

**MONGOLIA NATIONAL REPORT
ON SUSTAINABLE DEVELOPMENT
FOR THE 18TH SESSION
OF THE COMMISSION ON SD**

Боловсруулахад оролцсон:

Н.Батсуурь (БОАЖЯ-ны Төрийн нарийн бичгийн дарга), Ш.Дагва (БОАЖЯ), Д.Шижир-Эрдэнэ (БОАЖЯ), Л.Жаргалсайхан (Хилийн хорт болон аюултай бодисын бодлого зохицуулалтын асуудал эрхэлсэн Үндэсний зөвлөлийн ажлын алба), Г.Тамир (ЭБЭХЯ), Д.Бадарч (ХХААХҮЯ), Х.Гантөмөр (ЗТБХБЯ), Г.Түмэнжаргал (МУХАҮТ), Н.Эрдэнэсайхан (Байгаль орчны зөвлөх “Энвайрон” ХХК), И.Бямбабаатар, Б.Түмэнжаргал, Т.Одонтуяа, Э.Батмөнх.

Хянан тохиолдуулсан:

Н.Эрдэнэсайхан - Байгаль орчны зөвлөх “Энвайрон” ХХК, Ц.Банзрагч - БОАЖЯ,
Х.Хишигжаргал - БОАЖЯ

Эмхэтгэсэн: Н.Эрдэнэсайхан - Байгаль орчны зөвлөх “Энвайрон” ХХК

Хэвлэлийн эх бэлтгэсэн:

Дизайнер:

Д.Оюун

Байгаль орчин, аялал жуулчлалын яам

Засгийн газрын II байр, Нэгдсэн үндэстний гудамж 5/2, Улаанбаатар хот - 210646, Монгол

Утас: +976 11 261726

Факс: +976 11

FOREWORD



Once Mongolia joined Rio Declaration on Environment and Development that produced at 1992 United Nations Conference on Environment and Development, Mongolia has developed its national sustainable development strategy in 1998. The strategy is approved by the government and is well in implementation. The strategy implementation resulted in establishment of national and domestic sustainable development committees, national system of core indicators of the sustainable development, sustainable development education system, implementation of pilot projects in rural areas and we are regularly participating in international and regional activities on sustainable development. Strategy implementation assessment has been conducted in 2007 and relevant recommendations have been produced on increasing capacity of organizations participating in implementation of sustainable development strategy, improving inter-agency cooperation and identifying priorities for strategy implementation and follow up actions are being undertaken.

A national report on our nation's development achievement and on facing issues has been prepared for upcoming 18th assembly of United Nations Commission on Sustainable Development.

The current report is developed within the framework of the main objectives of the fourth implementation cycle of SD, these are: a. Transportation, b. Chemicals, c. Waste management, d. Mineral Industry and e. 10 years of program for sustainable consumption and production is based on reports from ministries and departments on common issues in line with the guidelines of the Commission on Sustainable Development.

Ministry of Environment and Tourism is working on policy and planning of measures towards adaptation and reduction of negative impacts of climate change and administrating and coordinating of policy implementation nation-wide. In addition to this, it facilitates harmonization of sustainable development program with other national programs, improving the performance indicators to measure outcomes and increasing public awareness on sustainable development.

Sharing our achievements on sustainable development strategy with international communities, learning best practices, getting advice and making follow up actions on this topic are of great value for advancing our country's development policy and actions as well as improving its outcomes and impacts to society as a whole.

Coordination of social and economical sectors play an important role in resolving problem and issues stated on the report and furthermore the issues of harmonization of sustainable natural resources utilization and consumption with the economic and social development policies, specifically, integrating green growth and ecologically effective concept into the national development policies and plans have been considered.

I Would like to emphasize that efforts of citizens, families, private entities and state organizations to support the economical, social development in harmony with the environment and to implement constitutionally declared human rights to live in a healthy and safe environment are extremely important.

PRIME MINISTERS

A stylized, handwritten signature in black ink, consisting of several loops and a long horizontal stroke.

BATBOLD

THEME-SPECIFIC ISSUES

(Economic, social and environmental dimensions of sustainable development)

CONTENTS

Foreword	3
Vocabulary	5
Abbreviation	6
Background	7
One. Chemicals	9
Two. Mining	15
Three. Transport	22
Four. Waste and waste management	27
Five. 10 Year programme on sustainable consumption and production (SCP)	31
Reference	38

VOCABULARY

Aimag	Administrative unit of Mongolia, which compresses of 21 aimags
Gher	A traditional Mongolian nomadic dwelling, which consists of felts and wooden structure easy to assemble and dissemble
Soum	Small administrative unit of Mongolia. An aimag compresses of about 15-20 soums on average.
State Great Khural	Parliament of Mongolia
Tugrig	Mongolian Currency (MNT). As of January 2010, 1 US\$ equals 1,435 tugrigs

ABBREVIATION

ADB	Asian Development Bank
BAT	Best Available Techniques
BEP	Best Environmental Practices
CAREC	Central Asia Regional Economic Cooperation
CGA	Customs General Administration
CFC	Chlorofluorocarbon
EIA	Environmental Impact Assessment
EITI	Extractive Industries Transparency Initiative
EGSPRS	Economic Growth Support and Poverty Reduction Strategy
GEF	Global Environmental Facility
GDP	Gross domestic product
GHS	Globally Harmonized System of labeling and classification of chemicals
ISO	International Standard Organization
ILO	International Labor Organization
JICA	Japanese International Corporation Agency
LLC	Limited Liability Company
MNET	Ministry of Nature, Environment and Tourism
MFALI	Ministry of Food, Agriculture, and Light Industry
MDG	Millennium Development Goal
MNS	Mongolian National Standard
MGL	Mongolia
NCCI	National Chamber of Commerce and Industry
NEMA	National Emergency Management Agency
NGO	Non government organization
NPAP	National Poverty Alleviation Program
OCHA	Office for the Coordination of Humanitarian Affairs
PCB	Polychlorinated biphenyls
PRC	People's Republic of China
POP	Persistent organic pollutant
PPPs	Public Private Partnerships
SAICM	Strategic Approach to International Chemicals Management
SSIA	State Special Inspection Agency
SAM	Sustainable artisanal mining
SCP	Sustainable Consumption and Production
SMEs	Small and Medium Enterprises
SAMRO	State Authority on Mineral Resources and Oil
UNEP	United Nations Environmental Programme
UNIDO	United Nations Industry Development Organization
UNITAR	United Nations Institute for Training and Research
WHO	World Health Organization

BACKGROUND

Since 1990, Mongolia has been shifting well the transition from a centrally planned economy to a market economy. It has made good progress in undertaking fundamental economic reforms centered on price liberalization, privatization, and in establishment of market institutions. Since that time, Mongolia has joined many international conventions and agreements and one of remarkable event was the development (1996) and approval (1998) of the National Sustainable Development Strategy of Mongolia as an indication of welcoming of outcomes of UN Conference on Environment and Development.

Upon adoption of this strategy, the Government of Mongolia incorporates the fundamental principles of sustainable development in its subsequent development policy documents.

Mining sector development has been accelerated since 2000 and consequently an acute demand for elaborating associated legal environment was raised. With mining development, chemicals use has been increased and this imposed on developing new legal documents to regulate these emerging issues. This issue was a political agenda of 2008 in the country. Moreover, the intensive mining has brought economic development and accelerated construction sector as well increased use of private vehicles, which in turn pressure on road transport sector.

Solid waste management was stagnated since 1990s and such programs and projects like Ulaanbaatar Public Service Improvement project have been assisted in improving the situation. As to make a policy reform, MNET together with the Ulaanbaatar city municipality has been applied and receiving grants and technical assistance from the Government of Japan from 2008.

Sustainable Development Program for 21 Century of Mongolia was adopted by the resolution of the Government of Mongolia on 27 of May 1998. The first part of the program included summary of status of politics, socio-economy and environment of that time period; the second part identified the trends of sustainable development, objectives and priority strategies of Mongolia and the third part described specific objectives and implementation approaches on socio-economy, natural resources and environmental protection. This program was further incorporated together with other policies, programs and strategies into a policy paper called MDG based Comprehensive National Development Strategy of 2007-2021 and that was adopted by the State Great Khural and it is now in effect for implementation.

Implementation assessment of the National Strategy of Sustainable Development was carried out in Mongolia on 2008, which included information on 1) status of mainstreaming Rio 27 principles into Mongolia's policy documents as well status of incorporating of NSSD objectives into decision making; 2) assessed implementation of specific objectives; 3) described public survey results on strategy implementation.

The assessment results provided recommendations on 1) identification in details of outputs as well ensuring harmony of specific objectives between various policy documents with the peculiarities of development process of Mongolia 2) increase awareness and provide knowledge to decision makers on SD principles; 3) strengthen capacities of various stakeholders; 4) increase effectiveness of inter-sectoral coordination; 5) organization of training and public awareness activities among population; 6) improving monitoring and evaluation capacities on SD of staffs of governmental ministries and agencies.

Millennium Development Goals based Comprehensive National Development Policy (2007-2021) puts emphasize on good governance, export oriented economic development (*Mongolia should focus on its advantage like mining*), rural development, poverty reduction and human development issues. Mongolia has developed Transportation Sector Development Strategy and submitted to its State Great Khural for approval. In addition, the Ministry of Road, Transport, Construction and Urban Development has developed Road Sector Master Plan “Transit Mongolia” to be implemented in 2008-2020 period and a 15-year Investment Plan.

Mining investment plays a dominant role for the economy. In past period, state owned copper and molybdenum corporation ERDENET along contributed a half of state reserve of foreign currency and j of government revenue from its sale of gold, copper and molybdenum. As a result of implementation of Governmental “Gold Program”, 24,000 kg of gold was extracted by private companies during 2004-2005 periods. Before launch of hard rock mining “Boroo Gold” in 2003, the most of mining have been extracting gold ore from placer mining deposits. Profits from mining contributed 20% to GDP in 2009; 56% to industrial products; 69% to exports; 36% - to the government revenue respectively.

Mongolia’s economic growth was observed 8.6% in 2006 and 9.9% in 2007, which were relatively high. The Great Khural had adopted the windfall tax law in 2006, which imposed 68% tax on the additional income generated if market price of one ounce of gold exceeds \$500 and one ton of copper exceeds \$2,600. This law was cancelled in 2009. In official statistics, 48,000 persons are employed in the mining sector and the number of artisanal miners several times higher than this figure.

The government pays attention to strengthen its legal regulation and these efforts can be observed in these five sectoral legislations and activities mentioned in the report. The concept of improving legislations is focused on poverty reduction, support environmentally friendly activities and rational use of resources, improving human development.

One of current challenges on the policy side is to reform legal regulations to meet the current demand of economic development. The National Chamber of Commerce and Industry actively works on promoting sustainable development concept to the public through organizing trainings to build capacities and implementing the program and projects.

The Government is announced Small and Medium Enterprise Support Year and with which it adopted the Law on Public and Private Partnership and pays attention on accountability of parties. Government provides financial resources and monitors disbursements with a purpose of developing SMEs in rural regions. There is a need to organize studies and relevant trainings on rational use of natural resources for businesses in accordance with sustainable development indicators, and to strengthen project development capacity and environmentally sound business.

It is high demanding issue to implement a project, which substantiates progresses and achievements of the past Mongolian Action Program-21 Project implemented with UNDP support in 1996-2004 period as well to support reform processes ongoing to harmonize socio-economic development with the environmental sustainability.

ONE. CHEMICALS

PROGRESS AND ACHEIVEMENTS

Chemicals risk assessment

Mechanisms for systematic evaluation, classification, and labeling of chemicals, including initiatives towards a harmonized system of classification and labeling of chemicals

1. After the international agreement to set up Globally Harmonized System of labeling and classifying of chemicals (GHS) at the Intergovernmental Forums and series of other chemicals related to other conferences such as Rio Conference in 1992, Mongolia has changed its national classifying and labeling standards according to GHS and approved it officially in 2009.

Newly adopted GHS allows Mongolia to set up appropriate labeling and classifying of chemicals and mixtures according to their physical health and environmental hazards.

2. In order to restrict the applications of hazardous and toxic chemicals that pose potential threats to human health and surrounding environment, the list of chemicals of prohibited and limited applications in the territory of Mongolia has been updated on 2007, 111 chemicals were banned from use and 28 with limited applications .

Initiatives for assessment of toxic chemicals, hazard and risk assessment, and participation in various international and regional initiatives

3. The Government of Mongolia elaborated and adopted the Law on Hazardous and Toxic Chemicals on May 2006 through the Parliament. This brought a remarkable change in regulations related to import, export, trans-boundary movement, production, transportation, storage, disposal, handle, monitoring of various toxic and hazardous chemicals in the country. The law stipulates among others, a compulsory risk assessment for activities that involve chemicals.

As follow up of this law provision, a risk assessment guideline and methodology was developed and EIA professional companies started conducting the chemicals risk assessments for various projects in accordance with the methodology. Chemicals risk assessment training has been organized this year in collaboration with the World Bank and various government officials, inspectors and specialists from the environmental impact assessment companies have attended the training.

Strategies for exposure assessment and environmental monitoring and improvement in procedures for using toxicological and epidemiological data to predict and estimate the effects of chemicals on human health and the environment

4. A nation-wide preliminary inventory of persistent organic pollutants (POP) has been conducted during 2004-2005 period and POPs applications, sources, pollution extents and volumes have been identified. The government of Mongolia adopted and implemented the national program of POPs and its implementation plan of 2020 (www.pops.int/implementation/nips/submissions/mongolia.pdf) on its session on May 3, 2006. The program has identified

priority issues for reduction of POPs and as a follow up, the project “Capacity building for environmentally sound management and disposal of PCBs stockpiles”, is started on 2009 in collaboration with the UNIDO and financially supported by GEF.

5. In the framework of the East-South East Asia Regional forum on Best Available Techniques (BAT) and Best Environmental Practices (BEP) regional projects on “Introduction of BAT and BEP to the heat only power and industrial boilers that use solid fuels” and “POPs pollution reduction from the metallurgical industry ” www.unido.org/fileadmin/user_media/Services/Environmental_Management/Stockholm_Convention/POPs/TEchTransOpportunitiesOnPops.doc have been developed jointly with participating countries and now well on the way for implementation.

Information exchange and cooperation, data-quality assurance, application of assessment criteria, and linkages to risk management activities

6. National Council for Policy Regulation of Hazardous and Toxic Chemicals with its permanent staffs was established under direct guidance of Prime Minister of Mongolia, by the Government resolution No. 314 in 2006, which aimed at providing professional supports on toxic and hazardous chemicals policies. The council coordinates inter-sectoral policy implementation on Hazardous and Toxic Chemicals.
7. An emergency response team within the National Emergency Management Agency (NEMA) took responsibility to coordinate and provide necessary responses to the potential disasters in particular hazardous and toxic chemicals and accidents and spills. Also NEMA has taken responsibility to inform and coordinate activities of government ministries through the Deputy Prime Minister who leads National Emergency Commission at the national level.

Progress within the larger framework of Strategic Approach to International Chemicals Management (SAICM)

8. The project “Updating National Chemicals Management Profiles, Development of a National SAICM Capacity Assessment, and Holding of a National SAICM Priority Setting”, which aims to identify current situation of Mongolia in chemicals management and set up priority areas on which the government should focus more and take necessary actions also consultation workshops were undertaken by SAICM, Swiss government and UNITAR in Mongolia. Also, National Chemicals Management Profile of Mongolia has been developed in 2007 and published in 2008. For detailed information visit (http://www2.unitar.org/cwm/publications/cw/np/np_pdf/Mongolia_National_Profile_2009.pdf).
9. Also, the first national forum on Hazardous and toxic chemicals and hazardous waste has been organized. The focus of this forum was to improve legal environment of chemicals and hazardous waste management, develop public awareness and involvement program while creating effective database, and build capacity in technical and technological infrastructure.

Initiatives and innovations for risk reduction, particularly taking in to account the life cycle of the chemicals

10. In order to disseminate laws, regulations, and other information on chemicals and hazardous substances to every citizen and the government agencies, MNET has developed a website www.mne.mn/chemicals for public use. This website allows an access to national laws, regulations, standards, and international conventions on chemicals. In addition to that material safety database of 250 chemicals that are widely used in Mongolia is installed and functioned on this website. This database provides access to all chemicals related information such as

hazard classifications, characteristics and toxicity of chemicals, emergency rescue and relief measures in case of chemical spills and disaster, first aid services, and hands-on-manuals as well guidelines for safe use, storage, transportation and disposal of particular chemicals.

11. Life-cycle analysis of hazardous and toxic chemicals such as improper use of mercury in artisanal mining, improperly disposed plastic bags, burning of raw coal and disposing vehicle tires in Gher districts, disposal of batteries and accumulators, and chemicals used in tanneries has been conducted in last three years. Based on these findings, media campaigns on impacts of these chemicals to health and environment have been carried out throughout the country. Mercury use was banned in all mining and sodium cyanide use was banned in small and medium scale mining processes.

Policy measures to phase out chemicals that pose unreasonable and unmanageable risk to human health and human environment, such as, ozone-depleting substances

12. Mongolia adopted “National program on protection of ozone layer” in 1999 and had taken measures on limited use of ozone depleting substances. Control and management system of those substances were established in 2000. Every year, a national inventory of the chemicals and their imports were carried out for further measures. Within the national program, the government reduces CFCs annually with target to phase out completely by 2010. The imports of CFC of Annex A under Montreal Protocol were 21.2 ton in 1999 and it reduced to 0.8 ton in 2009.
13. Land and water pollutions are ever increasing due to wide use and disposal of plastic bags. To reduce impacts of disposed plastics, importing and using of plastic bags thinner than 0.025 mm was banned by The law on Limited use and importing of some plastic bags adopted by The Parliament of Mongolia in 2009 and it is in force from January 1, 2010.

Policies and frameworks for prevention of accidents, preparedness and response

14. The government has reformed the approval procedure for imports and exports of chemicals among government agencies to make a coordinated control over chemicals. Previously, Local governments municipalities used to give a consent for imports of hazardous and toxic chemicals on imports of other chemicals before 2007 that led to uncontrolled and uncoordinated imports of chemicals, sometimes imports of hazardous and toxic chemicals under name of ordinary chemicals at the customs. Then the government regulated and assigned exclusively MNET to grant permission of import of all chemicals and it gave an opportunity to solve above problems.
15. According to the Law on hazardous and toxic chemicals, entities and enterprises, which use hazardous and toxic chemicals in their business, should take all measures to prevent any related accidents and they are fully responsible for any consequences and damages occurred due to use of these kinds of chemicals. State Specialized Inspection Agency (SSIA) is responsible for enforcement and monitoring of the law provisions. Law provisions that gives the right to ordinary citizen and NGOs to claim and sue on improper use of chemicals allow the public and NGOs to monitor all actions related with use of chemicals.

Policies aimed at reducing the risks posed by lead, mercury and cadmium and other harmful heavy metals, including through a review of relevant studies, such as, the United Nations Environment Programme global assessment of mercury and its compounds

16. In order to reduce the illegal use of mercury, the following measures have been taken:

The National Council for Policy regulation of Toxic and Hazardous Chemicals has discussed about the situations of increased negative impacts on public health and environment, which increasingly caused by pollutions of illegal use of acute toxic mercury use in mining extraction and processing. As follow up measure, the special order of the Minister of Environment and

Tourism has been issued to prohibit the use of mercury for mining extraction and processing and it is now in force throughout the county.

17. Government of Mongolia had taken actions to prohibit use of mercury and sodium cyanide on gold extraction in mining. Two inspections nationwide have been carried out during 2007-2008. As a result of these inspections, it revealed 53 hectares of area and dozens of wells were polluted by mercury and cyanide and about 200 thousand tons of slime and waste materials in 120 places in 10 provinces and closed down 145 grinding mills that use mercury.
18. MNET in collaboration with the General Police Department, has organized actions that appealed public to inform on bonus basis cases of illegal use and storage of chemicals and as results, confiscated 17 kg mercury and handed in to NEMA for further neutralization. In order to reduce the risk of hazardous chemicals and negative health and environmental impacts, MNET in collaboration with NEMA and SSIA has organized decontamination of chemical spills and pollution during 2008-2009. In the outline of this activity, four hazardous and toxic waste landfill sites have been created in the most polluted areas and total of 197,687 tons of slimes were neutralized and buried according to the requirements. The Government has spent 3.7 billion tugrig on this contamination action. Thanks to cleaning and rehabilitation, 128,444 square meters of polluted land in 231 places scattered around 38 counties of 10 provinces were decontaminated.
19. A guideline on assessing Chemicals risks on human health, environment and ecology was developed and distributed to public by the assistance of UNEP in 2006. "Chemicals originated industrial accident risk assessment: a methodology and case study" has been conducted and published within the framework of UNDP disaster management project in 2007.
20. The Disaster Protection law regulates local governments are responsible for emergency response and preparedness plans at local level by government funding and private organization level by companies' own resource. Control and monitoring of these activities and law enforcement are carried out by local departments of the National Emergency Management Agency. Most departments have search and rescue teams. MNET and SSIA have been providing professional guidelines and trainings for those entities, which use chemicals.
21. In spite of these initiatives, mercury and sodium cyanide spillage happened in Khongor County of Darkhan-Uul Province in February 2007 was given a big lesson. As a follow up this lesson learned, the government has taken measures to strengthen its legal documents, conducting a nation-wide inventory of hazardous and toxic chemicals and monitoring of chemicals applications. UN OCHA and UNEP joint assessment team visited the spillage area and provided relevant recommendations and follow up actions has taken place.

Initiatives to reduce overdependence on the use of agricultural chemicals

22. The government agencies such as MNET, Ministry of Food, Agriculture, and Light Industry and Ministry of Health are responsible for coordination of agricultural chemicals management in the country. Widely used chemicals in agricultures such as pesticides for plant protection, veterinary, sanitation purposes, chemical fertilizers for agricultural use, pest controls have been controlled by Ministry of Health, Ministry of Food, Agriculture and Light Industry, and Ministry of Nature, Environment and Tourism through establishing a list of permitted chemicals and its use volumes every year. This enables to monitor restricted applications of health and environmentally harmful pesticides. Moreover, updated and enforced a guideline on testing and use of pesticides, fertilizers, rodent poisons and disinfectants in 2009.
23. The private sector and local communities supported by environmental NGOs are encouraged to use eco-friendly solutions on alternatives of chemical pesticides and fertilizers. Instead of using pesticides for controlling the population of steppe rats (*Brandt's vole*), local citizens started

practicing natural ways. That is to install poles with seat for carnivorous birds in the steppe to assist the birds to improve chances of catching those steppe rats which destroy pastures and agricultural field. This practice is spreading mainly in steppe zones.

24. On fertilizer, Ulziin Gol LLC a local company in Selenge Province has been supplying bio-fertilizer produced by earthworm since 2005. The Government supported this kind of initiatives and developed standards of MNS 4722-99 for bio-fertilizer and exempted equipments for bio-fuel and bio-fertilizer from customs and value added taxes until December 2012 under the policy to support SMEs.

Current emerging issues, challenges and trends

25. In spite of overall progress and actions taken on chemicals management, Mongolia faces many challenges in this field due to lack of experience and knowledge on chemical on the one side and weakness of Public and Private Partnerships (*PPP*) and public awareness in chemical management because of policies and regulations on PPPs and SMEs which were issued recently on the other side.
26. A challenging issue is a weak preparedness for potential toxic chemicals hazards, that means it needs to build/strengthen human capacity and increase supply of relevant techniques and equipment.
27. Prevention measures from chemicals hazards depend on the capacities of existing laboratories (*requires relevant high technology and equipment*) and information management systems. An assessment of service, capacity and quality of all existing governmental laboratories was conducted in 2008 and the result shows inadequacy of capacity and outdated laboratory equipment, which do not meet current demands and in addition, the government's inability to provide financial support to improve the situation.

Potential ways for improvement

28. Overall gap analysis of policies, laws, regulations along with guidelines and manuals of chemicals should be conducted nationwide involving government agencies, NGOs, and private sector. It is need to elaborate legal environment for hazardous and toxic waste disposal.
29. The government is expected to develop and improve preparedness and response plans in case of chemical spills and accidents following OCHA/UNEP recommendation in the near future. For development of these activities, professionals with adequate experience are in short supply and capacity building and support in this field are needed through cooperation with international organizations and any interested donors and institutions.
30. It is a high priority to equip NEMA, SSIA, and Customs General Department with modern laboratories, portable measurement devices, personal protective equipment and reagents for chemicals test and establish adequate stocks of these equipment and materials. Also related training on operation of laboratory equipments and identifying of chemicals are needed in order to enhance control on chemicals. The Government of Mongolia is ready to work with the private sector and other international organizations.
31. Manuals and guidelines for chemical accidents and decontaminations activities, in line with today's modern technology and developments of chemicals, are required to be in use of NEMA's everyday operations. Also huge investments in equipments and technologies for decontamination of chemical spills together with operation manuals and training are needed from other financial sources and at the same time from government budget.

32. By enhancing and capacity building of NGOs, they can improve the chemical control system nationwide. Especially, independent monitoring and watchdog activities by professional NGOs and their involvement in decision making process require improvement of the legal environment, particularly private sector's information disclosure for public use and the granting of more access to NGOs.
33. Upon stimulating academic and research institutes in chemicals, life-cycle analysis and impacts of chemicals and products containing hazardous chemicals to human health, environment, and society should be studied through public private partnership and there is a strong need to set up real economic incentives. The Government of Mongolia is keen to receive best practices and lessons learnt from other countries into the Mongolian situation via support by international development organizations and foreign countries.
34. Chemicals related information from private sector and government should be disclosed to public and other monitoring organizations. The government needs to support initiatives to establish proper reporting procedures and performance rating mechanism of companies using chemicals as well as creating incentive mechanism for any progress on productions based on life-cycle analysis of chemicals.
35. Not many studies have been done in Mongolia on impacts of chemicals and toxic and hazardous chemicals to human health, environment, and society and it still lacks wider dissemination of those few studies and at initial level. Therefore, manuals and guidelines based on professional studies and researches should be developed on the impacts to human health, environment, and society; symptoms and signs that appear during poisoning and environmental pollution; irreversible damages and hazards of chemicals to human health, environment, and society for officials and wider public use.
36. A centralized landfill site for hazardous and toxic waste should be established which uses environmentally sound methods of waste neutralization, sanitation and disposal.

TWO. MINING

Progress and achievements

Policy and regulations

The features of the law on mining and mineral industry

1. The “Mineral Law” was first issued in 1997, and since that time it was revised in July 8, 2006 and amended in July 16, 2009. The Mineral Law regulates the relations between mining minerals sectors activities and environment and socio-economic sectors. The procedures and regulations accompanied this law are being improved and the general public and private sector actors have been submitting many proposals and feedbacks to amend the law. In terms of relevant legislations, the new standards on restoration of mining sites (2008) and “Guideline and methodology to identify ecological and economic damages resulted from adverse environmental impact of mineral resource exploration and exploitation” (*Resolution No. 207 by the MNET*) etc have been reinforced as new.
2. The Law on Land (2002) regulates the ownership, use, and protection of state-owned land. The “special needs” lands such as state strictly protected area, hay making area where mining activities are prohibited by the decision of local administration of an aimag, city, district and soum are clearly indicated. In some cases, some prospective exploration and mining licenses and active mines are found within special needs lands; and some licenses could be issued even before the land is reserved for special needs officially, which makes the issues more complicated. Despite these complications, with an aim to give a priority importance to the decision of local authority and local community, local Citizens’ Representatives Meeting is entitled to a right to evaluate the implementation of the annual plan on land use and protection, and in case of unsatisfactory fulfillment, to make a requirement on stopping the activities and on law implementation.
3. Legal documents on environmental impact assessment in mining sector, natural resources use, conservation of environment, biodiversity; water, air, soil are relatively well developed, and MNET, other line ministries and local authorities are working to improve the interconnection of the laws and inter sector coordination and monitoring system on implementation of the laws. Mongolia approved the Law on Nuclear Power in 2009 and the issues related to uranium mining and processing are regulated by this law.
4. Also, the State Great Khural passed the Law on “Prohibition of mining exploration and exploitation in river catchment area, water and forest reserves” on July 16, 2009 which created a legal framework to stop license issuance in ecologically sensitive areas and to cancel previously issued licenses with a provision of compensation to license holders. The Government is, in cooperation with relevant environmental organizations, working to develop regulations, procedures and guidelines for establishing the borders of these areas where mining exploration and exploitation activities are prohibited. As a result of the proper implementation of this law, the life charging eco-system can be rescued before it degrades.

Fiscal policies for investment and decreasing market fluctuations

5. A significant proportion of the mining sector contribution to the GDP growth, a large extent, recovers the declines in other sectors. Royalty rate was 7.5% for hard rock and placer gold mine and 2.5% for the rest of minerals before the Mineral law amendment of 2006. Today it is 2.5% for coal and other common minerals and 5% for the rest of minerals.
6. Mongolia approved a **Law on Development Fund of Mongolia** with an aim to prevent from the market fluctuations and to ensure sustainable development, and revenues from wind fall tax are generated in this fund and placed at the Central Bank. The income collected in the fund was used to overcome domestic crisis and for investment and other welfare programs, which was a beneficial action during the economic crisis.
7. Recently the State Great Khural approved the Law on Human Development Fund and decided to provide each citizen of the country with certain share out of royalty income from mining exploitations in deposits. Also some part of the fund will serve as a reserve for investment stability and commodity price risk. In case the market price exceed the price set by the Budget Law, the profit resulted from the price difference shall be generated into this fund and will be used to prevent from possible future price fluctuations.

Regulations and mechanisms for implementation of the laws and monitoring

8. Not only the central Government, but also local authorities are obliged to carry out legal monitoring and ensure the legal enforcement through Minerals Law, Law on Environmental Impact Assessment, Law on Environmental Protection, Law on Land and the Law on Underground Land. The law implementation is monitored and controlled by 1) State Specialized Inspection Agency and specialized inspectors in aimags and soums; 2) Sector ministries and directly appointed local authorities and officials; and 3) Joint monitoring of aimag and local administration.
9. Civil society is one of the means to ensure monitoring of proper implementation of mining law and other regulations. And it consists of the representatives of professional organizations, associations and private entities. Also, Open Society Forum, other civil society organizations and local environmental movements monitor law implementation in the mining sector.

Guidelines for micro, small and medium scale mining

10. In order to reduce negative impact of the artisanal miners and develop small and medium sized enterprises in the sector, the Government approved a midterm program for micro or artisanal mining, which aims to reduce negative impacts of the artisanal mining activities and develop small scale enterprises. It was the first step to introduce artisanal mining cooperative to the small scale miners and to create a legal environment.
11. Two draft versions of Law on Micro Mining have been prepared. The first one was submitted by the Government and Members of Parliament, it focuses on creating employment opportunities for people, reducing poverty, protecting human health and reducing negative impact to the nature and environment. Another version, developed by the Ministry of Mineral Resource and Energy with support of Sustainable Artisanal Mining (SAM) project, is under public review since July 2009.

Public and stakeholder consultation and participation in decision-making related to mining

12. The head of the Citizens' representatives of the Aimag and capital, and Citizens' council of soum and district have an obligation to send their approval or rejection for the mineral

exploration license request within 30 days, which is an important factor to reflect locals' feedback in decision making related to mining. It is stated that public consultations to be held during the technical and economic feasibility studies, EIA, and investment agreement process, which is another vital step to listen to the voice of local people. The MNET is working to create a database of EIA and to make it open for the public.

13. Local residents now have a right to select and appoint their representatives who may carry out monitoring on negative impact from mining on environment and restoration activities, and have opportunity to control the mining activities through the local authorities. But, when companies do not provide an opportunity for civil representatives to carry out monitoring or make refusal decision, the local public can not take monitoring. Therefore, it is required to develop an incentive for companies to be more open and active on this issue.

Public governance and transparency in the mining sector

14. The Mongolian Civil Society Coalition for Extractive Industries Transparencies Initiative has been supporting public participation and discussions since October 2006. The Extractive Industries Transparency Initiative (*EITI*) is a main factor to improve the governance of mining revenues. The Government has an obligation to inform transparently to the general public about issuance, transition and cancellation of special mining permission, and any interested body has a possibility to get introduced with the special permission, cadastral registration. Also MNET has an obligation to distribute information on mining EIA, environmental protection plan and utilization of toxics in electronic way to the public. The Mineral Law states that any mining company shall transparently inform about their sold products and tax payment within the first quarter of the following year, which creates a basic condition to ensure transparency and civil society organizations provide a possibility to monitor the implementation of the law provisions.

Mining best practices

Environmental Impact Assessment and monitoring of all phases of mining operation (exploration, project development, mine operation, and mine closure)

15. The consent procedures under the Law of Environmental Impact Assessment and Mineral laws require that a exploration license applicant is obliged to do a detailed environmental impact assessment, to prepare an environmental protection plan and environmental monitoring program, which reflect that the expected impacts of proposed activity does not exceed carrying capacity of the ecosystem, and to propose restoration and rehabilitation measures to reduce the impact.
16. According to the EIA Law and other regulations, MNET screens all business proposals submitted by state organizations, entities and individuals in terms of review of possible impacts to the environment. A detailed EIA is carried out by the specialized private companies that possess a permission license issued by the MNET. With current structure of EIA, relevant state organizations are able to take a control over all phases of mining operation. On the project development phase, MNET screens and revises all detailed EIA reports of project proposals and State Specialized Inspection Agency monitors mine operations and mine closure.
17. Currently, detailed EIA reports are not publicly accessible, however, with support from the World Bank, an activity to make all previous reports accessible to the public by establishing a web based database is being implemented.

18. There are few good starts that some mining entities pay attention in making not only technical but also biological restoration. The companies named “Altandornod Mongolia”, “Monpolimet” in Zaamar soum, Tuv aimag, organized demonstration training involving 8 aimags, and MNET and SSIA organize this training on annual basis.

Partnership of Private sector and Government on Development of Sustainable Mining

19. The State great Khural started to develop a strategic paper aimed at accelerating economic growth through export-oriented, private sector driven economic development and endorsed a State Policy Paper on Public-Private Partnership on October 15, 2009. The PPP policy highlights 1) private sector led economic development; 2) improve budget efficiency, and enhance regulatory framework for private sector; 3) strengthen public-private partnership through improved delivery of social services and infrastructure with private investment.
20. The Government is working with a strategy to increase State ownership percentage on mining industry and to support private sector through establishing new state-owned companies such as Erdenes MGL etc. In connection with the PPP policy, a draft law on Concession has been developed and is being discussed by the public and stakeholders.
21. With an aim to improve the public and private sector partnership and to make mining transparent to the general public, the Government has been operating Mongolian Extractive Industries Transparencies Initiative under the Prime Minister’s supervision since 2006.
22. The Ministry of Mineral Resources and Energy, in cooperation with the State Authority on Mineral Resources and Oil and Swiss Development Agency, has been implementing “Sustainable Artisanal Mining project” since 2005. The scope of this project includes activities to adopt environmentally friendly technologies and best practices in the micro-mining sector, provide on site trainings, and develop legal regulations, organize trainings for artisanal miners on environmental management and rehabilitation,

Disaster Response Plans and Preparedness at the local level

23. Activities to develop disaster and mine risk assessments guidelines are at their early stage in Mongolia. Although, the law states that professional organizations shall develop organizational and local risk assessments, detailed regulations and guidelines on selection of risk assessment organizations have not developed yet, and the emergency management departments in urban and rural areas are working toward it.
24. The National Emergency Management Agency is responsible to develop Disaster Response Plan at both national and local levels and to provide professional support to state organizations and companies in developing disaster plan. They are working actively according to the regulation about informing and cooperating with aimag, city and national emergency committee.

Risk assessment of mining activities

25. Although, mining companies are responsible to carry out a risk assessment in their mining, it is not being followed. Only few internationally invested bigger mining companies started to in doing risk assessment, which is a good example for other companies. An objective is set to make all mining companies comply with this provision of regulations

Restoration of eco-system degradation and provide compensation to the communities of adversely affected areas

26. Issues about carrying out assessment on human and eco-system affected by mining activities, restoration of degraded nature and establishing compensation fee are at their early stage of development in Mongolia. Any violations are investigated by SSIA and local authorities and government organizations in line with law and measures to stop the mining activities and even close the mine are taken.
27. But in very few cases, compensation fee for the damages established by court was paid and no incident that local people who adversely affected by mining activities were given compensation was registered, which shows that the legal regulations, procedures and guidelines, assessment methodologies are not developed yet. A Law on Compensation fee for damages caused by adverse affects on environment is under discussion.

Technological, institutional and social initiatives to protect the health of mining workers

28. The Ministry of Social Welfare and Labor conducted occupational safety and health survey in cooperation with ILO and produced National Occupational Safety and Health Profile of Mongolia and the State Great Khural, upon public review, approved the Law on Occupational Safety in 2008. Since enforcement of the law, general requirements in workplaces and implementation management, structure and organization, as well liabilities in case of breach became clear for all employers and employees. All concerned citizens and entities now obey the requirements of standards on technology and labor safety. The article 44 of the law stipulates obligations of mining companies on protection of health of mining workers and states that specialized inspection agencies and local health professionals are obliged to monitor implementation of this law.

Mine Closure Planning (Land use plans & site restoration, safety, closure, waste dam and piling, waste water management, off-site infrastructure, community socio-economic programs and employees)

29. The Mineral law regulates mine-closure activities and environmental protection plan. The law says “the rights and obligations of a license holder expire upon the termination of the license, except for their obligations regarding environmental restoration and mine closure” (*Article 53.3*). During mining closure period, mining site should be restored to make it safe and after this the site shall be handed over for public use. And possible risks shall be identified on map and warning signs should be marked and then the site shall be given back to the local authorities.
30. Mine closure plan reflects the issues such as providing local workers who worked for the mine with other workplaces, transfer, further sustainable development socio-economic means, hand over built infrastructure to the local community, carrying out environmental restoration, and handing over mine site etc, but in the reality, the implementation of this plan is not implemented well.
31. The Mineral Law provides the local authorities with and possibility to participate in decision making process. When license holder hands over partially or fully the mine site, aimag, soum and district Citizens' Representatives Khural shall review the fulfillment of environmental protection plan and the Governor shall issue a description for mine closure.
32. Currently in Mongolia there are very few mines that were closed according to the mine closure plan stated in the law. There were cases, some companies left the mine site without doing restoration after extraction of the minerals resources, and it has been regulated that the MNET and SSIA shall carry out joint monitoring on restoration and developing integrated report.

Current emerging issues, challenges and trends

33. Although efforts is being made to implement damage assessment procedures through establishing legal regulations on payments for causing negative impacts to environment and estimating chemical and physical effects of those impacts, lack of national capacity and relevant experience retards the effort.
34. Government faces considerable constraints in creating legal framework for micro-mining enterprises. Increasing workplaces to replace current artisanal miners duty is a challenge due to the inadequate social welfare policy and country's socio-economic circumstances.
35. The EIA law stipulates consultations with local citizens during mining EIA process to incorporate their views for further decision making. However, there is no clear mechanism how to incorporate public feedback and no control on how the feedback is reflected. The existing regulations need to be revised to make clear about mechanisms and regulations to incorporate public voice in the decision making process and to cancel non-transparent decision making.
36. The passage of the anti-corruption legislation, the implementation of the Asset and Income Declaration requirements for senior government officials and Parliamentarians, and the adoption of the Extractive Industries Transparency Initiative (*EITI*) with the support by the World Bank, are significant achievements by the Government of Mongolia. However, much remains to be done, and the Government should continue to strengthen its public sector governance capacity and implement the anti-corruption law effectively, and promote transparency in government-business interactions.
37. In connection with the approval of the Law on prohibition of mining exploration and exploitation in river catchment area, water and forest reserves by the State Great Khural, it is required to develop complex coherent legislative solution on liability, pollution penalty fee issues in order to improve the protection of the river catchment area and water and forest reserve areas.
38. There are several practices of mining companies on technical and biological restoration. But compared to the 350 mining companies that possess licenses, this is not satisfactory. Only few profitable bigger companies such as Erdenet, Ivanhoe Mines and Boroo gold mines have done rehabilitation, while other companies are on their first stage of restoration.

Potential ways for improvement

39. It is required to stop illegal actions of artisanal miners through creation and provision of alternative workplaces to the artisanal miners.
40. Improve the protection of river catchment area, water and forest reserves areas, implement restoration measures in damaged areas, take a measure to cancel all the licenses given in those areas. Need to take into account their damage to the environment when solving the issue of compensation from the Government to the companies that had their licenses cancelled.
41. Create a legal basis where no less than 15% of the mining income to be used for conservation and natural resources restoration activities, and negotiate at international level about following international integrated policy on this.

42. As mentioned above, it is needed to implement the recommendations given by the UN Office of Coordination of Humanitarian Affairs and UNEP to this programme, organize experts who will be responsible in taking measures in case of mining and chemicals disaster and providing trainings on labor safety and neutralization activities. Organize methodological training to the specialists and workers of laboratories that check mercury and sodium cyanide content in the environment and biological objects. Also it is required to develop medical guidelines and rules on how to diagnose and treat sharp and gradual poisoning with mercury and sodium cyanide, and provide necessary trainings to medical staff. Build national capacity in carrying out risk assessment of chemicals used in mining that can affect environment and human health.
43. It is needed to build capacity of the disaster study center under National Emergency Management Agency in terms of risk assessment of mining and chemicals. In collaboration with the Disaster Study Center, Mongolian University of Science and Technology should prepare students on mine accident rescue and risk assessment for future demands on mining industry. Enhance first aid groups at the bigger industries and mines for further professional development and support representative-fire officers from NEMA at the industries.
44. Make the report of EIA transparent to the general public and create an legal mechanism to consider feedback and proposal from local community and stakeholders in decision making of detailed EIA.
45. Develop and implement a methodology to provide and calculate compensation to local residents of the areas adversely affected by mining exploration and exploitation activities. Especially, it is required to carry our research on vegetation cover degradation caused by soil and pasture degradation, soil erosion and dust, by region by region. Evaluate the cost of natural resources scarcity and imply compensation. Assess the risks on biodiversity and protect.
46. Implement programs and training to strengthen national capacity to evaluate negative impact from mining development to urban development and society.
47. The provision on mining risk assessment is not fully reflected to the Law on Disaster Prevention, the Law on Minerals and other related regulations. Therefore the Government should pay more attention to reflect the provision into respective legislative documents.

THREE. TRANSPORT

Progress and achievements

Policy on providing transportation service to the rural and poor people, and achievements of implemented actions

1. The Millennium Road project which was started in 2000 is being implemented in Mongolia with a plan to construct paved roads of 7546 km long connecting Mongolia's east to west horizontally (2653 km) and five parallel vertical axes from Russian Federation to China by 2016, and Ulaanbaatar will be connected to all aimag centers by paved roads. It is planned to build a total of 3097 km of road by 2012 in order to improve transport access of residents living in rural and suburb areas.

Currently totally 2597 km long paved road, 1961 km gravel road, and 1902 km of improved road have been built. The Mongolian Government, with an aim to plan road construction investment efficiently, is creating a legal framework that can attract investment from private sector to road construction on a re-imbusement basis.

2. Mongolian Railway network which includes the Trans-Asian railway and connects Mongolia's three biggest cities is the most reliable alternative transport with 1810 km in length and it is going to expand its length by building new railway lines to major mine sites in Gobi region, which is planned to be financed mostly by private sector. This will enable residents of Gobi aimags to travel all year round and give open access to Ulaanbaatar and border cities. Depending on season and weather, there are more than 12 domestic and 7 international air destinations in Mongolia.
3. During 2006-2007, GoM financed the activities to build the Transportation Service Center under the Ministry of Road and Transportation, and other local transportation centers and purchased buses for inter-city transportation. As a result of this investment auto road is ensured to be the most accessible transportation mean to connect population spread around wide steppe to the market.

Removing subsidies on fuel

4. The Government of Mongolia announced that transport services and transport users will not be subsidized by Government except in special cases (*established by Government specific directives*). Although, the oil market is fully dependent from the Russian Federation and international market fluctuations, Mongolia attempts to maintain a stable price on fuel. Currently small amount of unprocessed oil is exported, and the Government provides tax removal on fuel imports in order to safeguard domestic market from foreign oil price pressure

Encouraging energy efficiency

5. The Government approved the Liquefied Petroleum Gas (LPG) Program by the resolution in 2006, and the companies PETROVIS LLC and ORGIL Oil LLC started to sell bio-ethanol fuel "eco-92" in Ulaanbaatar in October 2009 and that was 10% cheaper than imported fuel. The UNIGAS LLC, established in 2004 in partnership with Japanese Sumitomo Corporation, ICHI-

TAKA LLC and New Tel Card LLC placed auto equipment of liquefied petroleum gas next to PETROVIS service stations. Most private taxi service providers attracted as UNIGAS customers benefiting from economically efficient and cheaper prices. Since 2005, UNIGAS started the supply of LPG to industrial customers.

6. Coal-to-Liquids technologies are being studied by private sector such as the Industrial Corporation of Mongolia and the Coal-to-Gasoline project (<http://icm.mn/gazoline.html>) to be completed by 2013 is being implemented successfully. And the project is supported by the Government of Mongolia and NCCI and Petro-Erch Company.

Providing the poor with reasonable alternative transportation

7. The low income poor people mostly live in pre urban and mountainous areas that are far from centralized infrastructure and they have limited access to public transport. In some newly established districts, private minibuses runs to connect them to central routes of the public transportation, which makes transportation cost of an individual double, and we are working to solve this issue. Discounted travel fee by public bus is provided to low-income people, 50 percent discounted rate for students and full coverage of fees for elder persons and children under age of 8.

Regional and global transport system integration encouraging efficient choices

8. The Government supported the concept of “horizontal” and “vertical axes” of transport development in coordination with the Regional Development Policy of Mongolia. In particular, Mongolia will continue its close collaboration with and participate in the Central Asia Regional Economic Cooperation (CAREC) initiative to diminish physical and legal barriers to international trade and transport.
9. Mongolia joined the transport networks of Asian Highway and Trans-Asian Railway Network of UNESCAP and is implementing the Trans-Mongolia Project. Mongolia is now being connected to Asian Highway system and routes of AH3 (1009 km), AH4 (758 km), and AH32 (2325 km), which positively influence Mongolia to get closer to the international market and provide an opportunity to create workplaces and to reduce poverty.

Urban transport planning and policies

10. Due to urgent need to approve a revised integrated transport strategy and action plan, improvement of the transport strategies prepared with support from the World Bank and ADB. Ulaanbaatar City Development Master Plan study has been carried out with the support from JICA, and projects related to the traffic light, sign renovation and camera setting are being implemented by the loan from the Korean Government.
11. In accordance with the Government Program of 2008-2012, some of objectives of which are to reduce pollution in Ulaanbaatar through improving public transportation means and shifting public transport on natural gas, the Law on Road and Transportation was amended in 2009 respectively to shift the public transportation fully on electric and natural gas fuels. This will be enforced starting from January 1, 2012.
12. As part of public transportation renovation work, the Government purchased 400 big buses from South Korea and these buses are now substituting the insufficient public transport service in Ulaanbaatar. The minibuses which used in down town area are now moved to serve in pre-urban areas.

Policy on increasing vehicle efficiency and reducing emissions of toxic smoke

13. In order to reduce negative impact of automobiles on environment and human health in 2007, Mongolia has freed import taxes on hybrid vehicles and increased taxes on used cars depending on the age of cars according to the new Excise Duty Tax Law of 2006. According to the law and new standard MNS 5012:2008 on public transport issued by the Mongolian National Standardization Center, the usage of public transportation vehicles that are more than 12 years old and cars used for 10 years in taxi services will be prohibited, starting from April 2011.
14. Actions have been taken to revise the standards on toxic emission from automobiles and improve their control. Standards on "Permitted maximum level of diesel engine car emission and their measuring methods" - MN S5014:2004, and "Permitted level of benzene engine automobile emission and their measuring methods"-MN S5013:2004 were redeveloped by the Road and Transportation Policy Department of the Ministry of Road, Transportation and Construction, Urban development, Transportation Service Center, Electric Techniques and Machine Research company in collaboration with Air quality service authority.
15. With an aim to reduce impact of fast growth of automobile on human health and the environment, to improve the security of transportation means, reduce number of traffic accident, and decrease the number of unqualified automobiles, during 2003 and 2005, over 24 auto diagnostic inspection centers were established in all aimags and big cities. This enabled transportation authority and Traffic police to have an integrated information database to control emissions of vehicles and efficiency of fuel usage.

Transportation technology research and development (at public and private sector levels)

16. Mongolian electric transportation company is assembling trolleybuses from parts imported from Russia, Korea and China. The Government supports this trolleybus production, based on fuel and energy efficiency. Mongolia lacks of experience on succeeding transportation technology as all the transportation means are imported.

Adjust and revise road, rail and marine systems construction standards in connection with climate change impacts (sea level rise, and increased frequency and severity of weather events)

17. Extreme weather condition of Mongolia and its hot summer and cold winter negatively contributed to the quality of the road condition and reduced the operational period of the road. The technology used in road construction system is outdated. It is needed to upgrade current technology to the level of international standards.

Capacity building needs to carry out assessment on transportation activities in order to develop integrated plan (movement in the city, reducing traffic jam, movement without motor engine automobiles, develop program to increase automobile efficiency, establish the amount of financial incentives and system to coordinate various of luggage transportation) ,

18. One of the critical issues in Ulaanbaatar is traffic jam on the road and slow traffic flow. The first urban planning of Ulaanbaatar city was developed for 10 times less automobiles than today therefore it requires renovation of transportation techniques and sufficient investment for rapid public transportation means.
19. Although foreign practices are used to develop auto transportation sector master plan, adaptation to the climate, geographic location and socio-economic context of the country requires improved capacity of national professionals and promoted proper public awareness. Also, there is a need to increase private sector participation in public transportation, set up government incentives and remove barriers especially on those entities and citizens who serve low income

citizens in pre urban areas, *gher* district, and to organize methodological and awareness activities to change old mentality in this sector.

20. As substitute of having expensive foreign experts, there is an increasing need for capacity building of national staffs through trainings and extensive exercises in public transportation, transportation, urban planning, auto road research, decision making system and development of alternative options. Also it needs to reform and qualify the curriculums of academic institutions that prepare specialists in transportation sector.

Current emerging issues, challenges and trends

21. In economic transition period before 2009, Mongolia faced difficulties on public transportation due to technical inefficiency and the non renewal of formerly state owned public transport companies. The Government of Mongolia has given consent to private sectors to run intercity transportation services through establishing contracts with private companies. However, the quality of service is not good enough to have modern comfortable and safe transportation, because of their poor financial capacity.
22. Construction process of paving the roads in pre- urban areas of Ulaanbaatar city is going very slow and becoming as sources of dust, air pollution and causes difficulty in social services as people have to walk long to reach bus stops. This is an issue that requires a complex solution in tight connection with urban planning, land use, investment and management issues.
23. The government has been taking tax incentives for hybrid vehicles and tax burden on old vehicles more than 10 years. But those old cars are being sold to rural area where they are creating another problem on environment. There needs to be coordination and policy on this matter.
24. As the quality of petroleum is not classified by lead content that has toxic impact on human health therefore it is required to introduce revised strict controlling standard and limit the leaded fuel importing.
25. The State Great Khural approved a Law on Technology Transfer in 1998 and the Law on Science and Technology in 2006 in order to improve legal condition for transfer of modern technology for development sectors including transportation. There is a need to modify related regulations in association with this law and improve implementation.
26. Transport sector lacks investments that ensure sustainable development based on climate change reduction and adaptations
27. It is very challenging for Mongolia where there is no clear strategy on cleaner vehicles and fuel economy to reach 50 percent efficiency improvement in line with IPCC recommendations.
28. There is a limited economic capacity and know how technology that reduces urban air pollution, green house gas emissions, while increasing savings from avoided imports of oil, reducing health impacts, energy dependence and in general a contribution towards a move to low carbon/green economies. Measures should include cleaner fuels standards, limiting the import of old used vehicles, tax incentives, etc.
29. However, progress in terms of improved fuel and emission technologies is ultimately offset by the ever increasing number of automobiles. Human capital for regular monitoring of emissions standard along with more sustainable modes of transport is essential.

Potential ways for improvement

30. For Mongolia, railway road is the most efficient way of transportation, however, due to limited number of passengers, railroad service in Dornod aimag and Ulaanbaatar-Baganuur route have been stopped. But there is a research carried out by two private companies and “Ulaanbaatar” Russian- Mongolian joint railroad company about feasibility of connecting Umnugobi aimag to the railroad in the east to Mongolia, which is a main Trans-Asian railway. And it is vital in increasing passenger transportation service.
31. Financial support from the Government and foreign donors in supporting private sector led energy efficient transportation is urgently needed.
32. It is needed to support import of Lead-free petrol through removing tax and excise duty taxes and to develop relevant standards requirements.
33. Public mass transportation systems in urban areas with improved affordability, efficiency and convenience are required to reduce automobile use. Expansion of the roads, construction of bridge gateways may accelerate traffic flow, but it will encourage the use of automobiles more and thus, will never solve traffic jam and associated environmental impacts. New policy, strategy and economic incentives are needed to improve integrated approaches including land use planning and transport strategies to encourage patterns that reduce demand and improve the affordability, efficiency and convenience of multimodal transportation in Ulaanbaatar.
34. The further from Ulaanbaatar city, the higher is the fuel price, and rural customers have no options rather than using expensive fuel. Therefore a measure should be taken to maintain fuel price lower in the rural areas. Although, bio-ethanol and LPG have been started to be used in Ulaanbaatar and other bigger cities, rural residents have no access to such fuels.
35. Innovation of standards and technologies for road maintenance that are suitable to weather conditions in Mongolia is essential. Strengthening national capacity by learning from experienced countries is required accordingly.
36. Policies to avoid intensive use of transport for example, through better spatial planning, time regulation of public transport, creating infrastructure for walking, shift to cleaner modes of transport (*non motorized transport*) are required to be devised and implemented
37. Implement activities to promote use of electric automobiles and public transportation, create automobile-free days & streets and increase capacities of environmentally friendly transportation means.
38. Need to take immediate measures to decrease green house gas emission and air pollution, reduce the use of imported oil, and reduction of human health impacts through energy efficient transportation system and to bring positive impact on socio-economy through reduction of dependency on energy application as well to develop clean fuel standards, to ban the import of second hand automobiles using tax means.

FOUR. WASTE AND WASTE MANAGEMENT

Progress and achievements

Policy measures for the prevention and minimization of hazardous wastes

1. At the international level, Mongolia joined “The Basel Convention on the Control of Transboundary Movement of Hazardous Wastes” in 1996, “Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade” in 2001 and “Stockholm Convention on Persistent Organic Pollutant” in 2004.
2. The “Law on prohibition of importing, transit and export of hazardous waste” was approved in 2000 and the “Law on household and industrial waste” in 2003.
3. In line with the international conventions on hazardous wastes, the Government of Mongolia approved the “The National Program on Waste Reduction” for 10 years since 2000 and has been implementing the program. It has planned to develop and implement strategy that consider revision of the national program and introduction of 3R principles (*reduce, reuse and recycle*) starting from 2010.
4. With an aim to improve the waste management, Mongolia developed the following regulations: “A rule on classification, collection, temporary storage, transportation, treatment of hazardous wastes” (2002); “Regulation and procedures on disposal and landfill of hazardous waste of business entities, and requirements on waste containers and waste disposal sites” (2006); “Methodology for calculating waste norms” (2006); “Payment calculation methodology for hazardous waste” (2006); “Classification and characteristics and hazard level of waste” with joint order No. 324/318/336 of Ministers for environment, health, and education, culture and science (2006); “Regulation on labeling hazardous waste” (2006); “Regulation on national reporting and inventory of hazardous waste” (2009).

Initiatives to treat, recycle, reuse and dispose of waste at its source of generation and regulatory mechanisms (Polluter-pays principle)

5. Since 2004, with the support from the Government of Japan, and JICA “The Solid Waste Master Plan of Ulaanbaatar” was developed, and as a result of the project “Improvement of Ulaanbaatar City Waste Management System” approximately 4 ha of area in Ulaanchuluut disposal point was cleaned land filled and restored with soil and planting. Also a new disposal site was created in an environmentally friendly way. And at the next stage, project will focus more on implementing 3R waste management principle at individual, households and business entity levels and promoting reduction of excess consumption by supporting products reuse practices based on certain economic incentives.
6. With an objective to create a nationwide network of small and medium scale waste recycling factories, the Bureau on Advanced Technology Support, in cooperation with private companies such as “San Orgiu” and “New Cycling” has installed plastic bag recycling facilities in Dornod, Tuv and Dundgobi aimags.
7. To reduce waste and improve waste management of Ulaanbaatar city, the following projects such as World Bank loan project “Public Services improvement of Ulaanbaatar city”, grant

project of Australian Government “Waste Composition study of Ulaanbaatar” in cooperation with the WHO and American “Cal Recovery” company; “Green Productivity Training” in cooperation with Asian Productivity Organization have been implemented which promoted methodologies and technologies for waste management.

Treatment, reuse and recycling of hazardous waste and transforming it into useful thing

8. “Kornezit”, A Hungarian Company, winner of government organized international and national bidding, has carried out a technical and economic feasibility study on Establishing centralized treatment plant for hazardous waste
9. In total, more than 200 trucks are serving for waste transportation service in Ulaanbaatar. 10 types of 1568 waste bins, which produced in Russia, China, Korea and Mongolia, have been placed in city streets. A new system that provides on call service to transport classified waste from residents by packing it in bags in the building entrance and apartment is functioning. 2 factories to produce bags for food and household use are operating now in Ulaanbaatar.
10. Local initiatives to build waste treatment and disposal facilities at aimag centers next to industrial areas were supported by the government and donor funded projects. For example: San-Orgiu LLC at Darkhan town was granted funding to implement an initiative to recycle plastic bags and produce fence, street benches.

Environmentally friendly waste disposal and treatment

11. According to the Ulaanbaatar city Solid Waste Management Master Plan developed by JICA, Japanese specialists are assisting in the project “Improvement of Ulaanbaatar City Waste Management System” and planning to introduce 3R waste management principle, to establish central waste disposal site at Narangiin Enger and to improve the chain of waste collection and transportation facilities.

Census on hazardous waste production and its treatment/ disposal and contaminated sites

12. Ministry of Health, MNET and Ulaanbaatar City Municipality have been developed together a plan to establish a designated treatment plant for medical hazardous waste and in addition to this, they developed a Joint Strategic Plan for Medical Waste Management and the plan is now being realized.

Stopping illegal trans-boundary transportation of hazardous waste

13. As per the obligation of a party to the Basel convention, MNET organizes control and tracking trans-boundary transportation of hazardous waste together with the recipient country’s Ministry in charge for environment. An example is Glori International LLC had exported 3,000 ton lead acid battery disposal to Republic of Korea under the control of both countries’ ministries.

Policy on stopping, reducing, reusing and recycling waste

14. Annually 97, 5 thousand tons of waste is collected and transported from apartment buildings, *gher* district, families and organizations, economic entities and roads by public service companies to the central disposal site. According to the *Polluter-pay* principle, MNET submitted and approved the law “Prohibition of use and importing of some plastic bags” by the State Great *Khural* and it decided to restrict the import and use of plastic bags thinner than 0.025mm for household and packing purposes from January, 2010.
15. Kokusai Kogyo, a Japanese company has been providing waste management capacity building support in order to ensure the implementation of the “Law on Household and Industrial Waste” and to increase participation and competition among private sector in waste disposal and collection activities. “Ulaanbaatar Waste Service Fund” was established in 5 districts of

Ulaanbaatar city. It is a system where waste payment of the residents collected into the fund and used for reimbursing the waste transportation costs of servicing companies based on the number of transportation routes. An integrated database for waste disposal is being created that will record the number of disposal transports by companies and other relevant information, to make the waste collection and transportation services beneficial for both society and service providers.

Current emerging issues, challenges and trends

17. There are some constraints in improving techniques and technologies of city waste water treatment facility and facilities that treat waste water from tanneries and food factories, in clarifying the roles and participation of private sector and in introducing *Polluter-pays* market principles.
18. According WHO survey results, it was established that one citizen of a city produces 0,354-0,535 kg waste a day. 75% of total waste is collected by city waste maintenance organizations and 15% is transported by the organizations with their own trucks and 5-10% of waste is left without being transported.
19. Waste management reform is in its early stage of development since Mongolia's transition to market economy. The relevant legislative acts for this sector were started to be developed from 2000. But stakeholders' coordination mechanism is not perfect yet and some solid waste infrastructures are still under the state ownership. The Government has not fully reviewed and amended provisions to increase private sector participation in the relevant laws, regulations and programs and it still bears most of the responsibilities on its shoulders.
20. Currently, there are 103 wastewater treatment facilities. 41 of them are operating more and less normally and 35 malfunctioning because of financial and technical problems. Most of the 29 underground engineering pipes of total 877 km are being repaired step by step. However, it is far from completion and there is still needs to attract private sector investments. There are only eight biological treatment facilities functioning and they treat only 200 million m³ wastewater, annually. "Khargia" treatment facility was established in 1972 with a purpose to mechanically treat industrial waste water from tanneries and other industries. However, it has stopped functioning due to out-dated techniques and technologies. Ulaanbaatar municipality is planning to re-own releasing former private management and renovate the techniques and technologies. In spite of this, the municipality experiences difficulty with finding proper technical and technological solutions for renovation of this important treatment plant.
21. Residents of *gher* district dispose ashes and waste water directly in the streets, especially in winter time. Because of this bad habit, 60% of the waste is spread in streets of peri-urban area of Ulaanbaatar city. Therefore, to reduce such waste, there is a high demand to establish reliable private sector based waste collection system in gher district area in Ulaanbaatar.
22. Water and waste water issue is dealt by different ministries, and it is not clear distribution of responsibilities related to waste water treatment and reducing waste disposal in water and soil, the measures to be taken for improving waster water and toilet condition, improving sanitation infrastructure of tourist companies and decreasing environmental problem etc are left without solution.
23. In connection to the high rate of imported second hand transportation means and bicycles from abroad, environmental pollution is increasing a lot.
24. Mining companies and auto technical repair centers do not handle properly their used oil and technical devices, which cause a big spillage of waste. Currently recycling factories are in their

early stage, and most of the recycling materials are collected by the initiatives from the private companies and exports to neighbouring countries.

25. The Governmental Action Plan does include waste disposal, treatment and landfill activities in the socio-economic development section. However a few aimags have public funding to dispose waste in environmentally friendly ways. There is no factory that possesses full recycling capacity for solid waste in Mongolia.

Potential ways for improvement

26. Solid waste traditionally was buried in the ground in Ulaanbaatar city and other aimags levels in a simple way. Although there are proposals on building of waste processing facilities, unfortunately they lack funding due to economic difficulties . Therefore it is a priority to attract donor funding in creating market responsibility system to reduce waste, in carrying out appropriate studies on waste recycling and processing in a environmentally friendly way and in introducing advanced techniques and technologies to produce energy based on solid waste.
27. Also it is needed to implement principles of sustainable consumption and production through reducing certain import products and their packages.
28. There is a need to shift current strategy reduction, recycling and reuse of waste to a strategy on minimization waste at its source in all sectors and establish a corporate social responsibility system on waste reduction.
29. Promote choosing green products and services options that do not produce waste, introduce green product and eco-labeling system, increase awareness of the public on reducing waste amount.
30. As dominant part of solid waste consists of ash, it is required to introduce technology on processing of ash and to promote ash minimization activities.
31. A feasibility study on establishing a centralized water supply and sewage system in gher districts was developed in the framework of Ulaanbaatar City Master Plan, and it is required to clarify responsibilities of public and private institutions and find funding resources. There is a need to conduct feasibility studies on introducing eco friendly sanitation facilities to tourist camps and gher districts to reduce pollution and on producing bio-fertilizer
32. It is required to continue establishing landfill sites in urban areas and in connection with a policy on transition to waste classification system, it is required to build factories that recycle, reuse and dispose of solid waste.

FIVE. 10 YEAR PROGRAMME ON SUSTAINABLE CONSUMPTION AND PRODUCTION (SCP)

Progress and achievements

Inclusion of SCP in policy papers

1. MDGs based Comprehensive National Development Policy a Fundamental policy paper of Mongolia set the following objectives: "...protect and strengthen Mongolia's sovereignty; ensure sustainable development of science, technology and environment, strengthening intellectual development and human capacity; create knowledge based economy sustained by high technology; to develop the country to be a middle income country through prioritizing environmentally friendly production and services...", "...ensure development of pure national and advanced technology through supporting scientific organizations and private sector through "...intensive development of export-oriented, private sector-led, high technology-driven manufacturing and services, with particular focus on information, communication development, promoting bio and nano-technology.
2. The policy of the Government action plan for 2008-2012 to support advanced technology was focused on waste minimization at all production cycle and promotion of efficient use of natural resources, especially raw materials, energy, water, and reduction additional costs of transportation as well as on the implementation of public awareness raising activities for sustainable consumption and production.
3. A policy is set to establish legal accountability for polluters in order to implement polluter-pay principle and to encourage environmentally friendly production through various incentives
4. The Government fully supports new initiatives of countries in the region on increasing eco benefits and resource efficiency, including Green Growth and Cool Earth Partnership programs and actively collaborates to benefit and to learn from these initiatives.
5. Mongolian Climate change vulnerability risk assessment was carried out and National climate change plan was revised and adaptation strategy is under the development. This will be the main strategy to promote green production and consumption.
6. Although the Government of Mongolia is making good efforts, heavy dependence on world's economy and raw materials market as well as country's weak economic capacity and absence of incentive mechanisms to promote sustainable consumption do not yield desired results.

Inclusion in the poverty alleviation strategies

7. National Poverty Alleviation Program (NPAP) between 1994 and 2000 had provided valuable support to local governments for developing social and economic infrastructure. Mongolia faced an economic crisis with 331% inflation in 1993, 70% in 1994 and that time the Government of Mongolian had no other mission except providing support to the estimated 26% of total population living under poverty line and stabilizing domestic economy and continuing economic innovation. Nevertheless, NPAP has played an important role in ensuring economic growth, poverty alleviation, and policy and system reforms. The program continues to sustain

and improve livelihoods of the people especially, rural herders, nowadays.

8. The Poverty Reduction Strategy Paper for 2000-2004 was focused more on rural development and aimed at poverty reduction of herders who lost their livestock in winter disaster through improving pasture use and pasture management. The Economic Growth Support and Poverty Reduction Strategy (*EGSPRS*) for 2003-2007 prioritized deepening of economic reforms, improving financial and banking sector, and develop national industries in order to reduce poverty especially in rural area while ensuring sustainable development and ecological balance, to mainstream nature conservation and environmental policies as priorities within regional socio-economic development. This paper later became a basis of Mongolia's National Development Strategy.

Inclusion in National and Local Development Planning, including Infrastructure Investment plan

9. The Regional Development Concept was endorsed by the State Great Khural in June 2001 and was followed by the Law on Regional Development Management and Coordination and the strategy paper "Midterm Strategy on Regional Development for 2010" (*June 12, 2003*).
10. As reflected to the Government's Action plan, it has an objective to reduce air pollution by reducing use of raw coal and improving engineering infrastructure of gher district, to decrease environmental pollution through gher district re-planning and producing clean coal. Intensive use of raw coal is very common in daily life of the people in our country which has unique cold climate features, especially in winter.

The government supports investments in to developing production industry in rural areas, establishing railway infrastructure, which promotes the development of mining industry in the Gobi region.

11. With an aim to protect forest resources, a ban on application of timber as support stick for structure at construction sites was adopted and recommendation was given to use metallic or plastic support materials to replace inefficient and excessive use practice of timbers made through cutting young trees. It was an important decision to conserve forest resources.
12. In order to increase green spaces and open areas in urban planning, a standard on "Amount of Green Structure in Construction and Urban Planning" has been approved. It stipulates that no less than 15% of the construction area shall be covered with green structure.
13. The Government developed a Program on Healthy City, and is planning to organize urban planning and transportation policy in an environmentally friendly way.
14. A study on General Planning for Ulaanbaatar City Development was carried out and Master Plan 2030 has reflected objectives to develop Ulaanbaatar to be a densely populated with environmentally friendly public transportation system to establish social infrastructure focused on energy efficiency and resources recycling system, providing cheaper apartments to improve urban environmental quality.

Policy to support green purchasing

15. In 2005, the Law on Public Procurement (*LPP*) of 2000 was replaced by the Law on Public Procurement of Goods and Works. To complement the law, Mongolia adopted the General Guidelines for Procurement of Goods and Works and General Guidelines for the Use of Consultant, setup bidding committees and revised sample documents for bidding and other relevant regulations that were came up since 2000. There are no direct articles or provisions

on SCP principle however, it is possible to make a reference to relevant standards suitable for SCP principle during the development stage of bidding.

16. With an aim to implement a policy to support green growth, the Government incorporated the activities to promote SCP principle among public into its action plan and National Productivity Development Center NGO is in charge of organization of training and promotional activities to support green production.
17. The National Statistical Office, with an aim to set up the economic costs of natural resources deprivation and environmental degradation, has developed concept, theory, methodologies on definition of indicators in the framework of the environmental account which is a part of national system account.

Instruments to implement SCP principles Awareness-raising campaign (on SCP, including water conservation, energy efficiency, waste minimization and recycling)

18. National Chamber of Commerce and Industry is focusing on improving ecological education of business sector players through publishing new and reliable information on clean production.
19. Human Development Report 2010, is being prepared under the theme “Environmental Challenges and Human Development”, and environmental issues that are included in the report were analyzed using human development trends, which assessed as an effective way to assess human development, and multi-party stakeholders are involved to review current report status.
20. Actions to install water saving and efficiency technologies and water meters are ongoing in order to ensure efficient water consumption in the industry.
21. The General Requirements (*MNS 5480-2005*) on tanneries, wool processing factories; and standard of acceptable level of pollution of technological wastewater (*MNS*) are in force.
22. World Bank together with the program “Policy and Human Resource Improvement Fund of Japan” supports the “Capacity building on developing and implementation of carbon funding project”. 2 project proposals on hydropower station and a project proposal on replacing non-centralized heating boilers have been submitted to the UNFCCC Executive Committee. 2 seminars on “Phases of CDM projects” in cooperation with the Business Development Center and “involvement into CDM projects” in cooperation with the Golomt bank have been organized.
23. In order to ensure the funding resources for environmental restoration and conservation, it is planned to create a legal background for establishing Environmental Integrated Fund, which accumulates its fund from natural resources and minerals use fees.
24. With an aim to implement polluter-pays principle, draft laws on “Payment for air pollution”, and “Procedure on Payment for Negative Impact on Environment” have also been developed.
25. Legal basis for water meter requirements in industries has been established. In connection with this, initiatives on introducing water efficient technologies are being encouraged. In order to establish economic incentives for efficient water use, the water use fee for those sectors that have negative impact on environment has been increased within the limits stated by law. To increase energy efficiency, time difference based meter system has been introduced to some places.

SCP principle in national priority areas

26. Composition of the National Bureau on Clean Development Mechanism projects, the procedure on approving CDM projects, sustainable development indicators to evaluate CDM projects have been approved by the Resolution No.211 of the Ministry for Nature, Environment and Tourism and the Bureau functions well.
27. In recent years, with aim to restore natural resources and ensure sustainable, proper and environmentally friendly utilization of natural resources, the following regulations such as “Encouraging citizens, economic entities and organizations that introduced environmentally friendly technology”, “Procedures on analysis of detailed EIA”, as well as standards “Restoration of sites damaged by mining activities” and “Plantation in damaged sites” have been developed to improve the legal environment for business sector.

Policy and measures to improve environmental and social impact of products

28. Mongolian Chamber of Commerce and Industry, in cooperation with the European Commission, is implementing the project “Development of green products and eco-labeling” with an aim to provide support in improving current green labeling system in compliance with international standards, and to jointly develop criteria on granting eco-labeling in accordance with modern requirements.
29. Mongolian Chamber of Commerce and Industry, in conjunction with GTZ, has been implementing “Eco-profit” programmer to provide private sector enterprises with training and information on wool processing and energy efficiency since 2008.
30. With an aim to distribute equal share to the citizens from the mining and mineral sector revenues, the Human Development Fund has been established and a draft law is being elaborated on funding for activities to ensure human development.
31. The Ministry of Nature, Environment and Tourism has developed a National program on education for sustainable development and is working to expand awareness on sustainable development to all level of educational organizations, industry and entertainment sectors.

Participation of general public and private sector

32. MNET has signed Partnership Memorandum of Understanding and co-working with Mongolian Chamber of Commerce and Industry with an aim to cooperate with the private sector in order to expand clean production.
33. In the scope of the Year to Support Industrialization, and in accordance with the law on “Customs tax and import VAT removal of equipment and spare replacements for small and medium scale factories until 31 December, 2012”, a decision was made to exempt the import tax and VAT on equipment and replacement spare parts for bio-gas, bio-fertilizer production and half coked coal production.
34. In the scope of the project “Development of Green Production and Eco-Labeling” which is being implemented in cooperation with European Union, there is a plan to organize trainings for domestic enterprises on life cycle analysis methodology on wool, wood processing and tannery as well small scale food production.

Current emerging issues, challenges and trends

35. There is a lack of knowledge, limited access to information and low public awareness on improving legal framework for developing clean production and service, enhancing system for liability to polluters, reducing pollution and waste and using life cycle analysis methodologies on products.
36. Heat and power stations that use out of dated technologies and raw coal, traditional gher stoves, non-centralized heating boilers are the main source of pollution in urban areas. There is lack of investment and funding resources for establishing sustainable source of energy and renewable energy that can provide necessary energy supply.
37. Trees and bushes in Gobi desert and steppe areas extensively being used as fuel for heating and cooking by rural population and this facilitates the intensification of the desertification process. This is a huge challenge to change fuel types of local households and especially to meet herder families`energy needs to be environmentally friendly .
38. It is almost impossible for a least developed country to produce products and export to the world market.
39. Mineral exploitation and exporting of raw minerals are becoming the main source of the country's economy, which in turn forces over exploitation of natural resources and puts heavy pressure on environment.
40. There is a lack of a proper economic incentives and mechanisms to attract investment from private sector and public organizations into clean production and green products, and financial capacity of the private sector is quite low. Also, private companies get banking loans with a high interest rate. Because of these facts, the green investment activities are not being encouraged well among the private and public sectors.
41. There is a weak urban planning, which should have been focused on creating sustainable lifestyle and inadequate infrastructure intended to support reduction of automobiles use through improving the access to public transportation service. A weak economic condition discourages improving the situation.
42. Current poor legal framework does not help promotion of programs on eco-profit, eco-design and green products and there is limited choice for green products. Coordination and management of consumption demand for green products is weak. Entities that issue eco-badges do not have a common strategy and there is no integrated standard criterion for awarding eco-badge. Therefore, the public still not trust for this kind of activities.
43. Although some private organizations started initiating on natural resources conservation, improving natural resource's use efficiently, there is no established corporate social responsibility mechanism in all sectors, especially in intensive resource utilization sectors.
44. Due to lack of information on technology, technology transfer and limited access to the world's advanced technology, local businessmen have weak knowledge and limited capacity.
45. A system to develop standard and regulation on improving efficiency of natural resources use, reducing amount of raw materials used to produce per product, and to ensure and monitor the implementation of these regulation and standard is not well developed.

46. There is a lack of managerial, organizational and financial mechanisms to direct state investments, which have been spent for scientific research, into developing green production and national consumption technology.
47. Product distribution networks, transportation and storage measures have not been considered in the regional, local and urban development policies and land use planning.

Potential ways for improvement

48. The SCP principle is a relatively new concept in Mongolia, it should be publically accepted as a main factor to ensure green growth of economy and society. Public awareness raising campaign and promotion to increase the knowledge and awareness among population on SCP principle is a joint responsibility of all stakeholders.
49. Policy reform should focus more on creating processing factories rather than direct export of raw materials and supporting the investment for best techniques and technologies that reduce negative impact on environment, and on improving pollution prevention management and coordination.
50. It needs to create a system and capacity to carry out life cycle research on products with involvement of private sector, to encourage environmentally harmless and resource efficient practices and to conduct production process evaluation in compliance with the SCP principle.
51. It needs to implement waste reduction, re-use and recycling management throughout the industrial and service sectors, and increase awareness raising activities to guide consumers' choice to environmentally friendly green products.
52. It needs to ensure favorable condition for mining industries to introduce environmentally friendly, resources efficient and waste-free technologies, and to transfer technology for minerals processing factories.
53. Improve the efficiency of current energy use, and build renewable energy stations and resources, and direct donors investment into this sector.
54. It requires support in order to reduce green house gas emissions in the energy sector and to reduce methane emissions in agricultural sector through adoption of best practices on utilization of biomass as an energy source.
55. There is a need to incorporate environmental policy into the urban development planning, which is a main source for green products growth. Revise construction norms and codes to make them environmentally friendly.
56. Need to establish a system that is adapted to climate change through provision of soft loans, which tied to support green products and establishment of green production favorable tax system and create legal framework to support state and local budget customers to buy green products made by national enterprises.
57. Following the 3-R principle in all stages of industry process on raw materials input, production, use and recycling. Apply systematic approach for managing recycling process, and create an incentive mechanism to reduce waste in its source, and implement promotional and awareness raising activities among population through support of international organizations and donors.

58. Establishing legal and economic incentives to introduce proper management on water saving and water resources increase as well maximizing water use effectiveness per product.
59. Increasing awareness of citizens and communities on improved land use policy and management, decreasing pasture degradation, alleviating desertification process, use of soil conservation and environmentally friendly crop production methods and introduce traditional and best practices.
60. Encourage green production and service to ensure green economy growth, and build a capacity to mainstream it into the national account systems.

REFERENCE

1. National Occupational Safety and Health profile of Mongolia, Ministry of Social Welfare and Labor and ILO, National Occupational Safety and Health Profile of Mongolia, 2006.
2. Compendium of environmental legislations, MNET, 2008.
3. Manual for Environmental Impact Assessment experts, UB, 2006
4. Policies, Programs, Strategy, Guidelines and Implementation Reports of 1994-2009 periods, State Great Khural and the Government of Mongolia.
5. Mid-term Poverty Reduction Strategy, the Government of Mongolia, 2001.
6. Government Action Plan for 2008-2012, <http://www.cabinet.gov.mn/files/govnews/09010003.pdf>, 2008.
7. Government Programs` Implementation Status, Government of Mongolia, 2009.
8. Report and recommendation on Sodium cyanide and mercury pollution and mining related environmental emergencies in Mongolia by Joint UNEP/OCHA Environment Unit, 2007.
9. Report on the State of the Environment of Mongolia for 2006-2007, MNET, 2008.
10. National policies, laws, resolutions, and regulations by the State great Khural and the government of Mongolia, <http://www.legalinfo.mn> 2000-2009.
11. National Disaster Preparedness Plan, National Emergency Management Agency, 2009.
12. Updates and reports by the government ministries and agencies, website on <http://www.open-government.mn/>, 2009.
13. National Sustainable Development Strategy of Mongolia, MNET, 2008.
14. National Chemicals Management Profile Mongolia, MNET, <http://www.pops.int/documents/implementation/nips/submissions/Mongolia.pdf> June 2008.
15. MDG based Comprehensive National Development Strategy, the State Great Khural, 2008.
16. Green-Paper 2008-2009, Mongolian National Chamber of Commerce and Industry, <http://www.mongolchamber.mn> , 2009.
17. Coal-to-Gasoline project, Industrial Corporation Mongolia, government of Mongolia, Mongolian National Chamber of Commerce, (<http://icm.mn/gazoline.html>), 2009.
18. Extractive industries transparencies initiatives related reports and documents on <http://eitimongolia.mn>, <http://www.forum.mn/en> , and <http://eiti.mn>, 2009.
19. Household Socio-Economic Survey for 2007-2008, National Statistics Office and World Bank, 2009.

20. National standards, Mongolian Agency for Standardization and Metrology, government regulatory agency, <http://www.masm.gov.mn>, 2009.
21. National Implementation Plan for Stockholm Convention, Mongolia, MNE, http://www2.unitar.org/cwm/publications/cw/np/np_pdf/Mongolia_National_Profile_2009.pdf), 2006.
22. Sustainable artisanal mining development and reports on <http://www.sam.mn>, 2009.
23. The Study on City Master Plan and Urban Development Program of Ulaanbaatar City, JICA, MRCUD, UB City Administration, 2009.
24. Reports and updates on city transportation issues, Public Transportation Department http://www.mayor.mn/index.php?option=com_content&task=view&id=720&Itemid=212, 2009.
25. Mining related information, reports and regulations on Mongolian National Mining Association <http://miningmongolia.mn/ref.php> 2009, 2009.
26. Reports of National Council for Policy Regulation of Toxic and Hazardous Chemicals, <http://www.mne.mn/chemical/>, 2009.
27. Chemicals originated industrial accident risk assessment: a methodology and case study, UNDP Project Disaster Mitigation and Strengthening Disaster Management System in Mongolia, 2007.
28. Chemical Risk Assessment Handbook on human, environmental and ecological risks (translation), UNEP, 2006.
29. Reports and updates on waste management, UB city Mayor's Office, City Maintenance and Public Utility Agency, http://www.mayor.mn/index.php?option=com_content&task=blogcategory&id=36&Itemid=104 and <http://nug.ub.gov.mn/index.php> 2009.
30. Status Report on Development Loan and Grant Projects, Cabinet Meeting minutes and decisions, Annual government report hearing, 2007, 2008, and 2009 <http://www.pmis.gov.mn/cabinet>.
31. Investment Climate Survey, World Bank Governance Indicator, other projects and related documents and publication such as renewable energy, 2009 <http://web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/EASTASIAPACIFICEXT/MONGOLIAEXTN/0,menuPK:327735~pagePK:64026187~piPK:141126~sortDesc:DOCDT~theSitePK:327708,00.html> .
32. Updates on National Programs and projects on food, agriculture and light industry, http://www.mofa.gov.mn/mn/index.php?option=com_content&view=category&layout=blog&id=73&Itemid=282, MOFALI, 2009.
33. Economic Growth Support and Poverty Reduction Strategy Paper, Government of Mongolia, July 2002.
34. Report of the Consulting Team on Developing Recommendations to Develop New Laws and Make Amendment to some Environmental Legislations, UNEP Environmental Governance Strengthening Project, UB, 2009
35. State of Environment of Mongolia,-2, MNET, UB, 2009
36. Compendium of Mongolia's National Statistics, 2008.
37. Compendium of Current Legislations for Mining Sector, UB city, 2009

38. Sustainable Livelihoods Project. 2002-2007.
39. Law and sustainable development since RIO, Rome, 2002.
40. Report of the Regional Implementation Meeting for Asia and the Pacific ahead of the Eighteenth Session of the Commission on Sustainable Development, Bangkok, 2009.