



Lao People's Democratic Republic
Peace Independence Democracy Unity Prosperity

National Green Growth Strategy Of the Lao PDR till 2030

Vientiane Capital
2019



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2019**

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Preface

This National Green Growth Strategy of the Lao PDR is the elaboration of the Resolution of the 10th Party Congress, the Vision 2030, the 10-Year Strategy (2016-2025) and the 8th Five-Year National Socio-Economic Development Plan (2016-2020) into details. The main objectives and goals of this strategy are to enhance capacity for integrating green growth into the formulation and implementation of sector and local strategies and plans in each period to ensure achievement of long-term goals of National Socio-Economic Development set out by the Party and Government, which is : graduating from the status of Least Developed Country (LDC) and moving toward becoming a developing country with an upper middle-income in accordance with green and sustainable direction and achieving the Sustainable Development Goals (SDGs) by 2030 with quality.

With a view to ensuring the achievement of the long-term goals of National Socio-Economic Development set out by the Party and Government of Lao PDR, this National Green Growth Strategy of the Lao PDR is developed to reinforce economic growth, , environmental protection and social development in order to maintain high economic growth, , stability and sustained . In particular, this National Green Growth Strategy of the Lao PDR has focused on: (1) encouraging and promoting the economic growth and poverty reduction in a comprehensive, inclusive and fair manner, allowing all persons in the society to receive the benefits from such development; (2) raising the efficiency and effectiveness of the utilization of limited natural resources of the country to ensure optimal benefits; (3) clean economy as environmentally-friendly and that decreases wastes and greenhouse gas emissions; and (4) increasing the economic resilience to climate change, natural disasters and of global economic uncertainties.

To achieve these objectives and goals, this National Green Growth Strategy of the Lao PDR has, therefore, examined and identified 4 cross-cutting areas, 7 focused sectors for promotion and 5 supporting sectors as follows:

- Four cross-cutting areas are comprised of: (1) improving the investment environment and management system to make it more efficient and effective; (2) ensuring rural development and poverty reduction to raise the living standard of the rural people and decrease the disparity between urban and rural areas, and to enable poor people in the rural areas to receive the benefits from the economic growth in an inclusive and fair manner; (3) gender roles that will particularly focus on raising the roles and promoting the advancement of women to decrease the differences between men and women in all socio-economic fields; and (4) decreasing the risks and vulnerability of the economy to the climate change and natural disasters.

- Seven focused sectors are comprised of: (1) natural resources and environment sector with focusing on survey, allocation, natural resources used planning and management with the participation of many sectors, (2) agriculture and forestry sector, (3) industry and commerce sector, (4) energy and mines sector, (5) public works and transport sector, (6) information, culture and tourism sector, and (7) science and technology sector.

- 5 supporting or underpinning sectors are comprised of: (1) finance sector, (2) banking sector, (3) education and sports sector, (4) labour and social welfare sector, and (5) health sector.

In addition, this National Green Growth Strategy of the Lao PDR has also examined and identified the mechanism to integrate green growth into sectors and local policies, strategies and plans in a systematic and more effective manner. It has proposed the establishment of the National Green Growth Centre and Green Growth Fund of the Lao PDR which are to be the focal point of coordination and the financial mechanism to encourage and promote the National Socio-Economic Development according to green and sustainable direction. Beside of that, Monitoring and Evaluation system is created in order to check all green growth indicators which included in the strategy and to gradually develop it to become an efficient and successful monitoring system.

I would like to take this opportunity, on behalf of the Party, Government and the Lao people across the country, to express my profound thanks to all parties which have participated and provided supports to the process of the formulation of this National Green Growth Strategy of the Lao PDR that allow successful completion. Specifically, I would like to express my deep thanks to the National Steering Committee for Green Growth and the Leading Committee and Secretariat for Formulation of Green Growth Strategy and Establishment of Green Growth Promotion Centre of the Lao PDR for concentrating their efforts in carrying out their assigned work actively and responsibly leading to the successful completion of the formulation of this strategy.

I also would like to express my deep thanks to the World Bank (WB), the Environment Protection Fund (EPF) and the Global Green Growth Institute (GGGI) for providing technical and financial supports to the formulation of this Strategy that enable it to be completed as planned. At the same time, I would like to express my thanks to development partners, international organizations and all relevant parties of both public and private sectors including enterprises and domestic civil society organizations for actively making contributions to the process of formulation of this Strategy to make it successfully completed as planned. This strategy is the outcome of wide participation of all parties in the society. It is a pathway for the sustainable development and is the important strategy in implementation of the long-term vision of Lao PDR. I earnestly hope that after the official adoption of this strategy by the Government of Lao PDR, you will continue to actively contribute to the implementation of this strategy to allow it to achieve its targets as planned.

Vientiane Capital, 6 Mar 2019

Prime Minister of the Lao PDR



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Motto of the National Green Growth Strategy of the Lao PDR

“For achieving the economic growth that is efficient, clean, comprehensive, inclusive, fair and resilient to climate change and global economic uncertainties”

Preamble

With the aim of elaborating the Resolution of the 10th Congress of the Lao People's Revolutionary Party, the Government of the Lao PDR has developed the Vision 2030, the 10-Year Strategy (2016-2025) and the 8th Five-Year National Socio-Economic Development Plan (2016-2020). These Vision, Strategy and National Socio-Economic Development Plan had defined the directions and goals of the national socio-economic development of the Lao PDR with the focus on continuing the socio-economic development to enable Lao PDR to be graduated from the status of Least Developed Country and to become an upper-middle income developing country and achieve the Sustainable Development Goals (SDGs) by 2030 in accordance with green and sustainable direction¹. The National Assembly of the 8th Legislature had adopted these Vision 2030, Strategy and National Socio-Economic Development Plan at the Inaugural Session held between 20-22 April, 2016 in Vientiane Capital.

In order to ensure that the socio-economic development of the Lao PDR is undertaken in line with green and sustainable direction as defined by the Vision 2030, the 10-Year Strategy (2016-2025) and the 8th Five-Year National Socio-Economic Development Plan (2016-2020), the Government of Lao PDR had appointed the National Steering Committee for Green Growth on 08 December 2016 with the Deputy Prime Minister, Minister of Finance as a Chair, Minister of Planning and Investment as a Vice-Chair, President of the National Institute for Economic Research and Ministers of relevant line Ministries and agencies as members. This National Steering Committee for Green Growth has the main roles and duties to lead and guide the implementation of the green growth activities countrywide to ensure achievement of successes with high efficiency and effectiveness and conformance with the actual requirements of the socio-economic development of the Lao PDR in each period; and to study, consider and approve the strategies and policies related to green growth of the sectors and local administrations. (Details are in Annex 2).

To provide direction and basis for leading and guiding and to develop the mechanism of coordinating and promoting the green growth activities across the country in a systematic and more efficient manner, the National Steering Committee for Green Growth has decided to develop the national strategy and promotion centre for green growth on 19 April 2017 and has also decided to appoint the Committee for Formulation of National Green Growth Strategy and Establishment of National Green Growth Promotion Centre by assigning the President of the National Institute for Economic Research as a Chair of the Leading Committee, the Vice Minister of Planning and Investment and the Vice-President of the National Institute for Economic Research as Vice-Chairs and the Vice-Ministers of a number of relevant Ministries and Agencies as members. The Science and Socio-Economic Policy Research Center of the National Institute for Economic Research and the Department of Planning-Development Policy Research centre, of the Ministry of Planning and Investment are assigned to be the coordinating points of the Secretariat or the coordinating points for the drafting of this Strategy. (Details are in Annex 3).

¹ Vision 2030 and 10-Year Strategy (2016-2025)

Under the close guidance of the Leading Committee, the Secretariat for Formulation of National Green Growth Strategy of the Lao PDR has performed the role of focal point in coordinating, studying and drafting this Strategy with wide participation of the sectors, local administration, civil society organizations, development partners, and international organizations, domestic and foreign enterprises. In the process of the formulation of the National Green Growth Strategy of the Lao PDR, 3 consultation meetings were held for brainstorming and mobilizing opinions at the central and leading committee level to which representatives from relevant sectors at central level, civil society organizations, development partners and representatives from domestic and foreign enterprises were invited to participate. At the local level, the consultation meetings for brainstorming and mobilizing opinions were held in all 3 regions of the country (Northern, Central and Southern regions) with the participation of the representatives from sector agencies of all provinces (18 provinces) across the country. Moreover, specific meetings were also held several times for discussion within the Secretariat. In addition to the process of preparation and operation of the drafting of this strategy, the Leading Committee and the Secretariat for Formulation of National Green growth Strategy of the Lao PDR had undertaken the study tour to draw lessons in the Republic of Korea which is a country having lessons and successful achievement in the socio-economic development according to green and sustainable direction.

The strategy formulation process has also received the technical support from the World Bank (WB), the Global Green Growth Institute (GGGI), UNIDO and others. These international institutions and organizations had provided technical support to the process of drafting this National Green Growth Strategy of the Lao PDR in various forms, such as: the World Bank (WB) had organized a technical meeting on financial mechanism in order to mobilise fund of green growth activities and provided data, comments and recommendations that are useful for the process of drafting this Strategy. Specifically, the World Bank has provided the financial support for the process of drafting this Strategy through the Environment Protection Fund (EPF) including the budget for undertaking the study tour abroad of the Leading Committee and the Secretariat for the purpose of learning and sharing lessons, for organizing internal discussion meeting and for conducting the collection and analysis of data for drafting this Strategy. The Global Green Growth Institute (GGGI) had conducted the assessment of the green growth potentials in Lao PDR and the study of many activities underpinning the green growth work, such as: training, access to funding sources, assessment of wastes and sewages in Lao PDR and others. The outcomes of these assessments are the source of information and important base for the determination of this Strategy. Furthermore, the Global Green Growth Institute (GGGI) has also actively participated in the process and has provided advices and comments that are useful for the drafting of this Strategy. UNIDO and other international organizations and development partners have also actively and lively participated and provided valuable comments to the process of the drafting of this Strategy.

Hence, this National Green Growth Strategy of the Lao PDR is the outcome of wide participation and consensus of the society. This National Green Growth Strategy of the Lao PDR is not a strategy which is developed to replace the existing sector and local strategies and plans; but it is a supplementary strategy which is developed for providing direction and basis for integrating green growth into the sector and local plans in each period, ensuring uniform

determination of standards and minimizing inconsistencies, and for encouraging and promoting efficient and effective implementation of the programs and projects that relate to green and sustainable growth in these strategies and plans to ensure achievements of the national socio-economic development goals and the sector and local developments goals in accordance with green and sustainable direction as specified in the Vision 2030, the 10-year Strategy (2016-2025) and the 8th Five-Year National Socio-Economic Development Plan (2016-2020).

This National Green Growth Strategy of the Lao PDR consists of 5 major parts which are: Part I-need and requisite of the formulation of National Green Growth Strategy and establishment of National Green Growth Promotion Centre of the Lao PDR; Part II - meaning, position, roles and relations between the National Green Growth Strategy of the Lao PDR and the National Strategy and Socio-Economic Plan and the Sector and Local Plans; Part III-focused/priority sectors and areas of green growth promotion in Lao PDR; Part IV-mechanism and measures of implementation of the National Green Growth Strategy of the Lao PDR; and Part V-system of monitoring, evaluation and reporting on the progress of the implementation of green growth activities in each period through the creation of national green growth indexes of Lao PDR. This system has calculated the index values of the Lao PDR at present time and set the targets till 2025 and 2030.

However, this National Green Growth Strategy of the Lao PDR has not yet determined detailed programs and projects, and has not estimated the budget needs for the implementation of these programs and projects. These programs, projects and budget are to be further studied and translated into details in each period after the official adoption and promulgation of this Strategy.

This National Green Growth Strategy of the Lao PDR is not a static Scripture, but it is a dynamic document which is to be studied, revised and modified to ensure conformance with the actual situation and requirements of the socio-economic development of the Lao PDR in each period.

This version of National Green Growth Strategy of the Lao PDR was translated from original Lao version. So, if any parts of this English version contents are not correctly please refer to the original Lao Version for its correct meaning.

Part I

Need for and Requisite of the Formulation of National Green Growth Strategy and Establishment of National Green Growth Promotion Centre of the Lao PDR and Status of Socio-Economic Development

1.1. Overall Global Environment and Trends

Since the end of the 20th Century, many countries in the world have focused on accelerating the development of their economy through the significant use of natural resources in a wasteful, inefficient and ineffective manner leading to unsustainable development, affecting the natural resources which have rapidly depleted and degraded, the capacity of the ecosystem service capacity which has been decreased and the climate change which has become more severe, especially the rise of temperature, variation of weather, change of seasons and so on. The depletion and degradation of natural resources and the climate change have given rise to severe natural disasters, such as: storms, earthquakes, tsunamis, droughts, floods and so on that affect the infrastructures, natural resources, residential places as well as agricultural production which is the source of food for human. Worse than that, there are pollutions of air, noise, odor, etc. which are caused by the expansion of industrial factories, transportation, urban areas and other fields without taking account of the environmental condition. These pollutants become the main causes of various sicknesses and diseases, such as: lung cancer, skin diseases, etc. According to the statistics of the World Health Organization (WHO), in each year, there are more than seven million peoples in the world who die from air pollution-related diseases.² Millions peoples have faced the risk of losing their permanent residence due to the rise of temperature and sea water level.

The outcomes of unsustainable socio-economic development over the past period have led to the change in the concept and directions of socio-economic development of many countries in the world.

These countries have increasingly given emphasis to the environmental protection and social development in conjunction with the economic development. As a result, sustainable and green growth or economic development that takes into account the social and environmental aspects has become the overall global trend in the present era. Governments of many countries have determined their socio-economic development policy according to sustainable and green direction to ensure the protection of environment and to mitigate the climate change and social impacts. For examples: China set the goal of reducing the carbon dioxide emissions by 40-45% by 2020; India set the goal of reducing the use of energy by 20-25% in 2020 from the consumption level in 2005; Indonesia set the goal of reducing the greenhouse gas emissions to 26% lower than BAU level by 2020; Thailand set the goal of reducing the use of energy by 25%

² <https://www.paho.org/salud-en-las-americanas-2017/?p=53>

in 2030 from the level in 2005; Vietnam set the goal to reduce the greenhouse gas emissions by 10-15% by 2020 and will continue to further reduce the greenhouse gas emissions by 2-3% per year until 2030; Republic of Korea set the goal of reducing the greenhouse gas emission to 30% lower than the BAU level in 2020 (Jacob, Kauppert & Quitzow, 2013). The United Nations Development Programme (UNDP) determined the Sustainable Development Goals (SDGs) as the development goals until 2030 to enable this type of development to become the obligation of all countries. International organizations and financial institutions which plays an important role in the world development, such as: World Bank (WB), Asian Development Bank (ADB) and others, have also taken socio-economic development with green and sustainable manner direction as a condition for granting loan to governments and development projects.

At the 35th General Assembly of ASEAN Inter-Parliamentary Assembly (AIPA) on 17 September 2014, the ASEAN member countries had unanimously agreed that each country shall develop its green growth strategy and establish its green growth promotion centre for using as basis and coordination mechanism for encouraging and promoting the green growth activities in a systematic and efficient manner³. At present, many member countries of ASEAN, such as: Vietnam, Cambodia, Indonesia and others have already developed their green growth strategy and promotion centre. Therefore, in order to comply with the Resolution of the 35th General Assembly of ASEAN Inter-Parliamentary Assembly and to ensure conformance with the overall trend of international and regional socio-economic development, Lao PDR shall have its green growth strategy and green growth promotion centre.

1.2. Status of Socio-Economic Development in Lao PDR

The formulation of National Green Growth Strategy and the establishment of National Green Growth Promotion Centre are not only for complying with the overall global trend and international obligations, but they are the need and requisite for the socio-economic development of the Lao PDR to ensure the achievement of the long-term goals of national socio-economic development, such as: graduating from the status of least developed country by 2020 in a sustainably manner, achieving Sustainable Development Goals (SDGs) and becoming a developing country with upper-middle income by 2030 as determined in the Vision 2030 and in the 10-Year Strategy (2016-2025)⁴.

Over the past decades, Lao PDR has made significant achievements in the economic development and poverty reduction. According to the statistics in the 8th Five-Year National Socio-Economic development Plan (2016-2020), the average per capita income had increased from USD 1,217/person/year in 2011 to USD 1,970/person/year in 2015⁵ which corresponds to the average growth rate of GDP of about 7.9% per annum; the poverty rate (head-count) had declined from 27.6% in 2008 to about 20% in 2015,⁶ with an average decrease of more than 1%

3 Government of Lao PDR, 2014, Notification of the Government Office (Prime Minister's Office) No. 1751/GO.SD, dated 8 December 2014 concerning the Ministry of Planning and Investment is assigned to take the lead in coordinating with the Ministry of Foreign Affairs and relevant sectors to take charge of the formulation of the green growth strategy and establishment of the green growth promotion centre of the Lao PDR.

4 Government of Lao PDR, 2016, Vision 2030 and 10-Year Strategy (2016-2025), Vientiane Capital, 2016.

5 8th Five-Year National Socio-Economic Development Plan (2016-2020).

6 8th Five-Year National Socio-Economic Development Plan (2016-2020).

per annum. Lao PDR become one of the countries having the highest economic growth rate in the South-East Asia and Pacific region⁷.

However, such rapid economic expansion and poverty reduction are achieved through significant use of natural resources in a wasteful, inefficient, ineffective and unsustainable manner. This is the root-cause of many problems, such as:

- ***Degradation and Depletion of Natural Resources:*** The socio-economic development and poverty reduction in the past period were achieved through significant, inefficient, wasteful and unsustainable use of natural resources, such as: forests, cultivation land, mines, water resources, biodiversity, etc. This has resulted in the rapid degradation and depletion of these natural resources. According to the statistic data, the area of forest cover of Lao PDR has decreased continuously and rapidly from about 50% in 1982 to about 40% in 2010⁸ due to illegal logging, exploitation of forest for export and for supplying to meet domestic demand, granting of land concession for expanding the agricultural production areas and for infrastructure development projects and others. According to the report of the United Nations Development Programme (UNDP), this decrease of forest cover areas has affected water sources, biodiversity and the traditional lifestyle of the people.⁹ Many thousand hectares of agriculture land areas which were previously fertile have become deforested and degraded land due to unsustainable use; many species of wildlife and aquatic life population which are the sources of food of the peoples have decreased and become endangered. Streams, ponds, canals, marshes and rivers become dried; millions tons of minerals have been exploited and exported in the form of raw materials with low value.

- ***Economic Vulnerability:*** As the economy of Lao PDR is of small size and highly concentrated in certain sectors only and is the economy which is dependent on the use of natural resources and on the climate condition, such as: subsistent and small-scale agricultural production, hydropower, mining and tourism, and still lacks of diversification in foreign trade relations and export products. As a result, the economy of Lao PDR has faced with high risks and vulnerability to the climate change, natural disasters and global economic uncertainties. In 2015, the United Nations Development Programme (UNDP) had calculated the Economic Vulnerability Index to be equal to about 36.8¹⁰ which is higher than the standard required for graduating from a least developed country status by about 0.8 point (the standard required for graduating from a least developed country status is: lower than 36). The climate change, natural disasters, fluctuation of price of certain export products of Lao PDR or economic crisis in any country which is a trade partner of Lao PDR can pose a problem to the economy of Lao PDR.

7 <http://www.worldbank.org/en/country/lao/publication/lao-economic-monitor-may-2016-challenges-in-promoting-more-inclusive-growth-and-shared-prosperity>

8 Chittana Phompola, et. 2017. Forest Cover Change in Lao Tropical Forest: Physical and Socio-Economic Factors are the Most Important Drivers. 2017. (Electronic publication).

9 UNDP. 2011. Economic, Social and Environmental Impacts of Investment in Lao PDR: Case Study in Savannakhet Province. Vientiane Capital. 2011.

10 UNDP. 2017. 5th National Human Development Report. Graduation from Least Developed Country Status. Lao PDR. 2017.

- **Social Disparity:** Besides the problems related to the natural resources and environment mentioned above, the rapid economic expansion of Lao PDR during the past period has also resulted in the steady increase of social disparity. The income inequality ratio (GINI) of Lao PDR has continually and rapidly increased from 34.3 % in 1992 to 36.4% in 2012.¹¹ According to the statistic data in the 8th Five-Year National Socio-Economic Development Plan (2015-2020), 1.3 million people or about 20%¹² of the total population still live below the national poverty line. This means that they have no permanent residence, have not enough food and clothes. More than 15% of the population has no access to clean water, over 30% have no access to sanitary latrine and about 40% suffer from malnutrition. Most of these poor people live in the rural and remote areas in the Northern and Eastern regions of the country.¹³

- **Degradation of Urban Environment:** In addition to the degradation and depletion of natural resources, economic vulnerability and social disparity mentioned above, the economic development and poverty reduction in the past period have also resulted in the gradual degradation of the urban environment, particularly: the increase of air, odor and noise pollution, solid wastes, sewages, traffic jam, road accidents, etc. Which are caused by the rapid expansion of urban population, rapid increase in the number of vehicles, industrial factories and so on as well as by inefficient urban management. These lead to the gradual decrease in the quality of living conditions of the people in the urban areas, especially in large cities where there is a large number of internal immigrants, such as: Vientiane Capital, Savannakhet, Luang Prabang and Pakse.

- **Increase of Greenhouse Gas Emissions:** Even Lao PDR is a country with low greenhouse gas emissions and have the absorption capacity higher than the emissions, but the greenhouse gas emissions in Lao PDR has increased at a fast rate from 24,200 KtCo₂¹⁴ equivalent in 1990 to 51,000 KtCo₂¹⁵ equivalent in 2000 and to 161.517 Kt Co₂¹⁶ equivalent in 2012. This means that on average, the greenhouse gas emissions in Lao PDR has an average expansion rate of about 10% during the period from 1990 to 2000 and about 18% during the period from 2000 to 2012. These are considered to be high expansion rates that are caused by the increase of logging for export and for expanding agricultural production areas as well as by the increase of the number of vehicles and industrial factories and the increase of energy consumption and wastes. If such increase of greenhouse gas emissions continues at the same rate, Lao PDR will lose the status of being a greenhouse gas absorption country. According to the findings of the second greenhouse emissions survey conducted by the United Nations Development Programme (UNDP), 83% of this greenhouse gas emissions are from change of land use and forest; that means from deforestation which is due to various causes, such as: timber exploitation, forest clearance for expanding agricultural production areas and infrastructure development projects; and about 15% of these greenhouse gas emissions are from the field of agriculture and about 2% are from

11 <https://www.indexmundi.com/facts/lao-ldr/indicator/SI.POV.GINI>

12 Government of Lao PDR, 2016, 8th Five-Year National Socio-Economic Development Plan (2016-2020).

13 The National Statistical Center. 2014. Poverty Profile in Lao PDR. Vientiane Capital. 2014.

14 The Ministry of Natural Resources and Environment. 2013. Second National Communication on Climate Change of Lao PDR. Vientiane Capital. March 2013.

15 The Ministry of Natural Resource and Environment. 2013. Second National Communication on Climate Change. Vientiane Capital. March 2013.

16 <https://data.worldbank.org/indicator/EN.ATM.GHGT.KT.CE?locations=US-CN-LA&view=chart>

the field of energy¹⁷. Such increase of greenhouse gas emissions in Lao PDR has contributed to the climate change in the country as well as in the region and in the world, particularly the contribution in the increase of temperature, rainfall and weather variations.

- ***Climate Change and Natural Disasters:*** This economic growth that significantly uses the natural resources in a wasteful and inefficient manner has led to a gradual depletion of natural resources of Lao PDR, contributing to the change of climate and ecosystem in the country, in the region and in the world, especially the rise of temperature, prolongation and dryness of the dry season, delayed monsoon, heavy rainfall, severe storms and so on. These had caused adverse impacts on the agricultural production and led to the occurrence of natural disasters, such as: droughts, floods, storms, diseases outbreak, soil erosion, earthquakes, etc. According to the statistic data from the Ministry of Planning and Investment, during the period from 1970 to 2010, about 33 severe floods had occurred in Lao PDR, affecting the population of about 9 million persons (cumulative number) and causing a total loss amounted to more than 400 million US Dollar (MPI, 2012). According to the World Bank data, the amount of the losses from flood in each year is between 2.8% to 3.6% of GDP and the Government had spent about 2.7% of the budget in the protection and relief from these floods (World Bank Report, 2014). The impacts of such climate change and natural disasters have become more frequent, severe and have caused increasing losses to life and properties of the peoples.

In 2009, Ketsana storm had affected 4 Southern provinces of Lao PDR where 180,000 peoples were affected, 28 persons were dead, 6,100 houses and 36,000 hectares of agricultural areas were damaged; the total loss was amounted to USD 518 million. In 2011, eight provinces of Lao PDR were affected by Haima/Nok-Ten storms where a total of 421,000 peoples were affected, 30 persons were dead, 892 houses and 111,000 hectares of agricultural areas of the peoples were damaged; the total loss was amounted to more than USD 154 million. In 2013, twelve provinces of Lao PDR were affected by Varius storm where 380,000 peoples were affected, 29 persons were dead, more than 1,700 houses and 47,000 hectares of agricultural areas of the peoples were damaged; the total loss was amounted to USD 280 million.¹⁸ In 2018, heavy rainfall had caused the collapse of Xe Pian – Xe Namnoy saddle dam and flood in many provinces in Lao PDR, affecting the life and properties of the people very heavily.

The promotion of socio-economic expansion and poverty reduction through significant use of natural resources in a wasteful and inefficient manner over the past decades has put Lao PDR at a high risk of inability to achieve the long-term goals of the socio-economic development, such as: graduating from the status of least developed country in a sustainably manner by 2020, becoming an upper-middle income country and achieving the Sustainable Development Goals (SDGs) by 2030. Therefore, the Resolution of the 10th Party Congress, the Vision 2030, the 10-Year Strategy (2016-2025) and the 8th Five-Year Socio-Economic Development Plan (2016-2020) have given importance and emphasis to the national socio-economic development of the

17 The Ministry of Natural Resources and Environment. 2013. Second National Communication on Climate Change of Lao PDR. Vientiane Capital. March 2013.

18 The Ministry of Planning and Investment, 2014. Strengthening institutional capacities for resilient recovery. Vientiane Capital. 2014.

Lao PDR according to green and sustainable direction.¹⁹

Hence, the formulation of the National Green Growth Strategy and the establishment of the National Green Growth Promotion Centre are necessary for the translation of the Resolution of the 10th Party Congress, Vision 2030, 10-Year Strategy (2016-2025) and the 8th Five-Year Socio-Economic Development Plan (2016-2020) into details step by step.

1.3. Status of Socio-Economic Development in Lao PDR according to Green and Sustainable Direction

Green and sustainable growth is not a form of newly-developed socio-economic development framework in Lao PDR and in many countries in the world. It is a form of sustainable development that Lao PDR and many countries in the world have already implemented. As the expert of the Korean Development Institute said on the occasion of the exchange of lessons on green growth with Lao team in the Republic of Korea: “Green growth is the interpretation or the implementation of the sustainable development framework according to the specific model and characteristics of each country based on the actual needs of development of each country in each period”.

Over the past many years, the Government of Lao PDR has given the importance and attention to sustainable development to ensure that socio-economic development and environmental development are carried out simultaneously. The Government has developed, implemented and amended policies, mechanisms and legal instruments to ensure the implementation of sustainable development, such as: laws and mechanisms for managing public investments and domestic and foreign private investments by specifying that all public investment projects and domestic and foreign private investment projects must be subject to the process of environmental and social impacts assessment and must receive the certification and have appropriate management and monitoring plan for mitigating such impacts. This investment management legislation system has prohibited relevant agencies to approve investment projects which have significant environmental and social impacts or which do not go through the process of environmental and social impacts assessment or which have not received the impact certification or have no appropriate official plan of management and monitoring to mitigate the environmental and social impact. The Ministry of Natural Resources and Environment is charged of performing the function of assessing and issuing the environmental certificate to the public investment projects and the domestic and foreign private investment projects in accordance with the laws and regulations.

In addition, many sectors and local administrations have also started mainstreaming the Green Growth Agenda into their policies, strategies and plans, such as: the agriculture and forestry sector has the strategy and policy to increase the forest cover rate to 70% by 2020,²⁰ promotes clean agriculture, organic agriculture, integrated agricultural production and emphasizes on raising productivity through the increase of efficiency rather than the expansion

19 Vision 2030 and 10-Year Strategy (2016-2025).

20 Government of Lao PDR, 2005. Forest Strategy to the Year 2020 of the Lao PDR. Vientiane Capital, 2005.

of areas.²¹ The public works and transport sector also has the vision, strategy and policy on urban development²² and transport development according to green and sustainable direction. On 14 July 2018, the Ministry of Public Works and Transport had signed a cooperation agreement with 'Eptisa Servicios de Ingeniería SL' to conduct the survey and design of the urban green and sustainable transport project. This project will be designed and implemented on a pilot basis in 4 urban districts of Vientiane Capital such as: Chanthabuly, Sikhottabong, Sisattanak and Saysettha districts.²³ The energy and mines sector has the policy and strategy on development of clean energy and renewable energy which are available inside the country in order to reduce the environmental impacts and the dependence on import of fossil energy from foreign countries.²⁴ The Ministry of Energy and Mines has taken the initiative on the use of electric vehicles and has jointly worked with international assistance team (with the financial support of New Zealand government and ERIA institute) to conduct the study on electric vehicle use plan and strategy. Vientiane Capital has the policy and strategy on urban development based on 6 "Sor" (green, clean, light, peaceful, charming and civilized). The natural resources and environment sector has given the importance and emphasis on the management and utilization of limited natural resources in an efficient, effective and sustainable manner. The Ministry of Information, Culture and Tourism promotes green in terms of social-environmental friendly tourism.²⁵

However, the socio-economic development of Lao PDR according to green and sustainable direction still lacks clear and systematic policy, standards and uniformity at national level. Each sector and local level have carried it out in a scattering and arbitrary manner and there is a lack of deep and common understanding, lack of guiding strategy, lack of periodical monitoring, evaluation and reporting system and lack of working unit to perform the function of coordination and promotion of green and sustainable growth in each sector and local level in a systematic and efficient manner. Due to these reasons, the socio-economic development over the past period was not sustainable and had the risk of not achieving the long-term goals of socio-economic development set out by the Party and Government of Lao PDR. Furthermore, the lack of uniform understanding and strong coordinating point have resulted in the lack of research and analysis, allocation, planning of the use and management of limited natural resources of the country in an efficient, effective and sustainable manner. The use of natural resources in the past period had created conflicts in many sectors, such as: use of land, water, forests had caused complications in priority setting, particularly with regard to the agriculture land, construction land, and transportation land-used and so on.

Therefore, the Resolution of the 10th Party Congress as well as the Vision 2030, 10-Year Strategy (2016-2025) and the 8th Five-Year National Socio-Economic Development Plan (2016-2020) had defined the direction of the socio-economic development according to green

21 Department of Agriculture and Forestry of Saravane Province, 2015. Agricultural Development Strategy till 2025 and Vision 2030. Saravane. 2015.

22 Ministry of Public Works and Transport, 2017. Vision 2030 and 10-Year Urban Development Strategy (2016-2025) and 4-Year Investment Plan (2017-2020). Vientiane Capital, 2017.

23 Green Growth magazine.

24 Ministry of Energy and Mines. 2011. Renewable Energy Development Strategy in Lao PDR. Vientiane Capital. 2011.

25 Comments of the Department of Planning & Finance, Ministry of Information, Culture and Tourism.

and sustainable direction. With a view to translating the Resolution of the Party Congress and the socio-economic development strategy and plan and ensuring gradual achievements, the Government of Lao PDR had decided to appoint the National Steering Committee for Green Growth on 08 December 2016 with the Deputy Prime Minister as Chair and the Ministers of relevant Ministries and agencies as members of this steering committee. In order to determine the direction, focus and establish the focal point of coordination to encourage and promote the green growth activities in each sector and local level in a systematic and efficient manner, the National Steering Committee for Green Growth had decided to appoint the Committee for Formulation of National Green Growth Strategy and Establishment of National Green Growth Promotion Centre of the Lao PDR with the President of the National Institute for Economic Research as Chair, Vice-Minister of Planning and Investment as Vice-Chair and Vice-Ministers of relevant Ministries and agencies as members.

Hence, the formulation of National Green Growth Strategy and the establishment of National Green Growth Promotion Centre of the Lao PDR are the elaboration of the Resolution of the 10th Party Congress, Vision 2030, 10-Year Strategy (2016-2025) and the 8th Five-Year National Socio-Economic Development Plan (2016-2020) with a view to gradually realizing the actual results. They constitute a step and mechanism to strengthen the sustainable development mechanism in Lao PDR to ensure the achievement of the long-term goals of the socio-economic development set out by the Party and Government of Lao PDR, such as: Leading the country to graduate from the status of least developed country by 2020, to become a developing country with upper-middle income and achieve the Sustainable Development Goals by 2030.

Part II

Meaning, Directions, Overall Objectives and Goals of the National Green Growth Strategy of the Lao PDR and Relations with National, Sector and Local Strategies and Socio-Economic Development Plans

2.1. Meaning of National Green Growth of Lao PDR

As mentioned above, green growth refers to the interpretation, use or implementation of the sustainable development framework of each country and international organization based on the objectives and actual needs of each country in each period. Therefore, the specific meaning of green growth of each country, each international organization in each period is different from each other depending on the development requirement of each country and international organization. For example: the Organization for Economic Cooperation and Development (OECD) has defined green growth as “fostering economic growth and development, while ensuring that natural assets continue to provide the resources and environmental services on which our well-being relies”²⁶ or another meaning of green growth used by OECD is: “economic growth with low greenhouse gas emissions or economic growth which is resilient to the change of climatic conditions”.²⁷ The United Nations Environmental Program (UNEP) gives the meaning of green growth as follows: “green growth improves human well-being and social equity, while significantly reducing environmental risks and ecological scarcities”.²⁸ The green growth of the Republic of Korea has given importance and emphasis to innovation and development of clean, efficient and resource-saving technologies. The Green Growth Committee of the Republic of Korea has defined green growth as: economic growth by minimizing the use of natural resources and the environmental pollution.²⁹ In the Republic of Korea, raising the efficiency of natural resources utilization and minimizing the environmental pollution have become the engine that promotes the economic growth. The World Bank (WB) has defined green growth as “an economic growth that uses natural resources efficiently; a growth that is clean and minimizes the pollution and environmental impacts; an economic growth that is resilient to natural disasters; and an economic growth that is inclusive”.³⁰

26 <http://www.oecd.org/greengrowth/>: “Green growth means fostering economic growth and development, while ensuring that natural assets continue to provide the resources and environmental services on which our well-being relies.”

27 <http://sustainabledevelopment.un.org/index.php?menu=1448>.

28 www.unep.org/greeneconomy/AboutGEI/WhatisGEI/tabid/29784/Default.aspx: “improved human well-being and social equity, while significant reducing environmental riskss and ecological scarcities.

29 <http://www.greengrowth.go.kr>.”...The key to green growth pursues economic growth by minimizing the use of natural resources and the environmental pollution....”.

30 <https://whygreeneconomy.org/information/world-banks-green-growth-approach-denounced-bretton-woods-project/>: “...green growth as the growth that is efficient in its use of natural ressources, clean in that it minimizes pollution and environmental impacts, and resilient in that it accounts for natural hazards and the role of environmental management and natural capital in preventing physical disasters. And this growth needs to be inclusive”.

However, this does not mean that each country and international organization can define green growth without any framework and basic principles. On the contrary, the definition of green growth given by each country and international organization shall be within the sustainable framework that gives importance and emphasis to the development of 3 aspects simultaneously, such as: economic, social and environmental aspects. This means that green growth must contribute to the promotion of economic growth and poverty reduction, creation of employment opportunities and income generating activities for the peoples; contribute to the raising of equality right and the effectiveness of the utilization of limited natural resources to ensure optimal benefits; contribute to the improvement of social equity, etc. As mentioned above, the Korean Development Institute (KDI) has broadly defined green growth as: the interpretation or the implementation of the sustainable development framework which is specific for each country (the national interpretation of sustainable development) based on the special characteristics and actual requirements of the socio-economic development of each country in each period.

Based on the sustainable development framework, the fundamental principles mentioned above and the actual requirements of the socio-economic development of the Lao PDR at present time, the National Green Growth Strategy of the Lao PDR has determined the meaning of green growth of the Lao PDR as follows:

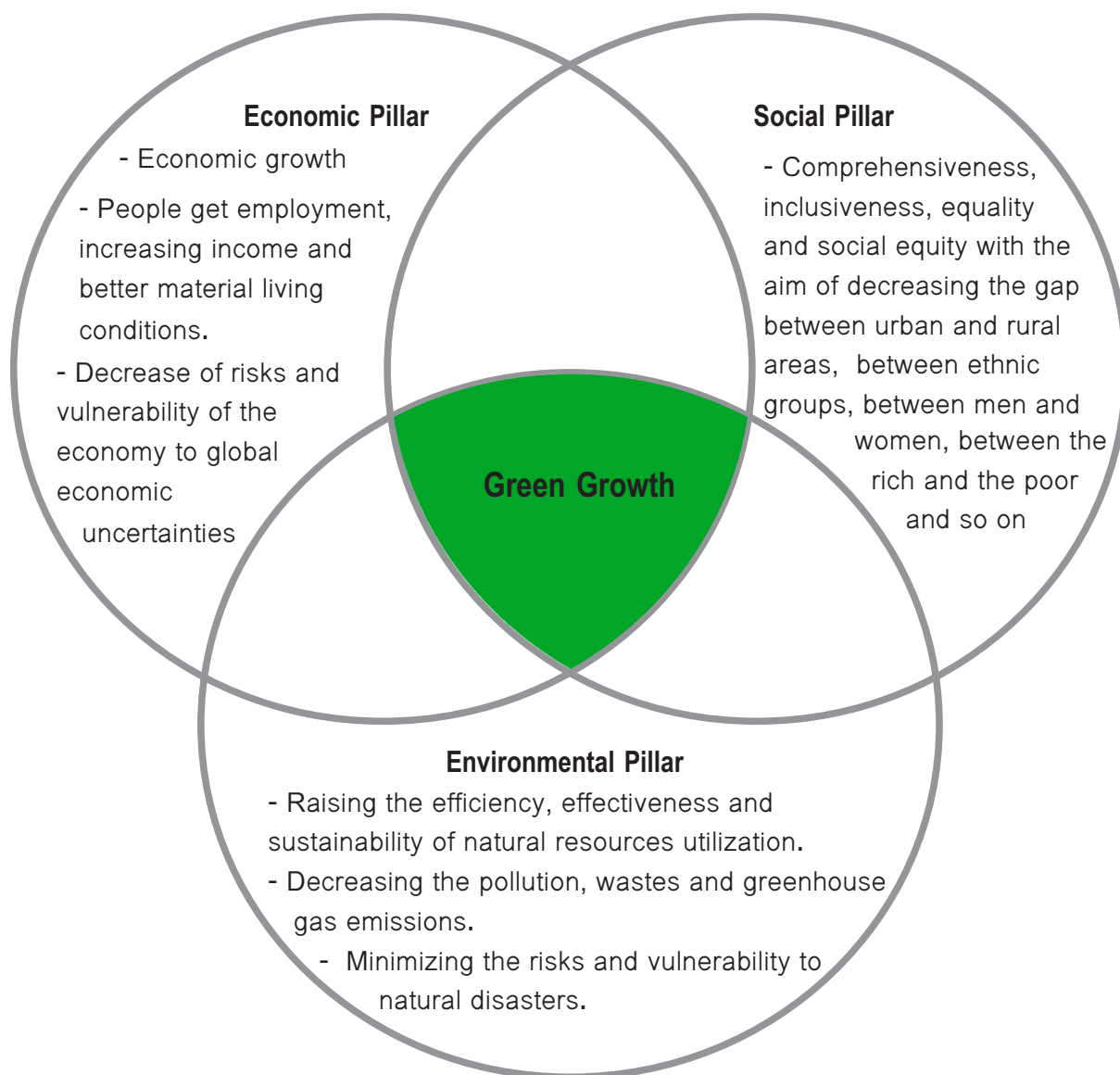
“National Green growth of the Lao PDR means the economic growth, poverty reduction and raising of living standards of the people in a comprehensive, inclusive and equitable manner by raising the efficiency, effectiveness and sustainability of the utilization of limited natural resources to ensure optimal benefits, decreasing the pollution, wastes and greenhouse gas emissions as well as minimizing the risks and vulnerability of the economy to natural disasters and global economic uncertainties.

This means that national green growth of Lao PDR is the growth of the economy, reduction of poverty and the raising of living standards of the people which have 4 fundamental characteristics, such as: (1) comprehensive, inclusive and fair: the aim is to ensure that all parties, ethnic groups, social strata and all persons are able to participate in the process and fairly receive the benefits from the socio-economic development; (2) highly efficient, effective and sustainable: this means using limited natural resources of the country in a small quantity to obtain high output and ensure sustainability; (3) clean: this means reducing the release of pollution, wastes and greenhouse gas emissions which are the main causes of climate change, natural disasters and various sicknesses; and (4) economic growth, poverty reduction and raising of living standards of the people which are resilient or have low level of risks and vulnerability to the climate change, natural disasters and global economic uncertainties.

Based on the definition mentioned above, the national green growth of Lao PDR will not include the growth of the economy, reduction of poverty and raising of living standards of the people through inefficient, ineffective and unsustainable use of natural resources or the economic expansion which is unclean, dirty, not socially and environmentally-friendly or the economic growth and poverty reduction that increase the risk and vulnerability of the economy to the climate change, natural disasters and global economic uncertainties.

In general, national green growth of Lao PDR, according to the definition mentioned above, is the translation of the sustainable development framework into details based on the actual requirements of the socio-economic development at present time. The national green growth of Lao PDR consists of 3 main pillars conforming with the sustainable development framework, such as: (1) Economic pillar. This particularly focuses on encouraging economic growth, creating jobs and income generating activities for the peoples, improving the material living standards of the peoples and making the economic growth strong and resilient to the global economic uncertainties; (2) Social pillar. The national green growth of Lao PDR has particularly given the importance and emphasis to comprehensiveness, inclusiveness and equity with the aim of allowing all ethnic groups, peoples of social strata and all persons in the society to be able to participate in the process and receive the benefits from the economic development in a comprehensive, inclusive and fair manner in order to reduce the inequality and gap between various ethnic groups, urban and rural areas, men and women, rich and poor and so on; and (3) Environmental pillar. This has, particularly given importance and emphasis to the efficiency, effectiveness and sustainability of the utilization of limited natural resources of the country to ensure optimal benefits, the cleanliness, the decrease of wastes, pollution of air, odor and noise, as well as greenhouse gas emissions; and also stressed on minimizing the risks and vulnerability of the economy to the climate change and natural disasters. The details are shown in Chart 1 below

Figure 1: Meaning of National Green Growth of Lao PDR



Source: Secretariat for Formulation of National Green Growth Strategy of the Lao PDR.

However, the meaning of national green growth of Lao PDR defined in this Strategy is not a static scripture which cannot be improved or changed. On the contrary, it is a dynamic meaning of national green growth which is to be improved and changed based on the actual situation and requirements of the socio-economic development of Lao PDR in each period.

2.2. Directions, Overall Goals and Objectives of the National Green Growth Strategy of the Lao PDR

The Steering Committee has given the directions, goals and objectives for the formulation of the National Green Growth Strategy and the establishment of the National Green Growth Promotion Centre of the Lao PDR as follows:

- The formulation and implementation of the National Green Growth Strategy of the Lao PDR shall be the translation of the Resolution of the 10th Party Congress, the Vision 2030 and 10-Year Strategy (2016-2025) and the 8th Five-Year Socio-Economic Development Plan (2016-2020) to ensure the achievement of the specified medium and long-term goals of the national socio-economic development, such as: graduating from the status of least developed country by 2020, becoming a developing country with upper-middle income and achieving the Sustainable Development Goals (SDGs) by 2030 in accordance with green and sustainable direction.
- The formulation and implementation of the National Green Growth Strategy of the Lao PDR must contribute to the promotion of economic growth of the country, improvement of living standards of the peoples, creation of jobs and income generating activities for the peoples.
- The formulation and implementation of the National Green Growth Strategy of the Lao PDR must actively contribute to the rural development, poverty reduction, reduction of development gap between urban and rural areas, gap between the rich and the poor, gap between women and men and between various ethnic groups with the aim of allowing all ethnic groups and peoples of all social strata in the society to be able to participate and receive the benefits from the socio-economic development in a comprehensive, inclusive and fair manner.
- The formulation and implementation of the National Green Growth Strategy of the Lao PDR must contribute to the raising of efficiency, effectiveness and sustainability of the utilization of limited natural resources of the country to ensure optimal benefits, especially: the forest resources, land, mines, water resources, water sources, biodiversity, etc
- The formulation and implementation of the National Green Growth Strategy of the Lao PDR must contribute to the decrease of the risk and economic vulnerability of the country to natural disasters and global economic uncertainties which have become more severe and unpredictable.
- The formulation and implementation of the National Green Growth Strategy of the Lao PDR must contribute to the decrease or restriction of the rise of pollution, dirt, wastes and greenhouse gas emissions which are the main causes of climate change, natural disasters and many kinds of diseases.

2.3. Position, Roles and Relations between the National Green Growth Strategy of the Lao PDR and the Sector and Local Development Strategies and Plans

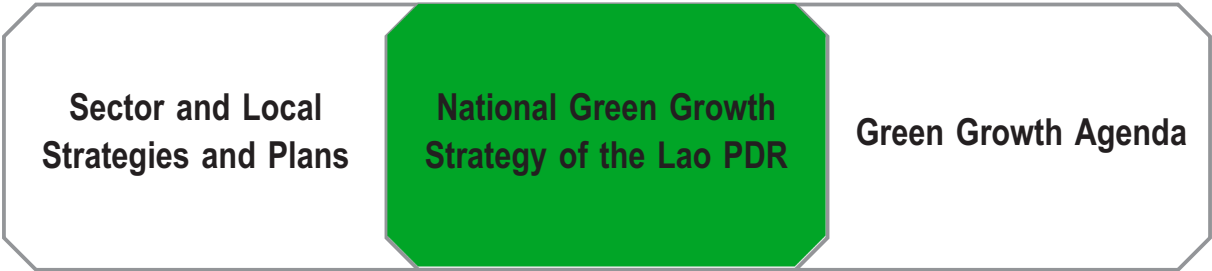
In fact, the National Green Growth Strategy of the Lao PDR is formulated in the context that Lao PDR already has the national socio-economic development strategies and plan as well as the sector and local development plans which are being implemented in a normal and regular manner. The identification of position, roles and relations of the National Green Growth Strategy of the Lao PDR with the national, sector and local strategies and socio-economic plans is, therefore, a necessity and a requirement.

Through the study and consultation with many sectors and local administration, it is found that the National Green Growth Strategy of the Lao PDR shall not be a strategy developed for replacing, cancelling or framing the existing strategies of the sector and local level, but must be a supplementary strategy developed for strengthening the policy, strategy and mechanism of sustainable development in Lao PDR to ensure the achievement of the medium and long-term goals of the socio-economic development which are specified in the Vision 2030, the 10-Year Strategy (2016-2025) and the 8th Five-Year Socio-Economic Development Plan (2016-2020), such as: graduating from the status of least developed country by 2020, becoming a developing country with upper-middle income and achieving the Sustainable Development Goals (SDGs) by 2030 in accordance with green and sustainable direction.

The National Green Growth Strategy of the Lao PDR has the position and main roles as follows: (1) Building the awareness and creating the consensus on green growth in conformance with the actual requirements of the national socio-economic development in each period; (2) Mainstreaming green growth into the national, sector and local strategies and socio-economic development plans in a systematic and more efficient manner to enable the sector development strategies and plans to become green step by step; and (3) Encouraging and promoting the sector and local level to implement the policies, plans, programmes, projects or/and activities that are related to green growth by using various promotion methods, such as: providing technical advices, information, recommendations on policy; sharing lessons and best international experiences; making the transfer of techniques and technology; building technical capacity for sector and local staff; helping the sectors and local level to mobilize the fund for implementing the green growth programmes, projects and activities which are specified in the sector and local strategies and development plans, etc.

As such, the policies, programmes, projects and activities supported and promoted by the National Green Growth Strategy of the Lao PDR must be the policies, programmes, projects and activities which are lying in the sector and local strategies and development plans or must be the policies, programmes, projects and activities related to green growth that the sectors and local level have accepted and are prepared to cooperate in their implementation. The details are shown in the chart below:

Figure 2: Relations between the National Green Growth Strategy of the Lao PDR and the Sector and Local Strategies and Development Plans



Source: Secretariat for Formulation of National Green Growth Strategy of the Lao PDR.

The chart above shows that the National Green Growth Strategy of the Lao PDR is the common point or the consensus between the Green Growth Agenda, the sector and local strategies and plans. However, this does not mean that any policy, programme, project or activity which is not lying in the National Green Growth Strategy of the Lao PDR cannot be implemented by the sectors and local administrations solely because it is not included in the promotion targets of the National Green Growth Strategy. The sectors and local administrations shall continue to implement their plans, programmes, projects and activities normally. Green growth of Lao PDR will be gradually implemented through the sector and local plans, programmes and projects.

Due to capacity constraints, the National Green Growth Strategy of the Lao PDR may not be able to promote policies, plans, programmes and projects related to green growth of sectors and local level at the same time. It is, therefore, required to conduct the ranking of priorities for the programmes, projects and activities which are to be promoted and supported by the National Green Growth Strategy of the Lao PDR.

Part III

Focused Areas and Sectors and Supporting Sectors of the National Green Growth Strategy of the Lao PDR

In fact, green growth is related to all areas and sectors. However, to ensure that the support and promotion are performed in a more focused, efficient and effective manner, this National Green Growth Strategy of the Lao PDR has divided the areas and sectors into focused and supporting areas and sectors based on notable potentials as below:

3.1. Cross-Cutting Focused Areas

3.1.1. Investment Environment and Management

Generally, Investment facilitation and management have an important and decisive role in the socio-economic development of the country and particularly in the socio-economic development with green and sustainable orientation. Over the past period, the Government of the Lao PDR was aware of this importance and had focused on providing facilities and improving the investment management system to make it more and more efficient and effective to ensure that all public investment projects and domestic and foreign private investment projects which are lawfully approved can actively contribute to the promotion of national economic growth, creation of jobs to the peoples, reduction of poverty and decrease of environmental and social impacts. The Government of the Lao PDR has developed, improved and implemented many laws, regulations and mechanisms to facilitate and ensure the efficiency and effectiveness of the investment projects. These include the establishment and implementation of the investment approval mechanism through one-stop service in the Ministry of Planning and Investment, Ministry of Industry and Commerce and in the Provincial Department of Planning and Investment, Provincial Department of Industry and Commerce as well as in District Office of Planning and Investment, District Office of Industry and Commerce, and in each Special Economic Zone and Specific Economic Zone in order to streamline the procedures and facilitate the investment; and the formulation, amendment and implementation of the Law on Investment Promotion, Law on Public Investment Management and others.

However, according to the outcomes of the assessment of the World Bank, it is found that the climate of doing business/investment in Lao PDR is still difficult, complicated and there are too many procedures and documents, involvement of many sectors and high cost. The World Bank has ranked Lao PDR at 141st in term of the ease of doing business in 2017,³¹ compared to 139th in 2016. In term of having difficulties in doing business, Lao PDR is ranked second among 10 countries of ASEAN, after Myanmar.

In addition, the results of the case study conducted by the United Nations Development Programme (UNDP) and many actual incidents taken place in the past years have also shown that investment management system in Lao PDR is not strong and not highly efficient and effective.

31 <https://tradingeconomics.com/laos/ease-of-doing-business>

Many approved investment projects, apart from being economically ineffective, are projects that caused significant environmental and social impacts. According to the outcomes of the discussion with sectors and local authorities, the main causes of low efficiency and effectiveness of this investment management system include: (1) loopholes in laws and regulations, (2) low technical capacity of relevant staff who involve in the evaluation, consideration and approval of the investment, (3) lack of quality data, and (4) non-ethical and opportunistic practices committed by some staff in the process of investment approval and management.

Continuing the improvement of the investment environment and management system in Lao PDR to make it strong, transparent and more efficient is, therefore, a necessity and an urgent need to ensure socio-economic development in accordance with green and sustainable direction as defined in the Vision 2030 and 10-Year Strategy (2016-2025) and in the 8th Five-Year National Socio-Economic Development Plan (2016-2020). The National Green Growth Strategy of the Lao PDR proposes to focus on:

- Conducting the review and improvement of the laws, regulations and mechanisms relating to the promotion/facilitation and management of investment in Lao PDR to make them more efficient and effective with the aim of reducing and eliminating the impediments, barriers that cause difficulties to investment and, at the same time, closing the loopholes in the laws, regulations and investment management mechanisms that make investment approval inefficient, ineffective and incapable to ensure economic efficiency and mitigation of environmental and social impacts, especially in the green and sustainable economic fields, such as: tourism, green agriculture, green energy, etc.

- Upgrading the technical capacity for the organizations and staff of the agencies and units which involve in the consideration, approval and management of public investments, domestic and foreign private investments to enable them to carry out their professional duties of facilitating and managing the investment efficiently and effectively. It is proposed to particularly focus on increasing the capacity of these organizations and staff at the local level (provincial level and district level).

- Strengthening the monitoring and inspection system, measures against persons who seek opportunistic advantages and offenders of laws and regulations in the process of approval and management of public investment, domestic and foreign private investments in order to prevent, restrict and minimize negative phenomenon in this process, and to allow the investment facilitation and management to be efficiently and effectively performed in strict compliance with the laws and regulations.

3.1.2. Rural Development and Poverty Reduction

An important characteristic of the green growth of Lao PDR, according to the definition specified in this Strategy, is economic growth and poverty reduction in a comprehensive, inclusive and fair manner, aiming at allowing all ethnic groups, peoples of all social strata, all sexes, all ages and all persons in the society to be able to participate in the process and to receive the benefits from development comprehensively, inclusively and fairly. Rural development and poverty reduction are, therefore, a focused area of this National Green Growth Strategy of

the Lao PDR in order to enable poor people living in rural and remote areas to contribute to the development process and receive the benefits from the socio-economic development in a comprehensive, inclusive and fair manner.

During the past period, rural development and poverty reduction were also the main focuses of the socio-economic development of the Lao PDR. With the generous support provided by development partners, international organizations and Governments of foreign countries, the Government of Lao PDR had developed policies, mechanisms and allocated a large amount of budget fund for these works. In particular, the Government had established the Committee for Rural Development and Poverty Reduction which is composed of many sectors; and had established the Poverty Reduction Fund to provide the fund for these works; had developed and implemented the policy of grouping small villages into a large village and grouping large villages into a small town with the aim of increasing the efficiency and effectiveness of the development of infrastructure and the delivery of public services, such as: education, health, etc. and of creating the conditions and means for commercial production to raise the efficiency of the production. These have resulted in the gradual decrease of poverty and improvement of the living standard of the Lao people in the rural areas.

However, rural development and poverty reduction in Lao PDR are slow, have not led to significant changes and have still encountered with numerous difficulties and challenges. All parties are, therefore, required to give importance and contribute more actively to these works. The rural area of Lao PDR is generally characterized by small number of population living in a scattered manner and low density that continue to make investment in development of infrastructure and delivery of public services less efficient and effective. The division of labour and commercial production cannot be developed, and the practice of subsistent agricultural production with low efficiency, low effectiveness and high risks and vulnerability to natural disasters continue to be the lifestyle of the people in the rural areas of the Lao PDR. The access to education and health services remains difficult and limited; a large number of the peoples have no access to clean water and sanitary latrines.

In order to enable peoples of all social strata and all parties in the society to gradually participate and receive the benefits from the socio-economic development comprehensively, inclusively and fairly, the National Green Growth Strategy of the Lao PDR proposes to focus on the rural development and poverty reduction as below:

- Continuing the implementation of the policy of grouping small villages into a large village and building large villages into a small green town which is livable and charming and ensuring that this policy is gradually realized in order to raise the efficiency and effectiveness of the investment in the development of infrastructure and the delivery of public services as well as to create the conditions and means for achieving the division of labour in the society, commercial production, expansion of production forces and basic change of the production practices and the lifestyle of the rural people.

- Developing the communication infrastructure to connect urban areas with rural areas to enable rural areas to become a place of production and processing of quality food for supplying to various urban areas that are the economic, trade, political and socio-cultural centers of the

country; a place of production of raw materials for supplying to industrial factories in the urban areas, industrial parks and for export markets; and also a place of conservation of culture and lifestyle of the Lao people so as to make the rural area to become the tourism and relaxation place for foreign tourists and the tourism site for Lao urban peoples.

- Improving the infrastructure and providing quality services of education, health, water supply, telecommunication and information to the rural areas sufficiently and widely in order to gradually raise the quality of livelihood of the rural people.

- Providing the training on livelihood practices and labour skill development to the rural people, especially the training on the methods of cultivation, livestock raising, agro-processing, handicraft production, packaging, marketing, trading, small business management and so on in accordance with the green growth style to enable farmers in rural areas to gradually become producers of goods and providers of services in domestic and foreign markets. The special focus shall be on training and development of labour skill related to the cultural base and advantageous potentials of each locality

- Creating the microfinance fund and other rural finance mechanisms to provide facilities to farmers to have access to the funding sources for undertaking the production as agro-business units and small handicraft units for meeting the demand of domestic and foreign markets.

- Promoting commercial production and consumption of Lao traditional products produced in rural areas, such as: cotton textile, silk textile, bamboo products and so on.

3.1.3. Gender Role: Protection and Promotion of the Advancement of Women

Over the past period, even the Party and the Government of Lao PDR were aware of the importance of and have paid attention to gender role. However, the status of women in Lao PDR in many fields is not equal to that of men, and women were still taken advantage of in many forms. Hence, in order to ensure that peoples of all gender and ages and all social strata are able to participate in the process and receive the benefits from the development in a comprehensive, inclusive and fair manner, the National Green Growth Strategy of the Lao PDR has identified gender role/protection and promotion of the advancement of women activities to be an important focus of the green growth and will particularly focus on:

- Mainstreaming gender role/protection and promotion of the advancement of women into the sector and local development strategies and plans to ensure systematic and efficient protection and promotion of the advancement of women in all sectors and localities with the aim of reducing gender disparity in all areas, sectors and localities.

- Promoting the access to education of girls/women, particularly the access to high level of education (secondary and higher education levels) in order to decrease gender disparity. According to the statistic data from the Ministry of Education and Sports, the enrolment ratio of girls to boys in primary education level is high and stands at about 0.97 (in 2008-2009); this means that gender disparity in primary education enrolment is low or there is gender equality. But this ratio gradually decreases in higher level of education, such as: it is equal to about

0.86 in lower secondary education and about 0.79 in upper secondary education in 2008 and about 0.78 in university level in 2016. There will be a special focus on promoting the access to education of girls/women who are poor, ethnic group, disadvantaged and living in rural and remote areas.

- Promoting the vocational training, labour skill development, creation of jobs and income generating activities for women, especially in green economic sectors; this means in economic sectors which are clean, healthy and stable or which have low level of risk or vulnerability to natural disasters and global economic uncertainties and in the green economic sectors related to the conservation of culture, tradition and lifestyle of the Lao peoples, such as: silk weaving, cooking, knitting and others with the aim of allowing women to have the vocation, jobs, stable income and to play a meaningful role in family and in society as well as allowing women to become representatives of cultural value of the Lao multi-ethnic peoples. The main focus will be the women who are poor and living in rural and remote areas including ethnic and disadvantaged women.

- Promoting the participation of women in all economic, political, socio-cultural activities; especially in the organizational machinery of the Party and State and in high and middle levels of leadership positions of the country.

- Promoting the protection and provision of assistance to women and children who are victims of domestic violence, sexual violence and human trafficking.

3.1.4. Adaptation to the Climate Change and Management of Natural Disasters

Lao PDR is a country having a high level of risks and vulnerability to the climate change and natural disasters because the country has small-sized economy and is highly dependent on nature. Such climate change and natural disasters can have the impacts of preventing Lao PDR from achieving the medium and long-term goals of socio-economic development on planned time. According to the estimates of SEA START, Lao PDR is lying in the area where the climatic condition may change at a medium level. It is estimated that by 2050, the temperature will be increased by 0.5-0.7 °C Degree and the rainfall will rise by approximately 14%, mainly due to heavy rainfall, not due to the prolongation of rainfall. According to the outcomes of this estimate, the dry season will be longer and drier and the rainy season will be shorter and have heavier rainfall³². The outcomes of this forecast indicate that natural disasters in Lao PDR will be increased in frequency, intensity and will cause more extensive losses to life and properties of the peoples, particularly the droughts, floods, storms and outbreak of diseases (plant, animal and human). Adaptation to climate change and management of natural disasters are, therefore, a requisite to ensure the achievement of the medium and long-term goals of the socio-economic development as planned.

Till now, the Government of Lao PDR has been aware of the importance and has developed and implemented many policies, strategies and mechanisms of adaptation to the climate change, such as: National Adaptation Plan for Action (NAPA), Strategic Plan on

32 Phaivanh, et. Basin-Wide Climate Change Impact and Vulnerability Assessment for Wetlands of the Lower Mekong Basin for Adaptation Planning

Disaster Risk Management, 2020. The Government has appointed the National Committee for Disaster Management (NCDM) with the Minister of Labour and Social Welfare as Chair. This committee has the office or coordinating point located at the Ministry of Labour and Social Welfare and has the coordinating network extended down to the district level. This means that there are Provincial Committee for Disaster Management in each province and the District Committee for Disaster Management in each district. These committees have the main roles of undertaking the surveillance, early warning, emergency aid and post-disaster restoration. Dealing with disasters and climate change problems in the long-term is the mandate of the Department of Control of Disaster and Climate Change, Ministry of Natural Resources and Environment. The existing strategies, policies, organizational machinery and coordinating mechanisms are the basis and important factors for the adaptation to the climate change and management of natural disasters.

However, based on the actual experiences during the past period, the implementation of these strategies and policies are not highly efficient and effective due to many causes, such as: (1) the awareness, understanding and capacity of the officials and organizations involved in the adaptation to climate change are not high; (2) lack of budget for carrying out activities of promoting the mainstreaming of the adaptation to climate change into the national, sector and local strategies and socio-economic development plans in a systematic and more efficient manner; (3) lack of efficient adaptation techniques and technologies, etc.

Therefore, this National Green Growth Strategy of the Lao PDR has identified the adaptation to climate change as a focused area to reduce the risk and vulnerability of the economy of Lao PDR to climate change and natural disasters, and will particularly focus on:

- Increasing the awareness, understanding and capacity of the officials and organizations involved in the adaptation to climate change, particularly the focus will be on the coordinating point/coordinating office of the Committee for Disaster Management at national, provincial and district levels and of the Department of Control of Disaster and Climate Change, Ministry of Natural Resources and Environment to enable them to integrate this work into the sector and local policies, strategies, programmes and projects in a more efficient and effective manner
- Encouraging the improvement of the early warning system to make it more efficient and effective with a view to decreasing the loss of life and properties of the peoples from natural disasters.
- Promoting the establishment and increase the capacity of the Reserve Fund for Emergency Aid of national, provincial, district and village levels so that it can be used for providing the relief to the victims of natural disasters efficiently, effectively and timely.
- Promoting the expansion of the coverage and management of the national social security system widely and inclusively to ensure the protection and management of health, properties and agricultural production (crops, livestock, etc.) from the impacts of the climate change and natural disasters.
- Encouraging the economic growth that causes low greenhouse gas emissions to contribute to the mitigation of the climate change through promoting the use of advanced techniques

and technologies which are efficient, effective, producing less wastes, energy-saving and using clean and environmentally-friendly energy; and promoting the protection and expansion of the sources of absorption of greenhouse gas, such as: forest, soil and others.

- Promoting the creation of income generating sources of the people to make them diversified so as to decrease the vulnerability to natural disasters.

3.2. Focused Sectors of the National Green Growth Strategy of the Lao PDR

In addition to the 4 focused areas that are related to many sectors mentioned above, the National Green Growth Strategy of the Lao PDR has also identified 7 key sectors which are detailed as below:

3.2.1. Natural Resources and Environment Sector

Management and utilization of limited natural resources of the country to ensure optimal benefits and environmental protection is a priority sector/area of the green growth. Till now, the Government of Lao PDR has given the emphasis to this issue and has put in place many policies, laws and regulations and mechanisms for managing and using the natural resources in an efficient, effective and sustainable manner and for protecting the environment, such as: Law on Environmental Protection, Law on Water and Water Resources, Law on Forestry, Law on Land, regulation on environmental and social impact assessment (ESIA) and others. The Government of Lao PDR has established the Ministry of Natural Resources and Environment and assigned it to assume the role of coordinating point in conducting research, allocation, formulation of plan on management and use of limited natural resources of the country in an efficient, effective and sustainable manner, and to perform the role of the coordinating point in the protection of environment in collaboration with sector agencies and local administrations. This Ministry has expanded its coordinating networks down to the district level. This means that there are Department of Natural Resources and Environment in all provinces and Office of Natural Resources and Environment in all districts across Lao PDR.

These policies, legal instruments, structure and mechanism of coordination constitute the basis and important factors for natural resources management and environmental protection in the Lao PDR today. However, the natural resources management and environmental protection work is quite recent in Lao PDR, compared to other works. As a result, the implementation of this work is not systematic, strong and highly efficient, particularly: (1) the division of the roles and responsibilities between the Ministry of Natural Resources and Environment and other Ministries and agencies is unclear, complicated and overlapped; (2) the development and implementation of laws and regulations relating to natural resources management and environmental protection are not comprehensively, systematically and strictly performed; (3) the standards for environmental quality control are not fully developed, such as: standards of the quality of water, air, soil, noise, odor and so on; (4) the survey, planning, utilization and management of natural resources (water resources, land, forests, biodiversity, mines, etc.) are not carried out in a systematic, efficient, effective and sustainable manner and there is a lack of wide participation of the relevant sectors. As a result, the use of natural resources at present time is not sufficiently efficient, effective and sustainable.

Therefore, the National Green Growth Strategy of the Lao PDR identifies improvement of the natural resources and environment sector as a priority and will particularly focus on:

- Creating the mechanism of coordination for the research, survey, allocation, formulation of plan of natural resources management and use with the participation of many sectors and local administrations to ensure more efficient, effective and sustainable use as well as to ensure consensus and avoid conflicts in the use of natural resources.

- Strengthening the roles and capacity of the Ministry of Natural Resources and Environment as well as of the Provincial Department of Natural Resources and Environment and the District Office of Natural Resources and Environment in performing the macro-management of natural resources and environment. This means that they shall be the coordinating point in the management, allocation, formulation of plan of natural resources management and use with the participation of many sectors and local administrations in an efficient, effective and sustainable manner with the aim of ensuring the consensus in the use of natural resources (forest, water resources, soil, mines, etc.) of the sectors and local administrations under the laws and regulations, and ensuring the macro supervision of the Ministry of Natural Resources and Environment.

- Enhancing the role of coordinating point of the Ministry of Natural Resources and Environment, the Provincial Department of Natural Resources and Environment and the District Office of Natural Resources and Environment in coordinating with the agriculture and forestry, energy and mines, tourism, public works and transport sectors and other relevant sectors to complete the survey, allocation and participatory formulation of the national land management and use plan as soon as possible to ensure efficient, effective and sustainable use of land which is the valuable property of the nation. The survey, allocation and formulation of the national land management and use plan must be conformed with the requirements of the national socio-economic development, have economic efficiency and scientific characteristics, and shall be conformed with the natural characteristics of the land in each place, such as: which land shall be used as agricultural land, construction land, production forest, conservation forest, wildlife and plant species conservation areas and so on; developing and implementing the law and regulations on the management of each type of land in an efficient, effective and sustainable manner. The conversion of land from one type to another type must receive the consideration and approval from the Ministry of Natural Resources and Environment or the Provincial Department of Natural Resources and Environment or the District Office of Natural Resources and Environment, depending on the division of management level within the natural resources and environment sector.

- Water and water resources are important natural resources of Lao PDR. The economic growth of Lao PDR is related with the efficient, effective and sustainable management and use of water and water resources. Therefore, this National Green Growth Strategy of the Lao PDR gives importance and focuses on promoting the management and use of water and water resources in an efficient, effective and sustainable manner. The main focus will be on: (1) encouraging and promoting the creation of the coordinating mechanism for the management, allocation and use with the participation of many sectors and local administrations to ensure efficiency, effectiveness and sustainability of the use of water and water resources and to ensure

the consensus and supply of water, in sufficient quantity and quality, for public consumption and use, agricultural production, aquatic life conservation, fishery, hydroelectricity production, industrial uses and other uses; (2) Protecting and improving the quality of the water source forests/water sources which are related to the water reservoirs; (3) Protecting, improving and expanding the natural water reservoirs (streams, ponds, canals, marshes, etc.) and man-made water sources to make them more efficient and sustainable to ensure sufficient water storage and supply and to respond to the climate change and water shortage; (4) Controlling the quality of water; and (5) Formulating the plan for efficient, effective and sustainable management, allocation and use of water and water resources.

- Pollution control is an important focus in the natural resources and environment sector. At present, the Government of Lao PDR is developing and implementing many policies, legal instruments and mechanisms relating to pollution control, such as: amendment of the Decree and Instruction on Environmental and Social Impact Assessment (ESIA), national environmental standards, etc. However, the development and implementation of policies, legal instruments and mechanisms relating to pollution control are still new in Lao PDR. The formulation of legal instruments for using as basis for these works as well as their implementation are not systematic, comprehensive and strong enough; the number of personnel with high knowledge, capacity and experiences in this field is very few and is inadequate to meet the demand, and there is a lack of technique, technology and accurate environmental standards in each area (standards of air quality, water quality, soil, noise and so on). Hence, this National Green Growth Strategy of the Lao PDR will focus on encouraging the improvement of pollution control system to make it strong and more efficient, and will particularly focus on: (1) continuing the formulation, revision and implementation of relevant laws and regulations in an efficient, effective and strict manner; (2) upgrading the capacity of the personnel of the relevant sectors and local level; (3) developing detailed and accurate environmental quality standard for each area (standards of air quality, water quality, soil, odor, noise and so on); (4) providing the environmental quality measurement equipment to the concerned working units; and (5) Creating the system of regular and systematic monitoring and reporting on environmental quality to provide information and recommendations on policies for the control of environmental quality.

3.2.2. Agriculture and Forestry Sector

3.2.2.1. Agriculture Sector

It covers 3 sub-sectors which are: cultivation, livestock raising and fishery. In general, the agriculture sector is an important economic sector in Lao PDR. In 2015, the total production value in this sector accounted for about 23%³³ of the total value of the Gross Domestic Product (GDP) of the Lao PDR and about 78% of the labour force of the country are engaged in this sector as their main occupation. Most importantly, this sector is a sector that ensures food security in Lao PDR, a sector where most of the poor and disadvantaged people are engaged as their main occupation, and is also a sector that has a high level of risks and vulnerability to natural disasters and global economic uncertainties.

33 8th Five-Year National Socio-Economic Development Plan (2016-2020).

Therefore, the National Green Growth Strategy of the Lao PDR has identified the agriculture sector as a focus or priority sector with the aim of promoting the development of this sector to make it strong and become an important sector for creating jobs and income generating activities for the peoples, reducing poverty, decreasing social inequality and minimizing the risks and vulnerability to natural disasters and global economic uncertainties.

In the past decades, the agricultural production in Lao PDR was mostly of small-scale production, family-based and subsistent production, using traditional techniques and technology with low efficiency and relying on nature. This traditional agricultural production practice, despite of being sustainable, has low efficiency and is unable to raise the living conditions of the people. For these reasons, in the 2010s, the Government of Lao PDR adopted the policy of granting land concession of large area and for long period to domestic and foreign investors for investing in large-scale agricultural production, using technology in the production for commercial purpose. However, due to lack of efficient management system, this granting of land concession, besides having low economic efficiency, has caused significant adverse environmental and social impacts, particularly to the traditional living style of the people, leading to serious disputes relating to land, forest cover, water sources, biodiversity, etc.³⁴ As a result, in 2013, the Government had temporarily suspended the granting of land concession of large area to domestic and foreign investors for industrial trees plantation in order to conduct the evaluation and review of the outcomes of the concession management. At present, the Government continues reviewing the implementation of the Order No. 13/PM and has authorized new investments in some industrial crops;³⁵ but, such investments promotion is to be carried out in a strictly manner and detailed consideration of project is made on case by case basis and on proper assessment of the impacts on environment and livelihood of the peoples. The study on land area allocation is still going on and it is found that one of the constraints is the use of land for many purposes. The reliance on the expansion of production area only is not enough for increasing the value of the agricultural production. Hence, the direction for future development of the agriculture sector in Lao PDR must primarily focus on raising the efficiency, effectiveness and sustainability of the use of existing natural resources (land, water resources and so on) to ensure optimal benefits. The details are as follows:

- Raising the efficiency and effectiveness of the production by using the production methods and alternative agricultural production techniques which are clean, efficient, sustainable and capable to adapt to different environmental conditions across Lao PDR.³⁶
- Reducing the wastes and pollution that are caused by agricultural production and moving toward the practice of comprehensive agricultural production³⁷ to reuse the wastes from the agricultural production process as raw materials for producing organic fertilizers for soil improvement and for producing biogas or fuel.
- Developing the knowledge and skills of the producers to ensure improved techniques and efficient production as well as providing the opportunity for livelihood alternatives. This

34 Green Growth Potential Assessment.

35 As specified in Order No. 09/PM, dated 02 September 2018.

36 Comments and proposal of the Ministry of Agriculture and Forestry.

37 Comments and proposal of the Ministry of Agriculture and Forestry.

includes the promotion and development of products with local unique characteristics that are linked with tourism, export and food security.³⁸

- Promoting the integrated agricultural production and crops rotation practices to reduce the degradation of soil; restricting and decreasing the mono-culture practices for long period that may affect soil fertility and biodiversity by promoting multi-crop cultivation that takes into account the economic efficiency, technical feasibility, change of climatic conditions, capacity to ensure food security and nutritional value.³⁹

- Taking the lead in coordinating with relevant sectors to control the production, import, distribution and use of pesticides and chemicals which are hazardous to human and animal health and to environment in the agricultural production; strengthening the strictness and efficiency of the production management to minimize the degradation of soil quality, water sources and biodiversity as well as human and animal health through the revision of laws, regulations, mechanisms of implementation and through the imposition of stricter measures against offenders.

- Encouraging and promoting clean and organic agricultural production as well as the cultivation and rearing activities that constitute the base for the production of handicraft products which are the heritage and unique identity of the nation to meet the increasing demand of tourism and export markets, such as: mulberry cultivation, silkworms rearing and cotton cultivation for supplying raw materials to the weaving industry, etc. and for using as the base for domestic processing industries.

- Improving and expanding the agricultural production infrastructure system to raise the efficiency of the production, the management of water resources (quality and quantity) to ensure optimal benefits, to decrease the potential dispute in utilization and reduce the risks and vulnerability to the climate change and natural disasters.

3.2.2.2. Forestry Sector

Forest is a natural resource which is important for the protection of environment and the promotion of sustainable development. It is the source of food, source of water for consumption, agricultural and industrial production; is the habitats for wild animals, the source of oxygen production, the place of retention of carbon dioxide which is the main cause of climate change and natural disasters, etc. Hence, sustainable protection and utilization of forests are the priority of the socio-economic development in accordance with green and sustainable direction.

However, the forest quality and coverage in Lao PDR during the past two decades have been rapidly degraded and depleted due to numerous causes, such as: illegal logging and unlawful wood export, land concession for expanding agricultural production areas and for development projects, fast expansion of urban areas, slash- and-burn cultivation practice and so on.⁴⁰

38 Comments and proposal of the Ministry of Agriculture and Forestry.

39 See reference data from the research work of MODA.

40 GGGI, Green Growth Potential Assessment.

Considering the economic, social and environmental importance of the forests, the Government has the policy to increase the forest cover to 70% of the total area of the country by 2020. In order to achieve this target, the Government of Lao PDR has formulated, implemented and amended many laws, regulations and mechanisms relating to sustainable protection and use of forests, such as: Law on Forest, Decree No. 95/PM on ceasing the export of timbers, policy on the decrease of slash-and-burn cultivation practice, etc. This National Green Growth Strategy of the Lao PDR has identified development of forest in line with the Government guideline as a priority sector and will particularly focus on:

- Encouraging and promoting the creation of the mechanism of development and implementation of the forest management, protection and use plan with the participation of many relevant sectors and local administrations under the coordinating role of the Ministry of Agriculture and Forestry and/or the Provincial Department of Agriculture and Forestry and/or the District Office of Agriculture and Forestry to ensure the efficiency, effectiveness and sustainability of the utilization.

- Encouraging and promoting the survey, division and zoning of forests and types of forest and ensuring their completion as soon as possible; focusing on the formulation, revision, implementation of the laws, regulations and mechanisms on protection and use of each type of forest and monitoring their implementation in an efficient, effective and sustainable manner.

- Encouraging the sustainable management, protection and use of forest of the community in order to promote the expansion of the economy, generation of income and reduction of poverty of the community, such as: sustainable collection of non-timber forest products, sustainable hunting, use of forests as eco-tourism sites managed by the community, sustainable exploitation, processing and sale of finished wood products of the community to meet the increasing demand of the tourism.

- Encouraging and promoting the investment of domestic and foreign investors in the forest plantation or industrial trees plantation by using integrated and rotation methods in deforested and degraded land in order to expand the areas of forest cover, restore the quality of soil, supply the wood to meet the demand of domestic processing industries and export markets as well as to promote economic growth, jobs creation and poverty reduction; to limit and decrease the practice of mono-culture for a long period that will affect the quality of the soil.

- Improving and restoring the quality of forests, particularly the water source forests, national conservation forests, conservation forests of the province and district by using various methods and measures, such as: (1) promoting the campaign of trees planting for the rehabilitation of forest on important days of national and international levels, such as: National Arbor Day, World Environment Day, International Water Week and so on; (2) enhancing the monitoring, inspection, prevention and suppression of illegal and unsustainable exploitation, use and export of wood; (3) encouraging and promoting the participation of all sectors, local administrations, communities and private sector in the process of sustainable protection and utilization of forest; (4) Building at least one national park for the protection of wildlife and plant species, and so on.

- Enhancing the monitoring, prevention and decreasing the destruction of forest cover areas by using various policies and measures, such as: (1) Strengthening and improving the mechanism of management of land concession for public investment projects and for domestic and foreign private investment projects to make it more efficient and effective so as to reduce the impacts of the granting of concession of development projects on the forest cover areas; (2) Planning and creating stable occupations for people/farmers who practice shifting agricultural production that affects the forest cover areas, and so on.

- Studying, developing and implementing the financial mechanism for the protection of forest, especially the national and local conservation forests, the protection forests and the production forests.

3.2.3. Industry and Commerce Sector

3.2.3.1. Manufacturing Industry

It is an important economic sector in Lao PDR. In 2015, the total value of industrial products (including electricity, mining and handicraft) was about USD 4,926.5 million⁴¹ which accounted for about 39%⁴² of the total value of the Gross Domestic Product of the Lao PDR, and about 15% of the workforce are engaged in this sector as their main occupation.⁴³ Most importantly, the industrial sector is a sector that has low risks and vulnerability to the climate change, natural disasters and global economic uncertainties, compared to other sectors.

However, apart from mining and electricity, the manufacturing industry and handicraft sector of the Lao PDR is still of small and medium-sized manufacturing industries that use the workforce of less than 100 persons and adopt family-based management system, apply the techniques and technology with low efficiency, low effectiveness and low environmentally-friendly level (no energy-saving, no raw material-saving, having large volume of wastes, using unclean energy, etc.) and have low competitive capacity and so on. Furthermore, the planning and management of industrial factories in Lao PDR are not systematic, strong and efficient. Many industrial factories located in crowded urban areas have no waste treatment system, such as: waste water treatment, air system and hazardous (solid) waste disposal systems that meet the environmental standards. This is due to many causes, such as: (1) the industrial entrepreneurs have difficulty to access the funding sources for importing modern techniques and technology, despite the Government has already put in place the policy and the small and medium-sized enterprise (SME) promotion fund; (2) lack of infrastructure (landfill) for industrial wastes disposal that meet the environmental standards; (3) the implementation of laws and regulations relating to the management of industrial wastes is not systematic and strict, etc.

Therefore, in order to promote the growth of the economy, reduction of poverty and creation of jobs for the multi-ethnic people in line with green and sustainable direction, the National Green Growth Strategy of the Lao PDR has identified the development of industrial sector as a priority sector for green growth and will particularly focus on:

41 Figure calculated based on data in the 8th Five-Year National Socio-Economic Development Plan (2016-2020).

42 8th Five-Year National Socio-Economic Development Plan (2016-2020).

43 Workforce Survey, 2018.

- Encouraging and promoting the process of industrialization and modernization strongly in order to increase the proportion of production value of the industrial sector in the Gross Domestic Product (GDP) of the country and to make the industrial sector to gradually become the main economic sector of the country so as to decrease the risks and vulnerability to the climate change, natural disasters and global economic uncertainties. Emphasis will be given to the promotion of industries that Lao PDR has advantageous potentials, such as: hydropower industry, agro-processing industry, finished wooden products industry, mineral processing industry and others.
- Encouraging and promoting the commercial production of products and the increase of competitive capacity of the manufacturing industries in Lao PDR at the regional and international levels by using the technical innovation and modern production technology.
- Promoting and developing the existing potential manufacturing industries, such as: food processing and beverage industry, textile and garment industry, construction material industry, agricultural and wood processing industry, and the new potential manufacturing industries, such as: metal and non-metal mineral processing industry and chemical industry; electric and electronic equipment industry, agricultural vehicle and equipment industry, printing and packaging industry, rubber industry.
- Studying, improving and implementing the financial mechanism to provide facilities to industrial factory entrepreneurs in the import and application of modern techniques and technology that are efficient, effective, clean, environmentally-friendly, energy and raw material-saving. Special focus will be on promoting the access to the funding sources for small and medium-sized industrial entrepreneurs in the processing industries related to agricultural production, forest, minerals, waste recycling and others, such as: finished wooden product industry, rubber processing factory, animal feed processing factory, food processing factory, factory producing organic fertilizer from agricultural wastes and others in order to create added value for these products.
- Promoting the development of complete cycle industries that use raw material wastes from one factory as raw materials in another factory to increase the efficiency of the use of limited natural resources to achieve optimal benefits and to decrease the wastes.
- Building the infrastructure for disposal or destruction of wastes or toxic industrial wastes that are not conformed with the environmental standards to ensure cleanliness, safety and low environmental impact.⁴⁴
- Improving and implementing the standards for industrial factory, laws and regulations relating to the environmental management in the industrial sector in a systematic and strictly manner to ensure that the waste water, pollution of air, odor and noise and the toxic wastes from industrial factories and industrial zones do not cause adverse impacts to natural environment and to human and animal health.
- Promoting the small and medium-sized processing industries in line with green and

⁴⁴ Proposal of the technical committee of the Ministry of Industry and Commerce.

sustainable direction through various special policies and measures, such as: facilitating the access to the funding sources; access to clean, advanced, efficient and effective technology; access to markets, skilled labour and, at the same time, upgrading the capacity of the entrepreneurs.

3.2.3.2. Handicraft Sector

It is an important sub-sector in the industry and commerce sector. Handicraft production is not only an economic activity for generating income and creating jobs to the people, but it also preserves arts, culture, tradition and lifestyle of the Lao multi-ethnic people. For these reasons, the National Green Growth Strategy of the Lao PDR has identified the handicraft production as priority for promotion and will particularly focus on promoting handicraft production in accordance with the priority programmes in the 8th Five-Year National Socio-Economic Development Plan (2016-2020) and in the development plan of the industry and commerce sector as follows:

- Creating the conditions and environment in term of laws and regulations and access to production inputs, markets and funding sources for the artisans and producers of handicraft products, especially those who produce the handicraft products which have national and local heritage, artistic and cultural characteristics and have small and medium sized handicraft structure.

- Promoting the establishment of group of artisans and/or entrepreneurs producing commercial handicraft products by using various methods, such as: setting-up model handicraft groups to make them to become strong in the improvement of quality and standards of handicraft production in conformance with the demands of domestic and foreign markets, and in the protection of markets and copyrights.

- Promoting the commercial production, marketing, sale and consumption of handicraft products through various methods and activities, such as: creating the database and provide marketing data to producers, organizing handicraft products exhibitions, advertising via various media and so on. The special focus shall be on the production, marketing, sale and consumption of handicraft products that have national and local heritage, artistic, cultural and unique characteristics so as to increasingly meet the demands of tourism and export markets, such as: products from cotton and silk weaving, natural dyeing, metal crafting (ornaments), clay, wood carving, bamboo-weaving, blacksmith work, traditional food, jewelry; and on creating the conditions to enable them to become ODOP's commodities.

3.2.3.3. Trade Sector

In 2017, the country had a total number of 753 markets, of these: 60 large-sized markets, 131 medium-sized markets, 350 small-sized markets and 212 fairs/bazaars. The total value of circulation of goods in the country in 2017 is equal to about 51,688 billion Kip or equivalent to about USD 18 billion with a growth rate averaging at 13% per year which is considered to be moderately high.

However, the behavior of commodity trading and consumption in the markets of Lao PDR has not fairly ensured the economic efficiency and environmentally-friendly situation. For example: there is the use of non-degradable plastic bags in large number and in a wasteful manner (throw them away after using only once) for containing and packaging the products, and the use of brochures for advertising and promoting the sale of goods, etc. The use of these plastic bags and brochures has not only increased the production cost, but has also generated wastes unnecessarily that cause adverse impact to the environment.

The gross value of export of Lao PDR was about USD 4,803 million in 2017⁴⁵ and the annual growth rate of export is about 13.4% per year which is considered to be substantially high. However, the export goods and export markets of Lao PDR are highly concentrated. According to the statistics, the main export goods of Lao PDR consist of minerals which covered 47% of the total value of goods export; followed by garment industry products and other processing products which covered about 24%; electricity, about 15%; agricultural products covered about 8%; wood and wooden products covered about 4%; and other products covered about 2% of the total value of export. The main export markets of Lao PDR include Thailand which accounted for 46% of the total value of export; China, 14%; Australia, 13%; Vietnam, 12%; and other countries, 15%. This concentration of export products and export markets makes the economy of Lao PDR to face with the risks and vulnerability to the global economic uncertainties. Moreover, Lao PDR is a country which has a significant trade balance deficit. According to the statistics, the import commodities of Lao PDR are comprised of: construction material (20%), spare-parts (18%), fuel and gas (17%), inputs for agricultural production (12%), electric appliances (11%), consumer's goods (6%) and others (16%).

Therefore, the National Green Growth Strategy of the Lao PDR has identified the trade sector as a priority sector for promotion and will particularly focus on:

- Promoting the use of bags made from natural cotton which are degradable and can be used many times, and the use of banana leaves and other tree leaves for packing the products so as to reduce the production cost and wastes and to promote the environmentally friendliness.
- Promoting online advertising and sale of goods to raise efficiency, reduce production cost, raise the competitive capacity, increase modernity and environmentally friendliness in the promotion of the sale of goods as well as to decrease the time and energy used in the sale of goods.
- Increasing the diversification of the products, especially the finished products or semi-finished products and the export markets in order to decrease the risks and vulnerability to the global economic uncertainties and to increase the efficiency of the use of limited natural resources of the country.
- Creating more facilities for the investment in the production and the movement of goods within the country, the export and import of products/goods with green and environmentally and socially-friendly production process.

45 <https://tradingeconomics.com/laos/exports>

- Issuing the certificates; promoting the production, sale, marketing and consumption/ purchase of green and environmentally-friendly products in domestic and international markets through various media; organizing the trade exhibition of green and environmentally-friendly products, the meeting event for sale and purchase and others.

3.2.4. Public Works and Transport Sector

It is comprised of many sub-sectors; but the National Green Growth Strategy of the Lao PDR has identified urban development and inland transportation as priorities. The details are as below:

3.2.4.1. Urban Development

Development of the urban areas and green residential areas is an important component of green growth to raise the quality of livelihood of the people in Lao PDR. Overall, in Lao PDR, the proportion of population living in urban areas is low, compared with many other countries. According to the results of the population census in 2015, Lao PDR has a total population of 6.5 million, of this: about 30% of the total population live in urban areas. In Lao PDR, there is only one large town of first level which is Vientiane Capital with a population of about 800,000 peoples; 4 secondary towns which are: Luang Prabang, Thakhek, Savannakhet and Pakse with a population ranging between 40,000 - 80,000 peoples; 12 provincial capitals with a population ranging between 6,000 - 40,000 peoples; and 106 district municipalities with a population ranging between 500 - 15,000 peoples.⁴⁶

In general, the urban areas in Lao PDR are in the initial stage of development and have small number of population and low density, compared to the urban areas in many other countries in Asia and in the world. Therefore, Lao PDR still has the opportunity to build and plan the urban areas to allow them to become beautiful towns with artistic and cultural value, green and most livable, while many other countries have already lost this opportunity.

However, these towns have been rapidly expanded during the past decades. A large number of peoples has migrated from the rural areas to work and live in the urban areas. As a result, the number of population in certain large towns has rapidly increased, such as: Vientiane Capital, Savannakhet and Pakse, while the development of infrastructure and the delivery of public services are not able to respond to this expansion of population. This situation gives rise to many problems, such as: crowded areas, wastes, sewage, pollution of air, noise, odor, traffic jam, accidents, damaged roads and bridges and others. Consequently, the quality of living conditions in many large towns have been decreased gradually. Furthermore, the problems of climate change (heat wave, heavy rainfall, flood, drought, etc.) have also affected the road network, building structure and construction in urban areas, such as: degradation of quality, shorter operation life, damage, loss, risk to natural disasters and so on. Therefore, the National Green Growth Strategy of the Lao PDR has identified urban development as a priority sector and will particularly focus on:

46 GGGI, Green Growth Potentials Assessment.

- Developing the urban plan design, housing and building designs and ensuring the management of the housing and building construction in urban areas (provincial capitals, district municipalities and community areas) with the aim of developing these urban areas into beautiful and green towns with national unique artistic and cultural value, stable structure; resilient to the climate change and natural disasters; having convenient and safe footpaths, green areas, public parks; stadiums, children playgrounds, etc.

- Promoting the use of construction materials which are efficient, environmentally friendly and/or are produced inside the country so as to decrease import, trade balance deficit and dependence on import.

- Improving the waste management system to make it more efficient and effective, especially in large towns, such as: Vientiane Capital, Savannakhet, Champasak, Luang Prabang and Khammuan. According to the findings of the study conducted by the Ministry of Natural Resources and Environment and the Ministry of Public Works and Transport, only 40%-50% of the wastes in these towns are collected for reuse or are destroyed by using proper method at the specified sites. This means that 50%-60% of these wastes are disposed disorderly or in non-conformance with hygienic principles. The National Green Growth Strategy of the Lao PDR has, therefore, identified waste management as a focus of the public works and transport sector and will particularly focus on: (1) building the consciousness of the people to avoid disorderly disposal of wastes, to separate the wastes to enable waste recycling and reuse; (2) studying, formulating, improving and implementing the financial mechanism and waste management mechanism in a more efficient and effective manner; (3) building and improving the infrastructure (landfill) to make it efficient, effective and conformed with hygienic principles and so on with special focus on large towns which start having the environmental problems, such as: Vientiane Capital, Savannakhet, Pakse and Luang Prabang.

- Encouraging and promoting domestic and foreign investors to make investment in waste-related business activities in order to reuse the wastes or to use them as raw materials for producing various items so as to create economic value, jobs and income generating activities for the peoples as well as to decrease the use of new natural resources. According to the statistic data, a person in Vientiane Capital has produced the wastes, on average, of 237 Kgs per year; about 70% of these wastes can be reused. Most of these wastes consist of papers, plastics, glasses and metals. At present, only 10% of these wastes are collected for reuse. These statistic data indicate that reuse of wastes is an opportunity for investment to create jobs and income generating activities for the peoples.

- Enhancing the improvement of infrastructure (treatment systems) and the environmental protection and management system in urban areas to reduce the release of wastes from industrial factories, hotels, guest-houses, restaurants and people's homes to the nature before being treated in accordance with the environmental standards and the hygienic principles to decrease odor pollution and water-related disease infection.

- Paving the earthen roads in the urban areas with asphalt and concrete, especially in the areas having high density of population and traffic congestion in order to reduce the dust which is the cause of lung disease and respiratory system diseases.

- Studying and creating, on testing basis, the model green urban areas and rural (community) areas for the purpose of drawing lessons and experiences on the development and management of these urban and rural areas with special focus on drawing lessons and experiences relating to: (1) the creation of environment, conditions and primary factors to facilitate the building of urban and rural areas; (2) the financial mechanism or method of fund raising for implementing the projects; (3) the organizational structure and the mechanism of sustainable administration of these urban and rural areas and others.

3.2.4.2. Transport Sector

It is a sub-sector of the public works and transport sector that the National Green Growth Strategy of the Lao PDR has identified as a priority. According to the statistic data from the Department of Transport of the Ministry of Public Works and Transport, in Lao PDR, the total number of road transport vehicles is about 1.6 million units and the average annual growth rate is about 10-12% which is considered to be moderately high and is higher than the rate of economic growth; 75% of these vehicles are motorcycles and more than 40% of these vehicles are concentrated in Vientiane Capital.

The Lao people, particularly those living in urban areas, have the behavior or the habit to travel by using personal vehicle. The number of people who walk or use bicycle is small. This is due to many reasons, such as: environment (hot weather) and inconvenient and unsafe infrastructure for pedestrians and bike riders; (2) the number of public transportation vehicles is small and is unable to provide service on time and the quality of service is low; and (3) the service charge of the public transportation is high in relation to the quality of service and the cost of using personal motorcycle, etc.

Most of the transportation vehicles in Lao PDR consume fuel imported from abroad. Consequently, in each year, Lao PDR has to import a large quantity of fuel from foreign countries. In 2015, the total value of import of fuel of Lao PDR had reached USD 2,930 million, covering about 16.6% of the gross import value of goods or equaling to about 5.7% of the Gross Domestic Product of the country in that year.⁴⁷ More than 80% of these fuels are used in the transport sector, especially in household transport or personal vehicles. The import and use of these fuels have made the economy of Lao PDR to be dependent to foreign countries and to have a high trade balance deficit in each year. Moreover, the import and use of these fuels in the transport sector are also an important source of greenhouse gas emissions in Lao PDR.

Furthermore, the increase of the number and the use of personal vehicles in many large towns, especially in Vientiane Capital, have also resulted in the rise of many problems, such as: traffic congestion, road accidents and so on. According to the statistic data of the Ministry of Public Works and Transport, in each year, there are more than 6,000 cases of road accidents, causing more than 1,000 deaths and 16,000 cases of injury and a significant number of damaged vehicles. This number of accidents has the trend to further increase in side with the increase of the number of vehicles. Therefore, the National Green Growth Strategy of the Lao PDR has identified urban transport sector as a priority area and will particularly focus on:

47 8th Five-Year National Socio-Economic Development Plan (2016-2020).

- Improving the urban transportation infrastructure to create favorable conditions and provide facilities for the walk, use of non-motorized vehicles (bicycles) and provision of public transportation service (buses), especially the walk path and bike riding path which are convenient, comfortable and safe and the specific road/lane for the public transportation vehicles (buses) to avoid the traffic congestion and ensure the delivery of service on time.
- Making the design and managing the road network infrastructures to allow them to have stable structure and to be resilient to natural disasters.
- Raising the consciousness and creating the values to allow the people to prefer walking, using non-motorized vehicles (bicycles) for health and using public transportation vehicles by expanding the service network, improving the service quality and charging reasonable cost so as to decrease the use of personal vehicles, import and use of fuel, greenhouse gas emissions and money spending.
- Promoting the production, import and use of transport vehicles which use clean energy or energy which is available in the country, such as: electric vehicles that use hydro-energy and solar energy in order to decrease the import and use of fuel and reduce the greenhouse gas emissions.

3.2.5. Energy and Mines Sector

3.2.5.1. Energy Sector

Lao PDR is a country which has the potential in clean energy, such as: hydro-energy, solar energy and wind energy. The Government of Lao PDR has the policy and strategy to produce and export the hydro-electricity to meet the demand of ASEAN countries, especially the neighboring countries. Such policy and strategy of the Government of Lao PDR aim at actively contributing to the reduction of the use of fossil energy and the energy from other sources that are not environmentally-friendly; ensuring energy stability and security inside the country and in ASEAN; and promoting the growth of the economy, reduction of poverty and generation of revenue for State budget.

Throughout Lao PDR, there are 63 hydro-energy power plants which are already in operation with a total installed capacity of 5,172 Megawatts.⁴⁸ In addition, there is a significant number of hydroelectric power projects which are under construction and are in the process of conducting the feasibility study across the country, including the projects of construction and feasibility study for the production of renewable energy, such as: wind energy, biomass and biogas. The Government of Lao PDR has the policy to develop sustainable hydroelectricity and has the Law on Electricity (amended in 2017). These policy and law have provided that the development of power projects must consider, pay attention and give importance to the protection and utilization of natural resources related to the development of power projects, such as: forest, soil and water sources, etc. to ensure optimal benefits for the nation and conformance with the national socio-economic development plan and ensure sustainability.

48 Data from the electricity statistics book in 2017

In addition, the Government of Lao PDR has also the policy to promote the saving and conservation of energy and the alternative energy, development of bio-fuel and development of rural electricity. The details are as follows: (1) Policy on saving and conservation of energy to reduce the greenhouse gas emissions which are the root-cause of climate change, and to generate revenue from the exchange of carbon credit in international markets. The energy saving and conservation policy of Lao PDR has focused on many sectors, such as: industrial sector, housing, business buildings and premises, transport sector. At present, the Ministry of Energy and Mines has coordinated with relevant parties to prepare the draft policy on promotion of the use of clean energy to enable the communication and transport sector to achieve the vision of: “turning Lao PDR into a pollution-free country by 2050 with a view to decreasing the dependence on import of fossil fuel in the transport and promoting the use of clean energy which is the potential of the country to encourage development in accordance with green and sustainable direction”; (2) Promotion of alternative energy by enhancing the cooperation at national, regional, international levels and with ASEAN to conduct the study, build the capacity of the officials and civil servants to enable them to have high technical skill, focus on cooperation in security work, resolve all emergency problems concerning the alternative energy, such as: nuclear energy and hydrogen energy; (3) development of bio-fuel by encouraging and promoting the public investment and the investment of all economic parties, both domestic and foreign, for producing the bio-fuel through promoting the planting, production, processing or mixing, distribution, purchase of raw materials, access to funding sources, access to markets and technology and providing facilities to entrepreneurs; (4) Promotion of the development of rural electricity to ensure the supply of electric power effectively, safely and inclusively with the aim of improving the living conditions of the peoples and to strive to raise the proportion of access to electricity of the households countrywide to 98%.

However, Lao PDR has still imported electricity from Thailand, Vietnam and China for supplying in some regions because the power transmission line is not yet developed to all parts of the country. Moreover, the proportion of the use of clean and environmentally-friendly (hydro-electricity) is low. The energy used in Lao PDR is from other sources which are less clean and less environmentally-friendly, such as: bio-mass (mostly firewood), charcoal, fossil fuel and coal⁴⁹ because the power transmission line is not widely expanded to all parts of the country. Like many countries in the Greater Mekong Subregion (GMS), the energy intensity is not high, compared to many countries in other regions. The proportion of energy consumption to the total Gross Domestic Product (GDP) is equivalent to about 296.21teo/million\$ GDP in 2012.⁵⁰ This means that it is required to use the energy equivalent to 296.21 tons of crude oil in order to produce the goods or provide the services of a value of USD 1 million. The techniques and technology applied in Lao PDR and in many countries in the GMS are mostly old technology which is not energy-saving.

Therefore, the energy sector in Lao PDR is a sector having the potential for development in line with green and sustainable direction. The production and export of energy of Lao PDR will not only contribute to the protection of environment and promotion of development with green and sustainable orientation in the country, but will also contribute to these tasks at the

49 Ministry of Energy and Mines. 2011. Renewable Energy Development Strategy.

50 <http://portal.gms-eoc.org/charts/overview/energy-intensity?gid=19>

international level. For these reasons, the National Green Growth Strategy of the Lao PDR has identified the energy sector as a priority sector. The National Green Growth Strategy of the Lao PDR will particularly focus on:

- Encouraging and promoting the creation of mechanisms of development and management of the electricity sector with wide participation of many sectors and local administrations to decrease the negative impacts and to ensure efficient, effective and sustainable use of natural resources and to ensure equity in the distribution of benefits and risks obtained from the electricity development projects with the special focus on the design and construction of the hydropower dams, construction of transmission line system, management and administration of water, management and protection of water sources and so on.

- Expanding the electricity grid (transmission line system) widely, inclusively to ensure the connection with all parts of the country and well as the regional and international connection with special focus on developing the national transmission line system to increase the efficiency and effectiveness of the investment, ensure the stability and the distribution of electricity widely and inclusively to reduce the impacts on environment.

- Encouraging and promoting the investments of the public sector and private sector, both domestic and foreign, in the production of hydroelectricity, solar energy and wind energy to meet the increasing demand for energy both inside the country and in foreign countries with the special focus on improving the laws, regulations and coordinating mechanisms to attract and provide facilities to investors.

- Enhancing the cooperation at regional and international levels in conducting the study and building the capacity of civil servants to enable them to have strong technical skills with the focus on international cooperation in security work, resolve emergency problems related to the alternative energy, such as: nuclear energy and hydrogen energy;

- Raising the efficiency of clean energy use by promoting and facilitating the production and use of materials, production equipment, transport vehicles, techniques and technology which are energy-saving while restricting the import of materials, production equipment, transport vehicles, techniques and technology which are energy-wasting.

- Reducing the use of unclean energy, such as: biomass energy (charcoal, firewood, etc.) in order to decrease the impact on environment and on the health of the people by increasing the efficiency and promoting the use of clean energy.

- Ensuring the supply of electricity effectively, safely and widely to improve the living conditions of the people; striving to raise the proportion of access to electricity of the households countrywide to 98%.

- Raising the consciousness, using the economic tools (price mechanism or taxes), disseminating relevant laws and regulations and coordinating with relevant sectors to encourage all parties to use the energy in an economical, efficient and effective manner so as to reduce the necessity of production and supply as well as to decrease the greenhouse gas emissions.

3.2.5.2. Mine Sector

Mine sector is a sector that the Government of Lao PDR has given importance because it is a sector that generates revenue for State budget. The Government of Lao PDR has the vision on participatory development of minerals in line with green and sustainable direction by formulating the strategy on mineral development and promulgating the Law on Mineral (amended) which specifies that development of minerals must be conformed with the national socio-economic development plan and with the comprehensive land use and development plan; attention must be paid to the conservation of natural resources, protection of environment and the health and safety of the workers, preparation of the plan to close the mine and restore the mining areas to enable the re-use of these areas, use of mineral resources to secure optimal benefits by promoting the processing of minerals inside the country into finished products or semi-finished products for export in order to increase the economic value and contribute to the creation of more and more jobs for the people.

The National Green Growth Strategy of the Lao PDR focuses on promoting the mines sectors in accordance with the guideline policy of the Government of Lao PDR and will particularly focus on encouraging and promoting the creation of the mechanism of development of the mining project with wide participation of sectors and local administrations to decrease negative impacts on environment and to ensure efficient, effective and sustainable use of natural resources as well as to ensure equity in the distribution of benefits from the mining development projects.

3.2.6. Information, Culture and Tourism Sector

3.2.6.1. Information Sector

It is a sub-sector which is important for supporting the green growth. In the whole country, there are 77 radio stations, of these: 3 stations are located at the central level, 74 stations are at the provincial and district level. The radio broadcasts are capable to reach 95% of the total areas of the country. There is a total of 37 television stations, of these: 9 stations are at the central level, 17 stations are at the provincial level and 11 stations are at the district level, and are capable to cover 80% of the total areas of the country through land signal and 100% of the country through satellite signal. There is a total of 148 volumes of printing matters, of these: 33 are newspapers including 11 daily newspapers. The National Green Growth Strategy of the Lao PDR has identified the information activities as priority sector and will particularly focus on: (1) raising the consciousness and promoting green growth through radio and television programmes and through printing media; (2) coordinating with the industry and commerce sector to advertise and promote the production, marketing, sale and consumption of clean and environmentally-friendly products; (3) coordinating with the cultural and tourism sector to advertise the natural, historical and cultural tourism sites to attract the tourists to undertake tourism activities in Lao PDR; and (4) Advertise and disseminate the Party and Government's policies and legal instruments relating to green growth to the peoples, agencies and local administrations to enable them to understand and efficiently and effectively elaborate into their livelihood and functions.

3.2.6.2. Cultural Sector

It is a sub-sector which is important for the protection and development of the national unique characteristics. Culture is related with many priority sectors of the green growth, such as: tourism, information, housing and urban planning sectors. Therefore, the National Green Growth Strategy of the Lao PDR has identified culture as an important sector and will particularly focus on: (1) coordinating with the tourism sector to create the activities and develop the national historical and cultural tourism sites to make them diversified and beautiful so as to attract the tourists to visit Lao PDR, and to promote economic growth, create jobs and reduce poverty; (2) coordinating with the information sector to disseminate the culture and lifestyle which are unique to the nation, to educate the Lao people to have simple life and to become thrifty, polite, generous and altruistic, respect and honor the visiting guests; and (3) coordinating with the public works and transport sector to design the urban plan, housing plan and town decorations to ensure artistic and cultural value which is unique of the Lao nation.

3.2.6.3. Tourism Sector

It is a sector which is clean, socially and environmentally-friendly and is also a sector which is related with many sectors, is the focal point and promotes many other sectors, particularly transport, handicraft, clean agriculture, hotel, resort, guesthouse, restaurant and others. Hence, tourism sector is a sector having high potential to promote the economic growth, poverty reduction and creation of jobs for the people, both urban and rural, in line with green and sustainable direction. Lao PDR is a country which has beautiful natural landscapes, ancient and historical sites, diverse cultures, traditions and lifestyles of the people of various ethnic groups. As such, Lao PDR is a country having high potentials for the development of natural, historical and cultural tourism sites which are in high and increasing demand both inside the country and in foreign countries. The Government has the policy to promote, manage and develop the natural, historical and cultural tourism sites, especially the management and conservation of the conserved areas, conservation of wildlife and prevention of illegal logging, promotion of the fine tradition and custom of the ethnic groups in each locality.

In 2018, the country has a total of about 2,208 tourism sites, including: 596 cultural tourism sites, 1,318 eco-tourism sites and 294 historical tourism sites; and of the total number of these tourism sites, 817 sites are already opened for services, 1040 sites are under the process of survey and 351 sites are under the process of development. In the whole country, there are 503 tourist/travel companies with 391 headquarters tourist/travel companies and 36 tourist/travel companies 's sub offices and total 2,035,275 staff; 670 hotels with a total of about 23,717 rooms; 2,432 guest-houses and resorts with a total of 33,108 rooms; 2,646 food shops and 6 restaurants and about 305 entertainment places and 109 karaoke . The total number of foreign tourists who come to visit Laos is 4.2 million persons and the revenue generated from tourism is amounted to USD 881.01 million.⁵¹

However, the tourism potentials in Lao PDR have not been exploited and utilized efficiently and fully, particularly the eco-tourism potentials. According to the data from the

51 Department of Tourism Development, Ministry of Information, Culture and Tourism.

Ministry of Information, Culture and Tourism, at present, about 20% of the total tourism sites are developed and opened for providing services. Furthermore, the advertising and dissemination of tourism in Lao PDR are not widely and extensively performed and, consequently, the tourists in many countries do not know about Lao PDR. The tourism activities are not diversified and impressive for tourists; the quality of the services remains low and substandard; the production of handicraft products and food product is not sufficient to meet the demand of tourism both in term of quantity and quality; the management and use of tourism sites in many places are not efficient, effective and sustainable and so on.

Therefore, the National Green Growth Strategy of the Lao PDR has identified the promotion of the development of tourism sector as a priority sector for encouraging economic growth, poverty reduction and for creating jobs and income generating activities for the peoples in line with the green and sustainable direction. The National Green Growth Strategy of the Lao PDR will specifically focus on:

- Enhancing the protection and development of natural, historical and cultural tourism activities and sites in Lao PDR to make them diversified and beautiful, such as: waterfalls, forests, rivers, caves, temples, traditions and lifestyles of the people of various ethnic groups, etc. with a view to prolonging the stay of the tourists.
- Advertising and disseminating the historical, cultural and eco-tourism sites in the Lao PDR to the world in a widely manner so as to attract a greater number of regional and international tourists to visit Lao PDR that will contribute to the promotion of economic growth and poverty reduction as well as creation of jobs and income generating activities for the peoples.
- Improving the quality of tourism services and the services of the related sectors, such as: passenger transport service, hotel, guesthouse and resort, restaurant, entertainment place services, etc. by providing trainings and skill development to the staff in these sectors.
- Coordinating with relevant sectors, such as: coordinating with the agricultural and handicraft sectors to promote the production of food and souvenir products to meet the demand of tourism sufficiently both in quantity and in quality; coordinating with the public works and transport sector to improve the roads to access the tourism sites to make them convenient and safe; coordinating with the natural resources and environment sector to determine the limits of protection and use of natural resources in a more efficient manner; coordinating with the cultural sector to develop the cultural tourism activities to make them diversified and impressive for the tourists so as to allow the tourists to extend their stay and increase their spending willfully that will increase the economic value, create jobs and income generating activities for the people.
- Coordinating with the business units in the tourism sector, particularly the tourism/travel companies, passenger transportation service, accommodation places, restaurants, other tourism services to use the energy economically and use clean and environmentally-friendly products with a view to contributing to the protection of environment and promotion of sustainable development.
- Developing and implementing the standards of green tourism city, green tourism site and green tourism service place (tourism/travel Company, hotel, resort, guesthouse, restaurant

and entertainment place). This consists of developing the standards, conducting the assessment, issuing the certificates and promoting the use of the services of these green tourism service places.

- Support and Encourage the development, widely participatory tourism management from people and people who are living in the at local tourism sites to ensure and quarantee the jobs creation, income genelation and makesure the stable income airly and inclusively allocation.

3.2.7. Science and Technology Sector

It is an important key in the promotion of national socio-economic development and green growth. Over the past period, the Government of Lao PDR has given the importance and has started developing the scientific and technological research system to undertake the research and analysis and provide information relating to the socio-economic development of the country. The Government had established the Ministry of Science and Technology and a number of research institutes and research centers which are independent organizations (ministerial level) and belong to sectors and local administrations to carry out scientific and technological research activities for using in the formulation and implementation of the national, sector and local socio-economic development plans, such as: National Institute for Economic Research, National Academy for Social Sciences, Economic and Trade Research Institute of the Ministry of Industry and Commerce, Development Policy Research Center of the Ministry of Planning and Investment, National Agricultural and Forestry Research Institute of the Ministry of Agriculture and Forestry, Renewable Energy Research Institute of the Ministry of Energy and Mines and other institutes.

However, the development of the scientific and technological research system in Lao PDR is quite new and is not yet becoming systematic, strong and highly efficient. Research institutes and centers that are established by the Government still lack researchers with high experiences and lack of budget for undertaking research work and lack strong coordinating network. Therefore, the National Green Growth Strategy of the Lao PDR has identified the science and technology sector as a priority sector and will specifically focus on:

- Establishing and building the capacity of the research network to support the implementation of the National Green Growth Strategy of the Lao PDR which is to be the focal point of coordination between universities, research institutes and centers of various Ministries, such as: National Institute for Economic Research, National Agricultural and Forestry Research Institute of the Ministry of Agriculture and Forestry, Renewable Energy Center of the Ministry of Energy and Mines, Environmental Research Institute of the Ministry of Natural Resources and Environment, National University of Laos and other institutes which are members of this network.

- Raising the research capacity of the researchers and of the research institutes and centers which are members of the research network in order to support the implementation of the National Green Growth Strategy of the Lao PDR.

- Studying, establishing and implementing the financial mechanism to provide sufficient budget fund for the research work to support the implementation of the National Green Growth Strategy of the Lao PDR. (This may be developed as a financing window in the Green Growth Promotion Fund or Research Promotion Fund).

- Learning and drawing lessons on good foreign and international practices regarding green policy, science, technique, technology and innovation for adapting and applying in Lao PDR in conformance with the actual situation of Lao PDR, especially the policy, science, technology and innovation in the priority areas and sectors of the National Green Growth Strategy of the Lao PDR, such as: agriculture and forestry, public works and transport, energy and mines, industry and commerce sectors and others.

- Implementing the thematic topics, projects and programmes of research on policy, science, technique, technology and innovation for supporting the implementation of the National Green Growth Strategy of the Lao PDR as well as for supporting the implementation of the strategies and national socio-economic development plan in accordance with green and sustainable direction.

- Studying and importing the techniques and technology which are more efficient, effective, socially and environmentally-friendly from foreign countries for adapting and applying in Lao PDR.

- Mainstreaming the results of research and lessons learned from international organizations and foreign countries into the formulation and implementation of the national, sector and local green growth strategies in a systematic and efficient manner.

3.3. Supporting Sectors

In addition to 4 focused areas and 7 focused sectors above, the National Green Growth Strategy of the Lao PDR has also identified 5 supporting or underpinning sectors as below:

3.3.1. Financial Sector

Apart from providing budget, the financial policy is also an important instrument for the promotion of green growth. Therefore, the National Green Growth Strategy of the Lao PDR has identified the finance sector as an important supporting sector of green growth and will specifically focus on encouraging and promoting: (1) the development and implementation of the environmental taxes with a view to reducing the generation of pollution, wastes and the emission of greenhouse gas; (2) the formulation and implementation of financial policy to promote economical use of energy and natural resources and to ensure distribution of the socio-economic development benefits widely, inclusively and fairly; and (3) the formulation and implementation of financial policy to support the production and consumption of green and socially and environmentally-friendly products, such as: reduction or exemption of duty for the import of efficient, effective and environmentally-friendly technique and technology; reduction and exemption of taxes on production and consumption of green products and so on; and (4) provision of preference to green products, green producers of goods and green providers of

services in the process of public procurement of goods and services.

3.3.2 Banking Sector

Similarly to the finance sector, the monetary policy is also a highly efficient and effective tool for the promotion of green growth. The National Green Growth Strategy of the Lao PDR focuses on encouraging and promoting the formulation and implementation of the monetary policy that facilitates green growth and will specifically focus on: (1) providing facilities to various enterprises to access low-interest and long-term loans for importing production equipment, machineries, techniques and technology which are highly efficient, effective and environmentally-friendly from foreign countries; (2) facilitating the access to low-interest loans for small and medium-sized enterprises to enable them to expand the investment in the areas and sectors related to green growth; and (3) providing facilities for the creation and operations of the micro-finance fund to facilitate access to the funding sources for family businesses (micro enterprises), etc.

3.3.3 Education and Sports Sector

It is a sector having an important role in supporting the green growth in the long term. The National Green Growth Strategy of the Lao PDR will focus on: (1) building the awareness of the students and mainstreaming green growth into the teaching and learning curriculum of the primary and secondary schools; (2) coordinating with the enterprise sector to develop the curriculum for vocational education in the fields related to green growth/sustainable development, such as: eco-tourism management, clean agricultural production, organic agricultural production, etc. in vocational schools with a view of ensuring the supply of quality labour for green growth; (3) developing the curriculum and starting the teaching of subjects related to green growth/sustainable development, such as: environmental economics, natural resources management, water resources management and administration, etc. in schools and universities; and (4) increasing the research and analysis on science and policies relating to green growth.

3.3.4. Labour and Social Welfare Sector

It is a sector having an important role in providing support to the green growth. The National Green Growth Strategy of the Lao PDR will focus on: (1) coordinating with the enterprises to develop the curriculum for short-term vocational training courses in the fields related to green growth, such as: food cooking, hotel services, textile weaving and silk thread spinning, production of handicraft products, etc. in various vocational training centers to ensure the supply of skilled labour to the enterprise sector in sufficient number and quality, with emphasis given to poor people in rural areas, women, ethnic and disadvantaged people; (2) creating the labour information center to provide information to enterprises which are in need for labour and to workers who look for job; (3) expanding the coverage and control of the social security system widely, inclusively and efficiently; and (4) increasing the efficiency and effectiveness of the provision of emergency assistance to victims of natural disasters, etc.

3.3.5. Health Sector

It is the priority sector of the Government for achieving the Sustainable Development Goals. So far, thanks to the emphasis given by the Government and the assistance of international organizations and foreign countries, the development of the health sector in the Lao PDR has achieved substantial successes, particularly the access to and the quality of health services have been steadily improved. However, the level of development of this sector remains low, compared with many neighboring countries, particularly the maternity and child mortality rates and the proportion of malnutrition of the people are high and the proportion of people having access to clean water and sanitation is low. For these reasons, the National Green Growth Strategy of the Lao PDR has identified health sector as an important supporting sector and will specifically focus on: (1) the nutrition activities in order to decrease the rate of malnutrition of the people; (2) the access to clean water and sanitation so as to decrease the sickness of the people; (3) decreasing the maternity and child mortality rates; and (4) improving the access to quality health services.

The table summarizing the focused areas, focused sectors and the supporting/underpinning sectors of the National Green Growth Strategy of the Lao PDR is attached in Annex 1.

Part IV

Mechanisms of Implementation of the National Green Growth Strategy of Lao PDR

To ensure efficient, effective and successful implementation of this Strategy and to promote the socio-economic development of Lao PDR in line with green and sustainable direction, the National Green Growth Strategy of the Lao PDR proposes the implementation measures as follows:

4.1. Organizational Mechanism

- **National Steering Committee for Green Growth:** In fact, in order to translate the Resolution of the 10th Party Congress, Vision 2030, 10-Year Strategy (2016-2025) and the 8th Five-Year National Socio-Economic Development Plan (2016-2020), the Government of the Lao PDR had issued the Decision No. 95/PM, dated 08 December 2016 on Appointment of the National Steering Committee for Green Growth with the Deputy Prime Minister, Minister of Finance as Chair, Minister of Planning and Investment as Vice-Chair, President of the National Institute for Economic Research and the Ministers of a number of relevant line Ministries as members. This Steering Committee has the rights and duties to overall lead and guide the green growth activities to ensure that they are performed successfully, efficiently, effectively and in conformance with the actual requirements of the national socio-economic development in each period; to consider and adopt the policies related to green growth, particularly the determination of the concept framework on green growth development policy of the Lao PDR, the formulation of green growth strategy and other underpinning tasks.

At the same time, this Decision has also appointed the Secretariat to assist the National Steering Committee for Green Growth, with the Vice-Minister of Planning and Investment as Chief, Vice-President of the National Institute for Economic Research as Vice-Chief of the Secretariat and the Vice-Ministers of a number of relevant line Ministries and Agencies as members; and has appointed the Support Committee to the Green Growth Secretariat with the Director General of the Department of Planning, Ministry of Planning and Investment as Chief, the Deputy Director General of Department of International Finance, Ministry of Finance and the Deputy Director of Training and Information Center (currently is Director of Science and Socio-Economic Policy Research Center), National Institute for Economic Research as Vice-Chiefs, and the Deputy Director General of Department of Planning of a number of relevant line Ministries and Agencies as members. This Support Committee to the Green Growth Secretariat has the rights and duties as follows: (1) Conduct research, collect information, coordinate with sectors and local administrations, domestic and foreign organizations for the preparation and implementation of the green growth activities in accordance with the direction of the Steering Committee and the Secretariat Committee and in an efficient, effective and timely manner; (2) Identify and conduct research on essential scientific topics that can be used as data for the formulation of policies and for the implementation of the green growth activities; (3) Research and perform the tasks prescribed in the concept framework on green growth development

policy of the Lao PDR in a timely manner; (4) Lead the holding of meetings, workshops and dissemination on the mainstreaming of green growth activities in each period and in accordance with the tasks under the responsibility of each sector; (5) Prepare the operations plan and budget plan of its unit in detail and in conformance with the actual situation; and (6) Perform other functions as assigned by the Secretariat. But most importantly, this National Steering Committee for Green Growth has no permanent office. Consequently, the coordination and promotion of green growth activities are not carried out in a systematic manner. Details are in Annex 2.

Committee for Formulation of Green Growth Strategy and Establishment of Green Growth Promotion Centre of the Lao PDR: The National Steering Committee for Green Growth has issued the Decision No. 01/NSCGG, dated 19 April 2017 on Appointment of the Committee for Formulation of Green Growth Strategy and Establishment of Green Growth Promotion Centre of the Lao PDR with the President of the National Institute for Economic Research as Chair, Vice-Minister of Planning and Investment and the Vice-President of the National Institute for Economic Research as Vice-Chairs, and the Vice Ministers of a number of relevant Ministries and Agencies as members. This Committee for Formulation of Green Growth Strategy and Establishment of Green Growth Promotion Centre of the Lao PDR has the following duties: (1) Lead and guide the formulation of the green growth strategy and establishment of the green growth promotion centre and ensure that they are completed in an efficient, effective and timely manner; (2) Request the National Steering Committee for Green Growth to consider and approve the draft Green Growth Strategy of the Lao PDR; (3) Submit the draft Green Growth Strategy to the Government Meeting based on the consent of the National Steering Committee for Green Growth; (4) Request the Prime Minister to adopt the National Green Growth Strategy of the Lao PDR based on the approval of the Government Meeting; and (5) Implement other tasks related to the formulation of the green growth strategy and the establishment of the green growth promotion centre. At the same time, this Decision has also appointed the Secretariat of the Committee for Formulation of Green Growth Strategy and Establishment of Green Growth Promotion Centre of the Lao PDR, with the Director General of Department of Planning, Ministry of Planning and Investment as Chief, the Director of Science and Socio-Economic Policy Research Center, Deputy Director General of Department of Planning, Ministry of Planning and Investment and Deputy Director General of Department of Planning, Ministry of Natural Resources and Environment as Vice-Chiefs, and the Deputy Director General of Department of Planning of a number of relevant line Ministries and Agencies as members. The Secretariat of the Committee for Formulation of Green Growth Strategy and Establishment of Green Growth Promotion Centre of the Lao PDR has the main right and duty of drafting the National Green Growth Strategy of the Lao PDR and ensure that it is efficiently, effectively and timely completed and conformed with the actual requirements of the socio-economic development of the country and with the opinions provided by relevant sectors and local administrations and with the instructions of the Committee for Formulation of Green Growth Strategy and Establishment of Green Growth Promotion Centre of the Lao PDR.

The Committee for Formulation of Green Growth Strategy and Establishment of Green Growth Promotion Centre of the Lao PDR is an ad hoc committee and will be ended after the Strategy is officially adopted and promulgated by the Prime Minister of the Lao PDR. Details are in Annex 3.

Green Growth Promotion Centre of the Lao PDR: After receiving the approval, in order to efficiently and effectively implement this strategy and to ensure continuity, the National Green Growth Strategy of the Lao PDR proposes to establish the National Green Growth Promotion Centre of the Lao PDR in accordance with the Notification of the Prime Minister's Office (previously called Government Office) No. 1751/GO.SD, dated 8 December 2014 to serve as an organization of the National Steering Committee for Green Growth. Details are in Annex 4.

To avoid the impact on the number of civil servants and salary expenditure of the Government, this Strategy proposes to establish the National Green Growth Promotion Centre of the Lao PDR through the transfer of some officials/civil servants from the National Institute for Economic Research, Ministry of Planning and Investment and from other line Ministries who are interested and are willing to voluntarily contribute to this work. Preferences shall be given to officials/civil servants who have experiences and have contributed to the process of drafting the National Green Growth Strategy and establishment of the National Green Growth Promotion Centre of the Lao PDR.

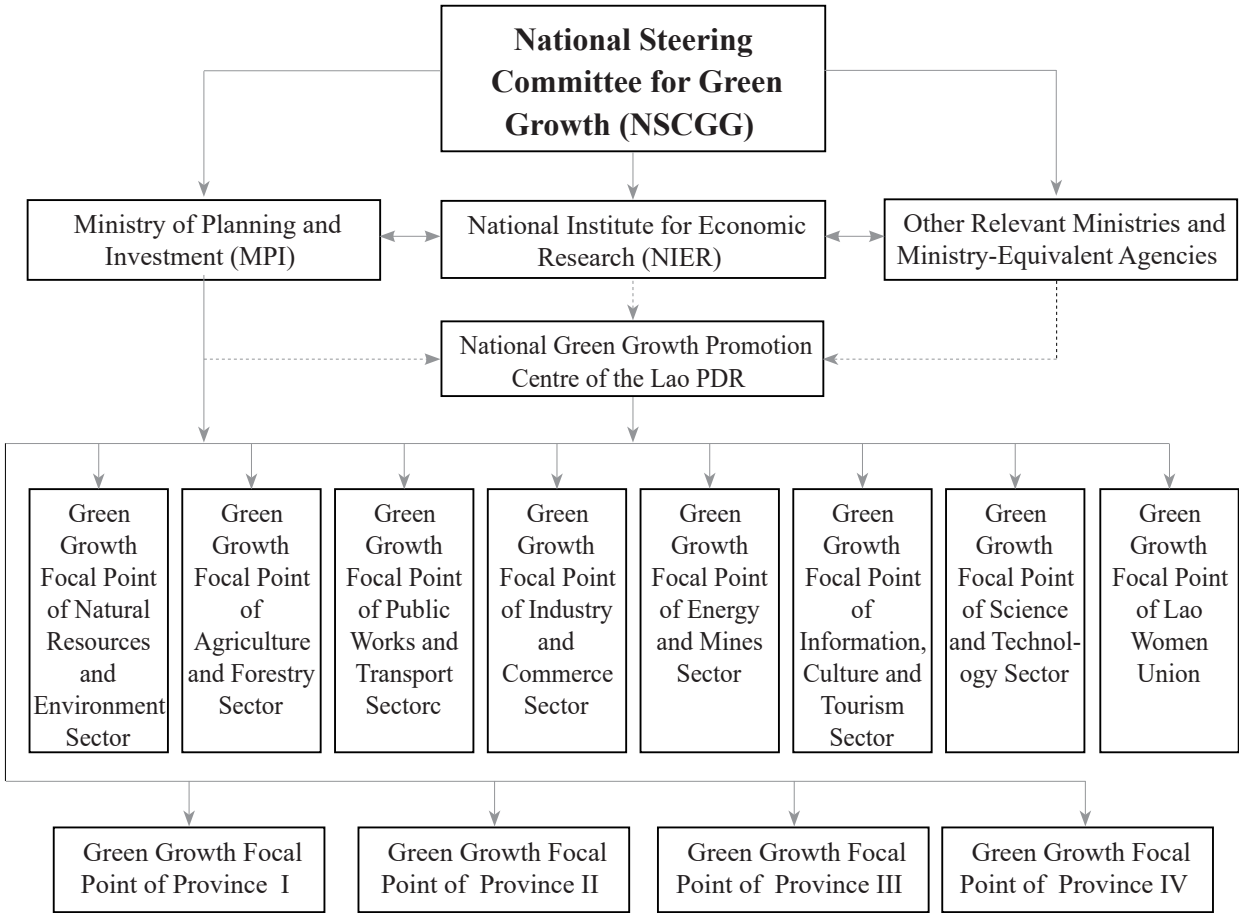
Considering the relevance and similarity of mandates, the National Green Growth Promotion Centre shall be a center having the position and role equivalent to other centers in the organizational structure of the National Institute for Economic Research (NIER) or Ministry of Planning and Investment (MPI) and shall be under the direct guidance of the President of the National Institute for Economic Research or the Minister of Planning and Investment (depending on the consideration and decision of the National Steering Committee for Green Growth) who has the status of member of the National Steering Committee for Green Growth. The National Green Growth Promotion Centre of the Lao PDR has the main role of coordinating, encouraging and promoting the green growth in each sector and local level in a systematic and efficient manner by using various methods, such as: (1) Conduct the advertising and dissemination and build the consciousness about green growth to the people in general and to the sectors and local administrations to enable them to have the awareness and deep understanding so as to translate it into their tasks and daily life efficiently and effectively; (2) Conduct research and analysis on policy as well as on green techniques, technology and innovation to support the formulation and implementation of the policies, strategies, plans and programmes of the sectors and local administrations; (3) Provide information, transfer knowledge and best practices from foreign countries to the sectors and local administrations to enable them to apply them in their actual works efficiently and effectively; (4) Mainstreaming the Green Growth Agenda into national strategies and socio-economic development plan and sector and local plans; (5) Support or promote the sectors and local administrations in the implementation of the plans, programmes, projects and activities related to green growth; (6) Assist the sectors and local administrations in seeking and raising the fund for the implementation of the plans, programmes, projects and activities related to green growth; (7) Study and develop the models of green areas (town, community, industrial zone, residential area and others), green production, green technology and so on which are to be the places for the transfer of experiences and knowledge on green growth to relevant sectors and local administrations for implementation to realize actual results; (8) Develop the system of monitoring and reporting on the achievements of the socio-economic development in accordance with green and sustainable direction to the public and to Government on a regular basis; (9) Build the capacity and provide the advices to the sectors and local administrations on the mainstreaming of Green Growth Agenda into their strategies, plans

and programmes. Further details regarding the rights, roles and duties of the National Green Growth Promotion Centre of the Lao PDR will be provided in a separate legal instrument.

To ensure efficient and effective implementation of these mandates, the National Green Growth Promotion Centre of the Lao PDR shall have the coordinating point or the coordinator in the Department of Planning of each Ministry, Agency and in the Department of Planning and Investment of the relevant provinces, particularly the Ministries, Agencies and provinces which are identified as priorities in this Strategy, such as: Department of Planning of the Ministry of Planning and Investment, Ministry of Agriculture and Forestry, Ministry of Public Works and Transport, Ministry of Industry and Commerce, Ministry of Science and Technology, Ministry of Natural Resource and Environment, Ministry of Information, Culture and Tourism, Lao Women Union and others. Details are shown in the Chart below.

However, this does not mean that the Department of Planning of all Ministries, Agencies and the Department of Planning and Investment of the relevant provinces will have to create a new division, section or unit to become specifically the focal point of coordination of the green growth. In order to avoid further expansion of state organizational machinery, the National Green Growth Strategy of the Lao PDR proposes to assign this work to any existing Division in the Department of Planning of the relevant Ministry and Agency at central level or to any existing Section of the Department of Planning and Investment of the relevant provinces, as deemed appropriate

Figure 3: Position and Coordinating Mechanism of the National Green Growth Promotion Centre of the Lao PDR.



The focal points or the coordinators of green growth at the relevant sectors and local administrations will receive the training, transfer of knowledge, information and capacity upgrading concerning the green growth activities and shall have the main mandate of ensuring the coordination and liaison between their sector and local administration with the National Green Growth Promotion Centre of the Lao PDR. The green growth focal point or the coordinator at the sector or local level has the main duties as follows: (1) Mainstreaming the Green Growth Agenda into the strategy, plan, programmes, projects and activities of its sector and local administration by coordinating with the National Green Growth Promotion Centre of the Lao PDR; (2) Representing the Green Growth Promotion Centre in providing information, advices and recommendations relating to green growth to its sector and local administration; (3) Monitoring and reporting the progress in the implementation of the plan, programmes, projects and activities in its sector to the National Green Growth Promotion Centre of the Lao PDR for information from time to time; (4) Perform other tasks as assigned by the National Green Growth Promotion Centre of the Lao PDR and by the National Steering Committee for Green Growth. The details on the roles, functions and responsibilities of the green growth focal point or coordinator will be provided in a separate legal instrument.

4.2. Financial Mechanism

As the National Green Growth Strategy of the Lao PDR is not a strategy developed for replacing the existing sector and local strategies and plans, but it is a strategy or a mechanism which is developed for encouraging or promoting the implementation of the green programmes, projects, activities or components in these strategies and plans to ensure the achievement of the long-term goals of the socio-economic development which are defined in the Vision 2030, the 10-Year Strategy (2026-2025) and the 8th Five-Year National Socio-Economic Development Plan (2016-2020), such as: graduating from the status of least developed country in a sustainably manner by 2020, becoming a developing country with upper-middle income and achieving the Sustainable Development Goals (SDGs) by 2030.

Therefore, the budget for implementing the sector and local strategies and plans and for the socio-economic development in accordance with green and sustainable direction will be mainly from the existing regular budget of the sectors and local administrations. Normally, this budget is obtained from many sources, such as: State budget, grants and loans from international organizations and foreign countries that are directly allocated to the sectors and local administrations, direct investment from domestic and foreign investors in various forms, such as: Foreign Direct Investment (FDI), Public-Private Partnership (PPP) in the forms of BOT, BTO and others. However, in order to strengthen the funding for the green growth activities, the National Green Growth Strategy of the Lao PDR will consider the setting up of the Green Growth Promotion Fund.

4.2.1. Sources of Revenue of the Green Growth Promotion Fund

This fund shall be a financial fund of second level which shall be under the management of the National Green Growth Promotion Centre of the Lao PDR and shall receive the revenue from many sources, such as:

- **Contribution of the State Budget:** It mainly consists of payment of salary and other benefits to the officials/civil servants who perform the function of management and administration of the fund; contribution in kinds, such as: workplace of the fund, vehicles and office materials and supplies which are necessary for the management and administration of the fund; and regular recurrent expenses for carrying out the mandates of the National Green Growth Promotion Centre of the Lao PDR. In addition, the Government will also allocate some percentage of the revenue from environmental taxes (taxes collected in accordance with the Law on Environmental Tax which is currently in the process of drafting by the Ministry of Finance and the Ministry of Natural Resources and Environment) to this fund.⁵² The details of the rate to be allocated will be separately discuss and define later. As this is the second level fund, the allocate that state budget to the fund should therefore get throught the NIER budget mechanism and or Ministry of palnning and investment. However, at the initial stage, it is required to consult with the Environment Protection Fund (EPF) to temporarily open the budget account specifically for green growth work until the National Green Growth Promotion Centre is able to establish the mechanism for the management of this fund.

- **Grants, Low-Interest Loans and Interest-Free Loans from International Organizations and Foreign Countries which are Related to the Promotion of Green and Sustainable Growth that are mobilized by the National Green Growth Promotion Centre of the Lao PDR:** At present time, green and sustainable growth is the overall global trend. Many international organizations, banks and governments of many countries have provided support to this trend and have established many funds for promoting the socio-economic development along this path, such as: Green Climate Fund, Global Green Growth Fund (GGF), Global Environmental Fund (GEF), Forest Resource Development Fund (FRDF), Rural Electrification Fund (RAF), Renewable Energy Fund (RAEF), Global Conservation Fund (GCF) and others.

Therefore, the socio-economic development with green and sustainable orientation constitutes a condition and opportunity to enable Lao PDR to receive the grants and to access low-interest loans or interest-free loans from the international organizations, banks and governments of these countries. The key role and duties of the National Green Growth Promotion Centre of the Lao PDR are to mobilize the fund for the Green Growth Promotion Fund and for the implementation of the plans, programmes and projects related to green growth of the sectors and local administrations.

- **Technical Revenue of the National Green Growth Promotion Centre of the Lao PDR:** The National Green Growth Promotion Centre of the Lao PDR will become a technical unit which provides technical services and marketing services relating to the promotion of green growth through various methods, such as: conduct the advertising to promote the use of green techniques and technology, consumption of green products and to promote the sale of green products, issuance of certificates for green products, and so on. The National Green Growth Promotion Centre of the Lao PDR can collect the service charge from the provision of certain technical and marketing services, and the collected fund shall be used in green growth

⁵² Details of actual budget figure to be allocated for the fund will have to be jointly discussed (Ministry of Finance, Ministry of Natural Resources and Environment, Ministry of Planning and Investment and National Institute for Economic research

promotion activities. However, the collection of these fees must have a promoting characteristic and for the purpose of maintaining the sustainability of the fund only, not for profit purpose.

- **Bank Interest:** In case the fund has a large amount of unspent money and has the plan to use the money in the long term, it can deposit such amount of money in the bank for gaining the interest which is to be used in the implementation of green promotion activities.

- **Voluntary Contribution from Individuals, Legal Persons inside the Country and Abroad:** Individuals and legal persons living inside the country and in foreign countries who are benevolent, have the intention and are willing to provide support can make contribution in cash or in kind to the Green Growth Promotion Fund of the Lao PDR unconditionally.

4.2.2. Goals of Spending of the Green Growth Promotion Fund

The goals of the Green Growth Promotion Fund of the Lao PDR are not for directly providing main, most or full budget for the implementation of the sector and local plans, programmes and projects relating to green growth, such as: construction of infrastructure, providing loans to people or to business sector and others; but such spending must be for implementing the plans, programmes and activities which have the characteristics of promoting green growth, such as: creation of awareness, building of capacity relating to green growth for the sector and local staff, promotion of green production, marketing and consumption, research and analysis, development of innovation, transfer of information and green technology, contributing fund in certain projects that are related to green growth, loan guarantee or interest subsidy for the people or business units involved in green growth and so on. The main funding source for the implementation of the sector and local plans, programmes and projects must be from their regular funding sources as mentioned above. The relevant sectors and local administrations are also mainly responsible for the implementation of these plans, programmes and projects.

Further details about the goals, objectives and mechanism of the spending of the Green Growth Promotion Fund will be further studied, considered and determined in a specific legislation (Charter of the Fund).

4.3 Policy and Legislation Measures

To ensure efficient, effective and successful implementation, the National Green Growth Strategy of the Lao PDR proposes the policy and legislation measures as below:

- The Prime Minister adopts and issues the Decree on implementation of the National Green Growth Strategy of the Lao PDR.

- The Prime Minister issues the Decree on Establishment of the National Green Growth Promotion Centre of the Lao PDR in accordance with the Notification of the Prime Minister's Office (previously called Government Office) No. 1751/GO.SD, dated 08 December 2014 and according to the proposals specified in this Strategy.

- Revise the Decision of the Prime Minister No. 95/PM, dated 08 December 2016 on Appointment of the National Steering Committee for Green Growth, by specifying that the

National Green Growth Promotion Centre of the Lao PDR shall be the focal point of coordination and the standing organization of the National Steering Committee for Green Growth under the leadership of the President of the National Institute for Economic Research or the Minister of Planning or Investment who has the status of a member of the National Steering Committee for Green Growth as prescribed in this Strategy.

- Revise the Decision No. 205/PM, dated 01 July 2016 on the organization and activities of the National Institute for Economic Research or the mandates of the Ministry of Planning and Investment so as to add the roles, rights, duties and organizational structure of the Green Growth Promotion Centre into the organizational structure, rights and duties of this institute or ministry.

- The President of the National Institute for Economic Research or the Minister of Planning and Investment shall issue a Decision to adopt the roles, organizational structure and activities of the National Green Growth Promotion Centre of the Lao PDR in accordance with the law and regulations.

- The National Green Growth Promotion Centre of the Lao PDR studies and prepares the rule on management and submit it to the Prime Minister, through the National Steering Committee for Green Growth, for consideration and approval of the establishment of the Green Growth Promotion Fund.

- Relevant sectors and local administrations shall issue the Decision on the establishment of their green growth focal point or on the appointment of their green growth coordinator.

- The Minister of Planning and Investment or the President of the National Institute for Economic Research shall issue an Instruction to the relevant sectors (priority sectors) to coordinate with the National Green Growth Promotion Centre of the Lao PDR and the Department of Planning of the Ministry of Planning and Investment to revise their strategies and plans in order to mainstream the Green Growth Agenda into their strategies and plans.

Part V

Monitoring, Evaluation and Reporting on the Progress of the Economic Development according to Green and Sustainable Direction in the Lao PDR

In order to measure and monitor the national socio-economic development according to green and sustainable direction, the National Green Growth Strategy of the Lao PDR develops the system of monitoring and evaluation of the green growth of Lao PDR as follows:

5.1. Areas, Dimensions and Indicators of the National Green Growth of Lao PDR

The National Green Growth Strategy of the Lao PDR proposes to create the system of monitoring and evaluation of the national socio-economic development according to green and sustainable direction based on the definition of green growth provided in this Strategy. According to this definition, green and sustainable growth of Lao PDR is comprised of 3 areas or pillars of the socio-economic development which are: (1) Economic area or pillar, (2) Social area or pillar, and (3) Environmental area or pillar.

In addition, this definition has also clearly defined the dimensions of the green and sustainable growth in each area. The economic area consists of 3 dimensions or aspects according to the green and sustainable growth characteristics, such as: (1) economic growth, (2) poverty reduction and rising of living standard of the people, and (3) decrease of risks and vulnerability to the global economic uncertainties. The social area consists of 2 dimensions or aspects, such as: (1) social equality and equity, and (2) comprehensiveness and inclusiveness of participation in the process and distribution of benefits of the socio-economic development. The environmental area consists of 3 dimensions or aspects according to the green and sustainable growth characteristics determined in this Strategy, such as: (1) efficiency of the use of limited natural resources of the country to ensure optimal benefits, (2) clean and environmentally friendly economic growth, and (3) decrease of risks and vulnerability to natural disasters.

However, in order to ensure efficient and effective measurement and monitoring of the socio-economic development according to green and sustainable direction, it is required to consider and select the indicators and sub-indicators for measuring and monitoring the progress of each area and dimension of the green and sustainable growth. This consideration and selection/determination are important and must take into account of the following: (1) they must be the key indicators and sub-indicators which can clearly reflect the characteristics of each dimension or aspect; (2) they must be obtained from the sources of data which are reliable and accessible in each period; and (3) they must be the indicators which are independent or have no statistical relations with other indicator which is used in the same system at high rate (60%); if an indicator or sub-indicator has relations with other indicator or sub-indicator, only one of them shall be used.

Based on these principles, the National Green Growth Strategy of the Lao PDR has examined and identified such key indicators and sub-indicators and has determined the targets for 2025 and 2030 for using as basis in the measurement and monitoring of the socio-economic development according to green and sustainable direction of Lao PDR. The details are shown in the table below:

Table 1: Areas, Dimensions and Indicators of the Green Growth of Lao PDR

Indicators of Green Growth	Base Year	Targets 2025	Targets 2030	Data Sources
I. Economic Area: Economic growth, poverty reduction, raising of living standards of the people and decrease of risks and vulnerability to global economic uncertainties				
1.1. Economic growth				
1.1.1. Average rate of growth of GDP (%)	7,9 (2011-2015)	7 (2020-2025)	7 (2025-2030)	8 th Five-Year National Socio-Economic Development Plan (2016-2020)
1.2. Poverty reduction and raising of living standards of the people				
1.2.1. Average per capita income (USD/person)	1,860 (2015)	3,000	3500	8 th Five-Year National Socio-Economic Development Plan (2016-2020)
1.2.2. Poverty rate (head-count) (%)	20% (2015)	<10	<5	8 th Five-Year National Socio-Economic Development Plan (2016-2020)
1.3. Decrease of risks and vulnerability to global economic uncertainties				
1.3.1. Ratio of concentration of the export (sum of rates of value of 3 top export commodities) (%)	67 (2015)	45	35	8 th Five-Year National Socio-Economic Development Plan (2016-2020)
1.3.2. Rate of concentration of export countries (sum of rates of value of export of commodities to top 3 export countries) (%)	73 (2015)	60	50	8 th Five-Year National Socio-Economic Development Plan (2016-2020)
1.3.3. Proportion of formal labor under the protection of the Labor Law and covered by the social security	32.4 (2017)	35	38	Lao PDR Labor Force Survey 2017
II. Social Area: Social equality, equity and inclusiveness				
2.1. Equality and equity				
2.1.1. Income equality (GINI)	36.4 (2012)	<33	<30	https://www.indexmundi.com/facts/lao-pdr/indicator/SI.POV.GINI
2.1.2. Gender role				

2.1.2.1. Percentage of female members of the National Assembly (%)	25 (2015)	>30	>35	UNDP, County Analysis Report.
2.1.2.2. Percentage of female members of the Government (%)	5 (2012)	>15	>25	UNDP, County Analysis Report. 2015.
2.1.2.3. Rate of enrolment of female to male in the tertiary education level (%)	0.78 (2016)	>0.9	>0.95	Calculation based on data from Department of Higher Education, Ministry of Education and Sports (http://ched.gov.ph/wp-content/uploads/2017/12/6.-ASEAN-Status-of-Gender-Mainstreaming-Lao-PDR.pdf)
2.1.3. Urban-rural disparity				
2.1.3.1. Proportion of expenditure and consumption in rural area to urban area	0,55 (2013)	0,7	0,8	Calculation based on data from 4 th Lao Expenditure and Consumption Survey (LECS 4)
2.2. Comprehensiveness and inclusiveness of the development				
2.2.1. Ratio of malnutrition among children under 5 years of age				
2.2.1.1. Ratio of underweight children under 5 years of age (%)	27 (2011)	20	17	8 th Five-Year National Socio-Economic Development Plan (2016-2020)
2.2.1.2. Ratio of children under 5 years of age shorter than standard height (%)	38 (2011)	30	25	8 th Five-Year National Socio-Economic Development Plan (2016-2020)
2.2.2. Proportion of population with access to clean water (%)	84,7 (2014)	96	100	8 th Five-Year National Socio-Economic Development Plan (2016-2020)
2.2.3. Proportion of population using latrine (%)	67,9 (2014)	85	100	8 th Five-Year National Socio-Economic Development Plan (2016-2020)
III. Environmental Area: Efficiency of utilization of natural resources, cleanliness and resilience to climate change and natural disasters				
3.1. Efficiency and effectiveness of utilization of natural resources				
3.1.1. Proportion of energy consumption to GDP (toe/GDP-million)	295.89 (2012)	240	230	http://portal.gms-eoc.org/charts/overview/energy-intensity?gid=19
3.1.2. Efficiency of agricultural land use				
3.1.2.1. Average productivity of rice production in wet season (tonne/hectare)	4,4			8 th Five-Year National Socio-Economic Development Plan (2016-2020)
3.1.2.2. Average productivity of rice production in dry season (tonne/hectare)	5,1			8 th Five-Year National Socio-Economic Development Plan (2016-2020)

3.1.3. Proportion of export of natural resources in the gross value of export (%)	51,2 (2015)	40	30	Calculation based on data in the 8 th Five-Year National Socio-Economic Development Plan (2016-2020)
3.2. Cleanliness and environmentally friendliness				
3.2.1. Proportion of greenhouse gas emissions to GDP (tonne/GDP-million)	83,3	<75	<70	Calculation based on data from: http://portal.gms-eoc.org/charts/overview/temperature-change?gid=39
3.2.2. Average production of garbage or wastes per person (Kg/person/year)	237 (2015)	210	180	GGGI: Green Growth Potential Assessment
3.2.3. Percentage of garbage or wastes which are reused or disposed through proper methods and sites (%)	50 (2015)	65	80	Ministry of Public Works and Transport, and Ministry of Natural Resource and Environment
3.2.4. Rate of forest cover (%)	40.3 (2010)	70	70	http://www.leafasia.org/sites/default/files/public/resources/Lao%20PDR%20Final-Revised-Nov2015.pdf
3.2.5. Proportion of use of clean energy (hydroelectricity, solar energy and wind energy) (%)	12 (2011)	25	40	Ministry of Energy and Mines
3.2.6. Proportion of import of fuel and gas (%)	17 (2014)	<12	<10	8 th Five-Year National Socio-Economic Development Plan (2016-2020)
3.2.7. Average consumption of electricity per person (KWH/person/year)	636,13	<1.000	<1.500	http://portal.gms-eoc.org/charts/overview/electricity-consumption-per-capita?gid=19
3.2.8. Average greenhouse gas emissions per person (tonne/person/year)	0,15 (2014)	<0,6	<1,2	http://portal.gms-eoc.org/charts/overview/co2-emissions-per-capita?gid=20
3.3. Decrease of risks and vulnerability to climate change and natural disasters				
3.3.1. Percentage of amount of economic losses caused by natural disasters (% of GDP)	0.3 (average 2010-2015)	<0.25 (average 2020-2025)	<0.2 (average 2025-2030)	World Bank: Country Assessment Report for Lao PDR
3.3.2. Average number of population affected by natural disasters	200.000 (average 2010-2015)	<160.000 (average 2020-2025)	<120:000 (average 2025-2030)	World Bank: Country Assessment Report for Lao PDR
3.3.3. Percentage of production value of agriculture in GDP (%)	23.7 (2015)	20	19	8 th Five-Year National Socio-Economic Development Plan (2016-2020)

Many indicators showing the characteristics of green and sustainable growth, such as: air, soil and water quality, proportion of green economy (green GDP) in the Gross Domestic Product (GDP) and other cannot be included in this monitoring & evaluation system for the time being due to lack of data. The National Green Growth Promotion Centre of the Lao PDR will be responsible for continuing the research and improvement of this monitoring & evaluation system to make it more efficient, effective and accurate in the future.

5.2 National Green Growth Indexes of Lao PDR

In order to measure and monitoring at macro level (overall level), the National Green Growth Strategy of the Lao PDR has developed the green growth indexes by giving an equal weight or importance to each area or pillar of the green growth; this means: giving the economic area 1/3, social area 1/3 and environmental area 1/3; and also giving an equal importance or weight to each dimension in each area. In the economic area, there are 3 dimensions which are: (1) economic growth, (2) poverty reduction and raising of living standards of the people, and (3) decrease of risks and vulnerability to global economic uncertainties; and each dimension will have an equal weight of 1/3. In the social area, there are only 2 dimensions which are: (1) social equality and equity, and (2) comprehensiveness and inclusiveness; and each dimension will have a weight of 1/2. The environmental area consists of 3 dimensions which are: (1) efficiency, effectiveness and sustainability of utilization of natural resources, (2) cleanliness and environmentally friendliness, and (3) decrease of risks and vulnerability to climate change and natural disasters; and each dimension will have an equal weight of 1/3.

In each dimension, there will be different number of key indicators and sub-indicators, depending on the relations and access to the data. Indicators in each dimension will have an equal weight and the sub-indicators in each indicator will also have an equal weight.

In order to fairly perform the measurement and monitoring, the National Green Growth Strategy of the Lao PDR has determined the standards in the assessment of each key indicator or each sub-indicator by taking the optimal/best success that a country in Asia-Pacific region is able to achieve in a period of time. The score of each key indicator or sub-indicator is the percentage (%) of such key indicator or sub-indicator compared to the standard. The table below shows the results of the measurement of the national green growth of Lao PDR.

Table 2: Results of the Assessment of Green Growth of Lao PDR and Targets in 2025 and 2030

Indicators of Green Growth	Base Year	Targets 2025	Targets 2030	Assessment Standards
National Green Growth Indexes of the Lao PDR	55.76	63.05	69.42	
I. Economic Area: Economic growth, poverty reduction, raising of living standards of the people and decrease of risks and vulnerability to global economic uncertainties	51.82	55.07	58.93	
1.1. Economic growth	76.7	67.9	67.9	
1.1.1. Average rate of growth of GDP (%)	76.7	67.9	67.9	Maximum: 10.3%
1.2. Poverty reduction and raising of living standards of the people	41.55	47.55	50.5	
1.2.1. Average per capita income (USD/person)	3.1	5	6	Maximum: 58,246 \$ /person/year
1.2.2. Poverty rate (head-count) (%)	80	90	95	Minimum: 0%
1.3. Decrease of risks and vulnerability to global economic uncertainties	37.2	49.75	58.4	
1.3.1. Rate of concentration of the export (sum of rates of value of 3 top export commodities) (%)	41.1	61.1	72.2	Minimum: 10%
1.3.2. Rate of concentration of export countries (sum of rates of value of export of commodities to top 3 export countries (%)	30	44.4	55.5	Minimum: 10%
1.3.3. Proportion of formal labor under the protection of the Labor Law and covered by the social security system (%)	40.5	43.75	47.5	Best: 80%
II. Social Area: Social equality, equity and inclusiveness	67.75	79.32	87.43	
2.1. Equality and equity	62.13	73.30	81.86	
2.1.1. Income equality (GINI)	85.4	89.9	93.9	Minimum: 25.5%
2.1.2. Gender role	46.00	60.00	71.67	
2.1.2.1. Percentage of female members of the National Assembly (%)	50	60	70	Best: 50%
2.1.2.2. Percentage of female members of the Government (%)	10	30	50	Best: 50%
2.1.2.3. Rate of enrolment of female to male in the tertiary education level (%)	78	90	95	Best: 1
2.1.3. Urban-rural disparity	55	70	80	
2.1.3.1. Proportion of expenditure and consumption in rural area to urban area	55	70	80	Best: 1
2.2. Comprehensiveness and inclusiveness of the development	73.37	85.33	93.00	
2.2.1. Ratio of malnutrition among children under 5 years of age	67.5	75	79	
2.2.1.1. Ratio of underweight children under 5 years of age (%)	73	80	83	Best: 0%
2.2.1.2. Ratio of children under 5 years of age shorter than standard height (%)	62	70	75	Best: 0%
2.2.2. Proportion of population with access to clean water (%)	84.7	96	100	Best: 100%
2.2.3. Proportion of population using latrine (%)	67.9	85	100	Best: 100%

III. Environmental Area: Efficiency of the utilization of natural resources, cleanliness and resilience to climate change and natural disasters	47.72	54.78	61.89	
3.1. Efficiency and effectiveness of utilization of natural resources	38.45	47.63	52.87	
3.1.1. Proportion of energy consumption to GDP (toe/GDP-million)	28	34.5	36.1	Best: 83toe/GDP-million
3.1.2. Efficiency of agricultural land use	67.85	83.4	89.2	
3.1.2.1. Average productivity of rice production in wet season (tonne/hectare)	67.7	81.5	87.7	Maximum: 6.5 tonnes/ha
3.1.2.1. Average productivity of rice production in dry season (tonne/hectare)	68	85.3	90.7	Maximum: 7.5 tonnes/ha
3.1.3. Proportion of export of natural resources in gross export value (%)	19.5	25	33.3	Minimum: 10%
3.2. Cleanliness and environmentally friendliness	53.05	54.60	59.26	
3.2.1. Proportion of greenhouse gas emissions to GDP (tonne/GDP-million)	84	93.3	100	Best: 70 tonnes / GDP-million)
3.2.2. Average production garbage or wastes per person (Kg/person/year)	42.2	47.6	55.5	Minimum: 100Kg/person/year
3.2.3. Percentage of garbage or wastes which are reused or disposed through proper methods and sites (%)	55.6	72.2	88.9	Maximum: 90%
3.2.4. Rate of forest cover (%)	57.6	100	100	Maximum: 70%
3.2.5. Proportion of use of clean energy (hydroelectricity, solar energy and wind energy) (%)	15	31.3	50	Maximum: 80%
3.2.6. Proportion of import of fuel and gas (%)	29.4	41.6	50	Minimum: 5%
3.2.7. Average consumption of electricity per person (KWH/person/year)	40.6	25.8	17.2	Minimum: 258 KWH/ person/year
3.2.8. Average greenhouse gas emissions per person (tonne/person/year)	100	25	12.5	Minimum: 0.15 t/person/year
3.3. Decrease of risks and vulnerability to climate change and natural disasters	51.67	62.10	73.53	
3.3.1. Percentage of amount of economic losses caused by natural disasters (% of GDP)	66.7 (average 2010-2015)	80 (average 2020-2025)	100 (average 2025-2030)	Minimum: 0.2% of GDP
3.3.2. Average number of population affected by natural disasters	25	31.3 (average 2020-2025)	41.7 (average 2025-2030)	Minimum: 50,000 persons
3.3.3. Percentage of production value of agriculture in GDP (%)	63.3	75	78.9	Minimum: 15%

The results of the assessment shown in the table above indicate that the green growth index of Lao PDR is equal to about 55.76% of the best standard in each area that a country in the Asia-Pacific region has achieved in a period of time. If the targets in each area set out in this Strategy can be achieved, such index will increase to 63.05% in 2025 and to 69.42 in 2030.

5.3 Monitoring and Reporting

- The National Green Growth Promotion Centre of the Lao PDR will be responsible for monitoring and reporting on the progress of the implementation of the socio-economic development in each period. From 2019 onward, the Centre will prepare and disseminate this report on an annual basis in every year to the public to allow all parties to know and capable to incorporate into their work efficiently. The main contents of this report will include: (1) Review of the status of the implementation and achievements of the socio-economic development according to green and sustainable direction in Lao PDR during the past year, (2) Assessment, opportunities and challenges in the year ahead, and (3) Directions and recommendations relating to the methods and measures to continue the socio-economic development according to green and sustainable direction.

- The Ministry of Planning and Investment will consider the contents of this report so as to include them in the report on the progress of the implementation of the Annual National Socio-Economic Development Plan(ANSEDP).

- The green growth focal/coordinating point or coordinator of each sector and local administration will report on the progress of the implementation of the green growth strategy to its higher authority for information from time to time.

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Annexes

Annex 1: Table Summarizing the Focused Areas and Sectors and the Supporting Sectors of the National Green Growth Strategy of the Lao PDR.

Focused Areas/ Sectors and Supporting Sectors	Focuses
I. Focused Areas	
<ul style="list-style-type: none"> • Investment Environment and Management 	<ul style="list-style-type: none"> - Review and revise the laws, regulations and mechanisms to provide facilities and increase the efficiency of the investment management. - Upgrade the capacity of the relevant organizations and staff. - Strengthen the monitoring, inspection and measures against offenders.
<ul style="list-style-type: none"> • Rural Development and Poverty Reduction 	<ul style="list-style-type: none"> - Continue the implementation of the policy of grouping small villages into a large village and building large villages into a green and livable town. - Continue to develop the communication roads to connect rural areas with urban areas. - Improve the education, health, water supply, telecommunication and information infrastructures. - Develop livelihood skills and labour skills. - Focus on creating the micro finance fund and other financial mechanisms to facilitate the access to funding sources. - Promote commercial production of goods and consumption of rural traditional products.
<ul style="list-style-type: none"> • Gender Role/Promotion of the Advancement of Women 	<ul style="list-style-type: none"> - Mainstream gender role into national, sector and local strategies and socio-economic development plans. - Promote the access to education of women, especially high level of education. - Promote vocational training, labour skill development and creation of jobs for women. - Encourage and promote the participation of women in economic, political and socio-cultural activities. - Promote the protection of women and children who are victims of domestic violence, sexual violence and human trafficking.
<ul style="list-style-type: none"> • Adaptation to Climate Change and Management of Natural Disasters 	<ul style="list-style-type: none"> - Increase the awareness, understanding and capacity of the staff and organizations involved in the adaptation to the climate change. - Promote the improvement of the early warning system to make it more efficient and effective. - Promote the establishment and increase the capacity of the Reserve Fund for Emergency Aid of the national, provincial, district and village levels. - Promote the expansion of the coverage and management of the national social security system widely and inclusively. - Promote the economic growth that causes low greenhouse gas emissions. - Promote the creation of diversified income sources for the peoples.

II. Focused Sectors	
<ul style="list-style-type: none"> • Natural Resources and Environment 	<ul style="list-style-type: none"> - Develop the coordinating mechanisms of research, survey, allocation, formulation of plan of natural resources management and use with wide participation of the sectors and local administrations. - Strengthen the roles and capacity the natural resources and environment sector in macro management. - Conduct survey, allocation and formulation of National land management and use plan and ensure it is completed as soon as possible. - Enhance the protection and management of water resources and water sources more efficiently and effectively. - Enhance the control of pollution more efficiently and effectively.
<ul style="list-style-type: none"> • Agriculture and Forestry 	
<ul style="list-style-type: none"> ➤ Agriculture 	<ul style="list-style-type: none"> - Raise the efficiency of the production by using clean and environmentally-friendly techniques and technology. - Reduce the wastes and pollution caused by agricultural production and move toward comprehensive agricultural production. - Develop the knowledge and skill of the producers to achieve improved techniques and efficient production. - Promote integrated agricultural production and crop rotation practices. - Enhance the control of the production, import, distribution and use of chemicals which are hazardous to human and animal health and to environment. - Encourage and promote clean agricultural production and organic agricultural production as well as the cultivation and rearing activities that constitute the base for the production of handicraft products that have national heritage and unique characteristics. - Improve and expand the infrastructure system for agricultural production.
<ul style="list-style-type: none"> ➤ Forestry 	<ul style="list-style-type: none"> - Encourage and promote the development and implementation of the mechanisms of management, protection and use of forests with wide participation of the sectors and local administrations. - Encourage and promote the survey, zoning and classification of the types of forest; and formulate, improve and implement the laws and regulations relating to the use of each type of forest in an efficient, effective and sustainable manner. - Promote sustainable protection and use of forest based on the community. - Encourage and promote the investment of domestic and foreign investors in forest plantation or industrial trees plantation using integrated and rotation methods in deforested and degraded land. - Enhance the improvement and restoration of the quality of forests. - Enhance the monitoring, inspection, prevention and reduction of the destruction of the forest cover areas. - Study, develop and implement the financial mechanism for the protection of forests.
<ul style="list-style-type: none"> • Industry and Commerce 	

<p>➤ Manufacturing Industry</p>	<ul style="list-style-type: none"> - Strongly encourage and promote the industrialization and modernization process. - Encourage and promote the commercial production and increase the competitive capacity at regional and international levels. - Promote and develop the existing potential processing industries and new potential industries. - Study, improve and implement the financial mechanism to provide facilities to industrial factory entrepreneurs to import and apply modern techniques and technology. - Promote the development of complete-cycle industries. - Develop the infrastructure for disposal and destruction of toxic industrial wastes that are not conformed with the environmental standards. - Improve and implement the standards of industrial factory, laws and regulations relating to the environmental management in the industrial sector. - Focus on promoting small and medium-sized processing industries.
<p>➤ Handicraft</p>	<ul style="list-style-type: none"> - Create the conditions and environment in term of laws and regulations and access to production inputs, markets and funding sources for the artisans and producers of handicraft products. - Promote the establishment of group of artisans and/or group of entrepreneurs producing commercial handicraft products. - Promote commercial production, marketing, sale and consumption of handicraft products.
<p>➤ Trade</p>	<ul style="list-style-type: none"> - Promote the use of bags made from natural cotton which are degradable and can be used many times, and the use of banana leaves and other tree leaves for packing the products. - Promote online advertising and sale of goods. - Increase the diversification of products, especially the finished products or semi-finished products and the diversification of export markets. - Create more facilities for the investment in production and the movement of goods within the country, the export and import of products/goods with green and environmentally and socially-friendly production process. - Issue the certificates; strongly promote the production, sale, marketing and consumption/ purchase of green and environmentally-friendly products in domestic and international markets.
<p>● Public Works and Transport</p>	
<p>➤ Urban Development</p>	<ul style="list-style-type: none"> - Develop the urban plan design, housing and building designs and ensuring the management of the housing and building construction in urban areas (provincial capitals, district municipalities and community areas) with the aim of developing these urban areas into beautiful and green towns with national unique artistic and cultural value. - Promote the use of construction materials which are efficient, environmentally-friendly and/or are produced inside the country. - Improve the waste management system to make it more efficient and effective. - Encourage and promote domestic and foreign investors to make investment in waste-related business activities. - Enhance the improvement of infrastructure (treatment systems) and the environmental protection and management system in urban areas. - Focus on paving the earthen roads in the urban areas with asphalt and concrete, especially in areas having high density of population and traffic congestion. - Study and create, on testing basis, the model green urban area and rural (community) area.

➤Transport	<ul style="list-style-type: none"> - Improve the urban transportation infrastructure to create favorable conditions and provide facilities for the walk, use of non-motorized vehicles (bicycles) and provision of public transportation service (buses). - Make the design and manage the road network infrastructures to allow them to have stable structure and to be resilient to climate change. - Raise the consciousness and creating the values to allow the people to prefer walking, using non-motorized vehicles (for example: bicycles) for health and/or using public transportation vehicles. - Promote the production, import and use of transport vehicles that consume clean energy or energy which is available inside the country.
• Energy and Mines	
➤Energy	<ul style="list-style-type: none"> - Encourage and promote the creation of mechanism of development and management of the electricity sector with wide participation of the sectors and local administrations. - Expand the electricity grid (transmission line system) widely, inclusively to ensure connection with all parts of the country and well as regional and international connection. - Encourage and promote the investments of the public sector and private sector, both domestic and foreign, in the production of hydro-energy, solar energy and wind energy. - Enhance the cooperation at regional and international levels in the conducting the feasibility study and the building of capacity of the officials and developers of alternative energy: nuclear energy and hydrogen energy and others. - Increase the efficiency of energy use. - Reduce the use of energy which is not clean and not environmentally-friendly. - Ensure the supply of quality and safe electricity in a widely manner. - Raise the consciousness, use the economic tools (price mechanism or taxes) and disseminate relevant laws and regulations to encourage people to use the energy in an economical, efficient and effective manner.
➤Mines	<ul style="list-style-type: none"> - Pay attention to the protection of environment and protection of labour health and safety. - Prepare the plan to close the mine and restore the mining areas to enable the re-use of these areas. - Promote the processing of minerals into finished products or semi-finished product for export to increase the economic value, create more job for the people in order to raise the efficiency of mineral utilization.
• Information, Culture and Tourism	
➤Information	<ul style="list-style-type: none"> - Build the consciousness and promote green growth through radio, television, printing media, including electronic media and loud-speaker system. - Coordinate with the industry and commerce sector to advertise and promote the production, marketing, sale and consumption of clean and environmentally-friendly products. - Coordinate with the cultural and tourism sector to advertise the natural, historical and cultural tourism sites. - Advertise and disseminate the Party and Government's policies and legal instruments relating to green growth.

➤Culture	<ul style="list-style-type: none"> - Coordinate with the tourism sector to create the activities and develop the historical and cultural tourism sites. - Coordinate with the information sector to disseminate the culture and lifestyle which are unique to the nation. - Coordinate with the public works and transport sector to design the urban plan, housing plan and town decorations to ensure artistic and cultural value which is unique of the Lao nation.
➤Tourism	<ul style="list-style-type: none"> - Enhance the protection and development of natural, historical and cultural tourism activities and sites in Lao PDR to make them diversified and beautiful. - Advertise and disseminate the historical, cultural and eco-tourism sites in the Lao PDR to make them known widely in the world. - Improve the quality of tourism services and the services of the related sectors to meet the required standards. - Coordinate with relevant sectors to promote the production of food and souvenir products to meet the demand of tourism sufficiently both in quantity and in quality. - Coordinate with the business units in the tourism sector to use the energy economically and use clean and environmentally-friendly products. - Develop and implement the standards of green tourism city, green tourism site and green tourism service place.
●Science and Technology	<ul style="list-style-type: none"> - Establish and build the capacity of the research network to support the implementation of the National Green Growth Strategy of the Lao PDR. - Raise the research capacity of the researchers and of the research institutes and centers which are members of the research network in order to support the implementation of the National Green Growth Strategy of the Lao PDR. - Study, establish and implement the financial mechanism to provide sufficient budget fund for the research work to support the implementation of the National Green Growth Strategy of the Lao PDR. - Research and draw lessons on good foreign and international practices regarding green policy, science, technique, technology and innovation for adapting and applying in Lao PDR. - Implement the thematic topics, projects and programmes of research on policy, science, technique, technology and develop innovation for supporting the implementation of the National Green Growth Strategy of the Lao PDR. - Study and import the techniques and technology which are more efficient, effective, socially and environmentally-friendly from foreign countries for adapting and applying in Lao PDR. - Mainstream the results of research and lessons learned from international organizations and foreign countries into the formulation and implementation of the green growth strategies.

III. Supporting / Underpinning Sectors	
• Finance	<ul style="list-style-type: none"> - Development and implementation of the environmental taxes. - Formulation and implementation of the financial policy to promote the economical use of energy and natural resources and to ensure distribution of the socio-economic development benefits widely, inclusively and fairly. - Formulation and implementation of financial policy to support the production and consumption of green and socially and environmentally-friendly products. - Give preference to green products, green producers of goods and green providers of services in the process of public procurement of goods and services.
• Banking	<ul style="list-style-type: none"> - Provide facilities to various enterprises to access low-interest and long-term loans for importing production equipment, machineries, techniques and technology which are highly efficient, effective and environmentally-friendly from foreign countries. - Facilitate the access to low-interest loans for small and medium-sized enterprises to enable them to expand the investment in the areas and sectors related to green growth. - Provide facilities for the creation and operations of the micro-finance fund.
• Education and Sports	<ul style="list-style-type: none"> - Build the awareness of the students and mainstream green growth into the teaching and learning curriculum of the primary and secondary schools. - Coordinate with the enterprise sector to develop the curriculum for vocational education in the fields related to green growth/sustainable development. - Developing the curriculum and start the teaching of subjects related to green growth/sustainable development. - Increase the research and analysis on science and policies relating to green growth.
• Labour and Social Welfare	<ul style="list-style-type: none"> - Coordinate with the enterprises to develop the curriculum for short-term vocational training courses in the fields related to green growth. - Create the labour information center to provide information to enterprises which are in need for labour and to workers who look for job. - Expand the coverage and management of the social security system widely, inclusively and more efficiently. - Increase the efficiency and effectiveness of the delivery of emergency assistance to victims of natural disasters.
• Health	<ul style="list-style-type: none"> - Nutrition activities for reducing the rate of malnutrition of the people. - Access to clean water and sanitation to decrease the sickness of the people. - Decrease the maternity and child mortality rates. - Improve the access to quality health services.

Annex 2: Notification of the Government Office No. 1751/GO.SD, dated 08 December 2014.



Lao People's Democratic Republic
Peace independence Democracy Unity Prosperity

Government Office

No. 1751/GO.SD
Vientiane Capital, 08 December 2014

Notification

To: - Deputy Prime Minister, Minister of Foreign Affairs.
- Minister of Planning and Investment.
- Minister of Industry and Commerce.

Subject: Results of the Economic Meeting of the General Assembly of ASEAN
Inter-Parliamentary Assembly (35th General Assembly of AIPA).

- Referring to the official letter of the Office of the National Assembly No. 0337/NAO/EPFC, dated 23 October 2014;
- Based on the instruction of the Prime Minister on 14 November 2014.

The Government Office has the honor to notify the instruction of the Prime Minister to you as follows: "The 35th General Assembly of ASEAN Inter-Parliamentary Assembly has considered and adopted 2 Resolutions which are:

- (1) Resolution on Promotion of Green Growth Development Strategy in ASEAN;
- (2) Resolution on Promotion of entrepreneurs development in the process of minimizing the development gap in ASEAN.

Relevant Ministries and Agencies are, hereby, assigned to study, translate and implement these resolutions:

1. Study and develop the Strategic Policy and the Centre for Green Development of the Lao PDR to become a place of research and provision of information (the Ministry of Planning and Investment is assigned to take the lead in coordinating with the Ministry of Foreign Affairs and relevant sectors to take charge of the implementation of this task).

2. Propose the establishment of Small and Medium-Sized Enterprises Fund under ASEAN cooperation framework (the Ministry of Industry and Commerce is assigned to take the lead in coordinating with the Ministry of Foreign Affairs and relevant sectors to take charge of the implementation of this task).”

Note: For details, see the copy of the 2 Resolutions attached herewith.

This Notification is issued to you for information and for complying with this instruction.

Minister, Head of Government Office

(Signed & sealed)

Sonexay SIPHANDONE

Copy to:

- | | |
|---|-----------|
| - Prime Minister and Deputy Prime Ministers | 06 copies |
| - Office of the Party Central Committee | 01 copy |
| - Office of the National Assembly | 01 copy |
| - Filing | 10 copies |

Annex 3: Prime Minister Decision No. 95/PM, dated 08 December 2016 On appointment of the National Steering Committee for Green Growth.



Lao People's Democratic Republic
Peace independence Democracy Unity Prosperity

Prime Minister

No. 95/PM
Vientiane Capital, 08 December 2016

Decision

on Appointment of the National Steering Committee for Green Growth

- Referring to the Letter of Proposal of the Ministry of Planning and Investment NO. 2810/MPI. DP6, dated 18 November 2016;

The Prime Minister Issues a Decision as follows:

Article 1. To appoint the National Steering Committee for Green Growth which shall comprise the following personnel:

- | | |
|--|------------------|
| 1. Deputy Prime Minister, Minister of Finance | Chairperson |
| 2. Minister of Planning and Investment | Vice-Chairperson |
| 3. President of National Institute for Economic Research | Member |
| 4. Minister at the Prime Minister's Office | Member |
| 5. Minister of Natural Resources and Environment | Member |
| 6. Minister of Agriculture and Forestry | Member |
| 7. Minister of Public Works and Transport | Member |
| 8. Minister of industry and Commerce | Member |
| 9. Minister of Energy and Mines | Member |
| 10. Minister of Science and Technology | Member |

Article 2. The National Steering Committee for Green Growth shall have the main rights and duties as follows:

1. Guide overall green growth activities to ensure that they are successfully performed in an efficient and effective manner and in compliance with the actual requirements of the national socio-economic development in each period; consider and adopt the policies related to green growth, particularly determine the concept framework on green growth development policy of the Lao PDR that receive the support from the World Bank (GG-PDO), the formulation of green growth strategy and other tasks that are related to green growth;
2. Guide each Ministry to establish its Secretariat for green growth activities to enable the coordination and implementation of these activities successfully as planned;
3. The National Steering Committee for Green Growth shall receive the report from the Secretariat at least once in a year on the status on the formulation of the strategy and on the works relating to the concept framework on green growth development policy of the Lao PDR that receive the support from the World Bank (GG-PDO) for seeking direction and for preparing the report to the National Assembly in accordance with the agenda of annual report on the socio-economic development plan;
4. Participate in study tours and major meetings related to green growth.

Article 3. To appoint the Green Growth Secretariat which shall comprise the following personnel:

- | | |
|--|-------------------------|
| 1. Minister of Planning and Investment | Head of the Secretariat |
| 2. Vice Minister of Finance | Deputy-Head |
| 3. Vice-President of National Institute for Economic Research | Deputy-Head |
| 4. Vice Minister of Planning and Investment | Deputy-Head |
| 5. Vice Minister of Natural Resources and Environment | Member |
| 6. Vice Minister, Deputy-Chief of Cabinet of Prime Minister’s Office | Member |
| 7. Vice Minister of Agriculture and Forestry | Member |
| 8. Vice Minister of Public Works and Transport | Member |
| 9. Vice Minister of industry and Commerce | Member |
| 10. Vice Minister of Energy and Mines | Member |
| 11. Vice Minister of Science and Technology | Member |

Article 4. The Green Growth Secretariat shall have the rights and duties as follows:

1. Guide and define the direction of the research on policies relating to green growth and ensure its completion with high efficiency, effectiveness and in conformance with the actual requirements of the national socio-economic development in each period;

2. Study the legal instruments; monitor the indicators in the green growth monitoring and evaluation framework and the system of reporting from the Secretariat Support Committee on a regular basis before reporting to the National Steering Committee in each period;
3. Prepare the operations plan and budget plan of green growth activities in detail and in conformance with the actual situation;
4. Perform other functions as assigned by the National Steering Committee for Green Growth.

Article 5. To appoint the Support Committee to the Green Growth Secretariat which shall comprise the following personnel:

- | | |
|--|------------|
| 1. Director General of Department of Planning,
Ministry of Planning and Investment | Chief |
| 2. Deputy Director General of Department of International Finance,
Ministry of Finance | Vice-Chief |
| 3. Deputy Director of Training and Information Center,
National Institute for Economic Research | Vice-Chief |
| 4. Deputy Director General of Department of Planning & Cooperation,
Ministry of Natural Resources and Environment | Member |
| 5. Deputy Director General of Department of Planning & Cooperation,
Ministry of Agriculture and Forestry | Member |
| 6. Deputy Director General of Department of Planning & Cooperation,
Ministry of Public Works and Transport | Member |
| 7. Deputy Director General of Department of Planning & Cooperation,
Ministry of Industry and Commerce | Member |
| 8. Deputy Director General of Department of Economics,
Prime Minister's Office | Member |
| 9. Deputy Director General of Cabinet, Ministry of Energy and Mines | Member |
| 10. Deputy Director General of Department of Planning & Cooperation,
Ministry of Science and Technology | Member. |

Article 6. The Support Committee to the Green Growth Secretariat shall have the rights and duties as follows:

1. Conduct research, collect information, coordinate with sectors and local level, domestic and foreign organizations for the preparation and implementation of the green growth activities in accordance with the direction of the Steering Committee and the Secretariat Committee and in an efficient, effective and timely manner;
2. Identify and conduct research on necessary scientific topics that can be used as information for the formulation of policies and for the implementation of the green growth activities;

3. Research and timely perform the works prescribed in the concept framework on green growth development policy of the Lao PDR which are supported by the World Bank (GG DPO);
4. Lead the organization of meetings, workshops and dissemination on the mainstreaming of green growth of each sector in each period and in accordance with the scope of its responsibility;
5. Prepare the operations plan and budget plan of its unit in detail and in consistence with the actual situation;
6. Perform other functions as assigned by the Green Growth Secretariat.

Article 7. All Ministries, Ministry-Equivalent Organizations, Vientiane Capital, all provinces countrywide, all relevant parties and appointed persons shall acknowledge and ensure successful implementation of this Decision.

Article 8. This Decision is effective from the date it is signed.

Prime Minister

(Signed & sealed)

Thongloun SISOULITH

Annex 4: Decision of the National Steering Committee for Green Growth No. 01/ NSCGG, dated 19 April 2017, on Appointment of the Committee for Formulation of Green Growth Strategy and Establishment of Green Growth Promotion Centre of the Lao PDR



Lao People's Democratic Republic
Peace independence Democracy Unity Prosperity

National Steering Committee
For Green Growth

No. 01/NSCGG
Vientiane Capital, 19 April 2017

Decision

on Appointment of the Committee for Formulation of Green Growth Strategy and Establishment of Green Growth Promotion Centre of the Lao PDR

- Referring to the Notification of the Government Office No. 1751/GO.DS, dated 08 December 2014, on assigning the Ministry of Planning and Investment to coordinate with the Ministry of Foreign Affairs and relevant sectors to take charge of the formulation of the green growth strategy and establishment of green growth development centre of the Lao PDR;
- Referring to the Prime Minister's Decision on Appointment of the National Steering Committee for Green Growth No. 95/PM, dated 08 December 2016;
- Referring to the Minute of the First Meeting of the National Steering Committee for Green Growth on 30 January 2017.

The Deputy Prime Minister, Chairman of the National Steering Committee for Green Growth Issues a Decision as follows:

Article 1. To appoint the Committee for Formulation of Green Growth Strategy and Establishment of Green Growth Promotion Centre of the Lao PDR which shall comprise the following personnel:

- | | |
|---|---------------|
| 1. President of National Institute for Economic Research | Chairperson |
| 2. Vice Minister of Planning and Investment | Vice-Chairman |
| 3. Vice-President of National Institute for Economic Research | Vice-Chairman |

4. Vice Minister of Natural Resources and Environment	Member
5. Vice Minister of Agriculture and Forestry	Member
6. Vice Minister of Information, Culture and Tourism	Member
7. Vice Minister of Energy and Mines	Member
8. Vice Minister of Public Works and Transport	Member
9. Vice Minister, Vice-Chief of Cabinet of Prime Minister's Office	Member
10. Director General of Department of Planning, Ministry of Planning and Investment	Member

Rights and Duties:

- Lead and guide the formulation of the green growth strategy and establishment of the green growth promotion centre and ensure that they are completed in an efficient, effective and timely manner;
- Request the National Steering Committee for Green Growth to consider and approve the draft Green Growth Strategy of the Lao PDR;
- Submit the draft Green Growth Strategy to be included in the agenda of the Government Meeting based on the approval of the National Steering Committee for Green Growth;
- Request the Prime Minister to consider and officially adopt the Green Growth Strategy of the Lao PDR based on the decision of the Government Meeting;
- Implement other tasks related to the formulation of the green growth strategy and the establishment of the green growth promotion centre.

Article 2. To appoint the Secretariat of the Committee for Formulation of Green Growth Strategy and Establishment of Green Growth Promotion Centre of the Lao PDR which shall comprise the following personnel:

1. Director General of Department of Planning, Ministry of Planning and Investment	Chief
2. Director of Economic and Social Science and Policy Research Center, National Institute for Economic Research	Vice-Chief
3. Deputy Director General of Department of Planning, Ministry of Planning and Investment	Vice-Chief
4. Deputy Director General of Department of Planning and Cooperation, Ministry of Natural Resources and Environment	Vice-Chief
5. Deputy Director General of Department of Planning and Cooperation, Ministry of Agriculture and Forestry	Member

6. Deputy Director General of Department of Planning and Cooperation, Ministry of Information, Culture and Tourism	Member
7. Deputy Director General of Cabinet, Ministry of Energy and Mines	Member
8. Deputy Director General of Department of Planning and Cooperation, Ministry Public Works and Transport	Member
9. Deputy Director General of Department of Financial Policy, Ministry of Finance	Member
10. Vice-Dean of Faculty of Economics, National University of Laos	Member
11. Vice-Dean of Faculty of Environmental Science, National University of Laos	Member
12. Director of Policy Research Center, National Agriculture and Forestry Research Institute, Ministry of Agriculture and Forestry	Member
13. Deputy Director of Training and Information Center, National Institute for Economic Research	Member
14. Chief of Division of Macroeconomic Management Planning, Department of Planning, Ministry of Planning and Investment	Member
15. Chief of Division of Training and Project Study, Training and Information Center, National Institute for Economic Research	Member
16. Chief of Division of Research on Socio-Economic Legislation System, Science and Socio- Economic Policy Research Center, National Institute for Economic Research	Member
17. Chief of Division of Science and Economic Policy Research, Science and Socio-Economic Policy Research Center, National Institute for Economic Research	Member

Rights and Duties:

- Draft the green growth strategy of the Lao PDR and ensure it is efficiently, effectively and timely completed and is consistent with the actual requirements of the socio-economic development of the country and conformed with the opinions of the relevant sectors, local level and the direction of the Steering Committee;
- Organize the consultation meetings with relevant sectors and local level to mobilize the opinions for the preparation of the draft green growth strategy of the Lao PDR to ensure extensive participation and suitability with the actual development situation of the country;
- Collect, compile and analyze the information, documents, legal instruments and issues that are concerned with the formulation and implementation of the green growth strategy of the Lao PDR;
- Provide information, opinions, explanations, answers to questions and advices relating the potentials, opportunities and challenges of the socio-economic development with green growth and sustainable orientation to the sectors and local administrations;

- Build the capacity in the mainstreaming of green growth into policies, strategies and plans for the sectors and local administrations;
- The Secretariat of the Committee for Formulation of Green Growth Strategy is entitled to request for technical supports from domestic and foreign experts;
- Coordinate and provide facilities for the implementation of activities related to the formulation and implementation of green growth strategy of the Steering Committee;
- Prepare the operations plan and budget plan for the implementation of activities related to the formulation and implementation of the green growth strategy of the Lao PDR;
- Monitor and report on the progress of the formulation of the green growth strategy and the establishment of green growth promotion centre of the Lao PDR to the higher authorities for information from time to time and after completing the project;
- Ensure the management of accounts, filing of documents and perform the disbursement of budget fund of the project in accordance with the regulations;
- Develop the magazine, website, calendar, brochures, summary of policy statement and others for disseminating and supporting the formulation of the green growth strategy and the establishment of the green growth promotion centre of the Lao PDR;
- The Secretariat of the Committee for Formulation of Green Growth Strategy is entitled to appropriately appoint the staff under their responsibility to assist in their work based on the actual requirement;
- Perform other works as assigned by the Steering Committee.

Article 3. All Ministries, Ministry-Equivalent Organizations, Vientiane Capital, all provinces countrywide, all relevant parties and appointed persons shall acknowledge and strictly implement this Decision.

Article 4. This Decision is effective from the date it is signed.

**Deputy Prime Minister, Minister of Finance
Chairman of the National Steering Committee for Green Growth**

(Signed & sealed)

Somdy DOUANGDY

Annex 5: Decision of the Government on endorsement and promulgated of NGGS No. 20/G.O, dated 31 Mar 2019,



Lao People's Democratic Republic
Peace independence Democracy Unity Prosperity

Government

No. 20 /G.O
Vientiane Capital, 31 January 2019

Decision
on Endorcement and Promulgated of National Green Growth Strategy
till 2030

- Referring to the Law of the Government No.04/NA date 6 November 2016
- Referring to the Agreement of the Government Monthly meeting No.13/G.O for November 2018 date 29 Nov 2018
- Referring to the Letter of the National Institute Economic Research No. 006/NIER, dated 17 Jan 2019;

The Government
Issues a Decision as follows:

Article 1. Endorcement and Promulgated of National Green Growth Strategy till 2030.

Article 2. Assign Ministry of Planing and Investment, National Institute Economic Research , take ownership to coordinate all Ministries, Ministry-Equivalent Organizations, and local government to explore, translate and ensure successful implementation of this Decision.

Article 3. All Ministries, Ministry-Equivalent Organizations, Vientiane Capital, all provinces countrywide, all relevant parties and appointed persons shall acknowledge and ensure successful implementation of this Decision.

Article 4. This Decision is effective from the date it is signed.

Prime Minister

(Signed & sealed)

Thongloun SISOULITH

