



SUSTAINABILITY OUTLOOK OF MONGOLIA



MINISTRY OF ENVIRONMENT
AND TOURISM



REGULATORY AGENCY OF GOVERNMENT
NATIONAL DEVELOPMENT AGENCY



UNITED NATIONS
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SUSTAINABILITY OUTLOOK OF MONGOLIA

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MINISTRY OF ENVIRONMENT
AND TOURISM

The Ministry of Environment and Tourism (MET) of Mongolia is the focal point institution with the goals of promoting green and sustainable development through the enhancement of ecosystem capacity, ensuring ecological balance, sustainable use and rehabilitation of natural resources, to ensure the human rights to live in a healthy and safe environment by fostering the cooperation and efforts of stakeholders including business entities and government organizations.



REGULATORY AGENCY OF GOVERNMENT
NATIONAL DEVELOPMENT AGENCY

The National Development Agency (NDA) is a Government regulatory agency under the Prime Minister of Mongolia which aims to ensure the country's economic stability, develop and implement an integrated development and investment policies. NDA is the coordinating body that leads the translation of the Sustainable Development Goals and Mongolia Sustainable Development Vision 2030 into a Medium-Term Development Plan nationally, sub-nationally and across sectors by identifying priority development areas and sectors that will address cross-cutting issues and ensure sector alignment.



NATIONAL STATISTICS
OFFICE OF MONGOLIA

The National Statistics Office (NSO) is an independent agency under the supervision of the Parliament. The mission of the National Statistical Office (NSO) is to provide state, government and public users with reliable and accurate economic, social and population data and information that is immune to political influence and scientifically feasible and acceptable. Main functions: to collect, compile and analyze the official statistics; to coordinate with government agencies while receiving statistical information from various ministries and agencies; to introduce international standards and methodologies; to conduct surveys and thematic studies; to conduct population and housing census every 10 years; to capture all entities in the recording of the business register; to improve the data dissemination system and services; to monitor the accuracy of official statistics; to co-operate with international organizations and other national statistical services.



The Economic and Social Commission for Asia and the Pacific (ESCAP) serves as the United Nations' regional hub promoting cooperation among countries to achieve inclusive and sustainable development. The largest regional intergovernmental platform with 53 Member States and 9 associate members, ESCAP has emerged as a strong regional think-tank offering countries sound analytical products that shed insight into the evolving economic, social and environmental dynamics of the region. The Commission's strategic focus is to deliver on the 2030 Agenda for Sustainable Development, which is reinforced and deepened by promoting regional cooperation and integration. ESCAP's research and analysis coupled with its policy advisory services, capacity building and technical assistance to governments aims to support countries' sustainable and inclusive development ambitions.

FOREWORD BY MONGOLIA

On behalf of the Government of Mongolia, we are delighted to present the Sustainability Outlook of Mongolia (SOM), as an analytical framework for policy development and implementation, monitoring and planning at the national level. This analytical framework is designed in an integrated and coherent manner to facilitate achievement of the 2030 sustainable development goals (SDGs). National governments around the world have been challenged to meet 17 sustainable development goals (SDGs), which necessitates substantial resources and efforts, within a 15-year timeframe. In this context, the SOM brings us a novel approach utilising systems thinking that acknowledges the strong interlinkages between SDGs, and introduces the idea of leverage point, where constructive actions can channel a network of changes influencing several of SDGs simultaneously. The SOM's approach highlights the basis for integrating government policies and actions with Mongolia's international obligations and multilateral environmental agreements (MEAs) and 2030 Sustainable Development Agenda while altering the narrow sectoral strategies and institutional ambitions.

As such, the SOM presents the outcome of fruitful cooperation of the Ministry of Environment and Tourism (MET) with the National Development Agency (NDA), the National Statistical Office of Mongolia (NSO) and the United Nations Economic and Social Commission for Asia and Pacific (ESCAP). The very process of developing SOM since early 2017, through multiple forums and workshops, has set an exemplary example of collaboration between these key institutions mandated to lead SDG implementation in Mongolia. On the other hand, we acknowledge that the work on the SOM has not been easy, as it is pioneering the complex analytical approach applied through step-wise approach at the national level. However, we learned from the process and obtained essential lessons that can be useful to other governments in their efforts for SDG integration at the national level.

I would like to extend the gratitude of the Government of Mongolia to the secretariat of ESCAP for their professional guidance and technical assistance in the SOM development, and recognize the SOM team work of MET for the overall coordination and integration of analytical materials of the NDA team for the reliable support and contributions throughout the process and for the NSO for meticulous work on SDG statistics and data presentation in the SOM document.

For demonstration purposes, the SOM presents an analysis of the current standing of Mongolia in each of the SDGs, with defined leverage points where the most effective measures should be taken to achieve multiple impacts and offers specific recommendations for priority development sectors. Therefore, the SOM provides important hints for policies and decision-making for the Government of Mongolia to follow-up at the mid-term planning process.

Lastly, it is important to highlight that the SOM is a living document, which should be updated as necessary to continue supporting decisions and actions on SDG implementation in Mongolia. The Government of Mongolia is committed to use the approach and the SOM results for further SDG planning, monitoring and reporting purposes and share our experiences regionally and globally.

I am sure SOM marks the beginning of next phase of the close partnership between the Mongolian Government and the ESCAP for communicating SOM results and putting the environmental conservation at the heart of SDG implementation, and we are looking forward to working side-by-side with SDG stakeholders to make Mongolia both sustainable and green country.

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FOREWORD BY ESCAP

The 2030 Agenda for Sustainable Development, along with its Sustainable Development Goals (SDGs), provide countries with an ambitious development agenda to leave no one behind. As countries grapple with this complex and integrated development agenda, building a reliable evidence base to take stock of where we stand, to measure progress, to help identify priorities and to address the interlinkages and tradeoffs will be a vital element of success.

The Sustainability Outlook of Mongolia (SOM) is a comprehensive evidence base of the country's sustainable development, providing an overview of the green and sustainable development processes, analyzing progress in the implementation of the SDGs and identifying priority areas for action. We hope that the report is a helpful tool for aligning national objectives and priorities with the SDGs and for helping identify some of the priority areas for integrated action in further policy dialogues and respective actions.

Three years into the 2030 Agenda for Sustainable development, Mongolia shows encouraging signs of progress on many SDGs. However, on some SDGs – including poverty, inequality, decent work, responsible consumption and production, and land management – the country must redouble its efforts or risk moving further away from the 2030 Targets. Special attention must be called to poverty. Following substantial improvement measured from the year 2000, Mongolia's poverty rate increased from 21.6% to nearly 30% between 2014 and 2016, resulting in a dramatic regression from the SDG target. Without focused actions to reverse this regression, Mongolia risks serious obstacles to achieve the 2030 Agenda.

Imbedded in the SOM are ways and means of analyzing and visualizing complex data and information including the SDG Baseline assessment – used for the very first time at national level – as well as an innovative system-thinking approach. More than the methodologies, however, the multi-stakeholder, cross government and cross sectoral participatory process has enabled the SOM to deliver a common vision of progress, challenges, priorities and pathways forward that provides the basis for stronger cross-sectoral cooperation and collaboration in implementation of the SDGs.

ESCAP is pleased to have worked with the Government of Mongolia on the Sustainability Outlook of Mongolia (SOM). We commend the Government of Mongolia for its forward-looking approach to development planning, its leadership in piloting the Sustainability Outlook methodology, and its commitment to implementation of the 2030 Agenda.

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The Sustainable Outlook for Mongolia (SOM) was initiated, developed and coordinated by the Government of Mongolia through the Ministry of Environment and Tourism (MET) in collaboration with the National Development Agency (NDA) and the National Statistics Office (NSO) and with guidance and the technical assistance provided by the Economic and Social Commission for Asia and the Pacific (ESCAP). The diversity of the issues covered by this report required the collaboration of a large community of experts and practitioners based both in Mongolia and broadly in the region Asia Pacific and beyond. The Government of Mongolia and ESCAP acknowledge the contributions made by more than 250 experts towards the preparation of this report, including through desk reviews and the national consultation processes.

Experts of the United Nations Development Programme (UNDP) have provided essential contributions during national consultations, specifically to the section on Sustainable Water Management in Chapter 3. The content of SOM is also building up on some recommendations of the Environmental Performance Review, which was prepared in a parallel process by international experts of the United Nations Economic Commission for Europe (ECE). In addition, Seoul Initiative Network on Green Growth (SINGG) has provided essential contributions.

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ABBREVIATIONS

AICT	– Authority of Information, Communication and Technology
CBD	– Convention on Biological Diversity
CBO	– Community-Based Organization
CC	– Climate Change
CHD	– Center for Health Development
CTF	– Committee on Trust Fund
DPPD	– Development Policy and Planning Division
EBRD	– European Bank for Reconstruction and Development
EIC	– Environmental Information Center
ENRMD	– Environment and Natural Resource Management Department
EPR	– Environmental Performance Reviews
GASI	– General Agency for Specialized Inspection
GGGI	– Global Green Growth Institute
GHG	– Green House Gas
GCF	– Green Climate Fund
LLC	– Limited Liability Company
LULUCF	– Land Use, Land-Use Change and Forestry
LP	– Leverage Point
MEA	– Multilateral Environmental Agreement
MoF	– Ministry of Finance
MET	– Ministry of Environment and Tourism
MFA	– Ministry of Foreign Affairs
MLSP	– Ministry of Labor and Social Protection
MJHA	– Ministry of Justice and Home Affairs
MoH	– Ministry of Health
MECSS	– Ministry of Education, Culture, Science and Sport
MCUD	– Ministry of Construction and Urban Development
MoE	– Ministry of Energy
MMHI	– Ministry of Mining and Heavy Industry
MMRA	– Mongolian Marketing Research Association
MoD	– Ministry of Defense
MEGDT	– Ministry of Environment, Green Development and Tourism
MED	– Ministry of Economic Development
NAPCC	– National Action Programme on Climate Change
NGDP	– National Green Development Policy
NGO	– Non-Governmental Organization
NGC	– National Gender Commission
NHRC	– National Human Rights Commission
NSO	– National Statistics Office
NDA	– National Development Agency
NAMEM	– National Agency for Meteorology and Environmental Monitoring
NC	– National Consultation (NC1 on <i>National Consultation 1 on Synthesis of EPR and SOM</i> ; NC2 – <i>National Consultation 2 on SOM with Data Support</i>)
SDG	– Sustainable Development Goals
SOM	– Sustainability Outlook of Mongolia
SDV	– Sustainable Development Vision
ToT	– Training of Trainers
UMO	– Ulaanbaatar Mayor's Office
UNESCAP	– United Nations Economic and Social Commission for Asia and the Pacific
UNECE	– United Nations Economic Commission for Europe
UNESCO	– United Nations Educational, Scientific and Cultural Organization
UNEP	– United Nations Environment Programme
UNDP	– United Nations Development Programme
UNFAO	– United Nations Food and Agriculture Organization
UNFCCC	– United Nations Framework Convention on Climate Change
WASH	– Water Supply, Sanitation and Hygiene
WB	– World Bank
WWF	– World Wildlife Fund

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EXECUTIVE SUMMARY

Background

Recent years have seen Mongolia set a course towards socially inclusive and environmentally-friendly economic development. In 2014, Mongolia committed itself to green growth and defined its development objectives by adopting the National Green Development Plan (NGDP). A global agreement the following year on the 2030 Agenda for Sustainable Development and the Sustainable Development Goals (SDGs) motivated Mongolia to further refine its vision for sustainable development, resulting in its adoption in 2016 of its Sustainable Development Vision 2030 (SDV 2030).

Mongolia's forward-looking planning has helped to define its priorities and identify relevant targets and indicators based on its national context, and to enhance implementation through alignment with its short and medium-term development objectives. The SOM offers Mongolia an outlook based on a synthesis of its planning efforts, combined with a qualitative and quantitative analysis of progress on SDGs. The resulting baseline and snapshot of SDG progress and selection of areas conducive to integrated policy development allows Mongolia to prioritize actions within its medium-term strategy.

Mongolia is in a period of major transition

Mongolia's economic transition has been accompanied by shifting development patterns and changing demographics. While the country's rich history has traditionally been characterized by rural population, nomadic herding and an agriculture-based economy, urbanization has grown, with the urban population expanding from 50 percent in 1996 to 68.3 percent in 2016. Employment and educational opportunities are increasingly concentrated in the capital city of Ulaanbaatar. Economic priorities are also shifting. The SDV 2030 identified objectives to diversify the economy, including enhancement of the tourism and industrial sectors, and to create a more favourable business environment for import and export of goods. These demographic changes and economic transitions induce significant policy implications across Mongolian society, including for the country's efforts to alleviate poverty, enhance health, education and employment opportunities, and to manage its vast natural resources.

On many SDGs, Mongolia shows encouraging signs of progress

Mongolia's concerted planning efforts and focus on the country's sustainable development is generating positive results. The analysis conducted for the SOM finds that, by maintaining current trends, Mongolia is expected to meet its 2030 targets, including: eradicating extreme poverty; ending all forms of malnutrition; reducing the maternal mortality; ending preventable deaths of new-borns and children under 5 years of age; eliminating gender disparities in education; and ensuring women's full and effective participation and equal opportunities for leadership. Highlights include Mongolia's progress in the following SDGs:

- **No Poverty (SDG 1).** Mongolia's poverty rate fell from nearly 39 percent in 2010 to 21.6 percent in 2014, establishing an initial trend of progress and improvement. However, the rate increased again by 2016 to 29.6 percent, indicating a level of regression. While overall progress is still positive, the more recent regression presents challenges for Mongolia to achieve SDG 1, in particular, target 1.2 to halve the poverty rate by 2030. Mongolia's SDV 2030 has set an even more ambitious target of a zero poverty rate by 2030, committing the government to focus efforts on policies and strategies to realize its vision, and reverse recent regression. Interlinkages with other SDGs, for instance SDG 4 (Education), SDG 8 (Decent Work and Economic Growth) provide leverage points to address poverty and achieve multiple impacts.
- **Zero Hunger (SDG 2).** Significant progress has been made across Mongolia to eliminate hunger. Prevalence of stunting in children under the age of five due to malnutrition has substantially decreased, dropping from 27.5 percent in 2005 to 10.8 percent in 2016. Undernourishment in the total population was cut by more than a third from 2006-2016, decreasing from 31.0 percent to 19.6 percent to 2.3 percent and 7.1 percent to .01 percent respectively over the period 2000-2017. Significant progress has also been made in efforts to reduce undernourishment in children under the age of five, cutting in half the percentage from 38.0 to 19.3 percent in the same period.
- **Sustainable Cities and Communities (SDG 11).** Projections indicate that the capital city of Ulaanbaatar

may be home to nearly 55 percent of Mongolia's population by 2030. Employment choices and better access to education and health services may continue to drive this trend. As a result of better access to services, analysis indicates initial progress against SDG target 11.1, although limited data prevents a comprehensive assessment against other targets. A strategic objective of the NGBP promotes smart cities and green development standards, which should guide local planning efforts in Ulaanbaatar and other urban centres and create potential for progress against SDG 11 targets. Optimizing interlinkages with SDG 6 (Clean Water and Sanitation) and SDG 12 (Responsible Consumption and Production) is a key strategy to continue sustainable urbanization.

- Climate Action (SDG 13). Although Mongolia remains a heavily coal-based economy, the country's Nationally Determined Contribution (NDC) in the Paris Climate Agreement commits to a 14 percent emissions reduction. Mongolia developed its National Action Programme on Climate Change to guide climate policy and implement actions to reduce the impacts from climate change. It has also strengthened capacity for collection, analysis and use of climate data, and its institutional capacities to coordinate and implement policies across multiple sectors. These early policy and institutional changes will need to be followed by robust implementation of climate actions, including reducing the country's energy and carbon intensities if there is to be progress against this goal.

On some SDGs, Mongolia must redouble efforts or risk regression

Despite the progress seen across a range of SDGs, Mongolia still faces challenges. Trends will need to be reversed for a great number of SDG targets, including: increasing expenditure on social protection, education and health; ending the epidemics of AIDS and tuberculosis; ensuring universal access to sexual and reproductive health-care services; ensuring that all children have access to quality early childhood development, care and pre-primary education; improving resource efficiency in consumption; achieving full and productive employment and decent work for all; promoting inclusive and sustainable industrialization; and enhancing scientific research and upgrading the technological capabilities of industrial sectors. The following are some of the SDGs where significant attention must be focused:

- Decent Work and Economic Growth (SDG 8). Mongolia has seen regression resulting from an economic slowdown. A decrease in the economic growth rate, from 17.3 percent in 2011 to just 1.2 percent in 2016, and to 5.1 percent in 2017, has resulted in unemployment and a decline in incomes, affecting attainment of a number of SDGs and targets, including SDG 4 (Education), and SDG 10 (Reduced Inequalities). Under-employment and access to education are also affected by urban-rural disparities. Interlinkages across these three SDGs have been identified as critical to establish multiple impacts.
- Reduced Inequalities (SDG 10). Regression is seen as a result of widening income inequality and disparate access to education, especially among the rural populations, and employment opportunities for disabled workers and youth.
- Responsible Consumption and Production (SDG 12). An increase in the material footprint per GDP contributes to the regression seen against SDG 12 targets. A reduction in the rate of domestic material consumption per GDP must accelerate to achieve targets. Mongolia's SDV 2030 has established environmental sustainability principles, which should help to reverse this trend including: efficient and effective resource use; support for clean technology; low-waste; and sustainable production and consumption. Leveraging interlinkages across SDGs 6, 7, 8, 16, and 17, are essential to develop integrated policies which will balance economic growth and sustainable resource use.
- Life on Land (SDG 15). Land degradation and desertification, overgrazing and expansion of mining operations have contributed to the regressive trend identified in the SOM. Nearly 77 percent of land areas have seen changes in vegetation cover, plant species and biomass production, and soil erosion from wind and water run-off are posing treats to ecosystems. In response, Mongolia seeks to increase specially protected land areas to 30 by the year 2030, one of the 20 key results indicators used to assess the performance and implementation of Mongolia Sustainable Development Vision 2030.

These analyses and summaries of progress, regression and trends result from a multi-stakeholder process that included review of existing data, national consultations, the outcomes of a Rapid Strategic

Impact Assessment, including a perception-based social survey, and systems mapping. Going forward, one of the main factors for Mongolia to continue tracking progress is to address the lack of sufficient data available for all SDGs. An analysis by Mongolia's National Statistics Office (NSO) showed that of the 244 global indicators in the SDGs, national data and statistics were available only for 134 indicators (57.5 percent). No data was available for 99 of the indicators, limiting analysis in some cases to only a subset of indicators. In response, NSO developed a Roadmap to create a set of indicators necessary for monitoring and assessment of the SDGs, as well as to build the overall statistical capacity of the country. This effort will support further elaboration of progress or regression for more clusters of SDGs.

Priority areas are emerging for integrated action

The systems approach revealed key leverage points across a range of interlinked SDGs that will allow Mongolia to further respond to the progress and regression in priority development areas. These areas respond to the development objectives embedded in Mongolia's vision and planning documents, and are expected to generate multiple impacts that contribute directly to attainment of cross-cutting SDG targets. Thus, the SOM recommends four priority areas where integrated policies be developed to accelerate attainment of relevant SDG targets. They are:

1. **Sustainable Water Management System:** Integrated water resource management was identified as a critical need across sectors, and is fundamental to achieving SDG 6 to ensure clean water and sanitation for all. As nearly 56 percent of the rural population have no access to safe drinking water, improved infrastructure and water management is essential to overcome identified disparities, improve health and well-being and enhance sustainable use of resources.
2. **Sustainable Land Management System:** Maintaining balanced ecosystem services is essential to Mongolia's development objectives to improve the productivity of livestock farming, to meet domestic food consumption, and develop the supply network for raw materials. Increased technology and finance needs to support farming, while increasing protected land areas will achieve multiple objectives related to SDGs 8, 9, 12 and 15.
3. **Natural Resource-Based Industry System:** Fostering development of industries, including manufacturing processed and finished export products, will contribute to economic diversification, with multiple impacts on SDGs related to employment, consumption and production, infrastructure and innovation, water and energy.
4. **Sustainable Tourism Management System:** Cultivating the tourism industry will generate economic benefits throughout Mongolia, helping to generate employment, overcome income inequalities and promote responsible consumption and production patterns.

Each of these priorities represent cross-cutting areas which build on the inter-related nature of the SDGs. They also reflect opportunities for Mongolia to more effectively plan implementation strategies which mobilise stakeholders across sectors and foster cooperation among relevant ministries. With these four priority areas identified for integrated policy development and policy coherence, Mongolia can subsequently conduct modelling and scenario planning to enhance coordination efforts and maximize the potential to achieve national objectives and SDG targets.

A systems approach can help provide future pathways

The findings and recommendations for integrated policies incorporated in the SOM result from an approach and methodology to apply systems-thinking to assessment of Mongolia's national context, objectives and progress towards the SDGs. The methodology relied on extensive, multi-stakeholder national consultations, review of national data and statistics, application of innovative tools, such as a Rapid Strategic Impact Assessment and Rapid Diagnostic tool on data, surveys and systems mapping.

The systems approach to developing a sustainability outlook follows a ten-step process (elaborated in Annex 1) that begins with the country's strategic vision for a sustainable future and progresses towards impact investments supporting implementation

The process of developing SOM provides a useful framework to create country-level sustainability outlooks. Subsequent modelling and scenarios, building on the results of the analysis in the SOM will solidify Mongolia's outlook and provide clear pathways to achieve the country's vision for sustainable development.

As with many planning processes, the success of Mongolia's efforts to achieve a sustainable future will depend in large part on its commitment to rigorous follow up on the recommendations in the SOM, and the implementation of a robust monitoring and reporting system. The framework of SDG targets and indicators provide a solid foundation for measuring progress. Mongolia must also take steps to enhance its capacities, especially in critical areas such as data collection and management and enforcement of regulations. Finally, Mongolia should continue the process begun through SOM, including scenario planning to better understand opportunities for integrated approaches, and should incorporate the findings from this work in its Medium-Term Strategies.

Structure of the Sustainability Outlook of Mongolia (SOM)

To assess the relevant policy environment for these diverse development issues while considering progress toward the SDGs and support the implementation of the SDV 2030 and NGDP, the SOM focused on four main objectives:

- Link the national development goals of Mongolia (as contained in the SDV and the NGDP) with the Sustainable Development Goals
- Analyze Mongolia's starting point on the SDGs, through establishment of an overall baseline and profiles for each SDG
- Assess priority areas for mid-term interventions and identify leverage points to accelerate implementation in these priority areas
- Present a baseline analysis to formulate scenarios and integrated policy pathways for development planning.

The above approach has resulted in a clear outlook for Mongolia, establishing where efforts have been successful or need to be enhanced. A baseline analysis of progress in Mongolia related to SDGs (explored in Chapter 2) has identified key areas of progress and regression, which can be used to inform medium-term strategies and future scenario planning. The systems approach used to develop the SOM (described in Chapter 3) reviewed progress across SDG target areas, identifying where the rates of progress must be maintained or accelerated to meet the target, or where the current trend must be reversed if the relevant sustainable development objectives are to be realized.

The SOM is structured as follows:

- Chapter 1 provides an overview of the long-term sustainable development aspirations of Mongolia as represented in the nation's key strategic policy documents, namely, the Sustainable Development Vision 2030 (SDV 2030), the National Green Development Plan (NGDP) and highlights the systemic linkages that exist with Mongolia's obligations under Multilateral Environmental Agreements (MEAs).
- Chapter 2 illustrates the 'SDG baseline dashboard' and the main outcomes of a Rapid Strategic Impact Assessment (RSIA) conducted using a policy analysis tool. Chapter 2 also presents individual profiles under the headings of each of the SDGs, highlighting the current context in Mongolia related to each SDG. The profiles provide a summary analysis of key issues and 'Insights', as well as highlight 'Bright Spots', 'Hotspots', 'Emerging Issues' and recommended leverage points aligned with the country's existing institutional frameworks;
- Chapter 3 presents an overview of the causal systems mapping and elaborates the systems-based analysis for four cross-sectoral priority areas identified to support the implementation of the SDV 2030 and the NGDP: 1) Sustainable Water Management; 2) Sustainable Agriculture Land Management; 3) Nature-based Industry; and 4) Sustainable Tourism.
- Chapter 4 provides the Conclusions and the Way Forward to demonstrate how innovative and interactive approaches for integrated SDG planning can help the government to effectively implement the 2030 Agenda.

I: SUSTAINABLE DEVELOPMENT IN MONGOLIA

In recent years, Mongolia has shaped a vision for sustainable development which includes strengthening its economy, meeting social needs and managing its vast natural resources in a manner that preserves the country's unique environment. To help achieve these ambitions amidst the country's rapid development, Mongolia has adopted policies and created institutional structures to guide implementation and plan future development in line with principles of sustainable development, good governance, and consistency with global development agendas.

Two principal documents have been adopted to guide Mongolia's development and establish long-term objectives consistent with Mongolia's vision. The National Green Development Policy (NGDP), and the Sustainable Development Vision 2030 (SDV 2030) outline Mongolia's sustainable development aspirations. Further, following adoption of the global 2030 Agenda for Sustainable Development, Mongolia is aligning its vision with global objectives and defining how the country can realize progress towards the Sustainable Development Goals (SDGs). The NGDP provides a roadmap for sustainable development to transform the economy, while the SDV 2030 establishes key principles and visions for Mongolia's development in consideration of the three pillars of sustainable development. The Sustainability Outlook of Mongolia (SOM) aims to serve as an analytical framework to further support alignment of Mongolia's strategies and helps to define the foundation for the ongoing planning processes.

National Green Development Policy - Roadmap to Sustainable Development of Mongolia

In January 2014, the Government approved the NGDP of Mongolia, which committed it to socially inclusive and environmentally-friendly green economic development. This effort was partly in response to the global call from the 2012 United Nations Conference on Sustainable Development (Rio+20) to shift to green economic development policies, as well as a recognition of the potential to steer Mongolia's increasing economic growth to support sustainable development. The NGDP affirmed Mongolia's ambition to evolve to a developed nation, while balancing long-term environmental sustainability and equally shared benefits across generations through inclusive economic growth.¹ The NGDP presents a development model for Mongolia's transition to green economic growth through six strategic objectives (See Figure 1).

Figure 1: Six strategic objectives identified in NGDP of Mongolia²



Serving as an overall guide for the country's development and providing an initial framework for monitoring, the NGDP established a set of 14 indicators to track the overall green development programme. Following review of Mongolia's development planning subsequent to adoption of the 2030 Agenda and the SDGs, the Government further expanded the table of indicators on green development to total of 33³ in 2017.

Mongolia's Sustainable Development Vision 2030 – Long-Term Development Objectives

The UN 2030 Agenda for Sustainable Development was adopted by Member States in September 2015. As an ambitious step to build on the momentum of the 2030 Agenda, and to capitalize on the sustainable development framework being established through the SDGs, the Government of Mongolia formulated and endorsed the Sustainable Development Vision of Mongolia – 2030 (SDV 2030). The SDV 2030, adopted in February 2016 and complementary to the NGDP, reaffirmed Mongolia's commitment towards a sustainable development pathway, within the global SDG framework.⁴ The SDV 2030 incorporates Mongolia's aspiration to be a stable, multi-sector economy, and a society dominated by middle and upper-middle income classes, which would preserve ecological balance, and have stable and democratic governance.⁵ It provides an overall vision and strategic guidance for future pathways, bringing Mongolia's national context into consideration with planning achievement of the SDGs. Ten key targets which address the three pillars of sustainable development and align with a number of the SDGs were incorporated into the SDV 2030:

1. Increase GNI per capita to USD 17,500 and become an upper middle-income country based on income per capita.
2. Ensure average annual economic growth of not less than 6.6 percent through 2016-2030.
3. End poverty in all its forms.
4. Reduce income inequality and have 80 percent of the population in the middle and upper-middle income classes.
5. Increase the enrollment rate in primary and vocational education to 100 percent, and establish lifelong learning system.
6. Improve the living environment of the Mongolian people to lead a healthy and long life; increase life expectancy at birth to 78 years.
7. Be placed among first 70 countries on the ranking of countries by the human development index.
8. Preserve ecological balance and to be placed among the first 30 countries on the rankings of the countries by the Green economy index in the world.
9. Be ranked among first 40 countries by the Doing Business Index and among first 70 countries by the Global Competitiveness Index in the world.
10. Build professional, stable and participative governance, free of corruption that is adept at implementing development policies at all levels.

In addition to these ten targets, the SDV 2030 defines visions for each of the three pillars of sustainable development, and identifies key objectives to guide sustainable development planning. The SDV 2030 visions and objectives are summarized below:

Vision for Sustainable Economic Development

To realize the economical dimension of sustainable development, Mongolia established a long-term goal to "implement a sound macroeconomic policy and diversify the economy in order to meet the objectives of sustainable economic development". The development of agriculture, industry especially light and food industry, construction materials, copper processing, coal, fuel-chemicals, lead processing plants, tourism, mining and extractive industries will be as the highest priority and energy and infrastructure sectors will be developed as the lead sectors.⁶

Five priority economic sectors were identified as key sectors for Mongolia's long-term sustainable development. Primary objectives were defined for each of these sectors. The sectors are: i) agriculture, ii) tourism, iii) industrial sector, iv) mining sector, v) energy and infrastructure ⁷(See Box 1).

Box 1: SDV 2030: Main Objectives for Sustainable Economic Development

- The primary objectives set for agriculture development are to (i) achieve 60 percent of the territory be disease free for trade and quarantine, (ii) increase the pure breed livestock to 200 thousand head through intensive livestock farming, (iii) increase zero-tillage farming technology application to 90 percent, and the area of irrigated arable land to 120 thousand hectares, and 100 percent supply of domestic seed demand, and (iv) provide people with necessary technologies to support rural household to have stable incomes.
- The primary objective of the tourism sector is to increase revenues from tourism by attracting two million foreign tourists annually by globally promoting Mongolia's culture and pristine nature globally.
- The primary objectives of the industrial sector include: (i) increase the share of processed products in leather, wool, and cashmere up to 80 percent in the total raw materials produced; (ii) supply at least 70 percent of domestic meat demand and 80 percent of domestic milk demand in the country; (iii) 100 percent supply of the national demand for main fuels from domestic production complying with the Euro-5 standards.
- The primary objectives for mining sector are to: (i) conduct in-depth explorations at mineral deposit sites, and create a national geological map of 1:50,000 scale for 60 percent of the territory; and (ii) commence the development of large-scale mining projects with adequate infrastructure.
- The energy and infrastructure sector has seven objectives, including: (i) 100 percent domestic supply of national energy demand, (ii) increase the share of renewable energy in the total energy to 30 percent; (iii) extend paved roads by another 470 km; (iv) develop Khushig valley airport as the regional hub center, and upgrade the public transportation system in Ulaanbaatar city; (v) develop and enforce general urban development plans; (vi) reduce heat-loss in buildings by 40 percent; and (vii) provide 95 percent of the population with high-speed Internet, digitize over 85 percent of public services, and launch and use a national satellite.

Source: [Mongolia Sustainable Development Vision 2030](http://www.un-page.org/files/public/20160205_mongolia_sdv_2030.pdf). Available at www.un-page.org/files/public/20160205_mongolia_sdv_2030.pdf

Vision for Sustainable Social Development

Mongolia's long-term goal for sustainable social development, as defined in the SDV 2030, is to 'ensure gender equality, improve the quality of and access to health care services, create a healthy, safe living environment for the citizens, improve public awareness on health education, provide equal education of high quality to every citizen, build a national system for lifelong education, end all forms of poverty, and increase the share of middle income classes sustainably and consistently.'⁸

Within SDV 2030 there are three social development objectives: (i) ensuring social equality through, (ii) an effective, high quality and accessible health care system, and (iii) knowledge-based society and a skillful Mongolia (See Box 2).

Box 2: SDV 2030: Objectives for Sustainable Social Development

- For ensuring social equality three objectives were set: (i) end all forms of poverty, and expand the middle classes to 80 percent of the population; (ii) raise the population's economic productivity to 70 percent and reduce unemployment rate to 3 percent; and (iii) achieve accountable and transparent social insurance system and social insurance funds.
- Four objectives were set to build a high-quality health care system: (i) increase life expectancy to 78 years; (ii) reduce maternal mortality to 15, under-5 child mortality to 9, and infant mortality to 8 per 10,000 populations; (iii) decrease deaths per 10,000 populations caused by cardiovascular diseases and cancer to 14 and 8, respectively; (iv) reach 99.8 percent vaccination coverage, reduce the prevalence of hepatitis and tuberculosis to 2 and 13 in 10,000 population.
- The five objectives for fostering knowledge-based society are: (i) increase pre-school education enrollment to 90 percent of all pre-school age children; (ii) decrease the number of secondary schools with two shifts by 50 percent; (iii) meet the national workforce demand from the national labor force; (iv) establish a tertiary education system capable of training internationally competitive workers; and (v) increase the funding for science, technology and research to 3 percent of the Gross Domestic Product.

Source: Mongolia Sustainable Development Vision 2030. Available at www.un-page.org/files/public/20160205_mongolia_sdv_2030.pdf

Vision for Environmental Sustainability

The long-term goal for achieving environmental sustainability as set forth in SDV 2030 is to “ascertain inclusive economic growth and sustainable social development, and provide the fundamentals of improving the quality of people's lives by efficiently using natural resources, preserving the sustainability of the ecosystem, and creating opportunities for people to benefit from natural resources in the long-run”.⁹

To achieve its long-term goal, Mongolia set three broad objectives for environmental sustainability: (i) implement an integrated water resource management; (ii) coping with climate change; and (iii) maintaining ecosystem balance. (See Box 3).

Box 3: SDV 2030: Main Targets of the Environmental Sustainability

- To implement integrated water resource management, two objectives were set: (i) conservation of 60 percent of water resources under state protection, and create a medium-scale hydrology map; and (ii) supply 90 percent of the population with safe drinking water, and 60 percent of the population with improved sanitation and hygiene facilities.
- Two objectives were identified for coping with climate change: (i) reduce the impacts of climate change by reducing land degradation and disaster risks; and (ii) reduce national greenhouse emissions by 14 percent from current levels.
- For maintaining ecosystem balance Mongolia will: (i) increase the area of specially protected areas to 30 percent of the country's territory, and expand the forest cover to 9.0 percent of the total territory; and (ii) develop urban green spaces to achieve 30 percent of the total urban land area, and increase the amount of recycling to 40 percent of the total waste generated.

Source: Mongolia Sustainable Development Vision 2030. Available at www.un-page.org/files/public/20160205_mongolia_sdv_2030.pdf

Institutional Context

The ratification and implementation of the NGDP and the SDV 2030 have created a favourable legal environment for implementation of the SDGs. Through the development of these core planning documents and subsequent actions, Mongolia established a strong foundation to support implementation of the 2030 Agenda. The government has achieved several significant milestones to build an institutional structure to support implementation of these plans, and by extension, to rapidly begin implementation of the 2030 Agenda.

The approval of the Law on Development Policy and Planning in November 2015 by the Parliament of Mongolia provided a critical breakthrough in the overall approach for national development planning and policy coherence. The law defines the hierarchy of development policies, types, implementation terms, scope and content outlines for each policy document. It also specifies inter-relationships between policy types across national and local scales of government and sets the standard for policy formulation processes and methods, reinforcing key principles of democratic governance and ensuring public participation and transparency of decision-making to assure the interests of all relevant stakeholders. The law stipulates critical requirements for development of policy documents, including implementation strategies and management cycles, with specifications for establishing monitoring and evaluation mechanisms, and provides the legal basis to support the SDV 2030 and the SDGs.

A significant milestone towards implementation of the SDGs in Mongolia was the establishment in July 2016 of the National Development Agency (NDA) as the national institution responsible for SDG implementation. The mandate of NDA is to coordinate national efforts towards achieving the SDGs, including participatory design of development strategies, analysis of the effectiveness of policies through research, creation of an information database, improvement of the legal environment for development planning, provision of strategic oversight, leadership and methodological guidance for investment plans, implementation, monitoring and evaluation¹⁰.

Another key institution with an institutional mandate to facilitate SDG implementation is the Ministry of Environment and Tourism (MET). MET is responsible for coordination of efforts directly related to the NGDP and Mongolia's commitments under multilateral global environmental conventions and agreements (MEAs), along with integral parts of Mongolia's sustainable development aspirations. As outlined in the NGDP, MET is empowered to set strategic direction among the key line ministries and to facilitate the NGDP Action Plan. MET oversees the joint implementation of the policy and inter-sectoral coordination of action plans at all levels. Under MET guidance, Ulaanbaatar, the capital city of Mongolia, and Bulgan, Khovd, Uvurkhangai and Khentii aimags were identified as "green development model aimags", aligning the provincial development policies and plans with SDV 2030. These were approved by aimag Citizens Representatives Khurals¹¹.

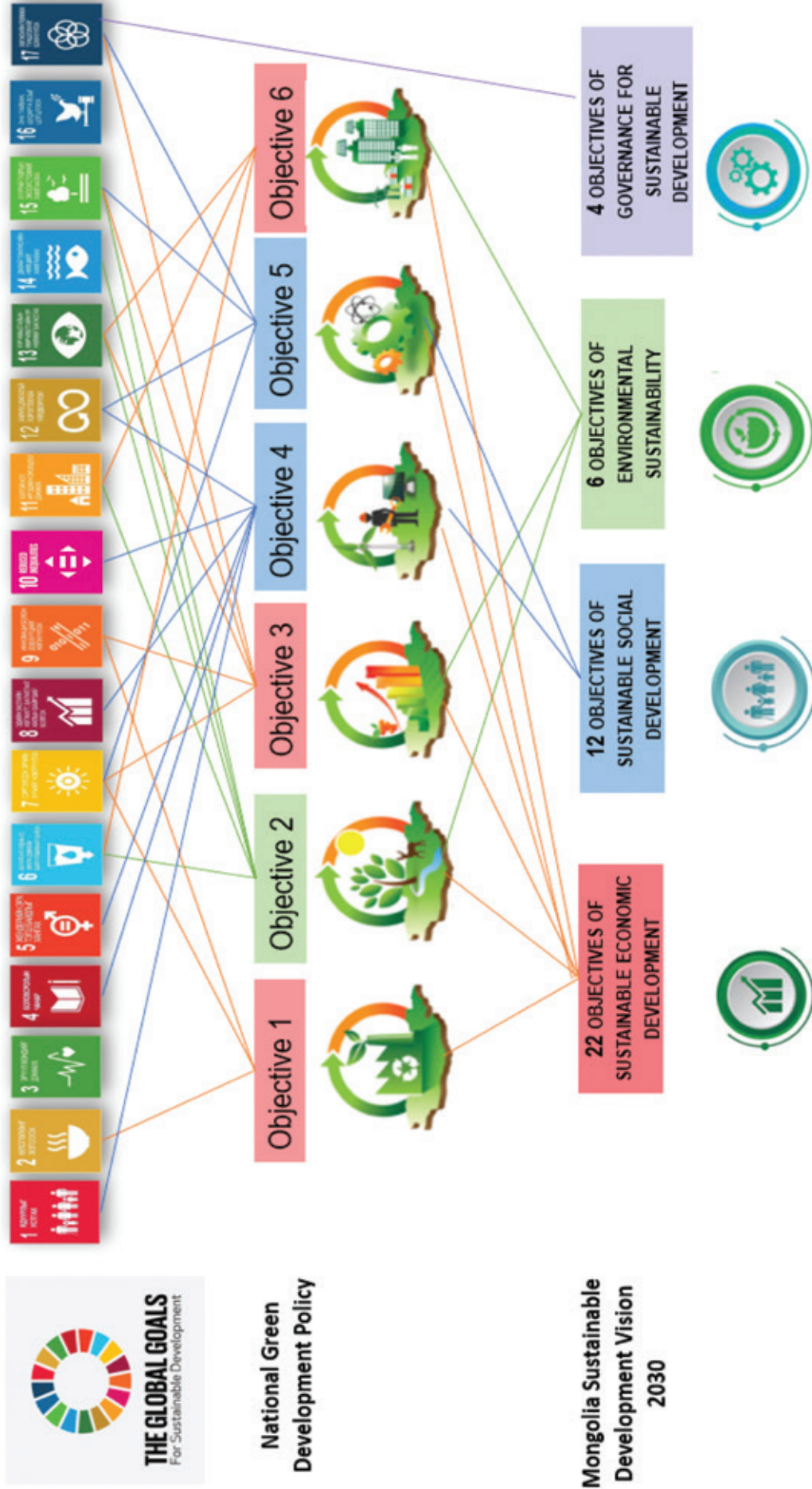
Linkages of the NGDP, the SDV 2030, SDGs and Core Global Environmental Commitments of Mongolia

The two main visionary documents of Mongolia - the NGDP and the SDV 2030 – have clear linkages with the 2030 Agenda and the SDGs.¹² As shown in Figure 2, the Government of Mongolia has mapped how all six strategic objectives of its NGDP are connected to relevant SDG in the 2030 Agenda, while they also feed into economic, social and environmental sustainability goals in the SDV 2030. Mongolia's action towards the 2030 Agenda can be analyzed through the various linkages between SDGs and the SDV 2030 objectives as presented in specific detail in Chapter 2.

Along with the NGDP and SDV 2030, Mongolia has ratified 15 international environmental conventions and protocols, and two regional agreements. Among the international treaties and multilateral environmental agreements (MEAs) to which Mongolia is a signatory, three conventions principally emphasize the country's commitment and aspirations for sustainable development, defining the strategic targets for maintaining ecosystem services. They are summarized below:

- Mongolia's program for implementation of the Convention on Biodiversity Conservation (CBD) follows four strategies: (i) increase awareness and knowledge on biodiversity conservation and sustainable use, (ii) develop and implement science-based policy on conservation, (iii) maintain sustainable use of biological resources, and (iv) improve policies and legal environment for conservation and use of biological diversity and ecological services.¹⁴
- The National Program for Combating Desertification 2010-2020 (under Convention for Combating Desertification and Land Degradation) emphasized the commitment to combat land degradation by increasing the country's forest cover and improving rangeland management through partnerships with stakeholders, particularly those in associated local communities.¹⁵ Key targets for reducing land degradation include the increase of forest cover from 7.9 percent of the total territory in 2016 to 9 percent in 2030, and the expansion of green spaces to cover 30 percent of the urban land territory. Mongolia is in the process of joining global land neutrality initiatives, and will set clear targets for reducing land degradation under UNCCD.
- The National Action Program on Climate Change (NAPCC, under the UN Framework Convention on Climate Change) endorsed by the Parliament in 2011, includes concrete measures to respond to climate change. In 2016, the Mongolian Parliament adopted the Paris Climate Agreement, and affirmed its Nationally Determined Contributions (NDC) to the UNFCCC. Mongolia committed to a series of actions up to 2030 in sectors responsible for greenhouse gas (GHG) emissions, including energy, industry, agriculture, and waste management. The expected mitigation impacts of these policies are estimated to reach 14 percent reduction in the total national GHG emissions, excluding for land use, land use change and forestry (LULUCF) by 2030, compared to the projected emissions under a 'business as usual' scenario. The key energy and climate change sectoral targets include an increase in renewable electricity capacity from 7.62 percent to 30 percent; reduction of electricity transmission losses from 13.7 percent to 7.8 percent; reducing building heat loss by 40 percent; and a decrease of Ulaanbaatar traffic by 30-40 percent from 2014 levels.

Figure 2: Linkages between SDGs, the SDV 2030 and the NGBP objectives¹³



Note: These different icons will be representing the objectives of respective national documents within each of the SDG profile in Chapter 2

REFERENCE (CHAPTER 1)

- ¹ Mongolia, Ministry of Environment and Tourism, "Alignment between Mongolia Sustainable Development Vision 2030 and National Green Development Policy", August 2017.
- ² Mongolia, Ministry of Environment and Tourism, *Green Development Overview*, page 51 (Ulaanbaatar, 2017).
- ³ Mongolia, National Statistics Office and Ministry of Environment and Tourism, "Extended Indicator Set for National Green Development Policy". Available at http://sdg.1212.mn/Home/Green_development_indicator (2017).
- ⁴ Mongolia, State Great Khural, Standing Committee on State Structure, *Mongolia Sustainable Development Vision- 2030: Justification and Framework*, (Ulaanbaatar, 2016).
- ⁵ Mongolia, State Great Khural, *Mongolia Sustainable Development Vision 2030*, page 9. Available at www.un-page.org/files/public/20160205_mongolia_sdv_2030.pdf (2016).
- ⁶ Ibid., page 11.
- ⁷ Ibid., page 13-21.
- ⁸ Ibid., page 23.
- ⁹ Ibid., page 29.
- ¹⁰ Mongolia, National Development Agency, "Mongolia SDV 2030", presentation, August 2017.
- ¹¹ Mongolia, Ministry of Environment and Tourism, National Development Agency and ESCAP, documents of Training of Trainers materials: Methodologies for Development of SOM, May, 2017.
- ¹² Ibid., NDA, *Mongolia SDV 2030*, presentation
- ¹³ Ibid., MET, *Alignment between Mongolia Sustainable Development Vision 2030 and National Green Development Policy*, presentation
- ¹⁴ Mongolia, Government Resolution No.325 (2015), *Annex: National Program for Biodiversity*. Available at www.legalinfo.mn/annex/details/6909?lawid=11359
- ¹⁵ Mongolia, Government Resolution N.90 (2010), *Annex. 1: National Program for Combating Desertification*. Available at <http://www.legalinfo.mn/annex/details/2653?lawid=5560>
- ¹⁶ Mongolia, Government Resolution No.2 (2015), *Annex: National Program for Climate Change*. Available at www.legalinfo.mn/annex/details/6909?lawid=6709

II: BASELINE STATUS OF SDGs IN MONGOLIA

A sustainability outlook must have as a strong foundation a clear understanding of recent trends, including indications of progress and/or regression, and a consensus on possible interventions which would positively influence identified trends. Establishment of a baseline, therefore, through a review of Mongolia's current status and achievements relevant to the SDG targets is useful to support the development of appropriate and responsive policies and actions. Mongolia has already realized progress through its ongoing development efforts which align with, or are contributing to attainment of the SDGs. In this chapter, quantitative analysis of available data provides a snapshot of Mongolia's progress against the SDGs, while profiles of each of the SDGs provide qualitative overviews that include insights and emerging issues relevant to Mongolia's policies and planning documents, and the results of systems mapping.

Following adoption of the 2030 Agenda, Mongolia has proactively advanced its development planning and identified necessary data and information needed to support measurement of progress against the SDGs. Since 2015 the National Statistics Office (NSO), which serves as the country's chief institution for SDG measurements and data coordination across ministries, has conducted three assessments on the availability of official statistics and administrative data to support monitoring of the SDGs. The results of these assessments indicated that of the 244 global indicators, national data and statistics are currently available against 134 SDG indicators (57.5 percent), 11 indicators were not applicable for Mongolia, and relevant data is not available to support monitoring for 99 indicators (42.5 percent).¹⁷ Based on this information, NSO developed a Roadmap to implement Mongolia's Monitoring and Reporting System for SDGs and the SDV 2030, - an action plan to create a set of indicators necessary for monitoring and assessment of the SDGs as well as to build the overall statistical capacity of the country.

The assessments of data and information by NSO and elaboration of a national monitoring and reporting system for SDGs allowed Mongolia to assess its progress and utilize existing data as the basis for a systems approach to identify additional actions to accelerate the pace of progress against or reverse negative trends against the SDGs. Reflected in the individual SDG profiles included in this chapter are the results and recommendations of systems analyses that reviewed trends and identified leverage points to advance attainment of the SDG targets.

The SDGs in Mongolia: A Snapshot

Through the development of SOM, a review of historical data since the year 2000 was translated into a baseline 'Snapshot' to illustrate progress or regression against the SDGs. Using a subset of SDG indicators for which sufficient data was available in Mongolia, the resulting baseline snapshot provides policy makers with a clear indication of the country's progress in some SDG areas, as well as the areas where critical attention must be focused. Relevant policies can then be assessed to identify thematic areas where cross-sectorial interventions and mid-term planning priorities for Mongolia can be reinforced to further support the 2030 Agenda for Sustainable Development (See Figure 3, Box 4, 5). The basic analysis using available indicators and data was performed to showcase the application of the methodology used in the development of SOM. The overview of SDG snapshot summarises the following points:

- Mongolia made a great progress in achieving SDG 2, in particular, between 2000 and 2017 on Zero Hunger. For instance, undernourishment and prevalence of overweight among children under 5 years of age dropped from 38.0 percent to 19.3 percent and from 12.7 percent to 5.0 percent, respectively during 2000-2017, more than halved. Prevalence of stunting and wasting among children under 5 years of age dropped from 29.8 percent to 2.3 percent and from 7.1 percent to 0.1 percent, respectively: strong progress during 2000-2017;
- In nine goal areas some progress has been achieved between 2000 and 2017. They are: no poverty (SDG 1); good health and well-being (SDG 3); equality education (SDG 4); gender equality (SDG 5); clean water and sanitation (SDG 6); affordable and clean energy (SDG 7); industry, innovation and infrastructure (SDG 9); peace, justice and strong institutions (SDG 16); and partnership (SDG 17);
- The situation in the country reversed to negative trend in four goal areas, namely on: decent work and equitable economic growth (SDG 8); reduced inequality (SDG 10); responsible consumption and production (SDG 12); and life on land (SDG 15). Although progress was made on some of the targets under these goals, the country regressed across the goals;

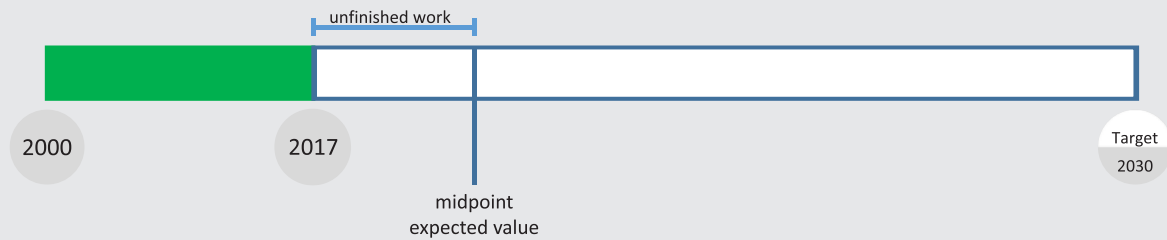
- A lack of sufficient data has limited progress assessment towards the goals. There was no data for Goal 14 (life below water) and the assessment for the rest of the SDGs was based on the analysis of only a subset of indicators for which data was available. Of a special note, only one/two indicators were used to assess SDGs 10-13, 16, constraining the accuracy of the results and adding the necessity to provide more careful interpretation.

Figure 3: SDG Baseline Status: Where did Mongolia stand in 2017?

Note: See analysis of observations in Chapter 2, Page 21



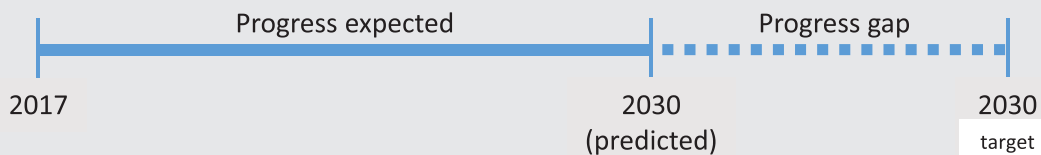
Note: The current assessment is based on a subset of 67 (out of 232) SDGs indicators (See Table 1-2) for which sufficient data for Mongolia are available from the database available at the ESCAP-ADB-UNDP SDG data portal at <http://www.unescap.org/stat/data>. This assessment does not include SDG 14 on Life Below Water. As more data becomes available, the progress and gap measures may change. Therefore, these results should be interpreted with caution (see Annex 2 on RSIA). The progress bar illustrates a regression between 2014-2016: based on data from 2014, with indication of 21.6 percent of poverty, which represents a 40 percent improvement against the baseline of 35.6 percent of 1998. Without special attention, the recent regression may create a risk of further slippages. See SDG profile in Chapter 2.

Box 4: Technical Note for Baseline Status (See Figure 3)

Each bar or dotted line indicates: The average progress for each goal is normalized to a scale of 0 to 10. In principle, because by 2017 starting time had elapsed, the country should already have progressed up to the midpoint. The distance from farthest left point on each bar/dotted line to the midpoint can therefore be considered “unfinished” work. For some goals (Goal 10, 11, 12, 13), there were few (or no) indicators with data available. The results significantly if more dimensions (indicators) were covered. Therefore, results should be interpreted with caution.

Dashboard of SDG Targets: Mongolia in 2030

Another useful illustration developed through the SOM is the SDG Dashboard. The dashboard results from an in-depth assessment for selected target areas across the SDGs (See in Table 1). It focuses on the pace of progress towards the SDGs and highlights target areas where Mongolia needs to maintain (green) or accelerate (yellow) progress, or entirely reverse the trends (red) in order to achieve the targets of the 2030 Agenda.

Box 5: Technical Note for Baseline Status on Progress Gaps

(See Figure 3) Each focus area above corresponds to one indicator which is classified into one of three groups, depending on the progress expected and the progress needed. This assessment is based on 62 indicators for which sufficient data were available to allow extrapolation to 2030. Note that the 62 is a subset of the 67 indicators used in the baseline status index measure, so the results of the two different measures for each goal are not comparable.

The dashboard indicates that Mongolia has been making good progress in a number of target areas under Goals 1 (no poverty); 2 (zero hunger); 3 (good health and well-being); 4 (quality education); 5 (gender equality); 7 (affordable and clean energy); 8 (decent work and economic growth); and 9 (industry, innovation and infrastructure). In order to achieve these goals by 2030, Mongolia needs to maintain its current rate of progress in some of these target areas and, at the same time, significantly enhances efforts in other target areas under these goals.

Specifically, by maintaining trends in extreme poverty eradication, Mongolia can expect to meet the 2030 targets for all people everywhere, reducing at least by half the people living in poverty in all its dimensions according to national definitions. Likewise, trends indicating attainment of the SDG targets by 2030 are evident towards ending all forms of malnutrition, reducing the maternal mortality, ending preventable deaths of new-borns and children under 5 years of age, eliminating gender disparities in education, and ensuring women's full and effective participation and equal opportunities for leadership.

In contrast, the dashboard indicates that to achieve the 2030 Agenda, Mongolia must reverse trends in several targets areas (highlighted in red colour), including: increasing expenditure on social protection, education and health; ending the epidemics of AIDS and tuberculosis; halving the number of deaths and injuries from road traffic accidents; ensuring universal access to sexual and reproductive health-care services; ensuring that all children have access to quality early childhood development, care and pre-primary education; increasing the share of renewable energy; improving resource efficiency in consumption; achieving full and productive employment and decent work for all; devising and implementing policies to

promote sustainable tourism; promoting inclusive and sustainable industrialization; retrofitting industries to make them sustainable; enhancing scientific research and upgrading the technological capabilities of industrial sectors.

The SDG Snapshot and SDG Dashboard illustrations are complementary, indicating historical progress towards, and the pace needed to achieve the 2030 Agenda. In addition, radar charts (Figure 4 and 5) were developed to further illustrate the magnitude of extra efforts required to accelerate progress (for target areas in yellow on the dashboard) or reverse the trend entirely (for target areas highlighted in red on the dashboard). The magnitude of extra efforts required represents the size of progress gaps (Figure 4) for target areas whereby the rate of progress in the past has not been sufficient (progress gaps exist) or trends need to be reversed (regression occurred). It was based on numeric estimates of the progress gap (progress gap ratio) for target areas, normalized to the scale of 100. The distance from the yellow point to the centre of the circle represents the extent of acceleration needed in the rate of progress (see graph labelled "Progress gap"). At the same time, Mongolia needs to reverse trends in eight target areas where the situation has worsened since 2000 (see graph labelled "Regression", Figure 5). The distance from the red points to the centre of the circle indicates the extent of regression since 2000.

Collectively, the analysis of data and the resulting graphs and illustrations indicate that Mongolia must accelerate progress in 20 target areas across 8 goals (Figure 4).

Figure 4: Sizing Progress Gaps: Magnitude of Extra Efforts Required Across Target Areas

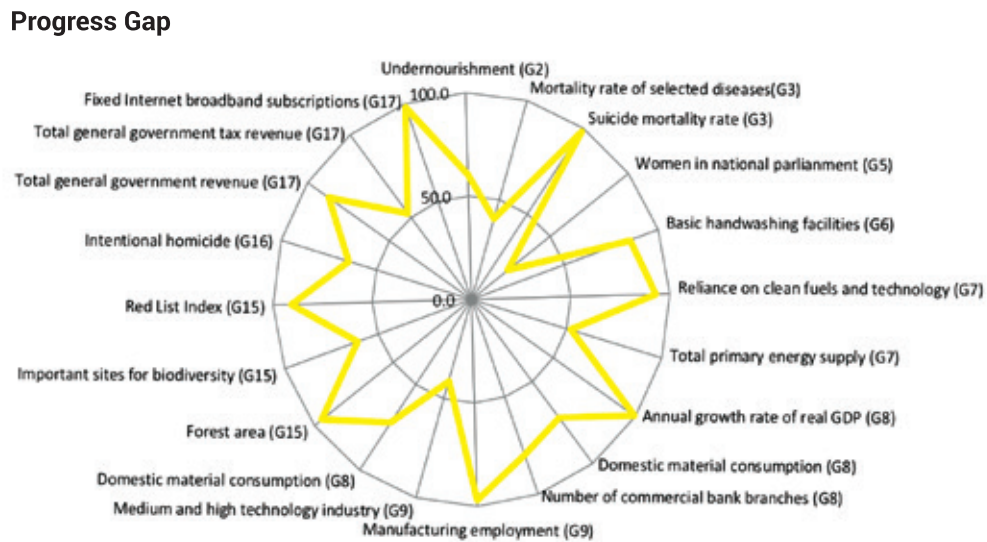


Figure 5: Sizing Regression Gaps: Magnitude of Extra Efforts Required Across Target Areas

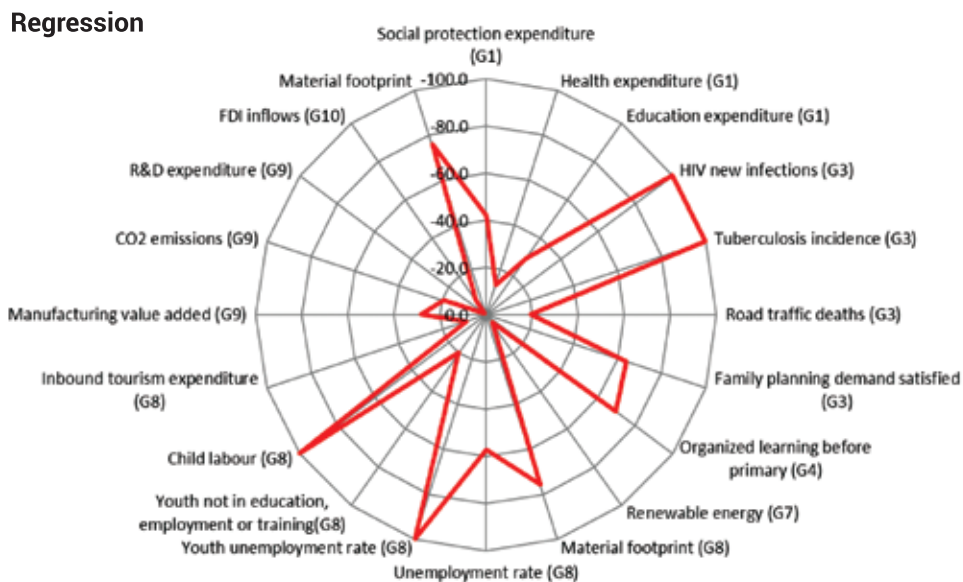


Table 1: Dashboard of SDG targets: How far will Mongolia be from achieving the SDGs?

GOAL	Target area												
GOAL 1	International poverty	National poverty	Social protection expenditure	Total people affected	Health expenditure	Education expenditure							
GOAL 2	Undernourishment	Prevalence of stunting among children under 5 years of age	Prevalence of wasting among children under 5 years of age	Prevalence of overweight among children under 5 years of age									
GOAL 3	Maternal mortality ratio	Births attended by skilled health personnel	Under-five mortality rate	Neonatal mortality rate	HIV new infections	Tuberculosis incidence	Mortality rate attributed to cardiovascular disease, cancer, diabetes or chronic respiratory disease	Suicide mortality rate	Road traffic deaths	Family planning demand satisfied	Mortality rate attributed to unintentional poisoning	Health worker density and distribution, Physician	International health regulation core capacity
GOAL 4	Organized learning before primary	Gross gender parity index for primary education	Trained teachers in primary school										
GOAL 5	Women in national parliament	Female senior national and middle management											
GOAL 6	Basic handwashing facilities												
GOAL 7	Access to electricity	Reliance on clean fuels and technology	Renewable energy	Total primary energy supply									
GOAL 8	Annual growth rate of real GDP per capita	Annual growth rate of real GDP per employed person	Material footprint per GDP	Domestic material consumption per GDP	Unemployment rate	Youth unemployment rate	Youth not in education, employment or training	Children aged 5-17 years involved in child labour	Inbound tourism expenditure	Number of commercial bank branches			
GOAL 9	Manufacturing value added	Manufacturing employment	CO2 emissions per unit of manufacturing value added	R&D expenditure	Medium and high technology industry	Internet users							
GOAL 10	FDI inflows												
GOAL 11	Total people affected												
GOAL 12	Material footprint per GDP	Domestic material consumption per GDP											
GOAL 13	Total people affected												
GOAL 14	N/A												
GOAL 15	Forest area	Important sites for biodiversity	Red List Index										
GOAL 16	Intentional homicide												
GOAL 17	Total general government revenue	Total general government tax revenue	Fixed Internet broadband subscriptions	Internet users									

● Current rate of progress needs to be **MAINTAINED** to meet the target
● Need to **ACCELERATE** the current rate of progress to meet the target
● Current trend needs to be **REVERSED** to meet the target

Box 6. Measuring the Progress towards Attainment of SDGs

Since the adoption of the global SDGs, national statistical systems (NSS) around the world have faced challenges to address increasing needs for timely and accurate statistical data that is required to measure progress towards the 2030 Agenda for Sustainable Development. In July 2017 the UN General Assembly adopted the global indicator framework to guide UN member states. This framework provides a guide, which countries can use as a basis to align proposed indicators to fit their own national needs and context.

In 2017, the United Nations Development Programme (UNDP) Mongolia, in cooperation with Mongolia's National Statistics Office (NSO), produced the "Mapping and Assessment of the Data Ecosystem in Mongolia" report, which provides information on legal, institutional and system environment for data and information creation, analysis and use. The report identified existing data gaps, and the means for data sharing, processing and analyzing among various data providers and users, and made suggestions for improving data collection, distribution, and use.

Through Mongolia's national consultation process to develop the SOM, a focus on statistical requirements for SDG data and information identified the following gaps:

- Economic data gaps: household consumption (especially energy consumption, water consumption, recycled water), industrial consumption (industrial wastes, waste volumes, types, sources, energy use/loss/re-use at household, organisation levels and transmission), social protection, descent work at household and institutions, accessibility and employment, safe food supply— e.g. wheat consumed, beverages produced, etc.
- Social data gaps: decent work, green jobs, vocational training and skilled human resources (with gender & age segregation), characteristics of pastoral community groups, membership of women in various sectors and levels, participation in tourism, household income, income sources (in particular of women), incomes from animal husbandry activities, accessibility to agricultural assets by population groups, women, productivity in agriculture sub-sectors, orphanages, single-headed households, population statistics from civil registration
- Environmental data gaps: urban waste (volume, types, sources, hazardous wastes), imported chemicals (types, users, storage places), soil pollution (polluted areas, pollution extent, pollutants), water pollution (polluted sources, water pollution degrees, pollutant types, water consumption by households (urban and rural) and entities, industrial water use, consumption types, water loss pattern), degradation rates of forests, lands, mining damages, treated and rehabilitated areas, economic values of ecosystem services.

SOM workshops suggested the following actions to support enhancement of a data plan to support monitoring progress towards the SDGs:

- Establish a mechanism for strengthening cooperation between users and producers of statistics to identify data needs for policy and planning as well as monitoring progress towards SDV and SDGs;
- Strengthen coordination among data producing agencies, including NSO, and data providers for reducing discrepancies between administrative data and official statistics released by NSO;
- Build capacity for sectoral and inter-sectoral statistics in meeting data requirements for each sector in SDV as well as SDGs;
- Identify needs for statistical capacity building and identifying the necessary resources to address the needs, and increasing professional skills of statisticians working in the line ministries and government agencies;
- Improve availability of disaggregated data at all levels;
- Develop a mechanism consistent with the UN Fundamental Principles of Official Statistics for the use of data from non-traditional sources such as earth observations, geospatial mapping, new sensors, cellphone-based data, and citizen-generated data;
- Develop water, land and biodiversity statistics accounting;
- Assess data availability and gaps in environmental statistics.

Mongolia's SDG Profiles

Mongolia's recent strategic policy documents (NGDP and SDF 2030) provide guidance for the country's planning and development efforts and define its sustainable development aspirations. Through the SOM, a systems approach applied a multi-dimensional analysis of these policy and strategy documents to relevant SDGs. Aligning the country's efforts with the goals provides an outlook on expected progress toward the 2030 Agenda. Each of the following SDG profiles in this chapter identifies Insights, Bright Spots, Hotspots, Emerging Issues & Leverage Points at the relevant goal and target level, using the following approaches:

- An Insight summarises the current situation and macro perspectives of SDV 2030 implementation (based on Environmental Performance Review, EPR 2017) as well as Mongolia's commitments to international MEAs, where relevant, in alignment with the goals and targets of the Agenda 2030 for Sustainable Development. Insights are presented as a narrative on the policy implementation status at visionary level.
- A Bright Spot illustrates a positive trend towards sustainability over a specified period of time: it provides a point of optimism, associated with obvious "drivers of positive change", including resources and capital (human, financial, environmental and social) available locally, nationally and regionally.
- A Hotspot highlights key issues, challenges and obstacles towards achieving the goals. Any issue or factor with data showing the trends in an opposite direction to sustainable development, especially for a significant period of time can be considered a 'hotspot'. Hotspots are often cross-cutting to multiple SDGs and sectors, and thus are obstacles to achievement of other SDGs.
- Emerging Issues are relatively recent issues that are more recently appearing on the radar of scientific, policy and/or the general public's attention. They signify the novelty or intensification of certain issues, with fresh understanding of their causes or consequences and/or the development of new management options, or the identification of issues that may have gone previously unrecognized.
- The policy recommendations of the identified Leverage Points consider multiple cross dimensional impacts, and are drawn from the analysis of SDG clusters and scenario planning process where relevant (See in Chapter 3). This is a first attempt to summarise the baseline policy status for Mongolia towards attainment of goals and target objectives of the SDV 2030, the NGDP, and the Agenda 2030, aligned with key MEAs.
- Systems maps illustrate the interlinkages and key leverage points identified through the multi-dimensional analysis and application of a systems thinking tool (explained in more detail in Chapter 3).

The SDG's qualitative (See Note) profiles provide overviews of the key thematic areas of Mongolia's Sustainability Outlook which came from this analysis. This methodology defined the interlinkages across SDGs and targets, and resulted in the development of the policy leverage points. In many cases, these leverage points will require integrated policies that require coordination among various ministries and stakeholders.

Note: The official statistical data reference for the insights of the SDG profiles is referenced and was sourced out from the extensive desk review process. The future new SDG qualitative profiles should be relying on the expanded table of the indicators of SDG statistical data, that could be built up on the available indicators set, see Tables in Annex 3



END POVERTY IN ALL ITS FORMS EVERYWHERE



Insights

The Sustainable Development Vision 2030 of Mongolia (SDV 2030) seeks to end all forms of poverty by 2030, which aligns directly with SDG 1. The national “Green Development Policy” (NGDP) aims to tackle the poverty through the promotion of green jobs, green technology, and overall green economic development. Mongolia’s poverty rate fell from 38.7 percent in 2010 to 27.4 percent in 2012 and 21.6 percent in 2014, but then increased to 29.6 percent in 2016.¹⁸ The NGDP seeks to reduce the poverty rate to 18 percent by 2020, while the SDV 2030 sets a far more ambitious target of zero by 2030. To align with the SDG target (SDG 1.2) to reduce poverty by half by 2030, according to national definitions, Mongolia would need to reduce poverty to 15 percent.

Bright Spots



- The share of working-age population (15-64 years) is approximately 66 percent in 2016¹⁹, which presents an opportunity to expand the economy and increase economic productivity and growth by increasing employment and household income levels.
- Rural financial services are increasing and the shares of herder households with electricity and who own their own vehicles, motorcycles and major appliances, including mobile phones, TV-sets, satellite dishes, are much greater than ever before.²⁰
- Mongolia’s legislation enables access to public land for grazing and land ownership in urban areas, two measures that are fundamental to economic development and food security to the population, especially for those at the lower economic strata. About four people out of 10 have livestock. All Mongolians, after reaching the age of 18 and above, are entitled to possess and use land equal to 700 square meters.

Hotspots



- The lack of quality education and skills training opportunities in rural areas means that migrants face challenges in the formal job sector. For the same reason, herders lack opportunities for improving livestock production and resource management practices, and herder families have substantial burdens to educate their children, resulting in continuous, multi-dimensional poverty.²¹
- Employment facilitation policies do not address existing mismatch between supply of skilled labor force and demand from employers. Similarly, trained people from vulnerable groups have many challenges to obtain jobs.
- Government regional development policy is weak in provision of adequate social services including quality of education and employment in rural areas, and this situation contributes to increasing rural poverty and migration to urban areas.

Emerging Issues

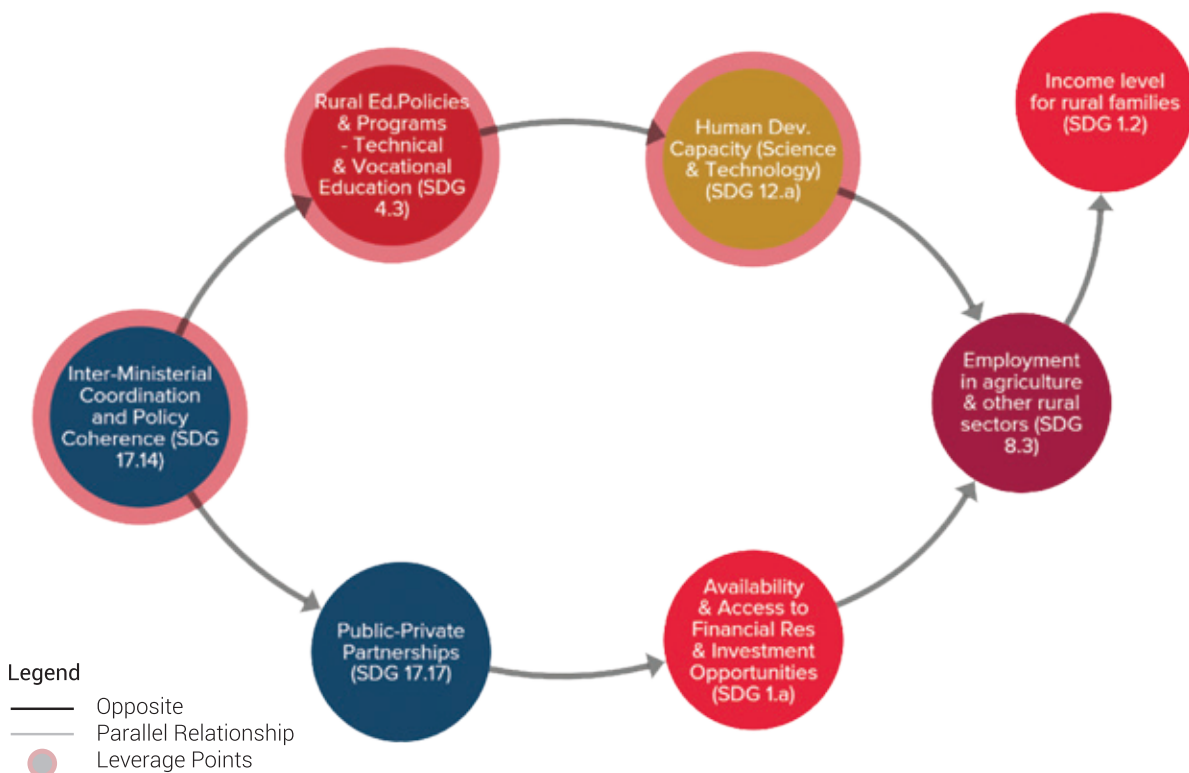
- Poor households significantly affected by the prolonged economic slowdown are coping by reducing food consumption and quality, limiting their family health expenditures, increasing household debt and absorbing the impacts of delayed wages and reduced employment opportunities. These trends and conditions could possibly lead to a perfect storm of entrenched and increasing poverty and inequality if not addressed.
- A majority of migrants with limited skills and experience to offer in the urban labor market face difficulties in securing employment and livelihood. Many of them, especially children, are not registered and they have limited access to the government services.

Recommendation for leverage points (LP) of multiple impacts

- *Rural Education Policy (See Figure 6 with example of LP):* Mongolia needs rural education reform to remove existing burdens to herder households for their children's education, including open access to vocational and skills training opportunities for rural youth and adults through technology-intensive distance and mobile training approaches.
- *Employment Facilitation:* Policies should require forecasting future job demands, adjustment of training curricula to match labor demand, introduce mandatory employment quota for disabled and vulnerable group members in enterprises as part of corporate social responsibilities, and provide incentives for rural education institutions. This policy leverage point could be accelerated through stronger coordination between ministries, cross-sectoral cooperation in planning and implementation of policies, linked to SDG 17.17, 17.8 targets.
- *Economic Diversification:* Regional development programs should focus on creating a more diverse and resilient rural economy through investment in human capital, physical infrastructure, and technology & innovation for development of entrepreneurship, which can steadily generate jobs and opportunities to tackle poverty as well as meet the hopes and aspirations of Mongolians. In this regard, the SDG 8.2 is one of the most impactful leverage point to achieve SDG 1.

Figure 6 below illustrates two examples of Leverage Points (SDG targets 4.3 and 12.a, correlated with the recommended list of LPs of SDG 6 profile above) and their linkages with relevant SDG targets. In this example, the influence of the SDG targets on *human development capacity in science and technology* and *rural education policies and programmes on technical and vocational education*, as LPs, links to SDG targets 17.14, SDG 17.17, and collectively contributes to multiple impacts and the attainment of SDG 1.2. "Household income for rural families" was identified as a measure of achieving SDG 1.2 by the SOM consultation process in Mongolia in 2017. Further reference is provided in Chapter 3, Figure 25 (*Land Management System Map: Agriculture*).

Figure 6: Example of Leverage Point on Rural Education Policy - SDG target 4.3.





END HUNGER, ACHIEVE FOOD SECURITY AND IMPROVED NUTRITION AND PROMOTE SUSTAINED AGRICULTURE

Insights

The national social development goals reflected in the SDV 2030 are being monitored through a set of NGDP indicators, and are consistent with the objectives of SDG 2. The transition from a centrally planned economy to a market economy, coupled with rapid urbanization, globalization of markets, and a shift in food industry marketing contributed to changing patterns and style of food consumption of Mongolians. The diet has been largely westernized, though still primarily includes meat and meat products, milk and dairy products and flour. Mongolia has joined a number of international conventions to promote sustainable agriculture, including "Basel Convention on the Control of Trans-boundary Movement of Hazardous Wastes", "Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade" and "Stockholm Convention on Persistent Organic Pollutants".

Bright Spots



- Mongolia achieved a significant reduction in malnutrition in the total population and with the population of children under 5 years old. For example, undernourishment in the total population decreased from 31,0 percent in 2004-2006 to 19,6 percent in 2014-16, prevalence of stunting in children under 5 decreased from 27.5 (2005) to 10.8 percent (2016), reflecting progress on targets SDG 2.2 to end all forms of malnutrition and stunting in children under 5 years of age²²
- In 2016, Mongolia produced nearly all of the food for its own annual national food consumption: 99 percent of meat and meat products consumed are produced domestically, 82 percent for flour and flour products, 100 percent for potatoes and 63 percent for other vegetables.²³

Hotspots



- The Poverty Profile 2016 reported that 30 out of every 100 Mongolians cannot afford to buy essential food items. In rural areas, about 35 people out of every 100 people are unable to afford basic food items.²⁴
- Mongolia's food safety is threatened by weak inspection and control over the use of veterinary drugs, imports of chemicals and substances applied in agricultural and food industries, and sanitation procedures in transportation and storage of food.
- There is a lack of reliable information on the number and condition of unregistered urban poor who have little access to daily food and shelter, or who live in shelters in a deplorable condition, particularly in large cities like Ulaanbaatar.
- Increasing incidences of corruption in customs and professional inspection organizations in relation to imports of food, along with the increasing use of chemical substances and mining operations, makes the country more vulnerable to food insecurity in the future.

Emerging Issues



- Small businesses and travellers import a significant quantity of food and related stuff, which contributes to the diversity of national food supply. However, this creates difficulties for monitoring of quality and safety of these imported goods.²⁵
- Expansion of large-scale crop farms supported by the government programmes made a substantial contribution to the increase in domestic supply of wheat, potatoes and other vegetables, at the same

time food security of local pastoral households with subsistence livestock herding has seen a steady decline in volumes of supply due to degradation and decrease of grazing land access and availability.

Recommendation for leverage points of multiple impacts

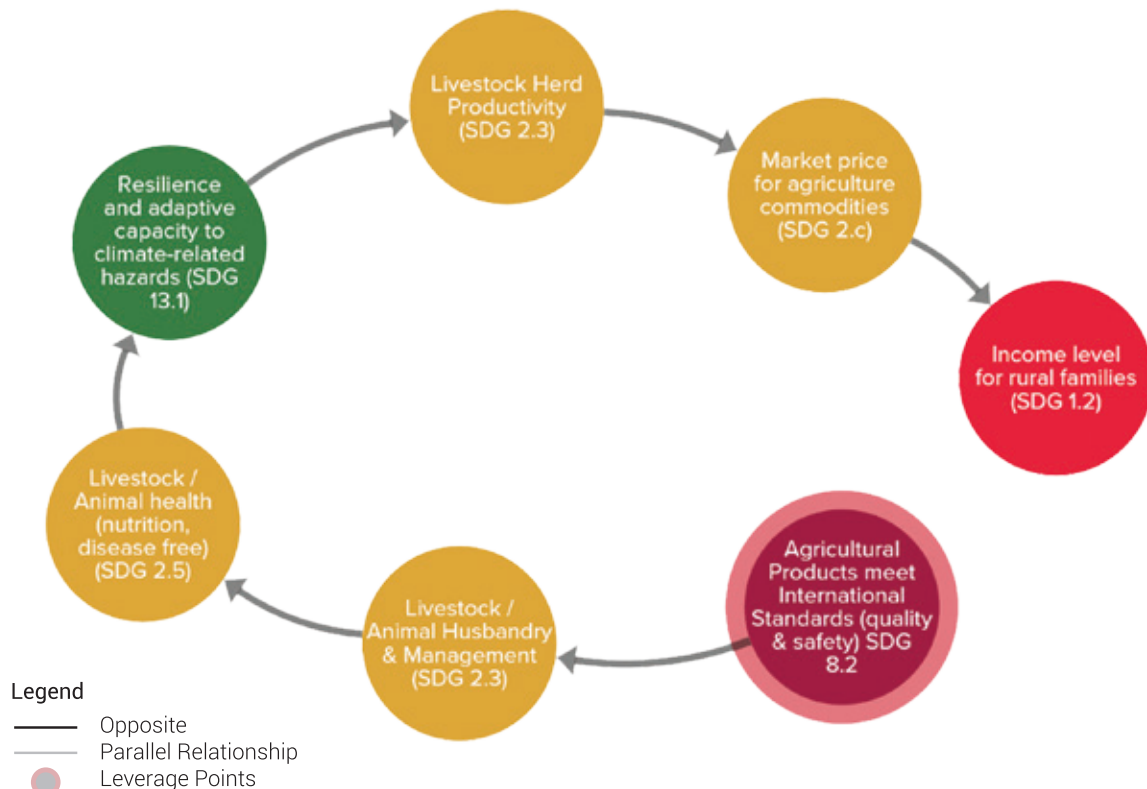
Food Security Programme: It is necessary to formulate and implement the next phase of the National Food Security Program to particularly highlight the protection of customary rights of rural herders to grazing lands, as advised by the World Food Organization, to ensure food security for all Mongolians. The same programme should target and put special focus on the economic productivity and improvement in the inspection system for food imports, agriculture, transportation, and sanitation & hygiene. The policies to ensure attainment of SDG 1, 8.2 (See Figure 7 with example of the leverage point) would be most impactful.

Increasing resilience of food production system: The National Livestock and Agriculture Program should emphasize the development of a risk-management strategy for the livestock sector to secure national food production including a network of forage production farms and irrigation systems for crop production and rural financing programme for technological modernization.

Supporting vulnerable groups: The Government needs to develop a reliable database of information on urban poor, linking the policy to SDG 11.4, and to put special attention towards unregistered individuals. The social protection system and programmes needs to be improved so, as to reach more poor and disadvantaged families and citizens through a food and clothing sharing system distributed among citizens and food & sales entities.

Figure 7 illustrates one of the Leverage Points (SDG 8.2) and its linkages with relevant SDG targets. In this example, the influence of SDG 8.2 on agricultural product management links to SDG target 13.1, and collectively contribute to multiple impacts and the attainment of SDG 2. "Livestock productivity" and "market price for agriculture commodities" were identified as measures to achieve respective SDG targets 2.3 and 2.c by the SOM development consultation process in Mongolia in 2017. Further reference is provided in Chapter 3, Figure 25 (*Land Management System Map: Agriculture*).

Figure 7: Example of Leverage Point on Agricultural Products to Meet International Standards – SDG target 8.2.





ENSURE HEALTHY LIVES AND PROMOTE WELLBEING FOR ALL AT ALL AGES

Insights

The health and well-being goals and targets of the SDV 2030 are correlated with most of the targets of the SDG 3. The vision in the SDV 2030 is to have an effective, high quality and accessible health care system and increase the life expectancy of the population to 78 years²⁶. As of 2016, the population of Mongolia has increased up to 3.1 million people, of which 68.9 percent live in urban areas²⁷. Life expectancy at birth for the adult population is 69.6 years, with female life expectancy reaching 75.1 years and 65.6 years for males.²⁸

Significant progress has been made during the last decade in key indicators which align specifically with SDG 3. Notably, there has been a decline in under-five mortality from 87.5 in 1990 to 20.8 in 2016, realizing SDG target 3.2, which states that by 2030, under-five mortality should fall as low as 25 per 1,000 births. Infant mortality rates declined as well from 63.4 in 1990 to 16.8 per 1,000 live births in 2016, approaching SDG target 3.2, which is 12 per 1,000 live births.²⁹

Nevertheless, progress is not equal across the country. The under-five mortality rate was higher in 6 aimags, and the infant mortality rate higher in 7 aimags than the national average mortality rates.³⁰ The main causes for this trend found in certain aimags can be attributed to several factors, including inadequate health facilities, a shortage of medical professionals, as well as under-developed health care infrastructure coupled with increasing neonatal disorders, measles, respiratory diseases, and child injuries.³¹

Bright Spots



- In 2015, Mongolia succeeded in being one of nine countries globally that successfully met its target to reduce maternal mortality by two-thirds (66 percent), which is being monitored by SDG 3.1 as well.³²
- With financial support from Japan, Mongolia is establishing its first university-affiliated hospital in Ulaanbaatar in the early 2018. The teaching hospital is affiliated with Mongolian National University Medical Sciences and aims to significantly improve post-graduate training for health care professionals and the overall quality of medical services provided in the country.

Hotspots



- Non-communicable diseases are increasing. One out of three deaths is now due to cardiovascular diseases, one in five deaths - due to cancer, and one in six people died due to injuries, poisoning, and external causes.³³
- There is also a rapid increase in diabetes and infectious diseases such as tuberculosis and sexually transmitted diseases, with the majority of cases of maternal mortality caused by one these diseases.
- The SDG Target 3.7 seeks to ensure universal access to sexual and reproductive health-care services, including for family planning, information and education, and the integration of reproductive health into national strategies and programmes. Current patterns in Mongolia illustrate that teenage pregnancy has been rising since 2006, with data showing that there are now around 29 teenage births per 1000 women ages 15 – 19 years (2013).³⁴ This situation is a major health risk to both mother and child. The key factor contributing to the high rate of teenage pregnancy is considered to be the lack of sexual and reproductive health education. In addition, poverty, unhealthy lifestyle and insufficient parental monitoring are also responsible for early pregnancy.³⁵

- Cases of drug and substance abuse among adolescents have also been on the increase, with alarming reports in the media linked to drug and alcohol-dependent consumption and crimes such as rape, perpetrated by teenagers under the influence of drugs and alcohol. Special measures could be undertaken to address SDG3.5 (strengthening preventions against substance abuse) and its target indicators.

Emerging Issues 

Many rural inhabitants migrate to cities in search of job opportunities and better access to social services, and most of them cannot afford to live in apartments, thus ending up in urban ger districts. As a consequence of the unplanned expansion of ger districts in Ulaanbaatar, there has been an increase of air, soil, and water pollution, which contributes to the deterioration of the health among urban population, especially, among children and infants.

Recommendation for leverage points (LP) of multiple impacts

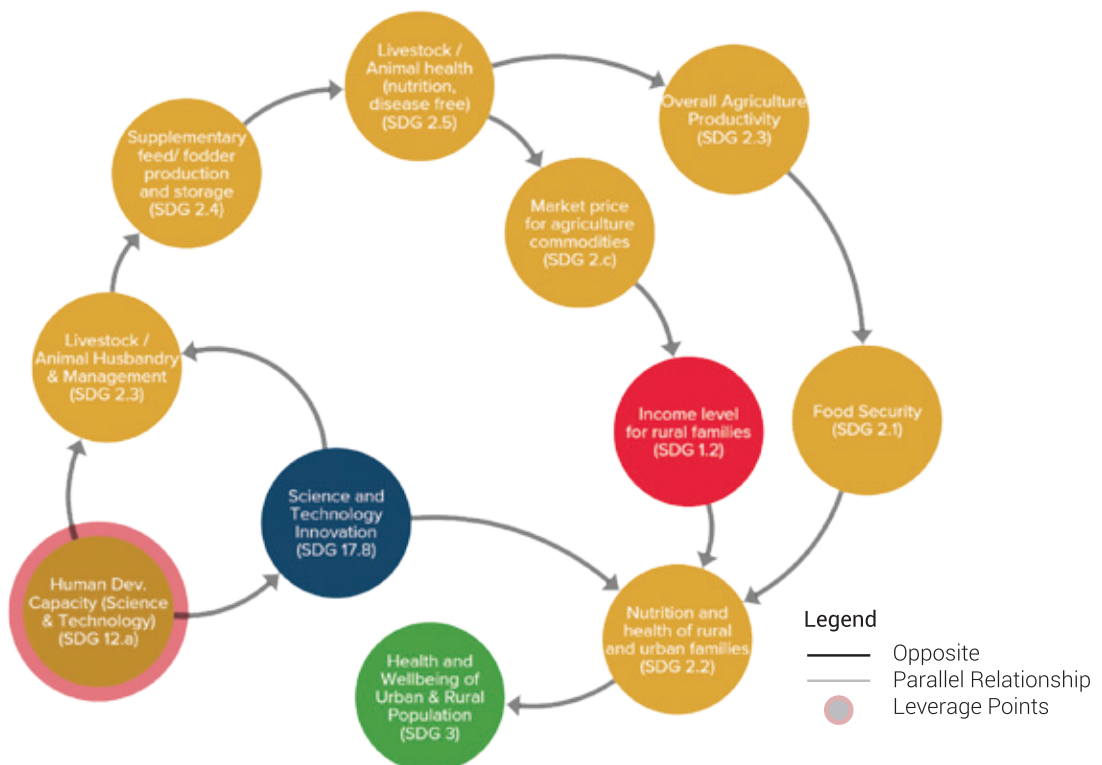
Policy Enforcement and Accountability: The government must enhance financial and human resources in the health sector along with raising the sense of accountability at all levels, putting special focus on anti-corruption measures and partnership with key stakeholders in enforcement and monitoring of government policies (through monitoring SDG 17.14). The essential first step is to separate businesses of private health establishments from large state clinics that share the same medical professionals working for both entities.

Health Research and Development: The government should introduce new technologies, and provide access to affordable basic medicines and vaccines, as per the Doha Declaration, affirming the right of Mongolia to use the full provisions of the agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), namely in protecting public health, and in particular, enabling access to medicines by all citizens.

Health Education: Education is an important leverage point (see Figure 8 with an example of SDG 3 LP) for improving reproductive health education among the adolescents, thus stimulating behavioral norms for a healthy lifestyle and increasing health services at schools or college campuses.

Figure 8 below illustrates an example of a Leverage Point for SDG 3 (*LP SDG 12.a - human development capacity in science and technology*), as it supports one leverage point for SDG 3 (*health and education*), and linking with other relevant SDG targets. In this example, the influence of SDG 12.a, besides linking to a large number of SDG 2 targets, also links to SDG 17.8 (*science and technology bank*), and together, they collectively contribute to multiple impacts and attainment of the SDG 3 (*health and wellbeing of rural and urban population*). Further reference is provided in Chapter 3, Figure 25 (*Land Management Systems Map*).

Figure 8: Example of Leverage Point on Inter-Ministerial Coordination and Policy Coherence -SDG 17.14





ENSURE INCLUSIVE AND EQUITABLE QUALITY EDUCATION AND PROMOTE LIFELONG LEARNING OPPORTUNITIES FOR ALL

Insights

The objectives of the SDV 2030 to build a knowledge based society and a skillful Mongolian population. The education requirements in the country are consistent with SDG 4 to ensure inclusive and equitable quality education. Education policy requires that civil and lifelong education system must be open, accessible and of high quality. However, the quality of education, and of facilities, lags in some areas, while the skills in demand from employers are lacking in many graduates from the system.

Mongolia's population is predominantly young, with 30 percent of the population under the age of 15 and about 13 percent under 5 years of age (2016)³⁶. Therefore, quality education is critically important for preparing the young generation for future work and a prosperous and satisfying life. By law, education is free for all regardless of their race, ethnicity, nationality, sex, religion, social status and the income level. Compulsory education includes nine-years of primary and secondary school. Nearly 60 percent of school children live in Ulaanbaatar and 40 percent live in rural areas³⁷. Schools in rural districts (soums) have dormitories for herders' children but often have insufficient capacity to accommodate all children from districts. In the 2016/2017 school year, the attendance rate in public and private kindergarten was 80.9 percent, although 19 percent of children were not able to receive pre-school education, which indicates a significant gap from the SDG target 4.2 which states that by 2030, all children should have access to pre-primary education.³⁸ There is a little difference between the school enrollment ratios for girls and boys. Further, the gap in access to secondary education that exists between urban and rural areas has almost ceased. In 2016, the share of the state budget earmarked for education was 8.2 percent, which was 4.4 percent of GDP.³⁹

Bright Spots



- High adult literacy rate of over 98 percent among the population 15 years old and above is a significant advantage in preparing people, at all ages, to respect human rights, gender equality and educate them towards sustainable future.



- The country has a well-developed institutional system for training/retraining teachers. Every teacher has an opportunity to systematically improve their professional capabilities.

Hotspots



- The quality of the education and training systems, including facilities, are lagging behind expectations. As a result, most graduates lack skills that are in demand by employers.



- The kindergarten and schools are overloaded, with an absence of adequate facilities and teaching personnel. Many teachers work beyond their specialized capacities and are using overtime, as they have large classes, yet receive little compensation. This reduces the quality of education, as well as creates health risks for both students and teachers.

- The Mongolian education system serves one-third of the nomadic herder population of the country who practice seasonal mobility and safeguard the cultural heritage of Mongols. At the same time the education system lacks an adequate platform tailored to the needs of rural herders and their children. The current centralized education system puts substantial financial burdens on herder families, while encouraging the widening disconnect of youth from their traditional pastoral culture.

Emerging Issues



- Information technology and communication appliances usage, including TV sets, cell phones, tablets, and the Internet (ICT) became an everyday necessity for both urban and rural Mongolians. However, the formal education system is not ready to effectively utilize this technology trend, as there is yet no appropriate and systemic training program or related materials focused on distance learning using various types of media and communication devices.

- Private training establishments have increased in numbers over the last two decades, delivering better quality education, although with significantly higher tuitions that only a few can afford. Unless the education quality in public schools improves, there could be a severe gap in access to quality education, which would exacerbate the existing income inequality among Mongolians.



Recommendation for leverage points of multiple impacts



The education sector must respond effectively to the growing demand for lifelong education and career development, especially for young people. Attaining SDG 4 (See Figure 9 with examples of SDG 4 LPs) would also be impacting achievement of targets of SDG 11,12, 17.17, etc.



Education Reform: Mongolia needs an education reform which targets substantial quality improvement in public schools, accompanied by the development of demand-based curricula in vocational and tertiary schools, and establishment of an ICT education delivery platform for herders and their children that does not disrupt their nomadic way of life.

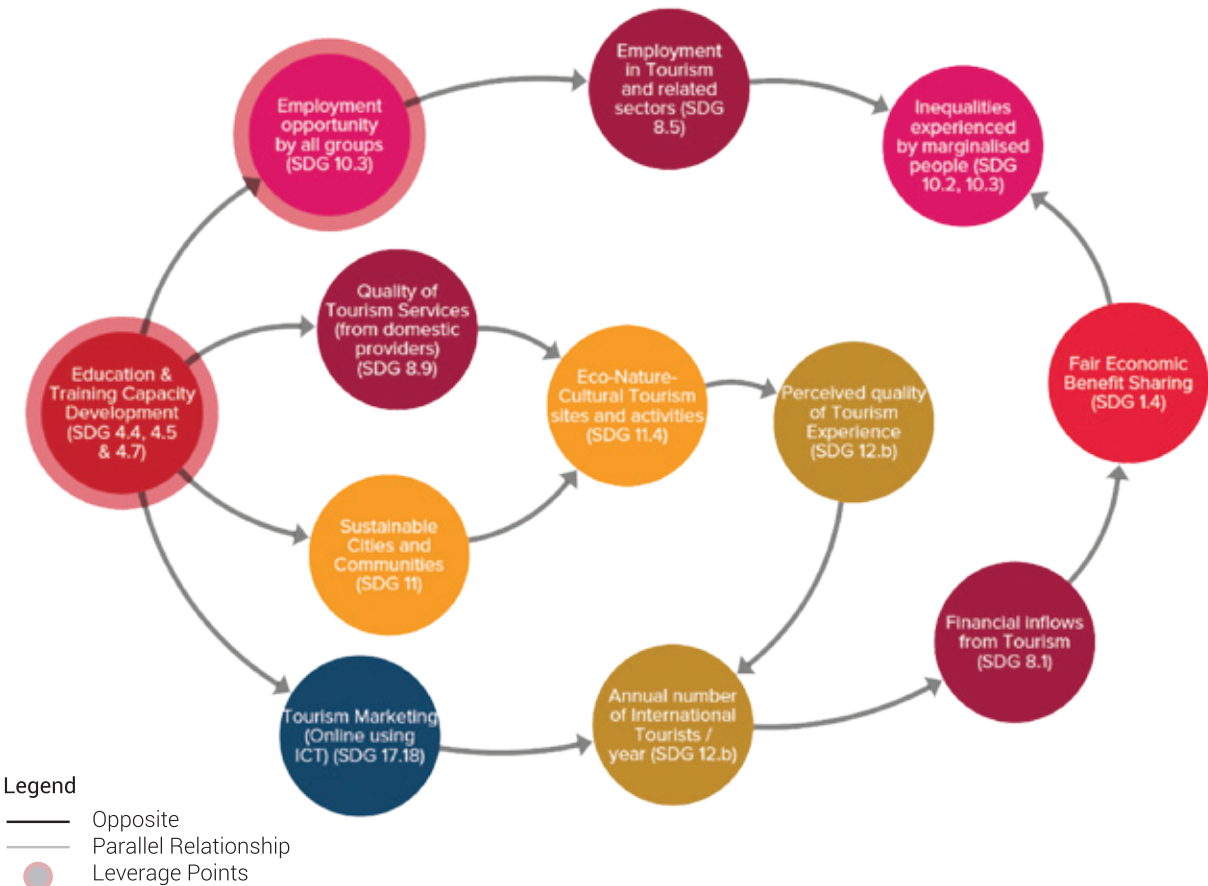


Improve Educational Facilities: Based on the lessons from the shortage of preschool education institutions for 3-5 year-olds, the government should take proactive actions to meet their future demands for primary and secondary education that forecast and plans the expected demographic window the country will have in the next 15-20 years. In meeting this demand, there should be a well-designed resource mobilization and investment plan along with serious anti-corruption program in the education sector.



Figure 9 below illustrates an example of the Leverage Point (SDG 10.3, correlated with recommended LPs of SDG 4 profile above) and its linkages with relevant SDG targets. In this example the influence of the SDG 10.3 target on "employment opportunity by all groups" is linked to SDG targets 8.5, 10.2, etc. "Human capacity development, education and training" was identified as a measure of achieving respective SDG targets 4.4, 4.5, 4.7 by the SOM consultation process in Mongolia in 2017. Further reference is provided in Chapter 3, Figure 29 (Sustainable Tourism System's Map).

Figure 9: Example of Leverage Points on Employment Opportunities by All Groups – SDG 10.3.





ACHIEVE GENDER EQUALITY AND EMPOWER ALL WOMEN AND GIRLS

Insights



The SDV 2030 calls for gender equality in social development, and for creating a pleasant environment for equal participation in social welfare, which is fully in line with the SDG 5. The Constitution of Mongolia ensures that all citizens of Mongolia - men and women - are entitled to equal political, social, economic and cultural participation, as well as having equal roles in the family. In 2016, women comprised 50.8 percent of Mongolia's population. Women in Mongolia are highly educated, but only 50 percent are employed, which is less than the 59.5 percent of employed men.⁴⁰ Professionally, women primarily occupy employed positions within the education, health, trade and service sector. At present, 17 percent of parliamentarians are women, and there is an increasingly upward trend in women filling middle-level managerial positions within the Government.⁴¹ *The National Program for Maternal, Child and Reproductive Health for 2017 – 2021* promotes reproductive rights and strengthens reproductive health services, aligning with SDG target 5.6 to ensure universal access to sexual and reproductive health and rights.

According to the *Global Gender Gap Report 2017*, Mongolia ranked 53rd out of 144 countries on its progress towards gender parity. Mongolia received high scores on education attainment (0.99), health and survival (0.98), and economic participation and opportunity (0.78), but a much lower score in the area of political empowerment (0.10).⁴²

Bright Spots

The Law on Gender Equality (2011) made a significant legal improvement for promoting gender equality and supporting women's advancement. It specified regulatory provisions for gender equality in all areas of social and economic spheres, along with providing guidance measures to maintain gender equality and framing the responsibilities of all public and private sector institutions.

Hotspots

- There is an increasingly upward trend in domestic violence, sexual assault and human trafficking, which is a worrisome issue for women and girls in Mongolia.
- In 2017, Police received 783 calls related to attend to domestic violence and sexual assaults, recorded 289 cases of rape, where predominantly young girls were the victims.⁴³
- Although *the Law on Domestic Violence* was revised in 2016, its enforcement has been inadequate up to present time.

Emerging Issues

- There is an increasing need for gender-disaggregated data at both the national and subnational levels, as well as by all sectors for monitoring the SDGs. Although NSO collects various gender-disaggregated data, the use of them for policy and planning is not adequate.
- There is a growing trend in families where women are becoming the main breadwinner while men are more and more assuming the roles of child care and other household chores. This is happening due to the higher education and professional skills of women now in society.

Recommendation for Leverage Points (LP) of Multiple Impacts

Raising awareness and education: Achieving SDG 12.a (strengthen scientific and technological capacity to move towards more sustainable patterns of consumption and production) through extensive education and awareness raising work across all levels of society (individuals, households, and organizations), in order to cultivate appropriate behavioral norms and attitudes that show respect for women and girls among men of all ages.

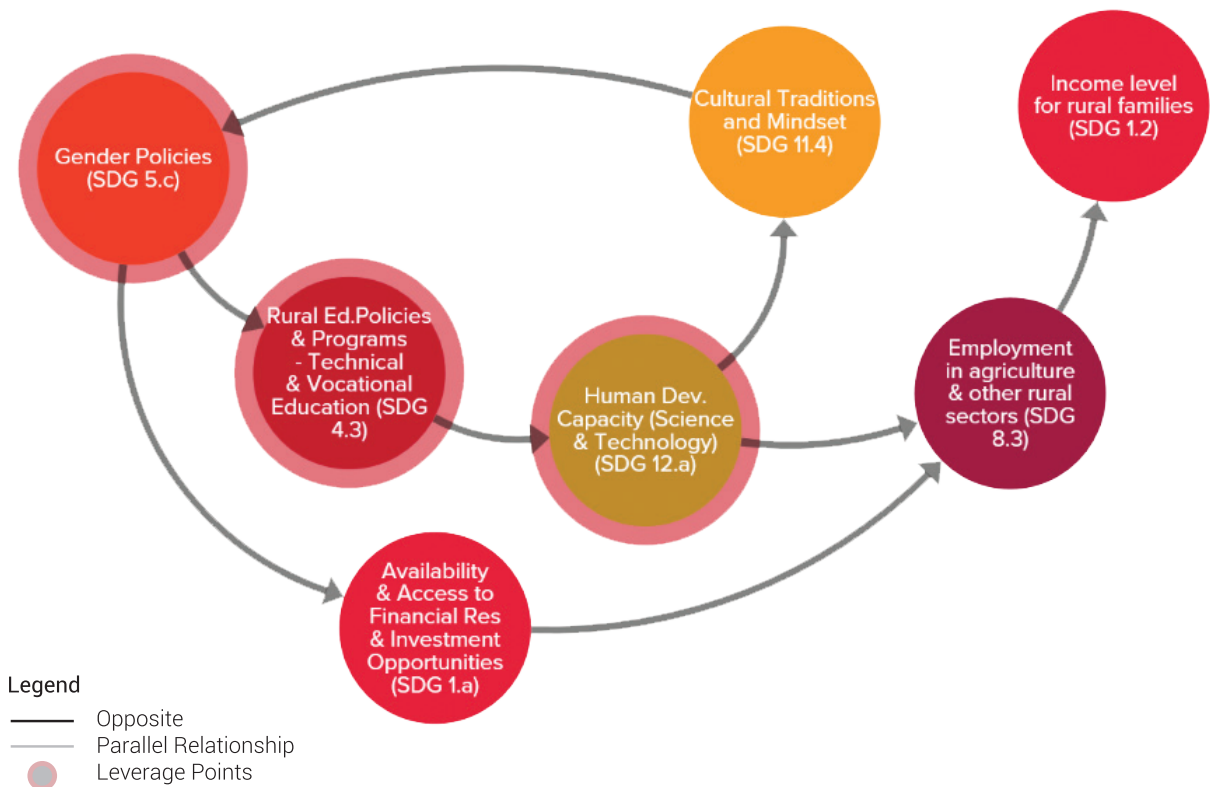


Policy Enforcement: Mongolia's policy enforcement is aligned with several international commitments on gender equality. However, the actual implementation of these agreements was unsatisfactory. There is a strong need for substantial improvement in professional legal support for social workers and gender focal points within government and non-governmental organisations, and within local communities, contributing to SDG 17.14. (See Figure 10 indicating examples of LPs)

Gender-disaggregated data and use: The statistical system should incorporate needs for gender-disaggregation of existing and new data sources together with clearly identifying the institutions responsible for data collection, analysis, and use so as to ensure adequate quality, comparability, timeliness of gender data necessary for monitoring the progress of relevant SDGs and specific to Mongolia targets of SDG 5.

Figure 10 below illustrates an example of Leverage Point (SDG 4.3, correlated to one of the LPs for SDG 5 profile above) and its linkages with other SDG targets. In this example, the influence of "rural education, policies and programmes through technical and vocational education" links to other SDG targets (such as SDG12.a, 1.a, 8.3, 1.2 and SDG 11.4) and collectively they contribute to attainment of SDG 5.c. "Gender policies" was identified as a measure of achieving respective SDG target 5.c by the SOM consultation process in Mongolia in 2017. Further reference is provided in Chapter 3 and Figure 25 (*Land Management System Map : Agriculture*).

Figure 10: Example of Leverage Points on Gender Policies, Rural Education policies and Programmes; Technical and Vocational Education; Human Capacity Development in Science and Technology - SDG targets 5.c, 4.3 and 12.a.





ENSURE AVAILABILITY AND SUSTAINABLE MANAGEMENT OF WATER AND SANITATION FOR ALL

Insights

Mongolia has identified objectives within its SDV 2030 to protect water resources and increase water supplies that meet health and sanitation standards. However, while the SDG targets universal access to safe drinking water for all, Mongolia's SDV 2030 seeks to ensure that 90 percent of the population is supplied with safe drinking water by 2030. This gap is an indication of the magnitude of the infrastructure needed to develop water resources to serve all areas of the country. Mongolia has identified the need to develop complex water projects, such as creation of two national level large water tanks (reservoirs) to collect water from precipitation and surface flows. Further, preservation from large rivers to reserve surface water flow, is now securing 60 percent of water resources under special protection. This has direct implications for domestic water utilization, as these protected resources would directly supply the targeted 90 percent of the population (SDV 2030) with safe drinking water, and the targeted 60 percent of the population (SDV 2030) with improved sanitation and hygiene facilities.⁴⁴

Water management in Mongolia falls under the mandates of many different organizations and institutions at central and local levels. In the absence of adequate coordination, this management arrangement results in policy incoherence and insufficient institutional performance in water resource sector. Enforcement of water regulations has been weak due to financial and human resource constraints and overlapping mandates.

Two MEAs, namely the Aichi Biodiversity Targets of the CBD and Ramsar Convention are linked to the protection of water resources. The Tuul river basin constitutes 3.2 percent of Mongolia's territory and almost solely supplies the total water consumption for the capital city of Ulaanbaatar, where 46.2 percent of the total country's population resides and about 60 percent of GDP is produced (2016)⁴⁵. However, the river is severely polluted due to untreated wastewater from the Central Wastewater treatment facility, as well as several skin and wool processing factories that are located within the Ulaanbaatar municipality. Another major threat to Tuul River is the gravel mining in the Tuul river basin.

Bright Spots



- *The Water Law of Mongolia (2012)* presents an umbrella law for water resource regulations and operation of the institutional system in the water sector. It provides for the classification of water resources and establishes responsibilities for the rational water management and procedures for issuing permits for water use. It also regulates the relations of water use and exploitation.
- The Government approved the *National Integrated Water Resource Management (IWRM) Plan* in 2013, contributing directly to SDG target 6.5. calling for such management approaches. From 21 River Basin Management Administration Offices that cover 29 river basins, 17 offices implement approved IWRM plans, and six offices are currently in the process of preparing their IWRM plans.⁴⁶
- In Mongolia mining activities were prohibited in head waters areas of rivers and water reservoirs, which has a direct link to achieving SDG 6.6 and an indirect contribution to SDG 6.3, which seeks to improve water quality by reducing pollution in waters.

Hotspots



- About 13 percent of the urban population and about 56 percent of the rural population have no access to safe drinking water. Insufficient access to safe drinking water has a direct negative impact on population health.⁴⁷



- Wastewater treatment facilities in the capital city, and in most provincial centers, are outdated and use older technologies, thus failing to adequately treat wastewater to the standard level required. Therefore, untreated or inadequately treated wastewater is released to naturally occurring water

sources such as Tuul river, causing environmental pollution, and health hazards to human and animals.

Emerging Issues



- The Government has made significant investments in the water supply and sanitation infrastructure through donor-funded projects in cooperation with international partners. Nevertheless, the Government is still struggling to address the rapid increase in demand for water and sanitation facilities due to urban population growth.
- Currently, there is no reuse or recycling of treated wastewater. Government policies promote reuse of wastewater, but due to the current water pricing system, the cost of reusing treated water is higher than using clean water. This discourages entities to introduce reuse technologies and practices.
- With the fast growth of the urban population, the volume of wastewater has also increased. This has resulted in increasing surface water contamination, which overstresses the current capacity of the water treatment facilities.



Recommendations for Leverage Points of Multiple Impacts



Integrated Water Management Strategy (SDG 6.5): The Government needs to develop and implement medium and long-term inter-sectoral strategies for Water Supply, the Sanitation Sector (SDG 6.1, 6.2, 6.3) and the Economic Service Enterprises Sector.

Inter-ministerial Coordination (See Figure 11 with LP on SDG 17.4): It is necessary to revise the legal provisions related to water resource management and improve coordination, restructure institutions accordingly, and enhance public-private partnerships.



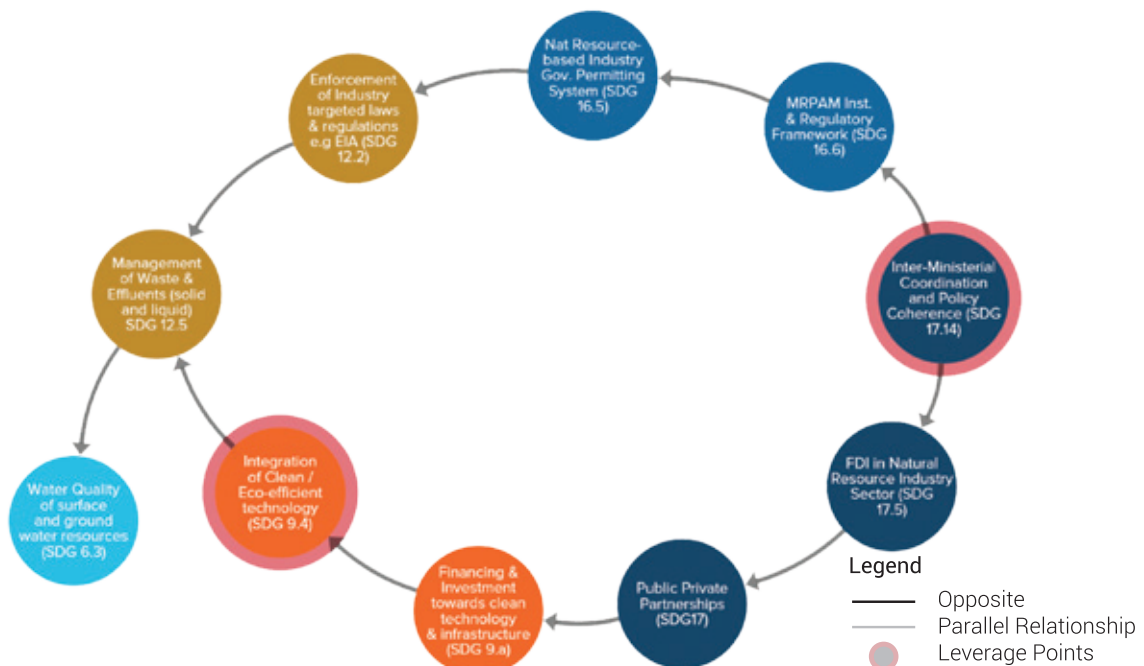
Eco-efficiency via Technology & Infrastructure Investment (See Figure 11 with LPs, SDG 9.4 impacting SDG 6): There should be a creative mechanism for improving the economic efficiency of water supply as well as water treatment facilities with the application of innovative and advanced technologies to enhance water reuse and recycling practices.



Figure 11 below illustrates an example of the Leverage Points (SDG 17.14 and 9.4, correlated with the recommended list of LPs of the SDG 6 profile above) and other listed in the diagram SDG targets. In this example, the influence of SDG 17.14 on *inter-ministerial coordination and policy coherence* and *integration of clean/eco-efficient technology* of SDG 9.4 link to SDG targets (namely, 15.6, 16.5, 12.2. and 17.5, 17, 9.a, 9.4 and SDG 12.5), which collectively contribute to multiple impacts and the attainment of SDG 6.3. "Water quality of water resources (surface and ground water)" was identified as a measure of achieving particular SDG 6.3 by the SOM development consultation process in Mongolia in 2017. Further reference is provided in Chapter 3, Figure 27 (Nature Based Industry System Map).



Figure 11: Example of Leverage Points on Integration of Clean Eco-Efficient Technology and Inter-Ministerial Coordination and Policy Coherence - SDG targets 9.4 and 17.14.





ENSURE ACCESS TO AFFORDABLE, RELIABLE, SUSTAINABLE AND MODERN ENERGY FOR ALL

Insights

The SDV 2030 recommends an increase in the share of renewable energy in the total energy mix to 20 percent by 2020 and to 30 percent by 2030, and to seek new sources of energy, which directly links to SDG7. The SDV 2030 calls to initiate the preparation of a nuclear power plant and to start using energy from this new plant by 2030. This would ensure reliable access to energy by all, reaching 100 percent households access to reliable electricity by 2030, as compared to 89 percent in 2014⁴⁸

About 98 percent of the energy sector is state-owned; only a few renewable energy sources (primarily wind) exist that are privately owned. According to the Government, the supply side situation is alarming as the aging combined heat and power plants from the socialist era struggle to meet the rapidly increasing demand for electricity and heat. Most of aimag and soum centers possess inadequate energy infrastructure and lack proper heating systems.⁴⁹

According to the NGDP and the SDV, Mongolia will reduce GHG emissions in the energy sector by 20 percent in 2030. The country has ratified 14 MEAs and has aligned its medium and long term development strategies with the UNFCCC and the Paris Climate Agreement. The Government of Mongolia is committed to reduce GHG emissions by 14 percent by 2030.^{50,51}

Bright Spots



- *The National Renewable Energy Program (2005) and the Renewable Energy Law (2007) both promote the use of renewable energy in Mongolia, contributing to SDG targets of 7.1-3. For example, through the Government's "100,000 solar homes" programme, 1999-2010, many households (mainly in rural and remote areas) now utilise solar panels and storage batteries as their primary source of electricity.*
- Mongolia hosts 10 percent of the world's known coal reserves which, if used cleanly, would provide a long-term reliable source for energy and heating for the country, which faces long and cold winters.

Hotspots



- Air pollution in Ulaanbaatar and in a number of provincial centers is climbing to an alarming level. This is happening due to a high porportion of dirty, low-quality heating stoves that are used for cooking in ger districts, coupled with the emissions of out-dated coal-powered combined heat and power stations (CHPS), and heat only boilers (HOB). Very high concentrations of particular matters (PM) in winter months have had an adverse impact on urban residents, particularly children, and infants.
- Mongolia's dependence on imported petroleum products is making the country's economy increasingly vulnerable to economic shocks, leaving the Government with no choice but to accept the high price set by the outside suppliers.



Emerging Issues



Both rural inhabitants and urban households who live in single-dwelling houses are increasingly using small-scale renewable power sources, including solar panels and wind-powered turbines. However, Mongolia lacks service entities to repair these devices and provide spare parts, which makes the use of renewable energy technology at this time costly and not sustainable. Many urban residents now prefer smaller fuel efficient vehicles rather than larger SUVs and Jeeps as favored in previous years.

Recommendations for Leverage Points of Multiple Impacts



Clean Technology for Coal Use (See Figure 12 indicating example of LP): Mongolia needs to adopt or invest in the development of new proven technology that facilitates the cleaner burning of coal to fully utilize its natural resource wealth of coal reserves, and to effectively address air pollution in major towns during the cold season. The SDG 8.2 on achieving higher levels of economic productivity through diversification, technological upgrading and innovation would be most impacted.

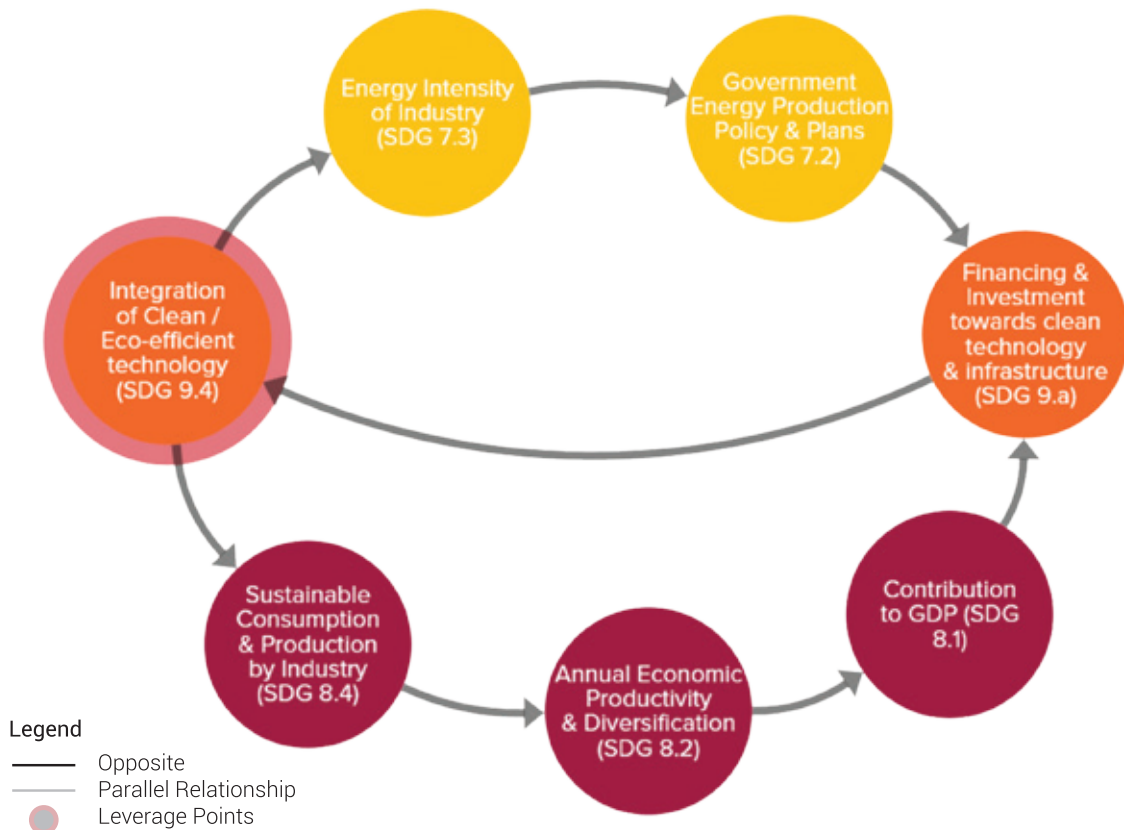
Affordable and Energy-Efficient Building Program: Ger districts in large towns urgently need to be replaced by government-supported affordable energy efficient apartment buildings and/or houses connected to a central heating system, with the alternate use of solar and wind energies. SDG 16.7 is highlighted as an impactful leverage point to monitor the progress.

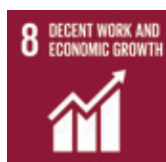
Substitutes for Petroleum Supply: For national security purposes, the country should support domestic refineries for oil extraction, or identify alternative options for importing petroleum products. SDG 16 could be considered as a highly impactful leverage point.



Figure 12 illustrates an example of Leverage Point (SDG 9.4, which is correlated with the recommended LPs for SDG 7 profile listed above) and its linkages with relevant SDG targets. In this example, the influence of SDG 9.4 on "integration of clean/eco-efficient technology" links to three SDG goal 8 targets and SDG 9.a, and collectively contributes to multiple impacts and attainment of SDG targets 7.3 and 7.2. "Energy intensity of industry" and "government energy production and plans" were identified as measures to achieve particular targets of SDG 7.3 and 7.52 by the SOM development process in Mongolia in 2017. Further reference is provided in Chapter 3, Figure 27 (Nature Based Industry System Map)

Figure 12: Example Leverage Point on Integration of Clean/Eco-efficient Technology -SDG target 9.4.





PROMOTE INCLUSIVE AND SUSTAINABLE ECONOMIC GROWTH, EMPLOYMENT AND DECENT WORK FOR ALL

Insights

The SDV 2030 envisions maintaining annual average economic growth at 6.6 percent, to reach labor force participation at a rate of 70 percent, and bring the unemployment rate down to 3 percent.⁵² This call is in line with the SDG 8.1 target, which promotes GDP growth (7 percent) and job creation.

The recent economic slowdown from a high of 17.3 percent economic growth rate in 2011 to around 1.0 percent in 2016 is mostly explained by falling international commodity prices of minerals, including coal and copper, two of Mongolia's leading exports, shrinking foreign direct investment and also moderate growth in China, Mongolia's top trade partner. This slowdown has resulted in increased unemployment and a significant decline in incomes, particularly among the more vulnerable and poor, leading to an increase in salary advances, pension loans and increases in people depending on other types of consumer loans with high interest rates over a short time frames. To stimulate the economy and foster employment, the government has pursued an expansionary economic policy of increased government spending through the issuing of government bonds. However, this policy has not resulted in significant economic growth or reduction in unemployment rate, but has instead increased the government budget deficit.

In 2016, the labor force participation rate was 60.4 percent. It was higher in rural areas (73.7 percent) than in urban areas (55.3 percent).⁵³ The lower rate in urban areas can be explained partly by the larger number of individuals attending educational institutions in urban areas than in rural areas. At the same time the opportunities for decent work are insufficient and skills shortages exist in a variety of industries; workers do not have the skills needed to meet available jobs.

Bright Spots



- There are early signs of improving economic performance. As of October 2017, the annual GDP increased by 5.1 percent. It is expected that economic growth will remain positive in the coming years. The number of employed people has increased by 4.1 percent over the same period of 2016.⁵⁴
- *The Law on Employment Promotion and Labor* is being revised to increase employment, promote decent work, greening of the economy, ensuring equitable participation of the working age population in the labor market, and increased labor force participation.⁵⁵

Hotspots



- Young people are more economically vulnerable to unemployment and economic volatility and slowing or reduction in economic growth than other demographic sectors. Youth (15-34 year) comprise nearly 57 percent of all unemployed. The highest unemployment rate was among the 20 – 24 age group. It was 2.5 times higher (about 15.2 percent) than the national average unemployment rate in 2016.⁵⁶
- Future population increase will likely occur in a series of “waves” as a function of the uneven age structure. This variable trend is making economic, social and infrastructure forecasting and planning particularly challenging.

Emerging Issues



In recent years, the number of people who migrate for labour abroad has increased significantly. At the same time, the country faces another social-demographic challenge, as those who are leaving tend to be younger, mostly male, and better educated than the rest of the population. To attract these expatriates to return to Mongolia, the government needs to plan for the future and provide incentives, as well as improve the overall business environment.

Recommendation for Leverage Points of Multiple Impacts



Population growth patterns needs to be considered: The population growth rate, along with gender, age structure and spatial distribution, are key factors in promoting sustainable economic growth. Reduction of unemployment and eradication of poverty can be achieved not only through job creation, but also managing the quantity and quality of the work force.

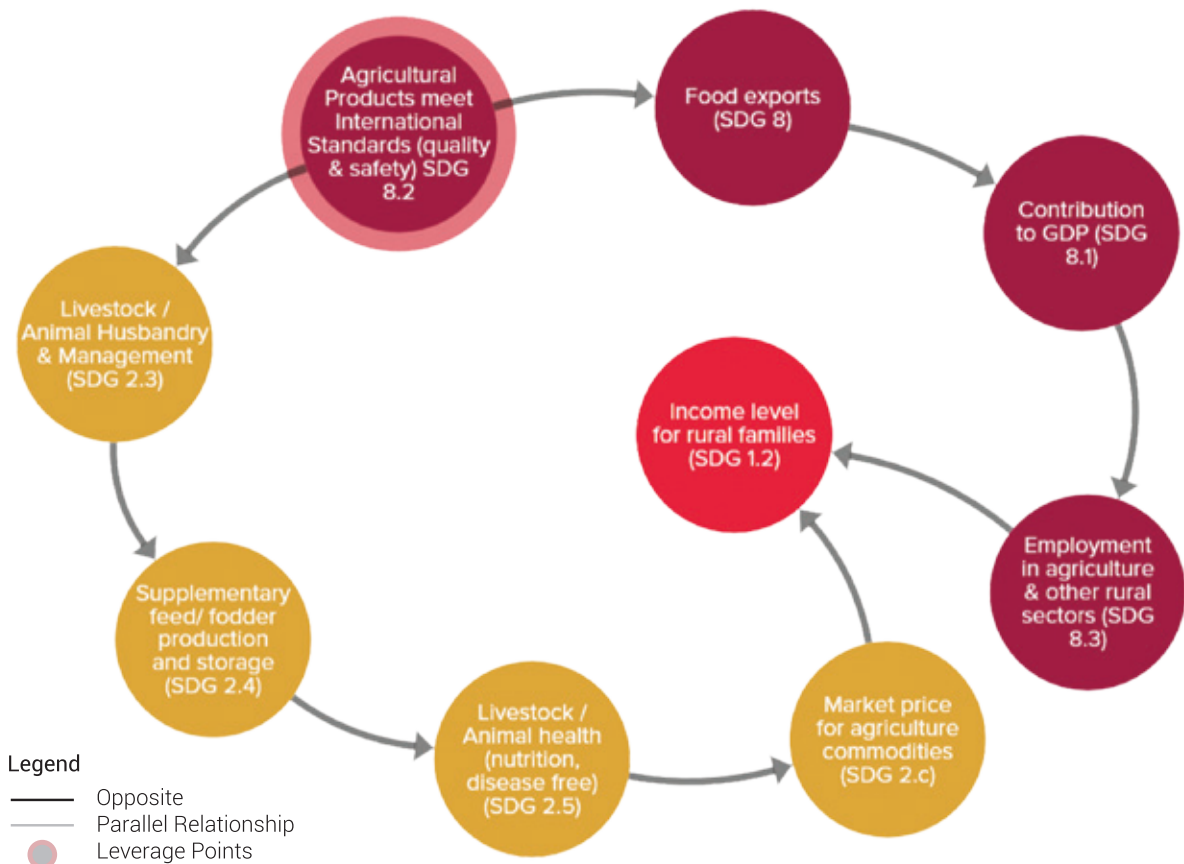


Economic diversification and decoupling economic activities: Unstable international commodity prices and demands from the country's main trading partners had created a number of problems such as volatile economic growth, and thus availability of jobs and employment fluctuations. As the mining sector is quite capital intensive and creates fewer jobs than other sectors, there is a need to boost growth in other economic business sectors, in particular, agriculture, tourism and service sectors.

Changing production methods: The production methods used currently in labor-intensive sectors, such as construction and agriculture, must be substantially improved to increase efficiency and productivity, and create decent jobs. Opportunities to support a dynamic and diversified economy and business environment that produce goods and services for domestic as well as for global markets should be promoted through SDG 12 objectives and would impact achievement of multiple SDG targets. (See Figure 13 with example of LPs)

Figure 13 illustrates one of the leverage points (SDG target 8.2) and its linkage with relevant SDG targets. In this example, the influence of SDG 8.2 on *agricultural products that meet international standards on quality and safety* links to SDG targets 2.3, 2.4, 2.5, 2 c., and collectively contribute to multiple impacts and the attainment of SDG target 8.3. "Employment in agriculture and other rural sectors" was identified as measures of achieving respective SDG target 8.3 by the SOM development and consultation process in Mongolia in 2017. Further reference in Chapter 3, Figure 27(Nature Based Industry System Map).

Figure 13: Example of Leverage Point on Agricultural Products that Meet International Standards on Quality and Safety – SDG target 8.2.





BUILD RESILIENT INFRASTRUCTURE, PROMOTE INCLUSIVE AND SUSTAINABLE INDUSTRIALIZATION AND FOSTER INNOVATION

Insights

For Mongolia, with its large territory and small population, infrastructure and roads play a crucial role in the country's development. In this regard, extension of the roads network and transportation services have a special objective within the SDV 2030 under Energy and Infrastructure Sector Objectives 2.1.5. Most of the aimag centers are connected with Ulaanbaatar by paved road, which has greatly increased rural inhabitants' access to markets and social services, indicating some progress on the SDG. While the per capita road and rail densities are relatively high, their spatial coverage is inadequate to make a substantial contribution to boosting employment and improving the economy which would contribute to target SDG 9.2.

In addition, the Objective 7 of the SDV 2030 under calls for expansion of ICT coverage, increasing high speed networks in rural areas and launching a national satellite. All aimag centers and 330 soums have fiber optic Internet connections, contribute to SDG 9.c, which seeks to significantly increase access to ICT. In 2017, the numbers of active mobile users and Internet users reached 3372 thousand and 2656 thousand respectively.⁵⁷ In 2016, Mongolia ranked 129th among 201 countries by Internet Live Stats ranking.⁵⁸

Under the Objective 1 of the SDV 2030 on industrial sector based productivity, Mongolia envisions export-oriented processing industry clusters that deploy advanced technologies, and increase the share of products in leather, wool and cashmere using up to 80 percent in the total raw material processes. Industry accounts for 33.5 percent of GDP, whereby the manufacturing sector produces 19.4 percent of the industrial share of GDP⁵⁹, each contributing respectfully to SDG targets 9.2 and 9.3, 9.5. In 2016, more than 141,500 enterprises operated in Mongolia, and of this total, 98 percent of these are classified as SMEs.⁶⁰ Over 80 percent of total employers of Mongolia's workforce are SMEs, and they produce about 60 percent of the total production outputs. In general, light industry, which processes raw materials from the agriculture sector, is the dominant industry. Mongolia has very limited production of minerals with regards to value-added deep processing and manufacturing (such as iron ore processing and steel manufacturing).

Bright Spots



- The rapid development of ICT characterized by affordable Internet, GIS and smartphones, has been a driving force for the development of network-based services. Today, most people, including those in remote areas, can take advantage of full connectivity, have more opportunities for businesses, and have greater access to basic information on health and education.
- Mongolia is planning to increase the use of Compressed Natural Gas (CNG) buses in public transport and encourage the increased use of Liquefied Petroleum Gas (LPG) vehicles. There is also an understanding of the need to address the issue of lead through Strategy on Ensuring Road Traffic Safety, covering the period of 2012-2020.
- The Mongolian Bankers Association in partnership with the Ministry of Environment and Tourism and other key stakeholders is planning to launch a national green financing mechanism to encourage investment in clean, green and environmentally friendly infrastructure.

Hotspots



- Weak transport infrastructure limits job opportunities and restricts the supply of local goods and services mostly from Ulaanbaatar with added transportation costs and delayed timing.
- Negative impacts of poorly developed industries using obsolete technology include environmental pollution and road accidents with human fatalities. According to WHO data, the number of people injured per 10,000 vehicle registrations in the road accident was 39.3 in 2015.⁶¹

Emerging Issues

- The Action Plan for implementation of the NGDP emphasizes the need to develop environmentally sound transportation solutions for mineral products and to electrify the railroad networks. It also foresees the implementation of the Ulaanbaatar metro project – an initiative that has been discussed for many years.⁶⁸
- Application of ICT is accompanied with serious threats. For example, water and electricity supply, building elevators, air conditioning, telephones, traffic control, online banking, shopping and many other basic technology related services depend on the smooth functioning of ICT. Thus, enhancing cybersecurity and protecting critical information are becoming essential to national economic wellbeing as well as to national security.

Recommendation for Leverage Points of Multiple Impacts



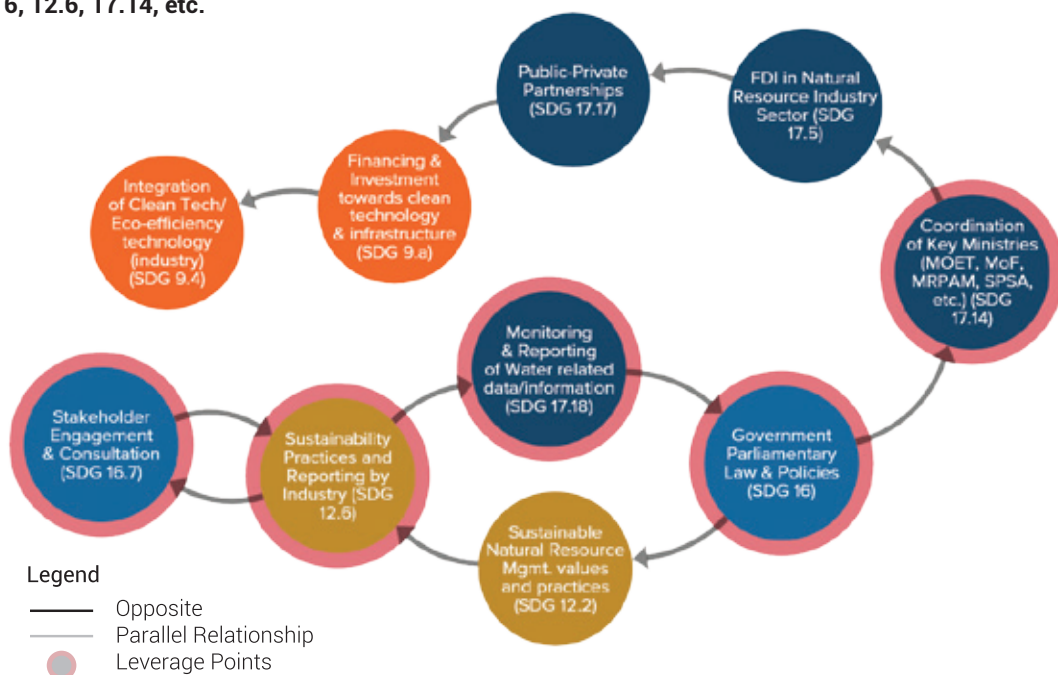
Policy coherence (See Figure 14 with examples of LPs): There is a need for an inclusive development of policies for a feasible sustainable transport sector. The road network in Mongolia provides only limited geographical coverage and connectivity; the low traffic volumes on most of the roads impede the expansion of road capacity when put into a standard cost-benefit analysis. The Government is aware of the need to build lower-cost roads, although there is a need for all-weather paved roads which are more costly to build and maintain.

Strengthening stakeholders' coordination and cooperation in ICT (SDG 12.2): There is a great need to formulate a more favorable policy and regulatory environment, and to develop human resource capacity, while fostering greater coordination and cooperation amongst different stakeholders.

Need for legal frameworks for logistics: Logistics are not very well developed in Mongolia. There are no regulations or legal frameworks for logistic services and Mongolia does not have any central logistics hub, including freight terminals, truck decks, cross-dock operations, or distribution centers.

Figure 14 illustrate a few of the Leverage Points (see SDG 16, SDG targets 16.7, 17.4, correlated with the recommended LPs of the SDG 9 profile above) and their linkages with relevant SDG targets. In this example, the influence of SDG 16.7 on "stakeholder engagement and consultation" links to SDG targets 12.6, and other listed in the diagram SDG targets (namely 17.14, 17.5 and 17.17) and collectively contribute to multiple impacts and the attainment of SDG 9.a and 9.4. "Investment in clean technology and infrastructure" and "integration of clean and eco-efficient technology in industry" were identified as measures of achieving of SDG targets 9.a and 9.4 by the SOM development consultation process in Mongolia in 2017. Further reference is provided in Chapter 3, Figure 27 (Nature Based Industry System Map).

Figure 14: Example of Leverage Points on Stakeholder Engagement and Consultation; Government Parliamentary Law and Policies; Sustainability Practices and Reporting by Industry; Coordination of Key Ministries - SDG targets 16.7, 16, 12.6, 17.14, etc.





REDUCE INEQUALITY WITHIN AND AMONG COUNTRIES

Insights

Income inequality has been widening in the country. The average consumption measures of the wealthiest 20 percent of the population measured 5.1 times higher than the average consumption of the poorest 20 percent⁶². The SDV 2030 indicator target level is to reduce inequality by reducing the Gini coefficient of inequality from 0.365 to 0.30 by 2030, which is in line with SDG 10.1 to 10.4 targets. In 2016, the national Gini coefficient was 0.32, where geographically, Central and Khangai regions' Gini coefficients were highest 32 and 30, respectively, showing greater inequality in these areas. Gini in Ulaanbaatar was 0.34, which was higher than the national average.⁶³

Access to education has been one of the significant factors fueling income inequality. Despite the increased enrollment in all levels of education, access to education has not been equal for all. Only 66.2 percent of the children with disabilities of secondary school age were able to study in schools. Almost one-half of the young people with congenital disabilities are illiterate and have no access to educational services. The fact that the majority of the universities and educational institutions are located in Ulaanbaatar, where the living costs are high, adds more burden to rural young people seeking tertiary education qualifications. Furthermore, the disparity in household living standards contributes to the unequal access to higher education among young people.

For the last decade, Mongolia has had a flat personal income tax, which may also exacerbate the inequality among the population. In particular, youth with disability, older adults and working mothers have been disproportionately affected by increased tax pressures, while prices for basic expenses for food, fuel, and medical care have remained the same.

Bright Spots



- In 2016, Mongolia's social protection program covered 70 percent of the pension-age population, 87 percent of disabled children, 63 percent of physically impaired citizens over 16 years old, and as of 2015, the program expenses, including children allowances, equated with 2.1 percent of GDP⁶⁴, contributing to SDG 10.4.
- As part of the EU Generalized System of Preferences (GSP) for developing countries, Mongolia negotiated a 10-year duty-free market access agreement to EU countries under GSP+ scheme, starting from 1 January 2014.

Hotspots



- Mongolia's welfare program was not effective in reaching the entire target population. In 2014, one in four Mongolians received state social assistance, whereas 40 percent of the wealthy population obtained 36.3 percent of social protection services. Due to this ineffective distribution of services, the state social care assistance shared only 16.6 percent of the average monthly consumption of poor households.⁶⁵
- Inequality continues to grow in Mongolia due to the substantial growth of income disparity, especially in rural areas, which may stagnate achievement of SDG 10.1, which seeks to sustain income growth of the bottom 40 percent of the populations at higher rates than the national average.

Recommendations for Leverage Points of Multiple Impacts



Reducing inequality via increased access to education (See Figure 15 with LPs): Education is linked to economic growth and labour productivity, whereby people have equal access to quality education. The Government should formulate and implement a framework/tool for assessing the quality of education

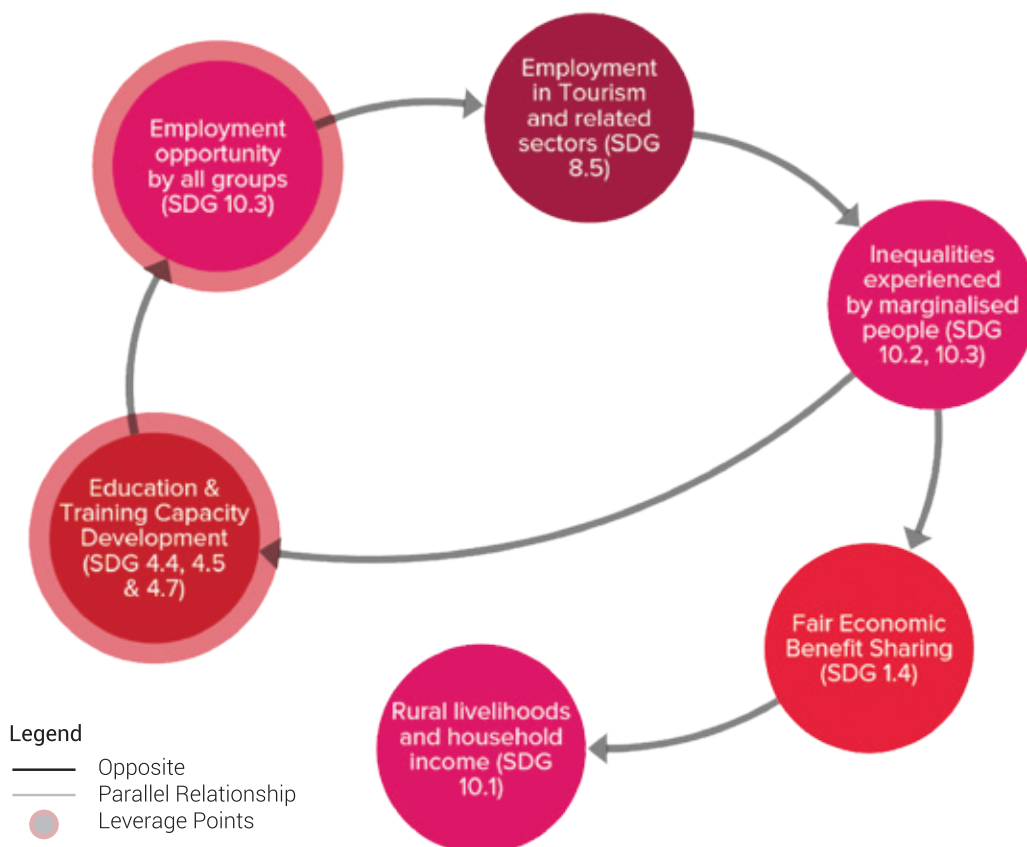
provided in schools and educational institutions, which would provide the basis for actions to improve access to quality education for vulnerable groups, including disabled individuals and children and youth in remote rural areas. As is already planned some of the tertiary education institutions can decentralize their establishments outside of Ulaanbaatar to improve access to higher education by rural youth.

Facilitating employment for disabled workers and rural youth (SDG 16.7): The current employment facilitation program of the Government has not been sufficient to employ citizens with disabilities and youth from rural districts, contributing to continued inequalities. For instance, only about 24 percent of disabled professional workers had employment, and unemployment is significantly higher in rural areas compared to urban places.⁶⁶ More proactive actions are necessary to increase employment of disabled professionals and offer job opportunities in rural areas.

Analysing Mongolia's standing in global trade and economic opportunities(SDG8.1): There is no systematic analysis of costs and benefits from bilateral and multilateral agreements for trade and other relationships, such as ODA to Mongolia, to inform government policies and decisions towards increasing the country's access to global markets. Therefore, the government needs to create a mechanism for regular assessment and monitoring of economic opportunities from past and present foreign policies, and study the feasibility of such opportunities in future policy decisions.

Figure 15 illustrates a few examples of important Leverage Points (SDG targets 4.4, 4.5, 4.7, and they correlate with recommended LPs of the SDG 10 profile above) and their linkages with other SDG targets. In this example, the influence of SDG targets 4.4, 4.5, 4.7 on *human capacity development, education and training* links to SDG targets collectively contribute to multiple impacts and the attainment of SDG target 10.1. "Rural livelihoods and household income", as well as "employment opportunity by all groups" were identified as measures of achieving of respective SDG targets 10.1 and 10.3 by the SOM development consultation process in Mongolia in 2017. Further reference is provided in Chapter 3, Figure 29 (Sustainable Tourism System Map).

Figure 15: Example of Leverage Points on Human Capacity Development in Education and Training - SDG targets 4.4, 4.5 and 4.7.





MAKE CITIES INCLUSIVE, SAFE, RESILIENT AND SUSTAINABLE

Insights



Under strategic objective 6 of the NGDP, Mongolia is striving to achieve self-sufficient and smart cities and villages, compatible local environmental conditions. In this regard, city planning in the urban areas and settlements should be improved to ensure access for all to adequate, safe and affordable housing and services, envisioned in SDG 11.

Urban population in Mongolia increased from 52.0 percent in 1996 to 68.3 percent in 2016. For instance, Ulaanbaatar, the capital city, which occupies only 3 percent of the total land area of the country, has 46.2 percent of Mongolia's population.⁶⁷ A 'business as usual' scenario predicted that 54.7 percent of the total population would be living in Ulaanbaatar by 2030. Factors influencing migration from the countryside include the fact that Ulaanbaatar is the center for political, economic and social services, and provides a more well-developed infrastructure to support economic activity and social protection. The city offers more choices of employment, access to better education and health services, among other social and economic advantages.

Following the adoption of the NGDP, which encourages urban space to be developed according to world-class green models, Ulaanbaatar and a few other provincial centers formulated city development plans following the sustainable green city principles. Three cities - Ulaanbaatar, Darkhan, and Erdenet - have officially joined the UNISDR coordinated global campaign 'Making Cities Resilient: My City is Getting Ready'.

Bright Spots



- Policymakers, practitioners and the public realize that green parks and open spaces are key components of sustainable urban planning and are an integral part of city wellbeing. Ulaanbaatar has four parks, among them, the *National Park* is the largest.
- Productivity in urban areas is higher than in rural areas due to positive externalities (educated workforce, better health services, environment-friendly infrastructure, better utility services, etc.) and economies of scale.

Hotspots



- Environmental pollution (air, soil, and water) in the larger urban centers in Mongolia, including Ulaanbaatar, make them a higher risk place to live with regard to health. The major contributors of this pollution include the unplanned expansion of "ger districts" that lack of basic sanitation facilities, have limited safe water sources, and are isolated from central heating systems, thus forcing communities to burn more coal for heating purposes. Compounding this problem, is the fact that 56.7 percent of Ulaanbaatar households⁶⁸ and 72 percent of aimag households lived in ger districts in 2015.⁶⁹



- Increasing volumes of wastes and new types of hazardous wastes, along with limited waste management capacity, is bringing new challenges to city authorities in Mongolia. Ulaanbaatar alone produces 1.1 million tons of solid wastes annually, whereas ger area residents generate more waste per capita because of the ash produced from heating in the winter, accounting for 49 percent of all waste produced by city households.⁷⁰



- Most towns in Mongolia lack the infrastructural capacity for water treatment to maintain water conservation objectives. In Ulaanbaatar, for example, the central wastewater treatment plant (CWTP), with a capacity of 170,000 m³ per day, receives a large volume of wastewater that far exceeds its capacity. As a result 170,000 to 190,000 m³ of improperly treated wastewater is discharged into the Tuul River daily, which causes ecosystem degradation and has negative impacts on livestock in downstream areas.⁷¹

Emerging Issues 

With a relatively large percentage of the population still leading a traditional nomadic lifestyle, it has been only recently that Mongolians have adopted urban ways of life. Thus there is a very limited experience of the rules, norms, knowledge and experience in managing more complex integrated urban systems. With increasing numbers of western-educated people who are accustomed to urban cultures, more people are joining campaigns to limit waste and live in a more environmentally friendly manner. However, there is still more work that needs to be done to improve consumer behaviors and attitudes to reduce consumption, conserve resources and reduce pollution in cities.



Recommendations for Leverage Points of Multiple Impacts 

Urban Planning and Land Use Policy (See Figure 16 with LPs on SDG 11, 9, 12): Urban policies should be reconsidered to restrict expansion of ger districts in towns, and incorporate this objective into regulations of land sales. This include issuance of land use licenses in the territories of towns. The Government should develop managed sanitation and heating facilities for residents of the Ger district.

Urban Policies for Decentralization: Policies need to emphasize the development of satellite cities along with regional development programs in order to decentralize political, economic and social powers that large cities like Ulaanbaatar have. Similarly, plans should integrate goals for improving connectivity, making transportation affordable and efficient to allow people to commute easily between cities and towns.



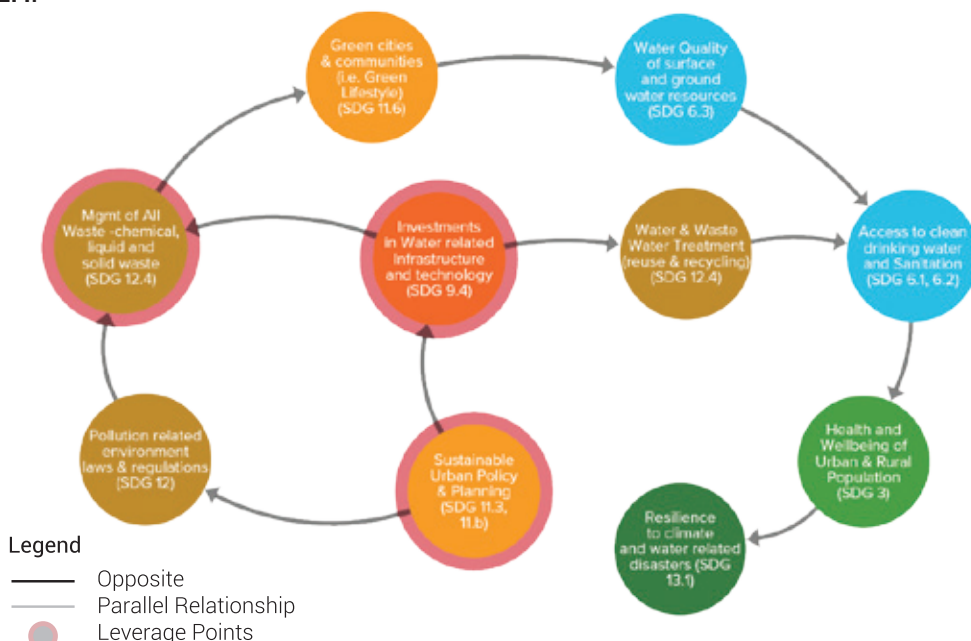
Urban Waste Management: City authorities need to plan for substantial enhancement in municipal waste management capacities (SDG 11.6), including construction of necessary facilities, training and recruitment of waste management professionals, development of transportation system, and establishment of information databases. Special consideration should be given to capacity development for waste recycling, storage and disposal of hazardous wastes.



Designing with Water Reuse and Recycling Architecture: Urban planning and construction designs need to incorporate objectives for saving, reusing, and recycling water in the early stages of design plans. Such requirements can be provided in the building codes and other construction permitting standards, which would also contribute to SDG 6.3,4.

Figure 16 illustrates one of the leverage points (SDG 12.4, as correlated to LPs of the SDG 11 profile above) and its linkages with other SDGs targets. In this example, the influence of SDG 12.4 on *management of all waste-chemical liquid and solid waste* links to SDG targets 6, 3, 13, and, collectively contributes to multiple impacts and the attainment of SDG 11. "Sustainable urban policy and planning" and "green communities and cities" were defined as measures of achieving respective SDG targets 11.3/11.b and 11.6 during the SOM development consultation process in Mongolia in 2017. Further reference in Chapter 3, Figure 27 (Nature-Based Industry System Map).

Figure 16: Example of Leverage Points on Management of all Waste Chemicals; Liquid and Solid Waste - SDG targets 12.4.





ENSURE SUSTAINABLE CONSUMPTION AND PRODUCTION PATTERNS

Insights



The NGDP strategic objective 1 is focused on promotion of sustainable consumption and production patterns, fostering efficient use of natural resources, low greenhouse gas emissions, and reduced waste, fully in line with SDG 12. The industrial sectors in Mongolia produce a substantial volume of waste, including coal ash, coal, sawdust, construction rubble, etc., all of which result in environmental pollution that has a detrimental affect on air, water and soil quality, contributing to SDG 12.4. If not practiced by business entities, saving and conserving culture within organizations does not exist, showing the poor norm in wasteful consumption of water, electricity and heating energy. However, Mongolia's traditional pastoral economy, which is strongly agricultural based, does possess strict customary norms for resource conservation to overcome the seasonal scarcity of water, forage and livestock products. On the other hand, modern urban Mongolians have cultivated more lavish behaviors that can be associated with a lack of environmental awareness, the undervaluing of resources such as water, and weak enforcement of environmental monitoring. For example, studies conducted in 2016 reported that one-third of the municipal waste was comprised of food residuals.⁷²



In response the Government approved the National Programme on Reduction of Air and Environmental Pollution to encourage responsible consumption by tightening the enforcement of "polluter pays principles". Also, the National Implementation Plan for the Stockholm Convention on Persistent Organic Pollutants, approved in 2006 and updated in 2014, has objectives to cultivate adequate handling and use of chemicals entering the country. Most importantly, POPs released into the environment should be prevented, thus avoiding adverse effects on human health.



Another mechanism for encouraging responsible consumption is the Solid Waste Management Improvement Programme for 2014-2022 that sets a number of targets on waste management, including a 12 percent target on reuse and recycling to be achieved by 2022, against the 4.4 percent achievement in 2013. The Programme also calls for an increase in the number of waste disposal sites that meet sanitary landfill requirements from 3 (2013) to 40 by 2022. On the other hand, standards for sustainability reports (SDG12.6.1) have not been practiced in Mongolia. The National Chamber of Commerce and Industry reports that very few companies issue sustainability reports, whereas the Business Council of Mongolia suggests that some mining companies have started reporting in this area.

Bright Spots



- Although Mongolia does not have a stand-alone national action plan on *Sustainable Consumption and Production (SCP)*, the NGDP and its Action Plan have specific actions towards mainstreaming SCP patterns into the areas covered by *the 10-Year Framework of Programmes on Sustainable Consumption and Production patterns*, with the respective indicators recommended for monitoring, contributing directly to SDG 12.1.
- The *National Chamber of Commerce* and Industry as well as the Business Council of Mongolia have engaged in efforts to increase efficiency in resource use by their respective members. Mongolia's commercial banks have also voluntarily adopted sustainable financing principles as part of their due diligence criteria before lending to projects in four key sectors: mining, construction, manufacturing, and agriculture.

Hotspots



- No targeted systemic effort is applied by the Government to promote resource efficiency and responsible consumption and production at either the industrial and household levels.
- The majority of waste collected in the country is sent to disposal. About 93.5 percent of waste is

disposed of using burial method.⁷³ The challenges for implementation of the 3R (reduce, reuse, recycle) policies, among others, include the lack of an incentive system for recycling, the current substantial role of the informal sector (rather than government or formal private sector) in the collection of recyclables, and the limited technological and financial capacity of the domestic recycling industry.

- There are not adequate education and awareness raising programmes available to change behaviors and attitudes for responsible consumption and production processes at different levels (i.e. school and adult informal education).



Emerging Issues

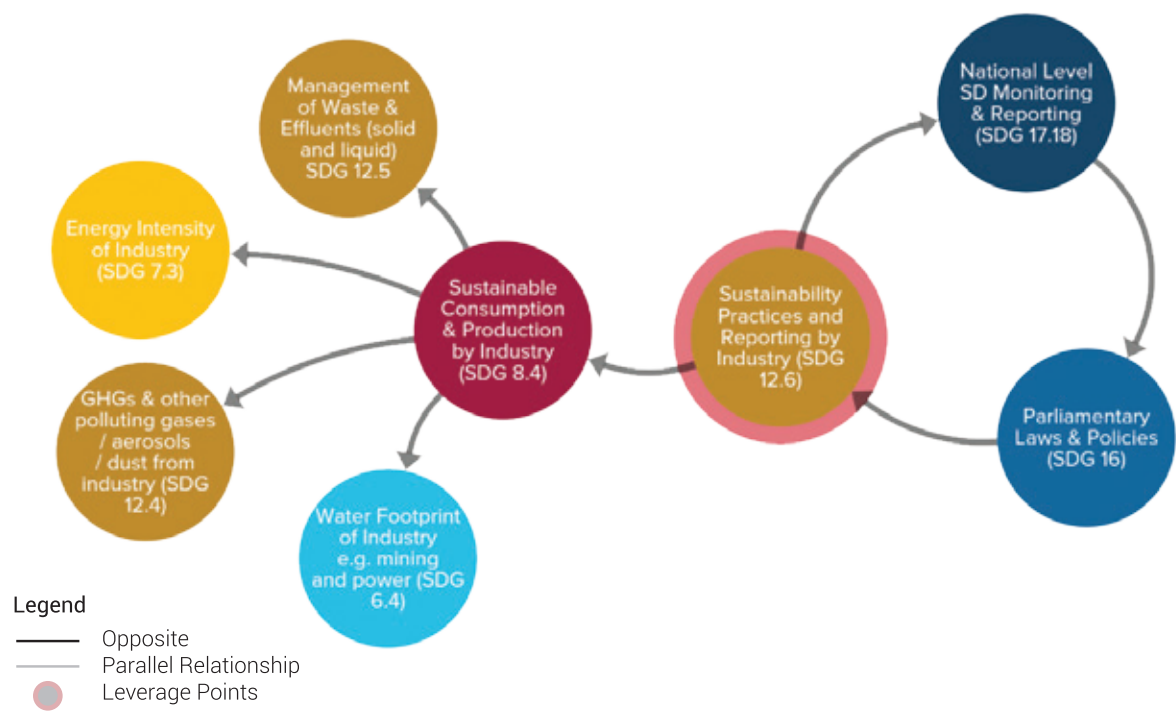
Mongolia has taken up the challenge of making its resource use more efficient through its Action Plan for the Implementation of the NGDP for the period 2016-2030, which places SCP as the first strategic objective. The Plan aims to “promote resource efficient and low waste technologies for the mineral resources sector”, bringing Mongolia’s resource efficiency closer to regional levels.

Recommendation for Leverage Points of Multiple Impacts 

- *With regard to sustainability reporting by companies* (see Figure 17 with example of LP), the Government’s commitment to EITI is crucially important. Public access to environmental management plans and annual reports on their implementation, on both company and Government websites, could be a driver for better sustainability reporting. To be able to fulfill monitoring and reporting requirements (to attain SDG12.6.1), the Government should introduce a reporting standard and also collect statistics in consultation with the business sector, including through business associations.
- *The Agency for Standardization and Metrology* should accredit organisations to issue commercial eco-labels.

Figure 17 illustrates one leverage point (SDG target 12.6) and its linkage with other SDG targets. In this example, the influence of SDG 12.6 on *sustainable practices and reporting by industry* is connected with other SDGs (namely SDG 17.18, 16, SDG 7.3, SDG 6.4 with SDG 8.4), through a system feedback loop, and they collectively contribute to multiple impacts and the attainment of SDG 12.4 and 12.5. “GHG and other pollutant gases, aerosols, dust from mine site” was identified as a measure of achievement of SDG target 12.4 by the SOM development consultation process in 2017. Further reference in Chapter 3, Figure 27 (*Nature Based Industry Systems Map*).

Figure 17: Example of Leverage Point on Sustainability Practices and Reporting by Industry - SDG target 12.6.





TAKE URGENT ACTION TO COMBAT CLIMATE CHANGE AND ITS IMPACTS

Insights



Strategic objective 6 of the NGDP calls to develop and implement a population settlement plan in accordance with climate change, while considering the availability of natural resources and the resilience of regions, which is contributing to attainment of SDG 13 targets on strengthening resilience and adaptive capacity to climate-related hazards and natural disasters. The Government of Mongolia has a strong commitment to addressing climate change through mitigating GHG emissions and adapting the economy and society to ongoing changes to reduce risks. Under its UNFCCC obligations, Mongolia endorsed the Paris Agreement, by pledging 14 percent GHG reduction compared to a business-as-usual (BAU) scenario, excluding LULUCF. The primary mechanisms for achieving international commitments is the National Action Programme on Climate Change (NAPCC), the recently approved National Program on Air Pollution Reduction and the updated Law on Wastes (2017)



For the last several decades, Mongolia has been experiencing the effects of climate change. It is becoming warmer in temperatures, precipitation patterns are changing, and frequency of extreme weather events is increasing. The annual average air temperature has increased by 2.2 degrees Celsius from 1940 to 2016⁷⁴, and mountainous regions have experienced greater intensity of warming. Variations in precipitation have been observed, with a slight decrease of 0.1-2.0 mm precipitation recorded in the majority of the territory, coupled with changes in timing of precipitation patterns (delayed summer rains). Further, the frequency of fast-onset disasters such as heavy rains, flash flood, strong wind, thunderstorm, and hail has been increasing, with adverse impacts on people's livelihoods and the country's economy. Livestock husbandry has been profoundly affected by dzud (severe winter storm) and drought, which are becoming more frequent and disastrous. For example, as a result of the dzud of 2009/2010, Mongolia lost approximately 10.3 million head of livestock, which caused at least 6 percent decline in national GDP and led to the impoverishment of many rural households. Mongolia ranks 8th out of first top ten countries according to the long-term susceptibility to climate change impact risk index.⁷⁵



Mongolia has a coal-based economy with an annual GHG emission of 34.530.1 Gg CO₂-eq as of 2014. Two sectors emit 98 percent of the total emissions: the energy sector (50 percent) and the agriculture sector (48 percent). In 2014, the total GHG emission consisted of 46.5 percent carbon dioxide (CO₂), 32.9 percent methane (CH₄), and 20.4 percent nitrous oxide (N₂O), and 0.3 percent hydrofluorocarbons (HFCs).

Bright Spots



- Mongolia has been actively engaging with the Green Climate Fund (GCF), the financial mechanism established under the UNFCCC to mobilise financial resources to fund the implementation of NAPCC. In 2016, Mongolia was granted direct access to the GCF, through the accreditation of XacBank LLC. In 2017 the GCF granted Khas Bank with a contract for USD 20 million, which was supplemented with USD 40 million from other donors, including EBRD and the Joint CTF.⁷⁶
- Mongolia has a relatively well-developed capacity for collection, analysis, and use of climate-related data, with a network of weather monitoring stations throughout the country. The National Agency for Meteorology and Environmental Monitoring (NAMEM) has over 330 meteorological stations in each soum (county) and 22 laboratories for data analysis and Environmental Information Center (EIC) for sharing information. Mongolia prepared two extensive assessment reports on climate change, the first in 2009 and the second in 2014. It has conducted GHG inventories with the two National Communications submitted in 2001 and 2010. Mongolia has time series of up to 25 years of climate relevant data.



Hotspots 

- While Mongolia's agriculture is strongly dependent on climate and weather conditions, adaptation mechanisms for risk reductions are weak, and the existing programmes are underfunded. Notably, the vulnerability of rural smallholders including herders, farmers and urban poor to climate risks has not been addressed.
- Policies of municipal authorities to address air pollution in major cities like Ulaanbaatar has not been effective, especially in reducing carbon emissions. Air pollution contributes to the deteriorating health of urban residents, particularly, children and pregnant women contributing to the high mortality rates in urban areas.
- Unplanned developments in cities due to land sales and land use licenses through corrupt and non-transparent procedures have imposed a high risk to urban residents by creating barriers to health and rescue assistance during crisis such as fire, floods and health emergencies.
- Despite the legal context and policies for coping with climate change being in place, the current institutional capacity is too weak to effectively handle this complex issue. Currently, climate change matters fall under the responsibility of the International Cooperation and Climate Change Department of the Ministry of Environment and Tourism (MET).

Emerging Issues 

Along with adverse impacts of climate change, Mongolia has had some positives experiences as well. Many urban people like the warmer winter, as this has contributed to less costs for heating energy and for clothing. Herders in some regions also appreciate a warmer winter and the early arrival of spring. For example, the early melting runoff of rivers and streams has extended the plant-growing season. Warmer weather may favor more diverse crop and vegetation production. Therefore, strategies to capture these opportunities can be highlighted instead of focusing only on the negative effects of climate change.

Recommendation for Leverage Points of Multiple Impacts 

Institution Building for Climate change: To ensure strategic oversight of the climate change issue, the institution for coordinating inter-sectoral implementation of NAPCC should be strengthened, with adequate capacity for human resources and financial mechanisms.

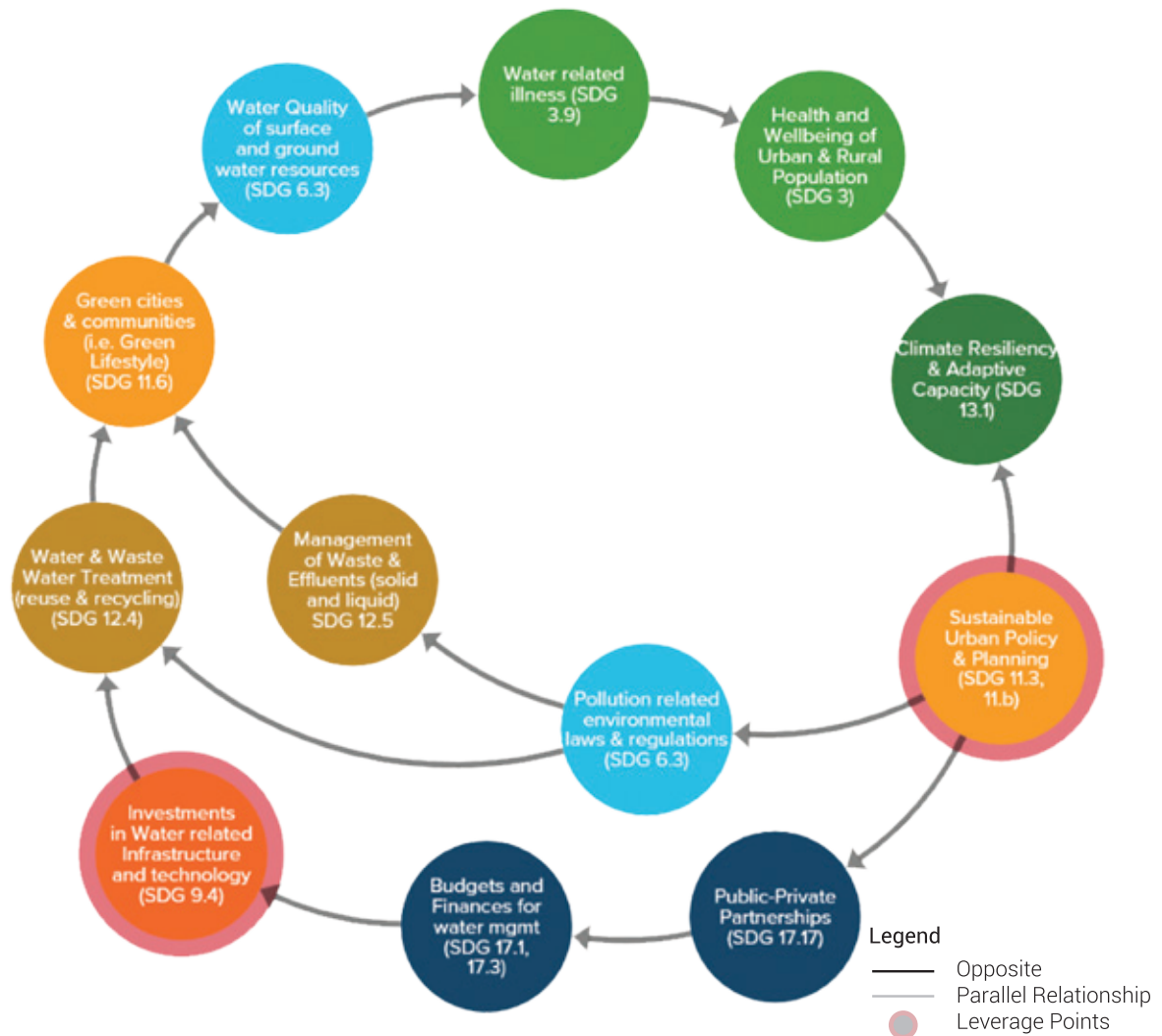
Research and development for clean coal: To achieve a substantial reduction in GHG emissions, more investment is necessary for research and technology in the clean use of coal and heating using electricity in cities and towns.

Green lifestyle and standards (See figure with LPs): Mongolia can support education and awareness efforts to reduce wastes and decrease forest and rangeland degradation while promoting a green lifestyle and standards for formal entities to reduce emissions at sources and increase carbon sinks.

Figure 18 below illustrates an example a few Leverage Points (for example, see circled SDG targets 4.4, 4.7, 9.4, 12.6, 1.4/1.5) and their linkages with other SDG targets. In this example, the influence of these few LPs on "human capacity development", "sustainability practices and reporting by industry" and "livelihood of local community around industrial zones" link to SDG targets of 17.18, 7.2, some targets of SDG 16, SDG 8, 9, 15, and they collectively contribute to multiple impacts and the attainment of the SDG target 13.1. "Climate resiliency and adaptive capacity" was identified as a measure of achieving respective SDG targets 13.1 by the SOM development consultation process in Mongolia in 2017. Further reference is provided in Chapter 3, Figure 27 (Nature Based Industry System Map).



Figure 18: Example Leverage Points on Human Capacity Development; Sustainability Practices and Reporting by Industry; Livelihood of Local Community Around Industrial zones- SDG targets 4.4, 4.7, 9.4, 12.6, 14, 15.



CONSERVE AND SUSTAINABLY USE THE OCEANS, SEAS AND MARINE RESOURCES FOR SUSTAINABLE DEVELOPMENT



Since Mongolia is a landlocked country, SDG 14 is not directly relevant. However, it is possible to use proxy indicators to assess its progress since Mongolia has many natural rivers, lakes and wetlands that are important habitat for 74 species of fish⁷⁷ as well as being the vital water storage for domestic and international use. Moreover, Mongolia joined the Conservation of Whales and the Management of Whaling in 2002.





PROTECT, RESTORE AND PROMOTE SUSTAINABLE USE OF TERRESTRIAL ECOSYSTEMS, SUSTAINABLY MANAGE FORESTS, COMBAT DESERTIFICATION, AND HALT AND REVERSE LAND DEGRADATION AND HALT BIODIVERSITY LOSS

Insights



SDG 15 has been integrated into the long-term development policies of Mongolia within the SDV 2030 and strategic objectives 2, 4, and 5 of the NGDP. SDG 15 has also been aligned with 10 of the 14 Multilateral Environmental Agreements (MEAs) that Mongolia has ratified to date.⁷⁸ Mongolia has 27,953.98 km² area or 17.9 percent of the total 1,564,116 km² territory under the state protection.⁷⁹ The protected area system of Mongolia is responsible for conservation of biodiversity, including 7,315 species of flora 141 species of mammals, 502 bird species, 21 species of reptiles, six species of amphibians, 74 species of fish and 13 thousand species of invertebrates recorded as of November 2017.⁸⁰ Mongolia is committed to increasing protected area up to 30 percent of the country's territory by 2030.⁸¹

Forest land in the country occupies 18.45 million hectares, whereas forest-covered areas comprise 12.28 million ha or 7.9 percent of the total territory in 2016.⁸² As stated in the SDV 2030, forest cover is targeted to reach 9 percent of the territory by 2030. Mongolia has been experiencing land degradation and desertification due to climate change, overgrazing and expansion of mining operations. Almost 77 percent of land areas have undergone different degrees of changes in vegetation cover, plant species, and biomass production as of 2015⁸³, which have been targeted by the SDV to decrease to 68 percent by 2030.

Climate change is a driving force for increasing soil erosion due to strong winds (165.7 ton per ha) and water runoff (300-400 ton annually), causing fertility decline in arable land. Major threats and pressures to ecosystems include overgrazing, forest fires, overharvesting of biological resources (illegal logging, poaching, overfishing), mining, oil extraction, infrastructure and roads development.⁸⁴

Bright Spots



- In Mongolia, almost 18 percent of the total land area is under state protection, while another 12 percent is under local protection managed by aimag (province) and soum (district) governments.⁸⁵
- The 2002 Land Law of Mongolia prohibits cultivation in virgin lands (can only use abandoned croplands for crop farming), which was further strengthened by the 2012 Law on Soil Protection and Prevention from Desertification.⁸⁶
- Legal context to support participation of local resource users in natural resources management is in the form of community-based organizations (CBOs). Many donor-supported programs are currently assisting in strengthening CBOs in various ways.

Hotspots



- A continuous increase of domestic livestock for the last two decades poses the greatest threat to rangeland ecosystems. This has caused scarcity of forage and water for wild ungulates and the spreading of contagious diseases to wild stocks. In February 2017, there was a case of thousands of saigas, listed in the IUCN Redbook as endangered, having died due to an outbreak of cattle plague that year.
- National programmes established for protection of biodiversity and combatting desertification and land degradation have been severely underfunded. In 2017, the environmental protection expenditure of the government (22.6 billion MNT) was only 0.5 percent of the total general expenditure, falling sharply from its 2011 level (74.4 billion MNT).⁸⁷ The fact that many provincial authorities do not make the necessary allocation to conservation from the collected natural resource use fees exacerbates



the shortage of financial resources. In 2016, only 29.0 percent of the fees from natural resource use fees was spent for environmental protection measures.⁸⁸

- Among the reported environmental crimes, poaching, illegal mining and illegal logging have been dominant in the absence of adequate inspection and control system. Recent reports on corruption cases of professional inspectors of the State Inspection Agency may provide some clues to the monitoring inefficiency and lack of effective enforcement.

Emerging Issues



With the recent growth of social media such as Facebook, Twitter and Instagram, many people are now starting to post instant reports in social media on violations of environmental regulations, pollution and other misbehaviors in order to get quick attention of the responsible officials. On the other hand, such posts may harm individuals if the allegations are false or ungrounded.

Recommendation for Leverage Points of Multiple Impacts



Incentives for community-based resource management: There is a limited capacity of the government to oversee large land areas for conservation. The Government may want to create more effective incentives for community-based conservation, such as secured resource use tenure and shares of benefits derived from commercial hunting and tourism.



Effective funding mechanism for conservation (SDG 17): To ensure adequate financial resources for environment conservation, there should be more efficient mechanisms for resource mobilisation stemming from use of natural resources, along with the establishment of a dedicated institution or network of professionals responsible for raising funds from both domestic and international sources.

Rangeland conservation structure (See Figure 19 with example of LPs): Recognising the fact that overgrazing poses the greatest threat to ecosystems, the government environmental institutions should have a specialized structure for rangeland conservation with a goal to establish a healthy balance between livestock and wildlife species.

Figure 19 illustrates an example of a few Leverage Points (see circled SDG targets 2.4, 1.4/1.b, 6.5) and their linkages with other SDG targets. In this example, the influence of SDG targets 2.4, 1.4/1.b, 6.5 on *IWRM policies and programmes; government legislation and policy on customary lands rights; rangeland pasture management*, link to SDG targets 2.3, 1.4, 6.3, and with other listed in the diagram SDG targets, which collectively contribute to multiple impacts and the attainment of SDG 15.5. “*Pasture, rangeland ecosystem health*” and “*conservation and protection of natural habitats and biodiversity*” were defined as measures to achieve respective targets of SDG 15.5 by the SOM development consultation process in Mongolia in 2017. Further reference in Chapter 3, Figure 25 (*Water Management System Map*).

Figure 19: Example Leverage Points on Integrated Water Resource Management (IWRM); Govt Legislation and Policy; Rangeland Pasture management - SDG targets 6.5, 1.4/1.b and 2.4.





PROMOTE PEACEFUL AND INCLUSIVE SOCIETIES FOR SUSTAINABLE DEVELOPMENT, PROVIDE ACCESS TO JUSTICE FOR ALL, AND BUILD EFFECTIVE, ACCOUNTABLE AND INCLUSIVE INSTITUTIONS AT ALL LEVELS

Insights



The core principles of SDG 16 have been reflected in the Constitution of Mongolia, which declares to "Cherishing human rights and freedoms, justice, and national unity". It also declares "Respecting the accomplishments of human civilization, and aspiring toward the supreme objective of building a humane, civil and democratic society in the country".⁸⁹ In addition, the SDV 2030 guides with the principles for governance for sustainable development (See Figure 2, Chapter 1), with the most relevant principles which would contribute to achievement of SDG 16. The Government is committed to improving the quality of life of its people and ensuring environmental sustainability for future generations. Cooperation between and among key international stakeholders, private sector and civil society, is vital towards fulfilling the Government's commitment towards achieving the SDGs.



Mongolia has ratified and is implementing over 30 international human rights instruments, including core conventions, demonstrating its strong commitment to the Universal Declaration of Human Rights and the strengthening of the international human rights system. Mongolia is a party to 15 International Labour Organization (ILO) conventions and the four *Geneva Conventions on International Humanitarian Law*.⁹⁰

Bright Spots



- Mongolia has fundamentally changed its totalitarian regime, centralised economy, and highly ideological society, and is currently underway to build a democratic society and a market-based economy, the main feature of which are free elections, freedom of religion, private property ownership, and many other rights. The legal system was totally renewed to accommodate requirements of a democratic and rights based society.
- Mongolia is undertaking wide-ranging legal reforms to harmonise its national laws with international norms and standards on human rights. This inclusive process, with the active participation of civil society, encompasses the establishment of adequate national mechanisms, the adoption of relevant programmes and the improvement of institutional capacity.⁹¹
- Mongolia actively participates in UN peacekeeping operations to develop peaceful relationships with other countries and contribute to international peace-support efforts.



Hotspots

- The most significant human rights problems are corruption and widespread domestic violence. Vague laws and a lack of transparency in legislative, executive, and judicial processes undermine government efficiency and change corruption.
- Courts sometimes fail to function as independent and neutral adjudicators of criminal prosecutions and civil disputes. Domestic violence has been pervasive, and the government has not yet addressed it effectively.⁹²



Emerging Issues

Other human rights problems included police abuse of prisoners and detainees; poor conditions in detention centers; arbitrary arrests and lengthy pretrial detentions; government restrictions on media content; restrictions on the freedom of assembly; child abuse; trafficking in persons; discrimination against persons with disabilities; discrimination against lesbian, gay, bisexual, transgender, and intersex.⁹²



Recommendation for Leverage Points of Multiple Impacts

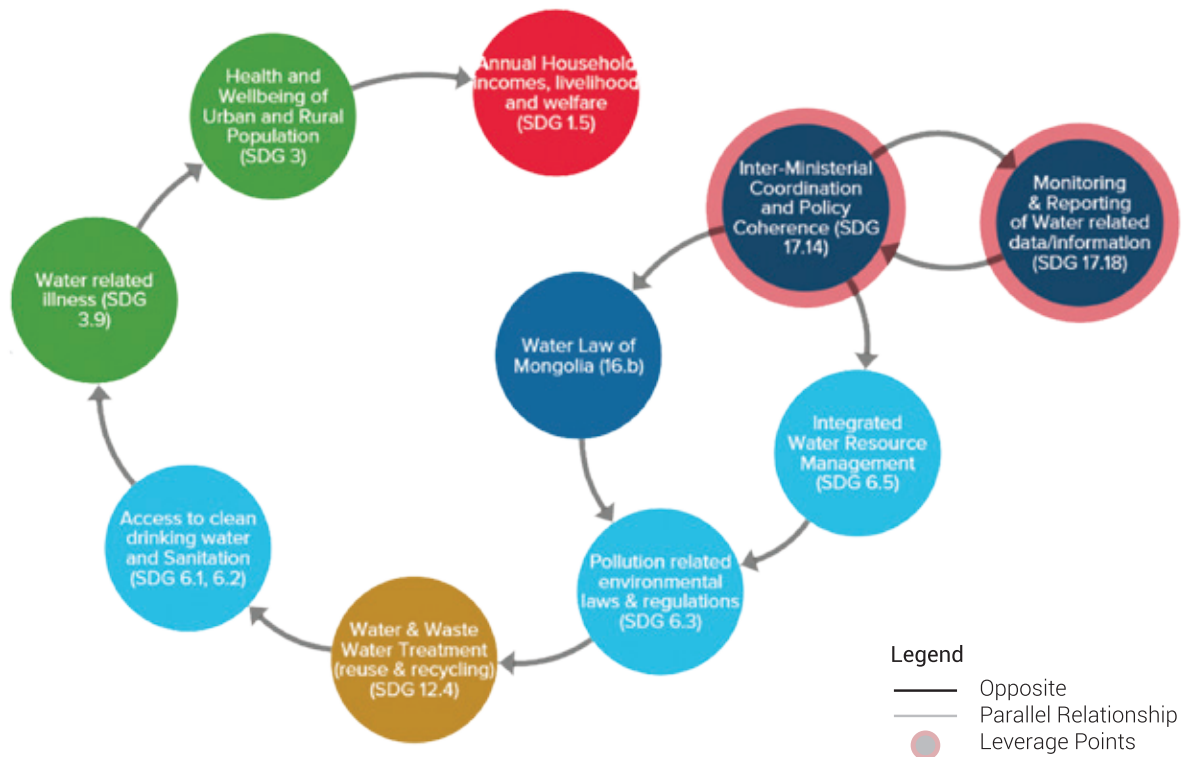


Policy coherence (See Figure 20 with example of LP on 17.4): Human rights and sustainable development are indispensable. There is a need to revise the law on human rights to include provisions about responsibilities on environmental impacts and their implications for human rights, and to protect the environment on which human rights depend.

Revising anti-corruption law: There is a strong need to revise the Law on anti-corruption with a clear system of restrictions, obligations, procedures and sanctions. Need crime prevention actions: Crime prevention actions need to be organised among the general public, especially among the vulnerable groups extensively, and awareness raising activities to improve the knowledge of citizens on how to exercise their rights to receive compensation for damages caused to them due to crimes committed by the faulty bodies.

Figure 20 illustrates one example of the Leverage Point (SDG target 17.14) and its linkage with other SDG targets. In this example, the influence of SDG 17.14 on *inter-ministerial coordination and policy coherence* is linked with SDG targets 2.4, 6.1, 3.9, 1.5, 6.5, 6.3, 16 b., which collectively contribute to multiple impacts and the attainment of SDG 16.b. "Water law of Mongolia" was identified as a measure to achieve SDG 16.b by the SOM development consultation process in Mongolia in 2017. Further reference in Chapter 3, Figure 25 (*Water Management System Map*).

Figure 20: Example of a Leverage Point on Inter-Ministerial Coordination and Policy Coherence- SDG target 17.14.



Legend
 — Opposite
 — Parallel Relationship
 ● Leverage Points



DEVELOPMENT OF METHODS TO STRENGTHEN AND IMPLEMENT THE GLOBAL PARTNERSHIPS FOR SUSTAINABLE DEVELOPMENT

Insights



The SDV 2030 calls to promote public participation and transparency, ensure public-private partnership, cooperate with international financial organizations, coordinate policies and follow governance principles for sustainable development, which is in line with the SDG 17 on strengthening partnerships, financial means, technology, capacity building, trade, and on enhancing policy and institutional coherence. Mongolia is ranked among the first 40 countries in the Doing Business Index, and is ranked among the first 70 countries by the Global Competitiveness Index in the world.^{94 95} As part of the global community, Mongolia has established diplomatic relations with 186 countries.⁹⁶ It is a member of the United Nations since 1961 and works closely with ADB, IMF, World Bank, WTO, Association of Cooperation Organizations, Mongolia has established diplomatic relations with 186 countries; is a member of the United Nations since 1961 and works closely with ADB, IMF, World Bank, WTO, Association of Cooperation Organizations, and other international organizations; received a total of USD 3.6 billion ODA during 1991 – 2016; per capita ODA was USD 79.1 million in 2015; 26.3 percent of ODA (in 2012) allocated for basic social services.⁹⁷



In 2016, Mongolia traded with 155 countries, reaching an overall trade turnover of USD 8274.5 million, including exporting to 74 countries, whereas in 1990, it traded with only a few countries and the trade turnover was about USD 1584.7 million (SDG 17.11).⁹⁸ The country is ranked 62 among 190 economies with regards to the ease of doing business, according to the latest World Bank annual ratings. The national strategies for the development of statistics of Mongolia for 2017 – 2020 aims to develop a comprehensive data ecosystem for the SDGs and SDV-2030, including establishment of reliable baseline data on data availability, accessibility and data gaps for planning and monitoring the SDGs and SDV.

Bright Spots



- The SDV 2030 is the first comprehensive planning mechanism that has aligned the country's challenges; priorities and aspirations of Mongolia to those of the rest of the world
- ICT plays an important role in achieving Mongolia' SDV. Almost 90 percent of the territory of Mongolia covered by the telecommunications network⁹⁹, and there has been a rapid increase of Internet and mobile users is cost-effective and facilitates economic development in services sectors as well as spillovers to other sectors.
- Mongolia has a relatively well developed statistical system for monitoring the SDV and SDGs.



Hotspots



- The Government's effort to mitigate the impact of external economic instability through expansionary economic policies was unsuccessful and resulted in an abrupt increase of public debts. Mongolia has launched an economic bailout programme worth USD 5.5 billion with the IMF and other partners to relieve debt pressures and sustain the national currency.
- The negative impacts of climate change are creating a significant challenge and affecting financial priorities and economic growth in Mongolia.
- Mongolia does not have clear financing strategies, nor an integrated capacity development policy to properly support the implementation of SDV 2030

Emerging Issues



- Uncertainty in the implementation mechanism of Global Partnerships for Sustainable Development and level of support expected is still causing mutual misunderstanding and overlapping of activities among organisations.
- Mongolia benefits from North-South and South-South cooperation as well as public-private



partnerships and philanthropic assistance. However, these efforts could be better coordinated, more result-oriented, as well as eliminating duplication of projects, and should be more accountable.

Recommendation for Leverage Points of Multiple Impacts



Financing framework (See examples of LPs in Figure 21): There is an urgent need to develop an integrated national financing framework for SDV, and to mobilise domestic and international resources while rationalizing public expenditure.

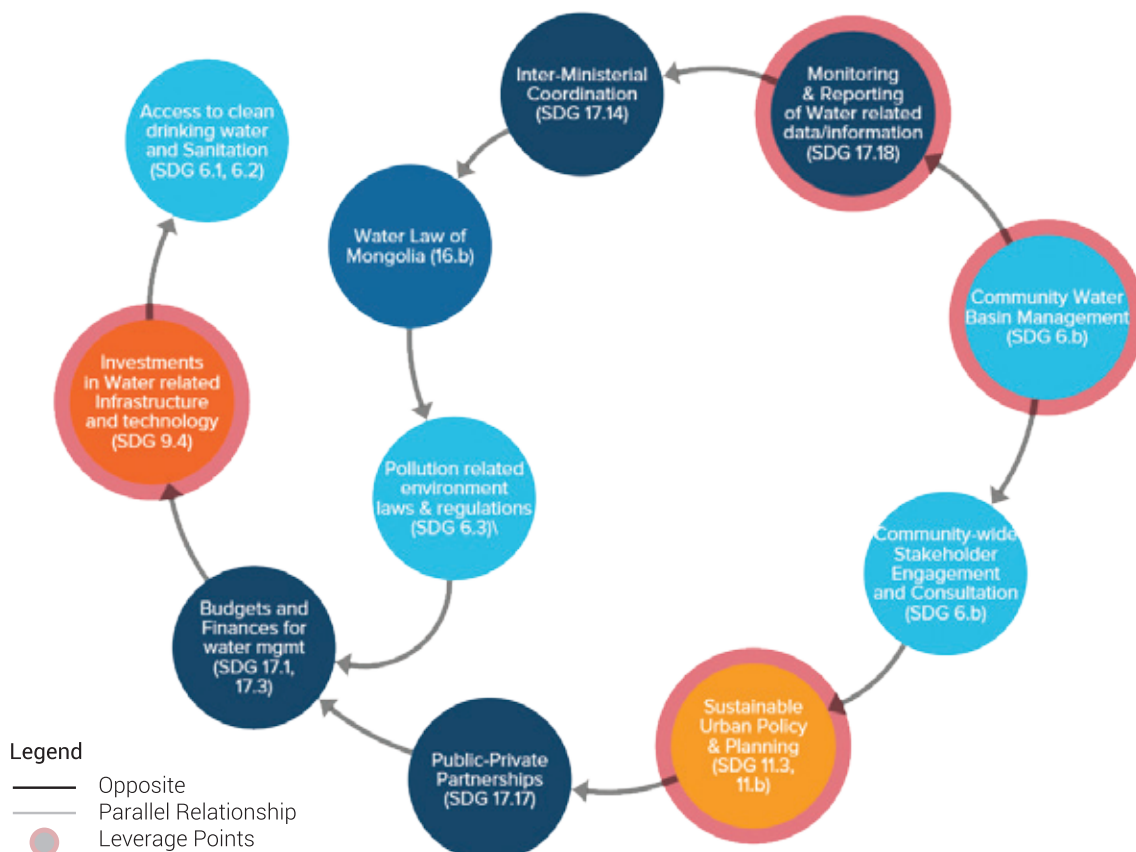
Strengthening performance and accountability (SDG 8): There is an emerging need to streamline and build on already existing and successful mechanisms, including performance and accountability frameworks; review and reporting mechanisms as well as alignment of resources.

Building capacity: Involve and build the capacity of academic institutions, non-governmental organisations, the private sector, international organisations and citizens for greater involvement in planning, monitoring and reviewing progress towards SDV and SDGs.

Encouraging participation of a wide range of stakeholders in monitoring the SDV and the progress on SDGs: Strengthening communication between producers and users of data and encouraging the use of data for monitoring the SDV and the SDGs through making data production and dissemination processes more responsive to user needs, more available in formats that is easy to understand and to track progress towards attainment of the SDV and the SDGs.

Figure 21 illustrates a few Leverage Points (SDG targets 6.b, 11.3/11.b) and their linkages with other SDG targets. In this example, the influence of SDG targets 6.b, 11.3/11.b on "community water basin management" and on "sustainable urban policy and planning" link to other SDG targets 6.3, 16 b, 9.4, 6.1, and they collectively influence the multiple impacts and the attainment of SDG 17 targets. "Finance and budgets for water management", "monitoring and reporting of water related data and information" as well as "community water basin management", and "investments in water related infrastructure and technology" were identified as a measure to achieve respective SDG 17 targets by the SOM development consultation process in Mongolia in 2017. Further reference in Chapter 3, Figure 25 (Water Management System Map).

Figure 21: Example of Leverage Points on Community Water Basin Management and on Sustainable Urban Policy And Planning - SDG targets 17.1, 17.3 and 17.18.



REFERENCES (CHAPTER 2)

- 17 Mongolia, National Statistical Office. "Sustainable Development Goals", SDG database. Available at <http://sdg.1212.mn/en> (assessed on 2017).
- 18 Mongolia, National Statistics Office, *Mongolian Statistical Yearbook 2016: Poverty indicators*, page 101 (Ulaanbaatar, 2017).
- 19 Ibid., *Calculation of percentage of the working age population was made based on 'Population of Mongolia by age group and sex'*, page 31, table 3.3.1
- 20 Bolor Radnaabazar and Khaliunaa Khuyag, "Inter-sectorial survey on preparedness to implement the SDGs", paper presented at the National Consultations on Development for Sustainability Outlook of Mongolia, Ulaanbaatar, August, November, December, 2017.
- 21 Mongol Bank, Survey Division, *Sample Survey on Socio-economic and Household Well-being, June 2016*. (Ulaanbaatar, 2016). Available at www.mongolbank.mn/documents/tovhimol/group11/11-07.pdf
- 22 Mongolia, National Statistics Office, "Poverty Profile – 2016". Available at <http://www.en.nso.mn/content/233> (assessed 2017).
- 23 Mongolia, National Statistics Office, *Indicators for Food Security Statistics 2016* (Ulaanbaatar, 2017)
- 24 Ibid., "Poverty Profile – 2016".
- 25 Arvinbayar Baatar, "Ensuring Food Safety in Mongolia by Institutionalizing Pre-import Inspection System", Policy analysis report, DCC 363.192 A.716, page 36. (Ulaanbaatar, Open Society Forum 2007). Available at www.forum.mn/res_mat/res_mat-6.pdf
- 26 Mongolia, State Great Khural, *Mongolia Sustainable Development Vision 2030*. Available at www.un-page.org/files/public/20160205_mongolia_sdv_2030.pdf (2016).
- 27 Mongolia, Center for Health Development, *Health indicators 2016* (Ulaanbaatar, 2017). Available at <http://www.chd.mohs.mn/2017/smta/2016%20Health%20indicator.pdf>
- 28 Ibid., page 18.
- 29 Ibid., page 41.
- 30 Ibid., page 41.
- 31 Ibid.
- 32 United Nations Population Fund, *Mongolia UNFPA 2016 Annual Report*, page 8, (Ulaanbaatar, 2017). Available at <https://mongolia.unfpa.org/en/publications/unfpa-mongolia-2016-annual-report>
- 33 Ibid., *Health indicators 2016*
- 34 United Nations Development Programme, *Human Development Report 2016*. Sales No. E.16.III.B.1. (Ulaanbaatar, 2017). Available at http://hdr.undp.org/sites/default/files/mongolia_human_development_report_2016_english_full_report_2016_06_28.pdf
- 35 Ibid., *Mongolia UNFPA 2016 Annual Report*
- 36 Ibid., *Mongolian Statistical Yearbook 2016*
- 37 World Bank, *Urban Poverty in Ulaanbaatar: Understanding the Dimensions and Addressing the Challenges* (Washington, 2017). Available at <http://pubdocs.worldbank.org/en/459481506972842865/Urban-Poverty-in-Ulaanbaatar-Final-20170810.pdf>
- 38 Ibid., *Mongolian Statistical Yearbook 2016: Main Indicators of Pre-School Institutions*, page 123.
- 39 Ibid., *Expenditure on Education Sector at current practices*, page 150.
- 40 Mongolia, National Statistics Office, *Labour Force Survey*, 3rd quarter, page 5. (Ulaanbaatar, 2017).
- 41 Ibid., *Mongolian Statistical Yearbook 2016: Members of the parliament by sex and age group*, page 23.
- 42 World Economic Forum, "The Global Gender Gap Report 2017", Insight Report (Switzerland, 2017). Available at http://www3.weforum.org/docs/WEF_GGGR_2017.pdf
- 43 Ibid., "Inter-sectorial survey on preparedness to implement the SDGs"
- 44 United Nations, Economic Commission for Europe, "Environmental performance reviews: Mongolia", paper prepared for the National Consultation on Sustainability Outlook of Mongolia, Ulaanbaatar, 22-23 August 2017.

- ⁴⁵ Mongolia, Ministry of Environment and Tourism, National Development Agency, "Introduction of the Methodology for Consolidating and Refining the EPR and SOM of Mongolia", national consultation workshop materials, 22-23 August 2017.
- ⁴⁶ Mongolia, Ministry of Environment and Tourism, *Environmental Statement of Mongolia 2015-2016* (Ulaanbaatar 2017).
- ⁴⁷ Mongolia, Integrated Water Resource Management Plan (2013). Available at <http://www.legalinfo.mn/annex/details/6140?lawid=9687>
- ⁴⁸ Ibid., "Environmental performance reviews: Mongolia"
- ⁴⁹ Ibid., "Introduction of the Methodology for Consolidating and Refining the EPR and SOM of Mongolia"
- ⁵⁰ Mongolia, National Statistics Office, *Social and Economic Situation of Mongolia* (Ulaanbaatar, October 2017).
- ⁵¹ Ibid.
- ⁵² Ibid., *Human Development Report 2016*.
- ⁵³ Ibid.
- ⁵⁴ Ibid., "Ensuring Food Safety in Mongolia by Institutionalizing Pre-import Inspection System".
- ⁵⁵ Ibid., *Social and Economic Situation of Mongolia*.
- ⁵⁶ Ibid., *Human Development Report 2016*.
- ⁵⁷ Ibid., *Mongolian Statistical Year Book 2016: Main indicators of the communications sector*, page 593 (Ulaanbaatar, 2017).
- ⁵⁸ Internet live stats, Internet Users by Country, 2016. Available at www.internetlivestats.com/internet-users-by-country
- ⁵⁹ Mongolia, National Statistics Office, *Gross domestic product, preliminary performance*, page 6 (Ulaanbaatar, 2017). Available from <http://>
- ⁶⁰ Ibid., *Mongolian Statistical Year Book 2016: Registered enterprises by activity status*, pages 617, 619, 621 (Ulaanbaatar, 2017).
- ⁶¹ Ibid., "Environmental performance reviews: Mongolia"
- ⁶² Mongolia, National Statistics Office, *Household Socio-Economic Survey 2016*, 4th quarter, page 10 (Ulaanbaatar, 2017)
- ⁶³ Ibid., *Poverty Profile-2016*, page 18.
- ⁶⁴ Ibid., *Human Development Report 2016*
- ⁶⁵ Mongolia, Ministry of Population Development and Social Protection, *Review of program design and beneficiary profiles of social welfare programs in Mongolia*, page 14. (Ulaanbaatar, 2015). Available at <http://documents.worldbank.org/curated/en/599141468185351818/pdf/99518-WP-World-bank-group-eng-Box393201B-PUBLIC.pdf>
- ⁶⁶ Ibid., "Inter-sectorial survey on preparedness to implement the SDGs"
- ⁶⁷ Mongolia, National Statistics Office, Population of Mongolia by sex and urban/rural (assessed 2017). Available at <http://www.1212.mn>
- ⁶⁸ Mongolia, National Statistics Office, *Economic and social status of the capital city of Mongolia 2016*, page 24 (Ulaanbaatar, 2017). Available at <http://www.1212.mn>
- ⁶⁹ Mongolia, National Statistics Office, *2015 Population and housing by-census of Mongolia*, National report, page 58 (Ulaanbaatar, 2016). Available at <http://www.1212.mn>
- ⁷⁰ United Nations Environment Programme, *Ulaanbaatar waste management and improvement strategy and action plan 2017 – 2020*, page 6 (Ulaanbaatar, 2017).
- ⁷¹ Mongolia, Ulaanbaatar Municipality, *Green development strategy and action plan for Ulaanbaatar for 2020*, page 10 (Ulaanbaatar, 2015). Available at <https://asiafoundation.org/resources/pdfs/GreenDevelopmentStrategicActionPlanforUlaanbaatar2020.pdf>
- ⁷² Ibid., *Ulaanbaatar waste management and improvement strategy and action plan 2017 – 2020*.
- ⁷³ Delgerbayar B, "Current Status of Solid Waste Management in Mongolia and Business Opportunities" research report, (UNIDO 2016). Available at www.unido.or.jp/files/Mongolia-updated.pdf
- ⁷⁴ Mongolia, Ministry of Environment and Tourism. "Third National Report on Implementation of the UNFCCC", discussion paper, (June 2017).

- ⁷⁵ Mongolia, Ministry of Environment and Tourism, "Compilation of presentations at the 21st Conference of the Parties to the United Nations Framework Convention on Climate Change" (2015)
- ⁷⁶ Global Green Growth Institute, *Fact Sheet of Mongolia* (Ulaanbaatar, 2017)
- ⁷⁷ Mongolia, Ministry of Environment and Tourism, *Environmental Statement of Mongolia 2015-2016* (Ulaanbaatar, 2017).
- ⁷⁸ Ministry of Environment and Tourism, Swiss Development Agency, *Sustainable Development Goals: Introduction* (Ulaanbaatar, 2017). Available at http://esd.mn/?page_id=776
- ⁷⁹ Mongolia, Ministry of Environment and Tourism, "Function and cooperation of national stakeholders to implement National Programme for Biodiversity Conservation", paper presented at the ToT on Sustainability Outlook of Mongolia. Ulaanbaatar, May 2017.
- ⁸⁰ *ibid.*, *Sustainable Development Goals: Introduction*
- ⁸¹ Mongolia, State Great Khural, Standing Committee on State Structure, *Mongolia Sustainable Development Vision- 2030: Justification and Framework*, page 31 (Ulaanbaatar, 2016).
- ⁸² United Nations Food and Agriculture Organization, *Global Forest Resources Assessment 2015, Desk Reference, Country report: Mongolia, page 5* (Rome, 2015). Available at <http://www.fao.org/3/a-i4808e.pdf>
- ⁸³ Mongolia, Ministry of Food and Agriculture, *National report on the rangeland health of Mongolia* (Ulaanbaatar, Mongolia 2015). Available at https://jornada.nmsu.edu/files/Mongolia-Rangeland-health-Report_EN.pdf
- ⁸⁴ *Ibid.*, "Environmental performance reviews: Mongolia"
- ⁸⁵ *Ibid.*, "Environmental performance reviews: Mongolia"
- ⁸⁶ Mongolia, Law on Soil Protection and Prevention from Desertification (2012). Available at <http://www.legalinfo.mn/law/details/8664>
- ⁸⁷ *Ibid.*, *Environmental Statement of Mongolia 2015-2016*
- ⁸⁸ *Ibid.*
- ⁸⁹ People's Great Khural of Mongolia, *The Constitution of Mongolia* (Ulaanbaatar 1992). Available at www.legalinfo.mn/law/details/367
- ⁹⁰ United Nations General Assembly, Letter dated 5 October 2015 from the Permanent Representative of Mongolia to the United Nations addressed to the President of the General Assembly, A/70/375 (6 October 2015). Available at <http://www.mfa.gov.mn/wp-content/uploads/2015/06/Pledge-Commitment.pdf>
- ⁹¹ *Ibid.*, *Human Development Report 2016*.
- ⁹² United States Department of State, *Mongolia 2016 Human Rights Report*. Available at www.state.gov/documents/organization/265568.pdf
- ⁹³ *Ibid.*
- ⁹⁴ World Bank Group, *Doing Business 2017*, flagship report. Available at <http://www.doingbusiness.org>
- ⁹⁵ *Ibid.*, *The Global Gender Gap Report 2017*
- ⁹⁶ Mongolia, National Statistics Office. Available at <http://www.1212.mn>
- ⁹⁷ Mongolia, Ministry of Economic Development, *Fifth national progress report: Achieving the Millennium Development Goals* (Ulaanbaatar, 2013). Available at www.mn.undp.org/content/mongolia/en/home/library/National-MDG-reports/TheFifthNationalMDGReport.html
- ⁹⁸ Mongolia, Ministry of Foreign Affairs, *Blue Book 2016* (Ulaanbaatar 2017).
- ⁹⁹ *Ibid.*, *Fifth national progress report: Achieving the Millennium Development Goals*

III: INTEGRATED POLICY DEVELOPMENT: A SYSTEMS APPROACH

The SOM was developed through a comprehensive analysis of policies and data, and through application of a systems-thinking approach, which reviewed and mapped institutional and functional interlinkages across the SDG framework. Supported by national level data and extensive consultation, systems thinking assessed the effectiveness of existing policies and programmes and identified key leverage points and opportunities for potential context-specific interventions and integrated policy statements to optimize efforts to attain the SDG targets. As a result of this process, four priority areas were established to provide a focus for integrated policy interventions and accelerate progress towards multiple targets. These four thematic priority areas, which also are consistent with the SDV 2030 and the NGDP, are:

- Sustainable Water Management;
- Sustainable Land Management (with special focus on agricultural pastureland management);
- Sustainable Natural Resource Use (with a focus on industry); and
- Sustainable Tourism and Economic Growth.

This chapter describes the four priority areas which were identified for integrated policy actions, illustrating how the systems approach and mapping led to a better understanding of the policy areas, their relevance to the SDGs, and recommendations for further actions

To support Mongolia's sustainable development planning, analysis of causal interlinkages across all SDGs was conducted, to identify the most relevant targets and indicators. Analytical systems maps were developed to illustrate interlinkages and the policy levers which can potentially generate multiple impacts. A Rapid Strategic Impact Assessment (RSIA), which included a perception-based survey, and the systems mapping represented initial steps in the development of integrated policies and were instrumental tools to visualize system structures. The results can lead to design plans to ensure implementation of the SDGs, and alignment with the country's vision for sustainable development

Following analysis of Mongolia's visionary and planning documents (NGDP and SDV 2030), and informed by the results of the RSIA and the 17 SDG profile analysis (See Chapter 2), the four thematic priority areas were further explored for their cross-cutting nature and the potential for multiple benefits among relevant SDGs. All seventeen SDGs and applicable targets were assessed and clustered through this process, as deemed relevant to each of the selected four cross-cutting areas (See Figures 22, 24, 26, 28). This further informed selection of leverage points and development of integrated policy statements and recommendations to guide mid-term interventions. The following sections describe the importance of each of the four priority areas to Mongolia's sustainable development vision, and the results and recommendations from the systems analysis.

Sustainable Water Management

The sustainable management of water has vital importance for the economic prosperity and social development for the people of Mongolia. Unfortunately, water scarcity due to climate change, increasing contamination and pollution of surface water resources, and inefficient water supply and sewage systems have converged to create an untenable situation that is degrading the natural environment, and the ecological systems that sustain and allow for a flourishing human society. This situation is worsened by a lack of coordination in policy formulation, planning and implementation across ministries and agencies at both the national and sub-national levels, and is intensified by very limited investments in the water sector commensurate with population and economic growth. Therefore, the use and management of the country's water resources are currently unsustainable. This prompts the question as to 'how best to ensure future water access and security in the face of climate change and continued economic development?'¹⁰⁰

The following water-related issues must be addressed in order for Mongolia to realize a sustainable future: unsafe drinking water and optimal wastewater treatment; unsustainable use of water resources, pollution and contamination of water resources; insufficient and unclean water in the environment; hazards due to floods, droughts, dzuds and other disasters; low capacity on water management; lack of monitoring and research for water management; lack of data and information management; lack of public awareness on water management and public participation; insufficient financing for infrastructure and recurrent

costs for water management institutions; and transition of institutions for water management to the new market economy.^{101 102} As identified in SDG 6 profile, there are a number of water-related interlinkages across the SDGs, which can lead to integrated policy development. To advance the principle of 2030 Agenda on 'leaving no-one behind', corresponding policies and institutional arrangements, regulating access to water, in particular by people, herders and animals, should be cleared.

Sustainable Water Management-- Interlinkages of SDG Clusters

Under the thematic area on 'Sustainable Water Management' stakeholders in the SOM development process selected the most relevant SDGs to the water theme, by grouping SDGs 6, 7, 8 and 17. Causal interlinkages were identified among the clustered SDGs around the goal of sustainable water management. Figure 23 illustrates the mapping of interlinkages that exist between these SDGs in the national context.

SDG 6 is strongly linked with the three other SDGs (7, 8, 17). In particular, SDG 6 links with SDG 8 as water is a critical resource needed for Mongolia to enhance its industries. Both the agricultural and the mining sectors, which employ many people in both the formal and informal workforce, each require sufficient water to function. Economic growth provides the means for investment in the development and utilisation of technology for using water more efficiently, for treatment of water for domestic consumption, and for increasing access to water.

SDG 6 is linked with SDG 7 through a two-way causal relationship. Energy is required to power irrigation and groundwater extraction pumps and for water treatment for domestic use. Energy production in Mongolia, which is heavily dependent on coal burning, requires water for processing of coal and also to power production from the burning of coal. In addition to the need for water to provide energy, the emissions from coal-fired power plants create acidic precipitation, which contaminates surface water supplies and create water quality concerns.

Partnerships will play a significant role if Mongolia is to realize its sustainable development aspirations, therefore SDG 17 has been causally linked to support progress to achieve SDG 6 as well as SDGs 7 and 8, through the following actions: i) identification and implementation of investment promotion mechanisms and opportunities, including via public-private and civil society partnerships; ii) transfer and diffusion of environmentally sound technologies; iii) operationalising the technology bank and science, technology and innovation capacity building mechanisms to increase the availability of quality and timely statistical data for reporting and informing policy and planning decisions.

Sustainable water management has direct implications on economic growth, prosperity, social development and individual human wellbeing. The cluster analysis revealed the importance of strong governance, policy and legal frameworks as being critical in driving change, as are financing, beneficial partnerships, investments in infrastructure and technology, access to sustainable and clean energy, human capacity development and participation of community stakeholders in local sub-national water management planning and implementation.

Initial System Map at Goal and Target Level for Water Management

Following the SDG Cluster analysis, stakeholders mapped elements and linkages of the current water management system of Mongolia. Figure 23 shows a systems map of various causal interactions (linkages) among identified factors (elements) involved in the water resources management system. The initial map was developed from the baseline stakeholder group work and further developed through national consultations. This was followed by identification of the targets that have the most impact with other goals. This was followed by identification of the targets that have the most impact with other goals. Examples of most impactful policy leverage points among targets are circled in a systems map (See Box 7 for the Legend of Figure 23). A sustainable water management system requires simultaneous interventions through the following leverage points to generate multiple impacts: Water Law of Mongolia (SDG 16.b); water management policy (SDG 6.5) and investments in water infrastructure & technology

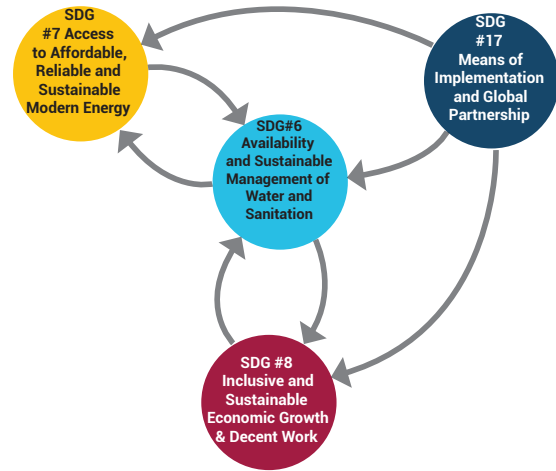


Figure 22: Sustainable Water Management SDG Cluster Analysis.

(SDG 9.4, 17.1, 17.3) , enforcement of pollution-related environment laws & regulations (SDG 6.3); Inter-Ministerial coordination (17.14); Integrated Water Resource Management (IWRM) (SDG 6.5) coupled with monitoring & reporting to measure to the effectiveness of water management policies (SDG 17.18); community engagement (SDG 6.b) for maintaining natural water cycle system and surface water hydraulics and flow; human capacity development of water management personnel (SDG 6.a) is also be a critical leverage point for increasing the overall system dynamics and behaviour.

Recommendations for Linking Leverage Points to the Mid-term Planning

The exploration of Sustainable Water Management led to the following recommendations for mid-term planning measures: to establish economic indicators of the water sector for sustainable/eco-friendly economic growth through the ways to improve integrated water management, to support waste water utilization and mechanism, to set a compensation fee for water contaminants, to implement a policy to increase water resource (e.g. to build water reserve), to support and develop clean technology, to improve inter-sectoral linkages, to extend a monitoring network, to increase water resource to meet with standard of drinking water and households based on transparent information flows between all sectors.'

To achieve these recommendations, there is a need to improve inter-sectoral coordination, to define indicators for each goal/target, to provide information/training/instruction to increase understanding at all levels, to submit the data/information of performance in consistent formats, and to report regularly. It is crucial to develop the policy – 'who will lead', to have well trained human resource – capacity and condition to work stable as well as discipline, system of accountability and fair performance appraisal (when, what, how to assess) for the achievement of the goal '*By 2013, achieve universal and equitable access to safe and affordable drinking water for all*'. In the Mongolian context the goal transformed as 'to supply equitable access to safe and affordable drinking water, mid-term (2021-2025): achieve to 85 percent. Further, an overall attainment of the cross-thematic objectives could be undertaken through formulation of the integrated policy statements (See example of Statement in Box 6), and respective scenario planning processes, as summarised in discussion documents of SOM.

Box 7: Integrated Statement for Water Management System

Provide the population with safe and affordable drinking water and maintain sustainable water use across all sectors by enforcing integrated water management with the focus on water conservation through establishment of economic values and adequate pricing, application of water reuse and treatment technology, and promotion of accountability and monitoring. [Source: Group work on integrated policy statement for scenario planning, NC2, November 2017](#)

Box 8: Proposed Leverage Points for Sustainable Water Management System

Nine leverage points were identified from the SDG cluster analysis and system mapping exercise for policy intervention for the "Sustainable Water Management" system (See Figure 23). The SDG targets in parenthesis represent the most relevant one for proposed policy intervention.

1. **The Water Law of Mongolia** (SDG 16.b) is a strong leverage point as it is a primary driver for all water management related policies of different ministries and agencies, which in turn has a direct influence on budgets and financing and environmentally related pollution laws. The water law also influences inter-ministerial coordination, which supports Integrated Water Resource Management (IWRM) and monitoring and reporting of water-related data.
2. **Water management policy** (SDG 6.a) of different ministries/agencies is a leverage point, as policy directly influences plans, programmes and budgets, which in turn influences the investment situation linked to water-related infrastructure and technology, especially earmarked towards wastewater treatment and water use efficiency. A policy that enables 'environmental and financial-focused market-based instruments', such as environmental taxes, in particular, water tariffs and taxes (on how water is consumed and conserved by water users, especially by industry) is instrumental.
3. **Investments in water related infrastructure & technology** (SDG 6.a) have impacts on water availability and water quality for agriculture (livestock and crops), industry (mining), and domestic utilisation (drinking water). This, in turn, supports economic development and employment.

4. Enforcement of Pollution-related environment laws & regulations (SDG 6.3) influences the government's budgetary allocation in this area, which can lead to investments in water-related infrastructure and clean/eco-efficient technology (including wastewater treatment) that can improve water quality. Improved water quality then ensures increased access to clean and affordable drinking water and also an improvement in the overall sustainability of the national water resource, including the Tuul River that flows through Ulaanbaatar.

5. Inter-Ministerial coordination (SDG 17.14) can also be an important leverage point in overall water management as it directly affects water-related policy formulation and coherence, budgeting and monitoring and reporting, which leads back to policy formulation and implementation.

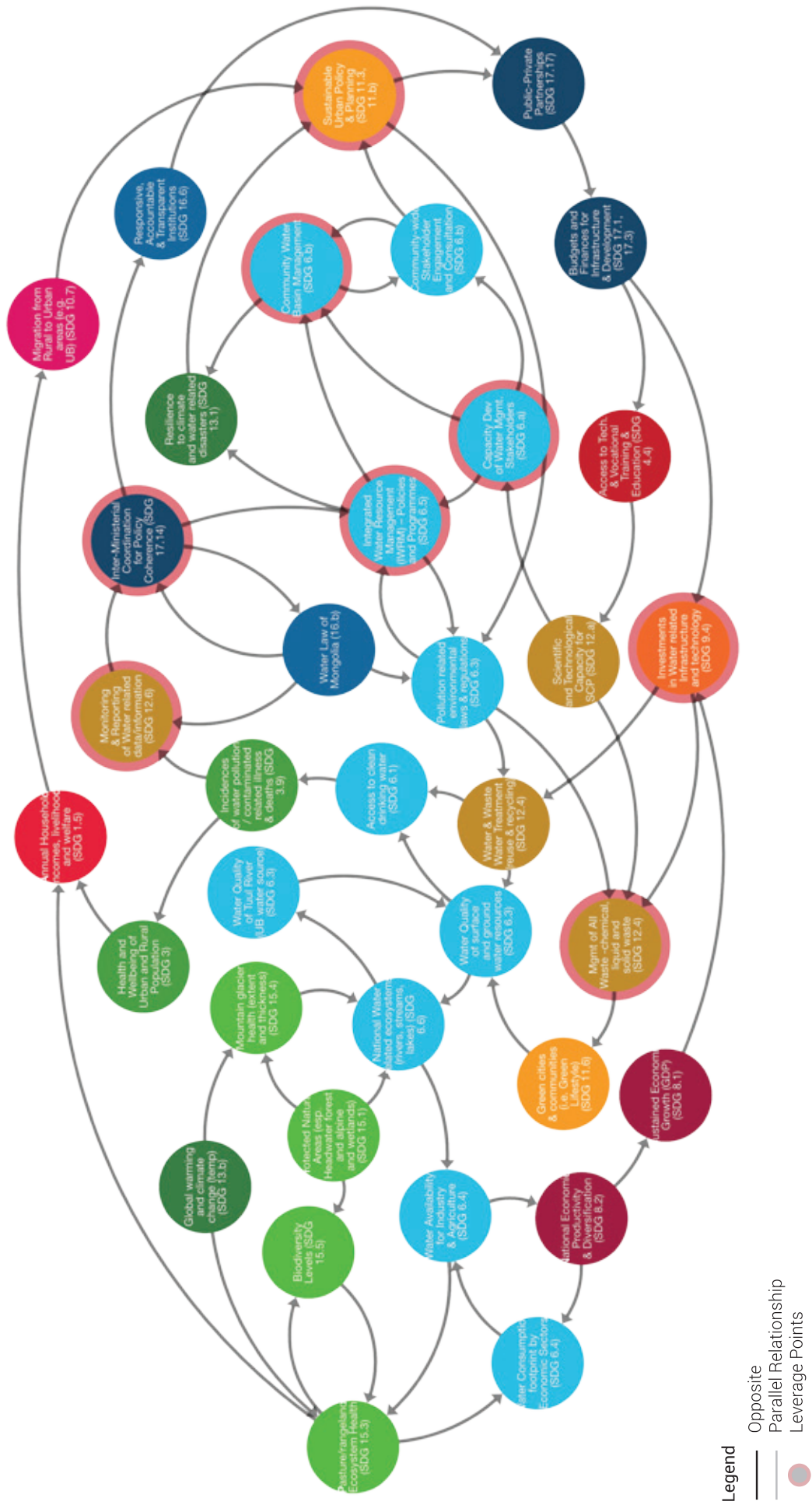
6. Monitoring & reporting (SDG 17.8) is a strong leverage point for water management as it is the crucial evaluation measure of the effectiveness of water management policies, which is a core primary driver for water management strategies and budget allocation.

7. Integrated Water Resource Management (IWRM) is a very strong leverage point if supported by other leverage points such as environmental laws and regulations, inter-ministerial coordination, water-related policies, sustainable budgets, as well as the strong technical capacity of water management personnel and involvement of community representatives in catchment and water resource management decisions. Strong IWRM (SDG 6.5) can have a positive influence on the management of protected areas (esp. headwater forest and alpine and wetlands), which help in ensuring surface water flow and groundwater recharge rates that sustain water availability levels for agriculture (livestock and crops) and Industry, all of which contribute to economic growth and employment in the country.

8. Community Engagement (SDG 6.b) on water issues via Community water basin management can be a high-impact leverage point as it will reinforce the effectiveness of integrated water resource management (IWRM), which in turn will strengthen resilience to climate change and water-related disasters, contributing to more ensuring more sustainable rural livelihoods and human welfare. Moreover, involving the community in water management has proven to be effective in a number of countries in supporting the protection of forests and headwater areas, which are critical for maintaining natural water cycle system and surface water hydraulics and flow.

9. Human Capacity Development (SDG 6.a) water management personnel is a critical leverage point for increasing the overall system dynamics and behaviour. Building capacity of both water management personnel within government departments, especially at the sub-national level will have direct impacts on the successful implementation of integrated water resource management regionally and locally and help support active community involvement in local water basin management, with implications throughout the overall system.

Figure 23: Mongolia Water Management System Map at Goal and Targets Level (to attain SDGs 6,7,8, 17) and Box 8 with the Legend on LPs.



Sustainable Land Management (Agriculture)

The SDV 2030 aspires to create a sustainable agriculture system for the country's future through the preservation of native livestock and reducing land deterioration, while increasing productivity that supports the business and economics of herders. Such a system must be adapted to climate change and support the adoption of economical and advanced agro-technical and irrigation technology, value-added processing to agricultural products that meet international standards, and a financial, economic and legal environment for sustainable production.⁴ Thus, Mongolia must strive to balance the well-being of pastoral households with productivity and support significant improvements in rural extension services for research and innovation for breeding and disease prevention, crop production and advance education for herders and farmers.¹⁰³

SDG Grouping into Clusters: Interlinkage

Under the thematic area of Sustainable Land Management, stakeholders, representing different government ministries and sectors identified a set of goals and analysed the cluster of SDGs 1 (No Poverty), 2 (Zero Hunger), 3 (Health and Well-being), 4 (Education), and 5 (Gender Equality).

From the group discussions, the causal interlinkages were identified among the clustered SDGs around the goal of achieving food security. Figure 24 illustrates the interlinkages that exist between these SDGs in the national context.

Ensuring that all people have access to safe, nutritious and sufficient food all year (SDG 2) is the core within the cluster of five SDGs, which depends on success in significantly reducing rural poverty (SDG 1) and increasing attention to the special needs of pastoral women, elderly and rural youth (SDG 5), while also ensuring inclusive education for all citizens, particularly, herders in remote rural areas with a limited access to information and learning opportunities (SDG 4).¹⁰⁴ It was agreed that improving access to quality education (SDG 4) was the principal basis to empower disadvantaged members of the society including poor women, youth and elderly (SDG 5) as well as to tackle rural poverty by facilitating employment of the vulnerable groups (SDG 1) and diversifying income sources of rural households, ultimately leading to improved wellbeing and healthy life (SDG 3). With the dominant pattern of rural poverty, pastoral women's tenure rights to land and rights for co-ownership of household assets were considered to be critical for their economic independence, thus also reducing risks of domestic violence against women and children. Empowering women in agriculture through increasing their participation and leadership in decision-making over agricultural production and incomes (SDG 5) also has been shown to improve both family health (SDG 3) and nutritional outcomes (SDG 2).

Furthermore, agriculture influences mental, emotional and physical health (SDG 3) directly through its ability to provide a sufficient quantity of nutritious foods (SDG 2) for direct household consumption, which is strongly linked with access to health education (SDG 4). However, unsustainable agricultural practices can constrain or even counteract healthy lives as a result of soil degradation and water pollution due to overgrazing, excessive use of chemicals and poor crop and livestock management practices, as well as health risks associated with soil and water pollution.

Initial System Map at Goal and Target Level for Agriculture & Land Use

Following from the SDG Cluster analysis, elements related to the theme linkages were mapped by adding the current water management system of Mongolia. Figure 25 shows a systems map, of various causal interactions (linkages) among identified factors (elements) involved in the agriculture land management



Figure 24: Sustainable Agriculture Rangeland Management SDG Cluster Analysis.

system. The map was initially developed during the baseline analysis and improved through national stakeholder consultations.

The mapped interlinkages indicate that realizing the potential sustainable agricultural growth and development in Mongolia will require a significant improvement in several areas to achieve the goals of increased volume and quality of agricultural products, and to improve competitiveness within the international agriculture food market. Much of Mongolia's economy is dependent upon agriculture, policies to ensure attainment of SDG 8.2, to achieve higher levels of economic productivity in the sector, would be among the most impactful. As a result, SDG 8.2 has been identified as a key leverage point (see Figure 25).

The national agriculture production, has four core elements, including rangelands, herders/farmers, livestock husbandry and crop production. Without advancement in these elements, the triple goals of achieving full supply of domestic food demand, increased export of processed and finished agricultural products, and healthy balance with ecosystems cannot be fulfilled. These factors are in turn dependent on a number of other key factors including: enabling incorporation and effective use of science and technology (SDGs 12.a, 17.8); strengthening the overall system of assessment, monitoring and reporting (SDG 17.18); and increasing soum-level cooperation (16.7).

Much of the mapping focused on rangelands, the key production asset that supports the other three elements (livestock, herders, and enterprises). Multi-functional use of rangelands includes the provision of essential habitat for steppe and forest ecosystems accommodating a significant number of endangered wildlife species as well as utilisation for tourism and recreational activities.

The analysis of herders highlighted the need to strengthen pastoral institutions for rangeland management, including members' access to education (SDG 4), and other social services (SDG 1). Notably, improvement of herder knowledge on resource management, livestock health, production, and marketing is considered essential. The systems analysis also revealed the urgency for improving livestock nutrition and health via modern animal husbandry technology and management, increasing overall crop production (e.g. wheat, potatoes, vegetables and animal fodder) through increased access to sustainable water sources, and the introduction and wide-spread promotion of international standards for agricultural products (SDG 8.2) in order to increase export potential resulting in increased employment (SDG 8.5) and household incomes (SDG 1.2) contributing to overall economic growth (SDG 8.1). To efficiently support agriculture entrepreneurs, various financial tools such as soft loans and partial subsidies would be necessary to increase overall agricultural production capacity.

Participants, prompted by the developed system map, agreed that attaining the government goals for increasing the volume and quality of agricultural products to supply domestic demand and compete at the international markets, depends on a number of linked system 'drivers' including enabling the incorporation and efficient use of science and technology; ability to finance programmes, strengthening the institutional system for monitoring the enforcement and reporting for accountability; and increasing consultation and partnerships with all stakeholders. Taking into the account the analysis of these four elements, the inter-linked SDG targets expected to have multiple impacts are targets 1.a, 2.4, 6.5, 12.a, 17.14, 17.17. (See Box 9 as a legend for the Figure 25). Sustainable Agriculture and Land Management System requires interventions in seven leverage points:

- Strengthened human capacity development;
- Inter-ministerial coordination & policy;
- Legislation that acknowledges and protects customary tenure rights of herder communities and formalizes their participation in rangeland management;
- Improved access to financial resources & investment for agriculture is another critical leverage point;
- Cross-sectoral cooperation for creating synergy between government, the private sector, academia and civil society (including local community organizations);
- Compliance with an International Standards for Agricultural Products (Safety & Quality);
- Integrated Water Resource Management (IWRM).
- Further, an overall attainment of the cross-thematic objectives could be undertaken through formulation of the integrated policy statements (See Box 8 with Example), and respective scenario planning processes, as summarised in discussion documents of SOM and in Annexes. Compliance with an International Standards for Agricultural Products (Safety & Quality);

- Integrated Water Resource Management (IWRM).

Further, an overall attainment of the cross-thematic objectives could be undertaken through formulation of the integrated policy statements (See Box 8 with Example), and respective scenario planning processes, as summarised in discussion documents of SOM and in Annexes.

Recommendations for Linking Leverage Points to Mid-term Planning

The inter-sectoral thematic group on agriculture and land use management highlighted the mid-term planning arrangement that the sector of agriculture is an umbrella or a macro theme that covers a wide range of issues including human development (health and education), food safety, land management, water management, bank and finance, and inter-sectoral linkages or integrated management (See Box 9). There is a need to consider all these issues in policy planning and implementation as leverage points to move the sector forward systematically.

Box 9: Integrated Statement for Agriculture Land Management System

Achieve agricultural development to meet domestic food consumption and food security fully, and set necessary foundations for export-oriented livestock production through extension services for technology advancement and business entrepreneurship while keeping healthy balance for maintaining ecosystem services [Source: Group work on suggested version for the integrated policy statement for scenario planning, NC2, November 2017](#)

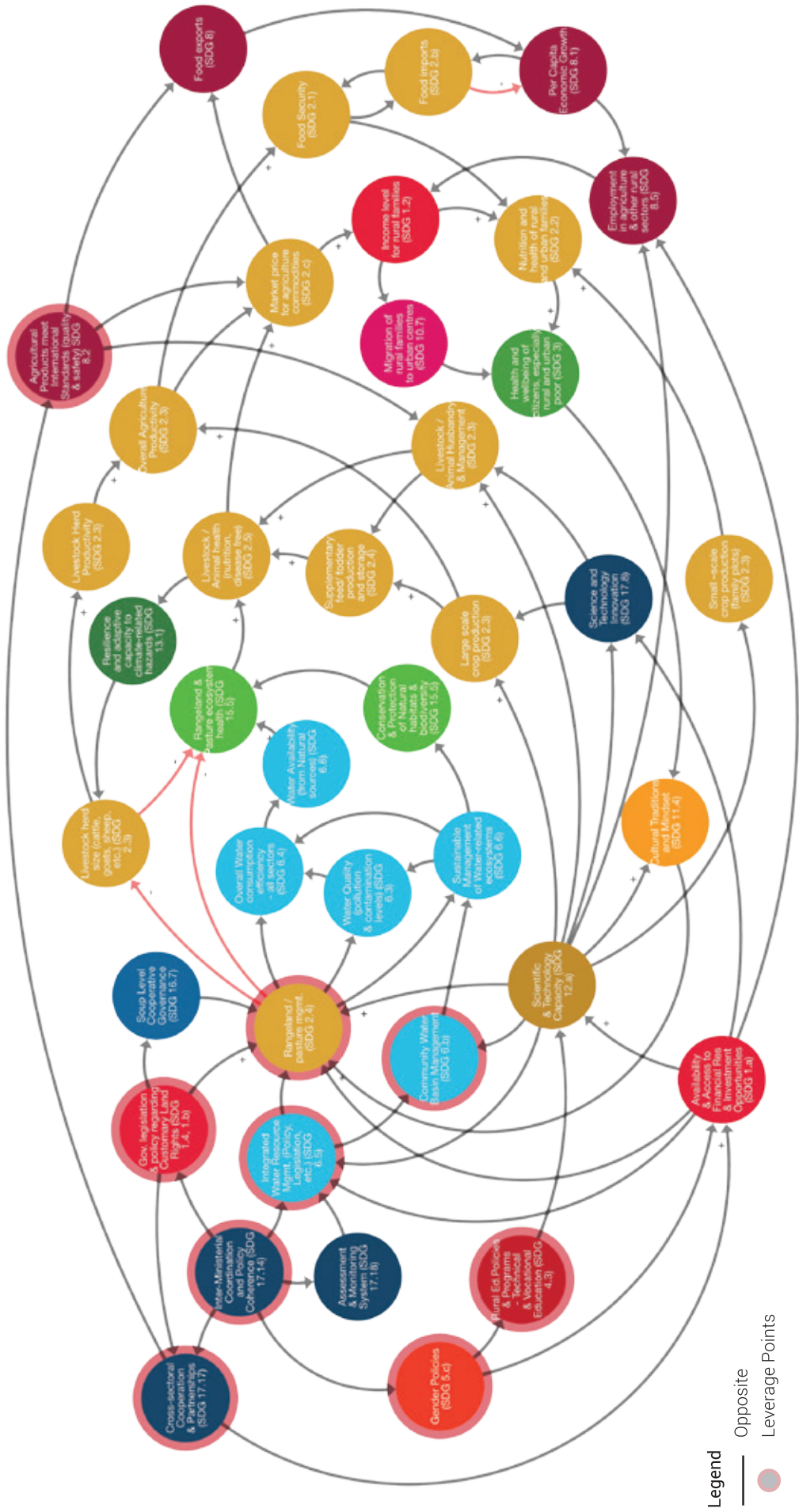
Box 10: Proposed Leverage Points for Sustainable Agriculture and Land Management System

There following leverage points were identified from the SDG cluster analysis and system mapping exercise for policy interventions on Sustainable Land Management/Agriculture System (See Figure 25). The SDG targets in parenthesis represent the most relevant for the policy intervention.

1. The overall strengthening of **human capacity development** through education and training (SDG 12.a). Human capacity development will increase the adaptive capacity of agricultural communities and sectors (livestock and crops) for climate change, through increased knowledge and skills, and enable this sector to shift from one that is solely dependent on agriculture commodity exports to one that has greater capacity and reliance on value-added quality products that meet international standards (food safety for example).
2. **Inter-ministerial coordination & policy** (SDG 17.14). is leverage point since policy emanating from different sectors that are not necessarily directly connected to agriculture can have systemic impacts on agriculture. Stronger coordination between ministries can influence future agricultural legislation and policy formulation, cross-sectoral cooperation between government, the private sector and civil society in the planning and implementation of policies, and in the strengthening of the overall quality and standards of agricultural-related products.
3. **Government legislation** (SDG 2.4). that acknowledges and protects customary tenure rights of herder communities and formalizes their participation in rangeland management. This links to the strengthening of local community (within soum) institutions and resource governance systems, and rangeland management practices including grazing lands and livestock, and stakeholder cooperation, all of which have implications to maintaining ecosystem services as well as ensuring access to financial resources and extension services.
4. **Access to financial resources & investment** (SDG 1.a). for agriculture is another critical leverage point in this area that can be directed to human capacity development, investment and utilization of new technology and infrastructure, and rangeland management practices favourable for forage production.
5. **Cross-sectoral cooperation** (SDF 17.17) is another critical leverage point. Cooperation and synergy between government, the private sector, academia and civil society (including local community organizations) can have a positive influence in mobilizing expertise, resources, investment and financing for small and large-scale farming operations, as well as strengthening the overall value chain for the country agricultural products. For example, the involvement of the stock exchange market, improved policy coherence, and integrated management via participation of other line ministries, such as in monitoring and reporting, can promote the efficiency and quality of production systems and products, help in securing access to investment capital, and also advance environmental management policies and practices.

6. The sector's ability to meet and comply with [International Standards for Agricultural Products](#) (Safety & Quality, SDG 8.2). The rationale here is based on the fact that having agricultural products, whether produce, meat, or other vegetable or animal products (processed or not), at a level that meets international quality and safety standards will have long-term impacts on economic growth as Mongolia will have access to more markets internationally.
7. [Integrated Water Resource Management \(IWRM\)](#). (SDG 6) There are multiple users of water across several vital sectors in Mongolia, and due to compounding pressures, the sustainable management of water in the country to meet all peoples' needs, thus, there is a need to carry out integrated water resource management in cross-sector policies and actions at both national and sub-national levels.

Figure 25: Land Management Systems Map: In Focus - Agriculture Sector (to attain SDGs 1-5) and See Box 10 with the Legend on Leverage Points.



Legend
 —●— Opposite
 ● Leverage Points

Sustainable Natural Resource Use (Industry)

The overall goal for the thematic area of Sustainable Natural Resource Use, developed through the national consultation process, is to “preserve natural resources for future generations to be able to live in a healthy and safe environment through proper use, rehabilitation and conservation of Mongolia’s natural resources and environment.” To achieve this goal, an underlying outcome, or system condition, relies on the “sustainable management and operations of natural resource based industry”, from which Mongolia’s economic growth prosperity is currently inextricably linked.² Management of natural resources that considers the relationships and links to all the dimensions of sustainable development is necessary to ensure that these resources can benefit all citizens in perpetuity. Presently, the environmental record of the Mongolia extractive mining sector, for example, is mixed, showing some positive trends in the adoption by some large mining companies of international standard practices to mitigate environment impacts. However, given the fact that the sector’s financial contribution to the economy is substantial, little has been done to systematically assess and address the costs of possible environmental and social impact from the sector’s on-going and planned activities.¹⁰⁵

SDG Grouping into Clusters: Interlinkages

Under the thematic area of ‘Natural Resources Based Industry’ stakeholders representing different government ministries and sectors identified the group of most relevant SDGs and analysed the cluster of SDGs 9 (Industry, Innovation and Infrastructure), 12 (Responsible Consumption and Production), 13 (Climate Action), and 15 (Life on Land).

Causal interlinkages were identified among the clustered SDGs around the goal of ‘preserving natural resources for the future generation to live in healthy and safety environment via proper use, rehabilitation and conservation’.

Figure 26 illustrates the interlinkages that exist between these SDGs in the Mongolia context. SDG 12 is at the heart of preserving Mongolia’s natural resources and environment (SDG 15). Sustainable consumption and production practices will covers specific targets on the sustainable management of chemicals and waste and their release to the environment (air, water and soil) along with the sustainable management of natural resources, procurement practices and scientific and technological capacity, and transparent reporting of industry information to enable sustainable consumption and production to be monitored. SDG 12 also strengthens the country’s overall resilience and adaptive capacity to climate change impacts. To enable SDG 12 in Mongolia, there is a strong need to leverage key targets of SDG 17 (partnerships), including financing, technology transfer, capacity building and monitoring and reporting. This will in turn stimulate progress on targets of SDG 9 (industry, innovation & infrastructure) that will help to promote sustainable consumption and production. Ultimately, all economic activities, particularly those stemming from extractive industry operations, will have an impact on the natural environment (SDG 15), which has suffered from soil, water and grassland degradation. Transitioning to a sustainable natural resource industry will require the integration of clean/eco-efficient technology and infrastructure an extractive industry permitting system, and also to international demand for sustainable natural resources management, which could impact the amount of foreign direct investment (SDG 17). The enforcement of environmental laws and regulations is essential to demonstrate effective natural resource management.



Figure 26: Sustainable Natural Resource Use: selected SDG Cluster Analysis

Initial System Map at Goal and Target Level for Natural Resource Use

Following from the SDG Cluster analysis, the elements and linkages that comprise the natural resource based industry system found in Mongolia were mapped. Figure 27 shows a systems map of various causal interactions (linkages) among identified factors (elements) involved in sustainable nature-based industry. The map was developed from the baseline work and revised through national stakeholder consultations. The system map is structured around the main goal of the thematic area – a sustainable

natural resource industry, which is highlighted with a blue thick circle around the circumference of the element node. The policy leverage points for SDGs 4, 16, and 17 are designated with thick red circles around the circumference of the element nodes. Five high-impact leverage points for policy intervention are identified for the Sustainable Natural Resource Management System.

As indicated in the system map, the natural resource-based industry sector can have direct positive impacts on water consumption, energy consumption and production, GHG emissions, management of solid waste and effluents, employment levels and community social development through corporate responsibility (CSR) programmes that stem from the companies operating in this sector. These elements in turn are directly linked with overall water quality, quantity and availability affecting all sectors, as well as the overall quality of the environment, biodiversity and ecosystem services, which feeds back to overall water availability and quality. Environmental quality and health directly affect human health, which in turn has a direct link to people's livelihoods, wellbeing and quality of life, something, which in Mongolia is a major factor influencing migration from rural areas to Ulaanbaatar.

Factors (system elements) driving the development of a sustainable nature-based industry sector include the diffusion and integration of clean/eco-efficient technology and infrastructure (SDG 9.4), Nature-based industry permitting system (16.5), and ultimately to the international demand for natural resources that Mongolia possesses (12.1), which itself directly effects the amount of foreign direct investment (9.a, 17.5). These elements are in turn driven by the enforcement of environmental laws and regulations, the embedding in industry of sustainable natural resource management values and practices (12.6) (which ultimately are influenced by the central Government's parliamentary laws and policies), and also by the coordination and cooperation of key sectoral ministries in overall management of this sector.

The next step taken was the identification of the targets that have the most impact on the sustainable achievements of other goals and the overall attainment of the cross-thematic objectives through the formulation of integrated policy statements (see Box 10 with examples) and summarised in other chapters of SOM. The circled targets were identified as having multiple impacts towards Sustainable Natural Resource Use (Industry). This system has defined five leverage points having multiple impacts, namely with respect to SDGs 4.4, 9.2, 12.2, 16, 17.14 (See Box 11): human capacity development and the creation of a new generation of human force competent and trained to strictly adhere to sustainable tourism standards for green consumption and production is a key (SDG 12.b); enforcement of environmental laws and regulations, linked to nature and cultural heritage, sustainable resource management values and practices practicing the resource saving, eco-friendly, low greenhouse gas emission, and low wasting technologies. Further, an overall attainment of the cross-thematic objectives would be undertaken through formulation of the integrated policy statements (national process oriented), and respective scenario planning processes, as summarised in discussion documents of SOM.

Recommendations for Linking Leverage Points to Mid-term Planning

The inter-sectoral thematic group on Natural Resource-Based Industry has recommended for the mid-term planning to preserve natural resources for the future generation to live in a healthy and safe environment through its proper use, rehabilitation and conservation". Hereby: to educate/build capacities at all levels (SDG4, 13), to use/manage natural resources sustainable way (SDG14, 15), to use clean energy, impactful technology and innovation (SDG7, 13), and to adopt integrated water management practices (SDG6).'

Box 11: Integrated Statement for Natural Resource-Based Industry System: Develop industries

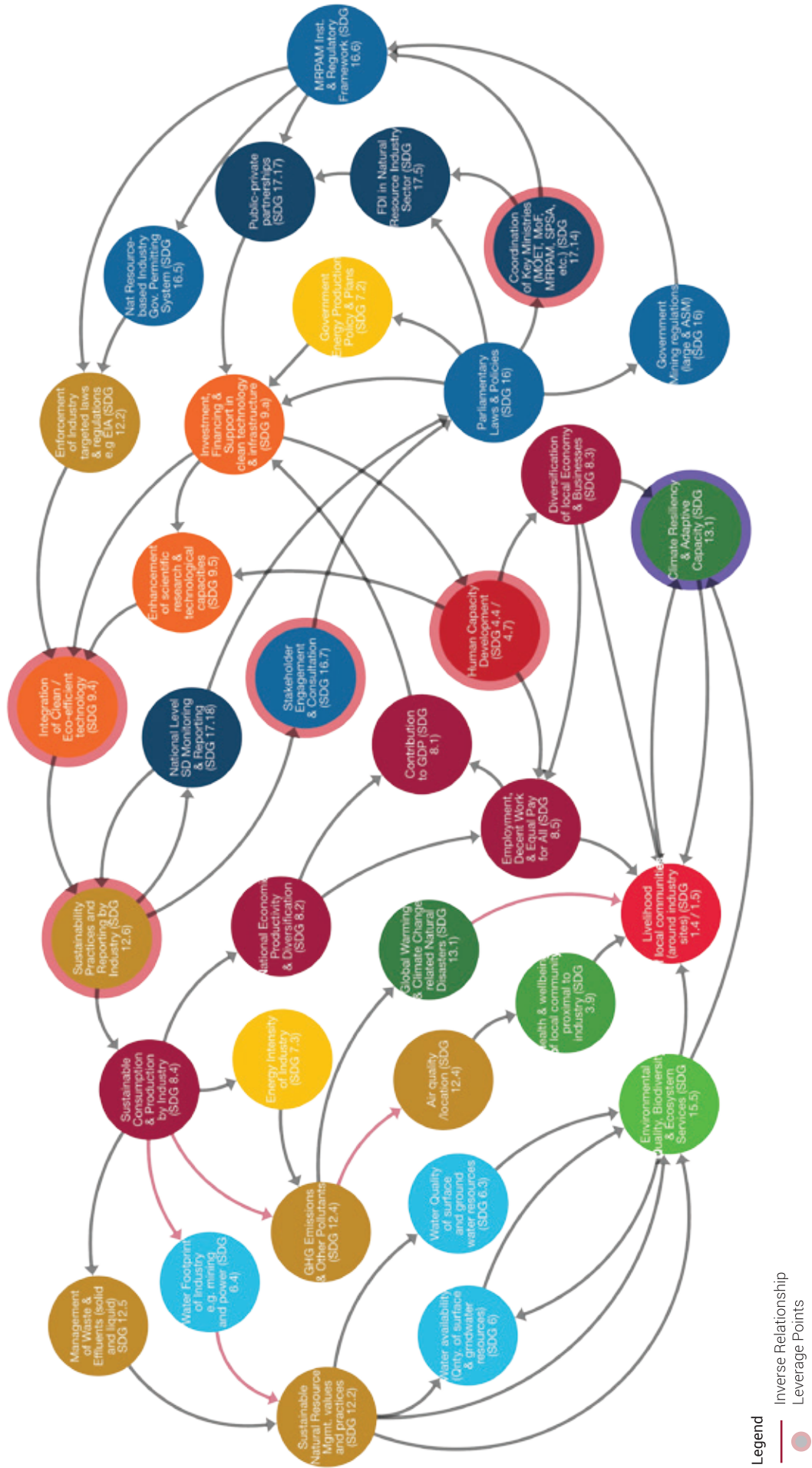
towards manufacturing processed and finished export products from domestically extracted minerals, and meet national energy demand through research and development for technology and innovation for increased productivity while improving the international competitiveness of the extractive industries and ensuring equal benefits through transparent and corruption-free mining
Source: Group work on suggested version for the integrated policy statement for scenario planning, NC2, November 2017

Box 12: Leverage Points for the Sustainable Natural Resource Use (Focus: Industry) System

There were five leverage points identified from the SDG cluster analysis and system mapping exercise for policy intervention for the Nature Based Industry system map (See Figure 27). The SDG targets in parenthesis represent the most relevant for future policy intervention.

1. **Human Capacity Development** – (SDG 12.2). the creation of a new generation of human workforce competent and trained to strictly adhere to sustainable tourism standards for green consumption and production is a key. Such a professional labour force is believed to be crucial for the development of the sector in terms of innovation, business development, provisioning of services, governance and ensuring a healthy and clean environment. At the decision-making level, multidimensional system thinking approach should be introduced to enhance the ability of the leaders to identify problems, formulate policy for solutions, and find new options for a sustainable future pathway. At public level education should be oriented to change lifestyle to a healthy and productive life in harmony with nature, increase capacity to understand natural resources management, impacts, reduce impacts, adapt to climate change and disaster, increase interest to be involved in the decision making process. Producers should be trained in green technology, green products, and economic tools. In the high education system courses on sustainable development should be mandatory.
2. **Enforcement of Environmental Laws and regulations** – (SDG 16). Given that much of Mongolia's tourism potential and interest from the outside is directly linked to its nature and cultural heritage, which themselves are inextricably linked a kind of symbiosis, protection of this foundation to the tourism industry is of primary importance. Discipline, accountability and the inculcation of green attitudes, and behaviours are the primary drivers for a sustainable tourism system.
3. **Sustainable Resource Management Values and Practices** – (SDG8.2). It will be essential to introduce resource saving, eco-friendly, low greenhouse gas emission, and low wasting technologies to the producers and to increase their interest to use such technologies based on economic incentives and potential tax deductions. Leverage here will require from the major producers to have wastewater and waste recycling facilities; to operate independent monitoring points at the polluting sources and to compensate the damages to the environment. To do so, there is a need to have professional organization with methodology to assess damage to the nature and environment; to make regular monitoring and evaluation on fixed amount of resources; to measure and to ensure natural resource use and expenditure; to change current system to estimate nature resource use; to set a basic cost of natural resource into the product cost; take measures aimed at reducing the use of natural resources used in the process of production. In particular, tax policy restricts the use of non-renewable resources.
4. **Coordination of Key Ministries aligned with Natural Resource Management and Industry** - (SDG 17.14) The board of directors that are responsible for the activities of natural resource-based enterprises and their environmental impacts should include representatives of the line ministries, local communities, and officers of the environmental protection agency. Community participation will increase when the information from the producers such as product size, income, technology, negative impact and their mitigating actions are transparent and available, especially to the local community. Also, there is a need to include local authority and public into the monitoring and assessment on the implementation of nature conservation and rehabilitation plans.
5. **Central Government Parliamentary Laws and Policies** – (ref SDG 16). The issue of NR based industry is standing at the right point to move forward since the NGDP and the SDV 2030 have been approved. Targets and milestones are defined well in terms of this issue. There is an urgent need to develop a short-term action plan with clear direction. For example, to have a regulation to report the highly polluted areas due to the industrial activities based on natural resources; a regulation to implement a mechanism of green finance and sustainable finance; a regulation for green labeling; to have a professional organization to determine clean technology and green product.

Figure 27: Nature Based Industry Systems Map (To attain SDG 9, 12,13,15,17- initial base) and See Box 12 for Legend on Leverage Points



Sustainable Tourism Management

Tourism is a significant and growing economic sector for Mongolia as it looks to diversify and green its economy. What draws tourists to Mongolia is the spacious, pristine landscape and diverse natural biomes with unique wildlife, as well as a long and rich history and traditional nomadic cultural heritage. The SDV 2030 and the NGDP identify tourism as one of the important sectors for the sustainable development of the country, with an overall objective that Mongolia becomes a world-class international destination for nomadic culture and tourism, reaching a target of 2 million visitors annually by 2030. Many people agree that Mongolia has the potential to eventually become a sizeable and highly profitable tourist destination if it can successfully integrate sustainable development principles and practices into the industry early on. Sustainable tourism principles are characterised by business operations and associated infrastructures that operate under natural capacities for the regeneration and future productivity of natural resources, and at the same time, recognise the contribution that local communities, their customs, and lifestyles contribute to the overall tourism experience.

To achieve a sustainable tourism industry, a number of challenges must be addressed, including inadequate infrastructure, low quality of service provision, a lack of skilled workforce in this field, lack of tourism benefits to rural host communities thus contributing to inequalities among citizens, and increasing pollution of the environment in tourist destination areas¹⁰⁶. Ultimately, the tourism business owners and operators acknowledge that local communities must have an equitable share in the economic benefits of tourism and participate in tourism-related decisions in their areas.

SDG Grouping in Clusters: Inter-linkages

Under the thematic area of 'Sustainable Tourism Management', stakeholders representing different government ministries and sectors identified the most relevant group and had analysed the cluster of selected SDGs relevant to sustainable tourism for systemic causal linkages and interdependencies.

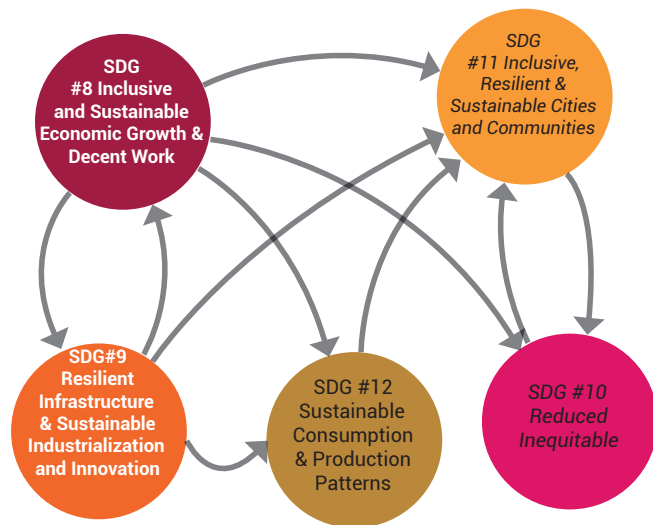


Figure 28: Sustainable Tourism Management SDG Cluster Analysis

Under the thematic area of 'Sustainable Tourism Management', stakeholders representing different government ministries and sectors identified the most relevant group and had analysed the cluster of selected SDGs relevant to sustainable tourism for systemic causal linkages and interdependencies.

The SDG grouping includes SDG 8 (Decent Work and Economic Growth), 9 (Infrastructure), 10 (Reduced Inequalities), 11 (Sustainable Cities) and 12 (Responsible Consumption and Production), with a central focus on the goal of SDG 12. Figure 28 illustrates the linkages identified between the five selected SDGs in the Mongolia's context.

Discussions around these interrelationships with respect to sustainable tourism revealed critical details and analytical points that are reported in the following section.

The SDG 12 (Responsible Consumption and Production) requires the adoption of resource-conserving and cost-effective technologies (also relevant to SDG 9), rigorous enforcement of existing standards and regulations and strict sanctions for violations to encourage changes in behaviours and attitudes for wiser choices and green standards for production. In the case of tourism, the sector must enforce responsible tourism principles and practices that reduce and eliminate non-natural wastes and pollution to the environment and provide adequate sanitation and waste collection facilities and respect for cultural traditions (SDG 11) in host communities. Local communities can substantially benefit from sustainable tourism activities that bring financial inflows and development and provide employment of local citizens in good paying and secure jobs (SDG 8), some of which can be linked to natural and cultural traditions.

Sustainable tourism can ensure decent work and economic growth (SDG 8), which also necessitates investing in new infrastructure (SDG 9)¹⁰⁷ and implementing standards that will facilitate sustainable consumption and production practices (SDG 12), such as implementing non-natural waste free catering services and strict waste collection by tour companies and related service providers. This includes employment programmes targeted at disabled and vulnerable citizens to reduce inequalities in the society (SDG 10). Specifically related to tourism, training, and education should be made available for

preparing skilled managers and tourism service providers with environmental education, traditional cultural knowledge and community facilitation skills, and responsible behaviours that will ensure quality service provisions, tourism infrastructure development and other areas of tourism operations. The lack of access to information and quality education also exists among the poor residents in urban peripheries, which in essence should not be the case in sustainable cities or communities in the 21st Century (SDG 11). In tourism, such lack of information in rural residents contributes to the existing inequality in tourism benefit-sharing between local communities and tour operators run by Ulaanbaatar companies who take advantages of scenic natural settings and traditional cultures in host destinations.

Initial System Map at Goal and Target Level for Tourism Management

Following from the SDG Grouping and initial Cluster analysis, stakeholders mapped elements and linkages that comprise the tourism system found in Mongolia. Figure 29 shows a systems map of causal interactions (linkages) among identified factors (elements) involved in sustainable tourism. The map was developed from the baseline work and improved through two additional national stakeholder consultations. The system map is structured around the main goal of the goal of sustainable consumption and production (SCP) related to the tourism sector, which is highlighted in the figure with a thick blue circle around the circumference of the element node. Policy leverage points are designated with thick red circles around the circumference of the element nodes.

The next step taken was the identification of the targets that have the most impact to the achievements of other goals and the overall attainment of the cross-thematic objectives through integrated policy statements as summarised in other chapters of SOM. The figure 29 illustrates the circled targets of multiple impacts, namely on SDG 12 and on SDG 16.7. Sustainable Tourism Management System has defined needs for three high-impact leverage points, namely: human capacity development by creation of a new generation of human workforce competent and trained to strictly adhere to sustainable tourism standards for green consumption and production is vital; enforcement of environmental laws and regulations, to ensure symbiosis with nature and cultural heritage, and ensure protection of this foundation to the tourism industry; installation of disciplines, accountability and green attitudes, and behaviours are the principal drivers for the sustainable tourism system; fair and equal benefit sharing policies in the context of the current tourism practices. Economic returns from tourism to host communities can be guaranteed by creating jobs for local citizens, as well as from services run by local entities and fees paid to the local government for environmental conservation and maintain cultural heritage.¹⁰⁸ Further, an overall attainment of the cross-thematic objectives could be undertaken through formulation of the integrated policy statements, and respective scenario planning processes, as summarised in discussion documents of SOM and in Annexes.

Recommendations for Linking Leverage Points to Mid-term Planning

The inter-sectoral thematic group on Sustainable Tourism Management has recommended for the mid-term planning arrangement to complete ongoing efforts to update the Tourism Law of Mongolia in a more inclusive manner, enabling active participation of all stakeholders (tourism businesses, local authorities and destination communities, and representatives of protected area administration) and to legalize the priorities for responsible eco-friendly and pollution-free tourism and equal benefits across stakeholders.

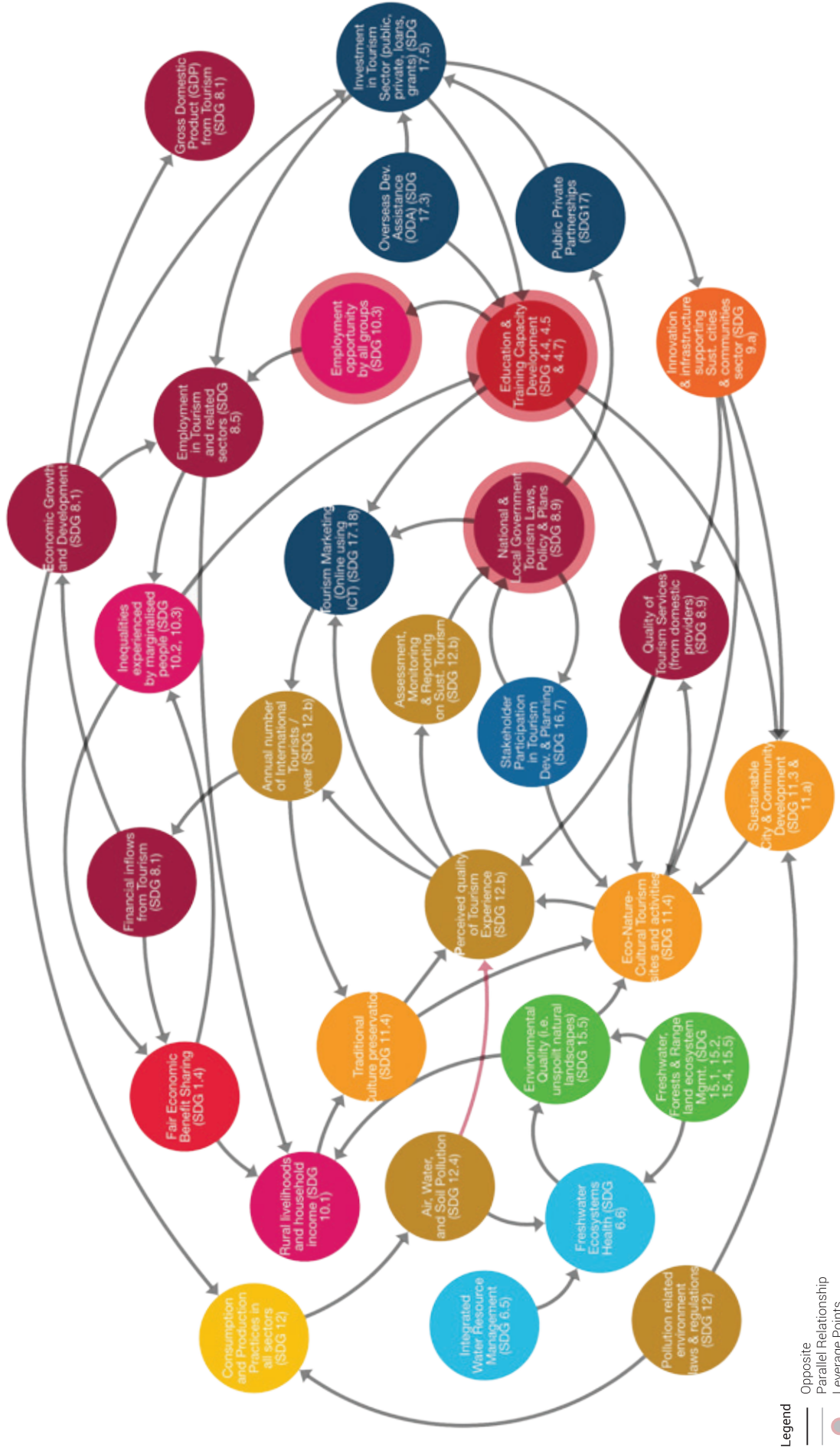
Box 13: Integrated Statement for Sustainable Tourism Management System: Cultivate responsible consumption and production by rigorously enforcing disciplines and accountability at all levels while ensuring equal access to information and education and encouraging innovation-based technology-proficient employment. (Source: Group work on suggested version for the integrated policy statement for scenario planning, NC2, November 2017)

Box 14: Leverage Points for Sustainable Tourism Management System

There are three high-impact leverage points identified for the Sustainable Tourism Management System (See Figure 29). The SDG targets in parenthesis represent the most relevant one for the policy intervention.

1. **Human Capacity Development** -(SDG 12, 4.4, 4.7). the creation of a new generation of human workforce competent and trained to strictly adhere to sustainable tourism standards for green consumption and production is vital Such professional labour force is believed to be crucial for the development of the sector regarding innovation, business development, provisioning of services, governance and ensuring a human health and clean environment.
2. **Enforcement of Environmental Laws and regulations** – (SDG 16.7). Given that much of Mongolia's tourism potential and interest from the outside indirectly linked to its nature and cultural heritage that are in a kind of symbiosis relation, protection of this foundation to the tourism industry is of primary importance Disciplines, accountability and green attitudes, and behaviours are the principal drivers for the sustainable tourism system.
3. **Fair and Equal Benefit Sharing Policies** – (SDG 17). In the context of the current tourism practices, where much of tourism gains are taken away by larger tour operators in tourist destination areas, the regulations need to set to support equal distribution of benefits. Economic returns from tourism to host communities can be guaranteed by creating jobs for local citizens, services run by local entities and fees paid to the local government for environmental conservation and maintain cultural heritage

Figure 29: Sustainable Tourism Systems Map (to attain the SDGs 8-12) and See Box 14 with Legend of LPs



REFERENCES (CHAPTER 3)

- ¹⁰⁰ Mongolia, Ministry of Environment and Green Development, *Integrated Water Resource Management Plan* (Ulaanbaatar, 2013)
- ¹⁰¹ Ranen Banerjee and others, "Mongolia: Targeted Analysis on Water Resources Management Issues", Report (2030 Water Resources Group, March 2014). Available at https://www.2030wrg.org/wp-content/uploads/2014/07/2030WRG_MONGOLIA.pdf
- ¹⁰² Janchivdorj L, "Water Supply Management: Challenges and Priorities", paper presented at the International and National Water Dialogue on The Delivery of SDG 6 "Ensure Availability and Sustainable Management of Water and Sanitation For All in Mongolia Asia and the Pacific Region, 25 October 2016.
- ¹⁰³ Mongolia, Ministry of Food and Agriculture, *National Report on the Rangeland Health of Mongolia* (Ulaanbaatar, 2015). Available at https://jornada.nmsu.edu/files/Mongolia-Rangeland-health-Report_EN.pdf
- ¹⁰⁴ Batkhishig Baival, "Food security in the face of climate risks – Mongolian herders' experiences", statement to the Hunger, Nutrition, Climate Justice Conference, Dublin, 15-16 April 2013. Available at <https://www.mrfcj.org/wp-content/uploads/2015/09/2013-04-16-Mongolia.pdf>
- ¹⁰⁵ Jovanna Dore and others, "A Review of Environmental and Social Impacts in the Mining Sector", Policy Research Working Paper, No. 36968 (Washington, D.C., World Bank, 2006). Available at <http://documents.worldbank.org/curated/en/583011468274233098/Mongolia-A-review-of-environmental-and-social-impacts-in-the-mining-sector>
- ¹⁰⁶ World Bank, *Mongolia Tourism Sector Policy Note: Strengthening Management of Natural and Cultural Heritage Assets to Scale-up Tourism and Stimulate Local Economic Opportunity*, No. 68640 (Washington, D.C., World Bank, 2011). Available at <https://openknowledge.worldbank.org/handle/10986/27430>
- ¹⁰⁷ United Nations Conference on Trade and Development, *Mongolia: Sector-Specific Investment Strategy and Action Plan*, Pilot Study Results, (Ulaanbaatar, 2012). Available at http://unctad.org/Sections/diae_dir/docs/diae_G20_Mongolia_en.pdf
- ¹⁰⁸ World Travel & Tourism Council, *Travel & Tourism Economic Impact Mongolia 2017*, Annual Research (London, 2017). Available at <https://www.wttc.org/-/media/files/reports/economic-impact-research/countries-2017/mongolia2017.pdf>

IV. CONCLUSIONS AND THE WAY FORWARD

At this critical transition point in its history, Mongolia has established a vision and set a pathway toward future sustainability. The country's economic transformation and shifting demographics present challenges and opportunities in the decades ahead, but Mongolia has demonstrated its determination to manage its growth guided by the principles of sustainable development. By identifying opportunities to align future development with the objectives of the 2030 Agenda, Mongolia can continue its economic transition as it seeks attainment of the Sustainable Development Goals.

The development of the SOM represents a major step forward, but efforts must continue. The realization of Mongolia's vision for sustainable development will be determined by how the country responds to, and addresses many of the findings in the SOM. With a clear understanding of progress, regression and trends, supported by data and analysis, Mongolia is positioned to act on the key leverage points that have been identified and to develop integrated policies which will generate multiple impacts and secure positive trends across multiple SDGs.

Analysis and review in the SOM has found that Mongolia made good progress in areas such as poverty eradication, nutrition and hunger, and in many target areas related to education. The analysis found that many of these same areas are inter-linked and thus, actions to generate positive impacts at leverage points will be essential to maintain progress and accelerate attainment of the SDG targets. Mongolia must focus attention, including through actions to realize multiple benefits at key leverage points, to continue progress against the SDGs, and in parallel mitigate threats and risks from negative trends and regression.

The SOM provides a clear outlook and priorities to guide further alignment of national development strategies with the 2030 Agenda. To successfully realize its objectives, Mongolia must focus on key priorities as outlined below:

1. Strengthen Internal Coordination

Achieving the SDG targets will require improved internal coordination, as the inter-related nature of the SDGs necessitates cross-sectoral and inter-ministerial cooperation. A significant component of the SOM focused on a systems approach to identify leverage points across a range of SDGs. Nearly all of the 17 SDG profiles in the SOM identified the need for stronger coordination, and in many cases, the benefits will only result from integrated policies and actions envisioned through leverage points. In other cases, coordination with other stakeholders, including private sector and civil society, will be needed to attain relevant targets.

Enhancing the coherence of Mongolia's policies to deliver multiple benefits will require strong coordination mechanisms, which will further support implementation of effective and efficient actions to continue advancement toward SDGs. Concerted efforts are needed from ministries to collectively focus on targeted priorities outlined in the SOM if Mongolia is to generate significant impacts and accelerate the country's progress towards sustainable development.

2. Enhance Capacities

Establishment of priority areas and institutional arrangements were critical and necessary steps for Mongolia to envision the many actions needed to achieve the ambitions of SDV 2030 and the SDGs. While these steps provide a strong foundation, the SOM has identified needs to improve capacities if the country is to continue its progress. Intended impacts and benefits will be limited without stronger institutional capacities to ensure that integrated policies are developed and implemented, and that progress is continuously measured.

During the development of the SOM, a strong appeal was made for improving the enforcement of regulations, and the lack of mechanisms and regular systems for control and analysis of the legal administration was highlighted. In all four of the thematic priority areas, the SOM identified the need for more advanced legal and policy frameworks. To achieve its objectives, Mongolia must increase its capacity to rigorously enforce regulations and improve accountability, conduct regular monitoring and

evaluation to measure progress and forecast future trends, provide strategic oversight for financing policy implementation, and safeguard necessary investments.

Increased capacity is especially needed in the key area of data, which is required across all SDGs. As discussed in Chapter 2, national data and statistics necessary to support 99 (approximately 42.5 percent) of global indicators are not available, so gaps exist that must be filled. Improved access to various data sources, standards for data and sharing mechanisms, and technical capacity to optimize data are clear needs. Capacity building among agencies responsible for data collection (for individual SDGs, and collectively for all 17) will be necessary if Mongolia is to effectively measure its progress towards the 2030 Agenda. Without strengthened institutions and governance systems, and education and training to develop human capacities, Mongolia risks future regression against SDG targets.

3. Prioritize SDGs where there are signs of regression

The SDG Baseline Status in the SOM identified certain areas where Mongolia has seen regression against SDG targets since 2000. To alter these trends, Mongolia must focus its attention and policy interventions in these specific areas, and capitalize on the inter-linkages across SDGs to achieve multiple impacts identified through the SOM. In particular, analysis indicated regression in the following SDGs

- Decent Work and Economic Growth (SDG 8).
- Reduced Inequalities (SDG 10).
- Responsible Consumption and Production (SDG 12).
- Life on Land (SDG 15).

To reverse the trends in these goals, targeted interventions are necessary. Mongolia should further assess existing conditions and develop integrated policies in these areas that will accelerate progress towards the goals. The SOM highlights that the interlinkages across SDGs provide opportunities for Mongolia to leverage actions in multiple goals to reverse negative trends. For example, the findings for SDG 8 (Decent Work and Economic Growth), indicate that key leverage points can be used to enhance economic diversification and decouple economic activities through changes in production methods. Capitalizing on this causal relationship to SDG 12 (Responsible Consumption and Production), and decoupling economic growth from natural resource use is expected to reverse the negative trend seen for SDG 8. Economic diversification will be further supported if Mongolia focuses on enhancement of the tourism sector, by leveraging the linkages between SDG 8 and SDG 10 (Reduced Inequalities), as tourism benefits are envisioned across society.

The analysis conducted through the SOM identified leverage points for all SDGs. While the most critical need remains for Mongolia to take accelerated action where there is documented regression, integrated policy development at all leverage points should be pursued to continue advancement towards attainment of all SDGs.

4. Incorporate Priority Areas for integrated action in Medium Term Strategies

The SOM has provided Mongolia with clear opportunities to incorporate attainment of the 2030 Agenda in its Medium-Term strategies. Broadly, the SOM has identified linkages between national planning documents and the 2030 Agenda, outlined areas for integrated policy development, and highlighted areas where the country has seen progress and/or regression against the SDGs. In addition to the need for accelerated action against specific SDGs, the SOM established four priority areas for greater focus and attention. The priorities are:

- Sustainable Water Management;
- Sustainable Land Management;
- Sustainable Natural Resource Use; and
- Sustainable Tourism and Economic Growth

These areas are critical to Mongolia's continued economic transition, and thus must be priorities in the development of Mongolia's Medium-Term Strategies. The recommendations in the SOM highlight the need to focus on these key sectors to medium and long-term planning efforts, but the significant potential

to achieve the country's economic, social and environmental objectives will only be realized through concerted efforts and development of specific actions incorporated in national strategies.

To advance in these four priority areas, Mongolia needs to develop scenarios and modelling to further assess policy options, identify uncertainties and guide an implementation programme that builds institutional structure and political traction towards financing. To continue the methodology used to develop the SOM, the following steps (outlined in detail in Annex 1) should be considered:

- Design a Quantitative Model of System Relationships (Causality and Correlation Statistical Analysis, optional)
- Organize a Scenario Planning Process
- Develop Adaptation Pathways (Plans)
- Develop an Implementation Programme and Attract Sustainable Financing

Following these steps in the methodology and incorporating these priority areas in Mongolia's Medium-Term Strategy will allow the country to better focus its attention and manage and enhance its economic transition.

5. Rigorous Follow Up and Reporting

As with many planning processes, the success of Mongolia's efforts to achieve a sustainable future will depend in large part on its ability and commitment to follow the recommendations and steps outlined in the SOM, and to monitor and report progress as it manages implementation. The SDG targets and indicators provide a solid framework on which Mongolia can build and align, however challenges such as the availability of data availability and national indicators have been well established. The country has taken significant steps to fill statistical gaps and create institutional arrangements for reporting. Such efforts must continue if Mongolia is to continue its transition to inclusive economic growth.

Especially in areas where Mongolia has seen regression against SDG targets, the government must follow up on the collection of data and statistics and report progress. Sound decision-making and continuous policy improvement will be dependent upon rigorous review and follow up to prevent further regression. The national processes planned to develop and implement Mongolia's Medium-Term Strategy are clear opportunities for the findings of the SOM to be incorporated more broadly in the country's policies, and such mechanism should also include reporting against sustainability objectives.

Annex 1: The Methodology of Development of SOM: Systems Thinking through 10 Steps Flowchart

System thinking is a way of approaching complex issues by envisioning them as an interlinked system of subsystems and elements. Systems thinking is applied through causal systems mapping of the systems dynamics, which was used to understand the connections between different elements and components in a system – be these environmental, social, economic, or policy-related, and understanding the behavior or interests these connections generate.

The main elements of the system thinking tool can be summarized in the following workflow sequence: (a) creation of a system diagrams for four thematic areas – agriculture, water management, natural resource industry, and tourism, which illustrate the baseline system model; (b) identifying key casual feedback loop for each thematic area system diagram; (c) defining the quantitative modelling based on real data, which takes into account causal effects; (d) re-envisioning the systems model for each area specific to the particular timeframe.

This approach helped in SOM to define the policy leverage points and identified the ones with multiple impacts. This methodology was applied in SOM in three sequential multi-sector stakeholder processes at the goal and target levels of the SDG and SDV 2030, beginning with a Training of Trainer (ToT) workshop (May, 2017). In the ToT workshop, participants constructed the foundations of the systems analysis for each of the four thematic areas. Following from the ToT workshop, the resulting systems maps were revised and improved in two subsequent national consultation workshops (August, November, 2017). The quantitative data needed to support the systems analysis and quantitative modelling would need to be ascertained through additional workshops organised at the national level, followed by scenario planning processes.

Taking a systems approach allowed participants to visualize how improvement in one area of the system can either positively or adversely affect another area of the system, and how to turn trade-offs into opportunities for the benefit of the whole system, while reducing the possibility of producing unintended responses and consequences. The systems framework allows stakeholders and policy makers to shift from a conventional siloed and linear policy and decision-making approach towards integrated scenarios in planning. While many quantitative decision-making tools assume that systems operate under equilibrium conditions, the systems approach allows for non-linear, non-equilibrium conditions, which are much closer to the actual situation on the ground under which policies are made.

The SOM methodology is built up on a sequence of first six steps out of ten progressive steps of collaborative multi-stakeholder participatory process (Figure in Chapter 3), involving relevant sector and inter-ministerial stakeholders to identify SDG cluster linkages, policy leverage points that facilitate cross-sectoral policy coherence and action, and adaptive policy implementation pathways and green investment schemes.

STEP 1: Start with the End in Mind – What is your Vision for a Sustainable Future?

The initial strategic planning step starts with a formulation of a clear vision that the country/city wishes to achieve in a particular time frame. Ideally, a future vision should be grounded in the best available science and empirical data, be inclusive in its formulation, as well as clearly and compellingly articulate what is needed and desirable from the perspective of human aspiration and well-being. (Ref: Agenda 2030 sets a common global vision and 17 Sustainable Development Goals (SDGs) and 169 targets.)

STEP 2: Identify Thematic Priorities Aligned with SDGs and the Country's SD Goals

Based on current laws, policies, plans and key nationally important sectors (ex. in Mongolia: natural resource based industry; agriculture; mining; tourism; water, energy, etc.), thematic priorities should be identified. These priorities should be formulated in synergies, address the challenges and opportunities aligned with the SDG target clusters, that are mapped to identify linkages between the targets and indicators within commitments to the Multilateral Environmental Agreements (MEA). Thematic priority determination should be informed by experts and solicit the stakeholder perspectives from different sectors. SOM has applied the effective analytical tools, such as SDG Spot Analysis, Rapid Strategic Impact Assessment (RSIA), Rapid Diagnostic Data analysis, validated by time-framed qualitative data at national level and through an Environmental Performance Review (EPR as developed by international experts of ECE in 2017 in Mongolia).

STEP 3: Design the Systems Map

Systems mapping is a way to visualize causal relationships between important elements or indicators and where dynamic system feedback occurs, as well as the interplay of different feedback loops (i.e. sub-systems). Through identification and mapping (as completely as possible at goal and target levels first) all the interactions between the elements/indicators, the behavior of the entire system, and smaller sub-systems, can be discovered. Systems mapping is best carried out through a collaborative multi-stakeholder participatory approach, that seeks strong consensus on the situation view.

STEP 4: Identify the Policy Leverage Points of Multiple Impacts through Scoring Technique

Utilizing the insights from the visualization systems mapping results (Step 3), the identification of system 'leverage points' for policy intervention is done through a combination of intuition based on experience and previous policy formulation, leverage point impact scoring incorporating Meadows' 12 level framework with three other criteria (lever, loop and trend). The scoring technique would be helping to define the most sustainable scenarios for future planning

STEP 5: Formulate the Integrated Policy Statements

Based upon thematic priorities or action areas identified from the Visioning documents (e.g. SDV 2030) and the system map, particularly key feedback loops and identified Leverage Points, system groups should formulate Integrated Policy Statements (or thematic areas for mid-term interventions to achieve the long-term vision and aspiration)– one for each key sub-system feedback loop identified. These statements would need to unite a cluster of SDGs and open a space for attracting investments for long term cash flow.

STEP 6: Revisit the System Maps in Alignment with SDG Targets, Indicators and Data

After the formulation of the Integrated Policy Statements (themes) for the various systems / sub-systems (loops) leverage points (Step 5), it is recommended to revisit the earlier system maps (Step 3) and consult additional stakeholders to review the system map to solicit inputs on how to improve it. From this point, it will be crucial to match the system elements with as many of the 17 SDG targets as possible, and identify country indicators that are supported with data.

STEP 7: Design a Quantitative Model of System Relationships (Causality and Correlation Statistical Analysis, optional)

A next step is to apply data to quantitatively model the system's dynamics and quantitatively analyse the causal relationships and high-impact leverage points to determine effective interventions and modulate the course of movement of the system model. Quantitative Systems modelling can establish a baseline reading of how the system reacts currently.

STEP 8: Organize the Scenario Planning Process

Scenario planning can be used to assess policy options under possible, plausible futures. It provides a systematic approach for developing and testing plans and policies under uncertainties especially in circumstances where there is high degree of uncertainty and low controllability

STEP 9: Develop Adaptation Pathways (Plans)

Adaptation Pathways involves an iterative planning process that recognizes if there is more than one way to reach a desired future. Adaptation plans are developed in a context of uncertainty and change. Ideally, they should be informed by a "backcasting" exercise in which one moves progressively back to the present from a desired future, step (milestone) by step, each time asking the question: "what do we need to do to successfully achieve that milestone?". The adaptive planning is a joint "walk through" tool as a combined effort of institutions.

STEP 10: Develop the Implementation Programme and Attract Sustainable Financing

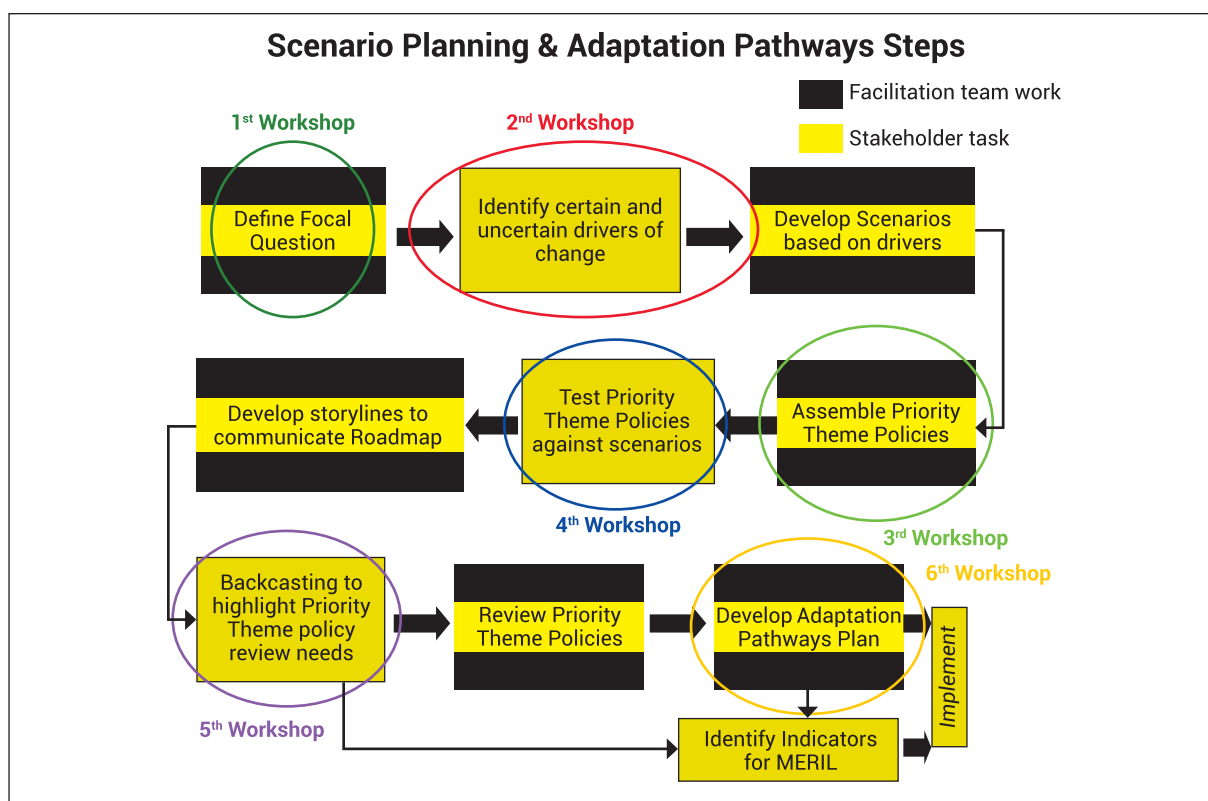
Applying the systems thinking approach results in a realization that implementing integrative policy requires collaborative commitment from different agencies under various government ministries at national, provincial and local levels. Keys to successful implementation include: (a) creating coherent and coordinated interagency institutional architecture for convergence planning, (b) integrated implementation, (c) political traction towards financial commitments, (d) inclusive planning and (e) embedding subsidiarity-based governance and institutional structure, with defined mandates and commitments.

Scenario Planning for Pathways (Steps 8-10) Elaborated

As discussed among policy makers of NDA, MET and NSO in December 2017, the generic methodological approaches for explorative scenario planning and adaptation pathways planning should be customised to account for the range of policy outcomes anticipated from the different sustainability initiatives currently being pursued in Mongolia, namely the SOM and the Medium-Term Development Plan 2022.

The combined scenario planning and adaptation pathways planning process envisioned will involve a number of discrete steps dominated by a series of stakeholder task-oriented workshops with support provided by a facilitation team. This participatory process should involve key decision makers, policy makers, and people who advise and contribute to policy – i.e. the ‘owners’ of the problem. This sequence of steps is illustrated in Figure 16.

Figure 30: Generic Scenario & Adaptation Pathways Planning Process (author Low Choy)



The scenario planning process commences with the establishment of a focal question which will overarch the whole scenario planning process and provide direction to the deliberations and tasks undertaken in subsequent steps. The next principal task is to develop the two scenarios that will be employed to test the priority policy options emerging from Mongolia’s strategic sustainable initiatives, namely Medium-Term Development Plan 2022 and the meeting documents created during development of the SOM.

The steps (See Steps 8-9, see earlier Figure 30 and Methodology in Annex 1) involve the assembly of priority policy options being implemented or considered to achieve the major strategic goals and vision in national sustainability documents such as Mongolia’s Sustainable Development Vision 2016 and the Green Development Policy 2014. Ideally these policy options should be cross sectoral commitments. Once assembled and agreed upon, these policy options can then be tested for appropriateness, robustness, and achievability within the context of the two scenarios. From this assessment, “roadmaps” with accompanying “storylines” (narratives) can be developed to communication possible routes from the present circumstances and set of policies towards the future visions within the context of the scenarios. As a highly participatory process, this approach would require a series of six workshops to successfully complete all the necessary steps (see earlier Figure 30).

The necessary follow-ups among the three key agencies for the potential use of SOM outcomes would be undertaken as part of medium term-planning process in Mongolia to attain its long-term vision by 2030.

Annex 2: Survey and a Data Snapshot of the Rapid Strategic Impact Assessment

The Rapid Strategic Impact Assessment (RSIA), as a policy analysis tool, is presenting the comparison of a perception based social survey among policy makers and the baseline status of SDG dashboard, as presented in previous section. The perception based survey was comprised of 30 questions on respective policy impacts on environment, social and economic dimensions of Mongolia's development. Each question was designed to assess the rate of the three-dimensional impact of the respective current national policy and the scale of its integration in relation to goals and objectives of Mongolia's Sustainable Development Vision document (SDV 2030) with the 17 Sustainable Development Goals (SDGs) of Agenda 2030. The time horizon of policy impact was set from the year 2000 to present and from present to 2030.

The RSIA, as applied in the SOM development process, measures the 'perceived impact' of policy in relation to the actual situation as measured from available indicator data normalized with SDG targets. A total of 78 respondents were surveyed, combining respondents from the Training of Trainers (ToT) workshop (May 2017) and from the online survey administration. The survey results for the 30 questions (Annex) were aggregated and a mean score calculated for each, to produce the radar graph ranging from -2 (negative impact or regression) to +2 (positive impact or progress in achieving SDG related targets).

A comparative analysis of perception vs. actual data was carried out, whereby the most relevant SD goals were identified for each question. Mongolia country data for all 17 SDGs sourced from the ESCAP SDG dashboard was calibrated using a scale from -5 (regression) to +10 (progress in achieving the goal by 2030). Average scores were then calculated and converted to the SIA policy impact scoring scale of -2 to +2. The comparison of perceptions with SDG dashboard data was registered in one radar graph.

RSIA Comparative Analysis

The analysis of the perception-based survey results 2017 shows that respondents consider positive impacts being linked to the state policy and plans associated with scoring on the promotion of renewable energy (0.50 for Q4, SDG 7, 13); women's participation in decision-making (0.23 to Q16, SDG5); integration of ecosystem conservation into policies (0.10 for Q3, SDG 1, 6, 7, 9, 13, 15); sustainable urban development (0.07 for Q12, SDG11); reducing pollution and contamination to natural sources (0.05 for Q2, SDG 1, 6, 7, 13, 15); protecting and conserving water-related ecosystems (0.02 for Q6, SDG 6, 15); climate change measures (0.01 for Q7, SDG 13); and sustainable food production systems and climate resilient agricultural practices (0.01 for Q26, SDG 2). However, the overall responses to 30 questions were mainly negative fluctuating between 0.50 and -0.50, which meant that the progress so far was assessed at "no impact" (zero score or neutral) or as a "regression condition" (score less than zero). The radar results were alarming with very low scores for 14 questions, particularly, related to the reduction of health risks, especially urban pollution (-0.80 for Q18, SDG3); tax incentives towards resource efficiency in consumption and production (-0.59 for Q24, SDG8, 11, 12), climate change adaptation (-0.51 for Q19, SDG13), resource efficiency in industries (-0.50 for Q22, SDG9), application of environmentally-sound technologies (-0.49 for Q1, SDG 17, 2, 6, 7, 9, 13, 15), production efficiency (-0.48 for Q23, SDG9, 12), supply of safe drinking water (-0.48 for Q20, SDG6), reduction of inequalities (-0.39 for Q13, SDG10), fostering equal and mutually beneficial urban-rural relationships (-0.38 for Q17, SDG1, 10). Also, responses to five questions (Q2, 6, 7, 21, and 26) were around "zero" score of a stagnant situation including air and water pollution, conservation of water ecosystems, coping with climate change, value addition in key industrial sectors, and sustainable food production.

The results of the comparison of the perception scoring with the scores calibrated from SDG 2017 dashboard data of ESCAP for Mongolia showed some interesting patterns on Mongolia's current standing on SDG progress. The RSIA scoring scale, when the normalized SDG target data used, showed a greater progress since 2000, and less regression than that indicated by the perception survey. Nevertheless, there was some agreement in both assessment curves regarding the women's empowerment (Q16, SDG5), the share of renewable energy (Q4, SDG 7, 13), preservation of cultural heritage (Q15, SDG 8, 11), sustainable urban development (Q12, SDG4) and education for employment facilitation (Q27, SDG4, 8).

The normalized SDG data showed some progress (scores ≥ 1.00) towards achieving SDGs in all but five areas: increasing access to safe drinking water and adequate sanitation facilities (Q20, SDG6), conserving water-related ecosystems (Q6, SDG6, 15); environmental data collection, and sharing (Q9, SDG17); combating land degradation (Q5, SDG6, 13, 14, 15), and financing environmental conservation (Q10, SDG9, 15). On the contrary, the graph revealed a regression (scores ≤ -0.20) in six areas (Q14, 27, 11, 21, 25 and 17) related to preservation of cultural heritage, education for employment facilitation, poverty reduction, value addition in key industrial sectors, promotion of sustainable economic business and green jobs, and fostering equal and mutually-beneficial urban-rural relationships.

Lastly, there were some conflicts between the two measures shown in the radar including scores for increasing access to safe drinking water and adequate sanitation facilities (Q 20, SDG 6), applying environmentally sound technologies (Q1, SDG 17, 2, 6, 7, 9, 13, 15), protecting water-related ecosystems (Q6, SDG6, 15), combating land degradation (Q5, SDG 6, 13, 15), financing environmental conservation and restoration (Q10, SDG 9, 15); sharing and collecting environmental data (Q9, SDG17). Such contradictions can be attributed to the measurement issues (lack of updated data and data incompleteness) as well as insufficient information and awareness of respondents on questions.

Micro Analysis Example on Effectiveness of Policies Related to Resilience and Adaptive Capacity to Climate Related Hazards and Natural Disasters (Q19)

Question 19 asked about the effectiveness of the current policy and plans for strengthening resilience and adaptive capacity of people in Mongolia to climate-related hazards and natural disasters.

An average perception of the impact of the Government climate policy for strengthening resilience and adaptive capacity of people indicates a regression (-0.51). On the other hand, the normalized SDG dashboard data showed positive progress (0.17), which used only one indicator (number of persons affected per 100,000 by climate-related disasters) including deaths, missing persons, and directly affected persons. Such indicator may have some limitations because it is the livestock mortality due to extreme weather events like dzud most affects herder livelihoods leading to poverty and rural-to-urban migration. Given the nature of climate-related disasters experienced by Mongolia, i.e., extreme winter storms (dzud) or extreme drought instead of typhoon or flooding, this may not be the most appropriate indicator of sustainability to measure policy impact toward climate resilience and adaptive capacity.

Key Insights from RSIA Analysis

- The general direction of progress or regression for each question (cluster of SDGs) was based on respondent perceptions. In most cases, perceptions mirror the same directions of the SDG data curve. The rapid perception-based survey with careful selection of experts can provide the initial picture of policy impact situation on attaining SDGs.
- Perceptions for almost all questions (excluding Q 21 and 25) are lower than what the data from SDG dashboard illustrated. Respondents were either reserved or reflecting on the level of their awareness of policy and issues or sector situation. The choice of indicator for calibration of the normalized RSIA data graph was important for accuracy.
- Perceptions of the impact of current policies were likely to reflect observations and general intuitive understanding of the situation. This perception was not always accurate in terms of the actual extent of the impact or change in the real situation, but does tend to be correct on whether any progress has been made.
- The RSIA is a fairly easy tool to administer for measuring perception of policy impacts, which for the most part are in alignment with the direction of change. The data validation was not accurate not measuring the actual extent of policy impact due to its limitations. However, it can be further strengthened using more accurate data as the SOM's main purpose was to demonstrate the method.
- The choice of indicators: (i) affects the accuracy of data and (ii) improves the measure the nexus of SDG targets for each question, (iii) is essential for an accurate assessment of policy impacts.
- It is important to utilize the updated national statistics for RSIA exercise to get more accurate and realistic visuals

Alignment of policy with MEAs

The SOM emphasizes alignment of Mongolia's sustainable development policy implementation with the country's obligations to three key multilateral environmental agreements – UNFCCC, CBD and CCD. The RSIA results showed that progress has been made towards meeting UNFCCC (Q. 4, Q.7 & Q.19), CBD (Q.3, Q.5 & Q.10) and CCD (Q.5, Q.6 & Q.10) convention targets.

Limitations of RSIA Tool in the SOM process

- RSIA perception survey tool demonstrated the participants' knowledge and experience in policy and related fields and their assessment of implications in measuring the situation for each question.

- Using the RSIA tool and comparing the perceptions with calibrated SDG indicator data, may reflect the existing lack of good or 'most relevant' indicators and related data on impacts of policy and plans in the areas of focus, within each question.
- The methodology of normalising SDG data had the limitations of data shortage for the purposes of the RSIA scoring scale as each uses a different unit of measurement.
- Assigned indicators may not necessarily measure an impact of the policy in question.

Figure 31: RSIA comparison of perception with SDG normalised scores on a scale (-2) to (+2)



List of Survey Questions, applied for RSIA

1. From the range from [-2] to [+2] how would you rate the application and diffusion of environmentally sound technologies in Mongolia?
2. What effect are national development policy and plans currently having towards reducing water and air pollution and contamination to natural water sources and soil?
3. To what extent do you feel that ecosystem and biodiversity values are currently integrated into national and local socio-economic planning, development processes, including economic growth and poverty reduction strategies?
4. How would you rate the impact of current policy to the increasing share of renewable energy in Mongolia's energy source basket by 2030?
5. To what extent the national policy, plans and strategies combat desertification and restore degraded land and soil in all regions of the country?
6. How effective are current national policy, plans, strategies and practices in protecting and conserving Mongolia's water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes?
7. To what extent are climate change measures (both mitigation and adaptation) integrated into Mongolia's current national development policies and plans?
8. What impacts are current development policies, plans and strategies having in changing key industrial sectors' production and consumption practices to ensure the sustainable protection and restoration of Mongolia's environment and ecosystem services?

9. How effective is current environmental data collection, dissemination sharing for use in national development policy and planning decision-making?
10. How effective are current policies, strategies and efforts at mobilizing resources at all levels to finance environmental conservation and restoration efforts in the country?
11. What is your level of confidence that current national policy and strategy will reduce by at least half, the proportion of people living in poverty by 2030?
12. To what extent does the Mongolian Law on Development Policy Planning (MLDPP), enhance the inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management?
13. What level of effectiveness and impact the current development policy and strategies have in reducing inequalities within Mongolia both in urban and rural communities?
14. To what extent do you see positive changes in Mongolia's education system to ensure that all learners acquire the knowledge and skills needed to promote and practice sustainable development?
15. How well are current national policy, plans and strategies working to ensure preservation Mongolia's cultural heritage?
16. Are current national development policies and strategies having a positive impact on ensuring women's full and effective participation and opportunities for leadership in decision-making in political, economic and public life?
17. How well do current policies, plans and strategies support positive economic, social and environmental links between urban, peri-urban and rural areas?
18. How effective are the national strategies in reducing the health risks to people, especially in urban centers like UB, from chemicals, air, water pollution and contamination?
19. How effective are current policy and plans with regards to strengthening resilience and adaptive capacity of all people in Mongolia to climate related hazards and natural disasters?
20. How would you rate current progress on achieving access to safe and affordable drinking water and adequate sanitation facilities for all people (both urban and rural)?
21. To what extent the key industrial sectors (mining, energy, agriculture, tourism) add total value across sectors (environment, social, economic)?
22. How effective are the current policies and plans in upgrading the infrastructure and retrofitting industries and enterprises to make them sustainable and more resource use efficient?
23. Do you feel that the various economic sectors are flexible enough and have the ability to change their development/ business models and processes to support the integration of environmentally sound technology to increase efficiency of production and consumption?
24. How effective are the taxation measures towards increasing resource efficiency in consumption and production and investment in environmental protection and social development?
25. What is your confidence level that current national economic policies and strategies are significantly increasing the number of 'green jobs' and effectively promoting green / sustainable economic business models in Mongolia by 2030?
26. What is your assessment of the level of progress that Mongolia is making to ensure sustainable food production systems and climate resilient agricultural practices that are increasing productivity will maintain healthy ecosystems?
27. How effective is the national education system (especially vocational and higher education) in preparing youth and adults with the relevant skills for employment, decent jobs and entrepreneurship skills and mindset to contribute to Mongolia's increasing economic development?
28. To what extent are enterprises in all sectors in Mongolia adopting sustainable practices and integrating sustainability information into their reporting cycle and public disclosed communications?
29. What is the level of progress nationally in strengthening scientific and technological capacity in order to more successfully move towards sustainable patterns of consumption and production?
30. To what degree of success do you see policies and strategies having in substantially reducing waste generation through reduction, recycling and reuse (e.g. circular economy)

Annex 3: Extended Indicator Set for NGDP

Table 2: Indicators of the NGDP of Mongolia (Source: NGDP of Mongolia, 2014)

Indicators	2020	2030	Indicators	2020	2030
Share of RE in total installed capacity of energy production	20%	30%	Increased environmental investments	20%	30%
Reduction of building heat loss	20%	40%	Share of forest area	8.5%	9%
Share of waste recycling	20%	40%	Population access to drinking water	80%	90%
Share of green development expenditures in GDP	2%	3%	Population connected to improved sanitation facilities	40%	60%
Share of R&D expenditures in GDP	2%	3%	Poverty level	24%	15%
Share of green procurement in total government procurement	20%	30%	Percentage of greenery spaces	15%	30%
Share of protected areas	25%	30%	Share of the agriculture and manufacturing in GDP	28%	30%

Table 3: Extended Indicator Set for NGDP aligned with Objectives (Source: NSO, NGDP, 2017)

No	Indicators	2014 base) (level	2030 target) (level	NGDP strategic objective	SDV objective	Alignment with SDGs
1	Capacity of energy	0.038	-	1	1	7
2	Share of renewable energy in total installed capacity of energy production	0.8	30	1	1	7
3	Percentage of major mineral products	33.1	-	1	1	8
4	Percentage of agricultural sector in GDP	13.3	30	1	1	9
	Percentage of industrial sector in GDP	29.6	30	1	1	9
5	Percentage of tourism sector in GDP	0.2	-	1	1	8
6	Percentage of cost for environmental protection and green development in GDP	-	3	3	1	?
7	Percentage of cost for disaster prevention in government spending	-	-	2	1	1
8	Percentage of the cost for research and development in GDP	0.22	3	5	1	9
9	Unemployment rate, percentage	7.9	-	4	2	8
10	Labor productivity, at 2010 constant prices, MNT thousand	13338.1	-	4	2	8
11	Poverty coverage or poverty level, percentage	21.6	15	4	2	1
12	Percentage of population use safety drinking water in total population of settlement area	-	90	2	3,2	6

13	Percentage of population use improved sanitation in total population of settlement area	-	60	2	3,2	7 / 6
14	Health and safe life index ((Ulaanbaatar	0.4849	-	6	2	3
15	Domestic consumption of material for per unit of GDP or material capacity, kg / mln.ton	3790.3	3889.9	3	3	12
16	Green house gas emission, thousand ton	35497.94	-	1	3	11
17	Percentage of freshwater resource in catchment area	-	-	2	3	6
18	Percentage of treated water at a level that meets the standard requirements in total contaminated water	100.0	-	2	3	6
19	PM (dust) concentrations in the city air, PM10, mg / m3	0.645	-	6,1	3	11
	PM (dust) concentrations in the city air PM2.5, mg/m3	0.190	-	6,1	3	11
20	Share of waste recycling	0.5	40	6	3	12
21	Percentage of green area (facility e.g garden) in Ulaanbaatar	-	30	6	3	11
22	Share of special protected areas	13.5	30	2	3	15
23	Share of forest cover areas	9.2	9	2	3	15
24	Percentage of damaged area in total area of Mongolia	6.0	-	2	3	15
25	Percentage of rehabilitated agricultural land in total damaged area	6	-	2	3,1	2
26	Percentage of area affected by mining in total damaged area	0.1	-	2	3,1	2
27	Percentage of areas cut or subtracted (processed) in total crop production	-	-	2	3,1	2
28	Share of an entity that introduced the ISO-14001 standard environmental management	0.0004	-	5	4,3	12
29	Percentage of stained rivers, streams, springs in total rivers, streams and springs	8.9	-	2	3	6
30	Percentage of degraded land in level of strong and severe desertification in total area	-	-	2	3	15
31	Grazing capacity, by head of sheep for 100 thousand ha grazing land	77	-	4	3,1	15

32	Concentration of sulfur dioxide in the city air, mg / m ³	0.021	-	6,1	3	11
33	Concentration of nitrogen dioxide in the air, mg / m ³	0.043	-	6,1	3	11

PHOTO GALLERY OF THE SOM FORMULATION PROCESS

JOINT ESCAP AND ECE SCOPING MISSION FOR INTEGRATED INTERVENTIONS ON SOM AND EPR, AT MET AND NDA, ULAANBAATAR, MONGOLIA, 9-12 JANUARY 2017



Photo Credit: Aida Karazhanova, Ariuntuya Dorjsuren, Ka Seen Chan

TRAINING OF TRAINERS ON METHODOLOGY OF SOM DEVELOPMENT, ULAANBAATAR MONGOLIA, 2-3 MAY 2017



Photo Credit: Bolor Radnaabazar, Khaliunaa Khuyag

FIRST NATIONAL CONSULTATION ON SYNTHESIS OF ENVIRONMENTAL PERFORMANCE REVIEW AND THE SUSTAINABILITY OUTLOOK, ULAANBAATAR, 22 - 23 AUGUST 2017



Photo Credit: Bilegtnomiin Zorigt, Khaliunaa Khuyag

SECOND NATIONAL CONSULTATION ON DEVELOPMENT OF SOM THROUGH SDG DATA SUPPORT, AT MET, NSO, NDA, MFA ULAANBAATAR, 1-2 NOVEMBER 2017



Photo Credit: Chuluunkhuu Baatar

NATIONAL WORKSHOP ON ENVIRONMENTAL SDGs, SUPPORTED BY SINGG AND MET, ULAANBAATAR, 20-21 NOVEMBER 2017



Photo Credit: Ko Sunhyun

SOM DEVELOPMENT PROCESS WRAP-UP MEETING OF ESCAP AND THE NATIONAL TEAM, ULAANBAATAR, 12 DECEMBER 2017



Photo Credit: Khaliunaa Khuyag

The Sustainability Outlook of Mongolia (SOM) is the product of a combined effort of the Government of Mongolia and Economic and Social Commission for Asia and the Pacific, Economic Commission for Europe and United Nations Development Programme and UN Environment provided essential contributions during the national and regional processes and consultations.

The SOM is designed to help governments and other actors prepare to translate the 2030 Agenda for Sustainable Development into the national context and to ensure inter-sectoral and inter-ministerial collaboration in development of the Pathways for Implementation of Internationally Agreed Commitments and Sustainable Development Goals.

By applying a systems-thinking approach, the SOM offers a quantitative and qualitative analysis of Mongolia's relevant policies and strategies, providing policy coherence and a baseline for formulating scenarios and integrated policy pathways. This approach has resulted in a clear outlook for Mongolia to help define and guide its sustainable development course well into the future. In Mongolia the SOM has been developed to support alignment of core strategic national documents, namely, the Sustainable Development Vision 2030, and National Green Development Policy with the 2030 Agenda for Sustainable Development and the Sustainable Development Goals.

For further information on this publication, please address your inquiries to:

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National Development Agency (NDA)
National Statistical Office (NSO)

Environment and Development Division of Economic and Social
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