

MINISTRY OF NATURE AND ENVIRONMENT

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**To: UNEP Chemicals
Attn: Mr. James B. Willis, Director
Date: 23 October, 2001
Fax: 00-41-22-797-3460
From: Ms. N.Oyundar, Director, International Co-operation Department**

Subject: Global Mercury Assessment

Dear Mr. Willis,

I would like to refer to your letter dated 10 April and 17 September, 2001 respectively regarding the information to the preparation of a global assessment of mercury and nomination of a member to serve in a working group.

I am pleased to inform you that herewith we are sending the relevant information on mercury in Mongolia.

Also I would like to inform you that the Ministry of Nature and Environment has nominated Mr. Sharav Dagva, Deputy Director, Department of Policy Implementation and Coordination as a member to the Working Group.

Please find attached his CV.

Thank you very much for your cooperation

Yours sincerely,

(sign)
N.Oyundar
Director
International Cooperation Department

Current situation of Mercury Assessment in Mongolia

Background

Mongolia has an estimated population of about 2.37 million (by 2001) and a total land area of about 1.5 million square km² and this yields a population density on the order of 1.6 persons/ km².

The country is divided into 21 aimags, administration unit of Mongolia and each aimag is further subdivided into sums. Aimags consist of between 11 and 23 sums.

For thousands of years Mongolian people have followed a tradition of protection and respect for nature as a source of their life. In the last 50 years of the 20th century the development of sectors such as agriculture, industry, mining etc. are rapidly increasing, and therefore, their influence to the environment has reached a new peak.

The state coordinated law as basis for environmental protection has been formulated and environmental policy is improving. Since 1994, 23 specialized laws on environment protection came into force and implementation has commenced.

The Government of Mongolia has undertaking many measures in the field of chemicals safety and improving ecologically sound management of toxic chemicals. In particular, the Government of Mongolia has adopted the Law on Protection from Toxic Chemicals in 1995 and Amendment to the law on Protection from Toxic Chemicals in 2000. The purpose of Laws are to regulate the production, export, import, storage, trade, transportation, use and disposal of toxic chemicals.

Furthermore, the Mongolian National Coordination Council for Chemical Safety (NCCS) headed by the Minister of Nature and Environment is operating under the Ministry of Nature and Environment the of Nature and Environment. The Council involves members from all relevant Ministries and Agencies as well as private sector representatives and academic institutions.

In 1998-2000, approximately 20 guidelines, regulations and classifications were developed within the framework of the implementation of laws of the Mongolian Government and decisions of international agreements on ensuring the safety of toxic chemicals.

The Mongolian Government has designed a government policy on ecology and approved sustainable development concept for 21st century.

In the Mongolian Government's action programme , which have been approved by the Cabinet Resolution # 161 of October 23, 2000, where giving priority to the environmental protection states as following: "to improve the living

environment of the citizenry by reducing air, water and soil pollution in urban areas". Hence, the problem of mercury – one of the most very toxic substances in Mongolia causing significant damage to the environment and to the health of who handle it is highly relevant in the context of the national efforts towards achievement of goals of agenda 21 on sound management of chemicals .

The Mongolian Government has accepted the conception "The Bahia Declaration on Chemical Safety "and participated actively in 3rd Intergovernmental Forum on the safety of chemicals and taking actions on the assessment of potential damages caused to the Mongolian population by toxic chemicals from neighboring and other countries , keeping on the surveys in this field being constantly on the alert appropriate response and developing the infrastructure in accordance with policy on the ecologically safe use of chemicals.

a/ Recent authoritative reviews on chemistry, toxicology and impacts of mercury on human health and the environment

The Ministry of Nature and Environment, Ministry of Health carrying out the following functions on protection from toxic chemicals:

- in accordance with the provisions of law on protection from toxic chemicals, to issue to citizens, economic entities and organizations a permit to produce, export, import, trade, dispose and use toxic chemicals, including the mercury;
- to control activities on protection from and use of toxic chemicals and toxicology and impacts of mercury on human health and the environment develop relevant recommendations;
- to prepare national report on the use and allocation of toxic chemicals nationwide ;
- to contact State registration of the production, export, import and use of toxic chemicals and create a databank with related information;
- in the event of damage or danger to national security, human health, or the environment caused by toxic chemical leaks, submit to the Government proposals for requesting assistance from international organizations to repair these damages and eliminate the dangers;
- to carry out training to improve the knowledge and skills of those people, who handling toxic chemicals;
- to asses impact of toxic chemicals, to the human health, environment and biological diversity

b/ Natural and anthropogenic sources of mercury in your country

In Mongolia large anthropogenic (technogenic) mercury placer is in the Boroo River. In the bed of the Boroo River, illegal mining of the mercury placer has been underway for a many decades. The "Boroo Mercury Placer" is situated at longitude 106⁰15' and latitude 48⁰41' close to a cereal farm in Bor Nuur Sum in Selenge Aimag in northern Mongolia, 120 km of Ulaanbaatar.

The "Boroo Mercury Placer" occurs on the west bank and river bed of the river Boroo, 10-15 km up of its confluence with the Selenge river.

On the fragmentary evidence available it appears that the Boroo Gold Recovery Factory was first set up in the first decade of the 1900's by Mongolor Company, and closed in 1919. The Boroo Gold Recovery Factory re-opened in 1926 but closed for a second time in 1927. It re-opened again in 1942, may have been upgraded in 1951 and finally closed in 1956.

In 1993 a geological assessment of the mercury and gold reserves in the foundations of the destroyed buildings of the Boroo Gold Recovery Factory was carried out by Mr.Namsrai and others on behalf of the Ministry of Energy, Geology and Mining. The investigation was financed by Mr. Sh. Shagdarjav director of Tyre-Sh Co. Ltd. No mining was carried out.

Exploration of Boroo Mercury Placer was carried out in 1993 and a report prepared by Namsrai (1994) but until the results are not published:

	First Method of Calculation	Second Method of Calculation
	Mercury Hg, kg	Mercury Hg, kg
Reserves in ruins of 1 st building	173.2	153.6
Reserves in ruins of 2 nd building	66.3	44.9

C1+C2 Approved Reserves: 198.5 kg

As demonstrated, this exploration was for only a small part of the area extent of the Boroo Mercury Placer, and thus the figure of 198.5 kg of mercury refers to only a small area.

On the basis of the field observations on the extent of the mercury mining, Eco-Minex International Co. Ltd. suggest a prognosis (P) of at least 10 tons of mercury in the Boroo Mercury Placer.

In the year of 2000 Ministry of Nature and Environment of Mongolia organized tender on "Environmental restoration technology and testing in the area near Boroo contaminated by gold mining activity". Contract awarded by to a local company Babs Ltd., who did preparations to mine the mercury using low percent recovery systems such as water monitors etc.

This company made an experiment on dirty land to separate mercury and they made separation 25 kg of mercury but due to the lack of technical and financial possibility they have stopped their activity.

c/ Environmental long-range transport, origin, pathways, deposition and transformation of mercury and its substances

Mercury is considered as a very toxic element according to Mongolian national classification and usage, transportation, and storage of mercury is under the

environment and health monitoring. In our country, mercury is being used in gold mining businesses and small amount of mercury components is used in the laboratories. Lately, small gold mining companies are using mercury illegally. The Ministry of Nature and Environment and other related Ministries and organizations cooperate to stop and expose illegal usage, transportation, and storage of mercury. Last years it has been increasing the number of gold mining. Consequently, the tendency of illegal export and trading of mercury is rapidly increasing.

d/ Sources of release of mercury to the environment and current production and use patterns in your country

In our country mercury is used in gold mining plants and small amount of mercury components is used in the laboratories.

e/ prevention and control technologies and practices and their associated costs and effectiveness, including the use of suitable substitutes

We have not planned to substitute mercury recently. The gold mining plants pursue policy to reduce mercury use.

In Mongolia we don't have control technologies, which fit international standards. Only in small capacity particularly in research institutes conducting control technology. Prevention measures are insufficient.

f/ Ongoing actions and limiting use exposures, including waste management practices; and

However, mercury is listed as very toxic chemicals in the Law on Protection from Toxic Chemicals, it is not taken any measures on limiting use of mercury.

Mercury, and their component elements are used under the environment and health control and limits. Especially mercury will be prohibited for gold extraction technology in the mining plants.

g/ Scientific and technical information needs and data gaps related to the above

The equipment to determine mercury amount in soil, at the Institute of Physics and Techniques of the Academy of Science and at the Chemistry, Chemical - Technological Institute are not capable to define total national land mercury pollution. Therefore it is not able to define mercury amount in the mercury-polluted environment and it is needed to take international technical and technological assistance to conserve the environment from the mercury pollution.