Building on Past Involvement

Preparing a new country strategy and program (CSP) should be backed by knowledge and experience of the Asian Development Bank's (ADB's) past support for Mongolia's environmental management. This included the following.

Initial Emphasis on Stand-Alone Technical Assistance. Development of environmental impact assessment procedures and capacity building in the Ministry of Nature and Environment (MNE) and advisory assistance on several aspects of energy efficiency.

Early Lending with Significant Environmental Content. Loans for the power sector (energy conservation, power rehabilitation, heat rehabilitation) and roads development (road master plan and roads upgrading).

Environmental Elements of Program Lending. Agriculture sector program (emerging topics of pasture degradation, land use reform, and agriculture privatization's environmental impacts); environment and natural resource management activities at the turn of the decade; and upgrade of provincial urban towns and environmental services and continued support for land use reforms, the Agriculture Sector Development Program, and its environment-related elements.

Recent Technical Assistance and Regional Environment and Natural Resource Management Initiatives. Undertakings, such as Renewable Energy Development in Small Towns and Rural Areas, Program on Renewable Energy and Greenhouse Gas Abatement, and Control of Dust Storms.

Recent Poverty Alleviation and Environment Activities. Undertakings, such as Improving Living Environment in the Poor *Gher* (tent dwelling) Areas of Mongolia's Cities.

Main Developments Since 2001

Environmental management in Mongolia and ADB's role were extensively reviewed in 2001 and again in 2002, as a component of the country assistance program assessment. The 2001 review formulated an approach to ADB's future involvement in Mongolia that maximizes positive environmental impacts through integrating environmental considerations into mainstream development activities. This broad approach remains valid. More specific recommendations made in this analysis reflect changes that have taken place during 2004–2005.

The new institutional developments include (i) strengthened policy role of MNE, (ii) improved environmental governance (delinking compliance activities from MNE and improved MNE internal structure), (iii) legislative amendments targeting land, water, solid waste, and natural resource management; (iv) more active inter-sector consultation, and (v) improved structure of land management (unification of land administration in a single agency). Few doubt the Government's genuine concern about continued pressures on the environment and its desire to apply effective remedies and safeguards. That assessment is not changed by the results of the October 2004 election.

Developments under principal areas of environmental concern have been the following.

Pasture Degradation, Desertification, and Deforestation. A viable model (United Nations Development Programme, Deutsche Gesellschaft für Technische Zusammenarbeit, and others) built around herder groups, income diversification options, and wells-rehabilitation is emerging. Policies are finally being harmonized, but more patient work is needed. Some conflicts with the provisions of the Mining Law have emerged. At the same time, deforestation continues. Policy for forest management outside protected areas is weak, and actual forest management is weaker still. There is no agreed approach on dealing with illegal forest output (two thirds of the total).

Water. A new water policy makes river basins the focus of management. The policy seeks to increase the use of surface water relative to groundwater. The implications of the policy for irrigation rehabilitation, hydropower development, and nature conservation have not been fully explored. Institutional capacity to implement the new policy is weak.

Urban Environmental Management and Industrial Pollution Control. Ulaanbaatar continues to attract migrants. The capital's population now exceeds 800,000, and the demands for urban infrastructure, especially water and solid waste management in suburban areas, multiply. Huge differences in water use between apartment dwellers and the rest persist. Water pricing and cost recovery need continuous attention. A significant amount of preparatory work has been undertaken on new approaches to wastewater management, but implementation continues to lag behind. Vehicular pollution in the capital is increasing, and the use of unleaded gasoline is cause for concern. Industrial and investment policy containing environmental incentives may be needed. Development and application of sector environmental impact assessment guidelines is under way.

Energy and Climate Change. While the main thermal energy segment is still coming to terms with deregulation and struggling with cost recovery, increased development partner support has been given to renewable energy and decentralized energy. Few generalizations have emerged so far about the appropriate model or models to be applied countrywide and the most appropriate role for the Government. Fuelwood is wrongly being omitted from the renewable energy debate. The economic case for hydropower and mini-hydropower would merit a review, and hydropower projects need to be integrated with the new water policy. Mongolia has not yet ratified the Kyoto Protocol, and this has slowed the preparations for tapping the Clean Development Mechanism to tackle local energy inefficiency.

Mining. The industrial mining sector has further gained in prominence. The new Minerals Law is considered sound (despite some conflicts with other laws) and conducive to further expansion of exploration and production. Rehabilitation of mining areas and conditions of mine tailings are the main environmental concerns. A new and rapid expansion of poorly regulated or unregulated small-scale gold mining has taken place in the last few years. Over 100,000 people are now involved, and this changes the dynamics of rural employment and patterns of settlements. Environmentally benign production methods in placer areas coexist with highly damaging methods of extracting gold used in hard-rock mining (e.g., using mercury), making this a major public health issue.

Environment and Public Health. Greater recognition should be given to the work of the Ministry of Health (MOH) on environmental health impacts, sanitation, and urban issues. A less opportunistic interpretation is needed by development partners and sector interests of existing public health data

in support of various environmental initiatives. Among MOH's priorities are backup power systems for *soum* (district) hospitals, safe disposal of hospital waste, and consideration of health impacts in environmental impact assessments.

MNE has increased its profile recently, but it faces a number of challenges. Centralization of all Global Environment Facility (GEF)-related activities in MNE has added to MNE's coordination workload, as most GEF activities are strongly crosscutting in nature. Several key policies cannot be better developed and articulated (e.g., forest policies). Some national action plans need to gain more support outside MNE. A greater role given to MNE in water and land management is well ahead of its institutional capacity, especially at the local level.

Environment is being mainstreamed in Mongolia. The main mechanisms used to facilitate cross-sector coordination are the National Council for Sustainable Development, national coordination committees (for most natural resources, land reform, public health, and all international environmental conventions, etc.), and ad hoc working groups. The committees are headed by different ministries (Ministry of Food and Agriculture, MNE, and MOH), according to the underlying concern. The effectiveness of the committees varies, and their work often stops short of substantive policy issues. Main integration challenges remain in industrial pollution control, urban environmental issues, and energy. The National Council for Sustainable Development has played a major and positive public awareness role but has rarely gone beyond a generalized support of sustainable development, rather than promoting any tightly argued version of sustainable development. Areas of persisting weakness across the whole spectrum of environmental concerns include drafting legislation and weak economic content of policies.

Development partner funding continues to underwrite a substantial portion of MNE's and other ministries' upstream activities, as well as much of MNE's field activities in protected areas. The knowledge of the flow of resources into Mongolia's environment is incomplete, and the funding by international nongovernment organizations is the least well documented. Greater disclosure of financial information would be a plus. Financing of local environmental management continues to be poorly understood, and a review (and probably a reform) of existing natural resource taxation supported by economic analysis could improve environmental outcomes.

Despite an absence of a development partner thematic or working group on environment, development partner and international finance institution coordination has improved, in particular in rural development, Ulaanbaatar development, and integrated river basin management. Calls

for closer development partner coordination in the aftermath of the 2003 Consultative Group Meeting are beginning to run into capacity and time constraints on the development partner side. To this day, there is no reliable information clearance mechanism in Mongolia that could say who is doing what, by environmental themes. For that to happen, more than desk- and Internet-based work is needed.

Post-2004 Policy on Environmental Management

The action plan of the new (post-October 2004) Government signals no major changes in the approach, other than a more laissez-faire approach to the distribution of economic activities, with its environmental repercussions. New positions have not been articulated on the use of market-based elements of environmental policy or hard tariff-related issues (water and wastewater). Continuity is apparent in the commitment to more fully use existing surface water resources (for electricity generation and other uses) and support renewable energy development, as well as its thermal segment. Urban zoning is recognized as a priority, and emphasis is placed once more on the construction of apartment buildings as a way of also easing urban environmental problems. All soum centers and settlements are to be provided with safe drinking water during the term of the new Government. The action plan speaks of intensifying land reform. The plan commits the Government to providing open access to environment-related information and renews calls for international cooperation to fight desertification and calls for active reforestation by local citizenry (without, however, saying anything new about how to stop illegal cutting of standing forests). Little is also said about environmental monitoring and its difficulties in the countryside, about how to finance environmental management, about application of environmental law and the role of courts, and about a number of other issues described in this analysis.

Recommended Asian Development Bank Strategy

ADB's overall support to environmental management in Mongolia should retain the broad direction recommended in 2001, with only some modifications. That means that ADB should favor an integrated approach to environmental problems, rather than stand-alone interventions. Environmental improvements as by-products of income-generating activities should be the preferred manner of assistance. Environmental safeguards

accompanying job and income creation should also have a place in ADB's strategy. The recommended approach calls for attention to cross-sector coherence and greater use of existing national coordination mechanisms.

There are good possibilities to address environmental concerns through a combination of lending and technical assistance. In both cases, ADB should actively seek bilateral or GEF cofinancing. Such cofinancing should be based on a meeting of minds, not merely on administrative and financial convenience.

Potential Areas of Involvement

The following are environment-related activities most suitable for consideration during CSP formulation. They are organized by themes first, and assistance modality (loan or advisory and operational technical assistance [AOTA]) second.

Theme 1: Environment management capacity.

Assistance Modality: Improved financing of local environmental management (AOTA, largely unchanged from the same proposal made in 2001).

In Mongolia, local environmental management depends on resource-related fees. At present, these are underpriced or unpriced. Better resource valuation could increase the amount of resources potentially available to local authorities for environmental management. The ramifications of the Public Sector Management and Finance Law for local environmental budgets are yet to be explored. There are a number of related specific concerns. For example, policies on ecotourism and hunting are currently not supported by hard data about the revenues generated, subsequent use of these revenues, and economic costs and benefits of these activities. Choices involving grazing, mining, ecotourism, and hunting need to be better informed by appropriate economic valuation of each of these conflicting or complementary options. Here, Mongolia has yet to emulate work done in a number of other ecotourism and hunting-dependent economies.

Theme 2: Urban environmental concerns.

Assistance Modality 1: Implementation of wastewater management strategy in Ulaanbaatar City (project preparatory technical assistance and a loan).

A considerable amount of preparatory work on wastewater management along the Tuul (the recipient of all discharges from Ulaanbaatar) has been completed with bilateral funding. A new wastewater discharge policy and legislation are being readied. Implementation has been slow and piecemeal. In the meantime, operations of several dozens of small-scale tanneries in the city are creating serious environmental problems. These industries match Mongolia's comparative advantage, yet they are among the most polluting anywhere. Offering the existing and prospective tanneries the option of relocating to an industrial estate equipped with a pretreatment facility could dramatically improve the industry's prospects and the pattern of pollution in the Tuul. ADB's assistance could demonstrate the effectiveness of combining incentive approaches with enforcement approaches to environmental management and drive green industry promotion policies. Opportunities exist to extend the scope of the project to municipal wastewater treatment, either in areas already connected to centralized treatment plants or in gher areas not yet connected to the centralized network.

Assistance Modality 2: Formulation of strategy on phasing out leaded gasoline (AOTA).

Using successful examples from other developing member countries, the assistance would generate a menu of existing options for phasing out leaded gasoline, together with their likely cost. With Russia being the principal source of automotive fuels at present, and with refinery modifications in Russia possibly the least-cost option, the conduct of such a project may either have to await Russia's membership in ADB or require a pattern of cofinancing (e.g., with United Nations Economic Commission for Europe and United Nations Economic and Social Commission for Asia and the Pacific that overcomes the current procedural obstacles to implementing the project partly outside ADB's procurement area.

Assistance Modality 3: Solid and hazardous waste management in Ulaanbaatar (project preparatory technical assistance and a loan).

The unsatisfactory state of solid waste disposal in Mongolia's capital is well known, as is the absence of any facility for hazardous waste (e.g., hospital waste) treatment or disposal. Besides the day-to-day operations and the functioning of the truck fleet, the problem extends to unsafe, inappropriately located and inadequate principal disposal sites. New, environmentally safe,

disposal sites need to be created, together with a hazardous waste treatment facility. Construction of such facilities would be an opportunity to introduce improved mechanisms of waste disposal financing.

Theme 3: Mining-related issues.

Assistance Modality: Environmental, health, and social safeguards in small-scale mining (AOTA or project preparatory technical assistance plus a loan with bilateral cofinancing and/or Japan Fund for Poverty Reduction component).

Use of mercury by a segment of the mushrooming informal small-scale gold mining sector in the last few years has created a major public health hazard (e.g., threat of the Minamata disease, which results from mercury exposure. Nevertheless, small-scale gold mining recently has become something of a savior of the rural economy and a poverty escape route. Its environmentally less damaging segment (placer mining) needs light-hand regulation and government support (e.g., delivery of social services closer to the mining areas). The environmentally damaging segment (hard-rock mining) should be phased out and the existing practitioners redirected toward placer areas. This process is likely to be gradual, and health monitoring is needed in all areas affected. Rules and mechanisms of coexistence between the small-scale miners and industrial operators are badly needed, as is development of environmental safeguards for small-scale mining operations.

Theme 4: Water management.

Assistance Modality 1: Strengthening of capacity for water management (AOTA).

The new government water policy is structured around integrated river basin management. This management approach is new in Mongolia, and little or no experience with its application exists. Development of policy details and regulations is needed, as is training of government workers at the central and river basin levels.

Assistance Modality 2: Irrigation and water conservation.

Attempts to rehabilitate portions of the old irrigation network were sporadic during the last decade and frustrated by the continuing uncertainty

regarding the ownership structure of former state farms. That structure has become clearer more recently, and new land legislation has created conditions under which rehabilitation of parts of the former irrigation network could be viable. There is a greater willingness on the part of the Ministry of Food and Agriculture to approach irrigation rehabilitation in a pragmatic manner and in a way that would divide the cost between the Government and water users. ADB assistance could spearhead this process.

Theme 5: Land degradation and forest management.

Assistance Modality: Dry ecosystem land management (project preparatory technical assistance and a loan with GEF cofinancing).

A generalized class of projects aimed at lessening degradation or desertification pressures on pasturelands that border the globally important ecosystems enjoying some degree of protection status (e.g., transboundary watersheds) should be prepared. Project preparation would follow procedures and mechanisms developed under the Central Asia Countries' Initiative for Land Management or the ADB-GEF Partnership for Land Degradation in the People's Republic of China, the experience of which and possible applicability to Mongolia should be closely followed.

Theme 6: Energy and climate change.

Assistance Modality: Use of the Clean Development Mechanism in support of greater energy efficiency (AOTA and GEF cofinancing).

It would be possible and desirable to build on the substantial amount of work funded by ADB (Asia Least-Cost Greenhouse Gas Abatement Strategy and Program on Renewable Energy and Greenhouse Gas Abatement) and others to develop proposals for financing energy efficiency activities in Mongolia under the Clean Development Mechanism. The work would have to be conditional on the ratification of the Kyoto Protocol by Mongolia and fulfillment of certain institutional prerequisites, including an improved link between United Nations Framework Convention on Climate Change-sponsored activities and those of the Ministry of Infrastructure.