

Part IV

CONCLUSION AND RECOMMENDATIONS

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Mongolia is committed to Agenda 21 in order to pursue the sustainable development objectives in the 21st century. Development took place in the past decades has put pressure on country's natural resources and environment. Government policy on environment was developed in 1997 to protect the environment and natural resources through legal mechanism as well as economic tools. Socio-economic policies are also being reformed to enhance the sustained economic growth through ecologically sound technology and production of high quality goods.

Natural resource base such as mining, forestry, animal husbandry and tourism provides a great opportunity for economic development in Mongolia. Existing conditions of environment and landscape are in a reasonably good shape. Mongolia is also endowed with rich biodiversity. Existing market economy could have potential to adversely affect the present conditions unless integrated sound policies and strategies encompassing environmental, economic and social issues are developed and implemented.

This chapter includes the conclusions and recommendations for land, water, and forest resources, and air pollution. Various policies and strategies identified to protect and conserve these resources have been discussed.

LAND RESOURCES

Mongolia is the seventeenth largest country in the world. Land degradation in Mongolia, which occurs through human induced activities and natural causes has been identified as one of the priority concerns. Human activities resulted in land degradation include rapid development of farm land, mining industry, and overgrazing. Natural causes include droughts, natural drying, deficit in soil moisture, and strong wind and dust storms. A large portion (about 40%) of land in Mongolia is presently covered under desert area. The increasing rate of desertification is of great concern. The results of land degradation and desertification have affected pasture land and agricultural production, especially crop yield and animal production. Some of the strategies identified to reduce land degradation are as follows:

- A correct assessment of the nature and extent of the existing degraded land needs to be carried out using remote sensing techniques and GIS with scientifically sound criteria and indicators;
- A policy to promote improved and sustainable agricultural practices needs to be developed;
- A policy mechanism could be developed for mining companies to adopt reclamation and rehabilitation of land in an integrated exercise for all mining operations;
- In the urban areas, specific sites need to be designed for the safe disposal of solid waste in order to check the land degradation;
- Government's newly drafted 'Land Law' and 'Law of Land Fees' which aims to provide innovative land policies, which need to be implemented in a specific timeframe;
- The implementation of the National Plan of Action to Combat Desertification needs to be strengthened;
- Institutional mechanism and networking need to be strengthened for monitoring and control of land degradation and desertification;
- A strong partnership needs to be developed between government, business and civil society in order to address and combat the issue of land degradation and desertification; and
- Creating public awareness at the local level would help in getting public support and involvement towards sustainable management of land resources

WATER RESOURCES

Demands of water in Mongolia are mainly met from the ground water sources. But, in the recent years, cities and towns are experiencing shortage of water due to lowering down of ground water table and drying up of some springs and small streams. The increasing consumption of water due to population growth, industrial and agriculture activities has resulted in lowering of ground water tables. Surface water sources are getting contaminated due to untreated domestic sewage and industrial effluents. There is a need to develop strategies and action plans in order to protect the water resources and as well as human health. Some of the measures could be undertaken as follows:

- Technological intervention is required in order to enhance effective treatment of wastewater. Adoption of cleaner technology would help to safeguard surface water and increase viability of freshwater;
- Introduce market based pricing for demand management and efficient use of water;
- Monitoring mechanism needs to be strengthening to assess the water quality in surface water, ground water, and wastewater discharge sources;
- Establish a realistic water budget through proper inventory of demand, supply, and availability of surface and ground water;
- Information on water consumption and wastewater discharges from industries and urban cities would help in developing strategies to optimize water allocation and uses;
- Development of institutional mechanism and trained manpower would help in enforcing existing laws, regulations and standards;
- Development of water zoning atlas would provide guidance for siting of industries and other economic activities; and
- Promoting integrated watershed management through policy intervention to enhance sustainable management of water resources.

FOREST RESOURCES AND BIODIVERSITY

Shrinking forest resources are one of the priority concerns in Mongolia. Increased human activities combined with forest fires and damaging insects has resulted in accelerating loss of forest cover. Loss of forests has aggravated erosion, increased desertification, negatively impacted the ground water table, and decreased agricultural productivity. The degradation of land and forests has also threatened biodiversity, especially the plant species. Many of the plants have medicinal value as currently over 200 species are being used for various treatments. Loss of forest resources could have serious implications on social and economic conditions in Mongolia. The situation demands urgent policy measures and action plans in order to reverse the negative trends in a specific timeframe. Some of the measures could be taken up as follows:

- More emphasize needs to be given on conservation aspects while developing policy measures and action plans;
- Action plan could be developed to conserve the rare and endangered species of flora and fauna;

- Institutional mechanism could be strengthened in order to develop and implement various policies and strategies;
- Continuous monitoring of biodiversity uses would help in reviewing the results of implementation of policies and programmes;
- Forest and biodiversity mapping using GIS and remote sensing techniques would facilitate the process of developing better strategies and action plans to manage forest and biodiversity resources, including identification of 'hot spots';
- Resources need to be raised for improvement and management of existing protected areas;
- Eco-tourism could be developed to harmonize the human and ecology interaction, which in turn would provide an economic opportunity for the local people; and
- A strong partnership needs to be developed between government, business and civil society in order to conserve and augment forest resources in Mongolia.

AIR POLLUTION

Air pollution in Mongolia can be attributed to coal and wood burning in households, forest fires, industrial emission and vehicular emission in urban areas. Rapid growth of vehicles has been the major sources of air pollution in urban cities. Urban population is reported to be increasingly suffering from air pollution problems, especially during winter months. Following measures could be undertaken to control air pollution in Mongolia:

- Control of industrial pollution could be made through promotion of cleaner technologies, strengthening emission standards, and enforcing the pollution control system;
- Air Pollution from power plants in Ulaanbaatar could be improved through adopting efficient 'clean' coal technology, efficiency improvements in combined heat and power plants, and improvement of efficiency in boilers, furnaces and coal stoves.
- Vehicular pollution control in cities could be done through augmentation of public transport system, setting strict emission norms, promotion on cleaner fuels like CNG, and traffic planning and management;
- A comprehensive air quality management strategy for major cities would help in controlling air pollution;

- Strengthening of monitoring network and institutional capabilities would facilitate an improvement on the enforcement mechanism;
- Well equipped laboratories and trained manpower would facilitate to improve monitoring networking and knowledge base on air pollution;
- Emphasize needs to be given on promotion of cost efficient and low smoke stoves for households;
- Use of renewable energy sources (Solar, Wind, Bio-gas) should be promoted with appropriate incentives; and
- Economic incentives need to be put in place to encourage industries to adopt cleaner technology and other conservation practices and discourage over utilization of natural resources.
- Emphasis should be given on public awareness and environmental education related to air pollution problems and concerns

While economic development is important to improve the quality of life of people, strong policies, planning and institutional mechanism would need to preserve environment and natural resources. A strong partnership amongst government, business and civil society would be required to bring about the desired positive changes. The Government of Mongolia is committed to achieve the goal of sustainable development, i.e. economic growth, social progress, and protection of environment and natural resources, which are mutually reinforcing.