



***Ramsar Regional Center- East Asia Wetland Fund for  
Wetland Conservation and Wise Use (RRC-EA WF)***

**Public Awareness for Communities Involving the Conservation  
of Wetlands, Mongolia**



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## **CHAPTER 1. GENERAL OVERVIEW**

Mongolia belongs to the group of Land-locked Developing Countries (LLDCs), one of the Economies in Transition (EIT). Since 1991, Mongolia has followed a policy of economic liberalization, including privatization, financial liberalization and capital account convertibility. At the same time, the total private sector share of GDP increased from being nearly absent to 75% in 2002. Since then some increases were shown in period of 2004-2008. The GDP per capita in 2007 was estimated as 1742.8 thous tugrigs (or about US\$ 1502.4), compared to 854.5 thous tugrigs in 2004. GDP real growth accelerated in 2008, reaching 11.3 percent. But the global downturn has hit Mongolia hard, predominantly due to the slump in mineral prices which returned the prices of Mongolia's main exports back to their 2004 levels. Mongolia is dependant from mining exploration. Mongolia's Traditional livelihood is of a pastoral or transhumant mode, involving annual movement from extensive summer grazing areas to winter camps nearer lo settlements. Livestock husbandry still employs 40% of the population. The other major sectors are mining, now critical lo Mongolia's viable economic development, *and forestry* which in serious decline following over-exploitation in Soviet times and poor management.

Exports are concentrated in mineral-based commodities, accounting for 57.9% in 2006, 66.8% in 2007 of total exports, while natural or cultured pearls, precious metal and jeweler accounts for 12.1%, and textiles and related articles account for 13.5% in 2007. Mongolia is dependable from its import; particularly about 70% of consumption is based on import. Most importing commodities are mineral products including fuel and energy, placed about 27.8% of total commodities, and food products including wheat, flour,

potato and fruits are placed about 7.3% of total commodities. Therefore food price is dependant from importing price such as oil and petrol products.

*Figure 1. Industrial composition of GDP by percentage*

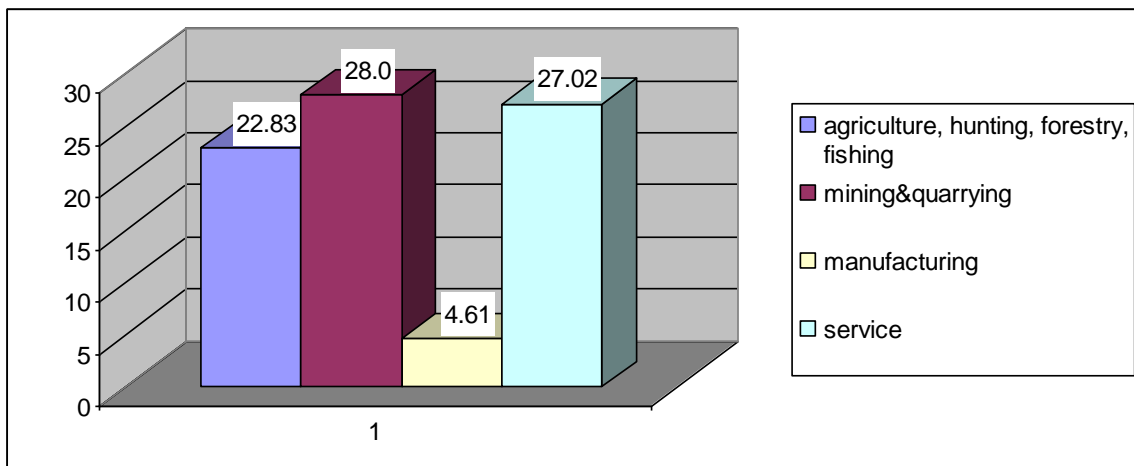
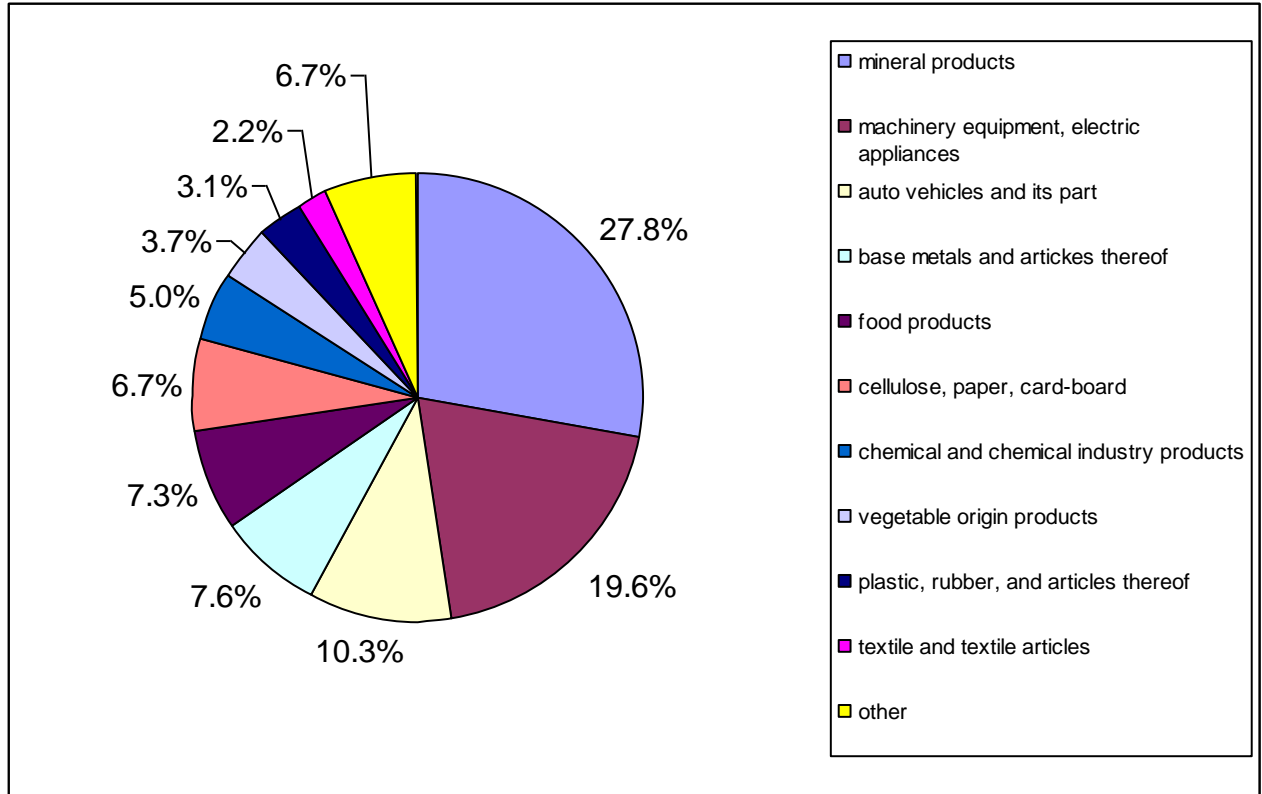


Figure 2. Import composition by groups of commodities



The climate is harsh continental with sharply defined seasons, high annual and diurnal temperature fluctuations and low rainfall. Because of the high altitude, Mongolia's climate is generally colder than other countries of the same latitude. The extreme minimum temperature is  $-31.1^{\circ}\text{C}$  to  $-52.9^{\circ}\text{C}$  in January and the extreme maximum temperature is  $+28.5^{\circ}\text{C}$  to  $+42.2^{\circ}\text{C}$  in July. In addition same time of migration to the mining site at rural area, another migration to the UB city is increased. It becomes a major cause of increasing of air pollution at UB city. Approximately, 5 million ton of coal are used and 380,000-420,000 ton/year of coal are consumed in the ger district. There are

also 230 coal-fueled heating boilers in UB, consuming 1 million ton of coal per year. 3 central power stations are now consuming approximately 3.5 million t/year of coal.

## **CHAPTER 2. WATER RESOURCES IN MONGOLIA**

Mongolia straddles a major continental watershed aligned east-west across the country. North of the divide, drainage is to the Arctic Ocean via the Lena River and Lake Baikal, and to the Pacific Ocean via the Amur and Yenisei rivers. South of the divide drainage terminates in dry lakes and salt pans with no outlet to the sea.

Aggregate water resources in Mongolia have been calculated at 599 km<sup>3</sup>). Of this 83.7% is in large lakes located in the inter-montane basins of the Altai, Khuvsgul (314 km<sup>3</sup>), Khentein and Khangai mountain region, 10.5% (500 km<sup>3</sup>) in glaciers and 5.8% (34.6 km<sup>3</sup>) in rivers. The average annual precipitation of only 224mm (90.1 percent of which evaporates) varies widely from year to year and from one part of the country to another. The coefficient of variation over mountain steppe is +/- 28% on an average precipitation of 250 mm/year; over desert steppe it is +/- 50% on an average precipitation of 100mm/year. The 9.9% of effective rainfall (ie that does not evaporate) recharges aquifers and provides limited surface water; it is supplied in part by ice melt.

It is this surface water which is essential for human use and the living environment. Water shortage is one of Mongolia's major socio-economic (and ecological) problems. Indeed, water availability per capita is only 17,300 m<sup>3</sup>. In the Gobi area it is 4,500 m<sup>3</sup> and in the Northern and Central Areas where most of the rivers and lakes are concentrated it is 46,000 m<sup>3</sup> per capita.

Though adequate in the north it is clearly a constraint on development in the south and particularly serious in urban areas including Ulaan Baatar, where water supplies are pumped from groundwater.

Little care has been taken over water supply and use. Water supply in pasture areas was improved over the period 1960/90 by construction of many wells to provide water to

more than 60 percent of the rangeland, but only forty percent of the existing 48,000 wells are currently functioning. Most wells drilled during the Soviet era were out of production by 1998. Over the ten years 1988/98 alone, the number of water supply points dropped by 20%. Over the same ten years, the number of livestock increased by 30%.

Mongolia has an estimated 3,800 rivers and streams and these have a total length of 67,000 kilometres. 3,500 lakes, 7,000 springs, 120 mineral water resources and 187 glacial rivers cover over 500 square kilometres. Surface and ground water resources play a vital role in the countries economy especially in agriculture and forestry, livestock production, industrial and domestic water supplies and, indirectly, the sanitation and health of the people.

The Water Act has been enacted since 1995. The purpose of the law is to regulate the protection, proper use and restoration of water resources. The Government approves the law on water discharge and its fee. Water quality standards have been updated. A pollution mitigation action plan for the Tuul River (which flows through Ulaanbaatar) was implemented in 1997 with support from the Dutch government. Also, the Government has approved a national action plan on water resources.

At present the level of studies on changes in Mongolia's water resources, the water regime and the effects of impacts of economic activities on broader environmental and other factors are not satisfactory. Salination and poor water quality are major problems in arid and semi arid regions of Mongolia. Salination is caused by a combination of poor drainage and high evaporation rates that concentrate salts in surface layers of the soil, lakes and ground water aquifers. Natural water quality problems related to saline waters, seasonal freezing and droughts limit the use of water resources in Mongolia.



### **CHAPTER 3. WETLAND CONSERVATION AND RAMSAR IN MONGOLIA**

Wetlands in Mongolia are considered important natural resources to conserve, because a considerable part of Mongolia belongs to arid and semi-arid zones. Mongolian dry land ecosystem is virgin and vulnerable to natural and anthropogenic changes. Therefore, it is very important not only not to lose wetlands, but to take appropriate actions and measures in timely fashion to conserve them.

The establishment of a legal foundation to regulate on biodiversity conservation has been given high priority by the Mongolian Government. In 1994 and 2000, the “ Law on Special Protected Areas”, “Law on Bufferzones of Special Protected Areas, “Law on Natural Plants”, “Law on Wildlife”, “Law on Hunting”, and “Law on Forest” were adopted. In addition, over 30 Regulations and Resolutions have been approved to support those laws. In 1998, “ The National Program on Special Protected Areas” was adopted. In 1995 Mongolia adopted Law on Water which is the main policy document to regulate relations, regarding water resources use and protection including wise use of wetlands.

There is no specific policy document or action plan on wetlands so far in the country. According to the existing legislation, all kinds of policy document are adopted by the Parliament, and action programmes and plans are approved by the Cabinet. After adopting National Water Policy, it will be discussed what documents would be most effective for conserving wetlands in Mongolia.

In any case, priorities will be given in the following order:

- Reducing threats to wetlands;
- Developing wise use and sustainable management of wetlands and their resources;
- Conservation of habitats and bird species of wetlands;

- Research and monitoring;
- Increasing technical training, capacity building and awareness at all levels;
- Participation in international cooperation and treaties for wetland conservation.

The document will be developed and implemented in close relevance with the following documents:

- Mongolian Agenda-21;
- State Ecological Concept;
- Mongolian Environmental Action Plan;
- Mongolia Biodiversity Action Plan;
- Protected Areas Action Plan;
- Desertification Action Plan;
- National Forestry Action Plan;
- National Water Policy (which is under development).

Mongolia has joined the Ramsar Convention from April 8, 1998. During the accession period to the Convention, Mongolia nominated Mongol Daguur as first Ramsar site from Mongolia. After joining the Convention, Mongolia submitted three additional nominations to the Ramsar List of Wetlands of International Importance and received confirmation of their designations from the Ramsar Bureau on 29 July, 1998, bringing the total number of Ramsar sites in Mongolia to four (264,220 hectares) and the number of Ramsar sites in all the 110 Contracting Parties to 927. The additional sites are Mongol Daguur, Ogii nuur, Terkhiin Tsagaan nuur, and Valley of Lakes which includes Boon Tsagaan nuur, Adgim Tsagaan nuur, Orog nuur, Taatsyn Tsagaan nuur and Ulaan nuur.

Among the four sites, there are two sites which are protected areas, one is Mongol Daguur declared as strictly protected area and the other is Terkhiin Tsagaan nuur declared

as National Park. The two other sites are very consistent with Action 6.2.4. of the General Objective on Designation of additional sites to the List of Wetlands of International Importance, which states that "Pay particular attention to the designation of new sites currently enjoying no special conservation status at national level."

Mongol Daguur is Mongolian part of the Dauria International Protected Area on which Mongolia, China and Russia concluded tripartite agreement. Two meetings of the parties were organized so far. Mongolia hosted the second Meeting. The Ministry of Nature and the Environment will work on nominating one additional site in 1999 as well as on urging the two other Contracting Parties to cooperate in making a proposal to designate the Dauria International Protected Area as a transboundary Ramsar site between Mongolia, China and Russia.

The Ministry of Nature and the Environment of Mongolia successfully organized the International Workshop on Wetland Conservation in Mongolia and North-East Asia in Ulaanbaatar on 16-19 September, 1997 in close cooperation with, and under the sponsorship of, Keidanren Nature Conservation Fund (Japan), Environment Agency of Japan, Development and Environment NGO, and Wetlands International. It was the first international workshop conducted on wetlands in Mongolia and attended by 60 participants from 10 countries. The Workshop requested the Government of Mongolia to prepare specific reserve training and survey proposals to enhance International cooperation at the Mongol Daguur, Daurisky Nature Reserve, and Dalai Nuur Nature Reserve.

**Table.1.Mongolian Wetlands of International Importance**

	<b>Wetlands of International Importance</b>	<b>Year of Registration</b>	<b>Covered area, by ha</b>
1	Ugii Lake	1997	2 510
2	Mongol Daguur	1997	210 000
3	Terkhiin Tsagaan Lake	1998	6 110
4	Lakes in Lake Hollow	1998	45 600
5	Khar Us Lake	1999	321 360
6	Airag Lake	1999	1 433
7	Uvs Lake	2004	585 000
8	Achit Lake	2004	73 730
9	Lakes in the Khurkh-Khuiten river basin	2004	42 940
10	Lake Ganga	2004	3 280
11	Lake Buir	2005	104 000
	Total		1 395 963

## **CHAPTER 4.**

### **PRIORITY CONCERNS RELATED TO WHITE LAKE CONSERVATION**

Wetlands in Mongolia are mainly threatened to be polluted by application of pesticides and inflow of nutrients from domestic wastes and animal dung. The latter may cause eutrophication which would eliminate the coregonid and salmonid fish fauna and replace it with one dominated by cyprinids.

In case of White Lake the above mentioned problems were occurred in addition to the over harvesting of fish in tourist season and lack of conservation efforts from the local community.

Since 1990, Mongolian private sector is under formation, after the country has started shifting into market economy in last two decades. In this context, the private sector in particular tourist camps near the lake are still weak and incomparable management regarding the nature conservation. Through awareness raising and information sharing, the private sector could be a strong stakeholder for the conservation efforts and wise use of wetland resources in the White Lake areas.

In further, there are number of considerations gathered during the implementation of this project. To protect White Lake from pollution by toxic chemicals and other organic substances must be fully implemented and re-enforced within the existing legal framework in the following:

- Issued regulations on pesticide application;
- Established protection (sanitary, sometimes) zones around White Lake;
- Prohibition of use of some pesticides and chemicals for rodent control;
- Set up waste water treatment plants for settlements located close to White Lake.

Within the framework of Important Bird Areas Program and with the support of Wild Animal Research Center, a project is being implemented with the objectives of identifying and protecting important areas for birds. The bird inventory at certain areas will help identifying the vegetation cover, rodents and insects living there, as well as recognizing other biological features.



Village next to the White Lake (*photo by "Green Initiative"NGO*)

2007 research that has been conducted on 79065 kilometer sq. area has identified and confirmed 70 Important Bird Areas nationwide. Most of these areas are not affected by human activities, and are usually wide steppe, mountainous and forest areas and taiga.

World rare birds such as White-headed Duck (*Oxyura leucocephala* ), Lesser kestrel (*Falco naumanni*), Great bustard (*Otis tarda*), Relict Gull (*Larus relictus*), Swan Goose (*Anser/Cygnopsis cygnoides*) and White-throated Bushchat (*Saxicola insignis*) live here. The habitat area of Dalmatian Pelican (*Pelecanus crispus*) in East Asia , is discovered and confirmed by the latest research.

**Table .2. Priority Concern Related to problems due to White Lake**

<b>Nature of Problem</b>	<b>Scale of Problem<sup>1</sup></b>	<b>Level of Concern</b>	<b>Ability to Control Problem</b>	<b>Availability of Statistical Data</b>	<b>Specific conservation Concerns</b>	<b>Priority Ranking</b>
Wetland conservation	National	High	Medium	Sufficient	Human and financial resources	1
White Lake areas conservation	Local	Medium	Medium	Insufficient	Community involvement	3
Human impacts for White Lake areas	Local	High	Medium	Sufficient	Awareness raising, community involvement	1
Wise use of White Lake resources	National and local	High	Medium	Insufficient	Monitoring, management	2

\* Note: Priority Ranking 1 = Very high 2 = High 3 = Moderate 4 = Low

## Comments/Analysis

Actually, in all data and information regarding to the wetland conservation in Mongola always focusing on the isolated protection so far. The concept of wise use of the White Lake is absolutely new in Mongolia. According to the priority concerns ranking on the Table.2. most of the problem area due to management of wetland is concerned at very low level and have insufficient statistical data. White Lake management reveals that there is rapid increase of tourism for income generation to the private sector, but less involvement with local communities and collaborative conservation efforts in general. Most concerned fact is that there is lacking of wise use of wetland principle due to other problems, as identified by this project team. However local communities have been educated through this project implementation, but this has still waiting for a further research and incentives from potential stakeholders.



*photo by "Green Initiative"NGO*



**CHAPTER 5.**  
**RESPONSIBILITIES OF GOVERNMENT MINISTRIES, AGENCIES AND**  
**INSTITUTIONS IN WHITE LAKE CONSERVATION**

**Table 3. Responsibilities of ministries and agencies**

<b>Ministry Agencies concerned</b>	<b>Protection</b>	<b>Management</b>	<b>Enforcement</b>	<b>Incentives</b>	<b>Wise-use of wetland resources</b>	<b>Awareness raising</b>
Environment	X	X	X	X	X	X
Health	X	-	-	-	-	-
Labour	-	-	-	-	-	-
Finance/Customs	-	X	-	-	X	-
Transport	-	X	-	-	-	-
Foreign Affairs/trade	X	-	-	-	-	-
State Inspection	X	-	X	-	-	-
Police Office/Traffic	-	-	X	-	-	-
NEMA	-	-	-	-	-	-
Standards and Metrology Center	X	-	-	-	-	-
NGOs and private sector	X	X	X	X	X	X
Local Communities	X	X	X	X	X	X

## **Description of Ministerial Authorities and Mandates**

### **1. Ministry of Nature, Environment and Tourism**

- To develop a program for wetland protection, submit it to the government for adoption, and organize its implementation;
- To organize work on testing and research on wetland conservation;
- To adopt regulations on wetland conservation as well as tourism and draft related standards for approval by the authorized agency.
- To organize a network in regular monitoring of wetland conservation
- To set the norms of tourism related regulation on wetland areas addressing to the service providers, citizens, economic entities and/or organizations
- To approve environmental impact assessments and business plans of surrounding business entities of wetland.
- To approve monitoring and management plans of wetlands.

### **2. Other stakeholders in wetland conservation and public participation**

The main participants in White Lake conservation are the private companies in undertaking tourism activities in Mongolia. Business environment supported by tax and other encouragement are crucial impact for those companies. Of course this encouragement should be towarded to the wise use of White Lake resources. As mentioned before there are a number of good initiatives in introducing wise-usage of White lake resources.

Other stakeholders in wetland conservation are research institutions have responsibilities of carrying out research and studies on resources and impacts of human, animals, and

climate change caused dramatic degradation of White Lake areas, reporting the result to the relevant authorities. The important role of scientific organizations is to provide information on alternatives management and new technologies in usage of resources. But currently, there is not clear research about wetland conservation in Mongolia.



Habitat degradation affecting the White Lake (*photo by Green Initiative NGO*)

## **Comments and Analysis**

According to all above mentioned data and information about current wetland conservation in Mongolia, the Ministry of Nature, Environment and Tourism have a leading role and responsibility to manage wetland conservation relations (protecting, conservation, monitoring, managing, and awareness raising). They have responsibility of integrated policy development and its implementation in White Lake management, involving stages from the local community to the high level decision making. The development of policy on wetland conservation and tourism needs to be drafted including the sanitation and waste management standards, otherwise which kind of and in which quality of service to be provided in White Lake are in hands of those business entities. Especially, MNET has responsibility of identification of state policy on environmental pollution and organizing its implementation along with conducting EIA on certain kinds of business activities.

Governors also have great responsibilities in White Lake management such as in organizing on site monitoring, developing local community development policy linked to the benefits of wetland conservation and its implementation. They have special power to limit or prohibit business entities entrance in certain kinds of area within their territories.

All the information is carrying to the conclusion that close cooperation between stakeholders is have crucial impacts in effective regulation of White lake management and its sustainability issues. Moreover, Ministry of Nature, Environment and Tourism have leadership role in managing White Lake conserving relations.

## **CHAPTER 6**

### **AWARENESS/UNDERSTANDING**

According to the Report on the State of the Environment, the state central budget has allocated 118,7 million tugrugs for investment in environmental sector, 63,0 million tugrugs for repair, 80,1 million tugrugs for equipment purchase, 40,3 million water research and exploration, 200,0 million tugrugs for implementing projects and developing feasibility studies, 600,0 million tugrugs for combating desertification and 250,0 million tugrugs for preparatory work of increasing surface water reserve in 2007. Moreover, Mongolian Development Fund contributed 400.0 million tugrugs for water research and exploration activities and 350.0 tugrugs for purchasing radar equipments influencing rain clouds to increase precipitation. However there is not any allocation for awareness raising goal for wetland management, except the budget is allocated for special protected areas protection, management, and monitoring that included the wetland conservation issues. There is a certain amount of resources had been spent for awareness raising activities of protected areas such as brochures, leaflets and newspaper towards to the tourists. From the tour operators also has taken measures in increasing awareness regarding White Lake through their web sites.

Within the planned activities of this project, we have published promotional materials for distribution to the public for awareness creation.



*photo by "Green Initiative"NGO*

### **Posters, leaflets and newsletter**

“Green initiative” NGO accomplished the distribution of leaflets, posters and newsletters. The all these materials were distributed to the local herders and tour operators, companies, and retailers in White Lake areas.

At present, all stakeholders including government, academic, and business sectors, as well as NGOs and herders are often in lack of awareness about White Lake conservation. Education and awareness building of White Lake conservation in Mongolia is very weak. This responsibility has splitted among MNET and Local Authority. In addition there is almost no any sufficient information database aboutwise use of White Lake resources. In

addition financial allocation for public awareness raising programme is insufficient and ineffective.



*White Lake (photo by "Green Initiative"NGO)*

## CONCLUSION

Under this project, the main objective of the public involvement in wetland conservation was to bring together key stakeholders in the wetland conservation in Mongolia to discuss the wise use of resources, tourism standards and environmental friendly technologies, and Local Economic and Development Policy as well as sensitize the public on the benefits of reducing negative human impacts for Whiet Lake in the future. Actually wise use concept was very new in Mongolia before cooperation. The related information and data splitted among several stakeholders and was difficult to access. Clear outcome of the cooperation is changes among public concerns about wetland conservation. In recent years, government had concerned on payment for ecosystem services as well as polluter pay principles for many environmental related projects, therefore this White Lake conservation may contributed to the encourgement of local communities for conservation through awareness raising activities. The wetland conservation is out of awareness among public and government agencies. After assessment on current regulation relating to wetland conservation in Mongolia following conclusion has coming out;

1. There is increased number of tour operators along with great acceleration of density of visitors. Also there is not still using environmental friendly waste management because of lack of montoring to White Lake conservation.
2. Insufficient legal environment is built for the wetland conservation. Lack of precise legal regulation addressing to the community involvement into conservation and lack of encouragement for other stakeholders except government agencies. There is also increased number of vistors and tourists without guide.
3. Awareness about wetland conservation among public is very weak and lack of participation from government agencies and civil societies in raising awareness. It also



linked to the lack of legal incentives for whom, involving any wetland conservation and lack of financial resources and spirits.



During our workshop (photo by "Green Initiative"NGO)