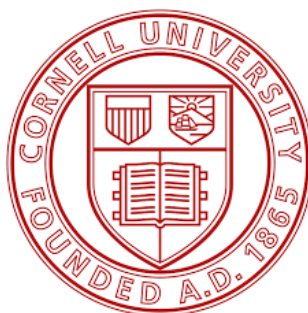


# **FINANCING FOR THE IMPLEMENTATION OF SUSTAINABLE DEVELOPMENT GOALS FOR MONGOLIA**



A capstone project

Presented to the Graduate School of Cornell University

In Partial Fulfillment of the Requirements for the Degree of

Master of Professional Studies in Global Development

By

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## **LIST OF ABBREVIATIONS**

HLPF	High-level Political Forum
INFF	Integrated National Financing Framework
INFS	Integrated National Financing Strategy
MSDV-2030	Mongolia's Sustainable Development Vision 2030
SDGs	Sustainable Development Goals
NAMEM	The National Agency of Meteorology and Environmental Monitoring of Mongolia
Parliament	The State Great Hural
VNR	Voluntary National Review

# **FINANCING FOR THE IMPLEMENTATION OF SUSTAINABLE DEVELOPMENT GOALS IN CASE OF MONGOLIA**

Key words: SDGs, Economic Development, Finance

## **AN ABSTRACT:**

This research aims to explore the financing challenges associated with the implementation of Sustainable Development Goals (SDGs) in Mongolia. Specifically, it focuses on how the Government of Mongolia incorporates the SDGs into its long-term development policy and allocates budget resources accordingly. The study recognizes the significance of effectively utilizing budget investments within the country's long-term development framework and emphasizes the need for reforms and policy changes.

To achieve these objectives, the research analyzes Mongolia's priority areas, including industry, social, and economic aspects, within the framework of the SDGs. It also examines the country's budget expenditure in accordance with the Integrated National Financial Framework, developed by the United Nations Development Program. Key areas of analysis include Assessments and Diagnostics, Financing Strategy, Monitoring and Review Systems, and Governance and Coordination Mechanisms.

Furthermore, this study investigates the implementation and outcomes of the National Air Pollution Reduction Program, which serves as a related case study reflecting the effectiveness of Mongolia's long-term development policy. By examining this program, the research intends to provide policy insights to decision-makers, offering recommendations for effectively financing the SDGs through the state budget in alignment with the national long-term development policy.

Through a comprehensive analysis of budget allocation, policy implementation, and case study evaluations, this research contributes to the identification of key challenges and opportunities in financing the SDGs in Mongolia.

## **CHAPTER 1: BACKGROUND AND METHODOLOGY**

### **Background: Achieving the Sustainable Development Goals in Mongolia**

The UN General Assembly adopted Agenda 2030 for Sustainable Development in 2015, establishing an ambitious 15-year plan to enhance human well-being, increase prosperity, protect the environment, and advance peace and good governance. Agenda 2030 included 17 Sustainable Development Goals (SDGs) with 169 associated targets (Martin, 2015). In this framework, all countries of the world have adopted their own programs and started implementing them to meet the targets of the SDGs. In 2023, we are standing in the middle of the 2015-2030 period for achieving Agenda 2030. There is no doubt that we have achieved much progress during the past few years, however, we are still very far from what we should have done to completely achieve all goals of the SDGs. Moreover, the current international political, economic, and social situation and accompanying economic crisis in many countries have been threatening to stall and even erode prospects for accelerating progress toward achieving the SDGs.

The SDGs implementation is still at an early stage globally. Implementation of the SDGs in developing countries particularly appears very complex and challenging. The current enormous financing gap is a major issue that authorities at the national and international levels must deal with. Therefore, there is rising concern about how to close the funding and investment gap to achieve the SDGs. The current level of investment in Sustainable Development is significantly smaller compared to the scale of what is required globally (Barua, 2020).

In this regard, the process of integrating the SDGs into budgetary frameworks and identifying the necessary stakeholders and countries to address the gaps and mobilize resources for activities and investments supporting the SDGs has emerged as a prominent and crucial topic of discussion (Sisto, et al., 2020). Although we do not have detailed studies on the costs required to implement the SDGs in most cases, there are several sources in the literature that have estimated the global resources needed to achieve them. For instance, the 2014 *World Investment Report* estimated that

USD \$ 5 trillion to USD \$ 7 trillion per year, invested between 2015 and 2030, would be necessary to globally achieve the SDGs, with USD \$ 3.3 trillion to USD \$ 4.5 trillion per year dedicated to the developing countries, mainly for basic infrastructure, food security, climate change policies, health, and education (United Nations Conference on Trade and Development, 2014).

For this reason, countries need to plan their fiscal policies in line with their implementation of the SDGs, as the national budget is an indicator of a government's ability to deliver public services and achieve development objectives. Consequently, determining the SDGs budget needs could assist nations in determining the financing gap for achieving the SDGs with their potentially available budgets and help governments, donors, and international organizations to develop strategies for achieving specified SDG targets (Okitasari and Kandpal, 2022).

Mongolia is a landlocked country situated between Russia and China that faces unique economic challenges. With its economy heavily reliant on its neighboring countries, Mongolia grapples with the task of solving the financing problem for the implementation of the SDGs. As a developing country of lower-middle-income status, the availability of adequate financial resources poses a significant challenge. For this reason, Mongolia is representative of, and interesting example of, the many developing countries seeking to implement sustainable development financing.

In the case of Mongolia, a number of domestic laws and long-term development documents have been revised to meet the SDGs. For this purpose, Mongolia has taken several important policy measures, including the approval of the concept of Sustainable Development of Mongolia, the Law on Sustainable Development, Vision-2050" Long-Term Development Policy by the State Great Hural (Parliament) of Mongolia. In this framework, the National Development Agency of Mongolia, which later became the Ministry of Economic Development in 2022, has been assigned the task of developing methods for calculating indicators for the SDGs, integrating them with other development programs, and reporting them to the Government of Mongolia and communicating with international organizations.

## **Methodology of Analysis**

The methodology used in this study is primarily descriptive and relies on various sources, including government documents, reports from international organizations, and research conducted by reputable organizations and institutes specializing in sustainable development. However, due to the complex nature of financing for the SDGs, the study focuses solely on analyzing the state budget allocations towards the long-term development projects aligned with the SDGs.

To investigate the current implementation of the SDGs in Mongolia, in Chapter 2, Mongolia's current economic situation, budget spending, measures taken in the field of financing Sustainable Development and the level achieved in the implementation of the SDGs will be analyzed based on the relevant laws and reports of the Government and its affiliated agencies.

In Chapters 3 and 4, this study will analyze Mongolia's budget approval process within the framework of the Integrated National Financing Framework developed by the United Nations Development Program. The study also examines the budget investments made by Mongolia between 2015 and 2022 in relation to the target of reducing air pollution, which serves as an important indicator of Mongolia's SDGs. The analysis incorporates numerical data obtained from the open-source database of the National Agency of Meteorology and Environmental Monitoring of Mongolia (NAMEM).

Through this comprehensive analysis of a specific program implemented in Mongolia, the study seeks to show the level of compliance between policy implementation, financing, and sustainable development outcomes at the national level. Based on these findings, in Chapter 5, the study will summarize policy recommendations to enhance the effectiveness of government institutions' activities and support the overall improvement of the implementation of the SDGs in Mongolia.



## **CHAPTER 2: CURRENT IMPLEMENTATION OF SDGS IN MONGOLIA**

### **Macroeconomic situation of Mongolia**

Mongolia has an area of approximately 604,000 square miles, but has a total population of about 3,460,000 people, making it one of the least densely populated countries in the world. Even with its vast expanse, a significant concentration of over 1.6 million individuals, roughly half of the country's total population, resides in the capital city of Ulaanbaatar. Mongolia transitioned to a market-based economic system in 1990, but since then, has faced serious economic challenges, including economic recessions, high poverty and unemployment rates, and failures in the health and education systems. However, due to utilization of large deposits of mineral resources and the high prices of commodities in international markets, the economy of Mongolia grew rapidly in 2010-2013, and at the peak in 2011, annual economic growth reached 17.3 percent. This high rate of economic growth could not be maintained for a long time, however, and gradually slowed down from 2014 on, with an average growth rate of 3.5 percent from 2014 to 2021.

Many factors have contributed to this decline in economic growth such as domestic political instability, inefficient economic policy, lower prices for exported products in global markets, the spread of the COVID-19 virus and consequent transportation and logistics delays. According to the World Bank, the GDP of Mongolia in 2021 is USD \$ 15.29 billion, and the GDP per person is equal to USD \$ 4,534. Recent trends in GDP and GDP growth area illustrated in Figures 1 and 2. As illustrated in the figures below, Mongolia's economic growth exhibits a volatile and unstable pattern, characterized by significant fluctuations. Furthermore, the country's economic performance is heavily reliant on external conditions, particularly those prevailing in foreign commodity markets.

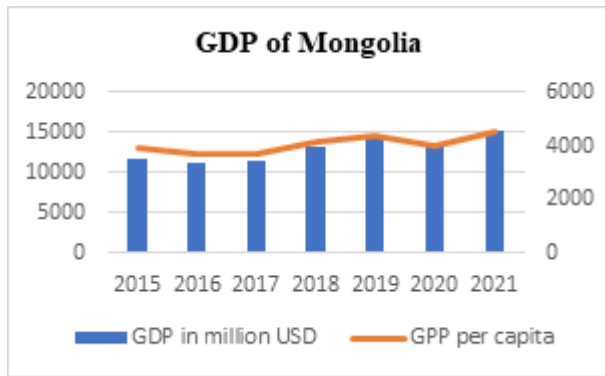


Figure 1: GDP of Mongolia, 2015-2021

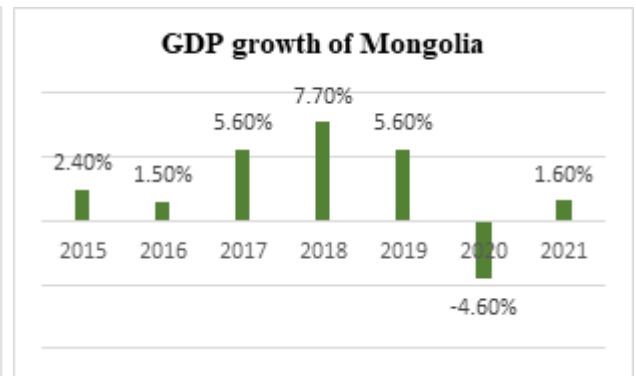


Figure 2: GDP Growth of Mongolia, 2015-2021

According to recent data from the National Statistical Office, as of 2022, the services sector accounts for 46.9 percent of the total GDP of Mongolia, while industry (including mining) accounts for 40.2 percent, and agriculture for 12.8 percent. The mining sector alone constitutes more than 92 percent of Mongolia's total exported products and is the most important source of the income for the country.

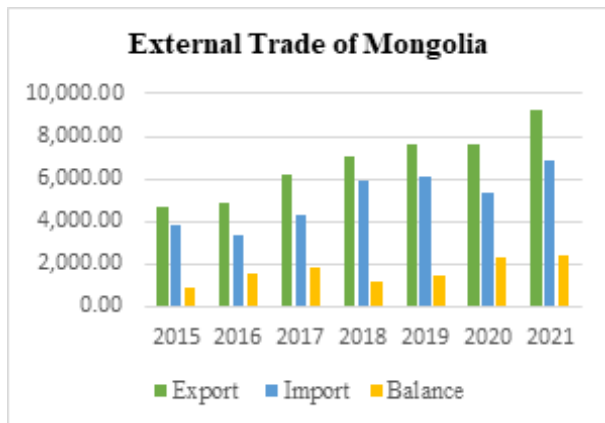


Figure 3: External Trade of Mongolia

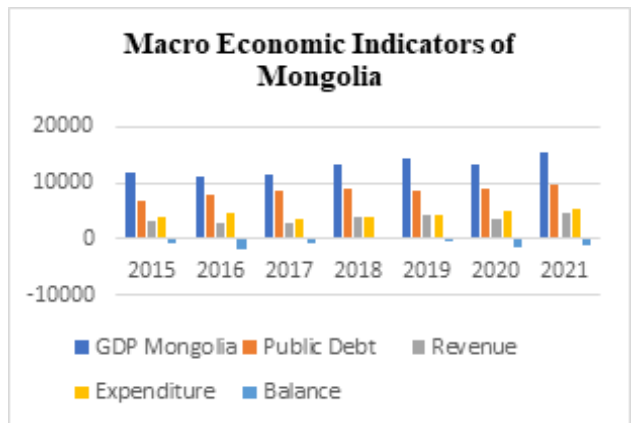


Figure 4: Main Macroeconomic indicators of Mongolia

Analyzing Mongolia's economy through the lens of foreign trade reveals an interesting dynamic. Starting from 2015, the regular trade balance has consistently shown a surplus however, the state budget has consistently experienced a deficit during this period. Consequently, this persistent budget shortfall has led to a substantial increase in government debt, as depicted in Figures 3 and 4.

For example, between 2015-2021, Mongolia's national budget expenditure increased from USD \$ 3.78 billion to USD \$ 5.47 billion. Except for 2018<sup>1</sup>, the parliament has always approved the budget with a deficit. Due to the adoption of a budget with a deficit for many years, the combined external debt of the government and the Central Bank increased to USD \$ 11.06 billion in 2022, which is equal to 72 percent of the country's GDP in 2022.

The most serious problem presented by government indebtedness is the fact is that 94.7 percent of the debt is accounted for by foreign debt, which is the reason for the weakening of the national currency against the main currencies of the international currency market, including the U.S. Dollar. Thus, the devaluation of the domestic currency has a strong impact on the solvency of the government and the resulting decrease in the standard of living of the population.

The Government of Mongolia has an optimistic expectation that the economy of the country will grow significantly due to the implementation of large-scale industrial and infrastructure projects in the future. However, the economic situation in the short and medium term will be challenged by the current global economic crisis in which the demand for and prices of commodities may fall in the international markets.

### **Policies and Activities Implemented by the Government of Mongolia to Address the SDGs.**

Within the framework of the SDGs approved by the U.N. General Assembly, Mongolia has taken some necessary measures to implement them. Notably, the parliament of Mongolia passed a development policy law in 2015, which defined the principles, rights, duties, and responsibilities of stakeholders for planning, implementing, monitoring, and evaluating stages of development programs. As a result, Mongolia's Sustainable Development Vision 2030 (MSDV-2030) was approved in 2016 by the resolution of the parliament of Mongolia. This document contained four groups and 44 goals to be implemented in Mongolia, to be aligned with the 17 goals and 169

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<sup>1</sup> The exchange rate is calculated as the official exchange rate announced by the Bank of Mongolia on the first day of the year indicated.

targets of the global SDGs. In addition, a working group responsible for determining the national SDGs indicators and monitoring them was established by the order of the Prime Minister.

However, it became clear that the targets included in MSDV–2030 were too abstract and not based on realistic data. For instance, the targets in this document aimed at far higher than potentially achievable levels. For instance, raising the GDP per capita to USD \$ 17,500, maintaining average economic growth at a level of at least 6.6 percent, and raising the average life expectancy to 78 years are far from being achieved, especially given the current economic situation. For this reason, it was required that MSDV–2030 be updated, and as a result, "Vision–2050", Mongolia's revised long-term development policy document, was developed and approved by the parliament of Mongolia in 2020.

The Government of Mongolia has stated that the “Vision 2050” is a relatively broad concept in terms of content, but it incorporates elements of the SDGs. For example, when the government conducted a study regarding whether the nine goals and 47 targets of the document were aligned with the 17 goals and 169 targets of global sustainable development, it was concluded that there are 117 targets that are consistent, 23 that are consistent in terms of content, 10 that are inconsistent, 14 that are not related, and 5 targets that have been achieved. However, it is not clear what research methodology was used to make this conclusion. In addition, when evaluating the level of implementation of the SDGs by 92 indicators including 193 countries, Mongolia was ranked 106th by 2021 with 63.8 points (Sachs et al., 2022).

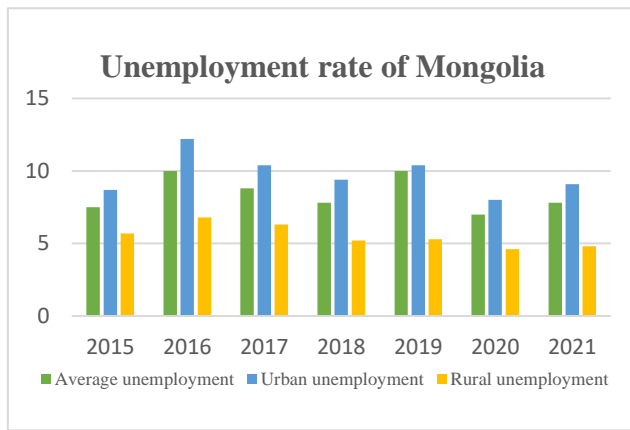
### **Implementation of the SDGs in Mongolia**

Mongolia presented its first and second Voluntary National Review (VNR) on the implementation of the SDGs in 2019 and 2023, respectively, at the United Nations High-level Political Forum (HLPF). (United Nations, 2023) According to these reports, although there was a certain growth in the economy of Mongolia during the reported time, social and economic inequality have increased. Especially in recent years, due to the fact that the benefits of economic growth have not

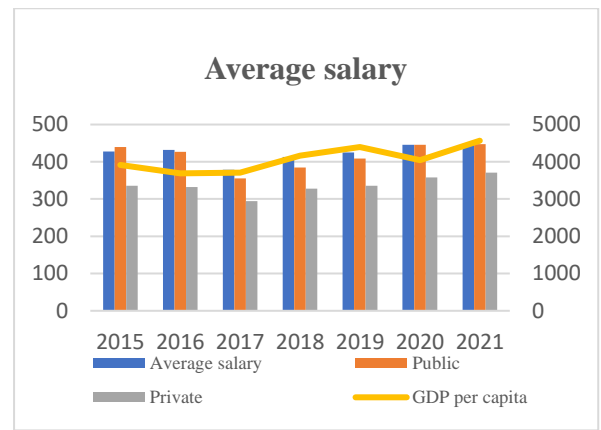
reached all of the target groups, the differences in human development between urban and rural areas have increased, and the unemployment and poverty levels among young people have also increased. Moreover, overpopulation, air pollution, and traffic congestion in the city of Ulaanbaatar, where about half of the population of the country reside, have become factors that negatively impact basic indicators such as the standard of living, access to quality of education, and health services.

These reports also concluded that the mining and agriculture sectors, which are the pillars of Mongolia's economy, have been negatively impacting the environment and, as a result, the frequency of natural disasters has increased thereby degrading the standard of living of the rural population, many of whom earn their living from traditional animal husbandry. For this reason, there is an increasing need to reevaluate economic growth, the living standards of the population, and the impacts on the environment when implementing the SDGs in Mongolia. According to the latest report of the National Statistics Committee, several of the main social and economic indicators of Mongolia can be described as follows below.

When it comes to the level of education, 54 percent of individuals who are actively seeking employment possess a secondary education degree (National Statistical Office, 2022) This observation highlights the crucial role that education plays in enhancing employability. Examining regional unemployment rates reveals that rural areas experience comparatively lower levels of unemployment; however, the average wages in these areas remain considerably lower than those in urban centers.



*Figure 5: Unemployment rate of Mongolia*



*Figure 6: Average salary between 2015 to 2021*

Between 2015 and 2022, the average salary in Mongolia witnessed a modest increase, rising from USD \$ 428 to 448 per month. However, this growth was not sufficient to offset the high inflation rate experienced in the country during the same period. Despite the nominal increase in average salaries, the impact of inflation has undermined the purchasing power of individuals, leading to a deterioration in overall living standards and quality of life for the majority of the Mongolian population.

The National Statistics Office of Mongolia presented the last report on the poverty level of the population in 2020 (World Bank, 2021). According to this report, the official national poverty rate was 27.8 percent in 2022, which was 0.6 percentage points less than in 2018. In 2020, this equates to around 903,400 thousand Mongolians living in poverty. Urban poverty decreased by 0.7 percentage points to 26.5 percent from 2018, while rural poverty decreased by 0.3 points to 30.5 percent. In 2020, 64 percent of the impoverished population resided in urban areas, with 43 percent – roughly 388,500 urban poor – living in the capital city (World Bank, 2020).

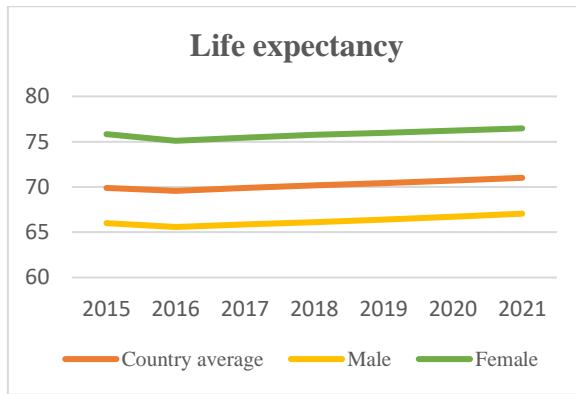


Figure 7: Life expectancy level of Mongolia

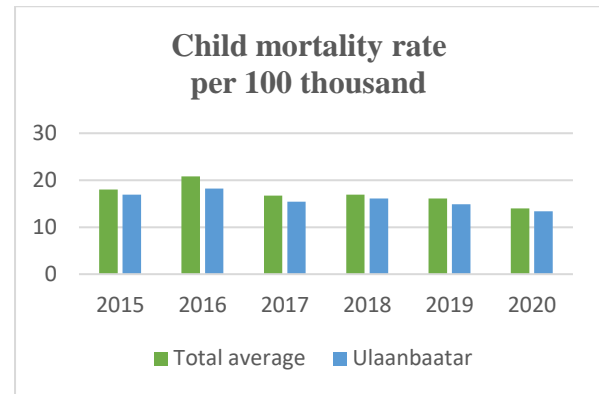
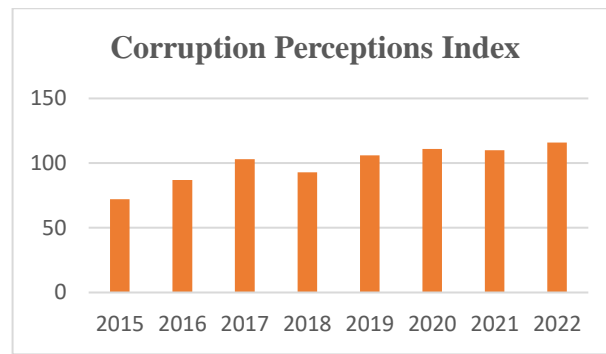


Figure 8: Child mortality rate of Mongolia

According to the health indicators of the population, Mongolia has made relative progress over the 2015-2021 period. For example, during this period, the average life expectancy of the population increased by 1.12 years (Figure 7), including the average life expectancy of men by 1.03 years, which is a very positive indicator. However, considering the average life expectancy by gender, men in Mongolia live 9.4 fewer years than women, which is greater than the world average differential of 4.4 years (Thornton, 2019). This high difference in life expectancy by gender causes some pressing social and economic issues, including the emergence of a substantial population of unmarried women, declining household incomes, and the perpetuation of gender inequality within society.

Finally, the mortality of children under the age of 5 is decreasing in Mongolia (Figure 8), but the maternal mortality rate for every 100,000 live births has increased dramatically from 23 to 68 in 2021. This is caused by the quality of healthcare services in Mongolia, especially the lack of medical facilities and human resources (Daily News, 2021). In the framework of the implementation of the SDGs, the Government of Mongolia is also gradually undertaking measures such as legal and executive level reforms to protect human rights, reduce serious crimes and levels of corruption, and increase the salaries of law enforcement officials. However, the reports of international organizations show that the confidence of the citizens of Mongolia in the government is weakening and the level of corruption is nonetheless increasing year by year.



*Figure 9: Mongolia's position in the corruption perceptions index*

For example, according to the Corruption Perceptions Index published by Transparency International, Mongolia's international position has decreased from 72nd place in 2015 to 116th place in 2022 (Figure 9). The indicators mentioned above clearly demonstrate that Mongolia is currently far from achieving the targets set by the SDGs. In light of this, it is crucial to implement decisive changes at the policy level to enhance the effectiveness of efforts and work more efficiently within the remaining timeframe. Therefore, taking prompt and decisive action is necessary to ensure a more sustainable and inclusive development trajectory for the country.



### **CHAPTER 3: THE INTEGRATED NATIONAL FINANCING FRAMEWORK FOR THE SUSTAINABLE DEVELOPMENT OF MONGOLIA**

In order to successfully achieve the SDGs, it is crucial to have adequate sources of financing alongside effective implementation planning. According to the United Nations Conference on Trade and Development, developing nations must together invest up to USD \$ 4.5 trillion annually between 2015 and 2030 to achieve the SDGs. There is a potential USD \$ 3.1 trillion yearly finance gap due to the existing USD \$ 1.4 trillion annual investment level (Petalcorin et al., 2021). Therefore, it is important to ensure coordination between state budget financing and the national development policy, including targets of the SDGs. Analyzing the expenditures of the state budget can provide insights into the country's development direction and policy.

#### **Current state budgeting practices in Mongolia**

In Mongolia, the process of approving the state budget is governed by the Budget Law. According to this law, the state budget is defined as the budget approved by the parliament and distributed to all ministries and authorities of the Government. In other words, the parliament of Mongolia is the final authority responsible for approving the budget, and the process involves the participation of all government organizations funded by the Mongolian budget.

However, there are still several shortcomings in the process of preparing and approving the budget. Notably, the financing of projects that may not align with Mongolia's long-term development policy or lack coordination amongst themselves. For instance, prior to the establishment of the Ministry of Economic Development in 2021, the institution responsible for planning and developing Mongolia's long-term policy underwent frequent changes. As a result, a significant portion of state budget investments were limited to financing the basic activities of state institutions. Accordingly, there arose an urgent need to manage funds in a rational and appropriate manner in order to effectively implement Mongolia's long-term development policy, and especially to achieve the SDGs.

In order to correct this situation, the Government of Mongolia proposed the goal of harmonizing budget investments with long-term development policies starting from 2017. In this context, the Prime Minister of Mongolia announced that starting in 2023, Mongolia plans to make significant progress in aligning the state budget with the “Vision 2050” program and the SDGs (Dolgor, 2021). Furthermore, Mongolia has emerged as one of the pioneering countries to adopt the Integrated National Financing Framework (INFF), which was formulated by the United Nations Development Program. This coordinated approach aims to enhance the availability of financial resources and improve the effectiveness and value of investments through the implementation of budget financing reforms.

### **Benefits of integrating the state budget with the SDGs**

At the Third International Conference on Financing for Development, which took place in Addis Ababa, Ethiopia, in 2015, global leaders convened and agreed on a global financial framework aimed at realizing the SDGs. As a result, the Addis Ababa Action Agenda has emerged as a key policy document enabling developing nations to gather financial support and the necessary resources in order to effectively pursue their sustainable development objectives (United Nations, 2015). The implementation of the Addis Ababa Action Agenda has brought about significant transformations in the development plans of numerous countries. Previously, developing nations formulated their medium- and long-term development policies without synchronization with the global development agenda, often lacking clarity regarding the funding sources for implementation. However, with the adoption of this agenda, many national development policies were focused on the Addis Ababa Action Agenda, and thus, there was a need for countries to create nationally owned sustainable development strategies, supported by integrated financing frameworks. This has served as the foundation for the development of the INFF (UNDP, 2016).

The INFF serves as a tool to align national sustainable development strategies with associated budget limitations. As a result, an increasing number of countries are incorporating the SDGs into

their fiscal policies. This trend highlights the growing recognition among nations of the need to integrate sustainable development objectives into their financial planning processes. As a result, almost all of the 46 nations that submitted a VNR to the HLPF in 2018 have taken action to include the SDGs in their planning documents or have carried out mapping exercises and coherence checks (United Nations, 2018). However, financing is often the weakest component of these national plans. A majority (79 out of 107 plans analyzed in one recent study) do not provide specific costing plans or details about how they would be financed. (Chimhowu et al., 2019)

It is, therefore, crucial for countries to align their INFF with their long-term development policies in order to foster comprehensive and sustainable development. By integrating the INFF with the long-term development agenda, countries can better ensure coherence, synergy, and efficiency in their financial planning and resource mobilization efforts. This alignment allows for a more strategic and holistic approach to development, enabling countries to prioritize their SDGs and effectively allocate financial resources to achieve them. By harmonizing these frameworks, countries can maximize the impact of their development initiatives and promote long-term, inclusive growth.

Specifically, the alignment of the state budget with sustainable development policies can lead to several potential outcomes:

1. Enhancing the coordination among different government institutions, minimizing resource overlaps, and improving resource allocation.
2. Mitigating the risk of using budget funds for short-term or political gains.
3. Enabling sustainable financing of significant investments aligned with the country's long-term development policy.
4. Enhancing budget planning and reducing wasteful spending by considering cyclical changes in the economy.
5. Increasing the accountability of budget managers and improving the efficiency of budget utilization.

6. Facilitating the identification of different policy trade-offs and the mobilization of financing sources customized to the specific circumstances of the country.
7. Demonstrating the government's commitment to fulfilling international obligations within the global agenda of sustainable development.

Because of these notable positive outcomes in their long-term fiscal policy, countries are increasing their investments in sustainable development initiatives. This approach enables nations to improve the effectiveness and efficiency of their fiscal policies, leading to more impactful and sustainable development results. However, there is a lack of comprehensive reporting by countries on how investments targeted at specific goals are being accounted for and measured (United Nations, 2019).

### **Process of adopting the Integrated National Financing Framework in Mongolia**

Mongolia's National Committee for Sustainable Development endorsed the draft Integrated National Financing Strategy (INFS) in August 2022 which made Mongolia one of the early adopters of the INFS. The INFS became a key vehicle for mobilizing, aligning, and leveraging resources for SDGs and achieving Mongolia's sustainable development priorities (UNDP, 2022b). The adoption of this framework will create favorable conditions for the more effective utilization of funds by the Government of Mongolia to better ensure the successful implementation of the SDGs.

The thematic chapter of [the Financing for Sustainable Development Report](#), published in 2019, emphasizes four key pillars: (i) assessments and diagnostics; (ii) a financing strategy; (iii) monitoring and review systems; and (iv) governance and coordination mechanisms which are essential for the successful implementation of the INFS. By analyzing the implementation of Mongolia's fiscal policy according to these four key pillars, it is possible to assess the extent to which Mongolia aligns its budget with the SDGs.

#### ***i. Assessments and Diagnostics:***

According to the Sustainable Development Report 2022, Mongolia ranked 109<sup>th</sup> out of 163 countries of the world in terms of the implementation of SDGs. The overall achievement of the SDGs of Mongolia is stated to be 63.5 percent, which is 2.4 percentage points lower than the regional average for East Asian countries (UNDP, 2022c). When it comes to the specific SDGs, Mongolia has made relatively successful progress in Goals 1 (no poverty) and 4 (quality education), whereas 7 (affordable and clean energy), 9 (industry, innovation and infrastructure), and 13 (climate action) are identified as areas where the country faces significant challenges and lags behind in terms of implementation (Sachs et al., 2022).

For the successful implementation of the SDGs, it is necessary for Mongolia to identify the financial needs and gaps related to its SDGs by conducting comprehensive assessments and developing relevant diagnostics. However, there are challenges in accurately calculating the required funds for implementation such as some target levels specified within the plans, as they may lack clarity, making it difficult to precisely estimate the financial needs.

In many instances, targets related to the SDGs outlined in these documents lack clear definitions of the levels to be achieved. As a result, there can be overlaps and inconsistencies among the goals, creating challenges in effectively prioritizing and implementing them. The absence of specific target levels hinders the ability to measure progress accurately and allocate resources efficiently towards the achievement of the SDGs. Furthermore, external factors such as the COVID-19 pandemic, the Russia-Ukraine war, and the periodic fluctuations of market prices for Mongolia's primary export products have created even more uncertainties in the funding calculation process.

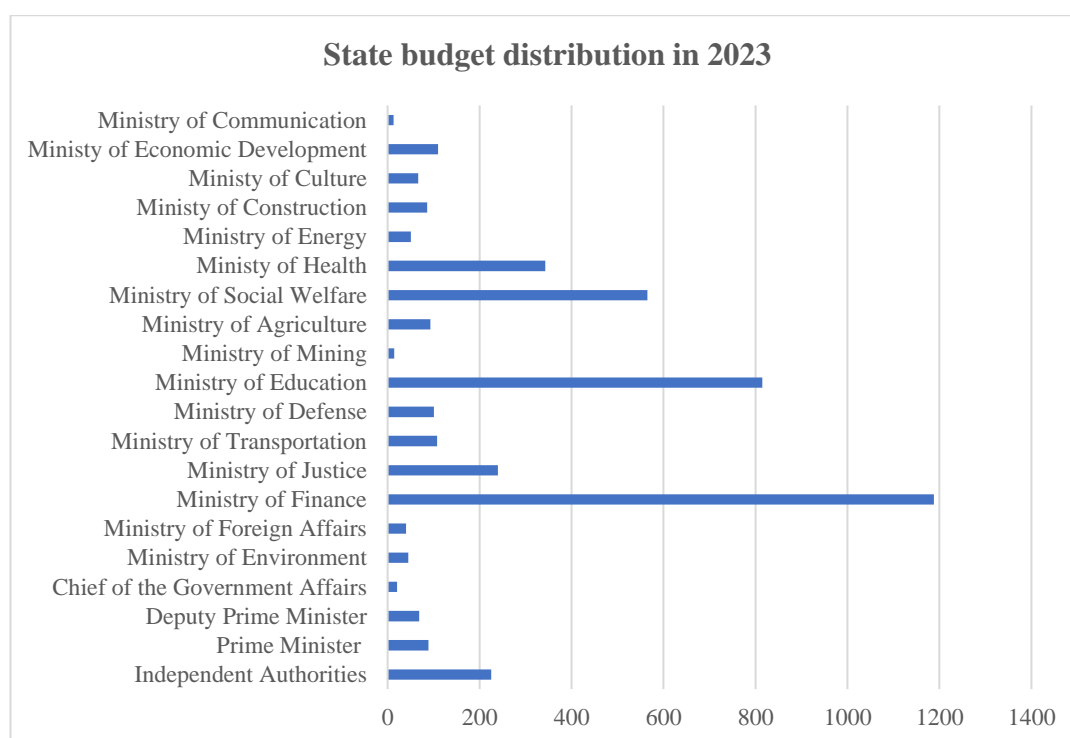
However, there have been some studies conducted to estimate the financial requirements for implementing targets of the SDGs in Mongolia. For instance, a recent study conducted by UNDP suggested that Mongolia needs total spending of USD 97 billion (MNT 276 trillion) between 2021 and 2030, which includes the government's current accumulated spending estimated at USD 54 billion. Hence, the cumulated additional financing required for achieving the SDGs over the next ten years is estimated at around USD 43 billion (MNT 122 trillion). This would account for 17

percent of GDP annually (UNDP, 2022c). This is a large amount of investment for the Government of Mongolia to finance alone.

*ii. Financing Strategy:*

Mongolia has identified the state budget investment, foreign loans, and public and private partnerships as the primary sources of financing for achieving the SDGs. Among these, the state budget investment stands out as the primary and most compelling resource for effectively realizing the SDGs. The allocation of funds within the national budget directly impacts the government's ability to finance and execute its programs effectively. For this reason, ensuring that the allocation of the state budget aligns with the objectives of SDGs is a highly significant indicator of the government's commitment to effectively implement its agenda.

Over the past 8 years, Mongolia's budget has experienced significant growth, increasing from 2.7 billion USD to 4.4 billion USD. This represents a substantial increase of over 60 percent in budgetary funds. While this increase may not fully meet the financing requirements for achieving the SDGs, if these funds are utilized effectively and efficiently, they have the potential to address many crucial development issues. It can be clearly seen in which direction the policy of the government focuses when implementing the SDGs from how it distributes its increased budget investments.



*Figure 10: Allocation of State Budget Funds in 2023 (in millions of USD)(Legal Info, 2022)*

The budget of Mongolia in 2023 was approved at approximately 4,070.7 million USD and as shown in Figure 10 above, Mongolia spends most of its budget on the education, health and social welfare sectors. It is important to note that budget figures can be influenced by various factors including shifts in government priorities, changes in economic conditions, and external factors such as the policies implemented in response to the post-COVID-19 pandemic situation.

For instance, due to the COVID-19 pandemic and the global geopolitical crisis, Mongolia experienced increasing budget deficits and severe external debt pressures which shrunk the potential of Mongolia for financing development priorities and SDGs. However, regardless of this situation, 1,137 projects with a total budget of 7,385.2 billion MNT (approximately 2.12 billion USD) and funding of 2,695.0 billion MNT (776 million USD) have been approved in the budget of Mongolia in 2023 (Legal Info, 2022).

Although there has been an increase in investments directed towards long-term development policies, it is important to note that the allocation of these investments is sometimes influenced by political decisions rather than prioritizing projects with substantial economic benefits. Out of the

projects implemented with state budget investments, 20 percent are allocated to the education sector, 15 percent to the road transport sector, 13 percent to the construction sector, and 6 percent to the health sector. In terms of expenditure categories, 85.1 percent is allocated to buildings and structures, 7.4 percent to capital repairs, 6 percent to equipment, and 1.5 percent to feasibility studies (Ministry of Finance, 2023). Based on these statistics, a significant portion of the state budget investment is shown to primarily allocated to construction and routine maintenance.

However, there's a notable deficiency in funding for knowledge-based production, innovation, and modern technology. This deficiency falls short of effectively fostering a competitive nation with a robust and stable economic foundation, which is the central objective of fundamental development and sustainable growth. It's worth noting that this circumstance is not only unique to Mongolia, but it is a prevalent challenge faced by many developing countries. While a certain number of projects are being funded through the state budget, it is challenging to determine which SDGs are specifically associated with these investments and the overall impacts of their implementation. Therefore, there is need for improved financial management and a more strategic allocation of resources to maximize their impact on sustainable development.

### ***iii. Monitoring and Review Systems:***

The increase in state budget investments aimed at long-term development is commendable, but monitoring their implementation and performance is an equally important measure. The issue of the efficient spending of budget funds is one of the most crucial demands that Mongolian taxpayers have placed on the government. For instance, it has become a common practice in Mongolia for projects funded by the public budget to experience delays and substantial cost overruns. For instance, there were 24 buildings and structures in Mongolia initiated between 2010 and 2016 that remain incomplete despite a total budget of 254.9 billion MNT allocated (Davaakhuu, 2020). Additional funding continues to be included in the annual budget to support these unfinished projects. This recurring pattern of allocating funds without achieving completion raises significant questions about the efficiency and effectiveness of budget utilization in Mongolia.



The inefficient use of state budget investments can be attributed to several factors. First, investment decisions are often influenced by politicians or officials with personal interests, rather than being based on objective criteria and the needs of the population. This can lead to projects being prioritized or approved for reasons other than their potential impact or economic viability. Second, the lack of transparency and openness in the tendering and procurement processes contribute to this inefficiency. When these processes are not conducted in a fair and transparent manner, there is a higher risk of favoritism, corruption, and misallocation of funds. Last but not least, the absence of proper technical and economic justifications for the projects being approved in exacerbates the situation. Although the National Audit Office has made a considerable effort to address these issues and recommend improvements through audits of budget investment performance and investigations into unfinished projects, the challenges related to the inefficient use of state budget investments have persisted.

The current government of Mongolia has implemented various measures to enhance the utilization of budget funds and strengthen controls over spending. One significant step taken in this regard was the adoption of the Law on Amendments to the Tender Law by the parliament in 2022. These amendments include restrictions on the provision of additional funds beyond the initially approved budget for project implementation. Additionally, a procedure for planning, financing, monitoring, and reporting projects and measures implemented with public investments was approved by the Government in 2021. These measures are expected to bring about improvements in the management and oversight of budgetary investments. By setting limits on additional funding and establishing clear procedures for project planning and monitoring, the government aims to enhance control and accountability in the implementation of public investment projects.

***iv. Governance and Coordination Mechanisms:***

In order to successfully implement the INFF, it is essential at the budget drafting stage to coordinate investments with the long-term development policy of the country and the targets of

the SDGs. Recognizing this importance, the Government of Mongolia has taken significant measures as follows.

First, the key initiative that the Government recently introduced is the development of a new budgeting methodology, which has already been successfully tested in four ministries. The government is actively working to incorporate this methodology into the fundamental procedure for budget development (UNDP, 2022a). By incorporating the SDGs into the budgeting process, ministries will be compelled to consider the SDGs as guiding principles in their planning and resource allocations in order to promote greater coherence and coordination among ministries towards their common objectives.

A second important measure taken by the Government is the introduction of SDGs - compliant budgeting and performance audits within the National Audit Office. This will involve monitoring and assessing the extent to which the budgets of state institutions align with the SDGs and how effectively they contribute to the achievement of those goals.

Finally, the Government of Mongolia has been promoting private sector involvement in achieving the SDGs. These measures include refraining from engaging in private sector businesses who can handle their job independently, supporting sustainable development projects with private investments, and reducing bureaucratic processes such as government inspections and approvals. In this way, Mongolia can make significant progress in realizing its long-term goals without creating large burdens on the state budget funding.

Overall, for Mongolia, the adoption of the INFS as part of the budget policy for achieving the SDGs represents a significant milestone in line with the Addis Ababa Action Agenda on Development Financing. However, as this process is still in its initial stages, the policies and measures implemented by the government have not yet produced visible outcomes. Therefore, there is a continued need to enhance and improve the efforts being made to align budget funding

with long-term development policies and goals as well as monitoring and achieving further improvements to ensure the effective implementation of these measures.

## **CHAPTER 4: BUDGET ALLOCATIONS AIMED AT REDUCING AIR POLLUTION IN MONGOLIA**

In order to assess the results of investments made by the Government of Mongolia in the implementation of the SDGs, it is necessary to compare the financing of major programs with the outcomes achieved. This analysis can help in evaluating the effectiveness and impacts of these investments as they relate to the intended goals of the SDGs. Specifically, this evaluation addresses the national air pollution reduction program implemented by the Government of Mongolia. This assessment can serve as a case study in addressing one of the targets of the SDGs.

The national air pollution reduction program addresses Goal 11 of the SDGs, which focuses on creating sustainable cities and communities. Mongolia set a target in its National Sustainable Development Policy of achieving internationally recognized air quality standards by 2030, specifically, by reducing the annual average levels of fine particles (PM<sub>2.5</sub> and PM<sub>10</sub>, particles that are less than 2.5 or 10 microns respectively) in urban areas. This objective emphasizes the importance of prioritizing air quality improvements, urban development, and effective waste management practices.

Air pollution is one of the most pressing social issues in Mongolia. The capital city of the country, Ulaanbaatar, has consistently ranked in the leading position of the most polluted cities in the world in recent years. The air pollution of Ulaanbaatar city exceeds the allowed standard by several times in winter, and sometimes there are cases where the visibility is limited beyond 10 meters. Levels of the tiniest and most dangerous airborne particles, known as PM<sub>2.5</sub>, once hit 133 times the World Health Organization's suggested maximum (Gardiner, 2019).

Therefore, air pollution has long posed a threat to the well-being and living conditions of local residents in Ulaanbaatar city and neighboring areas, as well as contributing significantly to greenhouse gas emissions. For this reason, the government has prioritized the problem of air pollution and allocated a substantial budget towards its reduction. In 2017, the government introduced the National Program for Reducing Air and Environmental Pollution, which aims to

achieve several key objectives. These include implementing a policy of providing free electricity during nighttime for selected districts to encourage the use of electric stoves for heating, distributing refined coal with reduced prices to minimize emissions, and expanding heating networks. In these ways, the government has exerted considerable efforts to actively implement proactive measures to address air pollution in Ulaanbaatar. However, there are varying public opinions regarding the effectiveness and implementation of these measures.

### **Causes of air pollution**

Although Mongolia has a vast territory, half of its population – approximately 1.6 million people – live in Ulaanbaatar, the capital city. The city is known as the coldest capital city in the world, with the weather consistently below 0 degrees Celsius in winter, from November to the end of April. Given such cold winters, families without central heating burn raw coal to heat their homes, and this is considered as the main contributor to air pollution in Ulaanbaatar city (Gordillo Fuertes, 2022).

Contributing to this problem has been the shift to a democratic governance system in Mongolia, which has facilitated the freedom of movement for its citizens. Consequently, there has been a significant increase in the number of urban residents, particularly those with low to middle incomes, seeking better opportunities, education, and access to healthcare. These citizens usually choose to live in the unplanned districts of Ulaanbaatar, where they collectively burn more than 1 million tons of raw coal annually, which is responsible for 80 percent of the total air pollution in the city (WHO, 2019). Hence, when considering the broader context, it becomes clear that the main underlying contributors to air pollution in Ulaanbaatar are intimately linked to factors such as poverty, the limited availability of energy resources, and inadequate urban planning.

The significant threat to human health caused by air pollution particularly impacts young children. In Mongolia, lung pneumonia stands as the second leading cause of death among children under 5 years old (UNICEF, 2018). Specifically, children residing in the heavily polluted areas of

Ulaanbaatar are estimated to experience a 40 percent reduction in lung function compared to their counterparts in rural regions (UNICEF, 2021).

In addition, pregnant women also bear the impacts of air pollution's negative consequences, as this pollution adversely affects both their own respiratory systems and the developing lungs of their unborn children. This can lead to premature births and complications during childbirth. The results of some recent studies have shown that a significant rise in respiratory diseases among inhabitants, with the incidence rate soaring by 2.7 times over last 10 years between 2012 – 2022.

Air pollution also casts a shadow on the overall life expectancy of the Mongolian population. The World Health Organization estimates that more than 4,000 lives are lost in Mongolia every year solely due to the effects of air pollution, underscoring its severe impact on public health. According to these statistics, in 2012, one out of nine deaths in Mongolia was caused by air pollution-related diseases, and more than half of child deaths from pneumonia were due to indoor air pollution (WHO, 2018).

Moreover, air pollution extends its negative impacts beyond human health, affecting the environment and overall quality of life. One of its harmful effects is the pollution of soil and water, further exacerbating the ecological balance. This pollution contributes to the loss of natural species and disrupts delicate ecosystems, significantly diminishing the attractiveness of cities, in particular, and the overall living environment.

Therefore, addressing the effects of air pollution places a substantial financial burden on both households and the nation as a whole. Significant amounts of money are being allocated to combat the harmful effects caused by air pollution. Although this diverts resources from other important areas, air pollution is widely recognized as a major public health challenge in Mongolia. As a result, the citizens of Mongolia have taken a proactive stance, organizing numerous protests to raise awareness and demand specific measures from the government to tackle air pollution effectively.

## **Measures taken by the Government to reduce air pollution**

### **1. The State budget allocation for reducing air pollution.**

The Government of Mongolia has prioritized the reduction of air pollution and accorded it considerable importance in its national agenda-setting since 2016. In this connection, the Mongolian government has been allocating a significant portion of the state budget towards combating air pollution, initiating several national programs dedicated to enhancing air quality and actively striving to attain tangible outcomes. For this purpose, the Mongolian government has allocated a substantial amount of financial resources, totaling 456.1 billion MNT (approximately USD \$ 131.8 million) between 2017 and 2020, to combat air pollution. The largest part of this investment consists of funding from international organizations and donor countries such as the Asian Development Bank, the World Bank, and the People's Republic of China (Tugs, 2021).

As part of this goal, the Government of Mongolia launched a National Program to Reduce Air and Environmental Pollution in 2018. This program aimed to reduce air pollution in the capital city, Ulaanbaatar, and other urban areas by improving heating systems, promoting energy efficiency, and increasing public awareness of the health risks associated with air pollution. Under the framework provided by this program, the Government took action in collaboration with Ulaanbaatar City's administration, including the replacement of coal-fired heaters with clean heating systems, the development of a sustainable urban transport system, and the establishment of a monitoring and evaluation system to track progress on air pollution reduction.

The Government of Mongolia has also implemented regulations to control emissions from vehicles and power plants and has provided subsidies for households to replace traditional stoves with more efficient and cleaner heating systems. Nevertheless, the allocation of funds executed within this program has not been made public, raising the possibility that it might have been an ineffective utilization of public investment.

### **2. The prohibition of raw coal consumption in Ulaanbaatar city**

Another significant step taken by the Government to combat air pollution was the decision to prohibit the burning of raw coal in the city of Ulaanbaatar starting with the winter of 2019-2020. This decision was particularly noteworthy because Mongolia possesses one of the largest coal reserves in the world, and coal has traditionally been the most abundant and affordable energy source in the country. Consequently, the government's ban on raw coal faced initial opposition and encountered various challenges during its implementation.

To facilitate the execution of the program, the government, in collaboration with the state-owned Tavan Tolgoi Coal Company, established a refined coal factory with a monthly capacity of 93,000 tons. This capacity was sufficient to entirely meet the heating needs of households in the central districts of Ulaanbaatar city. Furthermore, the price of the improved coal was set lower than that of ordinary coal, and substantial subsidies were provided by the government to make it more accessible (Denton, 2018). In order to ensure the widespread distribution of improved coal, numerous sales points were established in suburban areas through partnerships with private sector companies. Organizational measures were put in place to prevent households from purchasing more than 10 sacks of coal (each sack weighs approximately 25 kg) which is estimated to meet the need of an average household per week for 3,750 MNT, or USD \$ 1 per sack. Additionally, households in the target group were provided with free stoves for burning the improved coal, along with smoke detectors (Jun, 2021),

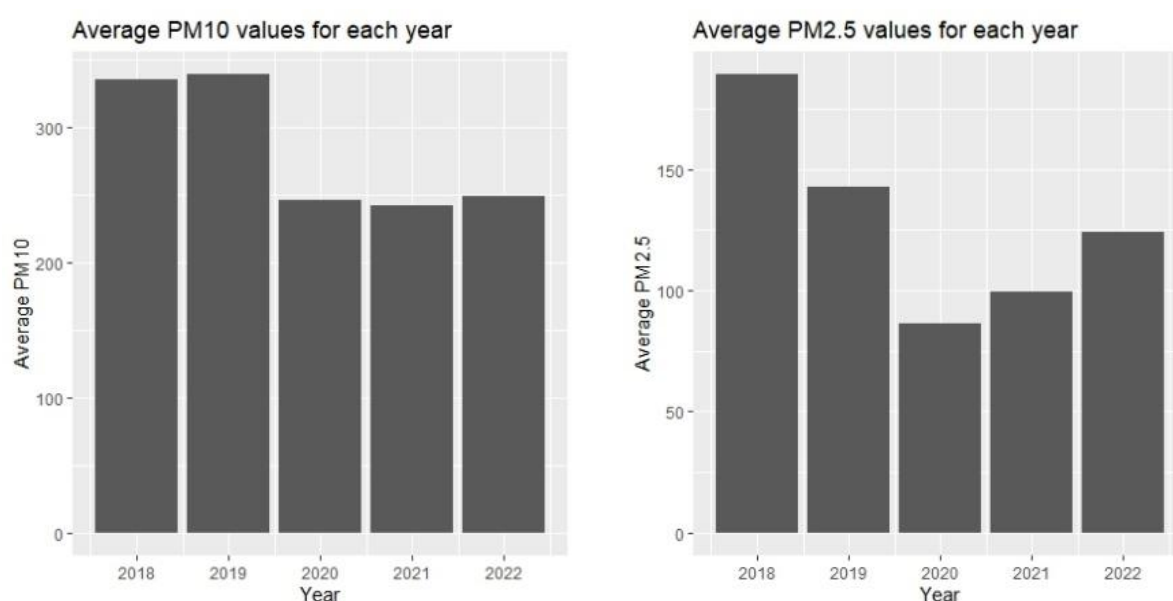
In parallel with the introduction of improved coal, the government implemented measures to support the adoption of electric heating systems. This included reducing the nighttime electricity tariff for target group households during the winter and collaborating with private banking and financial institutions to offer concessional loans to citizens for improving housing conditions and insulation.

Through these comprehensive initiatives, the government aimed to provide alternatives to raw coal consumption, encourage the adoption of cleaner energy sources, and improve living conditions while mitigating the adverse effects of air pollution.



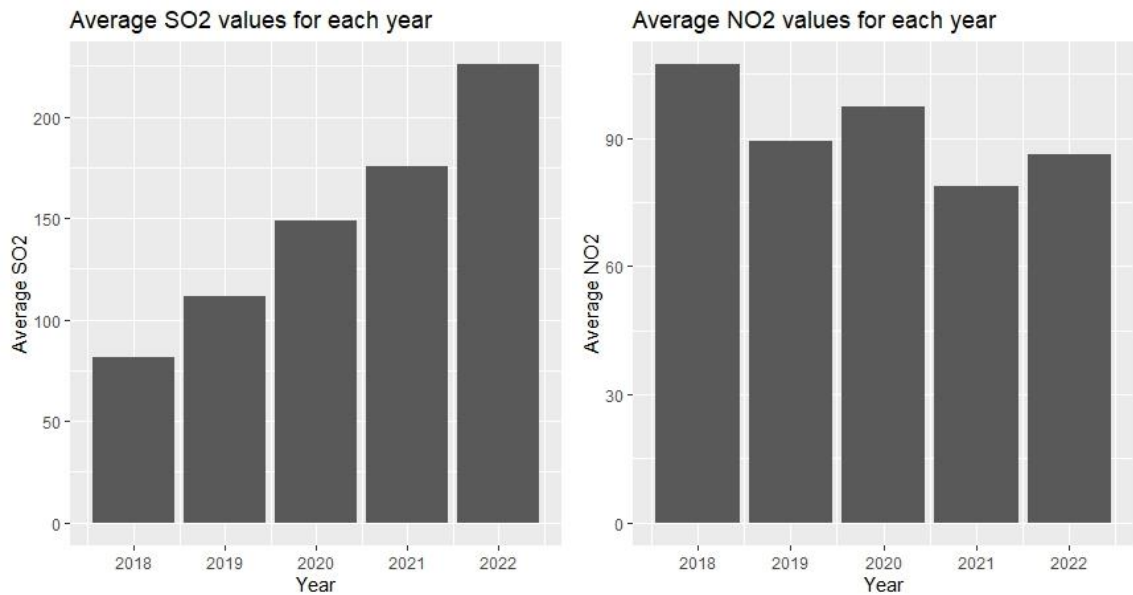
## Results of air pollution reduction measures

The NAMEM operates 15 air quality measurement stations in Ulaanbaatar and its surrounding areas and provides real-time air quality data. These measurements encompass various pollutants such as sulfur dioxide (SO<sub>2</sub>), nitrogen dioxide (NO<sub>2</sub>), carbon monoxide (CO), ozone (O<sub>3</sub>), as well as PM<sub>10</sub> and PM<sub>2.5</sub> fine particles. NAMEM's data is widely regarded as the most reliable source of information on air pollution in the city (Franklin et al., 2018). By analyzing the data provided by NAMEM, policymakers and researchers can assess the progress made in reducing air pollution levels over time. This quantitative information enables the evaluation of the effectiveness of the measures implemented and the identification of areas that require further attention or improvement. Therefore, several observations can be made through the examination of the data derived from this publicly available resource. These are summarized below in Figures 11



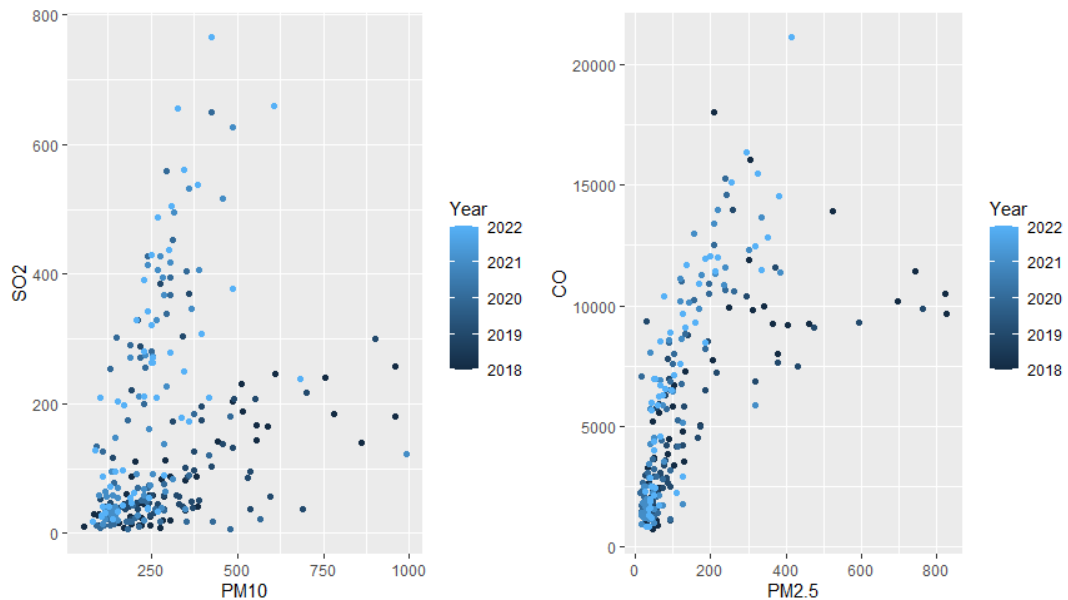
*Figure 11: Average value of PM10 and PM2.5 particles*

Upon analyzing the air quality data provided, the levels of PM<sub>10</sub> and PM<sub>2.5</sub> fine particles in the air of Ulaanbaatar city has significantly decreased since 2020, which corresponds to the period when the government decided to ban the use of raw coal.



*Figure 12: Average value of SO2 and NO2 values for each year*

However, during the same period (2018-2022), the levels of SO2 gas increased dramatically, while the amount of NO2 gas remained relatively stable. This shows that these toxic gases were released in large quantities regardless of the quality of the coal, and the improved coal emits more SO2 toxic gases.



*Figure 13: Relationship between small particles and toxic gases (2018-2022)*

When comparing the relationship between SO<sub>2</sub> and NO<sub>2</sub> toxic gases, PM<sub>10</sub> and PM<sub>2.5</sub> fine particles in the air of Ulaanbaatar city, there is no significant correlation between them. Therefore, it is important to note that the sources of these toxic gases are distinct from one another, requiring specific measures tailored to each of them. To elaborate, the government's efforts to combat air pollution have resulted in a decrease in PM<sub>2.5</sub> and PM<sub>10</sub> levels by a certain extent, however, this achievement has been accompanied by a rise in the concentration of toxic gases in the air. This complexity raises doubts about the efficacy of the program, as it appears that efforts have led to substituting one issue with another.

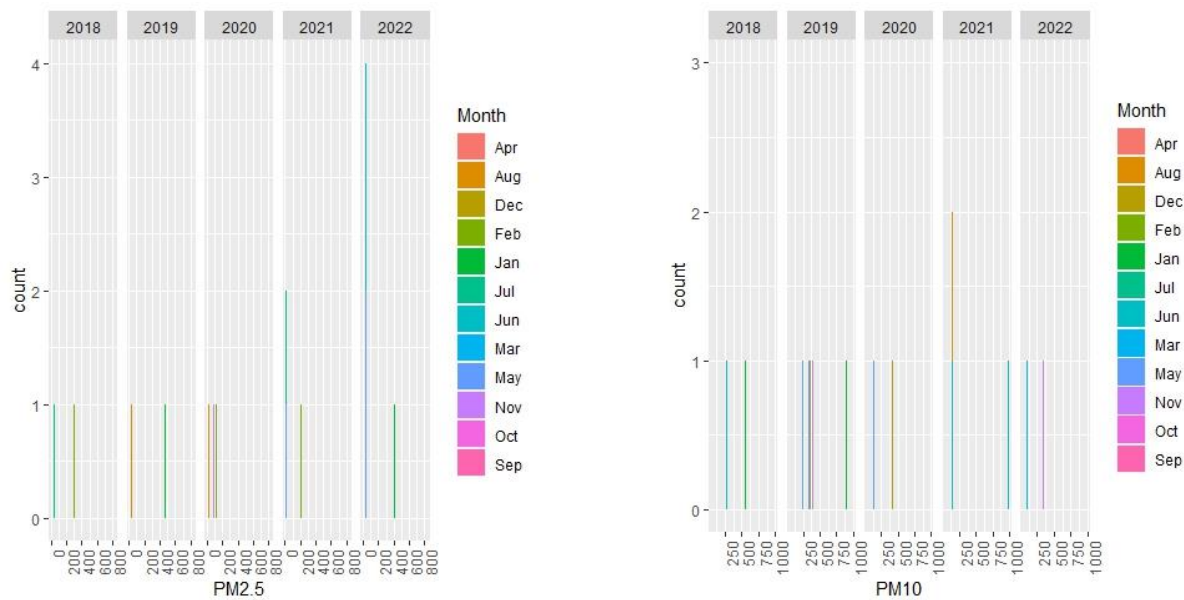


Figure 14: Distribution of PM<sub>2.5</sub> and PM<sub>10</sub> fine particles by month

Furthermore, comparing the fine particles of Ulaanbaatar city by date and month, the highest levels of PM<sub>2.5</sub> particles are observed in the winter months of December, January, and February, while the levels of PM<sub>10</sub> particles are distributed more evenly across seasons of the year. Additionally, a minor decline in levels has been observed when contrasting the present measurements with those from years before 2020.

As a result of the above analysis, the following observations can be made about the general nature of air pollution and the results of the air pollution reduction program in Ulaanbaatar city and its environs:

- Since the implementation of the government's air pollution reduction program in Ulaanbaatar in 2018, there has been a slight decrease in air pollution levels, particularly in terms of PM<sub>2.5</sub> and PM<sub>10</sub> particles. However, it is important to note that the concentration of these particles still exceeds permissible standards, indicating that improved coal consumption alone is not sufficient to fully address the issue.
- Despite the ban on the use of raw coal as part of the air pollution reduction program, the levels of sulfur dioxide (SO<sub>2</sub>) and nitrogen dioxide (NO<sub>2</sub>) gases have experienced a significant increase. This asserts that the use of improved coal emits a higher amount of these toxic gases compared to raw coal.
- These findings highlight the complexity of air pollution and indicate that it is not solely dependent on coal usage. Certain types of air pollutants persist throughout the year, not just during the cold season, suggesting the presence of other contributing factors beyond coal consumption.

These observations align with the findings reported by the National Audit Office and other experts, highlighting the need for the Government to address and rectify the situation. The National Audit Office of Mongolia conducted an inspection of the National Air Pollution Reduction Program in 2021 and determined that a significant portion of the organized works and activities funded by the program were unnecessary. According to the report, out of more than 200 projects and activities, approximately 70 percent were deemed redundant (Undarmaa, 2021). Additionally, the evaluation revealed that only three out of the 43 approved measures for reducing air pollution had been fully implemented, which means inadequate progress has been made in executing the remaining measures (Undarmaa, 2021)

Furthermore, the report highlighted inefficiencies in the production and supply of improved stoves designed to reduce air pollution in the capital. Although stoves were purchased and delivered to households at discounted prices, they were often not utilized in accordance with the recommended technology.

While initiatives such as insulating homes and providing electricity discounts were organized, discrepancies arose regarding the duration of use, whether the target families received the supplies, and the overall outcomes of these measures (National Audit Office, 2020).

In summary, the activities carried out in the air pollution reduction efforts have yielded some results, however, a substantial portion of the budgeted funds have been wasted, and government institutions have demonstrated ineffective coordination and execution. As a result, these efforts have not achieved the results that they might have. Consequently, the government needs to prioritize policy measures over direct program execution by exploring solutions that based on more green technologies and tapping into private sector investments.

## **CHAPTER 5: POLICY RECOMMENDATIONS**

Sustainable development is a long-term process that necessitates collaboration among different stakeholders and that requires significant financial resources. Due to the substantial funding required, it is essential that countries efficiently utilize their available resources and continuously explore alternative measures to achieve their shared objectives. Thus, the INFF serves as a valuable tool for aligning strategies and efforts in pursuing achievement of the SDGs. By adopting this framework, countries can better synchronize their approaches and coordinate their actions in efficiently achieving the SDGs.

The INFF framework enables governments to harness supplementary financial resources, enhance the alignment of diverse funding streams, improve coherence of programs and projects, and consolidate the associated processes.

In the case of Mongolia, although some important steps have been taken to adopt the INFF, such as aligning budget planning with the SDGs and increasing long-term development financing, there are still significant shortcomings and gaps in the implementation. These include issues such as investments in undisclosed projects, decisions influenced by political and personal interests, weak coordination among government institutions, and inadequate project implementation and results.

In particular, the outcomes of the National Air Pollution Reduction Program, which has been implemented by the Government of Mongolia with significant efforts and funding, is characterized by most of these limitations. While the program has attained some achievements by implementing diverse measures aimed at specific solutions, it is evident that most of these measures are characterized by limited long-term effectiveness, suffer from inadequate coordination, and will require substantial additional investments. These findings underscore the need for further examination and improvement of the INFF in order to enhance coordination, ensure better utilization of resources, and achieve the ultimate desired impacts.

Based on this study, the following recommendations can be given to the Government of Mongolia to address the financing challenges in achieving the SDGs:

1. *Diversify the economy*: While Mongolia's budget has experienced growth due to higher export prices for raw materials, it is important to invest in other sectors that generate employment and income to minimize the effects of economic downturns in the future.
2. *Incorporate SDGs into national development planning*: Integrating the SDGs into Mongolia's long-term development plans will help in establishing a clear roadmap for their implementation in the short and medium term, and assign responsibilities for financing and implementation.
3. *Implement the Integrated National Financing Framework*: Tailoring the Integrated National Financing Framework to the specific needs of the country must include estimating the costs of achieving the SDGs during the national budget development process, as well as enhancing the financial performance audit system.
4. *Diversify financing sources*: Sustaining financial support for achieving the SDGs should include exploring and leveraging multiple sources of financing, such as public-private partnerships, international development assistance, impact investments, and innovative financing mechanisms.
5. *Promote decentralized funding and community participation*: Funding responsibilities should be distributed across various levels of government, while encouraging the participation of citizens and communities in achieving development goals.
6. *Develop evidence-based long-term development strategies*: To enhance the impacts of the country's socio-economic development, thorough research and analysis must be conducted in order to develop comprehensive long-term development strategies. These impacts would be reinforced by upholding policy continuity regardless of political or economic circumstances.

7. *Enhance good governance and accountability:* Mechanisms should be strengthened to ensure transparency, integrity, and accountability in the implementation of projects and programs. Robust governance processes and practices to prevent corruption, mitigate conflicts of interest, and promote fair and equitable decision-making processes should be adopted.
8. *Enhance coordination and organization:* The coordination and organization of development programs across sectors should be improved in order to maximize the effectiveness of large-scale tasks with minimal economic resources.

By implementing these measures, Mongolia will take a significant step towards addressing its financing challenges in the achievement of the SDGs. This comprehensive approach will enable the Government to operate more effectively in the long term and effectively address its major development challenges.

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