

BACKGROUND

In August 2004 the Royal Netherlands Embassy in Beijing (RNE) contacted the World Bank's Beijing Office about the possibility of the Netherlands Government providing \$6 million for environmental activities in Mongolia to be managed by the Bank. This represented an outstanding opportunity to strengthen and advance the environment and natural resources agenda in light of its importance for sustainable development in Mongolia.

The Grant Agreement between the Government of Mongolia and the Bank was signed by the Minister of Finance in April 2005. The Netherlands-Mongolia Trust Fund for Environmental Reform (NEMO) funds were allocated among three categories: (i) Bank-executed technical assistance; (ii) Government-executed support for on-going World Bank projects, and (iii) Government-executed preparation of new World Bank-financed projects, each with a variety of activities. The financial arrangements for the Bank-executed activities are relatively straightforward, whereas for the government-executed ones they were rather complex by dint of the six executing agencies.

In June 2005, following the positive findings of a tripartite review of progress by the World Bank, RNE, and Ministry of Nature and Environment (MNE) and the Netherlands Embassy, Beijing, it was agreed that original closing date of December 2005 would be extended to the end of May 2006. NEMO finally closed at the end of September 30, 2006.

NEMO marked a major scaling up in the scope and type of both the Bank's and Netherlands' programs, and an attempt to move from a project-based approach to a programmatic one, with a stronger focus on environment and natural resources management sustainability in the context of poverty reduction and economic development.

Almost all parts of the environmental agenda, almost all environmental agencies and NGOs, and almost all parts of the country have been touched by NEMO. Its elements related to existing activities and many have reinforced others. It has:

- Established sound baselines of knowledge for environment and natural resource management that can now be used as benchmarks for measuring progress (or regress)
- Raised the visibility of environmental affairs, particularly at the national level thanks to the large coverage of the program;
- broadened the pool of environmental practitioners accessing resources to fund small and medium-size activities at the local level with the participation of local communities;
- Helped MNE to start prioritize responses among the many environment and NRM problems that the country faces, with particular attention to how their responses can be supported by the government's development policies, and specific donors' program.



World Bank, Ministry of Nature and Environment and the Royal Netherlands Embassy, Beijing.

TECHNICAL ASSISTANCE

ILLEGAL WILDLIFE TRADE

Illegal wildlife trade is emerging as a serious development issue which threatens the East Asia



region's remarkable biodiversity and the welfare of people who rely upon it. The report *Silent Steppe*, prepared by the Wildlife Conservation Society in cooperation with WWF Mongolia, other NGOs, and with assistance from the government, highlights the impacts of weak environmental governance and natural resources management on poor people's livelihoods. Since the economic dislocation of the post-Soviet era, hundreds of thousands of Mongolians have turned to hunting wildlife as one of the few

alternative income generating activities available. The fur trade alone contributes an estimated \$100 million to the economy annually - probably the fourth largest contributor behind mining, cashmere and tourism. However, the expanding illegal wildlife trade is unsustainable, providing diminishing support to livelihoods while contributing to the catastrophic population declines of rare and common species alike. *Silent Steppe* reviews the history of wildlife trade in Mongolia; examines the current levels of harvest and trade through surveys of hunters, trade chains and markets; investigates current wildlife management practices; and makes comprehensive recommendations to improve wildlife management and sustainable livelihoods.

FOREST COVER MAPPING

A few years ago GTZ contracted the mapping of forest cover in the three northeastern aimags to the Technische Fachhochschule, Berlin (TFH). To ensure consistency in approach and method, NEMO funds were used for TFH to complete this project by mapping the forest cover in Arkhangai, Khuvsgul, and Bulgan aimags in the northwest (213,100 sq km) using a variety of satellite image data. The results are shown at 1:1,000,000 and 1:200,000 for the whole area, and at 1:50,000 for some 30,000 sq km. The existence of the finished high-resolution maps has been advertised through email listservers, and MNE is distributing the DVDs free to everyone in Mongolia and beyond who wants them.

ILLEGAL WOOD SUPPLY

Mongolia's forestry sector is currently in crisis, with illegal logging devastating accessible forests, particularly around urban centers. Lack of reliable data means that estimates of timber consumption vary widely, but levels are clearly well above the sustainable harvest for Mongolia's slow-growing forests. Current legal harvest levels are set unrealistically low thus contributing to an environment in which illegal logging flourishes in order to meet the high demand, and corruption is endemic. The legal forestry industry is increasingly unprofitable, as large quantities of illegal timber depress prices. *Wood Supply in Mongolia: The*

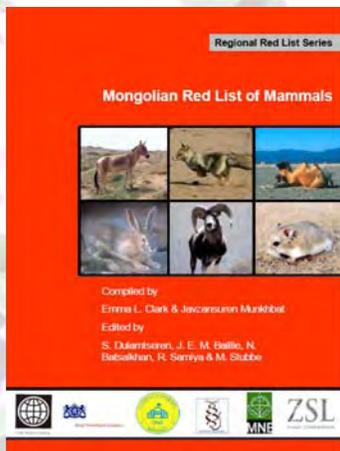


Legal and Illegal Economies is based on work by a small team led by Ms. Ts. Erdenechuluun and reviews the current situation, examines actions to date, and makes a series of recommendations for bringing control to, and prosperity from, Mongolia's forestry sector.

ASSESSMENT OF THE SUCCESS OF TREE PLANTING INITIATIVES

This work by GTZ, the University of Göttingen and the Institute of GeoEcology (Mongolian Academy of Sciences) was undertaken in response to requests from the former Minister of Nature and Environment for World Bank support for the Green Wall program and for planting initiatives in northern Mongolia. The Bank felt that it was important first to critically examine the success of previous attempts to plant trees in Mongolia's extreme climate. No similar assessment had previously been conducted. *Lessons from Tree Planting Initiatives* finds that the best and most lasting means of restoring forest landscapes for the lowest cost is to encourage natural regeneration, *not* investing in costly planting programs which appear to have had limited success to date. Where planting is undertaken, however, sensitive planting site selection, strong technical assistance, training for workers, and care of the seedlings for a number of years after planting are all crucial if the seedlings are to survive. It was also found that a program for planting in remote areas is open to corruption; in fact no planting at all was conducted at some of the sites examined.

RED LISTS AND ACTION PLANS



Coordinated by the National University of Mongolia (NUM), the World Conservation Union (IUCN), Steppe Forward and the Zoological Society of London, a number of workshops were held to bring together all the leading authorities on Mongolia's mammals, fish and reptiles and amphibians. Basic – but sometimes contentious – matters such as names, distributions, threats, legal status and much else were compiled and are being published as a series of 'Red Lists' and Action Plans, in both Mongolian and English. The text is written in an easy to understand, straight-forward manner that is aimed at conservationists, policy makers and researchers alike. The aim of these documents is to highlight species of particular conservation concern in Mongolia and to aid policy makers to prioritise conservation actions. The data collected is now part of the Mongolian Biodiversity Databank housed at NUM; an important resource, especially for those charged with conducting environmental impact assessments. The database allows free public access and aims to bridge gaps between different institutions, by making all data available in one place.

FISHES OF MONGOLIA

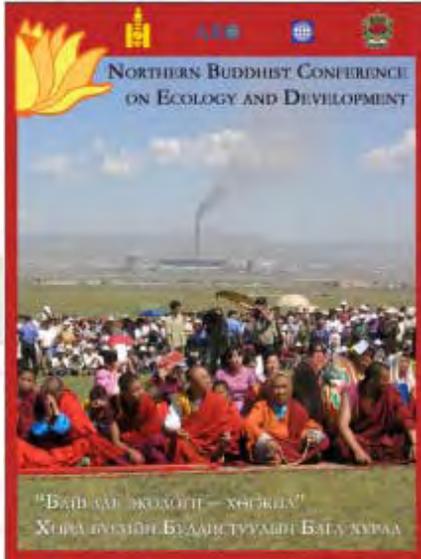
Many development projects have an impact on the freshwaters of Mongolia yet these ecosystems are poorly known. This NEMO-supported work has led to an up-to-date, reliable and comprehensive list of Mongolian fish which will be of fundamental importance for environmental impact assessments. The work is based on a review of the existing literature, interviews with local and international experts, examination of material preserved in natural history museums and



research institutes in Beijing, Wuhan, St. Petersburg, Berlin, Stockholm and Paris, and supplementary fieldwork in western and central Mongolia. The author, Maurice Kottelat, has applied his unparalleled knowledge of the fish of the region to write this critical analysis. This is the second time such a report has been published by the World Bank. It is done so in recognition of the foundational role of taxonomy in sustainable development, of the importance of freshwater biodiversity in the lives of subsistence, recreational and commercial fishers, and of the important role that biological knowledge plays in natural resource planning.

BUDDHISM, DEVELOPMENT AND ENVIRONMENT

A remarkable conference (see www.buddhistecology.org) was held in Ulaanbaatar in June 2005.



Organized by the Alliance of Religions and Conservation, it brought together 200 monks and environmentalists to strengthen the involvement of Mongolian Buddhist monks in environment and development activities. Senior monks were welcomed from Ladakh, China, Russia Cambodia and from all Mongolian provinces, as well as delegates from international organizations and government bodies. In doing so, the conference provided a truly unique opportunity to debate the historic, contemporary and future role of monasteries and Buddhist teachings in natural environment and development, and to discuss existing partnerships and possibilities for future cooperation. The President of Mongolia took a very active role in the conference. NEMO funds have also been used for following up some of the recommendations of the meeting, for example, study tours concerning the management of sacred sites and a training workshop organized by WWF Mongolia on the potential for monks to

be part of the official curriculum in relation to Buddhism and environmental education. In addition there have been a variety of publications including a handbook for development agencies on Mongolian Buddhism; student and youth activities; and a clean-up of an important sacred site.

TOURISM DEVELOPMENT IN MONGOLIA AND ITS IMPACTS ON THE NATURAL AND SOCIAL ENVIRONMENT

With a contribution of \$200 m to the country's GDP in 2005, the tourism sector is the third largest export commodity and foreign exchange earner, after mining and cashmere. Formal statistics indicate 12,000 people are employed by the sector, but informal statistics suggest that the number is much larger. Furthermore, tourism has great potential to diversify local economies and reduce poverty in rural areas and isolated communities, if leadership and management are appropriate. NEMO-supported work on the Investment Climate Assessment Report on tourism suggests that to realize these benefits, key capacity constraints need to be addressed. Higher environmental standards, stricter rules, and transparent regulatory bodies are necessary to make sure Specially Protected Areas and tourist destinations are well kept and maintained. Tourism competitiveness will be enhanced by well-maintained protected areas, improvements in the transportation sector, and availability of reliable statistical information.

MOVING UP THE VALUE CHAIN IN LIVESTOCK-BASED INDUSTRIES

The Investment Climate Assessment report on livestock-based industries examines the current situation of the meat sector in Mongolia, analyzes domestic supply chains, explores market opportunities, and outlines key issues and priorities to improve its competitiveness. A large informal sector provides about 90% of domestic demand for meat; a small and fragmented formal sector primarily exports to Russia at a very low price, leaving only a small profit margin for the companies. The major weakness of the current supply chain is the lack coordination between key players, and accountability in quality control and safety of meat products, which cause meat companies to incur high operational and business risk, as they cannot control the feeding, health care, fattening, and transportation processes. Environmental problems resulting from meat production and intensive livestock production are primarily water pollution, solid waste pollution, and odor problems. Some 22% of the meat processing companies do not have waste water or sewage cleaning system, which means they dump their waste water directly outside or into a river. Meat companies consider that environmental protection and related issues are the concern of environmental inspectors only; about 60% of companies are satisfied with current enforcement of environmental regulations, but 85% of their workers have never attended environmental trainings. About 30% of meat companies agreed that environmental certification would help competitiveness in the world market.

URBAN ENVIRONMENTAL SERVICES IN SECONDARY CITIES

Ulaanbaatar and other urban areas in the central region have experienced large immigration in the last few years. Little is known about the environmental conditions of those living in the secondary cities, where, as in Ulaanbaatar, the majority of the new urbanites live in ger areas on the peripheries. The research and various consultations found that most residents lack most environmental services, including water supply and sewage connections, solid waste removal, and heating. Concentrations of sulfur dioxide and nitrogen dioxide already exceed the standards in Darkhan, and citizens in Erdenet, Darkhan, Khovd and Choibalsan complain that poor air quality in winter months makes breathing difficult. However, particulate pollution is not measured anywhere outside Ulaanbaatar. As part of the implementation strategy for the government's Regional Development Plan, selected secondary cities would be upgraded to Pillar Cities that would become the focus of regional development and attract and retain citizens from neighboring provinces and the capital. It was found that none of the Government's plans are to date backed by systematic environmental analyses of either the environmental status of these towns or their future carrying capacity.

INNOVATIVE APPROACH TO TOXIC AND HAZARDOUS SUBSTANCES MANAGEMENT

The past 16 years have been marked by a massive increase in the numbers and types of chemicals imported into Mongolia, and there has also been an increase in private and industrial chemical use. Misuse and improper disposal of chemicals in the mining, tannin, livestock, and agricultural industries were of particular concern. Working closely with the Parliamentary Standing Committee on the Environment, NEMO funds were used to allow WWF Mongolia with additional international TA support, to facilitate a consultative process to improve the situation. This included high-level policy dialogue among the 23 ministries and agencies, an analysis of legislative and budget issues, and the first country-wide public awareness campaign on the impacts of use of toxic and hazardous substances. In the Spring 2006 parliamentary session the outdated chemicals legislation was successfully amended and approved. In addition, over 300 relevant regulations have been updated to reflect changes made in the legislative amendment, and more effective channels of communication were established among relevant agencies.



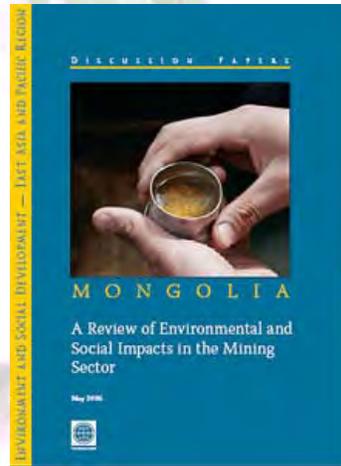
Belon Tannery, machines for tumbling skins with solutions. Wooden slats (lower left) are covering the open sewage line which channels the drained solution from these machines.



Storage space at Belon Tannery used for excess chemicals and wet skins. The floor is wet with Cr+4 contaminated water.

REVIEW OF THE ENVIRONMENTAL AND SOCIAL IMPACTS OF MINING

The core of this report had been produced using German consultant trust funds but NEMO funding was used to complete it. It was launched at the beginning of a major two-day event - the *National Forum for Mining, Regulation and Environment* in May 2006 in Government House. It provided the opportunity for a forward-looking discussion on how to concretely address key environmental and social issues in the mining sector. There was discussion of issues that stakeholders' programs and investments have been dealing with, and of realistic and sustainable ways forward. Over 380 participants from government agencies, local level governments, the private sector, civil society, NGOs, bilateral and multilateral donors attended the two-day meeting, which was sponsored primarily by the World Bank (through NEMO), together with the Office of the President, the Mineral Resources and Petroleum Authority of Mongolia, UNDP, SDC, BGR, and Support for Artisanal Mining Initiatives. The opening session included speeches from four ministers (Trade and Industry, Social Affairs and Labor, Environment, and Specialized Inspection Agency).



INFRASTRUCTURE STRATEGY: ENVIRONMENTAL FOOTPRINT

As an input into the World Bank's Infrastructure Strategy, a technical note was prepared - Environmental Footprint of Infrastructure Development - to assess the environmental impact of a business-as-usual approach in the development of infrastructure investments in Ulaanbaatar. It highlights the current unsustainability of heating services; that is, increased use of inefficient heat-only boilers, heating stoves and a deteriorating central heating system. It proposes a priority agenda for action including: (i) focused investments in heating efficiency (the Bank and other donors are now preparing an investment operation that will use the report for its preparation); (ii) urgent action in improved monitoring and measurement of pollutants and emissions; and (iii) integration of results into improved urban planning which is will be a component in the upcoming Infrastructure Sector project.

SUPPORT FOR ON-GOING PROJECTS

SECOND URBAN SERVICES IMPROVEMENT PROJECT (USIP2):

Urban greening, sanitation and track improvements

NEMO supported the provision of some 45,000 seedlings of vitamin C-rich trees and shrubs for a *khoroos*-based program for over 4600 selected households to plant in their compounds (*khasha*) in the ger districts. TV, radio, newspapers and attractive handbooks were used to disseminate information on planting, pruning, and watering requirements. This was coordinated and monitored by the Mongolian Nature and Environment Consortium. They also oversaw the rehabilitation of seven city parks using 2700 trees and nearly 40,000 shrubs and infrastructure improvements, as well as the rehabilitation of access to a natural spring to improve access to the water for ger-district inhabitants. In addition some of the city's greenhouse nurseries were rehabilitated. Nearly 2500 people participated in the various trainings.

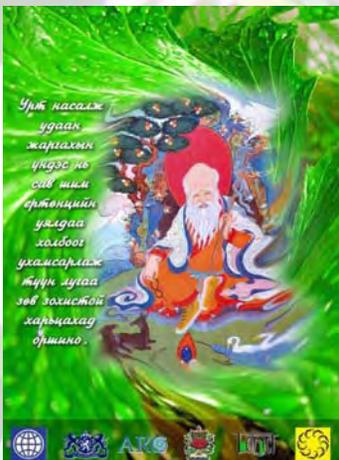


Dambadarjaa natural spring *before* rehabilitation



Dambadarjaa natural spring *after* rehabilitation

The project office also contracted for an environmental impact assessment on (lack of) sanitation in the tourist ger camps around UB, USUG improvement of water and sewerage laboratory operations and training for USUG, rehabilitation of Tolgoit and Selbe flood protection, and rehabilitation of drainage works.



SECOND URBAN SERVICES IMPROVEMENT PROJECT (USIP2):

Support for the management planning of Ulaanbaatar's sacred landscape

This work was designed to raise public awareness concerning the links between Buddhist teachings and wise environmental management. The focus was on Ulaanbaatar's sacred landscape including Gandan Monastery, Tasgan Ovoo and Geser Sum. These form a formal protected area but one threatened by *ad hoc* urban development. Under the project the monastic communities have been helped by the Alliance of Religions and Conservation to

create an environmental management plan for the monastery/temple compounds and for the area of the two hills, and educational materials to explain urban environmental issues in the context of traditional environmental practice have been developed and produced. A training program was carried out to educate the monks in the understanding and the practice of traditional conservation in relation to modern and urban challenges, permitting the clergy to play an active role in spreading this awareness among other segments of society. See www.buddhistecology.org.

DYNAMICS OF BIODIVERSITY LOSS AND PERMAFROST MELT IN LAKE HOVSGOL NATIONAL PARK, AND THE SUSTAINABLE LIVELIHOODS PROJECT:

Support for project researchers

Focused on one of the country's most popular scenic areas, this five-year GEF 'targeted research' project in the Institute of GeoEcology seeks to provide for the long-term protection of such forest/steppe areas by better understanding the scale and dynamics of natural and anthropogenic changes. The young project researchers are identifying the impacts of human activities on ecosystem dynamics in tributary valleys of Lake Hovsgol;



defining how those impacts interact and are affecting the melting of permafrost (and thus release of carbon dioxide), soil characteristics, and plant and animal biodiversity; inventorying climate change effects in the national park, and calculating the costs and benefits of alternative land use practices among the pastoral nomads. The project mid-term review recommended that the 20 researchers visit their various international mentors to analyze data, do short courses, and take part in various meetings in the US and Europe, and the allocation of NEMO funds made this

possible. The grant also allowed the ecological system being studied to be mathematically modelled. See www.hovsgolecology.org.

SUSTAINABLE LIVELIHOODS PROJECT:

Assessment of wells and other Gobi developments on khulan (wild ass) and other on threatened wildlife

This work began following a realization that the well rehabilitation under the large Sustainable Livelihoods Project (executed by the Household Livelihood Support Program) could be having a deleterious impact on threatened wildlife in the Gobi, especially the wild ass or khulan. It sought to better understand the human-wildlife conflict in the region, and provide recommendations on how negative impacts of development projects on wildlife could be avoided or mitigated. This study by ICAPS fitted satellite tracking collars on seven khulan and found that they have enormous ranges, and are sensitive to habitat fragmentation and movement barriers, requiring a landscape planning approach to be taken in the Gobi.



For an online video of the work see www.khulan.org

STRENGTHENING ENVIRONMENTAL MANAGEMENT CAPACITY AT NATIONAL AND LOCAL LEVEL:

Small Grant Facility and Environmental Education

A \$1 m small-grant facility was managed on behalf of MNE by the Open Society Forum (OSF). The grants for outcome-oriented capacity building activities were well advertised across the country, and over 400 proposals were submitted. A selection committee diligently picked a wide range of interesting projects from across the country from NGOs, academics, private sector and government offices. The projects encompassed reviews of legislation, children's cartoon books, soil pollution, conservation of deer, EIA training for banks, and recycling of plastic bottles and bags to make fences and other items (right). The grantees were subject to direct supervision – the OSF team travelled nearly 20,000 km in doing this - and were brought to Ulaanbaatar twice to join in networking fairs. See 'Environmental Reform' in the navigator panel of 'Forum Activities' at www.forum.mn.



In addition a wide range of environmental education activities were undertaken by MNE, some in association with the Ministry of Education with whom a new National Program on Public Ecological Education 2006-2021 has been agreed. A series of ten TV programs was produced by MNTV based on the Small Grants Program (above), as well as a series of 40 programs based on different environmental themes which was produced by Tsag Studios and broadcasted on Mongolian National TV.



SUPPORT FOR NEW PROJECTS

FOREST LANDSCAPES RECOVERY AND CONSERVATION PROJECT

Mongolia's forest resources and ecosystem services are under severe threat, and there are currently no mechanisms in place that would encourage local communities or the private sector give attention to sustainable management. A three-pronged strategy involving the introduction of landscape-level ecosystem restoration programs, gradual expansion of community forest management, and strengthening of the existing Government enforcement regime seems to offer the best chance of reducing illegal harvesting and other threats to sustainability. The proposed project would support the Government's vision (elaborated in the PRSP/ EGSPRS) of sustainable management of forest landscapes, to contribute to economic development and environmental protection. NEMO funds were used to field a consultant team working with MNE on assessing environmental law enforcement needs, a forest operability analysis, forest fire management and forest disturbance ecology, non-timber forest products, and proposed amendments to the Laws on Forests and Special Protected Areas (SPAs) as well as a study tour for ministry staff, politicians and academics to the US and Canada to learn about sustainable forest fire management and to Inner Mongolia on reforestation activities. Debates on proposed revisions to the Law on Forest and amendments to the Law on SPAs and their buffer zone were also held.



GOVERNANCE ASSISTANCE PROJECT



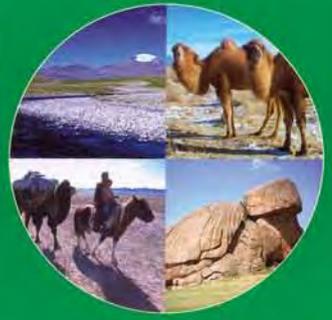
Mongolian laws and regulations protect the public's right to environmental information, but this right is severely constrained by bureaucratic hurdles, an absence of venues to obtain such information, and low public awareness.

Even when agencies would like to disclose information, they often lack the budget and the capacity to do so. As a result, the lack of information sharing adds to a general lack of trust in officials and

and a public perception that political wrongdoing is common and acceptable. Under a new five-year technical assistance grant, the Governance

Assistance Project includes a public information disclosure program targeting the number and quality of environmental impact assessments, and a country-wide awareness campaign to broaden access to information about environment and natural resources management. NEMO funds have been used to support this work by preparing for the national campaign and holding initial innovative regional outreach activities to disseminate information on the latest changes to the law during which more than 25,000 people directly participated, for a revamping and translation of the MNE and State Specialized Inspection Agency (SSIA) websites, a rapid assessment of the EIA process in Mongolia, preparation of documents for web posting, and work to reform the way in which MNE and SSIA manages and shares information.

БАЙГАЛЬ ОРЧНЫ
УДИРДАГЫН
ТОГТОЛЦОО ГЭЖ
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ТОГТВОРТОЙ ХӨГЖИЛ БА
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Cover image:
Some of the products from the NEMO-OSF-MNE Small Grant Program

