for a majority of Mongolia's hard currency income. Erdenet
		mines 22.23 million tons of ore per year, producing 126700 tons of
		copper and 1954 tons of molybdenum. The mine accounts for 13.5%
		of Mongolia's GDP and 7% of tax revenue. About 8.000 people are employed in the mine.
		Overnight in hotel
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15	05.Aug.2018	PSARTI (Darkhan-Uul province) – 250 km -Soil laboratory -Research on Agricultural Science -Loess Darkhan is the third largest city in Mongolia and the capital of Darkhan-Uul Province. On October 17, 1961, the city of Darkhan was built with extensive economic assistance from the Soviet Union. As its name implies, the city was originally conceived to be a manufacturing site for Mongolia's northern territory. The city remains a mostly industrial region and is the home of some 82% of Darkhan-Uul Province's population. We will visit to the Plant Science Agricultural Research Institute of
		Mongolian Academy of Science here.
		Overnight in hotel
16	06.Aug.2018	Manjshir Khiid and Ulaanbaatar city tour – 220 km -Geology -Soil profile -Plant species This is a former Buddhist monastery established in 1733 and destroyed by Mongolian communists in 1937. Its ruins are located on the south slope of Bogd Khan Uul mountain. The monastery, dedicated to Manjusri(Tib: Jampelyang - the Bodhisattva of Wisdom), was first established by the sainted monk Luvsanjambaldanzan in 1733 as the permanent residence of the Reincarnation of the Bodhisattva of Wisdom. It came under the personal administration of Mongolia's religious leader Bogd Gegeen in 1750. Over time, the monastery expanded became one of the country's largest and most important monastic centers with 20 temples and more than 300 monks. Religious ceremonies often involved more than 1000 monks. The lamasery housed a collection of valuable and rare Buddhist scriptures, including golden script on silver leaf.  19:30 Farewell dinner  **Overnight in hotel.**
17	07.Aug.2018	Departure



WE ARE LOOKING FORWARD TO WELCOMING YOU IN MONGOLIA. COORDINATING TEAM





















