GREEN ECONOMY POLICY REVIEW OF **MONGOLIA'S GREEN DEVELOPMENT POLICY**

MID-TERM REVIEW

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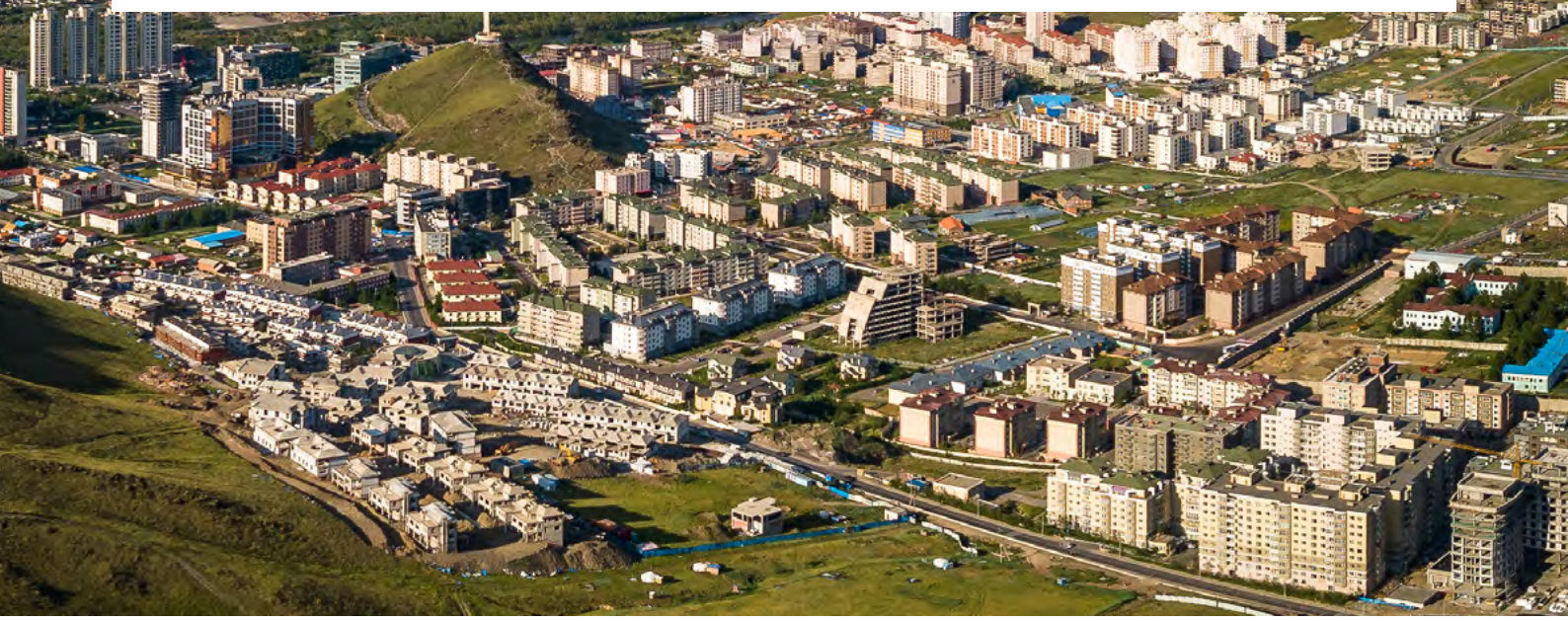
Abbreviations and Acronyms

CO_2	Carbon dioxide
EPCRC	Economic Policy and Competitiveness Research Center
ERC	Energy Regulatory Commission of Mongolia
GD Policy	Green Development Policy
GDP	Gross Domestic Product
GEPP	Green Economy Policy Project
GHG	Greenhouse Gas
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
GoM	Government of Mongolia
IMF	International Monetary Fund
INDC	Intended Nationally Determined Contributions
MCUD	Ministry of Construction and Urban Development
MEGD	Ministry of Environment and Green Development
MET	Ministry of Environment and Tourism
MMHI	Ministry of Mining and Heavy Industry
MNCCI	Mongolian National Chamber of Commerce and Industry
MNT	Mongolian Tugrug
MOFALI	Ministry of Food, Agriculture and Light Industry
MRTD	Ministry of Road and Transportation Development
MSFA	Mongolian Sustainable Finance Association
MULS	Mongolian University of Life Sciences
MUST	Mongolian University of Science and Technology
NAPCC	National Action Program on Climate Change
NDA	National Development Agency
NGO	Non-Governmental Organization
NREC	National Renewable Energy Center
NSO	National Statistics Office
NUM	National University of Mongolia
PAGE	Partnership for Action on Green Economy
PPP	Public Private Partnership
PoM	Parliament of Mongolia
SDG	Sustainable Development Goals
SDV 2030	Sustainable Development Vision 2030
SEA	Strategic Environmental Assessment
SME	Small and Medium Enterprise
SPIA	State Professional Inspection Agency
UN	United Nations
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
USA	The United States of America



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Executive summary

Mongolia became one of the first countries to have a national policy on green development, following the ratification of the Green Development Policy (GD Policy) in 2014. The development and approval of the GD Policy showed Mongolia's willingness and commitment to transition towards a green economy. This ignited interest in studying the Mongolian experience and helped build a better understanding and acceptance of the concept of green economy among Mongolian decision makers and enterprises by fostering cooperation initiatives.

In 2020, the Parliament of Mongolia (PoM) approved "Vision-2050", a national long-term development policy, ahead of the then-upcoming parliamentary election in June, 2020. With that, the previously active policy document "Sustainable Development Vision-2030", which was approved in 2016, was nullified. However, the GD Policy is still valid and effective. With targets for the years 2020 and 2030, the GD Policy exited its first phase in 2020 and therefore, the policy implementation process is reviewed at this stage.

As the GD Policy was adopted before the introduction and ratification of the Law of Mongolia on Development Policy and Planning (PoM, 2015), "Vision 2050" (2020), "Sustainable Development Vision 2030" (2016) and the introduction of the UN Sustainable Development Goals (SDGs), it is especially important to review the harmonization of the GD Policy against other key policy documents and strategies.

Undertaken in accordance with the Green Economy Policy Review methodology developed by the United Nations Evironment Programme (UNEP 2020), this study covers a review of the policy documents which are considered important for the GD Policy implementation. These documents include laws approved by the PoM, Government of Mongolia (GoM) resolutions, action plans, ministrial orders and other research and policy implementation plans and reports. In reviewing the document, the support and participation of special funds, Non-governmental Organizations (NGOs), professional organizations and Public Private Partnerships (PPP) were taken into account.

The first chapter of the report introduces the GD Policy, its targets and indicators as well as the research methodology and scope. The second chapter covers a review of the policy implementation, including the policy formulation process and progress on the implementation of the GD Policy, by: 1) analyzing whether it is able to reach the 2020 targets, 2) understanding the harmonization and alignment of the GD Policy with the SDGs and the "Vision 2050" long-term policy and 3) integrating qualitative findings based on interviews and a consultation workshop that was organized in December 2019. Chapter three puts forward conclusions and recommendations.

In the analysis comparing the mid-term performance against the target values, seven out of the 10 indicators which could be measured reached more than 70% of their 2020 target, and out of these, four even reached more than 90% of their target for 2020. In other words, the implementation of the GD Policy can be considered "above average". The authors find that the number of policy tools to support the policy implementation is substantial enough and the harmonization of the GD Policy against the "Vision 2050" and the SDGs is relatively high. Therefore, the authors believe that the policy is still relevant, however an amendment or a revision of the policy may be needed in order to make it even more consistent with the laws and national long-term policy documents that were introduced after the ratification of the GD Policy. In doing so, indicators and targets and the ways to access them can be updated based on data availaibilty and other long-term goals and objectives.

However, the findings from the interviews and discussions which were conducted during the study showed that there is a lack of coordination and common understanding among government agencies. For example, during the interviews and the consultation workshop, it was observed that ministries and agencies other than the Ministry of Environment and Tourism (MET) do not pay enough attention to the GD Policy. Besides, the civil servants responsible are often replaced after elections, which hinders the implementation of the policy. In another instance during the interviews, it was observed that government institutions may benefit from improving their common understanding on how to measure carbon dioxide (CO2) emissions.[1]

The authors found it somewhat challenging to assess the GD Policy implementation due to missing data for some of the indicators. For example, some of the baseline data were not available, thus making it difficult to assess the performance. Other factors that need to be taken into consideration include the observation that the law-making process was relatively simpler in 2014 and the SDGs were not adopted

1 Authors' observation from interviews

yet. By contrast, currently, Mongolia's law-making standards and criteria for adopting legal acts require more baseline research, impact analysis and data availability according to the Law of Mongolia on Development Policy.

Key findings and recommendations from the study can be summarized as:

- The GD Policy can be revised in line with the Law of Mongolia on Development Policy and other policy documents. However, the revision should be carefully approached and conducted. This is because there are ongoing actions, initiatives, projects and programmes that could be affected if a policy revision is introduced. Regulations and orders that may follow the policy revision can affect the implementation of those ongoing projects;
- It is necessary to increase the share of Gross Domestic Product (GDP) in green development and investment in research and technology in order to achieve the GD Policy objectives and targets; doing so would have positive economic and social benefits, especially in the long run;
- Building a common understanding among stakeholders and setting robust rules and regulations is important. More specifically, stronger leadership from the GoM and better coordination among government agencies by establishing joint taskforces and a platform for frequent coordination and reporting would be useful;
- It is necessary to strengthen PPPs, and expand the good practice of the banking sector through cooperation with other sectors including construction, tourism, food production and agriculture;
- Approving green standards in sectors such as mining, manufacturing, construction and trade would have positive impacts on reaching the GD Policy goals and targets;
- Introducing incentives for environmentally sound activities for citizens and enterprises would be a useful tool in implementing the GD Policy. In doing so, criteria for incentives must be transparent and clear;
- It would be beneficial to include green duties in the job descriptions of civil servants and include them as explicit criteria when considering promotion and awards for employees;
- Public attitude and awareness towards green economy can be improved through green education for citizens and businesses;
- Improved involvement of international and local NGOs and think tanks in the policy planning and implementation process could be beneficial.

1. Introduction

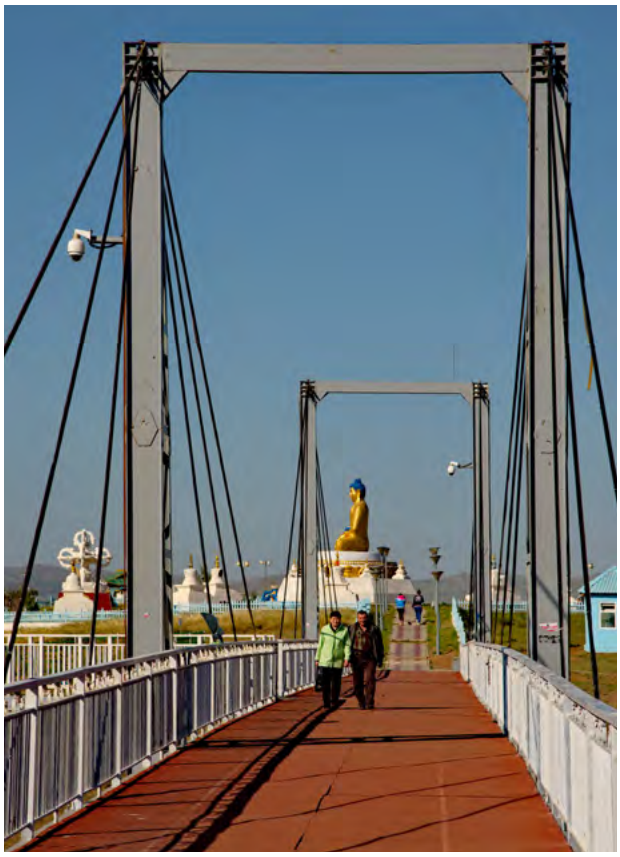
The aim of this study is to review the mid-term implementation of the GD Policy approved by the PoM in 2014, and to examine the consistency and coherence of the GD Policy against selected national and international policies and commitments. The review is undertaken in accordance with the Green Economy Policy Review methodology, "Advancing the Transition to an Inclusive Green Economy - A Policy Review Manual", developed by UNEP in 2020.

Thus far, no institution has conducted a thorough review on the implementation progress of the GD Policy and its indicators. The Department of Green Development Policy and Planning of the MET prepared a "Performance Report of GD Policy Implementation Action Plan" in 2018 and 2019 respectively. Although the reports include actions taken under each of the objectives and legal documents approved, there is no assessment on the implementation progress of the GD Policy and its indicators.[2]

According to "The Green Economy Progress Measurement Framework Methodology, Evaluating National Progress Towards Poverty Eradication and Shared Prosperity within Planetary Boundaries" report, produced by the UN's Partnership for Action on Green Economy (PAGE) initiative, Mongolia's green economy transition progress is ranked last in comparison to the other countries that are included in the study (PAGE 2017).

The Economic Policy and Competitiveness Research Center (EPCRC) produced the "Green Economy Policy Assessment: Mongolia" report upon the request of PAGE in 2018. This report referred to the GD Policy implementation progress and created and compared different scenarios in achieving green development and sustainable development goals by increasing investment in a green economy using the T21 model.[3]

The adoption of the GD Policy in Mongolia is the result of the country's commitment and intention to maintain a healthy living environment for future generations in respect to international development trends. In this section of the report, the GD Policy, its indicators as well as the research methodology are described below.



2 The MET compiled and produced a "Performance Report of GD Policy Implementation Action Plan" for the years 2018 and 2019. 2017- 2018 performances of GD Policy actions are included in the 2018 report, while 2018-2019 performances are included in the 2019 report.

3 Threshold 21 (T21) is a dynamic simulation tool designed to support comprehensive, integrated long-term national development planning. T21 supports comparative analysis of different policy options, and helps users to identify the set of policies that tend to lead towards a desired goal. In Mongolia, additions were made to the base modules taking into account the significant share of mineral revenue as well as the prices of major minerals, among other considerations.

1.1. The Green Development Policy

PoM's approval of the GD Policy[4] (Decree No. 43), dated 13 June 2014, was a historical event which ratified a policy document on inclusive green economy and green development for the first time in Mongolia. According to the policy, the PoM assigned the GoM, which is the executive body of the Mongolian state, to i) approve a policy implementation action plan and reflect the plan in state investment programmes for implementation, ii) reflect the policy goals, objectives and implementation methodology in national development policies and macroeconomic mid-term policies that are produced regularly for implementation, and iii) report on policy implementation performance to the PoM annually.

Following the collaborative work pioneered by the Ministry of Environment and Green Development (MEGD, MET as currently known), with support from the relevant PoM standing committees, the GD Policy paper became a legally binding document in 2014.

The overall purpose of the GD Policy is to ensure that "Mongolia evolves as a developed nation that has built conditions for environmental sustainability, so that it will be inherited by future generations who will gain benefits from it in the long-run through participatory and inclusive economic growth based on the green development concept" (PoM, 2014). Six strategic objectives that were set out in conjunction with this purpose are:

1.1. Promote sustainable consumption and production patterns with efficient use of natural resources, low greenhouse gas (GHG) emissions, and reduced waste generation;

1.2. Sustain the carrying capacity of ecosystems by enhancing environmental protection and restoration activities, and reducing environmental pollution and degradation;

1.3. Increase investment in natural capital, human development and clean technology by introducing financing, tax, lending and other incentives for supporting a green economy;

1.4. Engrain a green lifestyle while reducing poverty and promoting green jobs;

1.5. Encourage education, science, and technology to serve as the catalyst for green development, and develop cultural values and livelihoods that are in harmony with nature;

1.6. Develop and implement a population settlement plan in accordance with climate change, while considering the availability of natural resources and the resilience of regions.

The GD Policy was planned to be implemented in two phases. The first phase (2014 - 2020) sets the foundation for green development. It aims to achieve Mongolia's sustainable development goals by establishing green development models and norms in all economic and social sectors in Mongolia. It posits the development of a legal framework that ensures green development by fostering and mobilizing the inclusion of infrastructure and organizations that support long-term sustainable development. Furthermore, the first phase outlines the plans for regionally competitive industrial and service sectors, a knowledge-based economy, green investment and financing mechanisms, environmentally friendly and efficient infrastructure, production of renewable energy, adoption of sustainable production technologies and reductions in the CO2 produced per unit of production.

The second phase (2021 - 2030) is defined as the "Transformation to Green Development" phase. During the second phase, a highly efficient green economy and inclusive society will be established by preserving natural and environmental systems and adapting to climate change. Moreover, advanced technology and innovative production will be mainstreamed and integrated into the economy to further help establish a green economy.

Following the adoption of the GD Policy, the GoM approved the "GD Policy Implementation Action Plan" with resolution No. 35 of 11 January 2016. The action plan defined an implementation process for each of the objectives, numbered them and set deadlines and an implementation period. Responsible organizations and co-implementors were also assigned in the action plan. These included government ministries, agencies, local governments, the Mongolian National Chamber of Commerce and Industry (MNCCI) and companies, for each of the objectives (GoM 2016). The action plan included targets and results to achieve under each of the activities.

4 The draft policy document was initially presented to the PoM as "Green Development Concept". However, during the process, it was renamed "Green Development Policy" (according to an interview with working group member).

Table 1. **Green Development Policy indicators**

#	Indicator	Target	
		2020 (%)	2030 (%)
1	Share of renewable energy supply capacity against installed energy supply capacity	20	30
2	Share of reduction of building heat loss	20	40
3	Waste recycling share	20	40
4	Share of expenditure in green development in total GDP	2	3
5	Share of expenditure for science and technology research in total GDP	2	3
6	Share of green procurement in total government procurement	20	30
7	Share of protected areas in total territory	25	30
8	Increased investment in environmental protection and restoration	20	30
9	Share of forest area in total territory	8.5	9
10	Percentage of population with access to certified drinking water	80	90
11	Percentage of population with access to improved sanitation facilities	40	60
12	Poverty rate	24	15
13	Share of green areas in Ulaanbaatar and other urban areas	15	30
14	Share of agricultural and manufacturing industry in total GDP	28	30

Source: PoM, 2014

GD Policy indicators

Indicators were defined for each of the six strategic objectives; some of the indicators were expressed in numerical values and others are based on qualitative criteria. The indicators are inseparable parts of the GD Policy. The GD Policy defines 2020 and 2030 target outcomes with 14 indicators shown in the Table 1 above.

Although the GD Policy set 2013 as the baseline year and years 2020 and 2030 as target years, the baseline values for each of the indicators are not clearly specified - creating confusion among researchers,[5] as further explained in 1.2, the Methodology and Scope section of this report.

On another note, the National Statistics Office (NSO) developed indicators for Mongolia's SDG targets and assessed achievements according to each of the indicators since 2015, publishing them annually (NSO 2020).

Comparison of GD Policy indicators against other policy outcome indicators

The 17 SDGs, along with their 169 objectives, were set in 2015 by the UN General Assembly under its Resolution No. 70 and were adopted globally on January 1st, 2016. Furthermore, 244 SDG indicators were developed and approved in the spring of 2017 during the UN's Statistical Commission session. Mongolia was one of the first countries to adopt the SDGs and developed a national "Sustainable Development Vision 2030" (SDV 2030) policy document in 2016. However, the SDV 2030 was nullified in May 2020, in conjunction with the adoption of the longer term and more comprehensive policy document "Vision 2050".

5 2013 baseline values for some of the indicators were included in the draft policy document when it was initially presented to the PoM on June 13th, 2020 during the pre-approval stage. However, as some other baselines were unavailable, all the baseline values were eliminated (Information provided during interview of working group member)

As for the assessment of the implementation of the SDGs in Mongolia, the NSO proposed potential indicators that could be used in measuring the implementation. These included: 45 (17.5%) indicators that were readily available to measure; 64 (24.9%) available after some additional calculations; 28 (10.9%) available after much more extensive calculations; five (1.9%) that could be provided by international organizations; 72 indicators (28.0%) that required creation of sources or a change of sources and 43 (16.7%) that were not possible to measure (NSO and UN Development Programme (UNDP) 2015). In addition, the NSO announced that 60% of the detailed indicators for the SDGs are not possible to measure.

The NSO conducted a re-assessment of the 244 indicators of the SDGs in October 2017 (NSO 2017a). According to this assessment, 11 indicators were irrelevant to Mongolia, 233 were relevant, out of which 113 indicators were measurable, while 120 were not possible to measure. In other words, more than 50% of the total indicators could not be measured for Mongolia. The NSO made further calculations in 2016 and 2017 for indicators which can be measured (Appendix 6.3).

As for the "SDV 2030" policy document, baseline and target values are defined for the main 20 indicators. The NSO made evaluations in 2015, 2016 and 2017 for the main 20 indicators that can be measured (Appendix 5.4). As the "SDV 2030" is currently nullified in favor of the newly adopted "Vision 2050" policy document, the harmonization between the GD Policy and the "SDV 2030" is not addressed within this study.

Responsible bodies to measure the indicators

While the NSO is responsible for the performance evaluation of the SDGs, the MET is responsible for the GD Policy indicators' performance and evaluation.

There are reports published in accordance with the GD Policy action plan. More specifically, the GD Policy action plan fulfillment is reviewed annually in accordance with the "Common regulation on monitoring-evaluation and assessment of administrative units' operations and policy implementation" which is approved by the GoM, resolution No.89 in 2017.

1.2. Methodology and scope

The methodology for the GD Policy review is based on UNEP's Green Economy Policy Review manual and includes i) a desk review of relevant policies, performance reports and other government documents and quantitative data (Appendix 5.2), ii) interviews and consultations in accordance with the methodology's guiding questions, and iii) a stakeholder consultation workshop.

The policies and other government documents form the main framework for government actions towards a green economy.

The researchers used a "harmonization rate" when comparing the consistency of the policy goals, strategic objectives, implementation action plan and the indicators of the GD Policy against the "Vision 2050" long-term development policy and the SDGs. The following qualitative categorization was adopted for the harmonization rate: "highly satisfactory", "satisfactory", "less satisfactory", "not satisfactory" (meaning that while conceptually reflected, the harmonization is not enough for assessment), and "not reflected". The contexts of the different policies, such as the "SDV 2030" and the "State Policy on Minerals Sector", were carefully taken into account when determining the harmonization rate. In this paper, the researchers explored policy elements with "less satisfactory", "not satisfactory" and "not reflected" harmonization rates in greater detail, rather than focusing on those that were highly satisfactory and satisfactory, in order to provide recommendations for improvement.

The following quantitative data were used in the review of the GD Policy implementation: 1) "Data for SDG Indicators" published by the NSO (2016); 2) National Database of the NSO (2021); and 3) Environmental Information Database of the MET (2021).

A total of 18 individuals were interviewed face-to-face between October and December of 2019 in the format of semi-structured interviews (Appendix 5.1). The interviewees were selected based on their knowledge, participation in and relevance to the policy formulation and implementation processes. They were selected as a sample from the following three different groups: 1) public officials who took part in the policy formulation process and/or are responsible for implementation; 2) civil society and academia representatives who were either consulted or took part in the discussions; 3) business associations and representatives.

The following questions were used in guiding the semi-structured interviews:

1. What changes and positive outcomes, if any, came after the ratification and adoption of the GD Policy?
2. What is the current status of green transition in your sector?
3. How would you assess the GD Policy implementation?
4. Is it possible to achieve the GD Policy goals and objectives?
5. What are the ways forward?

A stakeholder consultation workshop was also organized on 4th December 2019, and aimed at introducing the overview of the GD Policy, the ongoing GD Policy mid-term review process at an early phase and the results of the T21 model. A total of 102 people attended the event including government representatives, international cooperation partners, the business community, civil society and academia.

Regarding methodological challenges, when reviewing the implementation of the GD Policy under the current circumstances, the official sources of data are not clearly indicated. There is also a lack of information on which indicators, developed by what organizations, should be used in assessing the implementation progress.

In this regard, the researchers compared performance reports from several different sources, when possible, in verifying the actual performance for some of the GD Policy targets and indicators, as described in section 2 of this report. The reasons for not including 2013 baseline values for the 14 targets when devising the policy included:[6] i) certain indicators were newly introduced and were not measured (building heat loss, expenditure on green development in GDP, share of the government's green procurement etc.); ii) some indicators required inputs from several institutions and their values were not consistent with one another and iii) values of some indicators were not available in 2013. It was also not clear which institutions should provide the figures, nor which methodologies were to be used in the estimate (increased investment in environmental protection and restoration, share of agricultural and manufacturing industry in total GDP).

6 Interview with Dr. Ganzorig.G, Vice Dean of Vice Dean for Academic Unit, School of Economics and Business, Mongolian University of Life Sciences

2. Review of the Policy Implementation

2.1. Policy formulation process

Policy-level commitment in green development began with the establishment of the MEGD in 2012 by the GoM, setting forth the foundations for the GD Policy formulation process.

The policy formulation process was preceded by a number of independent events and actions that took place during the previous years. Namely, in 2009-2010 Mongolia was harshly hit by *dzud*[7] which resulted in the loss of 8.8 million livestock, valued at least Mongolian Tugrug (MNT) 264 billion (US$192 million) - an equivalent of 4.4 per cent of GDP in 2009 (Benson 2011). Although *dzud* is not new to Mongolia, the 2009-2010 events - which lasted for two consecutive years - were more extreme than the previous years and resulted in a considerable amount of distress to the livelihoods of herders and the overall economy of the country. The *dzud* disaster was mostly perceived as being triggered by climate change. Therefore, in response to this, Mongolia developed a National Action Programme on Climate Change (NAPCC), which was planned to be implemented in two phases from 2011 to 2021. The goals of the programme were: to ensure environmental sustainability; develop socioeconomic sectors adapted to climate change; reduce vulnerabilities and risks; mitigate GHG emissions, as well as promote economic effectiveness and efficiency and implement "Green growth" policies (PoM 2011). Besides this programme, several other events and actions at a national and international level that took place in 2012 contributed to the inception and development of the GD Policy. Table 2 illustrates the the most important events and processes that contributed to the creation and implementation of the GD Policy.

Table 2. Timeline of the policy formulation process

International level	National level
2012	
• A delegation from Mongolia participated in the Earth Summit 2012 in Brazil. The Rio +20 Declaration – "The Future We Want" – recognized green economy as a vehicle for achieving sustainable development and poverty eradiction. After returning to Mongolia, the delegation, which consisted of experts, politicians and environmental activists, started to draft the sustainability concept for Mongolia. Their initial vision was to use green development as a lever to combat poverty.	• During the annual "Mongolia Economic Forum", which took place in February, a special session on "Green Civilization" was organized. The panel was dedicated to introducing a new paradigm trying to combine the wisdom of "Mongolian traditional nomadic civilization" with eco-friendly (low carbon) modern economic development. At that time, the forum was an influential platform where ideas were exchanged among high-level politicians, civil society actors and business leaders. The idea of "Traditional but modern" sustainable development with Mongolian characteristics was well received by the audience. As a result, most of the forum participants agreed that the green civilization concept should become an explicit public policy.

7 *Dzud* is a Mongolian term relating to climatic winter extremes associated with heavy snowfall and temperatures which can potentially threaten human livestock populations.

Table 2. **Timeline of the policy formulation process (continued)**

International level	National level
2012 (continued)	
	• In July, the newly elected parliament of Mongolia set-up a coalition government, as there was no clear winning party with majority seats. As a consequence, the Civil Will-Green Party secured a ministerial position at the MEGD. Under the leadership of this new structure, an inter-ministerial working group was established to draft a green policy. • MEGD organized several multi-stakeholder forums and workshops related to green development. Early suggestions on the title of the policy were "Green Economy Policy" or "National Memorandum on Green Civilization". During those events, it was discussed which organization should be in charge and have the final responsibility to implement the policy. Some favored a new special National Council consisting of representatives of diverse authorities to make coordination smoother, while others preferred the Prime Minister's office due to its power to govern over different agencies. Some officials felt that MEGD was the suitable body to implement the policy. • Around that time, there was heightened attention among policy makers on sustainability and environmental issues. Media coverage was also high.
2013	
• The UN PAGE initiative was launched and Mongolia was selected as one of the pilot countries.	• MEGD organized a "National Green Development Forum" on World Environment Day. Later, the MEGD drafted the"National Vision on the Green Civilization".
2014	
	• The GD Policy was ratified by the PoM.
2015	
• The 2030 Agenda for Sustainable Development, including the 17 SDGs, was adopted during the UN Sustainable Development Summit in New York. • COP 21 negotiated the Paris Agreement and brought together global attention to climate change and collective actions and efforts.	• Mongolia submitted its Climate Action Plan and the Intended Nationally Determined Contributions (INDCs) to the United Nations Framework Convention on Climate Change (UNFCCC) Secretariat ahead of the 2015 Paris Agreement. The national INDCs were developed by the Climate Change Project Implementing Unit of the Nature Conservation Fund under the MEGDT, with the financial and technical support from the Global Environmental Facility, UNEP and the Global INDC Support Programme. • The second Sustainable Finance Forum was organized by the Mongolian Bankers Association.
2016	
• The Paris Agreement became effective, and as of February 2020, all members of the UNFCCC have signed the agreement.	• The PoM approved the Sustainable Development Vision 2030. • The third forum on Sustainable Finance Forum was organized by the Mongolian Bankers Association.

After being approved by the GoM, the draft policy was delivered to the PoM (legislative organ) in 2013 for approval. At that time, the policy consisted of two different separate documents. The first was the "National Concept on Green Civilization" setting the overall vision, goals, guidelines and the main principles. The second was "The Mid-term Strategy" showing how to implement the nation's concept in the coming years.

The "National Concept on Green Civilization", which was drafted by the MEGD in 2012, initially covered broader issues, such as environmental protection, the fight against the negative consequences of climate change and income inequality and poverty. However, during cabinet-level meetings, some economic aspects were removed from the then-draft policy document, as it was argued that those sections should be specified as responsibility areas of different ministries, such as economic development or finance.

During the parliamentary level hearings, a parliamentary working group was created and took up the reading and revising of the drafts. According to several interviews within this review, the parliamentary working group made no significant changes. Nevertheless, the two documents were combined into one single policy document which was officially named the "Green Development Policy" with an explicit section of indicators and targets as measurements for the years 2020 and 2030.

In 2016, the GoM restructured MEGD and removed "Green Development" from its title and replaced it with "Tourism". The department in charge of green development policy still continued its operations in the same way as before, despite the name change.

During the interviews, the interviewees noted that MEGD was the pioneer in developing the GD Policy. The participation of the private sector in the policy formulation process was limited. The same interviewees reported that this may have been due to the short timeframe and certain challenges to include the private sector perspective in Mongolia. These related to representatives often being interested in having their own unique challenges specifically included, rather than focusing on the overall policy goals or broader sectoral challenges and issues.

Following the approval of the GD Policy, the GoM approved a detailed action plan to ensure policy implementation. Although the process of developing of the action plan ensured participation from various stakeholders and established dedicated task forces, again private sector representation was low. However, from the authors' point of view, it can be justified that the private sector perspectives may have been included in the GD Policy from the policy makers' view based on previous studies and follow-up discussions.

Some interviewees found that the policy implementation timeline is too tight or too optimistic, as the 2020 targets do not seem to be achievable. Furthermore, its implementation action plan seems to overburden civil servants who are loaded with regular assignments. During the consultation workshop, the participants noted that since the GD Policy was developed and approved prior to the approval of the Law of Mongolia on Development Policy and Planning, there may be some inconsistencies.

2.2. Actions taken within the policy framework

Despite the shortfalls, several actions have been taken in order to implement the GD Policy. Firstly, the Law on Development Policy and Planning was approved in November 2015 and amended in 2020. It defines the stages of planning, implementation, monitoring and evaluation for the development policy of Mongolia. It does so in order to set out guiding principles, outline rights, duties and responsibilities of the engaged parties and to build up a unified development policy planning system. As Mongolia is landlocked, has a relatively undeveloped industrial sector and nearly half of the population live in rural areas with insufficient infrastructure, such laws and development planning schemes are particularly necessary. Following the GD Policy action plan, the NSO adopted the "Regulation on Green Development Indicators and Computing of the Indicators" under Resolution No. A/130[8] of 2017, approved by the Chairperson of the NSO after consulting with the MET. According to the NSO, most of the indicators except six are measurable to some degree. However, the fact that measurement of the green indicators is conducted solely by the NSO can present challenges, as there are inter-sectoral issues that should be taken into account.

Further actions included identifying green development objectives in 13 provinces, taking steps to establish a green credit fund and incentives for citizens and businesses who

8 Interview with the NSO representatives and presentation made by the MET during consultation workshop

introduced eco-friendly approaches and technologies, such as loans from commercial banks with favorable terms through the Green Climate Fund. However, due to delays in approving standards for implementation, some of the implementation was deferred.

A number of sectoral policies and regulations were introduced in accordance with the implementation of the GD Policy, such as the "National Programme on Energy Saving" and the "Programme on Green Education". Furthermore, the GoM developed and approved a regulation in 2018 which forbids the single use of plastic bags (Resolution No. 189) within the Law of Mongolia on Waste. The existing "Environmental Fund" was expanded to the "Environment and Climate Fund" by amending the "Law of Mongolia on Special Fund of Government of Mongolia". As noted during the interviews and the workshop, it can be inferred that the GD Policy prepared an enabling environment for such follow-up laws and actions.

The following online archives, websites and database were established in order to improve information transparency:

- Green buildings: www.greenbuilding.mn
- Environmental Information Database: www.eic.mn
- Educational materials on sustainable development: www.nogoon.mn
- Statistical indicators: www.1212.mn
- Forest study: www.forest-atlas.mn[9]

2.3. Consistency between national policy documents and the UN Sustainable Development Goals

In terms of policy consistency, the GD Policy goals are generally consistent with the other policy documents of Mongolia as reviewed below. In particular, these policy documents include "Mongolia's Sustainable Developement Vision 2030" (initiated in 2020), "State Policy on Minerals Sector" (PoM Resolution No.18 in 2014), GoM Action Plan 2016 – 2020 (PoM Resolution No. 45 in 2016), Industrial Policy (PoM Resolution No. 62 in 2015), President of Mongolia's Order No. 77 in 2015, GoM Action Plan Implementation Plan (GoM Resolution No. 121 in 2016), and "Three Pillar Development Policy" (GoM Resolution No. 42 in 2018).

In the following two sections, the GD Policy is compared with "Vision 2050" and the SDGs.[10]

2.3.1. "Vision – 2050"

The purpose and the strategic objectives of the GD Policy are compared against the "Vision 2050", while the implementation action plan is compared against the 2021 – 2030 action plan of the "Vision 2050" policy. The authors focused on less "satisfactory", "not satisfactory" and "not reflected" clauses in this paper; more so than the "highly satisfactory" and "satisfactory" clauses, as mentioned in Section 1.2.

Purpose

The PoM approved "Vision 2050" under its Resolution No. 52 in 2020. The policy states that green development will be the starting point of Mongolia's long-term development policy in accordance with worldwide development trends. Hence, green development is identified as one of the main goals within the document, specifying that economic advancement, infrastructure and regional developments will be achieved through an efficient use of natural resources and taking advantage of the country's geographical location. From this, it can be stated that "Vision 2050" encompasses the overall concept of the GD Policy.

Strategic Objectives

The GD Policy has 6 strategic objectives and these are compared with the 9 objectives of 'Vision 2050' long-term development policy. Chapter 6 of the "Vision 2050" policy document is fully dedicated to the promotion of green development, and this part of the document also covers the GD Policy objectives. Overall harmonization between the objectives of the two policies are "satisfactory", based on assessments detailed in the supporting document (as per footnote 10). In other words, most of the 6 strategic objectives of the GD Policy are reflected in the "Vision 2050"

9 Some of the above-mentioned links are not working as of the date of publication, possibly due to completion of the respective projects and programmes. In addition to this, the EPCRC created and runs a green guide website: www.nogoonhutuch.mn.

10 The detailed assessment of the harmonization of these policies is contained in a separate document - "Comparison of Green Development Policy, "Vision 2050" and UN Sustainable Development Goals" – which can be found on the same web page as this publication.

long-term development policy. Strategic objectives 2, 5 and 6 of the GD Policy are reflected as "highly satisfactory" in the "Vision 2050" long-term development policy. Strategic objectives 1 and 4 of the GD Policy are deemed "satisfactory".

Strategic objective 3 of the GD Policy, "Increase investment in natural capital, human development and clean technology by introducing financing, tax, lending and other incentives for supporting a green economy", is reflected to a "less satisfactory" extent in the "Vision 2050" long-term development policy. It is mostly due to the fact that introduction of financing, tax, lending and incentives are not included in the "Vision 2050" policy.

Strategic objective 1 of the GD Policy aims to "promote a sustainable consumption and production pattern with efficient use of natural resources, low greenhouse gas emissions, and reduced waste generation"'. However, in part 4 of objective 6 of the "Vision 2050" document, the statement is comparatively weaker, stating that Mongolia would "contribute to international efforts in mitigating climate change by producing less carbon and by developing a highly efficient and inclusive green economy". The document does not suggest specific ways to implement this objective. In other words, it could be interpreted that Mongolia will focus on climate change mitigation efforts, supported by the transition to a green economy, if these efforts are part of a global initiative. However, it is possible that the GD Policy goals can be achieved through a combined fulfillment of "Vision 2050" indicators, as the indicators are interrelated and can contribute to the overall achievement of the goals. The harmonization rate can therefore be considered as "satisfactory".

Objectives 3 and 4 of the "Vision 2050" long-term development policy aim at a socioeconomic status with stable increases in employment, a prevalent middle class and a significantly reduced poverty rate. These objectives are considered as having a "satisfactory" level of harmonization with the strategic objective 4 of the GD Policy. However, the term "green jobs", or similar definitions, are not thoroughly included in the "Vision 2050" long-term development policy.

Actions for Implementation

A total of 52 activities are planned within the six strategic objectives of the GD Policy, and 958 activities are planned to be implemented within the nine objectives of "Vision 2050" long-term development policy between 2021 and 2050. In the latter document, objective 6 "Green development" includes 64 activities which account for around 7% of the overall activities. In other parts of the "Vision 2050" document, there are several references related to supporting green development and adopting the concept of green development. However, those references constitute less than 10% of the overall planned activities.

In the "Vision 2050" document, 35 of the 52 actions of the GD policy are reflected with a degree of harmonization that is "highly satisfactory", the harmonization of 8 actions were "satisfactory", the harmonization of 5 were "less satisfactory", while the harmonization of three actions were reflected as "not satisfactory" and one action was not reflected (as per footnote 10).

The overall harmonization between the two policies can be evaluated as being "satisfactory". In other words, most of the GD Policy implementation can be achieved if the "Vision 2050" long-term development policy is successfully implemented until the end of 2030. When looking at how the planned activities of the GD Policy are reflected in "Vision 2050" during the years 2012-2030 objective by objective, actions within GD Policy objectives 1, 2, 4, 5 and 6 are generally well reflected ("satisfactory"), while objective 2 is reflected to a "less satisfactory" extent.[11]

Out of the actions of objective 1 of the GD Policy, the following is not reflected well enough in the "Vision 2050" long-term development policy:

"Reduce greenhouse gas emissions in the energy sector by 20 per cent by 2030, through increased energy efficiency, and by ensuring that the share of renewable energy used in total energy production is at 20 per cent by 2020, and at 30 per cent by 2030. This will be achieved by renewing energy production and other industrial technologies, by reducing excessive consumption and transmission losses, by the optimization of pricing policies, by preventing pollution through the use of international standards for conventional and non-conventional oil deposit exploration and mining, and through frequent monitoring and evaluation."

Although the "Vision 2050" long-term development policy indicates the ambition of using renewable energy sources in green construction, it did not specify the creation of incentives, leveraging mechanisms and ways to support this. In addition, while the targets for using renewable

11 Objective by objective comparison made by the authors

energy in construction of green buildings are indicated in detail in the GD Policy, they are only generally included in the "Vision 2050". Moreover, it is mentioned in the "Vision 2050" policy that an oil plant will be built as one of the actions, but it does not specify environmental protection in accordance with international standards, nor prevention of environmental deterioration in that regard. These count as the main reasons for lowering the overall harmonization rate.

The alignment of actions indicated in clauses 3.2.2,[12] 3.2.6[13] and 3.2.8[14] of the GD Policy and related actions in the "Vision 2050" long-term development policy is "less satisfactory". For instance, clause 4.2.14 of the action plan 2021-2030 of the "Vision 2050" indicates establishing more heavy industry plants. However, in doing so, it needs to adopt green economy concepts in order to avoid contradicting clause 3.2.2 of the GD Policy. There was limited acknowledgement of this in the action plan, even though heavy industrial plants require an immense amount of natural resources and produce a significant volume of waste. However, it is possible to avoid contradiction in these two clauses by implementing Strategic Environmental Assessments (SEAs)[15] and building industrial plants in locations that are not natural reserve areas, historic heritage and national park areas. Hence, prevention measures must be well implemented and integrated into strategic plans.

Another action with low harmonization is clause 3.2.6 of the GD Policy, which is related to genetically modified organisms. While there is a clearly defined clause in the GD Policy asking for the "[l]imitation of the import and trade of genetically modified organisms (GMO) by strengthening the capacity to assess the risks associated with genetically modified organisms, and prevent the impact of genetically modified organisms on human health and the environment", there are no similar actions indicated in 2021–2030 action plan of the "Vision 2050". This plan mostly includes generic actions aimed at improving food security and increasing the capacity of the laboratory where imported goods are examined. However, it is not clear whether these include genetically modified organisms, nor if Mongolia would allow importing such products. So far, Mongolia still has not made any policy decisions regarding genetically modified organisms, nor included it in the policy documents as specific clauses, while many other countries around the world have banned genetically modified organisms in recent years.

Furthermore, clause 3.2.8 of the GD Policy indicates implementation of community-based natural resource management while the "Vision 2050" does not indicate similar actions. Although "Vision 2050" mentions actions aimed at providing market access for cooperatives, developing clusters and financial support, those actions are not detailed enough and will not be sufficient to reinforce community-based natural resource management. Therefore, due to lack of sufficient actions identified, the harmonization is "less satisfactory".

Clause 3.3.8 of the GD Policy that aims to "estimate the share of environmental contributions in socio-economic development by incorporating green development indicators into the National Accounting System"' is not reflected in "Vision 2050" at all. Based on this, the authors maintain that not reflecting green development indicators in national accounting systems or statistics makes it impossible to measure green development progress. It indicates that there is a risk of not fully utilizing actions or validating outcomes, even though green and environmentally friendly actions have taken place. These issues must be reflected in the "Vision 2050" implementation action plan for beyond 2030 and, if possible, should also be reflected in other previously approved and related policy documents. One of the highlights of the GD Policy is the suggestion to reflect green development indicators in national accounting systems, which has been implemented by the NSO.

Strategic objectives 4, 5 and 6 of the GD Policy are well reflected in the "Vision 2050" long-term development policy implementation plan for 2021 – 2030.

12 3.2.2. Promote the archetype of green development areas by limiting mining and industrial activities in national parks, and natural and cultural heritage sites, by developing eco-tourism and traditional livestock husbandry;

13 3.2.6. Limit the import and trade of genetically modified organisms by strengthening the capacity to assess the risks associated with genetically modified organisms, and prevent the impact of genetically modified organisms on human health and the environment;

14 3.2.8. Enhance forest absorption of greenhouse gases by intensifying reforestation efforts and expanding forest areas to 9 per cent of the country's territory by 2030;

15 A Strategic Environmental Assessment (SEA) is a systematic process for evaluating the environmental implications of a proposed policy, plan or programme. It provides a means for looking at cumulative effects and appropriately addressing them at the earliest stage of decision making alongside economic and social considerations.

Table 3. Indicators identified as inconsistent

№	GD Policy Indicators	"Vision 2050" Indicators	Harmonization
1	Share of renewable energy in total installed capacity of energy production	Percentage of population with access to electricity	Not satisfactory
2	Share of expenditure in green development in total GDP	Share of green procurement of government 10%	Not satisfactory
3	Share of increased investment for environmental protection and restoration		Not satisfactory
4	Share of agricultural and manufacturing industry in total GDP	Number of agricultural industrial and technological parks	Not satisfactory

Source: Authors' comparison

Indicators

In the GD Policy, there are 14 indicators to assess the implementation of the 52 actions for the years 2020 and 2030. These GD Policy indicators are compared against the "Vision 2050" indicators which will be used in assessing the 958 actions of the policy. Out of the 14 GD Policy indicators, the harmonization of eight indicators was rated as "highly satisfactory", one indicator was rated as "less satisfactory", three as "not satisfactory" and two of those were not reflected at all (as per footnote 10).

In terms of content, four indicators are not denoted consistently among the two policies.

Regardless of the few inconsistencies identified in Table 3, the indicators of the GD Policy are well reflected in the "Vision 2050" long-term development policy with "satisfactory" harmonization. In the "Vision 2050" long-term development policy, the harmonization level of the GD Policy goals can be considered "highly satisfactory" and strategic objectives "satisfactory".

The strength of the "Vision 2050" long-term development policy is that it includes the promotion of green development in all economic sectors by introducing low carbon industrialization and environmentally friendly technologies, increased efficiency and productivity and the use of renewable sources of energy.

2.3.2. Sustainable Development Goals

In this part of the report, the authors compared the strategic objectives, planned actions and indicators of the GD Policy with the SDGs and its planned actions, and defined their harmonization. Again, the authors focused more on detailed elaborations on "less satisfactory", "not satisfactory" and "not reflected" clauses; more so than the "highly satisfactory" and "satisfactory" clauses.

Strategic Objectives

The average harmonization rate is "highly satisfactory" based on the comparison of the 16 SDGs against the 6 strategic objectives of the GD Policy. SDG 14, "conserve and sustainably use the oceans, seas and marine resources for sustainable development", was excluded from the comparison as this SDG is not directly applicable to Mongolia. A "highly satisfactory" overall harmonization rate shows that the GD Policy is consistent with the global SDGs. Furthermore, it is observed that the content of the SDGs is reflected in detail in the GD Policy, based on Mongolia's characteristics.

For instance, GD Policy Strategic objective 1, "promote a sustainable consumption and production pattern with efficient use of natural resources, low greenhouse gas emissions, and reduced waste generation" is comparable to SDG 12, "ensure sustainable consumption and production patterns". Strategic objective 1 is also comparable to SDG 13 "Integrate climate change measures into national policies, strategies and planning" to some degree, as this SDG indicates reduced carbon emission without decreasing food production. The remaining strategic objectives are well defined and are consistent with the SDGs.

Actions for Implementation

GD Policy actions are compared against the SDG targets one by one. The overall harmonization rate of the GD Policy actions and the SDG targets is "highly satisfactory". In other words, if the SDGs are achieved succesfully in Mongolia, most of the GD Policy actions will be implemented. There are no actions that are "not reflected", "not satisfactory" or "less satisfactory".

Indicators

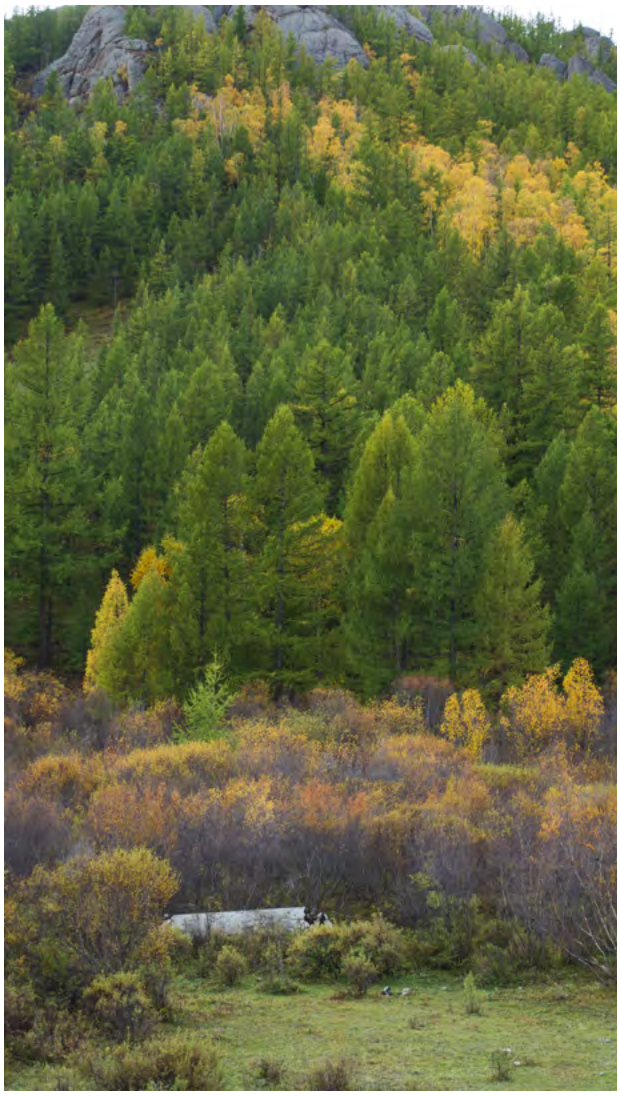
The researchers compared 33 comparable targets of the SDGs chosen by the NSO against the 14 indicators of the GD Policy (NSO 2021b). The overall harmonization rate of this comparison was "satisfactory" and most of the targets were well aligned with each other. However, the GD Policy's indicators "Reduction in building heat loss", "Share of expenditures for green development in total GDP" and "Share of green procurement in total government procurement" are not included in the SDGs. The remaining 11 indicators of the GD Policy are consistent with the SDG Targets.

Although some of the SDG indicators are not reflected in the GD Policy, the SDGs are taken into account when producing national policies and action plans, considering the national context, needs and requirements. Therefore, it is possible that although some GD Policy indicators are not well harmonized with the SDGs explicitly, they may be reflected in the policy in general.[16] It would be neither expected nor necessary for the SDGs and the GD Policy to contain completely identical indicators.

2.4. Performance of indicators

Although there were performance reports on the implementation of the GD Policy action plan for the past two years that were reported to the MET, implementation progress is not presented to the PoM annually in practice and there are no published reports or studies that specifically evaluated the implementation of the GD Policy on the basis of its 14 indicators. Baseline values and actual performance of the indicators are included in this midterm review.

There are no clear sources for the baseline and the progress of indicators 2, 6 and 8. In addition, interviewees noted that there is no specification regarding which methodology should be used in assessing and measuring the performance, nor who would assess the indicators. Indicator 11, "percentage of population provided with improved sanitation facilities", has a baseline of 33.2% as of 2013, but there is no information on its performance since then. Table 4 outlines values for baseline and following years as reported in various sources. More broadly, during the interviews, it was also noted that there remains a difference in opinion among officials and scholars on measuring CO_2 emissions in Mongolia, which compounds the general issue of measurement and assessment.



16 Authors' observations

Table 4. **Implementation Assessment of Green Development Policy in Mongolia: Achievement of 14 indicators**

#	Green Development Policy Threshold	Baseline (2013)		Achievement												Target	
		Num. value	Source	2014		2015		2016		2017		2018		2019		2020	2030
				Num. value	Source	Num. value	Source	Num. value	Source	Num. value	Source	Num. value	Source	Num. value	Source	Num. value	Source		
1	Share of renewable energy in total installed capacity of energy production	7.6	Asian Development bank (2017)	7.6	PoM (2015)			6.9	Tleykhan (2020)	11.8	Jambaa (2018), National Development Agency (2018)	18.1	Tleykhan (2019)	19.3	Tleykhan (2020)			20	30
		4.5	GEP project (2014.05.12)	7.50	PAGE (2018)														
		4.3	Erdenetseg (2018)																
		1	World Bank (2019)																
		0.8	NSO (2020a)	0.8	NSO (2020)	0.6	NSO (2020a)	0.9	NSO (2020a)										
2	Share of reduction of building heat loss	-	-	-	-	-	-	-	-	-	-	-	-	-	-			20	40
3	Waste recycling share	1.4	NSO (2020a)	0.5	NSO (2020a)	0.3	NSO (2020a)	8.9	NSO (2020a)	5.1	NSO (2020a)	7.2	NSO (2020a)					20	40
		5	GEP project (2014.05.12)																
		15.7	Erdenetsetseg (2018)																
4	Share of expenditure in green development in total GDP	0.40	Authors*	0.32	Authors*	0.29	Authors*	0.23	Authors*	0.25	Authors*	0.27	Authors*	0.39	Authors*			2	3
		0.5	Erdenetsetseg (2018)																
5	Share of expenditure for science and technology research in total GDP	0.23	NSO (2020a)	0.22	NSO (2020a)	0.05	NSO (2020a)	0.04	NSO (2020a)									2	3
		0.26	GEP Project (2014.05.12)																
		0.8	Erdenetsetseg (2018)																
6	Share of green procurement in total government procurement	-	-	-	-	-	-	-	-	-	-	-	-	-	-			20	30
7	Share of protected area in total territory	17.4	GEP Project (2014.05.12), Erdenetsetseg (2018)	17.4	MET (20196)	17.4	MET (20196)	17.85	MET (2017)	17.85	MET (2017)	17.85	MET (2019b)	19.8	MET (2019b)	21.11	Oyungerel (2020)	25	30
		13.4	NSO (2020a)	13.5	NSO (2020a)	13.5	NSO (2020a)	13.5	NSO (2020a)	13.5	NSO (2020a)	16.1	NSO (2020a)						

Table 4. **Implementation Assessment of Green Development Policy in Mongolia: Achievement of 14 indicators (continued)**

#	Green Development Policy Threshold	Baseline (2013)		Achievement												Target	
		Num. value	Source	2014		2015		2016		2017		2018		2019		2020	2030
				Num. value	Source	Num. value	Source	Num. value	Source	Num. value	Source	Num. value	Source	Num. value	Source		
8	Increased investment in environmental protection and restoration	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	30
9	Share of forest area in total territory	8.03	GEP Project (2014.05.12), Erdenetsetseg (2018), MET (2019b)	7.8	MET (2019b)	7.8	MET (2019b)	7.9	MET (2019b)	7.9	MET (2019b)	7.9	MET (2019b)	7.96	Otgonsuren (2020)	8.5	9
		9.10	NSO (2020a)	9.2	NSO (2020a)	9.2	NSO (2020a)	9.2	NSO (2020a)	9.2	NSO (2020a)	9.2	NSO (2020a)				
10	Percentage of population with access to certified drinking water	68.1	NSO (2020a)			68.1	NSO (2020c)	68.1	NSO (2020c)	68.1	NSO (2020c)	86.9	NSO (2020c)			80	90
		72.6	GEP Project (2014.05.12), Erdenetsetseg (2018)														
11	Percentage of population with access to improved sanitation facilities	23.2	GEP Project (2014.05.12)													40	60
		33.2	Erdenetsetseg (2018)														
		27.3	NSO (2020a)														
12	Poverty rate	27.4	Erdenetsetseg (2018), NSO (2020b)	21.6	NSO (2020a)			29.6	NSO (2020a)			28.4	NSO (2020a)			24	15
13	Share of green areas in Ulaanbaatar and other urban areas	1	GEP Project (2014.05.12)					14.3	NSO (2020a)							15	30
		3.14	Erdenetsetseg (2018)														
14	Share of agricultural and manufacturing industry in total GDP	22.1	Authors**	22.1	Auth-ors**	21.0	Authors**	19.0	Auth-ors**	19.3	Authors**	20.2	Auth-ors**	20.6	Auth-ors**	28	30
		22.5	Erdenetsetseg (2018)														
		41.9	NSO (2020a)	42.9	NSO (2020a)	42.3	NSO (2020a)	43.8	NSO (2020a)	45.5	NSO (2020a)	45.8	NSO (2020a)				

Source: The authors created the table by combining the sources mentioned

Note:

1. Figures highlighted in grey indicate the numbers that are more convincing than other sources (authors' assessment);
2. Sign " – " indicates that there is no numerical value for that certain indicator, it is not included in NSO's approved methodology (2017b) and there is no methodology, definition and source of information;
3. Blank tables indicate that no numeric value could be found;
4. * The ratio of MET's approved budget for 2013–2019 and the GDP (PoM, 2013–2018) serves as a proxy for this indicator ;
5. ** Ratio of the agricultural and manufacturing industry share reported by the NSO database and the GDP (NSO, 2020b).

As noted in Table 4, data are fully available for five indicators (1,4,7,9,14), partially available for 5 (3,5,10,12,13) and not available for 4 (2,6,8,11). Data inconsistency in the values of the indicators makes it difficult to assess the policy implementation as various data sources report different figures. For instance, the baseline of indicator 1, "share of renewable energy in total installed capacity of energy production", is reported as: 7.6% in a report published by the Asian Development Bank (ADB) (2017); 4.5% in the draft GD Policy;[17] 4.3% in the presentation (2018) prepared by Erdenetsetseg S. (Senior Officer at the MET); 1% in the report published by the World Bank (2019) and 0.8% by the NSO.[18] Out of these, the authors considered the ADB calculation to be the most realistic data, since it was the closest to the values reported the year after. Similarly, the most convincing data for each of the indicators were chosen from the sources mentioned in Table 4. This was based on comparing the performances of the indicators that are either fully or partially reported, as shown in Figure 1.

17 Working group memorandum dated 12 May 2014

18 Green development indicators issued by the NSO (2020a)

Figure 1. **Performance of the Green Development Policy indicators**

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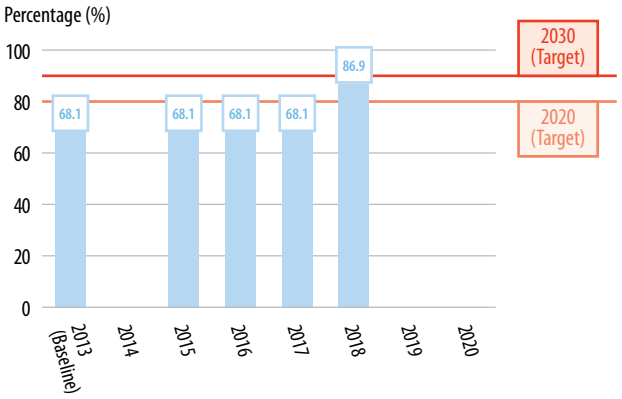
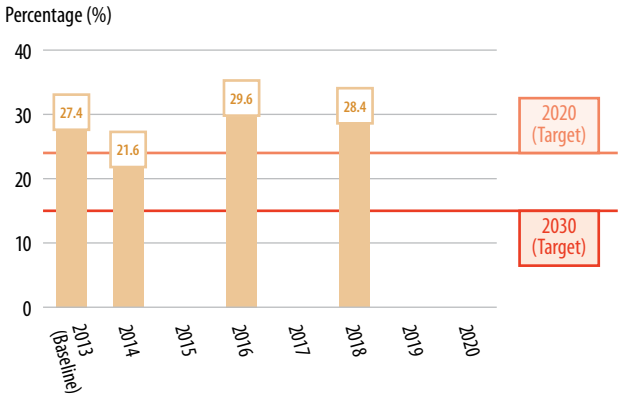
Figure 1. Performance of the Green Development Policy Indicator (continued)

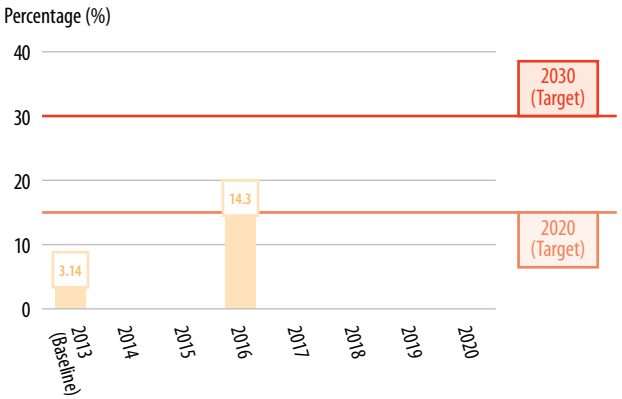
Indicator 10: Percentage of population with access to certified drinking water



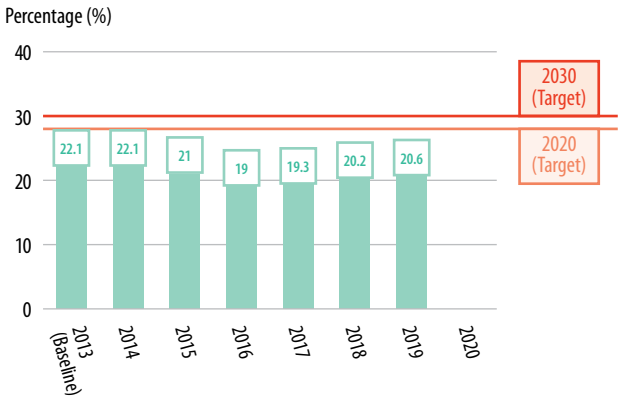
Indicator 12: Poverty rate



Indicator 13: Share of Green areas in Ulaanbaatar and other urban areas



Indicator 14: Share of agricultural and manufacturing industry in total GDP



Source: Authors calculation based on the sources detailed in Table 4

The graphs above show that seven out of the 10 indicators for which data are available have reached more than 70% of their target[19] in 2020. Out of these, four even reach more than 90% of their target:

- The percentage of population with access to certified drinking water reached 86.9% in 2018, which surpassed its 2020 target;
- The share of renewable energy in total installed energy supply reached 19.3% in 2019, which indicates over 95% implementation against the 2020 target;
- The share of green areas in Ulaanbaatar and other urban areas reached 14.3% in 2016, which also indicates over 95% of implementation against the 2020 target;
- The share of forest area in total area was also implemented at more than 90% of its 2020 target.

19 Share of renewable energy, share of protected area, percentage of population with access to certified drinking water, poverty rate, share of green areas in UB and other urban areas, share of agricultural and manufacturing industry in total GDP

The three indicators with the lowest achievement percentage based on comparison with 2020 targets are listed below:

- The share of expenditure on science and research in total GDP was 0.04% in 2016, which indicates 2% of achievement against the 2020 target;
- The share of expenditure on green development in total GDP was 0.39%, which indicates 19.3% of achievement against the 2020 target;
- The waste recycling share reached up to 7.2%, which indicates 36% of implementation against the 2020 target.

3. Conclusions and Recommendations

The ratification of the GD Policy by the PoM in 2014 set the basis for policy-level green development commitments and manifested Mongolia's intentions to transition towards a green economy. In the following years, several policy documents including "SDV 2030" and "Vision 2050" were adopted in relation to global initiatives and the agenda towards a green, fair and inclusive economy and sustainable development. With set goals, targets and an implementation action plan, the GD Policy was an important milestone in Mongolia, preceding those other policy documents. Furthermore, strong harmonization with the country's long-term policy documents that were adopted in the following years show that the GD Policy is a useful policy document and acted as a basis for further actions; it also showcased the country's commitment to green development internationally.

In the analysis comparing the mid-term performance against the target values, seven out of the 10 indicators which could be measured reached more than 70% of their 2020 target, and out of these, four even reached more than 90% of their target for 2020. The GD Policy was also found to be relatively well harmonized with the SDGs, as well as the "Vision 2050" long-term policy document. During the interviews, it was expressed that objective 6, on green development, of the "Vision 2050" document was written in line with the GD Policy, as it was authored and reviewed by the same ministry and team who were the pioneers in developing the GD Policy. Therefore, as noted in the analysis of the strategic objectives, implementation actions and indicators and the qualitative findings from the interviews and consultation workshop, it is implied that the GD Policy may have inspired and set the basis for related policy documents that came after. The most recent long-term development policy document "Vision 2050" includes promotion of green development in all economic sectors to some degree.

However, there are still challenges in achieving the goals and targets of the GD Policy, as some of the mid-term targets are not met. The main reasons for this include insufficient financing for activities, relatively poor awareness among policymakers of the policy and its goals, lack of innovation, an insufficient monitoring and evaluation system and a lack of clearly defined ways to assess and measure certain indicators. The researchers observed that the number of policy tools available and in use is considered to be satisfactory for ensuring policy implementation. However, data unavailability for four indicators and unclear coordination in terms of who is responsible for reporting and measuring hinders assessment of the policy implementation.

Overall, there are certain issues existing in each of the sectors which became apparent while reviewing the GD Policy implementation. Common challenges and obstacles for all targets included slow economic growth, insufficient financial incentives for green development, lack of stakeholder awareness, weak coordination among government institutions, poor institutional memory due to government restructuring and limited investment in infrastructure development. For instance, government institutions other than the MET were not prioritizing or sufficiently attentive to the GD Policy and its effectiveness. This may be due to frequent and high staff turnover in government agencies after elections, and the existence of other priorities. Frequent restructurings of government institutions require a significant amount of invesment and time for training and building capacity for newly appointed personnel. Additionally, equipment, financial resources and capacity are limited in government institutions, contributing to weak ownership and implementation of the GD Policy.

Despite the harmonization efforts noted, there is scope for the GD Policy to be carefully revised in line with the Law of Mongolia on Development Policy, Planning and its Administration (PoM 2020a) and "Vision 2050" Mongolia's long-term Development Policy (PoM 2020b). In addition, the measurement of performance and indicators should be managed by the NSO. In doing so, enhancing the NSO's capacity to measure the GD Policy indicators in a transparent way for independent review would be useful.

The Green Economy Policy Assessment for Mongolia projects that an increase in investment in a green economy will create higher economic returns, green jobs and a lower poverty rate by the year 2030 (EPCRC 2018). Considering that one of the priorities of the GoM should be to ensure economic growth while reducing poverty, achieving the GD Policy objectives would have both positive economic and social benefits. Achieving the GD Policy and SDGs and commitments would also have positive impacts on the competitiveness ranking of Mongolia. Therefore, it

would be necessary to increase the share of GDP in green development, and investment in green research and technology. If the key objectives can be clearly defined and implemented, targets that are lagging behind can be achieved.

Furthermore, it is important to generate a common understanding among government institutions and other stakeholders of the GD policy, its goals, objectives and targets, as well as actions and the implementation process, especially after the formation of a new GoM and assigning new government officials following elections. The effectiveness of the policy's implementation can be improved by strengthening coordination among government institutions. As suggested by some of the interviewees, Prime Ministerial leadership and empowerment of the MET would be important factors in tackling these challenges. The GoM leadership can be further strengthened by establishing joint taskforces, as well as a platform for frequent coordination and joint reporting.

Green development concepts began to be reflected in the action plans of different government institutions during the implementation of the first phase of the GD Policy. It would be beneficial to include these in the job descriptions of civil servants as next steps. Contributing to the green economy can become criteria for employees explicitly when considering promotion and awards.

It is also necessary to strengthen private and public partnerships, and expand the good practice of the banking sector through cooperations with other sectors including construction, tourism, food production and agriculture. Incentives for environmentally sound activities for citizens and enterprises would be a useful tool to implement the GD Policy. In doing so, criteria for incentives must be transparent and clear. For example, introducing green criteria in building standards and loan requirements would represent an important measure. In the construction sector, although the development of green building standards was started, the process stagnated as the first draft document was not supported by the Architects' Union. Furthermore, setting robust rules and regulations by approving green standards in sectors such as mining, manufacturing, construction and trade would be beneficial.

Finally, another important aspect in improving policy implementation is behavioral change to enhance sustainable consumption and production patterns. This can be promoted with green education and awareness raising among citizens and businesses. Further actions can include organizing events and forums in both cities and rural areas, possibly with support from think tanks. It is therefore valuable to regularly update the PoM on the GD Policy implementation progress, increase public awareness on the policy targets and goals and continue to promote green education.

During the consultation workshop, specific suggestions and comments were expressed with respect to the GD Policy's strategic objectives from the view of the participants, as outlined in Appendix 5.5.

In conclusion, the GD Policy is a tool to achieve the SDGs and an important policy document in Mongolia. However, a revision in line with the Law of Mongolia on Development Policy, the SDGs and the policy document "Vision 2050" may be beneficial. In this case, a revision should be carefully approached and conducted. This is because there are ongoing actions, initiatives, projects and programmes that could be affected if a policy revision is introduced. Regulations and orders that may follow the policy revision could impact the implementation of those ongoing projects. For example, GoM manifestos (PoM 2020c), including the recently adopted 2020-2024 government action plan, public and private dialogues, international development projects and the green model provinces initiative should all be taken into account in an integrated approach.

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5. Appendix

5.1. List of Interviewees

Table 5. List of interviewees

#	Organization	Position
1	Environment and Climate Fund	National focal point, UNFCCC
2	GIZ: Biodiversity Project	Director
3	GIZ: Energy Efficient Building Refurbishment Project in Mongolia	Expert
4	MET	Director, Green Development Policy and Planning
5	Ministry of Mining	Director of Mining Division, Geology and Mining Policy Implementation Coordination Department
6	Ministry of Roads and Transport Development	Director of Standard and Normative's Division, Policy and Planning Department
7	Mongolian National Association of Waste Recycling, NGO	Chief Executive Officer
8	MNCCI	Specialist
9	National Center of Renewable Energy	Director
10	National Development Agency	Director of Research and Analysis Department
11	National Statistics Office	Director
12	National University of Mongolia (NUM)	Lecturer
13	Policy and Planning Department, Ministry of Construction and Urban Development (MCUD)	Senior specialist
14	SEB, University of Agriculture	Lecturer
15	Sustainable Development Institute, NUM	Director
16	Sustainable Development Institute, NUM	Researcher
17	ToC NGO	Board Member

Note: The team requested a meeting with the Ministry of Energy several times. However, a meeting could not be scheduled.

5.2. Documents reviewed

- Government of Mongolia, Action Plan for 2016-2020 (Resolution No. 45 of the Parliament in 2016)
- Green Development Policy of Mongolia (Resolution No. 43 of The Parliament, 2014)
- Law on Development Policy and Planning (Approved by the Parliament on 25 November, 2015)
- Mongolia's Sustainable Development Vision 2030 (Approved by the Resolution No. 19 of the Parliament and terminated in 2020)
- Mongolia's long-term development policy document "The Vision 2050" (Resolution No.52 of the Parliament in 2020)
- "Report on the Implementation of the GD Policy Action Plan" of "General Procedure on Monitoring and Evaluation on the Implementation of Policy Documents and the Activities of Administrative Organizations" (approved by the GoM Resolution No.89 in 2017, as of the end of 2018)
- "Report on the Implementation of the GD Policy Action Plan" of "General Procedure on Monitoring and Evaluation on the Implementation of Policy Documents and the Activities of Administrative Organizations", approved by the GoM Resolution No.89 in 2017, as of the end of 2019
- State Policy on the Natural Resource Sector (Resolution No. 18 of the Parliament in 2014)
- State Policy on Industrial Sector (Resolution No. 62 of the Parliament in 2015)

5.3. Fulfillment of Sustainable Development Goals

Table 6. **Fulfillment of Sustainable Development Goals**

#	Indicator	Consistency of sustainable development goal indicators	2016	2017	Target 2020	Target 2030
	ECONOMIC INDICATORS					
1	Energy capacity, gj/million MNT	7.3.1	9.9	-	-	-
2	Share of renewable energy in total installed capacity of energy production	7.2.1	0.9	-	20	30
3	Manifacturing share of main mineral products		-	-	-	-
	Coal	8.4.1	6.9	13		
	Copper		1	1.1		
4	Share of agricultural sector in GDP	9.2.1	11.5	10.6	28	30
5	Share of manifacturing sector in GDP	9.2.1	36.6	39.4		
6	Share of tourism sector in GDP	8.9.1	0.2	-	-	-
7	Share of expenditure in green development and environmental protection in total GDP	-	-	-	2	3
8	Share of expenditure in government expenditure for disaster prevention	1.5.1	-	-	-	-
9	Share ofexpenditure for inspection, research and developemnt in GDP	9.5.1	0.04	-	2	3

Table 6. **Fulfillment of Sustainable Development Goals (continued)**

#	Indicator	Consistency of sustainable development goal indicators	2016	2017	Target 2020	Target 2030
	SOCIAL INDICATORS					
9	Unemployment rate, %	8.5.2	10	8.8	-	-
10	Productiveness of employment, basis of 2010 value, thou.MNT	8.2.1	13281.7	12977.7	-	-
11	Poverty range or poverty rate, %	1.1.1	29.6	-	24	15
12	Share of population provided with certified drinking water in total urban population	6.1.1	-	-	80	90
13	Share of population with access to improved sanitation facilities in total urban population	7.5.2 / 6.1.2	-	-	40	60
14	Health and safety index (Ulaanbaatar)	-	-	-	-	-
	ENVIRONMENTAL INDICATORS					
15	Domestic material consumption per unit GDP1, kg/ mlntoe	12.2.1	7887	-	-	-
16	Greenhouse gas emissions, thou.toe	-	-	-	-	-
17	Share of fresh water reserves in streamline fomation areas in total territory	-	-	-	-	-
18	Share of treated water in accordance with relevant standard in polluted water	6.3.1	96.9	-	-	-
19	PM10 content in urban air, mg/m3	11.6.2	0.199	0.115	-	-
	PM2.5 content in urban air, mg/m3		0.065	0.059	-	-
20	Waste recycling share	12.5.1	16.1	13.9	20	40
21	Share of green facilities in total Ulaanbaatar territory	11.7.1	14.3	-	15	30
22	Share of protected land in total territory of Mongolia	15.4.1	13.5	13.5	25	30
23	Share of forest area in territory of Mongolia	15.1.1	9.2	9.2	8.5	9
24	Share of damaged land in territory of Mongolia	15.3.1	4.5	7.3	-	-
25	Share of rehabilitated agricultural are in total damaged area	2.4.1	4.5	-	-	-
26	Share of post mining fields in total damaged area	2.4.1	0.1	0.1	-	-
27	Share of arable land with zero or reduced tilage in total arable land	2.4.1	-	-	-	-
28	Share of enterprises certified ISO14002 in total number of enterprises	12.6.1	0.0004	-	-	-

Table 6. **Fulfillment of Sustainable Development Goals (continued)**

#	Indicator	Consistency of sustainable development goal indicators	2016	2017	Target 2020	Target 2030
	ENVIRONMENTAL INDICATORS (continued)					
29	Share of dried rivers, streams, springs and fountains in total numbers of rivers, streams, springs and fountains	-	8.4	10.3	-	-
30	Share of areas experiencing very strong and strong desertification in total territory	-		-	-	-
31	Pasture capacity by sheep number per 100 thou.ha pasture land	-	92	99	-	-
32	SO_2 concentration in urban air, mg/m3	-	0.027	0.02	-	-
33	NO_2 concentration in urban air, mg/m3	-	0.043	0.048	-	-

Source: NSO 2021, https://sdg.1212.mn/Home/Green_development_indicator

5.4. 'Sustainable Development Goals - 2030' Policy fulfillment

Table 7. **'Sustainable Development Vision – 2030' long-term development policy fulfillment**

#	Indicator	Unit	2014 (baseline)	2015	2016	2017	2030 (target)	Source
1	Annual average economic growth	per cent	7.9	2.4	1.2	5.1	6.6	NSO
2	Gross national income per capita	USD	4,181	3,791.0	3,465.3	3,196.8	17,500	NSO
3	Human development index	ranking	90	92	-		70	UNDP
4	Average life expectancy	year	69.6	69.89	69.57	69.89	78.0	NSO
5	Poverty rate	percent	21.6	-	29.6	-	0	NSO
6	Index competitiveness	ranking	104	102	101		70	World Economic Forum
7	Doing business index	ranking	56	64	62		40	World Bank
8	Environmental performance index	ranking	111	-	114		90	Yale University

Table 7. **'Sustainable Development Vision – 2030' long-term development policy fulfillment (continued)**

#	Indicator	Unit	2014 (baseline)	2015	2016	2017	2030 (target)	Source
9	Share of population with social insurance coverage in economically active population	percent	84.4	-	-	-	99.0	-
10	Gini coefficient of inequality score	point	36.5	-	-	-	30.0	-
11	Infant mortality ratio per 1,000 live birth	ratio	15.1	15	17	14	8.0	Ministry of Health
12	Maternal mortality ratio per 100,000 live birth	ratio	30.6	26	49	27	15.0	Ministry of Health
13	Number of students in a class at high school (national average)	number	27.3	27.8	27.0	28.3	20.0	Ministry of Education, Culture, Science and Sports
14	Share of the land with disease free status for international trade certified by World Animal Health Organization	percent	0.0	0.0	0.0	0.0	60.0	Ministry of Agriculture and Light Industry
15	Share of deserted area	percent	78.2	76.8	-		68.0	Ministry of Environment and Tourism
16	Share of protected area in total territory	percent	13.5	13.5	13.5	13.5	30.0	Ministry of Environment and Tourism
17	International tourists' number travel to Mongolia	thou. men	392.8	386.2	404.2	496.3	2,000.0	Border Protection Authority
18	Households provided with secure electricity and energy supply	percent	89.0	99.2	99.2	99.1	100.0	NSO
19	Share of manifacturing industry in total export	percent	17.0	17.5	-		50.0	NSO
20	Share of main fuel products from domestic production	percent	0.0	0.0	0.0	0.0	100.0	Ministry of Mining and Heavy Industry

Source: NSO, 2021 https://sdg.1212.mn/Home/SDV_indicator

5.5. Suggestions for the achievement of the GD Policy from consultation workshop

Table 8. Suggestions for the achievement of the GD Policy from consultation workshop

GD Policy Strategic objectives	Suggestions from the workshop participants
Strategic objective 2: Sustain ecosystems' carrying capacity by enhancing environmental protection and restoration activities, and reducing environmental pollution and degradation.	• As most of the indicators were not achieved, develop implementation mechanisms and criteria • Monitor policy implementation and revise planning • Initiate a campaign to protect and restore the environment by cooperating with mining and other large enterprises within their social responsibilities
Strategic objective 3: Increase investment in natural capital, human development and clean technology by introducing financing, tax, lending and other incentives for supporting a green economy. Strategic objective 4: Engrain a green lifestyle by reducing poverty and promoting green jobs.	• Sharing of manifacturing burdens (since green economy is a high cost initiative) in a similar way to how eco vehicles were supported in Mongolia20 • Support local green SMEs and projects • Support green jobs for citizens and promote domestic manufacturing • Focus on consumer education or consumer readiness • Introduce incentives (tax and fine exemption) and support private sector involvement • Increase salaries for green jobs • Make indicators clear for assessment of outcomes • Ensure stability of government policy • Improve branding of the concepts of "eco" and "natural"
Strategic objective 5: Encourage education, science, and technology to serve as the catalyst for green development, and develop cultural values and livelihoods that are in harmony with nature.	• Take actions aimed at changing public attitudes
Strategic objective 6: Develop and implement a population settlement plan in accordance with climate change, while considering the availability of natural resources and the resilience of regions.	• Promote regional development activities in order to stabilize regional population growth • Support population growth, increase manufacturing and employment rate in the rural areas and support green education

20 According to Article 7.2 of the Mongolian Law on Excise Duty, the excise duty amount for hybrid cars, vehicles running on liquified petroleum gas and electric cars will be equivalent to 50% of the due excise duty amount. https://www.legalinfo.mn/additional/details/3080?lawid=434

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