Mongolia Environmental Performance Reviews

Highlights
Policymaking, legal and institutional framework

Mongolia is well on track with the work on implementation and monitoring of the 2030 Agenda for Sustainable Development and its Sustainable Development Goals (SDGs). The Government has designed the 2016 Mongolia Sustainable Development Vision 2030 as a framework policy document for implementation of SDGs. It has assessed the availability of indicators. High ownership of SDGs among governmental officials is an important achievement. However, the institutional framework for coordination of SDG implementation and monitoring still needs to be operationalized.

Green development is a clear policy objective, enshrined in the key national visionary document, the 2016 Mongolia Sustainable Development Vision 2030, as well as in the specific green-economy-oriented 2014 Green Development Policy. A weak point of the planning system, especially from the environmental perspective, is the non-application of the strategic environmental assessment (SEA) tool for evaluation of environmental impacts of future sectoral policies.

Since 1987, Mongolia has developed an extensive legal framework on environmental protection. The environmental legislation is largely consistent and coherent. However, implementation of environmental legislation is often delayed. Furthermore, enforcement of environmental laws and environment-related provisions in sectoral legislation often represents a serious challenge.

In recent years, the Government made efforts to integrate environmental requirements into the legal and policy framework on mining. Nevertheless, there are still a number of deficiencies. The environmental impact assessment (EIA) is conducted late in the permitting process. The mandatory agreements between mining companies and local authorities in order to protect the environment are not publicly disclosed. Implementation of legislation on the restoration of land affected by mining represents a huge challenge.

The current policy documents related to mining focus on establishing a favourable investment environment for the mining sector. Their environmental focus is less pronounced. There is no policy document that specifically addresses the abandoned and damaged mining areas and their rehabilitation. Similarly, there is no policy document that targets the creation of opportunities for artisanal miners to switch to other areas of employment.

One of the key issues for the Ministry of Environment and Tourism is staff turnover. High staff turnover impedes the consistent development and implementation of policies on the environment and green development and destabilizes the institutional memory of the organization.

The establishment of the General Agency for Specialized Inspection (GASI) under the Prime Minister in 2003 has allowed the separation of policymaking and the regulatory function from the control and enforcement function. Positive outcomes include more efficient use of resources and strengthening of the links between thematic inspectors. However, the insufficient level of cooperation between GASI and the Ministry of Environment and Tourism is a weak link in the new system. The dependency of soum environmental inspectors on soum governors is another drawback.
BOX 1. TARGET 17.14 OF THE 2030 AGENDA FOR SUSTAINABLE DEVELOPMENT

Goal 17: Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development

Target 17.14: Enhance policy coherence for sustainable development

This target covers one of the systemic issues for the achievement of the SDGs. It addresses how the country works across policy sectors and coordinates the sectors to achieve joint objectives of sustainable development. It also addresses the extent to which policies in various sectors are coherent and aligned with sustainable development. The indicator agreed for Target 17.14 at the global level refers to the existence in countries of mechanisms to enhance policy coherence for sustainable development.

Mongolia has a number of mechanisms for horizontal coordination at the national level. Interministerial committees or councils are created to address issues of a cross-cutting and intersectoral nature. However, a few coordination bodies incorporate other stakeholders along with governmental bodies, organizations and institutions. Some bodies are formally established but do not meet regularly. For example, the National Committee on Sustainable Development under the Prime Minister, the composition of which was last renewed in January 2017, has not met as of November 2017.

There is a good level of coherence among policy documents in Mongolia. Policy documents are consistent in terms of goals, targets and objectives set and measures envisaged for their implementation. The establishment of the National Development Agency in 2016 should further contribute to enhancing policy coherence. However, the lack of practical implementation of SEA is a loophole in ensuring the coherence of sectoral policies with the overall policies on green development, environmental protection and sustainable development.

Recommended measures:

- Operationalize the National SDG Committee under the Prime Minister;
- Ensure the regular preparation of reports on SDG implementation;
- Ensure that SEA is conducted for all national, regional and sectoral policies, development programmes and plans;
- Conduct training courses to raise awareness about SEA;
- Develop an action plan on rehabilitation of abandoned and damaged mining areas;
- Develop policies to create opportunities for artisanal miners to switch to other areas of employment;
- Ensure the independence of environmental inspectors at soum level.

*Note: The sections entitled “Recommended measures” represent an abridged version of selected recommendations from the EPR report and are provided for information purposes only. Please consult the text of the report for the full text of recommendations as adopted by the United Nations Economic Commission for Europe (UNECE) Committee on Environmental Policy.
Regulatory and compliance assurance mechanisms

The permitting and licensing system is continuing to evolve, incorporating additional environmental media and additional pollutant sources and environmentally-damaging activities. However, some implementing regulations are absent or incomplete, leading to some gaps in permitting, notably regarding air emissions and wastewater discharges.

The EIA procedures are comprehensive and Mongolia has accumulated extensive experience with the use of the EIA instrument. Still, EIA in practice is undermined by poor implementation by licensed entities and ineffective oversight. Public confidence in the EIA system is low. A cumulative impact assessment procedure is envisaged by the legislation, but its practical application has been limited.

The revised 2012 Law on Environmental Impact Assessment provides for biodiversity offsetting. Opinions about how biodiversity offsetting and alternative land rehabilitation actually work differ among governmental officials and international and local non-governmental organizations (NGOs) and activists. Guidelines for biodiversity offsetting and rehabilitation of alternative land are insufficient.

The introduction of environmental audit in 2012–2013 was an important addition to the environmental management framework. Practical implementation of environmental audit has been rather slow and experience is limited to date.

The Government’s commitment to the Extractive Industries Transparency Initiative (EITI) is central for progress in encouraging companies to adopt sustainable practices and integrate sustainability information into their reporting cycles in line with SDG Target 12.6. EITI Mongolia offers a structure for transparency that could give foreign investors confidence in the fairness of licensing. However, there are important gaps in the data provided to EITI Mongolia by the authorities.

The adoption of environmental management systems has progressed lately, but so far very few companies have been certified in accordance with MNS ISO 14001. Current efforts by the Government to promote the standard are not sufficient. No systematic effort is applied to promote resource efficiency and cleaner production among the business community.

Recommended measures:

- Ensure that the legislation and implementing regulations for air pollution and wastewater permitting are complete;
- Undertake a review of the criteria and method for licencing entities to undertake detailed EIA;
- Promote the value of a well-conducted EIA;
- Proactively apply the cumulative impact assessment procedure;
- Develop guidance on alternative land rehabilitation as part of biodiversity offsetting;
- Ensure a free flow of relevant information to EITI Mongolia;
- Implement regular compliance promotion activities.
Environmental monitoring and information

The environmental monitoring network covers the core environmental themes. However, it requires strengthening and some indicators are also lacking in the collection and reporting. In particular, there is no noise and vibration monitoring. The last nationwide assessment of species of different biomes was carried out in 2010, and was not repeated in 2014, due to the budgetary shortages. The laboratories of the National Agency for Meteorology and Environmental Monitoring (NAMEM) lack capacity; some laboratories at aimag (provincial) level lack accreditation for key parameters.

Self-monitoring is required by the legislation. In reality, larger companies have dedicated units and the quality of self-monitoring reports is better, but small and medium-sized enterprises struggle.

The Ministry of Environment and Tourism issues a national state of the environment report (SoER) every two years. The reports are indicator based, but not based on the Driver, Pressure, State, Impact, Response (DPSIR) framework. They do not contain a non-technical summary.

The Ministry of Environment and Tourism and the National Statistics Office (NSO) cooperate to produce official environmental statistics. However, the two institutions lack experience and capacity to produce good quality environmental statistics, which is a prerequisite for the production of high quality environmental reports, implementation of the System of Environmental-Economic Accounting and the production of indicators in the follow-up and review of the 2030 Agenda for Sustainable Development.

Recommended measures:

- Increase financial and human resources for environmental monitoring;
- Resume regular nation-wide assessment of species;
- Develop noise and vibration monitoring;
- Improve the capacity of laboratories;
- Ensure self-monitoring by companies and the publication of results;
- Use the DPSIR framework for preparation of the state of environment report;
- Include a non-technical executive summary in the state of environment report;
- Develop a roadmap for strengthening environmental statistics.
Greening the economy

The greening of economic growth is a key goal of the national development policies. Sectoral policies are being revised in line with the 2014 Green Development Policy and 2016 Mongolia Sustainable Development Vision 2030. However, the overall costs of achieving the related numerous targets and measures have not been estimated.

Financing of environmental expenditures and related national programmes relies largely on annual state budget allocations and foreign loans and grants. Resources allocated to the Environment and Climate Change Fund for the financing of national environment-related programmes have remained quite small. Local governments can rely on their own earmarked revenues for financing environmental expenditures, but the actual expenditures have fallen increasingly short of the mandatory funds that they should spend.

Another challenge is to develop statistics for the measurement of green growth indicators, which are designed inter alia for gauging the extent to which economic growth has been decoupled from environmental degradation (SDG Target 8.4). First steps in this direction have been made with the approval by the National Statistics Office (NSO) in July 2017 of 38 green development indicators.

The role of economic instruments in creating effective incentives for changes in the behaviour of polluters has remained modest. The tax rates applied to the four components of the air pollution tax are too low for achieving this. The water pollution tax has been awaiting the adoption of secondary legislation required for its implementation. The excise duty on motor fuels has not been used as an instrument for more rational use of petrol and diesel.

Tariffs for water supply and energy do not provide sufficient incentives for rational use of these resources. Insufficient tariffs for recovering costs are also a barrier for greater private sector involvement in the provision of these services.

Mongolia has developed and applied methodologies for assessing the monetary value of natural resources, which are used as benchmarks for the calculation of environmental damage compensation. However, the ways and means of establishing the asset values are not fully transparent and therefore difficult to appreciate. The same holds for the fees imposed on the use of the numerous specific types of natural resources, which are set at the local government level.

Mining companies are obliged to build up financial reserves to ensure adequate rehabilitation/reclamation of mining sites after their closure. However, there are concerns about whether these funds are sufficient for financing the required works in such a way that they meet the existing international best practice in the mining sector.

Mongolia has a huge potential in terms of solar and wind energy production. Interest in the sector is growing, reflected also in inflows of foreign direct investment. However, the exploitation of the huge potential for renewable energy remains a major challenge despite a generous system of feed-in tariffs designed to provide financial incentives for the development of the renewable energy sector and the recently-introduced system of support tariffs.
Table 1: Budget of the Ministry of Environment and Tourism, 2011–2017, billion tugriks

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<td>Current expenditures</td>
<td>63.1</td>
<td>70.7</td>
<td>71.8</td>
<td>66.1</td>
<td>52.5</td>
<td>44.3</td>
<td>48.2</td>
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<td>Capital expenditures</td>
<td>31</td>
<td>21.3</td>
<td>4.4</td>
<td>9.3</td>
<td>1.3</td>
<td>1</td>
<td>0.8</td>
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<tr>
<td>Total</td>
<td>94.1</td>
<td>92</td>
<td>76.2</td>
<td>75.4</td>
<td>53.8</td>
<td>45.3</td>
<td>49</td>
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<tr>
<td>Total (US$)</td>
<td>74.36</td>
<td>67.77</td>
<td>50.00</td>
<td>41.37</td>
<td>27.25</td>
<td>20.92</td>
<td>22.63</td>
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Total as percentage of total general government expenditures: 1.88 1.42 0.99 0.87 0.67 0.47 0.50

Source: Ministry of Environment and Tourism; ECE secretariat calculations.
Note: Figures in US$ were calculated using the average annual exchange rate of the corresponding year. 2017: approved budget.

Figure 1: Financing of national programmes by the Environment and Climate Fund, 2014–2016

- Environmental education: 40.85%
- Natural plant protection: 2.06%
- Combating desertification: 5.92%
- Protection of rare and endangered species: 12.75%
- Water: 31.13%
- Special protected areas: 2.65%
- Waste management: 4.65%

Note: Average percentage shares for the period 2014–2016.

**Recommended measures:**

- Ensure that resources allocated to the environmental sector are commensurate with the development agenda of the country;
- Develop data collection and estimation methodologies for indicators designed to measure green growth;
- Make effective use of all the funds earmarked at local level for spending on environmental protection;
- Ensure that taxes on pollution provide effective incentives for changes in behaviour of polluting companies;
- Develop tariff methodologies that are focusing on cost recovery;
- Revise the existing methodology for assessing the monetary value of natural resources;
- Ensure that rehabilitation plans developed by all mining companies are based on a realistic assessment of costs.
Access to information, public participation and education

The legislative framework regulating access to environmental information is in place and evolving. Nevertheless, adequate implementation by both the Government and the public remains a challenge. The current practice and procedures in governmental institutions other than the Ministry of Environment and Tourism in providing environmental information to the public are rather fragmented. Another concern is the scarce online availability of information on the state of the environment, including raw and aggregated data and metadata.

The Environmental Information Centre, managed by the Information and Research Institute of Meteorology, Hydrology and Environment under NAMEM, is a powerful tool for the sharing of information with the public. However, that information is incomplete and available data are often contradictory.

Mongolia is progressing towards developing the legal framework for public participation in environmental decision-making and implementing it in practice. However, numerous challenges remain to ensure effective public participation. These include insufficient time for public consultations on planned projects and for public comments on the drafts of laws and secondary legislation, and the lack of capacity and knowledge among local authorities and businesses on how to engage the public in consultations.

There are 487 registered environmental NGOs, though, according to the Ministry of Environment and Tourism, only about 100 environmental NGOs are active. There are a number of environmental NGO coalitions and movements. Organizing themselves in coalitions and movements helps NGOs conduct activities in a more targeted and efficient manner.

Cases of harassment and pressure against environmental activists for their environmental activities still occur. It is not clear what actions are being taken by the Government to prevent such cases from occurring and to ensure proper investigation and avoid suspicion of covering up.

Access to the courts for members of the public and NGOs is limited by the resources, skills and knowledge available to them. The overall financial costs for filing and pursuing cases in the courts are too high to allow the public fair access to justice in environmental matters. Judges do not receive training on environmental matters.

The process of integration of education for sustainable development (ESD) into curricula has intensified in recent years, since ESD was integrated into the curricula of general secondary education. Implementation of the new curricula in all schools across the country is now important, along with the efforts to further expand the integration of ESD at various education levels. Numerous activities are implemented as part of informal and non-formal education on the environment and sustainable development.
The biggest challenge is the provision of necessary financial resources from the state budget in order to ensure the training of teachers and build capacity on ESD of relevant governmental officials. The Government’s continuous commitment to and provision of adequate support to integrate ESD into formal and non-formal education are prerequisites to the successful development of ESD and the achievement of SDG Targets 4.7 and 12.8.

**BOX 2. ECO-SCHOOLS**

Mongolian schools participate in the Eco-Schools international programme, which is based on the ISO 14001 standard. Eco-schools provide a bridge between formal and non-formal education.

Starting from 2008, activities to establish and operate eco-schools were supported through the Swiss Agency for Development and Cooperation (SDC) Coping with Desertification Project. Since 2015, they are supported through an SDC project on ESD, jointly implemented with the Ministry of Education, Culture, Science and Sports and the Ministry of Environment and Tourism. The Information and Training Centre for Nature and Environment (ITCNE) NGO is the national operator for the Eco-Schools international programme.

As at mid-2017, 252 schools were engaged in the Eco-Schools programme, i.e. 40 per cent of all public schools in Mongolia. Another 55 schools in 11 aimags and Ulaanbaatar were undergoing training, carried out by ITCNE within the ESD Project, with a view to joining the Eco-Schools programme.

Participation in the Eco-Schools programme includes several components and steps, which typically could be implemented by a school within two years to achieve bronze and silver awards, and culminates with an application for the award of the Green Flag. Most of the participating schools in Mongolia have achieved a bronze award.

**Recommended measures:**

- Encourage active provision and dissemination of environmental information by sectoral ministries;
- Initiate the revision of legislation to extend deadlines for public consultations;
- Raise capacity of local authorities and business entities to engage the public in consultations on planned projects;
- Take measures to prevent pressure on environmental activists for their environmental activities;
- Ensure regular training of judges on environmental matters;
- Consider acceding to the Aarhus Convention when the necessary implementation capacities are in place.
Implementation of international agreements and commitments

International, regional and bilateral cooperation is at the heart of environmental policy in Mongolia. The country committedly follows the international community’s progress on sustainable development, the environment and green development. With the approval of the Mongolia Sustainable Development Vision 2030 in 2016, the country became one of the global early adopters of the SDGs.

Mongolia is party to nearly all relevant global multilateral environmental agreements (MEAs). It has rapidly ratified the most recent MEAs, such as the Minamata Convention on Mercury. Nonetheless, a few gaps remain, and ratifying further MEAs would support the country in achieving a more comprehensive framework for the protection of the environment.

Implementation and compliance with international obligations remain a challenge. This is due in part to insufficient human resources and capacity and financial resources in the Ministry of Environment and Tourism.

The country has complied with its international reporting obligations. Some exceptions occurred in reporting under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and the Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (Basel Convention).

Mongolia has been supported by an increasing number of bilateral and multilateral donors. This shows the country’s capacity to establish diverse strategic partnerships. Nevertheless, Mongolia is highly dependent on the international donor community in respect of technical expertise and financial resources.

From the early 1990s, the country has advanced considerably in wetland classification, designation of Ramsar sites, management and public awareness activities. Some protected areas were expanded to cover areas within Ramsar sites. However, not all designated Ramsar sites have management plans. The priorities also include conducting status assessments for Ramsar sites and improving Ramsar site monitoring activities.

Mongolia has been making constant efforts to protect specific species, driven by its obligations under CITES and the Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention). Several programmes were adopted to protect specific species, such as red deer, argali, snow leopard, Saker falcon, musk deer and Gobi bear. However, there is insufficient reliable and systematic information on the results of these programmes. Monitoring and law enforcement remain significant challenges.

The country has progressed notably in the 20 years of implementation of the international agreements related to the ozone layer. The Government reported the consumption of 0.64 Ozone Depleting Potential (ODP) tons of hydrochlorofluorocarbons (HCFCs) in 2015, which is 54 per cent below the country’s baseline. Mongolia therefore fulfilled the 10 per cent reduction in HCFC consumption in 2015 foreseen in the Montreal Protocol schedule.
Recommended measures:

- Safeguard the administrative and technical capacity and financial needs for the implementation of international obligations;
- Reinforce the number of staff devoted to MEAs;
- Proceed with the accession to the 2016 Kigali amendment;
- Approve the Ramsar Site management plans of lakes Ganga, Buir, Achit and Terkhiin Tsagaan.
Implementation of Rio Conventions

Although no specific mechanism or structure exists to promote synergies between the implementation of the Rio Conventions, the main policy frameworks in the three domains directly or indirectly contribute to the coordinated implementation of the three Conventions. Institutional, technical and financial capacities remain the main challenges for the implementation of all three Conventions, though to differing degrees.

Mongolia has more than 20 years’ experience of strategic planning on biodiversity, which has resulted in a vast but somewhat dispersed set of legislation and policy documents relevant for the implementation of the 1992 Convention on Biological Diversity (CBD). The main benefits lie in the steady evolution of the designation of state specially protected areas. Challenges affecting CBD implementation are associated with pressure on ecosystems related to cross-sectoral issues such as climate change, desertification, habitat degradation due to unsustainable agricultural practices and pollution due to the growth of mining operations near river beds.

The legal and institutional framework for implementation of the 2000 Cartagena Protocol on Biosafety is generally adequate. Challenges persist in terms of having the capacity to perform risk assessments and monitoring activities regarding living modified organisms (LMOs). No national database for registering LMOs and derived products exists. Legislation is in need of revision in order to comply with the 2010 Nagoya–Kuala Lumpur Supplementary Protocol on Liability and Redress.

Mongolia has an interest in rapidly starting implementation of the 2010 Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization, in order to prevent the continuation of genetic resources leaving the country. However, in addition to building an adequate legal framework, the main challenges for implementation lie in the funding required, capacity development and the operationalization of an effective institutional framework.

Being a party to the 1994 United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa (UNCCD), Mongolia implements its National Action Programme to Combat Desertification 2010–2020 aligned with the 10-year Strategy of UNCCD. Having an adequate strategic framework has facilitated access to international organizations and donor countries that support the implementation of technical assistance projects. A land degradation monitoring network was established.

Greenhouse gas (GHG) emissions amounted to 34,530 Gg CO₂ eq in 2014, representing an increase of 57.07 per cent since 1990. The largest contributors are the energy sector (50 per cent of total emissions in 2014) and the agriculture sector (48.44 per cent). In 2014, Mongolia was in fifty-fourth position in the global ranking of CO₂ emissions per capita, with 7.12 t CO₂ emissions per capita.

Mongolia has done a comprehensive and thorough strategic planning and needs assessment on climate change, which is a direct benefit of being a party to the 1992 United Nations Framework Convention on Climate Change (UNFCCC). The country today has time series of up to 25 years of climate-relevant data, though some challenges persist in terms of data availability and GHG inventory. Mongolia has benefited extensively from technical and financial support through the Clean Development Mechanism, the Joint Crediting Mechanism and the Green Climate Fund.
The 2015 Nationally Determined Contribution (NDC) of Mongolia includes the target to reach an annual reduction of 7,300 t CO\textsubscript{2} eq of emissions in 2030, corresponding to a 14 per cent reduction compared with a business-as-usual (BAU) scenario, excluding Land Use, Land-Use Change and Forestry (LULUCF). However, implementation of the measures foreseen is not yet decided. Furthermore, although adaptation components have been included in the main strategic documents on climate change, no strategy or national adaptation plan has been approved to date. Preparation of such a plan is an important element for achievement of SDG Target 13.2.

**Figure 3: GHG emissions by sector, 2014**

![Diagram showing GHG emissions by sector.](source)

**Figure 4: Aggregated GHG emissions and removals by sector, 1990–2014, 1990=100**

![Graph showing aggregated GHG emissions and removals.](source)

**Recommended measures:**

- Pursue implementation of the 2015 National Biodiversity Programme for the period 2015-2025;
- Revise legislation on biosafety;
- Adopt legislation necessary for the implementation of the Nagoya Protocol;
- Adopt a national adaptation plan;
- Adopt the Second Phase Implementation Plan of the National Action Programme for Climate Change;
- Establish a body dedicated to coordination between line ministries relevant to climate policy.
Air protection

Although the air quality monitoring network of 40 monitoring sites seems robust, only 11 sites are automated. There is no regular monitoring or self-monitoring of emissions of major polluters, and insufficient air quality monitoring in ger districts. Also, there are no available data on air emissions on the national level. Government policies are more focused on the capital city, while bad air quality in other regions is insufficiently addressed.

Particulate matter (PM) is considered the main pollutant in Mongolia, especially in Ulaanbaatar. However, there is limited scientific knowledge on its content and source.

The dust storms from the Gobi Desert (predominantly yellow sand) contribute substantially to sporadic PM pollution peaks. However, regular assessment of air quality does not take into account the contribution of sand and dust, especially to PM$_{10}$.

The Government has implemented numerous projects in ger districts, providing clean fuel and improved heating stoves, as high concentrations of suspended particles are commonly blamed on the use of raw coal for domestic heating in ger districts. Annual concentrations of PM$_{10}$ in Ulaanbaatar show a certain decline but, due to inconsistent measurements and lack of data analysis, the results of actions taken are difficult to estimate.

The revised 2012 Law on Air requires major stationary sources to install equipment to monitor air emissions and abatement equipment. However, emissions from power plants are not monitored regularly and there is no national emission standard specifically for large combustion plants. The Law also prescribes fines for violating emission standards. However, the fines are too low to serve as an incentive to install abatement equipment.

According to the 2010 Law on Air Pollution Fees, fines for major sources that exceed emission standards should be calculated based on the estimated value of the damage. The most significant environmental damage caused by air pollution is damage to human health. However, there is no precise methodology for the estimation of population exposure and calculation of the economic cost of the health impact of air pollution. This also leaves Mongolia less prepared to substantially reduce the number of deaths and illnesses from air pollution in line with SDG Target 3.9.

The Mongolian standard MNS 4585:2016 for the Air Quality Index prescribes the method for calculation of such an index. The prescribed methodology makes the Air Quality Index misleading, as, in most of the cases, the values of the Index would correspond to the real PM$_{10}$ concentrations.
Figure 5: Average annual concentrations of SO$_2$ and NO$_2$ in Ulaanbaatar, 1990–2016, µg/m$^3$


Figure 6: PM$_{10}$ emissions by sector, Ulaanbaatar, 2010–2016, tons


**Recommended measures:**

- Gradually replace obsolete air quality monitoring techniques with a more efficient and less costly organized air quality monitoring network;
- Focus on the monitoring on fine particles (PM$_{2.5}$);
- Develop expertise for regular analysis of the content of particulate matter and assess the contribution of sand and dust in coarse particles;
- Ensure monitoring of the emissions from major stationary air polluting sources;
- Ensure that fines for violation of emission standards are effective and dissuasive;
- Adopt the methodology for the calculation of the economic cost of the health impact of air pollution;
- Change the methodology for calculation of the Air Quality Index.
Water management

The Government established the priorities for water management in the 2010 National Water Programme and 2016 Mongolia Sustainable Development Vision 2030. Much attention is paid to revising and extending the legislative and regulatory frameworks. Achievements include the prohibition of mineral exploration and exploitation in run-off source areas, introduced in 2009, and placing 44.5 per cent of the total area of river sources under national protection by 2016.

The integrated water resources management (IWRM) approach is a priority direction for reforming the water management system. Practical implementation of IWRM lags behind, with the need to develop IWRM plans for the remaining basins, ensure implementation of IWRM plans and advance opportunities for public participation in water management.

Mongolia established 21 water basin administrations for its 29 water basins. However, these bodies lack the experience needed for implementation of their tasks. Training and professional development of employees of the water basin authorities are of the utmost importance, to enable them to implement the assigned tasks and be better positioned for advancing implementation of Target 6.5 of the 2030 Agenda for Sustainable Development.

About 95 per cent of the water used in the country is supplied from groundwater resources, which amount to only 1.91 per cent of the total volume of Mongolia’s water resources. Surface water resources are unequally distributed throughout the territory and are used to a limited extent.

The official data for access to water supply and sanitation and the related MDG indicators vary between different sources. The clear gaps are the persistent differences in access to both water supply and sanitation between urban and rural areas, the limited number of households connected to central sewerage systems in urban areas and the very low percentage of the rural population (according to some sources, less than 5 per cent in 2010) estimated to have access to adequate sanitation. Open defecation is still practised. Additional efforts are therefore needed for the country to achieve Targets 6.1 and 6.2 of the 2030 Agenda for Sustainable Development.

Treated wastewater increased from 60 million m$^3$ (30 per cent) in 2012 to almost 88 million m$^3$ (44 per cent) in 2016. Untreated wastewater is dumped into the environment, causing surface water and groundwater contamination. The lack of financial resources causes delays in repair, maintenance, restoration and reconstruction of wastewater treatment plants (WWTPs). This is especially true for WWTPs in rural areas and in remote locations.

### Table 2: Water consumption in Ulaanbaatar, 2012–2016

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<tr>
<td>Daily water consumption of apartment resident (litre)</td>
<td>200</td>
<td>189.7</td>
<td>167.8</td>
<td>156.3</td>
<td>150</td>
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<tr>
<td>Daily water consumption for ger district resident using water from pipe connected water kiosk (litre)</td>
<td>8.3</td>
<td>8.9</td>
<td>7.7</td>
<td>8.1</td>
<td>8.1</td>
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<tr>
<td>Daily water consumption for ger district resident using water from truck supplied water kiosk (litre)</td>
<td>7</td>
<td>7.7</td>
<td>7.4</td>
<td>7.9</td>
<td>7.3</td>
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<tr>
<td>Non-revenue water (per cent)</td>
<td>19.2</td>
<td>17.4</td>
<td>14.1</td>
<td>13.9</td>
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BOX 4. WATER COLLECTION: A GENDER PERSPECTIVE

A survey of water collection in Mongolia showed that, in Ulaanbaatar, men made up the majority of water collectors across all forms of water collection, but were particularly prominent in water collection by vehicle and by animal. Men and boys are much more likely to collect water when they can use mechanized transport such as bikes, scooters and trucks. In 70 per cent of urban households that collected water by vehicle, men were the sole collectors and, in urban households that used horses to collect water, only men performed this task. In rural Mongolian households in which water was collected by vehicle (mainly motorbike), men had sole responsibility for 48 per cent of water collection, and in households that collected water by hand, they had sole responsibility for 25 per cent of water collection.

The involvement of Mongolian men in water collection may point to greater gender equality in Mongolia than in other countries, where it is often seen as shameful for men to participate in this task. The survey findings also indicate that women are most often charged with deciding when to collect more water for the family. Nevertheless, this gender equality does not translate into more opportunities for women to participate in local or regional decision-making on water management.


Recommended measures:

- Provide training in order to improve the water resources management capacity of the water basin authorities’ staff;
- Create and maintain the national water database and subdatabase of water basin information;
- Develop an action plan to shift from the use of groundwater to the use of the surface water resources;
- Increase investments in water supply, sanitation and sewerage infrastructure, with a focus on rural areas.
Waste management

Although waste data have been collected for more than a decade, their quality is low. A list of hazardous waste was adopted, but it is not used in practice. Other waste-management-related data exist but are not aggregated at the national level. The lack of waste management data impedes the development of projects and provision of information to public.

The priority in waste management during the last decade was the improvement of municipal solid waste (MSW) management and healthcare waste management. Sectoral strategies or sectoral waste management plans are not in place. Radioactive waste is not considered an immediate priority.

Regular MSW collection services are concentrated in urban areas. The overall waste collection coverage is assumed to be 70 per cent in urban and 40 per cent in rural areas. Waste collection coverage in Ulaanbaatar is estimated at 90–95 per cent.

MSW is disposed of in dumpsites, which are located near residential areas. These sites were created ad hoc, and only later did municipal authorities start to declare official disposal sites. There are about 400 official disposal sites covering territory of 3,500–4,500 ha. The number of illegal dumpsites is hard to estimate but, during the period 2006–2016, more than 4,000 illegal sites covering 500,000 ha were cleaned and 1.1 million tons of illegally disposed waste were transferred to official disposal sites.

Recycling is focused on high-value wastes such as metals, plastics, paper and cardboard. Separation of recyclables from municipal waste is well developed with a system of buy-out points. However, most recyclables are exported because recycling capacities are lacking in Mongolia. A complex waste management facility, EcoPark, is planned to enhance waste recycling capacities.

Information on hazardous waste is limited. It is estimated that about 27,000–54,000 t of hazardous waste is generated annually throughout the country. The main sources of hazardous waste are sludge from tanneries, waste from processing and use of crude oil, and soil containing cyanide and mercury from gold ore processing. Additionally, there are banned chemicals and acids from the recycling of car batteries. Improved reporting mechanisms on hazardous waste are needed for Mongolia to be able to measure progress towards achieving SDG Target 12.4.

Information on the environmental impact of artisanal mining activities is limited. The 2007 SoER identified 120 illegal gold extraction sites. These illegal activities generated 203,500 m³ of tailings and 53.5 ha of land contaminated by mercury.
Figure 8: Waste disposed in the three main disposal sites of Ulaanbaatar, 2013–2016, t


Figure 9: Treated healthcare waste in Ulaanbaatar, 2011–2016, t

Source: Element LLC, 2017.

Recommended measures:

- Introduce data verification procedures;
- Publish annual statistical reports on waste management;
- Approve the new national waste management strategy and prepare a financing plan;
- Ensure that sectoral ministries develop and implement waste management strategies;
- Develop and implement waste management plans at the municipal level;
- Develop a specific strategy, plans and legislation for radioactive waste management;
- Become a party to the Joint Convention on the Safety of Spent Fuel Management and the Safety of Radioactive Waste Management;
- Develop and implement the national waste database and the metadatabase on waste data;
- Support development of the EcoPark as a modern waste management centre.
Biodiversity and protected areas

Mongolia has managed to preserve its pristine natural ecosystems and is still one of the last wildlife species refuges of East Asia. However, throughout the last three decades, Mongolia has experienced rapid declines of numerous species, including those globally threatened by extinction. Simultaneously, the integrity of almost all natural ecosystems in each of the four ecoregions of Mongolia is currently threatened, mostly due to growing anthropogenic pressures.

Since the beginning of the 1990s, Mongolia has developed a complex system of protected areas, designated at different administrative levels and covering almost 47 million ha, or 29.91 per cent of the country’s territory, in 2017. However, a considerable part of wildlife habitats and migration corridors of wide-ranging and globally significant species remain in the “non-protected” 70 per cent of the country. Moreover, in the case of some protected areas, the current zoning pattern does not provide the sufficient protection level for important wildlife habitats. Addressing these challenges is important for Mongolia’s progress in achieving SDG Targets 15.1 and 15.4.

Management planning is not adequately regulated by the current legislation, and remains a weak point of the system. The management responsibility pattern is complicated, as strictly protected areas and national parks (NPs) are either directly managed by the State or by contracted NGOs and herder group associations, while State-designated nature reserves and natural monuments, as well as all locally-designated buffer zones and local protected areas, are managed by the regional and local authorities. Even though there is no legal requirement for developing management plans for special protected areas (SPAs), the Ministry of Environment and Tourism expects all state SPAs to have management plans and this process is ongoing.

Budgetary constraints are common in State-funded protected area administrations, which cannot retain and use revenues from entrance fees. There is no legal requirement for land fees to be allocated for the maintenance and management of protected areas.

The current human, technical, operational and financial capacities are not sufficient, given the tasks determined by the current policy framework on biodiversity. Seven officers of the Protected Areas Management Department of the Ministry of Environment and Tourism being responsible for effective management of the state SPA system, or 337 rangers being responsible for surveillance and law enforcement over the territory of 24 million ha, are clearly not enough. Without enhancement of the current capacities, the implementation of state policies related to biodiversity and protected areas, as well as the related achievement of SDG Targets 15.1, 15.4 and 15.5, might simply not be feasible.

Due to a considerable number of gaps and shortcomings, the 1994 Law on Special Protected Areas is currently under revision. In addition, a new programme on SPAs is to be developed in place of the 1998 National Programme on Special Protected Areas. The new programme is to address the planned expansion of the state network of protected areas and improve the management of protected areas.
Table 3: State and local protected areas, 2017

<table>
<thead>
<tr>
<th>Protected area category</th>
<th>Number</th>
<th>Total area (ha)</th>
<th>Share (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>State protected areas</td>
<td>102</td>
<td>27,953,449.98</td>
<td>17.87</td>
</tr>
<tr>
<td>Strictly protected area</td>
<td>20</td>
<td>12,411,057.44</td>
<td>7.93</td>
</tr>
<tr>
<td>National park</td>
<td>32</td>
<td>11,884,605.59</td>
<td>7.6</td>
</tr>
<tr>
<td>Nature reserve</td>
<td>36</td>
<td>3,528,824.17</td>
<td>2.26</td>
</tr>
<tr>
<td>Monument</td>
<td>14</td>
<td>128,962.78</td>
<td>0.08</td>
</tr>
<tr>
<td>Local protected areas</td>
<td>1,108</td>
<td>18,837,459.75</td>
<td>12.04</td>
</tr>
<tr>
<td>Total</td>
<td>1,210</td>
<td>46,790,909.73</td>
<td>29.91</td>
</tr>
</tbody>
</table>

Source: Ministry of Environment and Tourism, ECE secretariat calculations.

Recommended measures:

- Support the development and/or revision of protected area management plans;
- Revise the protected area zonation to improve conservation efficiency;
- Introduce the use of spatial planning tools in the expansion of the protected area network;
- Provide that the revenues from entrance fees are returned to the collecting protected area;
- Provide training and modern equipment and increase budgets in the biodiversity conservation sector;
- Finalize the revision of the Law on Special Protected Areas;
- Finalize and adopt the new programme on special protected areas.

BOX 5. HUSTAI NURUU NATIONAL PARK

Hustai Nuruu was originally designated as a nature reserve in 1993, to protect takhi – Przewalski’s horse (Equus ferus ssp. przewalskii), at that time listed by IUCN as Extinct in the Wild (EW). In the period 1992–2000, 84 horses were brought from Europe by the Foundation for the Preservation and Protection of the Przewalski Horse and the Mongolian Association for Conservation of Nature and the Environment (MACNE). Two projects on the reintroduction and acclimatization of this rare species were supported by the Governments of Australia and the Netherlands. Research programmes in Hustai Nuruu often involve foreign partners, including Japan’s Kyoto University and Tokyo University, and Wageningen University of the Netherlands.

In 1998, in recognition of the successful reintroduction of takhi, and the implementation of other biodiversity conservation measures and scientific research programmes, Hustai Nuruu was designated a National Park (with an area of 50,600 ha and buffer zone of 350,000 ha) and, in 2002, was nominated a UNESCO Biosphere Reserve (with an additional external transition area of 378,000 ha). Hustai Nuruu was the first SPA in Mongolia to be managed on a contract basis by an NGO (by MACNE from 1993 to 2003, and by the local Hustai Nuruu NP Trust (HNPT) since 2003), and among the first to have a valid management plan (since 2002).

In order to finance nature conservation programmes, HNPT has developed a wide range of ecotourism initiatives. HNPT involves local people in conservation and research activities and provides them with viable income opportunities. HNPT initiatives include the establishment of the cheese factory in Altanbulag soum and the yoghurt factory in Bayankhangai soum; part of their dairy products are bought by the HNTP and offered to park visitors, together with other local products made by cooperating herder communities. As a result, the park is self-financing.
Land management

In 2015, around 76.8 per cent of the total territory was degraded to some degree, with 24.1 per cent slightly degraded, 29.8 per cent moderately degraded, 16.8 per cent severely degraded and 6.1 per cent very severely degraded. The severely and very severely affected areas include dry and semi-desert lands of the Lake Uvs Basin, the Great Lakes Depression, and Dundgobi and Dornogobi Aimagas.

Most land degradation occurs on rangeland. The area of rangeland had decreased from 123.6 million ha in 1987 to 112.2 million ha in 2016. Meanwhile, the livestock population had increased by 2.7 times, from 22.741 million head in 1987 to 61.549 million head in 2016. Consequently, the density of livestock increased from 18 head per hundred ha in 1987 to 54 head per hundred ha in 2016, putting increased pressure on the rangeland. Along with the increase in the livestock population, the composition of livestock had changed: the share of goats has increased from 19.3 per cent in 1987 to 42.1 per cent in 2015. At the end of 2015, about 63 per cent of rangeland was severely overgrazed.

Apart from overgrazing, the pressures on rangeland from human activities include mining, unpaved multitrack roads and urbanization. Notwithstanding this pressure, Mongolia lacks a law for regulating the use of rangeland; it has remained in a draft version for a number of years.

The Government has set ambitious targets to restore not less than 70 per cent of degraded land and decrease the area of desertified land to 60 per cent of total territory by 2030, in line with SDG Target 15.3. It has advanced the legal and policymaking framework through the adoption of the 2012 Law on Soil Protection and Desertification Prevention and the 2010 National Action Programme to Combat Desertification, covering the period 2010–2020. However, practical implementation of the envisaged policies faces challenges in view of limited financial resources and the inadequate level of institutional coordination.

Mongolia’s network for monitoring land degradation and desertification consists of 1,500 points throughout the country. The information on three land degradation neutrality (LDN) indicators (i.e. land cover and land cover change, land productivity, and carbon stocks above and below ground) is currently not collected.

Figure 10: Agricultural land, rangeland and livestock, 1987–2016

Table 4: Land degradation in 2006, 2010 and 2015, per cent of the total territory

<table>
<thead>
<tr>
<th></th>
<th>Slightly degraded</th>
<th>Moderately degraded</th>
<th>Severely degraded</th>
<th>Very severely degraded</th>
<th>% of total territory</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>23</td>
<td>26</td>
<td>18</td>
<td>5</td>
<td>72</td>
</tr>
<tr>
<td>2010</td>
<td>35.3</td>
<td>25.9</td>
<td>6.7</td>
<td>9.9</td>
<td>77.8</td>
</tr>
<tr>
<td>2015</td>
<td>24.1</td>
<td>29.8</td>
<td>16.8</td>
<td>6.1</td>
<td>76.8</td>
</tr>
</tbody>
</table>


**BOX 6. PRESSURES FROM TRANSPORT**

The Mongolian road network has about 49,200 km of roads, of which 12,700 km are state roads and 36,500 km are local roads. Although more and more paved roads have been constructed, most vehicular mobility in Mongolia still relies on dirt tracks. More than 90 per cent of roads are dirt tracks, while paved and gravel roads account for less than 10 per cent. In 2009, the road network included only 2,680 km of paved roads, 2,100 km of gravel roads and an additional 1,730 km of improved earth roads. By 2016, the length of paved roads had increased to 7,500 km.

On the main national routes (state roads), more than 3 million ha of land is degraded due to dirt-track corridors with an average width of 164 metres. The remaining, less intensively used, local roads can predictably contribute to land degradation at least as much as national roads.

Off-road vehicles compact the ground and damage its ability to absorb and retain moisture and nutrients. Surface water flows are concentrated and accelerated, leading to soil erosion and increased sediment loads in watercourses. Full revegetation of damaged swaths takes 10–15 years after the track has ceased to be in use. Vegetation loss, erosion and degradation of such large swaths of land spur the ever-present threat of desertification. It is estimated that, in Mongolia, there are four times more vehicle tracks than necessary, causing 0.7 million ha of land degradation.

**Recommended measures:**

- Finalize and adopt the law on rangeland;
- Improve the mechanism for development of land management plans;
- Establish coordination mechanisms for integrated land management among the relevant ministries and agencies;
- Mobilize additional financial resources for the implementation of the 2010 National Action Programme to Combat Desertification, covering the period 2010-2020;
- Initiate data collection for three LDN indicators.
Forestry and environment

About 18.45 million ha are considered forest land as of 2016, representing 11.8 per cent of the country’s total area. Of this, only 12.28 million ha, or 7.85 per cent of the country’s territory, are actually covered by forests. Unstocked forest area (5.63 million ha) refers to areas that have been deforested due to various disturbances, such as forestry and/or non-forestry operations, overgrazing, overexploitation for fuelwood and timber, repeated fires and attacks by insects and diseases. The 2016 Mongolia Sustainable Development Vision 2030 sets the target of increasing the area of forest cover to 9 per cent of the country’s total territory by 2030.

The Multi-Purpose National Forest Inventory (2014–2016) has shown that the major part of the Mongolian boreal forest is overmature, with 74.07 per cent of forest stands classified as mature or overmature. Consequently, forests are not only less productive but also more prone to fires and pest attacks and less resilient to climate change. The result is forest degradation and, ultimately, deforestation. More active forest management of mature and overmature stands, which would not only improve the overall forest condition but also create jobs and income in rural areas, is lacking.

There are no recent data available on the percentage of the forest fund that is inside the SPAs. According to the Multi-Purpose National Forest Inventory and ECE estimates for saxaul forests, to date, 3.1 million ha of the forest area, including both boreal and saxaul forests, are located inside SPAs, which corresponds to close to 25 per cent of the total forest area covered by forests but only 1.98 per cent of the country’s territory.

Most of the government funding in the forestry sector is allocated for tree planting (reforestation and afforestation) and pest control. However, the success and survival rate of the reforestation and afforestation practices are not carefully evaluated and reflected in long-term policy. The funding currently provided to the forestry sector is not sufficient to support more effective forest management with consideration of the potential of forestry to support rural livelihoods.

The natural forests are in great need of tending and thinning to ensure healthy forest stands, increased growth and resilience to climate change. However, there is no concept on the rational use of residues from forest thinning and tending activities.

Mongolia made significant progress towards developing participatory forest management. The creation of forest user groups has been effective in preventing illegal logging in forests managed by such groups. However, forest user groups are still not regarded as key players in the sustainable management of the country’s forests. The legal status of forest user groups is still unclear. They do not have access to financial services. There is no information on the extent to which the management of forests by forest user groups has impacted on deforestation and forest degradation, management of non-timber forest products (NTPFs), wildlife and plant resources, and enhancing carbon sequestration.
Recommended measures:

- Revise the 2015 State Policy on Forests in the light of the findings of the Multi-Purpose National Forest Inventory;
- Develop national criteria and indicators of sustainable forest management;
- Develop a system of national certification for sustainable forest management;
- Develop the use of residues from thinning and tending operations to produce biofuels;
- Conduct an analysis to evaluate the effectiveness of reforestation and afforestation efforts;
- Increase funding for more effective forest management with a consideration of the potential of forestry to support rural livelihood and create green jobs;
- Formalize the status of forest user groups.
Risk management of natural and technological/anthropogenic hazards

The number, occurrence, frequency, severity and impact of natural and technological or anthropogenic hazards in Mongolia increased in the period 2000–2016. The average economic loss caused from natural and technological hazards in the period amounted to 76.0 billion tugriks per year. In particular, in 2010, the economic losses of 534,796 million tugriks amounted to 5.5 per cent of GDP, at 2010 constant prices.

Since the 1990s, Mongolia has been experiencing rapid rural-to-urban migration and urbanization, which has largely been unplanned and has resulted in many development challenges, including lack of access to basic services and high levels of air pollution during winter in some areas. Ger districts at the city outskirts are often situated in flood pathways. Addressing these challenges is crucial for achieving progress towards SDG Targets 1.5, 11.5 and 11.b.

Government officials are well aware of the importance and interdependence of the Sendai Framework for Disaster Risk Reduction (DRR) 2015–2030, the Paris Agreement on Climate Change and the 2030 Agenda for Sustainable Development, which are seen as the drivers of the national development agenda. There is a good understanding of the interdependence of work on disaster risk management (DRM), climate change adaptation and sustainable development, but practical implementation of these linkages and institutional coordination encounter difficulties.

There are multiple challenges faced by the DRM system as far as preparedness, response and recovery planning are concerned. Emergency preparedness and response capacities are more developed at the national level. At the local level, international organizations and NGOs support government efforts and provide technical assistance with emergency response services. Effective coordination of the activities at the national and local levels to optimize the use of available funds and resources is among recurrent challenges.

The majority of institutions and professionals, at all levels of administration (from central to local), have a good understanding of disaster and climate risks. Various technical institutions are formally mandated for data collection and forecasting. However, only in a few sectors has risk assessment eventually been conducted.

Three cities (Darkhan, Erdenet and Ulaanbaatar) have officially joined the global campaign “Making Cities Resilient: My City is Getting Ready”. This means that they have integrated DRR into local development policy and urban action plans and work to ensure effective implementation. There is no information on other local governments that have adopted and implemented local DRR strategies.
Recommended measures:

- Integrate DRM and climate change adaptation into sectoral and local development plans and budgets;
- Conduct inventory and risk assessment of infrastructure facilities in urban areas;
- Promote the upgrading of existing ger districts by providing their inhabitants with access to modern infrastructure such as piped water, sanitation, paved roads and public transportation;
- Build capacities of stakeholders in contingency planning;
- Develop response plans at national and aimag levels;
- Strengthen capacities (personnel, equipment) of the National Emergency Management Agency;
- Enhance the coordination and monitoring of disaster response resources;
- Conduct multi-hazard risk assessments on a regular basis;
- Develop the national multi-hazard risk profile and integrate climate change scenario modelling into it.

Figure 13: Natural and technological hazards and related mortality rate, 2000–2016

Source: Disaster Research Institute, 2017.
Health, food safety and environment

During the last two decades, the health status of the population improved. However, great differences in health indicators are observed between regions and aimags (provinces). Since 2000, the lowest life expectancy values are observed in Dornod Aimag (58 years in 2000, 63.9 years in 2010 and 68.63 years in 2016) and Khuvsgul Aimag (59 years in 2000, 63.6 years in 2010 and 66 years in 2016).

In recent years, both ambient and indoor air pollution have become among the most pressing environmental health problems. The annual PM$_{2.5}$ air pollution concentration (average nearly 70 µg/m$^3$) in Ulaanbaatar is higher than the Mongolian Air Quality Standard (25 µg/m$^3$) and the WHO Air Quality Guidelines (10 µg/m$^3$). In 2016, a UNICEF-funded assessment of hygienic and sanitary conditions and indoor air quality in schools showed that the average CO$_2$ concentration in the sampled schools was 1.6–1.8 times higher than the approved standard. The same study indicated that the PM$_{2.5}$ concentration was 3.1–10.05 times higher in sampled schools than the national standard on air quality.

The 2017 National Environmental Health Programme designed for the period 2017–2020 prioritizes work to reduce health impacts from air, water and soil pollution, and from chemicals. Several other environmental-health-related programmes exist, but their implementation at aimag and local level and their final assessment are not available. The priorities and the overarching strategy in environmental health are not defined. There is a lack of thematic action plans such as action plans on asbestos, indoor air quality and environmental noise.

Knowledge on the impact of environmental factors on population health is limited to specific media, such as air pollution, but the impacts on health of asbestos, noise, chemicals and anthropogenic activities are not documented. Databases on dangerous substances (chemicals, hazardous waste, asbestos, lead, radon) and on their emission and locations are not established. Consequently, exposure of the population to these contaminants and their impact on health are not defined and it is difficult to prevent population exposure.

Asbestos is still in use. There are no standards for asbestos exposure and no policy for detection of asbestos in buildings before demolition. Asbestos exposure and related diseases are not monitored or registered.

Mining activities have increased during the last two decades, which has had an impact on the environment and on the health of the workers, the population and livestock. The population in mining areas is subject to the cumulative impact of mining activities on air, soil, water, animals (livestock) and, consequently, their health. Health hazards related to mining include dust-related respiratory diseases and chemical poisoning.

The country is committed to ending the use of mercury in medical materials. The Mercury-free Hospital Initiative was successfully rolled out. In 2012, 14 hospitals were announced to be mercury free.

Access to good quality, safe water in schools and kindergartens is an issue, especially in remote areas. Several local actions are performed by national and international organizations to ameliorate this situation, but they are not replicated across the country.
Table 5: Causes of infant and under-five morbidity, 2016, per cent

<table>
<thead>
<tr>
<th></th>
<th>0-1 age</th>
<th></th>
<th>Under-5</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Urban</td>
<td>Rural</td>
<td>Urban</td>
<td>Rural</td>
</tr>
<tr>
<td>Diseases of respiratory system</td>
<td>54.3</td>
<td>63.9</td>
<td>57.5</td>
<td>68.8</td>
</tr>
<tr>
<td>Diseases of digestive system</td>
<td>9.9</td>
<td>9.7</td>
<td>8.7</td>
<td>12.6</td>
</tr>
<tr>
<td>Conditions originating in the perinatal period</td>
<td>7.9</td>
<td>3.7</td>
<td>4.0</td>
<td>2.3</td>
</tr>
<tr>
<td>External causes of morbidity and mortality</td>
<td>1.9</td>
<td>0.7</td>
<td>7.0</td>
<td>1.9</td>
</tr>
<tr>
<td>Infectious and parasitic diseases</td>
<td>12.6</td>
<td>7.9</td>
<td>7.6</td>
<td>3.3</td>
</tr>
<tr>
<td>Diseases of skin and subcutaneous tissue</td>
<td>4.9</td>
<td>3.7</td>
<td>9.6</td>
<td>4.8</td>
</tr>
</tbody>
</table>


Table 6: Food borne disease outbreaks: affected and hospitalized, 2012–2016, number

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Outbreak of food-borne illness</td>
<td>3</td>
<td>5</td>
<td>11</td>
<td>6</td>
<td>12</td>
</tr>
<tr>
<td>Affected people</td>
<td>572</td>
<td>93</td>
<td>766</td>
<td>311</td>
<td>382</td>
</tr>
<tr>
<td>Patient hospitalized</td>
<td>5</td>
<td>1</td>
<td>244</td>
<td>33</td>
<td>127</td>
</tr>
</tbody>
</table>


Recommended measures:

- Develop an overarching strategy for environmental health;
- Ensure collection of data on environmental health indicators;
- Develop registration of diseases related to environmental exposure;
- Carry out an inventory of the use and distribution of asbestos and lead;
- Adopt the strategy on mining and health;
- Carry out a survey on the impact of mining activities on health;
- Continue to implement water safety plans;
- Ensure access to safe drinking water and sanitation in all schools and kindergartens;
- Accede to several ILO conventions on environmental health.
The Environmental Performance Review Programme of the United Nations Economic Commission for Europe assesses progress made by individual countries in reconciling their economic and social development with environmental protection, as well as in meeting international commitments on the environment and sustainable development.

The Environmental Performance Review of Mongolia covers legal and policy frameworks, compliance assurance, greening the economy, environmental monitoring, public participation and education for sustainable development. Furthermore, the review addresses issues of specific importance to the country related to air protection, biodiversity conservation and water, waste and land management. It also examines the efforts of Mongolia to integrate environmental considerations into its policies in the forestry and health sectors and highlights the progress achieved in the management of disaster risk associated with natural and human-made hazards. The review further provides a substantive and policy analysis of the country’s participation in international cooperation on the environment, with a specific focus on the three Rio Conventions. The successes of Mongolia in the achievement of the Millennium Development Goals are highlighted, as well as the challenges to be addressed by the country when implementing the globally-agreed Sustainable Development Goals.

The Highlights of the Environmental Performance Review of Mongolia draw attention to the key findings of the review to inform and guide policymakers and representatives of civil society, as well as the international community, in their efforts to improve environmental management and to further promote sustainable development in Mongolia.

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