

**A thesis submitted to the Department of Environmental Sciences and Policy
of Central European University in part fulfilment of the
Degree of Master of Science**

**Environmental Impact Assessment in Mongolia:
Critical analysis and recommendations for improvement**

Zaya DONDOV

July, 2010

Budapest

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(signed)

Zaya DONDOV

ABSTRACT OF THESIS submitted by:

Zaya DONDOV

for the degree of Master of Science and entitled: “Environmental Impact Assessment in Mongolia: Critical Analysis and Recommendations for Improvement”

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This paper analyzes the current situation of the legislation and practice on project-level environmental impact assessment (EIA) and gives recommendations to enhance the EIA system in Mongolia. As of today, the development of the EIA system in Mongolia is in its transition period, moving from the system of appraisals into the period of the reform and improvement of its EIA system. The transition period has provided many opportunities for economic growth, but posed increasing challenges of environmental conservation. Like many other transition economies, Mongolia has limited experience in the “state-of-the-art” EIA practices, and there are significant rooms for improvement as it has been confirmed during the research analysis.

This Master’s thesis work aims to provide a humble contribution to enhancing the EIA system in Mongolia, by providing an integrated base for EIA analysis. A wide range of the research methods were used for the research such as case study analysis, legislative and literature reviews, comparison of the law changes, as well as the questionnaire and interviews with key stakeholders of the process of environmental impact assessment.

The study indicates that Mongolia’s legislation in general provides a good framework for EIA by incorporating basic principles of the EIA system. The individual Law on Environmental Impact Assessment was adopted in 1998, and later amended in 2001. There is an increasing recognition at both public and private levels that economic development should consider the environmental consequences at the beginning of the planning. EIA is an appropriate environmental management tool, providing an opportunity to avoid and mitigate the possible harmful impacts of industrial project development at the planning stage as the prevention is better than cure.

However, there are various weaknesses and deficiencies in the current EIA practice that need to be resolved and the gap between the legislation and the practice need to be narrowed. Although basic elements of the internationally accepted EIA system were rooted in the EIA legislation, there are areas that need revision and improvement to reflect the rapid changes in the socio-economic transition.

The research concludes that the EIA practice has been hampered by, among others, capacity issues (human resources, funding, technology), poor enforcement, lack of community involvement, weak coordination at national and local levels, lack of transparency and accountability and the existing bureaucracy in the public services. Thus, it is time to solve these existing problems and to enhance the EIA practice and legislation in Mongolia as recommended by this research work.

As an outcome, this research gives recommendations to overcome the practical and legal deficiencies that were identified during the research work. The general conclusion of this research is that more comprehensive, detailed and integrated Regulations need to be developed complementing the Law on EIA and covering the recommended issues. This conclusion was made after determining through the study work that the Law on EIA and the current procedures do not provide enough guidance on the EIA practice. Laws do not often provide all details, thus Regulations are required to explain the details and make the law work.

The EIA system of Mongolia should undergo the improvement, involving not only the national and international organizations, but also national stakeholders such as assessment companies, consultants as well the community, who have gained appropriate practical experience during the development process.

Key words: environmental impact assessment, environment, Mongolia

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LIST OF ABBREVIATIONS

ADB	Asian Development Bank
EIA	Environmental Impact Assessment
EI	Environmental Assessment
EIS	Environmental impact statements
LCM	Labor Code of Mongolia
METM	Ministry of Environment and Tourism of Mongolia
MNT	Mongolian national tugrug (currency)
NEPA	National Environmental Policy Act
NGO	Non-governmental organization
OLEM	Office of Labor and Employment of Mongolia
SSIAM	State Specialized Inspection Authority of Mongolia
UNDP	United Nations Development Programme
UNECE	United Nations Economic Commission for Europe
UK	United Kingdom
US	United States
UNWCED	United Nations World Commission on Environment and Development
WB	World Bank

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CHAPTER ONE. INTRODUCTION

1.1. BACKGROUND

Mongolia has one of the oldest tradition of viewing the nature as the mother of sustenance in association with its ancient nomadic culture preserved till today. With the socio-economic transition from the socialist to a market economy during the early 90s, the levels of economic growth and production have increased. In the bid to grow via industrialization, Mongolia has been facing the challenges of balancing local socio-economic, political and ecological priorities in the pursuit of the principles of the sustainable development. Since the 1992 Rio Summit, Mongolia has been committed to mainstreaming the sustainable development strategy and actions in the decision making process.

As defined in the 1987 report of the United Nations World Commission on Environment and Development (UNWCED), sustainable development is: *“Development that meets the needs of the present generation without adversely affecting the ability of future generations to meet their own needs.”* The Environmental Impact Assessment (EIA) is recognized as a key instrument of sustainable development aiming to make developments better by identifying, avoiding and mitigating potential negative environmental impacts. (Saddler 1999)

Mongolia has become heavily dependent on natural resources for its development and economic growth since the transition from the centrally planned a market-oriented economy in the late 1980s. (World Bank 2005). The transition reforms have been associated with the strong public dissatisfaction with the recent focus on maximum exploitation of natural resources for rapid economic development with scant consideration of environmental conservation and protection. It has become a challenge to eliminate the recent emphasis on short-term economic profits rather than long-term stability and to ensure that the environment is considered in every decision-making because we owe to future generations.

An important part of Mongolia's challenge in preserving the environment and promoting the economic growth based on the natural resources should be the major effort to improve environmental impact assessment for any project that can have an effect on the environment, to enhance the governmental regulation and to promote community involvement.

There has been a gap between the EIA legislation and the practice. The research has attempted to find out the major deficiencies and answer the major question on "What needs to be done to improve the EIA practice in Mongolia?" This Master's thesis work intends to fill the gap of the existing literature on the environmental impact assessment in Mongolia, make an analysis of the current situation and to comment and give recommendations for improvement of the EIA practice in Mongolia. The details are provided below in the respective sections.

The findings of this research work can be used to enhance the coordination of local and central governmental bodies, private entities and community, and overall, to improve the EIA process in Mongolia. It is hoped that this work can provide an integrated base for information and practical ideas on EIA development in Mongolia.

1.2. THE AIM AND OBJECTIVES OF THESIS WORK

The overall aim of this research work is to analyze the EIA process in Mongolia, to identify practical deficiencies and to recommend proposals to improve the relevant legal grounds.

Thesis objectives

The following major work has been done to achieve the research goal:

Objective 1: To analyse the legal framework on EIA in Mongolia, including the law, instructions, rules and procedures;

Objective 2: To identify deficiencies in the EIA practice based on the research methods such as literature review, case study, interviews with key stakeholders and the questionnaire taken from the licensed companies authorised to conduct detailed environmental impact assessment;

Objective 3: To propose recommendations and policy options for improving the legal grounds of the IEA process in Mongolia.

1.3. THESIS STRUCTURE

The thesis is structured into 6 parts. Chapter One is an introduction to the studies. The Introduction justifies the importance of this thesis work and contains the aims and objectives of the study and explains the thesis structure. Chapter Two explains the methodology used for the research work. Chapter Three provides a review of the current literature on environmental impact assessment, its concepts, definition and history of development worldwide. Chapter Four explains legislative background, overview, history, current status, actors and the process of EIA in Mongolia. The next chapter presents findings of the case study at a coal mining company on compliance with the Law on EIA of Mongolia and the questionnaire involving the assessment companies of Mongolia that are licensed to carry out detailed EIA. The main purpose of the case study and the questionnaire was to identify deficiencies in the EIA practice in Mongolia. Chapter Six summarizes the findings of the research and key messages of the dissertation and provides recommendations for improvement of the EIA process.

CHAPTER TWO. METHODOLOGY

2.1. METHODS OF DATA COLLECTION AND ANALYSIS

For the thesis goal, the *qualitative research methods* were used primarily. According to Punch (1998), this method is a type of research technique concerned with understanding social phenomena typically through in-depth interviews, different forms of observations and case studies.

The thesis was based on the review of numerous sources of information on the EIA process in Mongolia. To achieve the thesis goal, the methods of primary and secondary data were used. Primary data and information were gathered from library of the Central European University, databases of the relevant institutions, in particular, those of the Ministry of Environment and Tourism and the State Specialized Inspection Authority of Mongolia, newspapers, legal acts, policy papers as well as the official websites of relevant official institutions on internet, with a specific focus on environmental impact assessment.

A detailed analysis was made on the gathered documents, laws, legislation and procedures on the environmental policy, with a special focus on environmental impact assessment issues.

The literature review was complimented by interviews conducted with key informants in the EIA process, which explored gaps found in the existing literature. The interview plays an important role in data and information collection and verification of the research hypothesis. Traditional and specialized knowledge defined through the interviews enabled to get in-depth practical experience on the research subject area. However, since the data obtained through interviews may have personal perceptions, it was validated with published secondary information wherever possible. Audio records were made for each interview and analysed thereafter in accordance with the corresponding interested topics under the research work.

For the interview, the qualitative methods of data collection such as *semi-structured and unstructured interviews* were used. In a semi-structured interview, the scope of the of interview was defined with a flexible approach in the sequence and order of questions of the interview guide in the interested area, while “the interviewee’s” responses shape the structure of the interview” (Esterberg 2002). The unstructured research technique was also used because it expresses the way to understand the complexity of the issue without imposing any prior categorization, which might limit the field of inquiry. (Punch 1998).

A database of key informants were created and all interviews were conducted with face-to-face interaction. Before the interview, an interview guide was prepared with specific questions and topics of interest based on the study of the legislative grounds and work experience.

The target group of the interviewed included the EIA regulators of national and local levels, including the senior and junior officials of the relevant departments of the Ministry of Environment and Tourism of Mongolia (METM), State Specialized Inspection Authority of Mongolia (SSIAM) and specialists of the international organizations such World Bank (WB) and United Nations Development Programme (UNDP). The list of the interviewed is attached hereto as Annex 1.

Obviously, the interviews can not alone provide a sufficient overview and determine weaknesses in the EIA practice. Therefore, the method of questionnaire was used for gathering the opinion of the assessment companies authorised to conduct detailed EIA in relation to improving the environmental impact assessment process in Mongolia. A total of 20 companies responded to the questionnaire and the questionnaire results and the conclusions made thereof are provided below in the Chapter Five.

In conclusion, recommendations for improvement of EIA are provided based on the literature review, work experience and the research findings, including the questionnaire, interview and other major issues that were identified or confirmed during the thesis work. The

areas of recommendations were selected and clustered around the problematic areas that were identified during the research work, including institutional capacity, public participation, EIA process, implementation and follow-up, legal provisions, international cooperation and other organizational issues.

2.2. RESEARCH ETHICS/CONFIDENTIALITY

The participants in the interview and the questionnaire were fully informed about the intent and purpose of the request to participate in the research and their consent was taken before each interview. All participants in this research agreed to list their names in the research paper.

The research principle of confidentiality will be pursued for this research so that no specific statement or personal opinion of an individual participant in the interview and the questionnaire is included in this research, unless it is expressed inside a majority view.

CHAPTER THREE. LITERATURE REVIEW

3.1. FROM THE BOTTOM UP: DEVELOPMENT OF EIA AT INTERNATIONAL LEVEL

The last three decades have experienced a growing international interest in the development of the environmental protection tools. An important example of the effort to seek and regulate the relationship of the environment and the development process is the environmental impact assessment, which is nowadays applied in more than 100 countries worldwide. (Donnelly *et al.*, 1998).

The roots of EIA, as a formalized (e.i. action-forcing) procedure for assessing the potential environmental effects of proposed actions, are not deep. The EIA formalization was first introduced in the United States in 1969 when the National Environmental Policy Act (NEPA) was enacted by the United States Congress. (Lawrence 2003). It was a response to a public dissatisfaction with the decision-making of governmental planners, who allegedly used traditional criteria in terms of economic efficiency of projects affecting the surrounding environment. NEPA has established the formal procedures for all federal government agencies on the preparation of Environmental Assessments (EAs) and Environmental Impact Assessments (EIAs) for specified types of projects and programs. NEPA, in general, has had a significant influence on public policy in the United States and abroad: the procedural reform required by the environmental impact statement provision has improved the quality in the planning and decision-making. (Hildebrand and Cannon 1993)

The EIA has spread worldwide and had a boost in Europe in the last 1980s. For example, the number of the EIA exercise has grown rapidly since the introduction of the EIA legislation in the United Kingdom (UK) in 1988: the originally planned 20 environmental impact statements (EIS) per year in the UK have escalated to over 600. (Glasson *et al.* 2005). Nowadays, the EIA practice is developing in all countries who care about their environment.

3.2. CONCEPT AND DEFINITION OF ENVIRONMENTAL IMPACT ASSESSMENT

The concept and definition of environmental impact assessment continues to grow to a broad view, from an early emphasis on physical and biological effects to an increased concern with social, cultural, human health and ecological effects (Lawrence 2003)

The definition of EIA is plenty. However, they all contain one principle. The United Nations Economic Commission for Europe (1991) has a concise definition of EIA as “an assessment of the impact of a planned activity on the environment”.

In broad terms, *Environmental Impact Assessment* is a set of systematic actions involving research and analysis to identify in advance any possible negative effects on people's health and environment during the process of production and services of people, business entities and institutions, and to determine measures to minimise or eliminate such negative effects if they exist, with an emphasis being on prevention. (Wathern 1994)

The importance of EIA is significant since it: (Noble 2006)

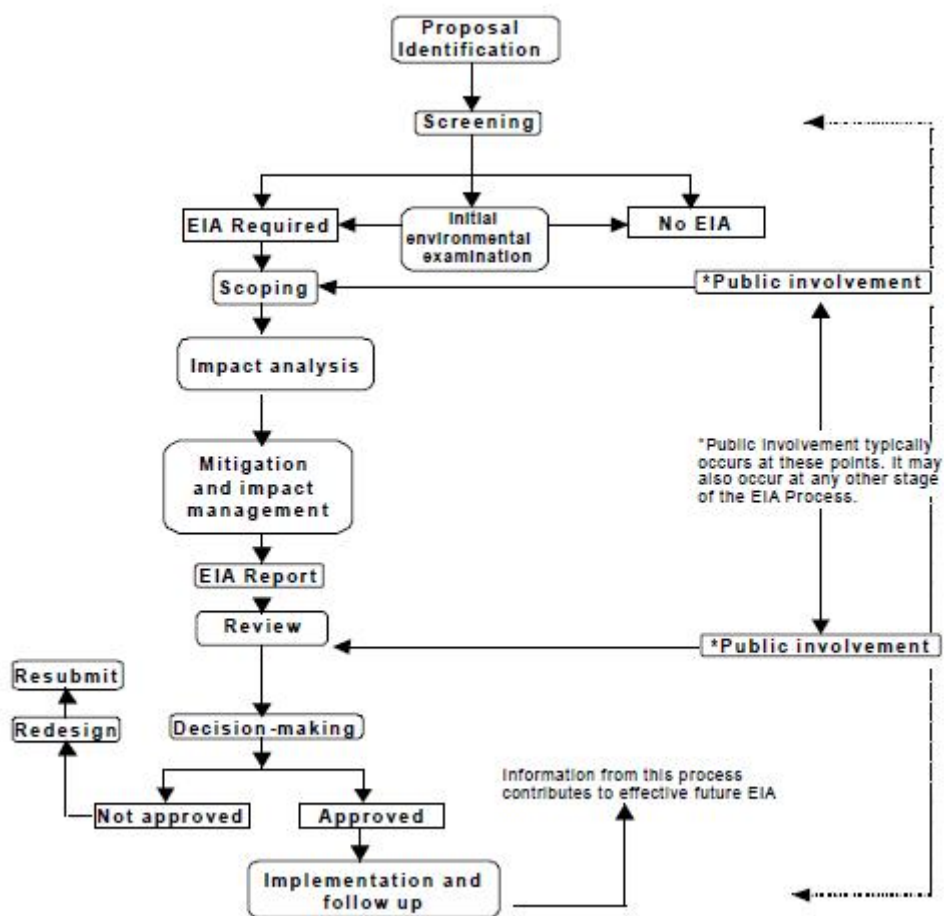
- ensures the sustainable development principles,
- ensures life guarantee of citizens to live in healthy and safe environment,
- limits environmental degradation,
- prevents from the loss of natural resources,
- improves the implementation capacity and the ecological-economic efficiency of projects,
- promotes production of clean ecological products,
- promotes introduction of environmentally safe technology, and
- prevents those implementing the project from possible loss or damage

The fate of new projects is increasingly being decided by the results of EIA rather than traditional cost-benefit methods and all over the world the countries are making it mandatory that EIA is conducted before any development projects. (Bellinger *et al.* 2000)

CEU eTD Collection

The steps of the basic EIA process means the following (Glasson *et al.* 2005):

Table 1. Generic steps of EIA process



Source: UNEP 2002

The steps of the basic EIA process means the following (Glasson *et al.* 2005):

- *Project screening* is an important initial step, narrowing the application of EIA only to those projects which may have potential harmful effects on the environment.

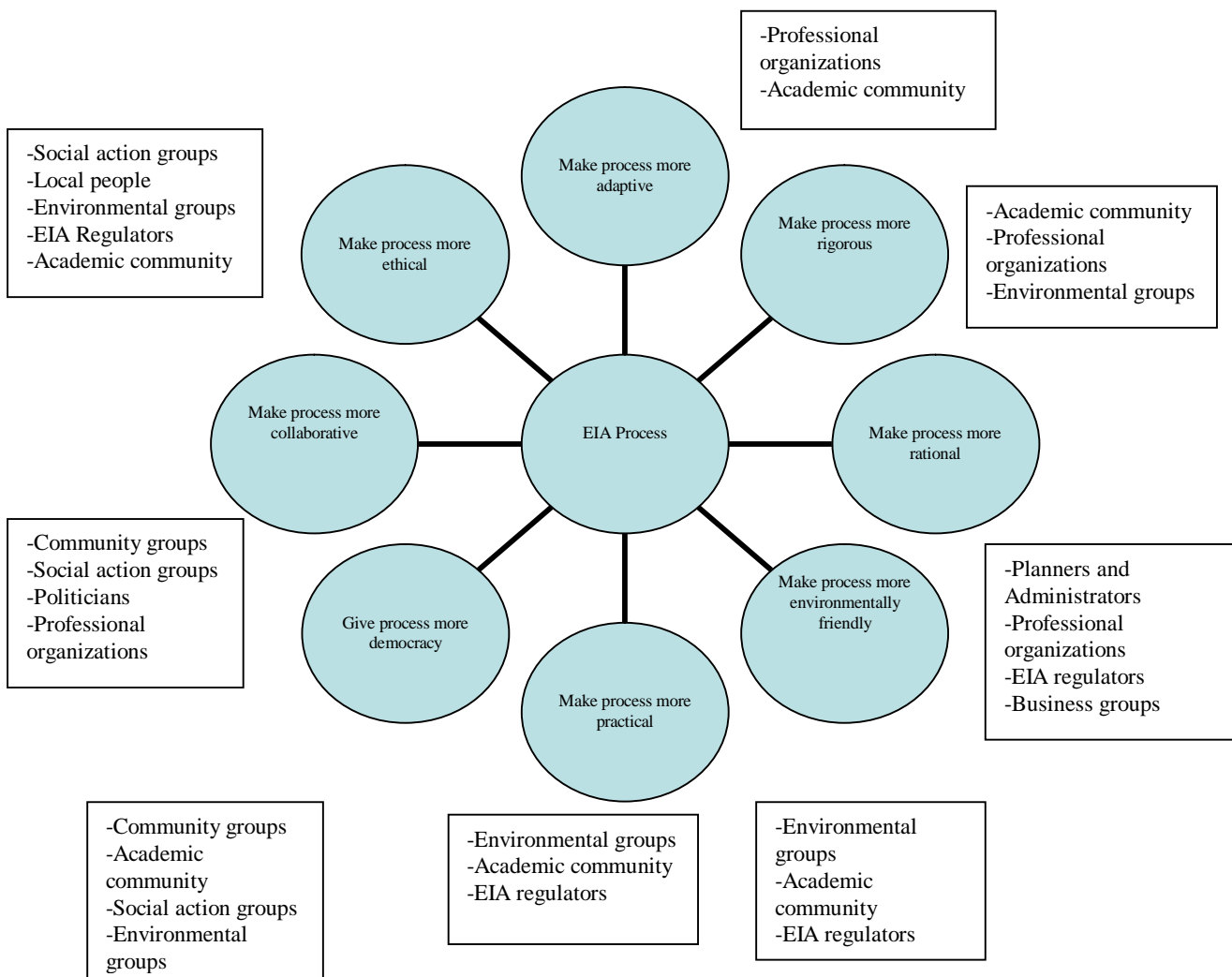
- *Scoping* determines the nature and extent of the required impact assessment by identifying key environmental issues connected with a project development.
- *Identification and key impacts* – the objective of this phase is to identify all potentially significant environmental impacts, both negative and positive. In addition to the identification, it also covers an analysis and prediction of significance of the impacts.
- *Mitigation* covers determinations of ways to avoid, reduce, remedy, or compensate for any adverse impact. It also covers measures how the positive impacts can be enhanced.
- *Reviewing* is a systematic appraisal of the quality of EIA which is done by public and independent specialists before finalization and decision-making.
- *Decision-making* refers to the consideration by the relevant public authority for final approval of the project under specific conditions.
- *Implementation and follow-up* is an important step to make the outcome of the EIA effective, involving the monitoring of outcomes associated with development impacts and comparing the actual outcomes with the predicted ones.
- *Public involvement*, as seen from the chart above, is a crucial step in the overall process of IEA. It is aimed at ensuring the quality and effectiveness of the EIA, by considering the public opinion in the major EIA steps. As described by Hanna (2005), a great deal of attention has been paid to the participatory aspects of EIA, but actual participations remain uneven in both quantity and quality. EIA, as widely recognized management tool, has been used extensively, however, the aspect of public involvement varies greatly among jurisdictions.

3.4. EIA REQUIREMENTS AND DEMANDS

As specified by Lawrence (2003), EIA processes should have a multi-pronged approach which can cover both the stakeholder values and the specific of the process.

The Figure 1 below illustrates that there are different demands on different stakeholders. An effective EIA mechanism should combine all these perspectives, by narrowing the bridge between practical process and actors. There can be various approaches in addressing each of the demand, and the EIA system should provide procedures specific to the country's system and conditions.

Figure 1. Demands on EIA process



Source: Adapted from Lawrence (2003)

3.5. STUDIES ON ENVIRONMENTAL IMPACT ASSESSMENT IN MONGOLIA

Since the time when the Law of Mongolia on IEA was adopted in 1998 with the assistance of international community, including Asian Development Bank and World Bank consultants, there has not been undertaken any significant study combining and integrating

information and data on environmental impact assessment, except for general reports on environmental protection and planning that occasionally cover some issues related to the EIA practice in Mongolia.

As part of this thesis work, certain data and information on the process of EIA were obtained from the reports of the stakeholders in the EIA process, including the Ministry of Environment, State Specialized Inspection Agency and also from international organizations, that were related to general environmental issues. It shows that international knowledge of EIA is very limited in Mongolia. Moreover, there were difficulties encountered during the research work in connection with the access to information, lack of integrated data and the bureaucratic processes within the governmental agencies.

Discussions and interviews with different stakeholders in the IEA process as part of this thesis work have confirmed that there are significant deficiencies in the EIA process that need to be resolved in order to reflect the procedural deficiencies. This Master's thesis work has been intended to provide a humble contribution to fill this gap in the research area of the IEA process in Mongolia, one of the major pillars of protecting the environment and ensuring a sustainable and balanced growth.

CHAPTER FOUR. LEGAL FRAMEWORK AND OVERVIEW OF ENVIRONMENTAL IMPACT ASSESSMENT IN MONGOLIA

4.1. BRIEF INFORMATION ABOUT MONGOLIA

Mongolia is a vast, sparsely populated landlocked country in the North East Asia. The country is characterized by a harsh, dry climate with significant seasonal variations in temperature and a long history of nomadic herding.

Total population of Mongolia is about 2.7 million, residing over the large territory of 1.5 million square km. Population density is 1.52 persons per square km, which is considered as one of lowest density in the world.

In terms of the administrative structure, the country's vast territory is divided into 21 provinces, with more than 60% of the population residing in urban areas. The geographical remoteness, low population density and the location of the majority of the population in urban areas, are, in general, have the major impact on the socio-economic development of the country.

Illustration 1. Location of Mongolia on the globe



4.2. DEVELOPMENT OF LEGAL FRAMEWORK OF IEA IN MONGOLIA

Mongolia's practice of environmental protection has the history of 2200 years of evolution, from the times of King Modun Shanyu of Hun Kingdom when the Land was

recognized as the basis of the state and its protection was provided at strict level. When the integrated state of Mongolia was founded in 1206 by Chinggis Khaan, the “Ikh Zasag” state legislation was the first formal and constitutional law, setting the basic legal principles of environmental protection and monitoring intended to preserve the rich natural resources on the vast territory.

Until modern times, most of the abundant natural resources have not been used at large scale because of the needs for development of appropriate industrial means and advanced technology for the exploitation. Traditionally, the environmental planners of government agencies conducted assessment of possible impacts and consequences of projects. However, such assessments were invariably not in a systematic, comprehensive and integrated manners as required by EIA. (WB 2006) Therefore, it can be concluded that the formal evolution of the EIA system in Mongolia has started from the late 80s, during the transition from the centrally planned economy to a market one. (ADB 2004) It was necessitated by the start of the rapid development of the industrial and mining sectors with the increasing inflow of foreign investment in the country and the formal considerations of the environmental impact of industrial activities (World Bank 2005).

The evolution of the EIA system in Mongolia has been linked with the institutional development and the economic development process. Basically, the history of the institutional development of the formal process of Environmental Impact Assessment in Mongolia can be divided into the following time frame (Myagmarsuren 2006):

1. Initial development period (1987-1992)
2. Active development period (1992-1997)
3. Reform and transition period (1998-present time)

1. Initial development period (1987-1992):

An establishment of an Ecological Analysis Unit in the Authority of Meteorology and Hydrology in 1987, set the institutional basis for the formal development of the environmental

impact assessment in Mongolia. With the establishment of the Ministry of Environment of Mongolia later in the same year, the management of environmental issues were integrated under one roof. However, the major focus of the Ministry of Environment was forestry, meteorology and hydrology at that time.

As a part of the Ministry, the Ecological Analysis Unit was dealing with issues related to the analysis and evaluation of possible negative impacts on soil, air, water from the projects and provide recommendations on the mitigation of adverse effects. The Ecological Analysis Unit consisted of 5 researchers from the National Scientific Academy, government agencies and the academia and carried out impact assessments of over 150 projects.

2. Activating period (1992-1997)

In 1992, the Ministry of the Environment was replaced by the State Committee on Environmental Monitoring (SCEM), with much more widened organizational structure and functions. The scope of activities of the Ecological Analysis Unit also widened and the experts from different institutions dealing with the various types of environmental impact assessment were brought together under the Unit. During this period, the Unit conducted about 760 EIAs of different projects. (D.Bat-Ochir 2004)

In the Resolution #121 of 1994, the Government of Mongolia set the basis for the formalized IEA process in Mongolia by adopting the first formal procedures on environmental impact assessment with the assistance of Asian Development Bank, an international organization operating in Mongolia. It was the first attempt to formalize the procedures on environmental impact assessment and to authorise individual entities with the right to conduct detailed IEA in line with the international practices. This analysis of this Resolution and its outcome shows that this attempt was a positive step towards reducing the work load of governmental institutions in Mongolia. (Myagmarsuren 2006)

In 1995, the Parliament included in the Law on Environmental Protection provisions on conducting the environmental impact assessment. It was a very general provision requiring that EIA screening should be conducted before the commencement of projects, without going into details of how it should be regulated. However, it can be concluded that it was a major development in the EIA development history acknowledging the need for EIA.

3. Period of Reform and Transition (1998-present time)

However, the procedures were not enough to regulate the EIA process and to respond to the alleged environmental degradation and an increasing inflow of foreign investment in the industrial sector using the natural resources.

The adoption of the Law on Environmental Impact Assessment in 1998 has brought a new reform stage in the EIA practice. (Bayasgalan 2002) The period since this time can be referred to as the era of reform and transition. Based on the principles and requirements of the Law on EIA, relevant procedures have been released to formalize and enhance the EIA process. The Law on Environmental Impact Assessment was amended in 2001 to reflect some important socio-economic transition changes. A comparison of the Law on Environmental Impact Assessment of 1998 and 2001 is provided in Annex 2. This comparison describes the intentions of each change in the Law on EIA of Mongolia.

There are 29 laws in Mongolia on environmental management, of which very few can apply specifically to the EIA process. According to the Law on EIA of Mongolia, the legislation on Environmental Impact Assessment consists of the Constitution of Mongolia, the Law of Mongolia on Environmental Protection, the Law on Environmental Impact Assessment, and other legislative acts which is consistent with those laws. In addition, the basic legal grounds on the EIA process consist of relevant procedures adopted by the Ministry of Environment.

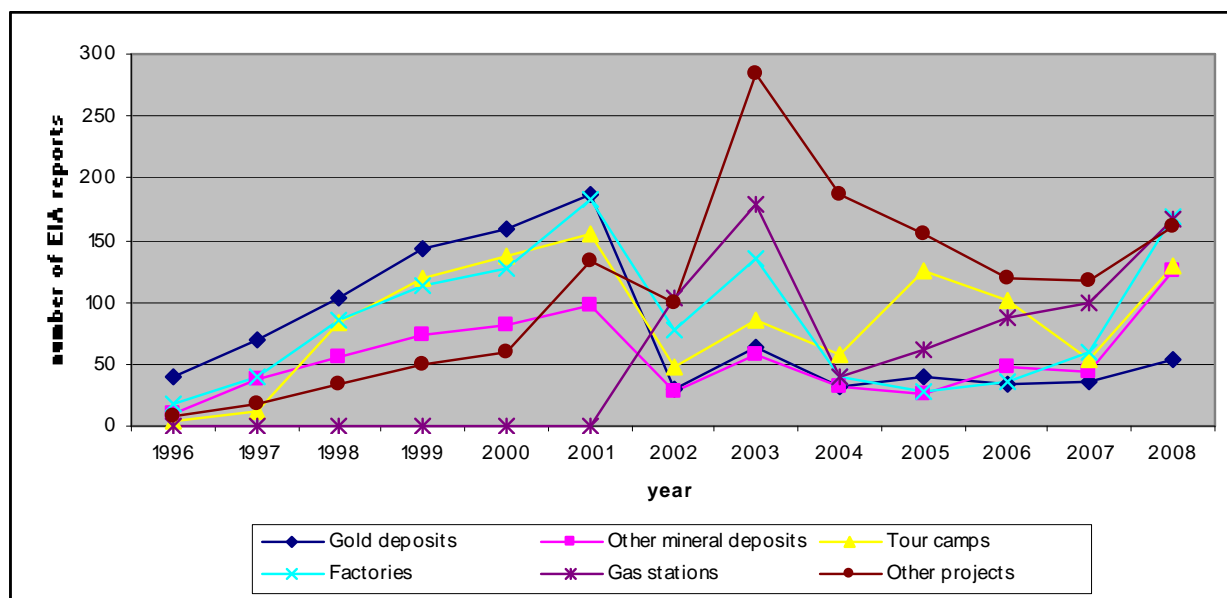
The major procedures specifically related to the EIA process include “The Working Procedure for the Committee of the Environmental Impact Assessment”, adopted by Order

#119 dated April 27, 2006 of the Environmental Minister, “Procedure for Detailed Environmental Impact Assessment”, adopted by Order #195 dated June 21, 2006, of the Environmental Minister, and “Procedure for Monitoring the Implementation of Detailed Environmental Impact Assessment Reports”, adopted by Order #87 of 2000 of the same Minister.

The establishment of the formalized legal grounds of the environmental impact assessment practice has provided a basic definition of the EIA concepts and an integrated approach to handle the EIA practice. The main purpose of the current Law on Environmental Impact Assessment of Mongolia is to regulate the implementation of the environmental impact assessment, improve the governmental decision-making on general development, protect ecological values, and ensure sustainable use of the natural resources.

The below figure shows the trend in the number of project screenings in different sectors approved by the Ministry of Environment during the period of 1996-2008.

Figure 2. Number of projects which underwent EIA screening, by sectors, 1996-2008



Source: Data taken from the Ministry of Environment, 2010

* Data for gas stations are not available before the year of 2001 because the issue of gas stations were handled by a different ministry during that period.

As seen from the chart above, the adoption of the first procedures on EIA has provided favourable conditions for increasing the number of EIAs for all sectors. The chart also shows the development trend of the EIA project screening. Specifically starting from 2007, the number of EIA projects is increasing reflecting the intensified economic activity.

During 1996-2008, a total of 6043 EIAs of the screening stage were approved by Ministry of Environment of Tourism as shown in the Table below, which sums up all the sector EIAs from the Figure 2.

Table 2.Total number of EIA screening, 1996-2008

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	Total
Total:	78	176	362	501	567	753	383	805	347	433	425	411	802	6043

The increasing trend in the number of project screening in all sectors since 2007 requires a careful approach with appropriate technological solution, qualified personnel, and strengthened monitoring and follow-up to meet the demands of the market economy. Otherwise, there can be an increasing risk of environmental pollution, degradation of natural resources, deterioration of production activity and reduction of economic efficiency. When not controlled properly, the exploitation of environmental resources can lead to devastating consequences.

4.3. PROCESS AND PRINCIPAL PLAYERS IN ENVIRONMENTAL IMPACT ASSESSMENT IN MONGOLIA

As noted above, Mongolia's EIA procedures and steps have in general been drafted with the assistance of the international community, specifically, the Asian Development Bank, that has played an important role in particular at the start of the development of formal process on EIA. In general, the EIA process of Mongolia contains the basic generic steps of EIA in many countries as it was illustrated in Table 1 above.

However, there are significant rooms for improvement that require reflecting specifics of the country's governmental structure and procedures. It can not be certain that whether the EIA approaches can be replicated elsewhere since the EIA systems in transition economies follow different paths which are unique to their economic, social and political changes. (Cherp and Antypas 2003) Therefore, it is important to examine the current status of EIA and make improvements reflecting the specific characteristics of the country.

The legislation on EIA of Mongolia provides the following main requirements:

- Any project to be implemented on the territory of Mongolia affecting the environment or natural resources should have environmental impact assessment;
- Project developers should take the responsibility for involving their projects in the environmental impact assessment screening;
- The experts of the Ministry of Environment and the provincial government offices shall carry out the EIA screening at the expense of the project developers without charging fee. However, the EIA expenses should be provided by the project developers;
- The process of EIA in Mongolia consists of the following principal steps: EIA screening and detailed EIA. It applies to specific projects as required in the legislation on EIA.

The Law on EIA affects specific types of projects to undergo EIA, from manufacture and production to construction and mineral exploitation, as well as their expansion or renovation:

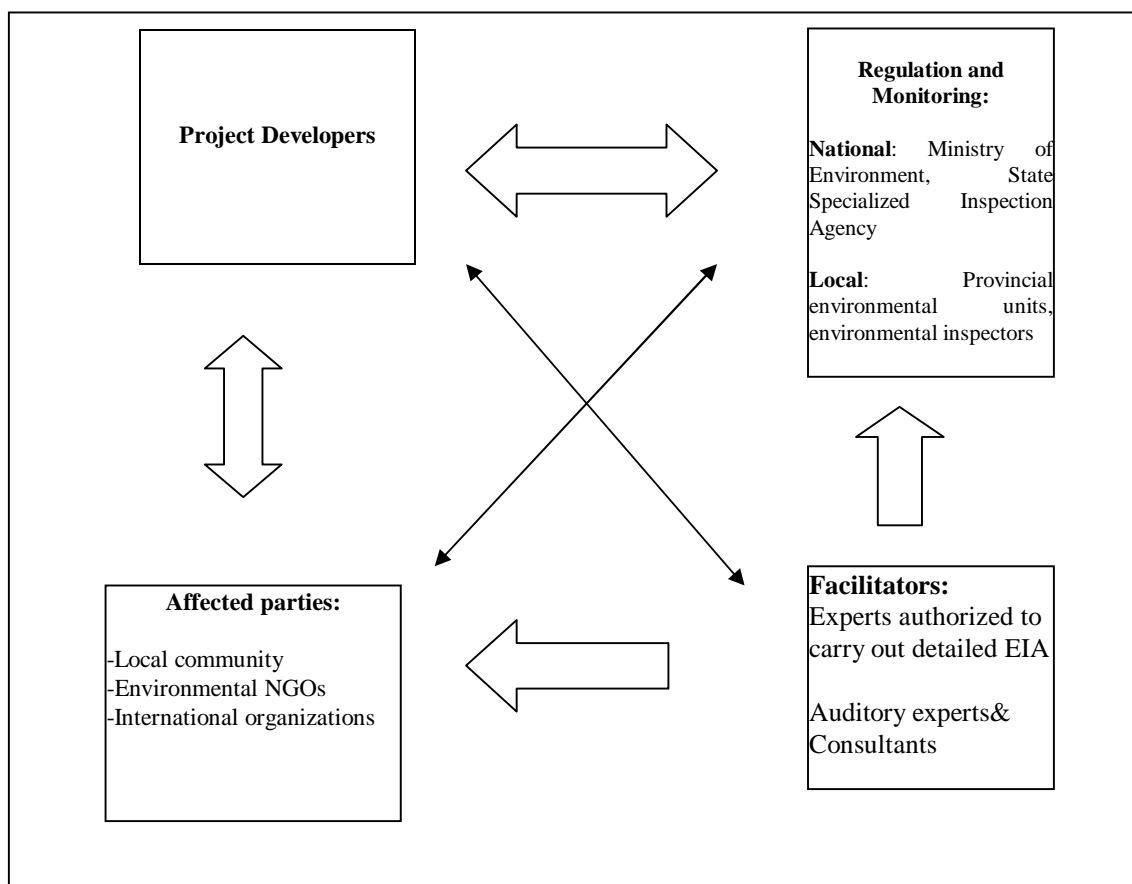
Types of activities for which EIA is required before the start of operation:

1. Mining activity
2. Local factories
3. Production and services except those related to water basins and watering

4. Electricity stations with capacity up to 1 mWt, electricity transmission grids with capacity up to 35 kW voltage, heat transmission lines and local roads and communication lines
5. Tourist and resort places with capacity of up to 50 beds
6. Water supply, waste water cleaning facility, waste disposal sites at residential places with population up to 10,000
7. Local construction facilities related to civil defence
8. Local hunting, fishing and forest resort places
9. Other activity in local protected areas.

According to the EIA legislation of Mongolia, an overview of principal players and their relationship in the EIA process can be characterised as follows:

Figure 3. Simple chart of EIA Actors in Mongolia



This chart was made based on the legislation on EIA of Mongolia

Article 15 of the Law on Environmental Impact Assessment of Mongolia empowers the Ministry of Environment to develop procedures and measures for EIA. This is the main regulatory and monitoring body at national level. The experts of the Ministry of Environment and provincial environmental authorities carry out the screening and issue the relevant conclusion. EIA facilitators when authorised by the Ministry of Environment carry out detailed EIA and provide consulting. The parties affected in the EIA process, such as the local community and Environmental NGOs, do not play roles in the EIA practice as well as in the overall environmental monitoring. This is most probably due to the weak NGOs development and poor coordination of public involvement. (UNDP 2008)

4.4. EIA PROCESS IN MONGOLIA

The EIA process in Mongolia can, basically, be divided into two stages: screening and detailed EIA. Upon the EIA screening, it is identified whether a project needs to undergo detailed EIA, the more comprehensive stage.

Screening

EIA is most effective when it occurs before the commencement of development, as this allows the precautionary principle to play a significant role. (Wood 2003). This principle is enshrined in the legislation of Mongolia on EIA. According to the Law and the relevant procedures, the project screening should be conducted before starting any project or project expansions or renovations that operate using the natural resources. Local environmental inspectors and Leaders of State or Local Representatives (provincial self-governing bodies) take in charge of monitoring the implementation of the law, specifically in relation to whether any of the projects subject to EIA, has undergone the required screening before the operation in their respective jurisdictions.

Before starting the project, the project implementer submits to the state or local administrative organization his project proposal, including project description, feasibility study, any technological solutions, and work schemes for conducting EIA.

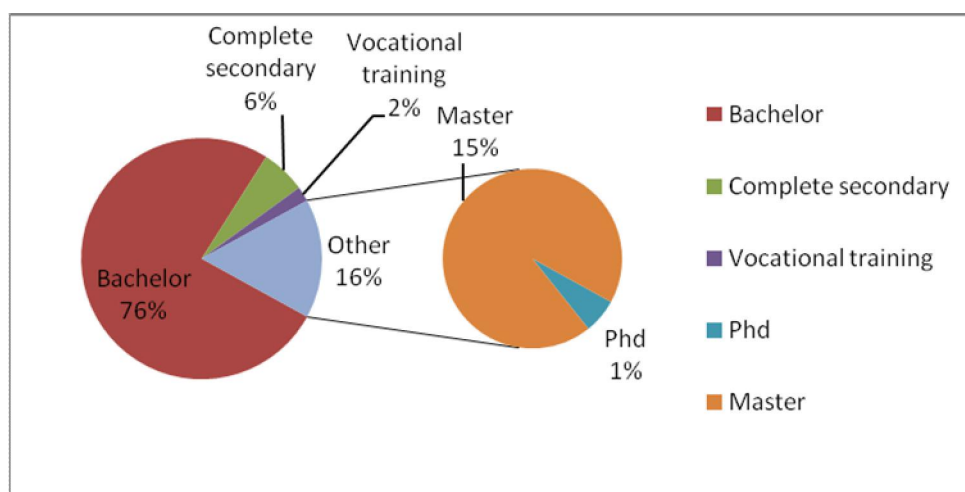
A project proposal may be rejected if it does not meet the law requirements, or if it can not be covered by within the framework of the land planning system, or contain characteristics that may have a significantly harmful impact on people's health and environment. If the project proposal is accepted, then the experts of local or central governmental bodies carry out the project screening.

After carrying out general EIA, local experts may decide one of the following, that the proposal:

- “can be implemented right away without the need to conduct the detailed EIA”
- or “can be implemented at specific conditions”, or
- specify the need to carry out detailed EIA.

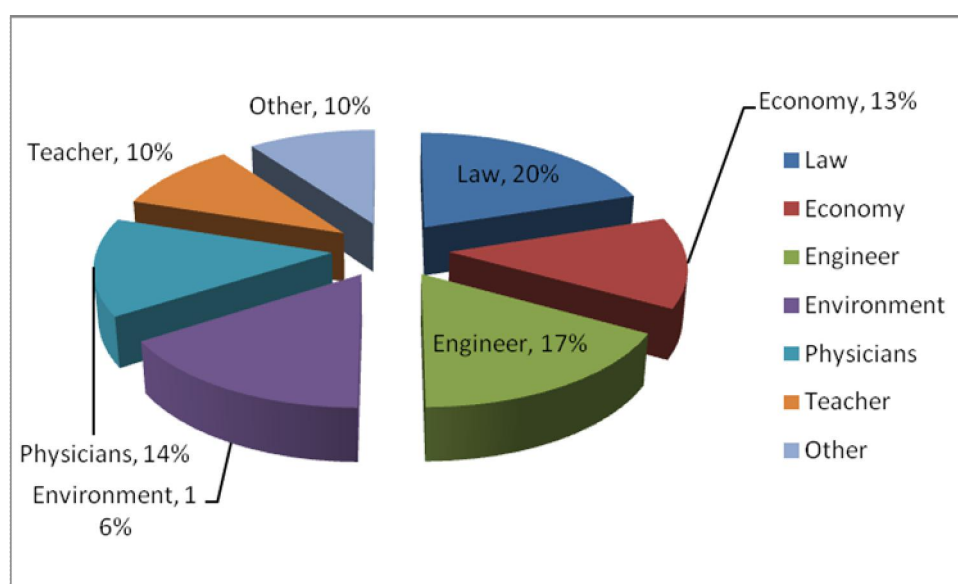
However, the interviews have confirmed that insufficient attention is paid to the content of the EIA reports due to lack of specialization and that in most cases the screening is scrolled through the list of required materials. This process shows that there is a significant need to pay attention at the quality of EIA from the local level, since this is the stage where the result of EIA depends upon. Specifically, the quality of specialization and knowledge of local experts is of utmost importance.

Table 3. Education Levels of Local Environmental Inspectors



Source: This chart was made based on data available from the Office of Labor and Employment of Mongolia, 2010

Table 4. Field of Education of Local Environmental Inspectors



Source: This chart was made based on data available from the Office of Labor and Employment of Mongolia, 2010

As seen from the chart above, the majority of local environmental inspectors have Bachelor degree, but in different fields, some of which are not directly relevant to the field of environmental impact assessment. This shows that a careful attention should be paid to improving education and specialization of environmental inspectors, especially local ones, and to retaining the trained personnel by means of various social benefit programs.

Detailed Environmental impact assessment

When submitted further from the local level assessment, the detailed EIA of extensive projects are dealt with by the experts of the state central organization, which is the Ministry of Environment and Tourism of Mongolia (METM).

As specified in the Law on Environmental Impact Assessment of Mongolia (2001), the Detailed Environmental Impact Assessment Report should include:

- Environmental Baseline data and indices;
- Project alternatives;
- Recommendations for minimizing and mitigating measures as well as eliminating of potential and significant adverse impacts;
- Analysis and calculation of the extent and distribution of adverse impact and its consequences;
- Risk assessment;
- Environmental Protection Plan;
- Environmental Monitoring Program;
- Opinion of local residents of the area of the project implementation;
- Other issues with regard to the special nature of the project
- Rehabilitation project.

According to the EIA legislation, the METM grants authorisation to companies to carry out detailed EIA. As of the end of 2008, there were 70 companies that were licensed to conduct detailed EIA. The below table shows the types of sectors and the number of licenses in different sectors to conduct detailed EIAs.

Table 5. Sectors and licenses companies of authorised to conduct detailed EIAs,

as of the end of 2008

#	<i>Sectors of detailed EIA</i>	<i>Number of licenses</i>
1	Mining	57
2	Infrastructure	41
3	Industry and agriculture	46
4	Services	53

Source: Ministry of Environment, 2010

Out of these companies, 15 companies have the authorisation of carrying out detailed EIA in 4 sectors, 25 have the authorisation in 2 sectors, and the remaining 25 have the authorisation in 3 sectors of industrial activities. In 2008, these companies carried out a total of 450 EIA, and the list of these companies and the number of EIAs that they conducted are shown in detail as Annex 3.

As seen from the Annex 1, out of these 70 authorised companies, 45 have been active by conducting different types of detailed EIAs. This means that the remaining 25 companies have remained inactive, although they were granted with this authorisation to conduct detailed EIA.

According to the relevant legislation, the selection and authorisation of companies to conduct detailed EIA is done through tender bidding by public announcement. The Law on EIA does not provide specific requirements for selection of companies. Article 9, Chapter 2, Law of EIA indicates that the capacity of interested companies submitting their proposals to carry out detailed EIA shall be reviewed by the state authority in 26 business days and that the license on detailed EIA shall be allocated for the period of two years with possible extension. However, the Law on Environmental Protection, provides a bit more detailed provision in the Article 5, Chapter 2, specifying the requirements for professional staff no less than two third of

total team, technological equipment necessary for EIA work and the EIA database for the selection of the EIA assessment companies.

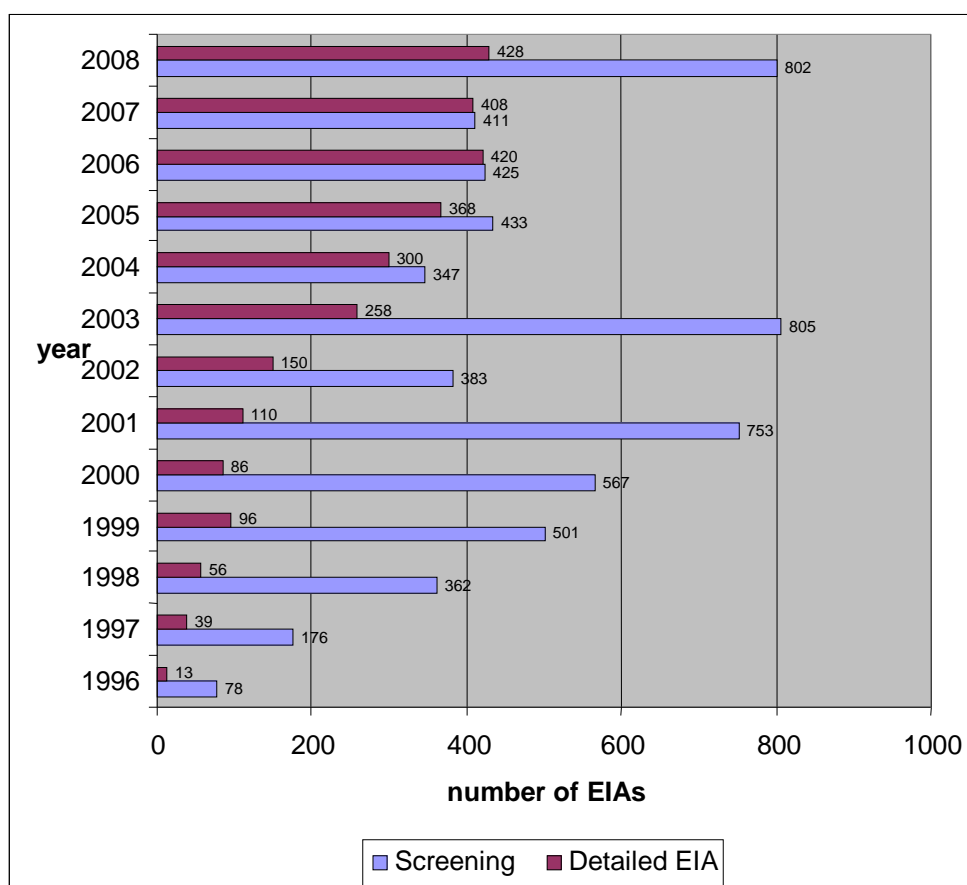
Therefore, it is important to include in the procedure a special clause to renew the list of companies with the EIA authorisation, for example, in every two years, in order to avoid a monopoly of few companies dominating in the detailed environmental impact assessment work and promote the private business in this area.

This effort can not only promote advanced technology usage and comprehensive methods in the EIA practice but also it will increase the number of work places. The data from the Labor and Employment Office, a governmental office in charge of employment issues, show that as of the end of 2008, a total of 325 people were employed in these 70 companies. Thus, the selection of should be based on, first of all, on the quality of work in the past and the attestation, as it was concluded from the interviews and the questionnaire results.

For the approval of the detailed EIA, there is a special evaluation committee of the Ministry of Environment. This committee discusses and approves detailed EIA reports through its frequent meetings. In 2008, a total of 450 detailed EIA reports were approved by the evaluation committee during its 18 discussion-meetings. Out of these 450 EIA reports, 86 were in the mining sector, 42 in the industry and agriculture, 298 were in the services sector and 24 were in the infrastructure sector.

In total, during the development of the legal framework on environmental impact assessment between 1996 and 2008, the Ministry of Environment has issued decisions on 6043 project screening reports and 2732 detailed EIA reports. The following chart shows the number of projects for which general and detailed environmental impact assessments were carried out between 1996 and 2008.

Figure 4. Projects with general and detailed environmental impact assessment 1996-2008



Source: Data taken from the Ministry of Environment, 2010

The figure shows that the number of detailed EIAs is increasing, demonstrating the recognition of the need for more detailed assessment of environmental impacts. From 2007 to 2008, the number of project screenings have increased 2-fold, exemplifying the enhancing industrial activities, improving economic capacity and an increasing need for EIAs. It also shows that the EIA process has intensified during this period.

When compared, EIAs in city areas significantly lack community involvement in the EIA process, mainly in the urban planning. Especially, significant conflicts arise between local community and the project implementers after the construction of buildings and also in relation to mining projects.

In urban areas, the following types of activities cause the major concern on environmental degradation and most of them are decided upon without the community involvement in relation to the urban planning (UNDP 2007):

- Projects affecting water reserves, and underground water levels;
- Projects in the proximity area of the largest river in the city “Tuul”;
- Projects at state special protected area zones;
- Projects affecting parks and gardens;
- Projects affecting road traffics near residential areas;
- Projects using raw materials with radioactive substances in the construction;

Out of all these above listed activities, the projects in the mining sector are having the most negative impact on the environment, specifically by the following ways: (Ministry of Environment and Tourism 2007)

- Land degradation and soil erosion;
- Deterioration of water ecosystems since most of gold mines are located along watershed areas, causing water pollution, water shortage and also causing changes in the water direction, and reducing the water levels;
- Loss and pollution of plants as a result of soil work at mining sites.

Thus, as a part of this thesis work, a case study was made at a mining company of Mongolia in order to audit its compliance with the Law on EIA of Mongolia. The details of this case study are described in the following chapter.

CHAPTER FIVE. CASE STUDY/ QUESTIONNAIRE

5.1. CASE STUDY ON THE COMPLIANCE WITH THE 2001 LAW OF MONGOLIA ON ENVIRONMENTAL IMPACT ASSESSMENT

Background

As a part of this research work, an audit was made at a Mongolian coal mining company in order to determine the status of the compliance with the Law of Mongolia on Environmental Impact Assessment. An analysis was made on the company's environmental impact assessment reports and the environmental plans, such as the Environmental Monitoring Plan and the Environmental Protection Plan, the most important environmental documents on environmental impact assessment. The name of this mining company will not be indicated here, due to the research ethics.

Evaluation criteria

In order to determine the status of compliance, the following most important criteria were selected and used from the Law on Environmental Impact Assessment:

1. Article 4.1., Chapter 2, the Law on EIA: "New projects as well as the renovation and expansion of existing industrial, service and construction activities and project which use natural resources in different ways shall be subject for screening."
2. Article 4.2., Chapter 2, the Law on EIA: "The screening shall be done prior to mining, procurement of a license of land possession or use as well as implementation of a project."
3. Article 5.2., Chapter 2, the Law on EIA: "Detailed Environmental Impact Assessments shall be conducted by a legal entity authorized to do so according to Article 9 of this Law."

4. Article 6.1., Chapter 2, the Law on EIA: “The project implementer shall develop an Environmental Protection Plan and Environmental Monitoring program for the purpose of implementing the recommendations and conclusions of the detailed environmental Impact Assessment and to monitor and control process and performance of its own activity.”
5. Article 6.1.1, Chapter 2, the Law on EIA: “The Environmental Protection Plan shall include measures to minimize, mitigate and eliminate adverse impacts identified during the detailed environmental Impact Assessment as well as determine the timeline and estimated budget for implementation of those measures”
6. Article 6.1.2, Chapter 2, the Law on EIA: “The Environmental Monitoring Program shall address the monitoring and study of changes in the environment as a result of project activity and reporting requirements, include monitoring schedule and methods as well as determine the timeline and estimated budget for implementation of those measures”
7. Article 6.4., Chapter 2, the Law on EIA: “The Citizen Representative Khural of Aimag and Capital City, Soum, District and their Presidiums, and local environmental inspector shall exercise oversight of the implementation of the Environmental Protection Plan and the Environmental Monitoring Program.”

Findings:

1. Based on Article 4.1. of Chapter 2 of the Law on EIA, the experts of the Ministry of Environment issued conclusions based on the screening of the EIA report of the company in 1997, 2002, and 2008.
2. Based on Article 4.1., Chapter 2, of the Law on EIA, the project screening was carried out in 1997, 2002 and 2008.
3. Based on Article 5.2., Chapter 2, of the Law on EIA, the detailed EIA of the project on extraction of coal from the first shaft of the coal mine was made in 1997, the

detailed EIA report on the extraction of coal from the 2nd shaft of the coal mine was made in 2002, and its corresponding adjustment was made in 2008, respectively.

4. Based on Article 6.1, Chapter 2 of the Law on EIA, the company has the Environmental Protection Plan (EPP) and Environmental Monitoring Program (EPP). Although the company maintains the written documents, it is important to analyze the contents in relation to the compliance with the Law on EIA. The comments on the coverage and the content will be provided the following section.
5. The Law on EIA requires that EPP and EMP be separate documents. In general, the company has complied with this legal requirement. For instance, the 2002 EIA report contains general actions to be taken in regard to environmental protection and environmental monitoring in the forms of a graphic and a table.
6. Based on Article 6.1.2, Chapter 2 of the Law on EIA, the company arranged that a special committee on monitoring the rehabilitation work of mining companies arrive at the rehabilitation site and accept officially the result of the rehabilitation work. This work was done following the Order #136/75 of the Provincial Governor of Gobi-Altai province, to which the company belongs by its jurisdiction.
7. The documentation and evidence provided by the company show that the provincial government inspectors carried out regular monitoring on the implementation of the plans, as required by law. A comparison was made on the confirmation acts on the acceptance of the rehabilitated sites in 2005, 2007 and 2008, the statement # 331/2007 on the acceptance of the biological rehabilitation results and the statement 1014/2008 on the acceptance of technical rehabilitation by the provincial specialized inspector in 2007 and 2008.

Conclusion

The following major conclusions were made based on the findings of the case study:

- 1) The Law on EIA requires that specific measures, duration and expenses are specified for the Environmental Monitoring Plan and the Environmental Protection Plan. During the analysis of the company documents, it was found out that related action plans were created for different categories of activities, such as technology monitoring, water and air monitoring, prevention of water leakages, placement of oil and oil products in special containers and others. These action plans included the necessary details, including responsible persons, duration and types of response and emergency measures. However, an approximate amount of expenses for categories of actions were missing, failing to comply with the law requirement.
- 2) It was also established that the Environmental Monitoring Plan has not been implemented at satisfactory level. As specified in the Law on EIA, the purpose of the EMP is to monitor and analyze any changes in the environmental conditions as a result of the industrial activity. However, no work has been done to document any effort to identify the possible impact and take measures to mitigate or eliminate.
- 3) It was also determined that due to the absence of a full-time environmental officer, the company's involvement in the EIA process has been insufficient. It has resulted in an unawareness of possible conditions occurring due to the mining activity, insufficient outcome of the environmental rehabilitation work (although it was done several times) at the same site, causing inefficient spending and poor quality in the environmental responsibilities.

5.2. QUESTIONNAIRE TAKEN FROM LICENSED COMPANIES AUTHORISED TO CONDUCT DETAILED EIA

As a part of this thesis work, the method of unanimous questionnaire was used in order to gather the opinion of the assessment companies regarding the improvement of the EIA process in Mongolia. This method of the questionnaire was selected to add to the reliability of data and information and to support the conclusions that are made under this research work, in the hope that these can reveal the problems in the EIA process as well as the interests and the opinion of the assessment companies. The reason for organizing this questionnaire specifically among the assessment companies is that such companies carry out the detailed environmental impact assessment work and play an important role in the EIA process. A total of 20 companies responded to the questionnaire, which sample copy is attached hereto as Annex 4.

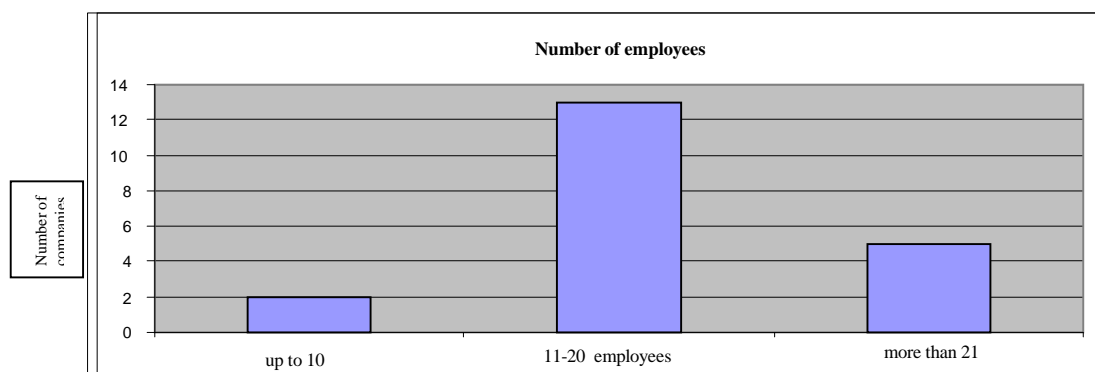
The questionnaire questions were selected based on the literature review, work experience as well during the interviews with the key informants.

The presentation of the results of the questionnaire are provided below separately from the discussion and interpretation in order to provide neutral and objective data. The questionnaire results are provided below by specific topics. The corresponding interpretation of the questionnaire results are presented in Chapter 6 as part of the overall research findings.

Questionnaire results

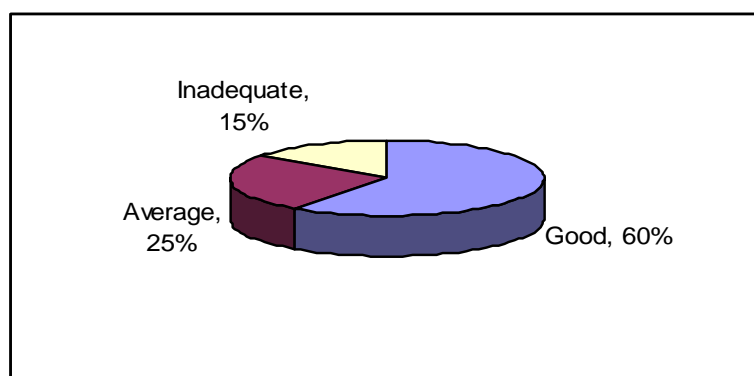
- The majority of respondents (75%) have considered that the Law and the procedures on EIA need to be revised and improved. Most of respondents commented that it is crucial to consider the views and opinions of the assessment companies in revising or releasing any new regulations or procedures on EIA.
- In terms of staffing, 65% have up to 20 employees, 10% have up to 10 employees and 25% have more than 21 employees. The category of companies with more than 21 employees don't often have full time employees, rather they have contract workers who work on a calling-basis when needed.

Table 6. Number of employees of the surveyed companies authorised to carry out detailed EIA



- In terms of work experience, 40% of these companies have 1-5 years, 42% have 6-10 years, and 12% have more than 10 years of work experience.
- In terms of technological capacity, 60% have responded that they have good technological capacity to carry out EIAs, while 25% responded that they have average level technological capacity, and the remaining percent responded that they have inadequate technological capacity. Here, the term “technological capacity” included any basic tools that are used for carrying out EIAs. (Figure 5)

Figure 5. Technological capacity of the surveyed companies authorized to carry out detailed EIA

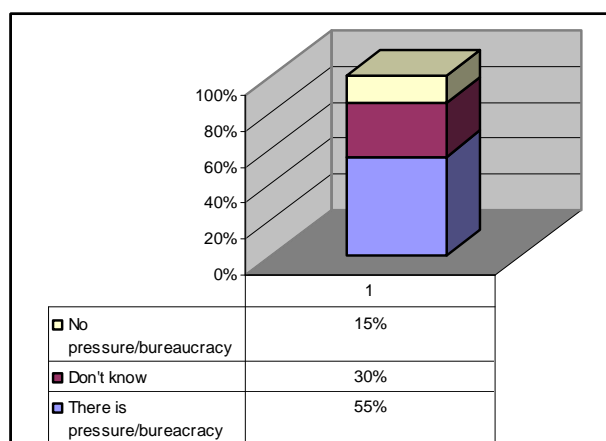


- 55% of companies have considered that a total of about 30 companies can be satisfactory at national level to respond to and work on detailed EIAs. Some have

considered that too high number of the assessment companies may reduce the work fees and reduce the quality of EIAs.

- Moreover, in terms of job availability and the opportunity to get the job/secure contract to carry out detailed EIA, 60% have considered that there are good opportunities, while 40% have responded that there are not so good opportunities. In addition, 60% of respondents have responded that only few companies are having a monopoly in taking most of the work on detailed EIA by its long years of work experience and by its well-known status. Moreover, almost all of the respondents (95%) have considered that it is crucial to consider in the detailed EIA reports the correctness of information and the usage of technological solutions.
- In terms of community involvement, 35% have considered that the public participation in the EIA process is satisfactory while the remaining 65 % have considered that it is not so satisfactory at this time.
- In terms of their relations with the state administrative authority, the Ministry of Environment, more than half of the respondents (55%) have considered that there is a pressure/bureaucracy from the Ministry of Environment that affects their work. However, 30% have replied that they don't know, while the remaining 15% replied that there is no pressure/bureaucracy. (Figure 6) The reasons that were indicated by the respondents who think that there is pressure/bureaucracy were related to bureaucracy of the state authority by withholding the approval of the EIA reports for uncertain period, delaying their work.

Figure 6. Questionnaire responses on pressures/bureaucracy from the government authority



- Similarly, all (100%) respondents have commented that it is important to organize regular training, seminars and workshops by inviting high professional experts from abroad and to improve the knowledge of EIAs among the domestic experts.

CHAPTER SIX. RECOMMENDATIONS ON IMPROVEMENT OF EIA IN MONGOLIA BASED ON RESEARCH FINDINGS

This section provides recommendations for EIA improvement based on the research findings, including the questionnaire, interview and other major challenges/problems in the EIA process that were identified during the thesis work. Below, the discussion and recommendations on the most challenging issues are clustered around major criteria in analysing the EIA system that were selected to be specific to Mongolia's context.

Need for revision of the legislation on EIA

Over the past decade, the major focus has been on drafting major principles and adopting relevant legislation on environmental management. Now it is time to review the implementation and consistency of the approved legislation and bridge the gap between the practice and the legislation, when required.

During the preparation of this thesis work on the EIA process in Mongolia, the research hypothesis that the legislation on the EIA process needs revision has been confirmed. The legal basis of the EIA practice was laid down with the assistance of international

community. However, this time the community and the private entity need to be part of the process of improving the EIA practice in Mongolia to reflect the procedural defects and complications.

Laws do not often cover all the details needed to explain how an individual, business, state or local government, or non-profit might follow the law (Mackenthun and Bregman 1992). In order to make the law to work on daily basis, detailed Regulations interpret the law and provide comprehensive usage of the law in practice.

Considering the current status of the legislation on EIA in Mongolia, more detailed and integrated Regulations may be necessary to complement the Law on EIA comprising the major challenging issues such as community involvement and the EIA process, specifically, post decision-making.

In this regard, this research work has attempted to provide recommendations and policy options for improvement of the EIA process that can be used as an integrated tool.

Capacity building

The legislation on EIA require that the assessment companies should have staff with at least two third working on full-time basis. Given the infrequency of job availability, the companies with the license to conduct detailed EIA often complain that this law requirement is too unrealistic and that it is too budget-consuming to maintain such percent of full-time employees until securing a contract on conducting detailed EIA. This opinion of the assessment companies may be justifiable, considering the EIA market and the size of the assessment companies. It may be especially difficult to comply with this procedure when there is significant government intervention and the early stage of the development of the EIA practice in Mongolia. During the interviews that were conducted as part of this thesis work, most officials from the Ministry of Environment and Tourism and the State Specialized Inspection Authority were also sharing the same opinion about the need to change this legal

provision and reduce the requirement of the full-time staff of the assessment companies to at least one third of overall staff.

- Given the early stage of the development of the EIA process and the economic capacity of the country, the financial and technological capacity of the EIA assessment companies is not at its desirable stage. It is time to support the capacity of equipment and technology such as field research laboratories. Although the experts carrying out the EIA take the field substances back to the city laboratory for research and analysis, there are often cases when the environmental impact assessment work requires an analysis of some rapidly evaporating substances at the site. Technological incapacity thus affects the quality of EIAs. Therefore, there is a strong need for the government action to organize soft loans or financial opportunities for businesses in this area, as an important part of the effort to improve EIAs in Mongolia and enhance the capacity of the assessment companies. It is significant especially at this time when the banking sector of Mongolia is experiencing a recovery after the decline in the past few years. (World Bank 2007)

- To produce qualified EIAs, the government needs to adopt more efficient procedures among the interested EIA assessment companies in order to improve the quality of detailed EIAs and to promote the introduction of the modern technology. Therefore, the requirement on the selection should first of all be based on the quality of the work in the past, technological solutions and attestation because the questionnaire results have revealed that the acquaintances with the state organs were influencing on securing a contract to conduct detailed EIAs. It is necessary to promote the competition and maintain the fair judgment on the selection of companies to conduct detailed EIA, in order to eliminate the alleged monopoly and bureaucracy in the governmental organs.

- In addition, the quality of professional staff at the governmental agencies to provide guidance on minimising possible environmental impacts and risks, on environmental restoration

and rehabilitation, as well as on calculation of relevant budget and expenses is significant for the quality of EIA implementation. Moreover, there is significant lack of specialization on EIA at local level. It is crucial to improve the specialization of particularly local environmental inspectors by way of organizing frequent training and by adopting a special employment policy to retain the trained personnel. This may be one of issues seriously affecting the EIA process from the initial stage. It is recommended that the professional code of conduct for EIA should be developed for enhancing professionalism in this area and frequent training should be organized to improve the knowledge of local experts.

Community involvement

Indeed, community stays outside during the whole process of approval of EIAs, as it was also confirmed by the results of the questionnaire and interviews. The international practice show that the involvement of local community is significant in monitoring the implementation of EIA. At the moment, the introduction and presentation of EIA reports and documents are limited only within central and local governmental organizations for the approval processes, without ensuring access to it by the community, especially by local ones.

The Law and Procedures on EIA do not provide specific measures to involve local community in the EIA process, except for the general requirement in the detailed EIA report to include “Opinion of local residents of the area of the project implementation”. Even the Law on EIA does not provide a definition of “community” as one of major actors in the EIA relations. Moreover, the legislation on EIA need to define the legal basis for involvement of consultants or NGOs in the EIA process. It is essential to ensure that partnership of governmental and non-governmental bodies is actively involved in the formulation, decision-making and the implementation process of not only project-level EIAs but also in much wider contexts, such as strategically important projects.

Therefore, it is recommended that there should be specific clauses in the procedures on EIA which require the assessment companies and governmental institutions to enhance public

participation during the all stages of project, and to consider the public opinion as mandatory in the approval process, for example, through the methods of public hearing or questionnaires. A special procedure should be established by which the project implementers constantly provide update of their project to the community and takes into consideration the comments and voices of the community in their work.

Moreover, the regulations on EIA need to require specific documentation of such community involvement, for example in the form of photo evidence, filled-in questionnaires, records, public announcement or any other evidence that shows that the public view was considered in the project consideration. Openness to the community makes the monitoring much easier and contributes to reducing governmental workload and to eliminating bureaucracy and corruption.

When compared, EIAs in city areas significantly lack community involvement in the EIA process, mainly in the urban planning. Especially, significant conflicts arise between local community and the project implementers after the construction of buildings and also in relation to mining projects.

To solve the conflicts, it is important to set the requirement in the law and the relevant procedures on EIA to expand the scope of mandatory EIA projects and include community voice in the approval process of the project proposals. This will limit at some level the alleged widespread corruption of approving EIAs under closed conditions. Furthermore, this effort will have positive impact on reducing air pollution and noise, restricting the soil degradation and preserving water levels. Therefore, regulations on EIA may need to specify the content of the EIA information that is required to be published. Specific examples include, among others, short description of the project, short environmental protection plan, reflection of public view in the project report, alternatives of mitigation of possible damages to environment, risk plan and ways how the community can get updates on the process of the implementation of the

project. One of ways of establishing a communication between the project developers and the community can be a mandatory procedure requiring that project developers should have their own websites and provide update on their process to the public.

Need for expansion of international cooperation on EIA

More than a decade has passed since Mongolia's entry into the international environmental mainstream. However, specifically in relation to the environmental impact assessment, Mongolia needs to make an effort to consider and access to the international conventions related to increasing community involvement and promoting international cooperation in the area of EIA. Important examples of the most priority international conventions include the United Nations Economic Commission for Europe (UNECE) Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters, usually known as the Aarhus Convention, and the Convention on Environmental Impact Assessment in a Transboundary Context, known as the Espoo Convention.

The Aarhus Convention was adopted in 1998. As of the end of 2009, it was ratified by 40 countries, mainly from the Europe and Central Asia. The area of the Convention is structured around "three pillars": access to information, public participation in decision making and access to environmental justice. It seeks to promote greater transparency and accountability by guaranteeing the right of public access to environmental information, enabling the public affected and environmental NGOs to comment on proposals and making effective judicial mechanisms available to the public so that its legitimate interests are protected.

The Espoo Convention was adopted on 25 February 1991 and entered into force on 10 September 1997. The Espoo Convention was ratified by 47 countries. The Espoo Convention

sets the general obligation of States to closely cooperate and consult with each other on major projects that 'likely to cause significant adverse transboundary impact' in another State.

The Aarhus and Espoo Conventions are widely recognized as international legal instruments for achieving the sustainable development and acknowledge that we owe an obligation to future generations (Petts 1999). Both of the Conventions establish that sustainable development can be achieved only through the involvement of all stakeholders, by linking environmental rights with human rights.

Bureaucracy and pressure from state authority

One of the issues that is frequently cited by businesses in dealing with the government agencies is the alleged bureaucracy. The amended clause in the Law on EIA states that the duration of approval of EIA screening and detailed EIA can be extended at the discretion of the state administrative authority. According to participants in the questionnaire, this approval process when extended has significantly been causing delays for uncertain period. Although structural and organizational changes can happen quite frequently within governmental authorities with the current political instability, especially after political elections, the governmental ministries and agencies should always try to keep the balance of their work load and try not to cause burdens on the development of the private enterprises and production process. Therefore, it is recommended to make required changes and amendments to the law and relevant procedures, and one of such proposed changes would be to set specific time frame for the discussion and approval of general and detailed environmental impact assessment by the governmental agencies.

However, it would be too unfair to blame the government authorities for the delay and uncertainty in responding to the companies and people. The delays and bureaucracy in the public services are at some level related to the current method of work, which still remains as paper-based. There is no integrated database and interconnected digital system in the

government apparatus, connecting the government agencies in the city and rural areas – it does not even exist within the central government agencies.

Need for integrated database and network

During the approval process of detailed EIA reports, the procedures on EIA require to take comments and proposals from the respective Citizen's Representative bodies (local self-governing authorities) in rural administrative divisions. Given the long distance and poor development of the infrastructure network and postal services, it takes for more than 2 weeks on average for one mail to reach the city from a distant rural area, thus causing uncertain delays in receiving the written confirmation of the comments on project proposal.

Not only this but many other large and small problems arise in connection with the lack of integrity of database of the governmental agencies. The world is moving from the paper to a digital world. Although it is costly at some point, Mongolia's public services should follow this direction to reduce the burden of the bulky government apparatus and provide easy services to the public. This work may require involvement of international capable companies since the capacity of domestic ones may not be able to meet the requirements of the work standards at this time.

The goal to make the government process open to the public and improve an access to information has been already set in the Government Platform 2008-2012. In this regard, one major step was the creation of the official websites of the governmental agencies, including the Ministry of Environment and Tourism (METM). Currently, the website of METM provides information on EIA, including the Law and some procedures on EIA and the list of authorised companies to conduct detailed EIA. In relation to improving access to EIA, it is desirable that the website in the first stage posts more information and regular update on the results of the approval of project proposals by the Ministry's evaluation committee. Moreover, the website and the Information Post of the Ministry of Environment need to be regularly updated by including information on the list of project screenings that were conducted by state experts, as

well as environmental plans so that the local community and the public can monitor the implementation process.

Content of EIA reports

As it was revealed during the literature review, interviews and the questionnaire, the requirements for detailed EIA reports need to be improved and expanded. The current Law on EIA provides the major issues that need to be covered in the detailed EIA report. However, in line with the rapid changes in the socio-economic situations, it is important to reflect other development priorities in the project consideration, such as infrastructure needs and supply as well as the integration with the national and local land use planning. Moreover, the Law or new regulations on EIA need to clarify that the content of the detailed EIA report should cover possible adverse effects not only on environment but also on people's health. These requirements may require additional steps or permissions to obtain from other state authorities. Thus, a careful approach is necessary in the coordination with other governmental agencies to avoid double bureaucracies.

EIA Implementation and follow-up

The Law on EIA and respective procedures provide very general provisions on the monitoring of the EIA implementation. Article 4.3, Chapter 2 of the Law on EIA provides very general clause that the relevant state and local authority and environmental inspectors should carry out monitoring of EIA implementation and that the community can also monitor the project progress. The Procedures on the Monitoring the Implementation of the Detailed Environmental Impact Assessment Reports, adopted by Order #87 of 2000 by the Ministry for Environment consists of 2 Chapters and 7 Articles. This procedure has been proved as insufficient to provide detailed guidance on the EIA follow-up, as it was emphasized frequently during the interviews. The legislation in EIA needs to be more specific regarding the frequency and the methodology of the monitoring/auditing by the state and local authorities, as well as the public involvement, establishing detailed auditing guidelines on EIA follow-up. For the

monitoring of project implementation by local communities, it is important to specify ways how and where to obtain relevant information on the project, its indicators and progress and how the individuals can bring up their concerns to the state and local authorities, since the accessibility of information to the public is far from being perfect at the moment.

Sanctions on non-compliance with the Law on EIA

The current Law on EIA needs to revise the provisions on sanctions to be imposed on non-compliance with the law to make them consistent with the country's rapid transition reforms and economic conditions. The current Law on EIA imposes administrative sanctions of specific sums for non-compliance with law, such as up to 50,000 Mongolian tugrug (MT) (approx.USD 35) to be imposed on a guilty official, and up to 250,000 MNT (approx. USD 178) for the economic entity, if the project implementation does not meet the requirements as defined in the EIA report. Considering the current economic level, such specified amounts of the monetary sanction are too low to ensure the compliance with the Law. Therefore, as it is a common practice, the Law on EIA needs to revise the level of sanctions to reflect the economic changes and specify them in terms of multiplied sums of 'minimum level of labor cost' as defined in the Labor Code of Mongolia (LCM).

EIA assessment of projects operating before the passage of the Law on EIA in 1998

Another issue that should attract serious consideration is the matter of assessment of environmental impact of those services and production that were either approved or were operating before the adoption of the Law on EIA in 1998. It is important to require such projects to undergo EIA under the law requirements in line with any other new projects or their expansions. However, due to the frequent restructuring and the lack of integrated database within the governmental agencies, there is no integrated full list of such projects at the Ministry of Environment, the main body handling the issue EIA nowadays, as it was revealed during the interviews. Mainly gas stations make up such list of services that should undergo the EIA, as revealed during the interviews with the responsible officials. Therefore a

significant effort should be made to centralize the documents and evidence from different authorities at the single body in relation to the information on projects operating or approved before the passage of the Law on EIA in 1998. Moreover, it is critical to ensure that an integrated mechanism is established and coordinated between city and local authorities on EIAs on urban planning and development for better government process.

Re-consideration of duration and minimum cost of EIAs

Another deficiency that was identified during the research work is the issue of the duration and minimum cost of EIAs. At the moment, the procedures on EIA provide neither any specific clauses on the minimum cost nor duration for carrying out the detailed EIA by the assessment companies. It is important to make changes in the formal EIA procedures to specify minimum duration and minimum expenses for conducting detailed EIAs in order to avoid unqualified EIA work.

CONCLUSION

Development of environmental impact assessment has gone through its own specific path in Mongolia. The Government has recognized that the EIA is an optimal tool for environmental protection and prevention from pollution by establishing the legal basis for regulating this process.

However, the EIA legislation and practice in Mongolia still need an improvement to reflect the rapidly changing transition period and to narrow the gap between the practice and the legislation.

Notwithstanding the limitations encountered during the study in connection with the traditional information secrecy and associated difficulties in data accessibility, the research has fulfilled its major goal to identify the most challenging issues in the EIA legislation and the practice by using research means of the legal review, case study, questionnaire and interviews with major actors in the EIA process in Mongolia.

Recommendations were provided on major problematic areas that were identified during the research work, including the needs for revising the legislation on EIA; improving capacity building; revising legal sanctions on non-compliance with the Law on EIA; establishing an integrated data network data among public institutions; promoting community participation; improving the content of EIA reports; enhancing EIA implementation and follow-up; expanding international cooperation on EIA and reducing bureaucracy of governmental institutions. Moreover, recommendations included some organizational issues related to the EIA practice, such as the need to conduct EIAs of industrial projects that were either approved or operating before the passage of the Law on EIA in 1998.

The general conclusion of this research is that more comprehensive, detailed and integrated Regulations may need to be developed complementing the Law on EIA and covering the recommended issues of this research. This conclusion was reached after the study

work is that the Law on EIA and the current procedures do not provide enough guidance on the EIA practice. Laws do not often provide all details, thus Regulations are required to explain the details and make the law work.

The EIA system of Mongolia should undergo the improvement, involving not only the national and international organizations, but also national stakeholders such as the assessment companies, consultants as well the community, who have gained appropriate practical experience during the EIA development process.

ANNEXES

1. List of Interviewed officials
2. A comparison of the Law of Mongolia on Environmental Impact Assessment of 1998 and its amendments in 2001, and relevant justifications
3. List of licensed companies to conduct detailed EIA and the number of EIA in 2008
4. Annex 4. Questionnaire on environmental impact assessment for private entities licensed to undertake detailed environmental impact assessment

ANNEX 1. PERSONAL COMMUNICATIONS

1. Ts.Banzragch, Head of Department of Sustainable Development and Strategic Development, Ministry of Environment and Tourism of Mongolia. Formal interview. Ulaanbaatar, 25 May 2010
2. Kh.Narantsetseg, Expert of Department of Sustainable Development and Strategic Development, Ministry of Environment and Tourism of Mongolia. Formal interview. Ulaanbaatar, 26 May 2010
3. Ts.Gantuya, Senior Specialist, Department of Information, Monitoring and Evaluation, Ministry of Environment and Tourism of Mongolia. Formal interview. Ulaanbaatar, 7 June 2010
4. G.Shijirbat, Specialist, Department of Information, Monitoring and Evaluation, Ministry of Environment and Tourism of Mongolia. Formal interview. Ulaanbaatar, 10 June 2010
5. S.Otgon, Senior Expert, Inspection on Environment, Tourism, Geology and Mining, State Specialized Inspection Authority of Mongolia. Formal interview. Ulaanbaatar, 10 June 2010
6. L.Naranbat, Expert, Inspection on Infrastructure Sector Monitoring, State Specialized Inspection Authority of Mongolia. Formal interview. Ulaanbaatar, 10 June 2010
7. T.Tumur-Ochir, Manager, “Munkh-Orgil Consultant” EIA company. Formal interview. 1 July 2010
8. T.Bat, Economist, World Bank Office. Formal interview. 1 July 2010
9. S.Oyun, Economic Assistance, Office of United Nations in Mongolia. Formal interview. 12 July 2010

ANNEX 2. A COMPARISON OF THE LAW OF MONGOLIA ON ENVIRONMENTAL IMPACT ASSESSMENT OF 1998 AND ITS AMENDMENTS IN 2001

#	The Law on EIA of 1998	The Law on EIA of 2001	Rationalization
1.	In 1998, the Law on EIA was released with 4 Chapters and 13 Articles	The Law was amended in 2001.	The main reason for making amendments in the Law on EIA was to reflect the socio-economic changes and practice since the adoption of the Law in 1998.
2.	“Project Developer” means economic entity responsible for implementing the project	“Project Developer” means <i>legal citizen</i> and economic entity responsible for implementing the project	In conformity with other administrative legal changes, the law added “legal citizen” as a Project Developer to undertake an industrial project.
3.		New provision: “Assessment analysis” means the conclusion done by by auditory Experts assigned by the organization conducted the screening, to the report of Detailed Environmental Impact Assessment of the project;	This is a new provision, added to the Law. The Auditory experts will be part-time officials and when necessary will carry out assessment at the request of the organization.
4.		New provision: Chapter 1, Article 3.1.6. “ <i>Expert</i> ” means a person authorized to assess the environmental impact and issue the assessment conclusion;	The Experts shall be officials of the national (Ministry of Environment) and provincial environmental authorities. The experts carries out the screening and issue the relevant conclusion.

5.		<p>New provision:</p> <p>Chapter 1, Article 3.1.7</p> <p>“Assessment specialist”</p> <p>means a person, who has a right to participate in the activities of</p> <p>Detailed Environmental Impact Assessment, by conducting research investigation, impact assessment and evaluation;</p>	The Assessment Specialists should be specialized officials and shall carry out the detailed assessment and issue the conclusion.
6.		<p>New provision:</p> <p>Chapter 1, Article 3.7.8</p> <p>“Project sponsor”</p> <p>means a citizen, legal person, financing the project.</p>	The Project customer should provide sponsorship for carrying out the project screening.
7.		<p>New provision:</p> <p>Chapter 2, Article 4.1.</p> <p>New projects as well as the renovation and expansion of existing industrial, service and construction activities and project which use natural resources in different ways shall be subject for screening.</p>	<p>With the law amendment, project implementers are required to ensure that the project screening is carried out by the state authority.</p> <p>Depending on the result of the screening, the project may be decided to undergo detailed EIA.</p>
8.	<p>Chapter 2, Article 4.2</p> <p>The screening shall be done prior to implementation of a project.</p>	<p>The screening shall be done prior to mining, procurement of a license of land possession or use as well as implementation of a project.</p>	The specification on projects related to mining and land were also added in order to specify and reflect the increasing number of mining and land projects.
9.	Chapter 2, Article 4.4.	Chapter 2, Article 4.4.	This amendment intended to promote the development of

	The project implementer shall submit a project description, the technical and economic feasibility study, the work drawings and other related documents to the state central administrative body in charge of nature and environment or the local government for screening according to the classification contained in the appendix to this Law and the screening shall be conducted accordingly.	Requirement for “Technological solution” was added by an amendment.	environmentally-friendly technology and solutions. The screening will require adequate technological capacity for the project.
10.		Chapter 2, Article 4.6.4. One of conclusions of the expert screening of the specific project can be: “rejection of the project on the ground of non-conformity with the relevant legislation, or adverse impact of the equipment and technology on the environment, or absence of the project in the land management plan.”	This was new amendment in the law.
11.	Chapter 2, Article 4.7 The state central administrative body in charge of nature and environment shall appoint an environmental impact assessment expert taking into consideration professional ability and work	By an amendment, it was added that, specialists of related fields can be involved in the assessment work.	This amendment’s purpose is to enable that that the screening of environmental impact assessment is done at professional level, by involving specialists from related fields.

	experience.		
12.		<p>Chapter 2, Article 4.8.</p> <p>If necessary, the state central administrative body in charge of nature and environment may extend the period indicated in Article 4.6 of this Law.</p>	<p>This is a new provision. Article 4.6 states that the expert shall perform screening of a project within 12 working days.</p> <p>This provision was made to provide adequate time for the experts to conduct the screening. However, the law is not clear about how long the experts can extend the screening period.</p>
13.	<p>Chapter 2, Article 5.4.8.</p> <p>-Opinion of local residents of the area of the project implementation (required to be taken as part of the detailed EIA report)</p>	<p>Chapter 2, Article 5.4.8.</p> <p>-Opinion of local residents, and Citizen Representative Khural of the area of the project implementation (required to be taken as part of the detailed EIA report)</p>	<p>This provision was amended to require that the detailed EIA report should include not only an opinion of local residents but also that of the Citizen Representative Khural (CRKh), provincial administrative authority, of the relevant area.</p> <p>CRKh is the main self-governing body in the provincial area, which representation is elected by free and open election. CRKh's main responsibility is to decide on socio-economic and environmental issues in the relevant jurisdiction, by combining local self-governance and the state administration.</p>

14.		Chapter 2, Article 5.4.10. Rehabilitation project (required to be included in the detailed EIA report)	This is a new provision in the law, that was made in the law in an effort to ensure that proper rehabilitation principles are planned ahead. Based on this law requirement, certain amount of deposit should be placed at the bank account of the state authority, in order to make sure that the project implementer has enough funding to accommodate the rehabilitation work.
15	Chapter 2, Article 6.1.2. The Environmental Monitoring Program shall address the monitoring and study of changes in the environment as a result of project activity and reporting requirements, include monitoring schedule, methods and the timeline for implementation of those measures;	Chapter 2, Article 6.1.2. The Environmental Monitoring Program shall address the monitoring and study of changes in the environment as a result of project activity and reporting requirements, include monitoring schedule and methods as well as determine the timeline and <i>estimated budget</i> for implementation of those measures;	The requirement for inclusion of “estimated budget” was added in the law, in order to make sure that the project implementers plan in advance the cost and expenses of each category of monitoring activities in advance.
16.	Chapter 2, Article 6.2. The estimate budget for implementation of the Environmental Protection Plan and the Environmental	Chapter 2, Article 6.2. The organisation which conducted the Screening of the EIA shall approve the annual Environmental Protection	This law amendment requires that <i>the amount of required property</i> be planned in advance. Based on this provision, 50% of the approved budget of the

	Monitoring Program shall be approved by the organization carrying out the project screening.	Plan, the Environmental Monitoring Programme, and <i>the amount of required property and expenses</i> for their implementation.	Environmental Protection Plan should be deposited with the state bank account before the commencement of the operation.
17.	Chapter 2, Article 6.3 A project implementer shall annually report on the implementation of the Environmental Protection Plan.	Chapter 2, Article 6.3 A project implementer, except for mining license holder, shall place, as a guarantee, a sum in the amount of no less than 50 percent of the total annual amount of the environmental protection measures in the local environmental protection account of the local soum or district and shall annually report on the implementation of the Environmental Protection Plan. The pecuniary guarantee of the environmental protection measures of the mining project shall be governed by the relevant legislation on mining.	Due to the amendments in the Law on Mineral Resources of Mongolia, this provision was amended to exclude the issue of the reporting by the mining license holders to be regulated by the different law. This provision also included the issue of planning and depositing the environmental protection measures in advance.
18.		Chapter 2, Article 6.5 The organization carrying out the screening shall resolve the issue of refund the guarantee to the project implementer upon consideration of the report of implementation of the Environmental Protection Plan and the oversight mentioned in Article 6.4 of	This is a new provision. Based on this provision, the deposit will be returned based on the comment from the provincial authority. According to the law, the local authority is responsible for oversight of the EIA implementation.

		this Law	
19.		<p>Chapter 2, Article 6.6</p> <p>Procedures for development of the Environmental Protection Plan and Environmental Monitoring Program and procedure and guidelines of rehabilitation shall be issued by the state central administrative body in charge of nature and environment and the rehabilitation standards - by an organization authorized to do so under the law.</p>	<p>This is a new provision. It aims to ensure an integrated approach in the formulation of the EIA practices under one roof.</p>
20.	<p>Chapter 2, Article 7.2</p> <p>The expert who has received the detailed environmental impact assessment report shall review the report and come to conclusion within 18 working days.</p>	<p>Chapter 2, Article 7.2</p> <p>The Expert who receives the report of the Detailed EIA, shall do the assessment analysis during 18 working days.</p> <p><i>If necessary, the State Administrative Central Organization in charge of nature and environment shall extend this time interval. If necessary, certified laboratory of the environmental analysis shall do the conclusion of the assessment analysis.</i></p>	<p>By expanding this provision, the duration of assessment analysis was extended by an uncertain period.</p> <p>To reduce the government workload, this provision also enable the certified laboratory to the conclusion on the assessment analysis, if necessary.</p>

21.		Chapter 2, Article 7.4 Procedure of assessment expertise and guidelines for the assessment shall be issued by the state central administrative body in charge of nature and environment.	This is a new provision. It aims to ensure an integrated approach in the formulation of the EIA practices under one roof.
22.		Chapter 2, Article 7.5 The recipient organization of the detailed environmental impact assessment report shall ensure public access to the report.	This was an important amendment in the law, intended to legalize public access, one of the most important principles of the EIA practice. However, this provision is too general in order to implement it at satisfactory level.
23.		Chapter 2, Article 7.6 Creation of the database of the environmental impact assessments shall be governed by the Law on Environmental Protection.	This is a new provision, legalizing, in general terms, the establishment of an integrated database.
24.	Chapter 2, Article 8.1. If a damage was caused to the health of the local population or the environment by the implementation of a project which was subject to the detailed environmental impact assessment, the assessment shall be reviewed.	Chapter 2, Article 8.1. If a damage was caused/or <i>being caused</i> to the health of the local population or the environment by the implementation of a project which was subject to the detailed environmental impact assessment, the assessment shall be reviewed.	This amendment to the Law states to ensure that such damage is resolved not only after it was made, but also when the damage is being made.
25.	Chapter 2, Article 9.11 The licensed entity whose	Chapter 2, Article 9.11 The licensed entity whose	This amendment added an option of “administrative

	detailed environmental impact assessment work has been proven as incorrect as a result of an assessment expertise or a review, its license shall be revoked by the state central administrative body in charge of nature and environment.	detailed environmental impact assessment has been proven as incorrect as a result of an assessment expertise or a review, <i>an administrative liability shall be imposed</i> or its license shall be revoked by the state central administrative body in charge of nature and environment.	liability” in case if it was proved that the EIA work was made inadequately. This provision was revised in response to the insignificant number and the small market of EIA licensed entities in practice upon the adoption of the Law in 1998.
26.		Chapter 2, Article 9.12 The state central administrative body in charge of nature and environment shall issue and revoke a license of an assessment specialist to conduct environmental impact assessment.	The law legalizes and empowers the Ministry of Environment for this function.
27.		Chapter 3, Article 11.1.3 Rights and obligation of licensed entity: -To monitor implementation of the plan and the program described in the detailed environmental impact assessment, to recommend to the state central administrative body in charge of nature and environment on the issue of continuation of the project.	This is a new provision, that was necessitated by the practical experiences in the relationship between the Ministry of Authority, licensed entities and the project implementers.
28.		Chapter 4, Article 12.2.4	This is a new amendment,

		<p>. If a licensed entity has completed a detailed environmental impact assessment which has been found as incorrect as a result of an assessment expertise or a review, a fine of 150,000 - 250,000 tugrugs shall be applied to that entity.</p>	<p>imposing administrative charges to faulting licensed authorities in order to improve the responsibility system in the EIA practice.</p> <p>However, given the inflation rate and the practical application of this provision, now there is an urgent need to increase the level of fines, since the current level is too low to have an effect of responsibility on the entities.</p>
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ANNEX 3. LIST OF LICENSED COMPANIES AND DETAILED EIAs IN 2008

#	Company names	Types of EIA				Number of EIAs
		Mining	Industry and agriculture	Services	Infrastructure	
1	“Gazar Eco” LLC	4	4	22	1	31
2	“Nemer International” LLC	15	2	5	0	22
3	“Eco-Gobi” LLC	5	4	12	1	22
4	“Eco-Ertunz” LLC	1	0	4	0	5
5	“Ecos” LLC	3	3	5	6	17
6	“Eco sphaera” LLC	1	1	2	0	4
7	“Erchim huch-Baigal orchin” LLC	0	2	1	0	3
8	“Gazar delkhii” LLC	9	1	0	0	10
9	“Eco natur” LLC	5	1	6	2	14
10	“Buhun chingeleg” LLC	0	0	4	0	4
11	“Enco” LLC	7	0	16	3	26
12	“NBK” LLC	0	0	1	0	1
13	“Eco trade” LLC	5	1	0	3	9
14	“Satu” LLC	0	0	2	0	2
15	“Echo Planeta” LLC	1	1	29	1	32
16	“ACME” LLC	0	1	0	0	1
17	“Chandmani ekh oron” LLC	0	1	3	0	4
18	“Eco-Mon” LLC	3	0	3	0	6
19	“Munkh-Orgil trade” LLC	2	1	1	0	4
20	“Monvecom” LLC	3	0	0	0	3
21	“Altan-Eco” LLC	6	2	4	1	13
22	“Eco-Alta” LLC	0	2	2	0	4
23	“Eco-Energy” LLC	3	1	1	0	5

24	“Zul Khorolt” LLC	1	0	7	0	8
25	“Condiz” LLC	6	0	0	0	6
26	“Mintech negdel” LLC	1	0	2	0	3
27	“Baigal ecology” LLC	0	4	2	1	7
28	“JTJ” LLC	0	0	90	0	90
29	“OSMT” LLC	0	0	5	2	7
30	“Mintech shinjilgee” LLC	0	3	22	1	26
31	“Eco shine zuun hugjil” LLC	0	0	15	0	15
32	“Yantari” LLC	2	0	7	0	9
33	“Eco world” LLC	1	0	2	0	3
34	“Edem” LLC	0	2	5	0	7
35	“C and U” LLC	0	0	2	0	2
36	“Eco mandal” LLC	2	0	0	0	2
37	“EIAEC” LLC	0	2	6	0	8
38	“Khuren yamaat” LLC	0	0	3	0	3
39	“ATTP” LLC	0	0	1	0	1
40	“Environ” LLC	0	0	1	1	2
41	“JEMP” LLC	1	0	0	1	2
42	“MEIA” LLC	0	0	3	0	3
43	“Sunny trade” LLC	0	0	1	0	1
44	“Erdem Eco” LLC	0	2	0	0	2
45	“Uugiin shuteen” LLC	0	0	1	0	1
	Total					450

ANNEX 4. QUESTIONNAIRE ON ENVIRONMENTAL IMPACT ASSESSMENT

for private entities licensed to undertake detailed environmental impact assessment

(translation from Mongolian into English)

Please fill out this short questionnaire. Just a few minutes of your time will provide the research work with essential information. Thank you.

Part I. Capacity

- How many employees do you have? Of them, how many are full-time or part-time?

Comment:.....
.....
.....

- How many years of work experience in EIA do you have?

Comment:.....
.....
.....

- What is the level of your technological capacity to conduct detailed EIA?

- Good
- Satisfactory
- Unsatisfactory

Any comment:.....
.....
.....

Part II. Legal framework

- What is your opinion about the current law and legislation on EIA? Is there a need to improve the legislation?

Any comment:.....
.....
.....

Part III. EIA Process

- In terms of the relationship and communication with the main state administrative authorities in charge of EIA issues, *is there any bureaucracy or pressure coming from the state administrative authority that affects your work?*

- Yes.
- No
- I don't know

Any comment:.....

- In terms of job availability, what are the job opportunities to conduct EIA?

- Satisfactory
- Unsatisfactory

Any comment:.....

- Please comment on public participation in the EIA process. Public participation is

- Satisfactory
- Unsatisfactory
- I don't know

Any comment:.....

Other comments:

.....
 .

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List of official websites used for the research:

International Association for Impact Assessment

<http://lnweb18.worldbank.org/ESSD/envext.nsf/47ByDocName/EnvironmentalAssessment>

World Bank

<http://www.unep.org/themes/assessment/>

UNEP Activities in Environmental Assessment

<http://www.adb.org/Environment/default.asp>

Asian Development Bank

<http://europa.eu.int/comm/environment/eia/home.htm>

European Union Environmental Assessment

<http://www.epa.gov/compliance/nepa/>

USA National Environmental Policy Act

<http://ceq.hss.doe.gov/index.html>

United Nations in Mongolia

<http://www.un-mongolia.mn/web/>

World Bank in Mongolia

<http://web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/EASTASIAPACIFICEXT/MONGOLIAINMONGOLIANEXTN/0,,menuPK:475489~pagePK:141159~piPK:51073105~theSitePK:475350,00.html>