



Lao People's Democratic Republic
Peace Independence Democracy Unity Prosperity

Ministry of Natural Resources and Environment
(MoNRE)



**MoNRE Vision
toward 2030**

**Natural Resources
and Environment
Strategy, 10 Years
2016-2025**

15 May 2015





Acknowledgement

This 10 Years Natural Resources and Environment Strategy 2016-2025 (NRES 2025) is developed through a participatory process with an active participation from MoNRE departments and institutes, centres and key sectoral ministries including Ministry of Planning and Investment, Agriculture and Forestry, Ministry of Energy and Mines, Ministry of Public Works and Transportation, Ministry of Industry and Commerce, Ministry of Health, Ministry of Information, Culture and Tourism. This is to ensure that NRES 2025 is well-coordinated, collaborative and supporting and in line with sectoral strategies.

Therefore, special gratitude goes to the MoNRE departments, institutes, key sectoral ministries, departments, agencies and authorities for their active participation and contribution in providing data, and useful comments during the data collection and consultation process. Without this contribution the development of the strategy could not have been succeeded.

Financial and technical support from the Environmental Management Support Programme (EMSP), Finland is gratefully acknowledged. Other development partners whose views helped shape the strategy document are also thanked. Exchanges with the development partners provided useful insights.

Finally, the contribution of the consultants and MoNRE planning staffs throughout the formulation process of the strategy is much appreciated.

Message from the Minister



I am proud to present the first MoNRE's 10 Years Natural Resources and Environment Strategy, 2016-2025 (NRES 2025).

The Ministry of Natural Resources and Environment (MONRE) was established in 2011 combining departments and divisions related to natural resources and environment together to ensure sustainable management and rational use of natural resources and environment for a more prosperous

country for our children and for generations to come.

In the past, the management of natural resources and environment was not well-coordinated, collaborative and integrated. Each department and sector had its own directions and unrealistic strategic plan and targets without full consideration of existing conditions and available resources. At the same time, the growing development is the biggest challenge that Lao PDR has with regard to the management and protection of the environment and natural resources (land, water resources, forests, minerals, etc). Without adequate and sustainable planning and management of natural resource, the development will cause serious ecological and socio-economic problems and lead to irreversible damage or poverty.

In response to the challenge MoNRE has developed the 10-year Natural Resources and Environmental Strategy, 2016-2025 based on national directions and policies (National Social and Economic Development Plan, the National Strategies for Economic Development and Poverty Reduction, the IX Government Resolution and sectoral strategies) as well as on regional and global orientations and policies (Millennium Development Goals and MEAs). However the Ministry cannot succeed in implementing its strategies without ownership and active involvement of all the partners and beneficiaries in the sector.

The MoNRE strategy will support NSEDP and I fully hope that our NRES 2025 will help guiding sector actions, in an interconnected way, toward a healthier environment and more prosperous future.

H.E. Mr. Noulinh Sinbandhit

Minister of Ministry of Natural Resources and Environment (MoNRE)

Table of Contents

List of Acronyms	2
1 Introduction.....	3
2 Country Background.....	4
2.1 Geographic and Community Profile	4
2.2 Country Economy (GDP).....	5
3 Status and Issues in in the Natural Resources and Environment Sector.....	6
3.1 Land	6
3.2 Water.....	9
3.3 Forest.....	10
3.4 Bio-diversity.....	12
3.5 Minerals.....	13
3.6 Natural, historical and Cultural Heritage.....	14
3.7 Urban Environment	14
3.8 Climate Change.....	15
4 MONRE Mandate, National Legal Frameworks and Multilateral Environmental Agreements (MEAs)	16
5 Vision toward 2030 and guiding principles	19
5.1 Vision toward 2030.....	19
5.2 Principles	20
6 National Natural Resources and Environmental Strategy, 2016-2025	21
6.1 Theme 1 Sustainable Planning and Management of the Use of Natural Resources (Land, water, forest and minerals).....	22
6.2 Theme 2 Sustainable Environmental Quality Management for Green, Clean and Beautiful City and Rural Development	23
6.3 Theme 3 Strengthening capacity of Lao PDR on Climate Change Adaptation and Mitigation and Disaster Risk Reduction.....	24
6.4 Theme 4 Maintaining and Enhancing MoNRE Coordination, Cooperation and Integration with Line Sectors and Regional and International Initiatives	24
6.5 Theme 5 Building MONRE Institutional Capacity effectively, efficiently and sustainably	25
7 Strategy Implementation	25
8 Strategic Environmental Assessment (SEA).....	27
8.1 SEA Background.....	27
8.2 SEA on NRES 2016-2025	28
9 References.....	30
9.1 Legislations	30
9.2 International Conventions.....	30
9.3 Policies and Strategies on Natural Resources Uses	31
9.4 Country Background	31
10 Annexes Lao Laws.....	32
10.1 Link between Vision 2030 and Strategy 2025	32
10.2 Annex 2 Summary of NRE Legal and MEAs	39

List of Acronyms

AEC	ASEAN Economic Community
DONR	Provincial Natural Resource Environmental Office
EIA	Environmental Impact Assessment
ESIA	Environmental and Social Impact Assessment
FAP	Five Years Action Plan
INDC	Intended Nationally Determined Contributions
ISP	Integrated Spatial Planning
IT	Information Technology
IWRMP	Integrated Water Resources Management Plan
Lao PDR	Lao Peoples Democratic Republic
MEA	Multilateral Environmental Agreement
MOHA	Ministry of Home Affairs
MONRE	Ministry of Natural Resources and Environment
MRC	Mekong River Commission
NAP	National Adaption Plan
NTFP	Non Timber Forest Product
NRES	Natural Resources and Environmental Strategy
NSEDP	National Socioeconomic Development Plan
ODA	Official Development Assistance
PMIS	Personal Management Information System
REDD	Reducing Emissions from Deforestation and Forest Degradation
SEA	Strategic Environmental Assessment
SME	Small and Medium-sized Enterprises

1 Introduction

The Vision towards 2030 and the National Natural Resources and Environmental Strategy to 2025 provide a vision and strategic direction for the development and management of natural resources and environment, and to ensure sustainable social economic development, and build capacity for climate change adaptation and mitigate the risks of natural disaster. This strategy aims to achieve sustainable utilisation and management of natural resources and environment, together with improving healthy environment and wealth for all people in Lao PDR.

The process of developing the NRES 2025 was based on the coherence between related sectors that utilise natural resources and protect the environment. The process was also based on the need for sustainable socio-economic development, particularly poverty eradication ensuring maximum socio-economic benefits from natural resources utilisation, and adaption and abatement of impacts from climate change. The strategy development process employed a participatory process from related sectors, both central and local levels and consists of following five main steps:

1. Collecting and assessing the country data (demographic, social, economic and environment) to define strengths, weaknesses, and challenges in according to the characteristics of Lao PDR;
2. Collecting and assessing government policies and directions that links to natural resources and environment, ensuring a coherent strategy;
3. Collecting and assessing the MEAs rectified by the government of Laos to ensure regional and international alliances and partnerships;
4. Collecting and assessing public opinions on the use of natural resources and environmental protection from up to date media releases;
5. Conducting participatory consultation workshops at all levels applying SWOT and PTA.

The consultations have indicated that the main issue to consider in the strategy are the protection and use of natural resources for maximum social benefits, the development of cities and rural areas, local participatory on natural resources development and management, the adaption to and mitigation of climate change, strengthening of regional and international alliances and partnerships and building the required capacity in MONRE to ensure effective and efficient natural resource management, climate change adaptation and mitigation, and environmental protection.

The important issues have been converted into five themes:

1. Sustainable Management and Planning of the use of Natural Resources and Environment;
2. Sustainable Environmental Planning for City and Rural Development;
3. Strengthening capacity of Lao PDR on Climate Change Adaption and Mitigation;
4. Maintaining and Enhancing Regional and International Integration;
5. Building MONRE Institutional Capacity effectively, efficiently and sustainably;

Both the vision towards 2030 and the strategy to 2025 consist of an overall goal. The vision towards 2030 divides into 4 specific objectives and target indicators specified for each specific objective while the strategy to 2025 divides into five main themes with a specific objective which will be achieved through the implementation of strategies.

Before reaching to the MONRE Vision toward 2030 and 10 years strategy 2016-2020, Lao country profile, national legal frameworks related to natural resources and environment and Multilateral Environmental Agreements (MEAs) are summarized in this document

2 Country Background

2.1 Geographic and Community Profile



Lao PDR is located in South East Asia, in the Indochina Peninsula, and is bordered by China to the north, Vietnam to the east, Cambodia to the south, and Thailand and Myanmar to the west and north-west, respectively. Lao PDR has a total land area of approximately 236,800 square kilometers, of which 80 percent is mountainous, mostly in northern area. 20 percent of the area is flat plains along the Mekong River. The lowest altitude is 200

meters and highest is 2,880 meters. 90% of the total area is situated in Mekong river basin, and the remaining 10% are located on the eastern side of Huaphanh and Phongsaly province.

More than 50% of the population lives in the lowland plains along the Mekong river in Vientiane, Borikhamxay, Khammouan, Savannakhet, Champasak, Saravan and Attapeu provinces.

Lao PDR has a tropical climate, which is influenced by the south-east monsoon causing significant rainfall and high humidity. There are two distinct seasons: the dry season from October to May with the influence of northeasterly winds, bringing cold air and causing low

temperatures from November to January; and the rainy season from May to September influenced by the south-west monsoon, bringing moisture from the Bay of Bengal. The average annual rainfall is 1,900 mm, and 80% of precipitation falls during the rainy season and only 20% during the dry season. The average temperature is around 20°C in the north, eastern mountainous areas and the plateaus and 25-27°C in the plains (NSC 2010).

Lao PDR has three different climatic zones:

- (1) Northern mountainous areas: altitude above 1,000m, low temperatures and relatively colder than other parts during the dry season (November to January), constant changes of annual temperature compared to other areas, and with an average annual rainfall of 1,500 to 2,000 mm;
- (2) Central and southern mountainous areas: average altitude from 500 to 1,000 meters (with some peaks above 2,000 meters), situate east of central areas like Xaysomboun district, Lak Sao and Bolaven plateau in the southern provinces, and with temperatures similar (cooling to extreme cold) to the northern provinces;
- (3) Tropical lowland plains in central and southern areas: more than 50% of the population are living in the plains along the Mekong River, especially in Vientiane, Savannakhet and Champasak. (Source: Lao Statistic Bureau, 2010 and NEAP 2012).

2.2 Country Economy (GDP)

Lao PDR is on an increasingly sustainable development path. Reforms underway have helped reduce poverty and stimulate broad-based growth. The economy has expanded on average by 7.1 percent per year from 2001 to 2010, and is expected to grow by 7.6 percent per year in 2011-2015.

In 2011, Lao PDR reached a GNI per capita of US\$1,010, and, as such, moved up from its lower income status to become classified as a lower-middle income economy. At this pace, Lao PDR is on track to achieve its long term vision: to graduate from the Least Developed Country status by 2020.

Natural resources - forestry, agricultural land, hydropower, and minerals - comprise more than half of the total wealth of Lao PDR ([Reference](#)). The hydropower and mining sectors combined accounted for about one third of the country's economic growth between 2005 and 2010 ([Reference](#)). The growth in these sectors has resulted in significant increases in revenue which has translated into poverty reduction. It has also spurred progressive changes in environmental legislation.

Lao PDR is increasing its integration into the regional and global economy. It is located in one of the fastest growing regions of the world economy which has strategic importance in terms of potential for growth in cross-border investment and exports (including hydropower and mineral products) to rapidly industrializing neighboring countries. Lao PDR is a member of the Association of Southeast Asian Nations (ASEAN) and the ASEAN Free Trade Area. On

February 2, 2013, Lao PDR has officially become a full member of the World Trade Organization.

Available data suggests that, while Lao PDR made significant progress on many of the Millennium Development Goals (MDGs), one of those MDG 7 4 indicators. The achievement of these goals in Lao PDR are summarised in the table below.

MDG Table

In its Sixth National Social and Economic Development Plan (NSEDP) 2006-2010 (which is a successor to the National Growth and Poverty Eradication Strategy), the government laid out its poverty reduction strategy to meet the MDGs by 2015. It aims to foster economic growth with equity, develop and modernize the country's social and economic infrastructure and enhance human resource development.



Critical reforms towards this end are receiving priority in the Seventh NSEDP 2011-2015. The development partners including the World Bank Group (WBG), ADB, UNDP, EU, Government of Finland, JAICA, GIZ, continues to work with the government as it lays the foundations to graduate from Least Developed Country status. The World Bank Group's operations in the country are guided by the Country Partnership Strategy (CPS) for 2012 to 2016, designed in

consultation with a range of stakeholders in Lao PDR to support the Government's Seventh NSEDP and build stronger institutions for sustainable and inclusive development. (The World Bank report, 2013).

3 Status and Issues in in the Natural Resources and Environment Sector

All statements need proper and consistent intext reference

In general, Lao PDR has good environmental quality and rich natural resources compared to the ASEAN region, creating significant potential for national socio-economic growth. However, this status is challenged by rapid changes.

3.1 Land

Around 80% of the total national land area is plateaus and high mountains; of which 1/3 is 30% inclined while the remaining approximately 20% is flat area. The land management in Lao PDR is divided into eight land use categories. Three categories including agricultural land, forest and wetland are on a declining trend. The remaining five categories including

industrial, transport, cultural, national defence and security, and constructional lands are increasing.

In general, soil quality is still in good condition but agricultural lands and wetlands are degrading in some areas as a result of improper land use, excessive acquisition, poor conservation, use of chemical substances, and prolonged droughts. (Source: NEAP 2012)



The findings of agricultural land research conducted by NAFRI-MAF towards the near future indicate that climate change, especially hydrology, water factors and conversion of forests for agriculture with improper technical aspects will impose high risks of modifying the soil structure and significant ecosystems. Lao PDR currently has a total natural land area of 23,680,000 ha, of which 6,136,264 ha are fallow

forests with no tree cover due to shifting cultivation that was recently practiced by poor ethnic villagers, improper land use management and land concessions, illegal logging and increasing natural disaster phenomenon and others. The unique characteristic of this soil is well solid, small underground water activities, washout of all fertile surface soils leaving only poor nutrient sub-level during heavy rains. This type of land is located in the five Northern provinces: LPB, HP, PXL, OUX and LNT. In additions, the conversion process of fallow forests, which almost have only sand on their top-surface and laterite (gravel stones) or salted water on the sub-level, is for the agricultural purposes, for instance, 772,762 ha of fallow forests located in Utumphone, Adsapangthong and Sonbury district of Savannakhet province. Most of these areas were already converted into agricultural lands, causing the lack of surface forest coverage, destruction of soil structure, insufficiency of soil moisturizing and occurrence of laterite on the surface leading to future agricultural problems. The result of this negative development is increased global as well as local negative climate impact, loss of biodiversity and loss of generation of local livelihood. The fallow forests in Vientiane Province have salted groundwater reserves but with lots of agricultural activities, the soil would eventually be in the same situation. (Source: NEAP 2012)

In order to achieve effective land management, the Government of Lao PDR has completed the the following achievements (the 7th NSEDP Report):

- Complete drafting ມະຕິກົມການເມືອງສູນກາງພັກວ່າດ້ວຍທີ່ດິນ, draft national land policy, draft revised land law and land use master plan for fair and effective land administration;
- Complete land use planning at districts and village level in 55 districts (37.93%) and 4,608 villages (53.49%) across the country.
- Complete issuing land title of 388,611 plots, the current accooumured number of last 10 years land titles is 617,918 plots covering 1,006,579 plots;

- Complete registration of 2,633,217 land families covering 4,99 millions ha; 1,279,927 (48.61%) of the total registered land families have been entered in the database system.
- Complete data collection and database for land lease and concession of 3,066 projects covering more than 9 millions ha. MoNRE has awarded the land concession to 40 projects covering 111,036 ha with the contract value of USD 92,469,166.
- Completed development of land price assessment map in 9 provinces and 26 districts
- Completed of issuing public land right of 1,015 pieces. Transferred land to government staffs with good work performance of 463 pieces (with the value of 313.77 billions Kip.
- At present, the Lao PDR has completed the land titling of 823,000 land pieces. Currently, the annual revenue collected from land use is about 200 billion kips out of which over 100 billion is land tax (Source: MoNRE Report 2012-2013)

According to the document produced by Land Issues Working Group (2012): Introduction to Lao Land Issues Managing Land, Forests and Natural Resources Growing in Equity or Growing Inequity, some of issues related to land use in Laos are:

Concessions:

- “Informal” concessions and increasing land grabbing phenomenon
- Weak enforcement of existing rules and regulations, e.g. in relation to conducting Social and Environmental Impacts Assessments
- No accurate information available on granted land concessions
- Lack of capacity to evaluate and monitor concessions
- Participation of and consultation with affected communities are minimal

Land disputes:

- Conflicts between investment projects and affected communities are on the increase
- Lack of awareness of land rights among the impacted populations
- Limited channels and opportunities for people to raise their concerns or seek grievance redress

Land use planning and rural land tenure

- Top-down land use planning processes risk to undermine the livelihood needs of communities
- Lack of land tenure security
- Land titling programs have not fully met the objectives of assisting rural poor
- Communal land titling not yet fully introduced as an option of ownership

Village resettlement and consolidation

- Pressures on land use and confusion over land occupancy
- Risk of decreased food security of resettled populations

- Difficult to get an overview of recent and planned resettlement
- Planning development interventions becomes difficult if there is a risk that target are a becomes resettled

3.2 Water

The country is generally rich in water resources. The average annual rainfall is over 1,900 mm or 462 km³, among this 80 percent of surface water availability occurs in rainy season, while only 20 percent is available in the dry season. About 35 percent of total Mekong runoff is contributed from the Lao territory. Mekong river flows through 1,898 Km of Lao PDR with 13 tributaries, and the average annual flow is approximately 8,500 m³ per second. Groundwater information is limited in this country. Groundwater is an important source of drinking water for rural people, particularly in plateaus located far from surface water such as the South and the West of Champasack province, Xe Bang Hieng and Xe Don Plateaus. In addition, monitoring and evaluation activities on quantity and quality of groundwater have not yet carried out systematically and regularly.

The rich water resources and geography of Lao PDR provide great potential contribution to the national socio-economic development such as: irrigation, urban and rural water supply, fishery, tourism, mining, industry, transportation and others. Currently most of water use is in agricultural sector such as: irrigation, fishery, agriculture, and livestock. Water use in hydropower development is only 5 percent of the total capacity, which is equivalent to 23,000 MW (reference). Great availability of water sources provides Lao PDR good condition for transportation in rainy season. 60 percent of urban and 50 percent of rural people have access to clean water.

The total water discharge is 333,500 million cubic metres; the average annual water per capita is 54,565 cubic metres. The water consumption in Lao PDR was 4.260 million cubic metres, which accounted for 1.3 percent of its total renewable freshwater resources. The industrial water consumption is 4.0 percents, domestic 3.1 percents and agricultural 93 percents (source: FAO AQUASTAT).

Water resources are crucial for livelihood of people in the country whose majority live in rural areas, adjacent to river, marsh, stream, canal and other ecosystem. Most of people's jobs are related to water, source of food, and have income generated from water resources such as: agriculture-livestock, fishery, aquatic vegetables, bamboo shoot and others.

The utilization of water for socio-economic development in Lao PDR continues to increase, which likely imply water scarcity, impacts on water quality, human health and environment in future. At the same time, natural disasters such as flood and drought will be more exacerbated and frequent because of climate change.

Therefore it is necessary to increase roles, responsibilities, and raise capacity of organizations involved in water resource management.

Development of appropriate plans and utilization of tools are needed to guide both public and private sector investment, and to create a balance between economic development and environmental protection with the aim to reduce poverty and accomplish socio-economic development goals.

The Government agencies, international organizations and general public need greater awareness and in-depth understanding of the importance of water resources, priority areas in water resource management, and the Government's direction and decisions. Mechanisms are needed to coordinate activities and to resolve disputes on water use and other matters to ensure equity and sustainability (Draft Lao National Water Resources Strategy 2020, year 2012).

The Government of Lao PDR is applying the integrated approach, namely, integrated water resource management (IWRM) in river basin management planning. The purpose is to establish key examples of integrated water resources management practices in the lower Mekong Basin at the regional, national and subnational levels, thus contributing to more sustainable river basin management in the Lower Mekong. According to the 7th NSEDP report (2015), Lao PDR has:

- 1) Drafted and implemented the technical guideline on IWRM, conducted inventory of wetland and water resources, managed and monitored water quality and developed water quality assessment report ;
- 2) Completed establishment of 2 river basin committees : Nam Theun-Nam Kading River Basin and Num Ngum River Basin ;
- 3) Implemented the water resources management plan in the 11 priority sub-river basins including namely Nam Song, Nam Lik, Nam Pow, Nam Tone, Nam Ko, Nam Peek-Nam Suay, Nam Ting-Nam Chat, Nam Cheng-Nam Suang, Huay Cham Pee, Huay Kham Muane and Huay Nam Sai

Currently, in the major cities in Lao PDR are facing with solid waste and wastewater from community consumption (population density, hotels and restaurants, hospitals and entertainment centres). In addition, water pollution from agricultural and industry practices including mining activities is also increasing. Natural river and catchment degradation from sedimentation and soil erosion also continue, (World Bank 2014) <http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/EAP/2014/12/06/09022>.

3.3 Forest

Forest cover in 2012 stood at 9.5 million hectares or an estimated 40 percent of the area of the country. The forest cover has declined, although the rate of loss seems to have slowed from that between 1992 and 2002. Overall, the Ministry of Agriculture and Forestry calculates that the loss of forest cover is 1.4 percent per annum. The main drivers of forest degradation are unsustainable wood harvesting, a result of illegal logging, poorly regulated timber harvesting by rural households and shifting cultivation. The main contributors to

deforestation are agricultural expansion, hydropower, mining, infrastructure and urban expansion.



For effective forest management, the Government of Lao PDR classifies forest areas into three different types for preservation and development purposes. These are production, conservation and protection forests. The last two are also called the protected areas, are dedicated to conserving nature and to preserving plant and animal species. Sustainable forest

management plans are being promoted to address deforestation. The government has committed to bring all 51 production forest areas under sustainable forest management plans that apply Forest Stewardship Council standards. In 2012, 1.3 million out of 3.1 million hectares in 18 production forest areas were under sustainable forest management with approved Forest Management Plans.

The Government aims to expand the sustainable forest management into other production forest areas. The Government of Lao PDR has adopted 24 national conservation areas, and 2 biodiversity corridors which accounted for 4.7 million ha. In addition, 49 protection forest sites were also adopted by the Government in 2013 which accounted for 8.2 million ha (The Millennium Development Goals Progress Report for the Lao PDR 2013).

According to the REDD Desk (<http://theredddesk.org/countries/laos#institutional-arrangements>), Nine activities have been identified as responsible for driving deforestation and forest degradation: natural and human-induced fires; timber extraction (commercial and illegal logging and for household consumption); shifting cultivation; agricultural expansion; forestry plantations; mining; hydropower; infrastructure development; and urban expansion (Mekong Maps, 2010). Of these, wood extraction and shifting cultivation are among the most important drivers of forest degradation, and agricultural expansion and industrial plantations of deforestation (*ibid*). Annual emissions from deforestation and forest degradation are estimated at around 51 million tonnes of CO₂ (DOF, 2010).

Lao PDR has developed a number of policies that address climate change and aim for the sustainable management of the forestry sector including through targets for increased national forest cover, such as the National Strategy on Climate Change and the Forestry Strategy to the Year 2020.

REDD+ has been identified as a key mechanism to increase the national forest area. Lao PDR has been participating in international REDD+ negotiations under the United Nations Framework Convention on Climate Change (UNFCCC) to push for an agreement on REDD+ since 2007. It is engaged in several multilateral negotiating blocks, including the Association of South East Asian Nations (ASEAN), G-77 and China, and the UNFCCC's Least Developed Countries (LDCs) (DOF, 2011b). The Government supports a flexible yet internationally

binding agreement for REDD+ (DOF, 2011b). It aims to adopt fund-based mechanisms in the short-term, allowing for participation in the voluntary carbon market (DOF, 2010). However, it intends to use compliance markets in the longer term once international protocols have been agreed (*ibid*).

Lao PDR is being supported in its preparations for REDD+ implementation by the Forest Carbon Partnership Facility (FCPF), the Forest Investment Programme (FIP), and most recently the UN-REDD Programme (since 2012). It was one of the first 14 countries to become a REDD+ country participant under the FCPF in July 2008 and its REDD Readiness Preparation Proposal (R-PP) grant was requested and signed in October 2009. The R-PP was subsequently developed and a final version accepted by the FCPF Secretariat in late 2011. The R-PP funding was closed in March 2013 and the REDD Readiness grant is expected to be signed in mid-2013 (FCPF, 2013). Lao PDR was selected as a pilot country by the FIP in June 2010 and its FIP investment plan was approved by the FIP sub-committee in October 2011.

As well as these broader programmes, various other bilateral and multilateral donor initiatives are providing substantial financial and technical support for the development of REDD+ in Lao PDR. There are also numerous subnational activities, including REDD+ feasibility studies and pilot projects including :

- Institutional arrangements
- Stakeholder engagement and participants
- Land tenure arrangement and carbon right
- Forest management
- Reference levels
- Safeguards
- Monitoring, reporting and verification (MRV)

3.4 Bio-diversity

Lao PDR is rich in biodiversity; however, several species are threatened with extinction. Protected Areas now cover 14.2 percent of the country's area. If the areas under provincial and district protection are added, the coverage increases to around 20.2 percent of the land area.

The drivers of deforestation and forest degradation lead to biodiversity loss. Efforts to address deforestation and environmental degradation focus on protecting forests for sustainable ecosystem services, smallholder forestry projects and participatory sustainable forest management. Community livelihoods are closely linked to forests and the participation of forest-dependent communities is consequently crucial for successful forest management as shown in the report (RAP Publication 2012/06, Making forestry work for the poor). The 2012 Presidential Decree on benefit sharing of timber revenue harvested from production forest areas will significantly increase the flow of regular revenue to these communities as well as to the local government for forest management. The role of communities is being expanded to all types of forests.



The 2004 National Biodiversity Strategy and Action Plan (NBSAP) reported an estimated 8,000 to 11,000 species of flowering plants, at least 166 species of reptiles and amphibians, 700 species of birds, with another 100 are likely to occur, and 90 known species of bats. About 500 indigenous fish species were reported to live in the Mekong and its tributaries in Lao PDR. Surveys reported 247 mammal species, including three new species:

Muntiacus truongsoneis, *Muntiacus vuquangensis* and *Pseudoryx nghinhensis*, which occur only in the Ammamite range, forming the boundary between the Lao PDR and Vietnam (Source: The National Biodiversity Strategy and Action Plan, NBSAP, 2004).

It has been reported that 44 species of mammals, 36 species of birds, 7 species of fish , 1 species of amphibians and 8 species of reptiles are threatened (Source: MONRE 2013).

3.5 Minerals

The economically important mining activities imply a number of negative social and environmental impacts if not managed well and some mining companies are operating without concessions. Lao PDR has mineral deposits, which offer potentials for exploration. More than 500 spots with extraction potentials have already been identified but there are only few activities on these sites. The mineral deposits are important for economic



development in both short-term and long-term. Previous studies illustrate many environmental and social impacts caused by mining activities. The impacts are on landscape's value, water quality, peoples living conditions, forests, biodiversity, air pollution, noise, loss of arable land as a result of the use of non-proper technologies (Source: NEAP 2012).

Lao PDR still has many unexploited mineral resources, including gold, precious stones, lead, coal, lignite, oil, iron , copper, limestone, zinc, salt and others that are important for economic development (Source : National Environment Strategy 2020).

The Government of Lao PDR has emphasized the use of mineral resources to support the national socio- economic development. There are 69 companies prospecting mineral resources in 91 activities covering 2,339,597 ha and there are 83 companies exploring mineral resources in 138 activities covering 8,057,371 ha. The Government of Lao PDR has awarded the concession to 64 companies in 99 activities covering 282,886.98 ha (Source: MONRE DGM, 2014).

3.6 Natural, historical and Cultural Heritage

Lao PDR has a long and distinguished history in South East Asia. It has beautiful natural features, such as water falls, caves and well-known historical and cultural sites, for instance the Plain of Jars, Wat Phu in Champassak Province and the world heritage site of Luang Prabang. In addition there are other cultural sites, for example That Luang Stupa and ancient town planning in Vientiane, Champassak and Bokeo (Source: National Environment Strategy 2020).



Lao PDR still has an uncovered source of natural, historical and cultural sites offering potentials for national economic development.

In general, the natural, historical and cultural sites are still in their original forms but they are confronting deterioration caused by land conversions, infrastructure development and poor restoration. Many of them were

developed as tourist attraction sites generating state revenues and incomes for local people. Meanwhile, they are confronting deterioration due to waste and dirty water caused by tourism, insufficiency of good sanitation, change of landscape, non-integrated construction planning, poor conservation awareness and information dissemination (source: NEAP 2012).

3.7 Urban Environment

In general, the urban environment is in good condition, peace and safety. However, urban cities are in rapid growth trends causing some environmental concerns such as increased migration from rural areas into cities, lack of public utilities to meet the demands, many forms of pollutants in the air, water, soil and distractions (smoke, odor, noise and color), persistent chemical residue, high temperature, dust, solid waste, dirty water, disorders of societies, absence of green landscape and public parks, and other problems.

Currently, the solid waste production in major urban areas trended to increase from 0,65 kg/person/day in 2000 to 0,69 kg/person/day in 2011 with the annual growth rate of 7,5 percent, while the annual solid waste productions increased by 0,79 percent in urban areas and 0,31 percent in rural areas (SOE, 2012).

The urban infrastructure development and management, construction of buildings and residential houses do not promote and integrate with friendly environmental and sustainable designs. The lack of energy efficiency in buildings, residential areas, public transportation with efficient fuel use, green areas and public parks, water treatment facilities and absence of urban environmental management for solid waste dumping facilities, and others do not support sustainable development. (Source: NEAP 2012).

In general the social environment in urban settings is relatively good, although the rate of population growth is quite high. Increase in industry, tourism and general urbanization is leading to rapid urban development.



Public health services are quite basic and 40% of urban population has no access to a clean water supply. There is limited drainage and sewage systems, insufficient waste water treatment, insufficient solid waste disposal sites both for household and hazardous waste. In addition there is a lack of ambient quality and emission standards for noise, air and odorous pollution. The industrial and service sectors do

not have proper mitigation measures to deal with solid waste and waste water from factories, hotels, hospitals, restaurants and others (Source : National Environment Strategy 2020).

3.8 Climate Change

Lao PDR faces significant threats from climate change, given its dependence on agriculture and natural resources. Lao PDR is subject to floods and droughts with significant impact on agriculture, forestry, water resources, health and economic growth. Impact assessments have concluded that recent regional changes in temperature have had discernible impacts on the country's physical and biological ecosystems, and that the frequency and severity of floods and droughts are on the rise.

Flooding is one of the major disasters in Lao PDR which results in significant damage to the national socio economic development. During the past decade, twenty-seven 'major' floods have occurred in Lao PDR with an average reoccurrence of every 1.5 years, as per official statistics recorded for annual events during 1966-1999, floods and droughts are the most serious disaster for the country in terms of damage costs, which US\$104,897,400- damage caused by floods; US\$ 597,700,000- damage caused by drought and for some years (1972, 1979, 1986, 1991,1991 and 1997-1999) flood and drought damage assessed together amounting to US\$ 77,654,927 (NDMO, 2000).

At the national level, Lao PDR also completed the NAPA 2009 covering the rapid assessment for 4 main sectors such as agriculture, forestry, water resource and health. The findings showed that during the past 3 decades Lao PDR had confronting the impacts caused by climate change and these included drought and flooding from 1966 to 2009. The events happen every year and they also existed twice with different severity scales. The central and southern part is the most vulnerable. From 1995 to 2009, the incident of drought and flooding occurred more frequently with the trend of increasingly serious treats. The cause was the high temperature and abnormal hot-humid weather in 1996 leading to the serious drought and flooding in many areas, and serious drought from 1998 to 2003. Furthermore,

there was wide-spread flooding in the central and southern part, flash flooding in the northern and eastern part in 1995, 1996, 2000, 2002, 2005, 2008 and Ketsana typhoon crossing the southern part of Laos in 2009. All of these events warn us about the impacts of climate change on our country as well as the Mekong sub-region countries. (Source: NESP 2012).

4 MONRE Mandate, National Legal Frameworks and Multilateral Environmental Agreements (MEAs)

The Ministry of Natural Resources and Environment (MONRE) has a mandate as a secretariat and key regulator for direct management of land, forest, water, air and biodiversity and minerals hereafter called natural resources and environment including the mandate of management of climate change, disaster, meteorology and hydrology throughout the country.

Currently, there are 4,106 government staffs in total in the sector of natural resources at central and local levels; of which 677 staffs (211 female staffs) and some volunteers working at central level; 3,429 staffs (female 840 staffs) working at local level. The government staffs with bachelor, master and PhD degree working in ministry covers 58,73% of total staffs. There are 281 staffs who are member of government party.

In order to achieve the two key mandates MONRE has the following legal frameworks support as summarised below:

1. The Constitution of Lao People's Democratic Republic Law on Environmental Protection No.29/NA, dated 18 December 2012
2. Law on Land No.4/NA, dated 21 October 2003
3. Law on Forestry No.6/NA, dated 24 December 2007
4. Law on Water and Water Resources No. 02-96, dated 11 October 1996
5. Law on Agriculture No. 01/98 NA, dated 10 October 1998
6. Law on Aquatic Animal and Wildlife No. 07/NA, dated 24 December 2007
7. Law on Fishery No. 03/NA, dated 9 July 2009
8. Law on Mineral No. 02/NA, dated 20 December 2011
9. Law on Electricity No. 03/NA, dated 20 December 2011
10. Law on Promotion of Investment No. 02/NA, dated 8 July 2009
11. Law on Investment of Government No. 08/NA, dated 26 November 2009
12. Presidential Edict on the Rate of the Land Rental and Concession Fee No. 02/PR, dated 18 November 2009
13. Disaster Risk Management
14. Hydromet laws

15. Prime Minister's Decree on Land Lease and Land Concession No. 135/PM, dated 25 May 2009
16. Prime Minister's Decree on Compensation and Resettlement of People Affected by Development Projects No. 192/PM, dated 7 July 2005
17. Prime Minister's Decree on the Protection Forest No. 333/PM, dated 19 July 2010
18. Prime Minister's Decree on the Forestry and Forest Resources Development Fund No. 38/PM, dated 21 February 2005
19. National Policy on Environmental and Social Sustainability of the Hydropower Sector in Lao PDR No. 561/CPI, dated 7 June 2005
20. National Policy on Health Impact Assessment approved under the Prime Minister's Decree No. 54/PM, dated 23 March 2006
21. Renewable Energy Development Strategy in Lao PDR approved under the Prime Minister's Decree No. 324/GOL, dated 11 October 2011
22. Agreement on the National Environmental Standards No. 2734/PMO.WREA, dated 7 December 2009
23. "EIA Instructions")

The summary of these laws and regulations can be found in [annex 2](#).

Also, the development of this strategy was based on the study of government policies and sector strategy related to natural resources and environment especially transport, mining, energy, tourism and agriculture which interlink to all dimensions of natural resources and environment management especially in the context of an evolution to green growth including:

1. 9th National Congress of the Lao People's Revolutionary Party;
2. National Growth and Poverty Eradication Strategy;
3. Draft National Disaster Management Plan 2012-2015 (2011);
4. National Environmental Strategy 2011 to 2020;
5. Agricultural Development Strategy 2011 to 2020 (2010);
6. Climate Change Strategy (2010);
7. Forestry Strategy to 2020 (2005);
8. National Biodiversity Strategy to 2020 Action Plan to 2010 (2004);
9. Renewable Energy Development Strategy in Lao PDR (2011);
10. National Socio-Economic Development Plan 2011-2015;
11. National Development Vision to 2030;
12. National Energy and Mining Strategy to 2020;
13. Land Policy and National Master Plan;
14. National Tourism Strategy to 2020;
15. National Agricultural Development Action Plan to 2015;
16. Communication, Transport, Post, and Construction Development Plan to 2020.

Strategy was developed in order to implement the Multilateral Environmental Agreements ratified by Lao PDR are as follows:

1. United Nations Framework Convention on Climate Change, UNFCCC
2. Kyoto Protocol
3. United Nations Framework Convention on Biodiversity, UNFCCC
4. United Nations Convention to Combat Desertification, UNCCD
5. Vienna Convention for the Protection of Ozone Layer, and Montreal Protocol
6. Convention on International Trade in Endangered Species of Wild Fauna and Flora, CITES
7. Stockholm Convention on Persistent Organic Pollutants
8. Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade
9. Basel Convention on Transboundary Movements of Hazardous Wastes and Their Disposal
10. Mekong Agreement
11. ASEAN framework
12. The UN Hyogo Framework For Action

The summary of these MEAs can be found in [annex 2](#).

5 Vision toward 2030 and guiding principles

5.1 Vision toward 2030

The MONRE's vision toward 2030 was developed based on the government vision for socio-economic development towards 2030, National Growth and Poverty Eradication Strategy, and the 9th National Congress of the Lao People's Revolutionary Party, and regional and international policies such as the Millennium Development Goals and MEAs: to achieve 70% of forest area/cover and graduate Lao PDR from the Least Developed Country by 2020. In order to contribute to achieve government vision towards 2030, the MONRE's vision towards 2030 focuses on:

“Making Lao PDR Green, Clean and Beautiful, based on Green Economic Growth, to ensure Sustainable Resilient Development and Climate Change”

With the following targets:

1. Make Lao PDR Green to ensure peoples livelihood, biodiversity and contribute to mitigate the global warming from greenhouse gas emission:

- 1.1. Increased forest area (cover) in the country by 70%;
- 1.2. Reserve 50% of protected and protection area for biodiversity protection and managed effectively;
- 1.3. Streets, household plots, public building areas and office areas greened with trees;
- 1.4. Promote cities larger than 100,000 people having a park available with trees and effective management system for people's recreation.

2. Make Lao PDR Clean and Beautiful to ensure good quality for Lao people:

- 2.1. Reduce water and air pollution for industries and services by 30%;
- 2.2. Protect water quantity and quality in 10 river basins to satisfy water quality and quantity standards to ensure minimum negative impact;
- 2.3. Agriculture and forestry sector has reduced the use of hazardous chemicals by 20%;
- 2.4. Reduce the waste generation in the municipal areas across the country by 30%;
- 2.5. 50% of household in the municipalities in the six priority provinces and household along the national road 13 implement proper waste separation practise;
- 2.6. Main roads and public areas in municipalities and the important tourist areas have effective and efficient clean up waste collection system;
- 2.7. Mainstream the ISP in the development and improvement of cities and rural areas.

3. Contribute to the green growth economy to achieve sustainable development and contribute to the climate change mitigation:

- 3.1. Increase the green production satisfying ISO 14001 environmental management standards every year;
- 3.2. Reduce resource consumption (water, energy and raw materials) from industry and tourist services and domestic households every year;
- 3.3. Minimise the socio-economic and environmental impact from investment projects (hydropower, mining, infrastructure, industry, industrial plantation, urban development etc);
- 3.4. Reduce the greenhouse gas emission from transport of goods and people by 20%.

4. Prepare Lao PDR for Climate Change Adaptation and Reduction of natural Disaster impact:

- 4.1. Lao people have easy and timely access to updated climate change and disaster data and information to support livelihood and socio-economic development planning ;
- 4.2. The people that live in all areas vulnerable to disaster have knowledge and good understanding and are prepared to respond and recover from disasters;
- 4.3. Reduce the risk and impact from natural disaster to livelihood, agricultural products, public and private investment.

5.2 Principles

In accordance with the Environmental Protection Law and recognised regional and international strategies, MONRE will implement the 10 years strategy on natural resources and environment based on four guiding principles including Sustainability, Partnership and Collaboration, Leadership and Transparency and Measurability.

Sustainability

MoNRE recognizes the social and economic importance of carefully balancing the use and protection of natural resources to ensure the availability or presence of natural resources for future generations.

Partnership and Collaboration

Natural resources are shared resource, and its sustainability and environmental protection is a shared responsibility in accordance with the Environmental Protection Law. To accomplishing the strategy requires the understanding and commitment by all stakeholders including all levels of government, the private sector, communities, and individual citizens.

Leadership

Creating positive change in the way we manage our natural resources will require strong leadership not only by the MONRE mandate, but by all line sectors, interested and affected parties.

Transparency

Decision making should be transparent based on evidence and open to public review.

6 National Natural Resources and Environmental Strategy, 2016-2025

The development of the 10 years National Natural Resources and Environment Strategy 2016-2025 (NRES 2025) is based on government directions and policies including National Socio-Economic Development Plan 2011-2020, the National Strategies for Economic Development and Poverty Eradication, the 9th National Congress of the Lao People's Revolutionary Party as well as on regional and global orientations and policies such as the Millennium Development Goals and MEAs. Therefore, it is very important to actively coordinate and cooperate with all the key sectors and partners at local, central, regional and international levels and involve local people in the implementation of this strategy.

In order to strive for achieving MoNRE visions towards 2030, the overall goal of the 10 years strategy is focusing on:

“In order to achieve Vision 2030 build Lao PDR Green, Clean and Beautiful, MONRE will, in cooperation with line sectors and international organisations, ensure and implement an effective and efficient natural resources management and development system to support the national economic development in the direction of green growth and achieve sustainable development”

By 2025, MoNRE's strategy on natural resources and environment aims to achieve 5 specific objectives as follows:

Objective 1 *to ensure sustainable use, management, protection and conservation of natural resources to support long term sustainable economic development*

Objective 2 *to improve the environmental quality in Lao Cities and rural areas to ensure better quality of life of Lao people*

- Objective 3** *to ensure Lao PDR is informed and prepared for adapting climate change, responding to the CC impacts (Natural Disaster) and contributing to global greenhouse gas emission reduction*
- Objective 4** *to ensure effective and collaborative implementation of MoNRE vision, strategy and action plan including MEAs related to natural resources and environment to ensure mutual benefits and to reduce cumulative and trans-boundary impacts*
- Objective 5** *to ensure MONRE has capacity to achieve the MoNRE mandate (Visions towards 2030 and goal towards 2025)*

These five specific objectives will be achieved through the implementation of following strategies

6.1 Theme 1 Sustainable Planning and Management of the Use of Natural Resources (Land, water, forest and minerals)

Objective: *to ensure sustainable use, management, protection and conservation of natural resources to support long term sustainable economic development:*

- 1.1** Sustainable, fair and integrated land use planning and management to reduce conflict in land use and support environmental quality management and sustainable use of natural resources for economic and social development in both urban and rural areas; Vision 1 Goal 1.1, 1.2 and 1.4 Vision 2 Goal 2.2 and 2.7 and Vision 3 Goal 3.3 Vision 4 Goal 4.1 and 4.3
- 1.2** Integrated water resources management to ensure the balance between the use of water resources for social and economic development, peoples livelihood and ecological system; Vision 2 Goal 2.2 and 2.7 and 3 Goal 3.3
- 1.3** Sustainable and participatory management of forest and biodiversity to ensure the forest area, access to non-timber forest products, food security, improved rural livelihood and biodiversity protection; Vision 1 Goal 1.1, and 1.2 Vision 2 Goal 2.3 and 2.7, V 3 Goal 3.2 3.3 and 4 Goal 4.1 and 4.3
- 1.4** Sustainable planning and management of the use of mineral resources to ensure maximum social benefits and minimum negative environmental impacts from mining activities in particular in affected communities; Vision 1 Goal 1.1 and 1.2, Vision 2 Goal 2.1, 2.2 and 2.7 and V 3 Goal 3.3
- 1.5** Effective and strict implementation of ISP, SEA, EIA and Cost Benefit Analyses as important tools in planning and decision making, for approving the Government Policies, Strategies, Programs and Projects for socio-economic development at central and local levels, to ensure public participation, transparent decision making, maximum

social benefits and minimum negative environmental impacts, in particular in affected communities. Vision 1 Goal 1.2 and 1.2, Vision 2 Goal 2.1, 2.2 and 2.7, and Vision 3 Goal 3.1, 3.2, 3.3 and 3.4

6.2 Theme 2 Sustainable Environmental Quality Management for Green, Clean and Beautiful City and Rural Development

Objective: to improve the environmental quality in Lao Cities and rural areas to ensure better quality of life of Lao people:

- 2.1 Promote the implementation of land use master planning and ISP in the sustainable improvement and development of cities and rural areas; Vision 1 Goal 1.4, Vision 2 Goal 2.7, Vision 3 Goal 3.3 and Vision 4 Goal 4.1, and 4.3
- 2.2 Implement legislations, standards, guidelines and mechanisms for effective and efficient pollution control and management in municipalities across the country (land, water and air) Vision 2 Goal 2.1, 2.2, 2.3, 2.4, 2.5, 2.6 and 2.8 and Vision 3 Goal 3.1, 3.3 and 3.4
- 2.3 Implement mechanisms to promote green production, initiatives and lifestyle Vision 1 Goal 1.1, 1.2, 1.3, and 1.4, V 2 Goal 2.1, 2.2, 2.3, 2.4, 2.5, 2.6 and 2.7, V 3 Goal 3.1, 3.2, 3.3 and 3.4 Vision 4 Goal 4.1, 4.2 and 4.3
- 2.4 Continue to implement education and awareness programs on environmental protection and sustainable use of natural resources, through the implementation of environmental and awareness strategies towards 2020 All Visions and Goals 1 Goal 1.4, V 2 Goal 2.5, 2.6 and 2.7, V 3 Goal 3.2 and 3.3 and V 4 Goal 4.1, 4.2 and 4.3
- 2.5 Promote the implementation of ISO14001/2004 Environmental Management System in medium and large scale industries across the country Vision 3 Goal 3.1 and 3.2
- 2.6 Promote the implementation of the 3R concept (reduce, reuse and recover) in the tourism service sector Vision 2 Goal 2.1, 2.4, 2.5 and 2.6 and Vision 3 Goal 3.2 and 3.4
- 2.7 Effective and strict implementation of EIA process as an important tools in planning and decision making, for approval of investment projects and activities (hydropower projects, mineral prospecting and exploration projects, agricultural projects, industrial projects, and other infrastructure projects) to ensure public participation, transparent decision making, maximum social benefits and minimum negative environmental impacts, in particular in affected communities and trans-boundary impact with the regions that shares natural resources. Vision 1 Goal 1.2 and 1.2, Vision 2 Goal 2.1, 2.2 and 2.7, and Vision 3 Goal 3.1, 3.2, 3.3 and 3.4
- 2.8 Engage investment projects and local based business to contribute to develop and improve the living standard and the local environmental quality in particular in the

communities where the projects and business are located Vision 1 Goal 1.4 Vision 2 Goal 2.1, 2.2, 2.3, 2.4, 2.5 and 2.6 Vision 3 Goal 3.2 and 3.3

6.3 Theme 3 Strengthening capacity of Lao PDR on Climate Change Adaptation and Mitigation and Disaster Risk Reduction

Objective: to ensure Lao PDR is informed and prepared for adapting climate change, responding to the CC impacts (Natural Disaster) and contributing to global greenhouse gas emission reduction:

- 3.1** Mainstreaming climate change adaptation and mitigation and disaster management into relevant sector policies, program and action plans Vision 3 Goal 3.4 and 4 Goal 4.1 and 4.3
- 3.2** Implement research programs to study and disseminate the updates climate change scientific data and develop maps of vulnerable and high risk disaster areas to support in policy and strategy planning, national socio-economic development plans of line sectors at central and local levels and for people livelihood; Vision 4 Goal 4.1, 4.2 and 4.3
- 3.3** Implement public awareness raising programs on climate change and related impacts to ensure the effective use of local resources, appropriate governance arrangements and community participation in CC adaptation and disaster management and prevention Vision 4 Goal 4.1, 4.2 and 4.3
- 3.4** Implement effective and efficient disaster protection and prevention measures and management system including preparedness, warning, protection, rescue, recover and rehabilitation systems, to ensure the protection and relocation of people and valuable assets in time Vision 4 Goal 4.1, 4.2 and 4.3

6.4 Theme 4 Maintaining and Enhancing MoNRE Coordination, Cooperation and Integration with Line Sectors and Regional and International Initiatives

Objective: to ensure effective and collaborative implementation of MoNRE vision, strategy and action plan including MEAs related to natural resources and environment to ensure mutual benefits and to reduce cumulative and trans-boundary impacts:

The following strategies will support all visions and goals

- 4.1** Effectively and efficiently coordinate and cooperate with line sectors (at central and local levels) and regional and international organisations, to ensure implementation of

MoNRE vision, strategy and action plan including MEAs related to natural resources and environment Vision 2 Goal 2.7, V3 Goal 3.3 V 4 Goal 4.1

4.2 Effectively and efficiently report the progress of the implementation of MoNRE vision, strategy and action plan, including MEAs related to natural resources and environment, to ensure information and data sharing for better management of shared natural resources, to reduce cumulative and trans-boundary impacts.

6.5 Theme 5 Building MONRE Institutional Capacity effectively, efficiently and sustainably

Objective: to ensure MONRE has capacity to achieve the MoNRE mandate (Visions towards 2030 and goal towards 2025)

The following strategies will support all visions and goals

5.1 Improve and develop the necessary legislations, guidelines, mechanisms and procedures for sustainable implementation of the MoNRE mandate Vision 2 Goal 2.1, 2.7, V 3 Goal 3.2, 3.3 and 3.4

5.2 Implement short and long term human resource development and management plans to ensure sufficient, efficient and competent technical staff to fulfil the MoNRE mandate.

5.3 To ensure that MoNRE has the funding sources and sufficient available budget with easy access and timely transfer of the budget to ensure fulfilment of the MoNRE mandate.

7 Strategy Implementation

In order to have effective, efficient and sustainable implementation of NRES 2025, the Ministry of Natural Resources and Environment will have to act as a central coordination and cooperation with other relevant sectors as mentioned below:

Government Sector

- Ministry of Agriculture and Forestry;
- Ministry of Energy and Mines;
- Ministry of Public Works and Transportation;
- Ministry of Education and Sport;
- Ministry of Industry and Commerce;
- Ministry of Health;
- Ministry of Information, Culture and Tourism;
- Ministry of Science and Technology;
- Ministry of Labour and Social Welfare;

- Universities and Research Institution;
- Other sectors that is relevant to natural resources and environment.

Mass Organizations

- Lao Front for National Construction;
- Women Union;
- Youth Union;

Private Sector

- Development design and production professions and industries such as architects, engineers, surveyors, landscape architects, planners and urban designers, building maintenance and construction industries.
- Financial institutions such as banks and insurance companies.
- Development Project.

Mass Media

- Lao Televisions, Radios and Newspaper.

International Organisations

- Regional and international environmental and climate change organizations.

Local Authorities

- Provincial Authority.
- District Authority.
- Village Authority.
- Villagers.

The strategies will be put into action through 2 Five Year Action Plans (FAP). The two FAPs will identify detailed projects, activities, budget and implementing sectors. Projects, activities and indicators, implementing sector, and budget of each activity and project will be defined and developed through consultation process and working directly with departments and cabinets at local level and other relevant sectors to ensure the strategy statements included in NRES can be achieved.

Budget will be prepared based on the FAP and performance assessment of the FAP will be conducted annually against the stipulated key targets and indicators set for that particular five years. At the end of each year, an Annual Report will be prepared outlining the achievement in the last twelve months and also identifying some key actions for the next year. All information about the strategy and progress of the implementation will be made available at MONRE as well as to public.

8 Strategic Environmental Assessment (SEA)

The Environmental Protection Law (EPL) No. 29/NA dated 18 December 2012, article 4 and 19, specify that all government policies, strategies, programs and plans are subject to Strategic Environmental Assessment.

The assessment shall assess if the Government Strategies will have environmental impacts that may affect social and natural environment and advice how negative impact can be reduced or positive impact can be increased including alternative solutions if required.

8.1 SEA Background

The National Natural Resources and Environment Strategy will arrange tasks and responsibilities to achieve sustainable development and improve healthy environment and wealth for all people in Lao PDR.

The strategy focus on two objectives; (1) covers involvement of all parties to support implementation of the strategy; (2) covers important coherent initiatives required by different sectors to support sustainable natural resource and environment development.

The strategy is in accordance with the Environmental Protection Law (EPL) No. 29/NA dated 18 December 2012, article 4 and 19, subject to Strategic Environmental Assessment. This assessment is a process where environmental impacts that may affect social and natural environment and possible environmental protection have been included in the development of the strategy.

A SEA shall support Policy, Strategy, Program and Plans (PSPPs) development in fulfilling these following principles:

1. Shall ensure sustainable development of economy, society and environment, including utmost benefits of people and the country.
2. Shall be consistent to the National or Provincial Socio-Economic Development Strategy and Plan, and National or Provincial Environmental Action Plan (NEAP);
3. Shall be consistent to local uniqueness and potentials for achieving sustainable development;
4. Shall clearly identify goals and scope of assessment including examinations of both positive and negative impacts or risks, and taking solution measures while implementing PSPPs;
5. Shall promote participation of organizations, local authorities and people or public involvement that may be directly or indirectly affected;
6. Strengthening institutions and technical capacity for sectors undertaking SEAs.

A SEA shall fulfil these following steps, provided that the full cycle of SEA is required:

1. Screening for significant environmental impacts;
2. Scoping;
3. Collection of baseline data;
4. Identifying impacts on social and natural environment;
5. Identifying environmental measures;
6. Recommendations for Monitoring the implementation of the PSPPs;
7. Reporting of SEAs;
8. Public hearing from person(s) directly or indirectly affected;
9. Considering of SEA reports; and
10. Finalisation of the PSPP.

The line sector shall screen the draft PSPP to identify whether the PSPP is likely to have significant negative impacts on the social or natural environment. A SEA Report shall not be required for any PSPP where it is agreed that that PSPP is not likely to have any significant negative impacts on the social or natural environment. The SEA on the NRES has been done in a participatory approach with participation of MONRE and line ministries.

8.2 SEA on NRES 2016-2025

A SEA screening has been completed with focus on initiatives in the strategy that might imply substantial impact on the social and natural environment. The assessment has been done based on the current knowledge and level of details in the strategy. It has not been possible to make an assessment of the very general initiatives related to the strategies about regional and international integration and building capacity in MONRE. These more general initiatives can be assessed when more detailed activities have been developed.

The assessment has been done as a screening of the 54 statements covering the five themes in the strategy. The SEA screening did not identify substantial negative impact from the strategy and the full ten step cycle of SEA are therefore not relevant.

Overall it can be stated that the National Natural Resource and Environment Strategy will have a general positive impact on social and environment and no major negative impact. This covers in particular the focus on green, clean and beautiful Lao cities, climate change and use of natural resources. The strategy appears well integrated with other sector ministries strategies.

The timeframe for the strategy of only 10 years is very short. The timeframe does not allow for many of the strategies to be properly implemented within the timeframe. It is suggested that the activities related to the NRES should focus on objectives that can be achieved given the budget and capacity available.

The statements on climate change adaption and mitigation support, that planning in all sectors and the related activities will work together in protecting assets and people. A precondition would be that authorities create emergency and strategic fora that can develop and maintain the governance of water flow; this should be considered, developed and implemented.

The sustainable environmental planning for city and rural development could support development of local green industries providing job opportunities in cities and rural areas and reducing movement from the country side to the cities and reducing import of foreign goods and commodities.

The strategy related to sustainable mining and mineral exploitation will support cleaner and healthier mining operation including proper rehabilitation after completion of the mining operation. It is recommended that the issue about protection and reservation of minerals should be considered in more details in order to ensure future generations.

If the NRES will not be implemented it will be much more difficult to achieve reduction of climate impact, healthy cities, positive rural development and clean water for all.

The assessment table below show how the expected impacts on different socio-economic and environmental parameters have been assessed. As mentioned above the impact has been assessed as positive (three themes) or impossible to perform until more details have been described (two themes).

The SEA should be repeated when the NRES have been turned into action programs or plans to assess the cumulative impact of those programs or plans.

9 References

9.1 Legislations

1. Constitution of Lao People's Democratic Republic No. 25/NA, dated 6 May 2003;
2. Environmental Protection Law, No.29/NA, Dated 18 December 2012;
3. Land Law, No.4/NA, dated 21 October 2003;
4. Forestry Law, No.6/NA, dated 24 December 2007;
5. Water and Water Resources Law, No. 02-96, dated 11 October 1996;
6. Agricultural Law, No. 01/98 NA, dated 10 October 1998;
7. Aquatic Animal and Wildlife, No. 07/NA, dated 24 December 2007;
8. Fishery Law, No. 03/NA, dated 9 July 2009;
9. Mineral Law, No. 02/NA, dated 20 December 2011;
10. Electricity Law, No. 03/NA, dated 20 December 2011;
11. Promotion of Investment Law, No. 02/NA, dated 8 July 2009;
12. Investment of Government Law, No. 08/NA, dated 26 November 2009;
13. Presidential Edict on the Rate of the Land Rental and Concession Fee No. 02/PR, dated 18 November 2009;
14. Prime Minister's Decree on Land Lease and Land Concession No. 135/PM, dated 25 May 2009;
15. Prime Minister's Decree on Compensation and Resettlement of People Affected by Development Projects No. 192/PM, dated 7 July 2005;
16. Prime Minister's Decree on the Protection Forest No. 333/PM, dated 19 July 2010;
17. Prime Minister's Decree on the Forestry and Forest Resources Development Fund No. 38/PM, dated 21 February 2005;
18. National Policy on Environmental and Social Sustainability of the Hydropower Sector in Lao PDR No. 561/CPI, dated 7 June 2005;
19. National Policy on Health Impact Assessment approved under the Prime Minister's Decree No. 54/PM, dated 23 March 2006;
20. Renewable Energy Development Strategy in Lao PDR approved under the Prime Minister's Decree No. 324/GOL, dated 11 October 2011;
21. Agreement on the National Environmental Standards No. 2734/PMO.WREA, dated 7 December 2009;
22. EIA Instructions.

9.2 International Conventions

1. United Nations Framework Convention on Climate Change (UNFCCC);

2. Kyoto Protocol;
3. Convention on Biological Diversity 1992; + Cartagena Protocol on Bio-safety 2004 (UNFCBD);
4. United Nations Conventions to Combat Desertification was signed in 1994 (UNCDD);
5. Vienna Convention and Montreal Protocol;
6. Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)
7. Stockholm Convention;
8. Rotterdam Convention;
9. Mekong Agreement;
10. ASEAN Cooperation on Natural Resources and Environment.

9.3 Policies and Strategies on Natural Resources Uses

17. 9th National Congress of the Lao People's Revolutionary Party;
18. National Growth and Poverty Eradication Strategy;
19. Draft National Disaster Management Plan 2012-2015 (2011);
20. National Environmental Strategy 2011 to 2020;
21. Agricultural Development Strategy 2011 to 2020 (2010);
22. Climate Change Strategy (2010);
23. Forestry Strategy to 2020 (2005);
24. National Biodiversity Strategy to 2020 Action Plan to 2010 (2004);
25. Renewable Energy Development Strategy in Lao PDR (2011);
26. National Socio-Economic Development Plan 2011-2015;
27. National Development Vision to 2030;
28. National Energy and Mining Strategy to 2020;
29. Land Policy and National Master Plan;
30. National Tourism Strategy to 2020;
31. National Agricultural Development Action Plan to 2015;
32. Communication, Transport, Post, and Construction Development Plan to 2020.

9.4 Country Background

Please provide reference list for all statements presented in the section 2 above

10 Annexes Lao Laws

10.1 Link between Vision 2030 and Strategy 2025

Overall goals

Vision Goal	Strategy Goal	Action Plan Goal
<p>“Making Lao PDR Green, Clean and Beautiful, based on Green Economic Growth, to ensure Sustainable Resilient Development and Climate Change Adaptation”</p>	<p>“In order to achieve Vision 2030 build Lao PDR Green, Clean and Beautiful, MONRE will, in cooperation with line sectors and international organisations, ensure and implement an effective and efficient natural resources management and development system to support the national economic development in the direction of green growth to achieve sustainable development”</p>	<p>“In order to achieve Vision 2030 build Lao PDR Green, Clean and Beautiful, MONRE will, in cooperation with line sectors and international organisations, ensure an effective and efficient natural resources management and development system to support the national economic development in the direction of green growth to achieve sustainable development”</p>

Link between Vision 2030 and Strategy 2025

Vision Objective 2030	Vision Target by 2030	Strategy 2025
<p>1. Make Lao PDR Green to ensure peoples livelihood, biodiversity and contribute to mitigate the global warming from greenhouse gas emission</p>	<p>1.1 Increased forest area (cover) in the country by 70%;</p> <p>1.2 Reserve 50% of protected and protection area for biodiversity protection and managed effectively;</p> <p>1.3 Streets, household plots, public building areas and office areas greened with trees;</p> <p>1.4 Promote cities larger than 100,000 people having a park available with trees and effective management system for people’s recreation.</p>	<p>Theme 1 Sustainable Planning and Management of the Use of Natural Resources (Land, water, forest and minerals)</p> <hr/> <p><i>Objective: to ensure sustainable use, management, protection and conservation of natural resources to support long term sustainable economic development:</i></p> <p>1.1 Sustainable, fair and integrated land use planning and management to reduce conflict in land use and support environmental quality management and sustainable use of natural resources for economic and social development in both urban and rural areas; Vision 1 Goal 1.1, 1.2 and 1.4 Vision 2 Goal 2.2 and 2.7 and Vision 3 Goal 3.3 Vision 4 Goal 4.1 and 4.3</p> <p>1.2 Integrated water resources management to ensure the balance between the use of water resources for social and economic development, peoples livelihood and ecological system; Vision 2 Goal 2.2 and 2.7 and 3 Goal 3.3</p> <p>1.3 Sustainable and participatory management of forest and biodiversity to ensure the forest area, access to non-timber forest products, food security, improved rural livelihood and biodiversity protection; Vision 1 Goal 1.1, and 1.2 Vision 2 Goal 2.3 and 2.7, V 3 Goal 3.2 3.3 and 4 Goal 4.1 and 4.3</p> <p>1.4 Sustainable planning and management of the use of mineral resources to ensure maximum social benefits and minimum negative environmental impacts from mining activities in particular in affected communities; Vision 1 Goal 1.1 and 1.2, Vision 2 Goal 2.1, 2.2 and 2.7 and V 3 Goal 3.3</p> <p>1.5 Effective and strict implementation of ISP, SEA, EIA and Cost Benefit Analyses as important tools in planning and decision making, for approving the Government Policies, Strategies, Programs and Projects for socio-economic</p>

Vision Objective 2030	Vision Target by 2030	Strategy 2025
		<p>development at central and local levels, to ensure public participation, transparent decision making, maximum social benefits and minimum negative environmental impacts, in particular in affected communities. Vision 1 Goal 1.2 and 1.2, Vision 2 Goal 2.1, 2.2 and 2.7, and Vision 3 Goal 3.1, 3.2, 3.3 and 3.4</p> <p>Theme 2 Sustainable Environmental Quality Management for Green, Clean and Beautiful City and Rural Development</p> <hr/> <p><i>Objective: to improve the environmental quality in Lao Cities and rural areas to ensure better quality of life of Lao people:</i></p> <p>2.1 Promote the implementation of land use master planning and ISP in the sustainable improvement and development of cities and rural areas; Vision 1 Goal 1.4, Vision 2 Goal 2.7, Vision 3 Goal 3.3 and Vision 4 Goal 4.1, and 4.3</p> <p>2.2 Implement legislations, standards, guidelines and mechanisms for effective and efficient pollution control and management in municipalities across the country (land, water and air) Vision 2 Goal 2.1, 2.2,2.3, 2.4, 2.5, 2.6 and 2.8 and Vision 3 Goal 3.1, 3.3 and 3.4</p> <p>2.3 Implement mechanisms to promote green production, initiatives and lifestyle Vision 1 Goal 1.1, 1.2, 1.3, and 1.4, V 2 Goal 2.1, 2.2, 2.3, 2.4, 2.5, 2.6 and 2.7, V 3 Goal 3.1, 3.2, 3.3 and 3.4 Vision 4 Goal 4.1, 4.2 and 4.3</p> <p>2.4 Continue to implement education and awareness programs on environmental protection and sustainable use of natural resources, through the implementation of environmental and awareness strategies towards 2020 All Visions and Goals 1 Goal 1.4, V 2 Goal 2.5, 2.6 and 2.7, V 3 Goal 3.2 and 3.3 and V 4 Goal 4.1, 4.2 and 4.3</p> <p>2.5 Promote the implementation of ISO14001/2004 Environmental Management</p>

Vision Objective 2030	Vision Target by 2030	Strategy 2025
		<p>System in medium and large scale industries across the country Vision 3 Goal 3.1 and 3.2</p> <p>2.6 Promote the implementation of the 3R concept (reduce, reuse and recover) in the tourism service sector Vision 2 Goal 2.1, 2.4, 2.5 and 2.6 and Vision 3 Goal 3.2 and 3.4</p> <p>2.7 Effective and strict implementation of EIA process as an important tools in planning and decision making, for approval of investment projects and activities (hydropower projects, mineral prospecting and exploration projects, agricultural projects, industrial projects, and other infrastructure projects) to ensure public participation, transparent decision making, maximum social benefits and minimum negative environmental impacts, in particular in affected communities and trans-boundary impact with the regions that shares natural resources. Vision 1 Goal 1.2 and 1.2, Vision 2 Goal 2.1, 2.2 and 2.7, and Vision 3 Goal 3.1, 3.2, 3.3 and 3.4</p> <p>2.8 Engage investment projects and local based business to contribute to develop and improve the living standard and the local environmental quality in particular in the communities where the projects and business are located Vision 1 Goal 1.4 Vision 2 Goal 2.1, 2.2, 2.3, 2.4, 2.5 and 2.6 Vision 3 Goal 3.2 and 3.3</p>

Vision Objective 2030	Vision Target by 2030	Strategy 2025
		<p data-bbox="1032 248 2007 368">Theme 3 Strengthening capacity of Lao PDR on Climate Change Adaptation and Mitigation and Disaster Risk Reduction</p> <hr data-bbox="1032 384 2101 387"/> <p data-bbox="1032 432 2045 544"><i>Objective: to ensure Lao PDR is informed and prepared for adapting climate change, responding to the CC impacts (Natural Disaster) and contributing to global greenhouse gas emission reduction:</i></p> <p data-bbox="1032 584 2085 695">3.1 Mainstreaming climate change adaptation and mitigation and disaster management into relevant sector policies, program and action plans Vision 3 Goal 3.4 and 4 Goal 4.1 and 4.3</p> <p data-bbox="1032 703 2078 887">3.2 Implement research programs to study and disseminate the updates climate change scientific data and develop maps of vulnerable and high risk disaster areas to support in policy and strategy planning, national socio-economic development plans of line sectors at central and local levels and for people livelihood; Vision 4 Goal 4.1, 4.2 and 4.3</p> <p data-bbox="1032 895 2085 1046">3.3 Implement public awareness raising programs on climate change and related impacts to ensure the effective use of local resources, appropriate governance arrangements and community participation in CC adaptation and disaster management and prevention Vision 4 Goal 4.1, 4.2 and 4.3</p> <p data-bbox="1032 1054 2069 1206">3.4 Implement effective and efficient disaster protection and prevention measures and management system including warning, protection, rescue, recover and rehabilitation systems, to ensure the protection and relocation of people and valuable assets in time Vision 4 Goal 4.1, 4.2 and 4.3</p>

Vision Objective 2030	Vision Target by 2030	Strategy 2025
		<p data-bbox="1032 280 2092 405">Theme 4 Maintaining and Enhancing MoNRE Coordination, Cooperation and Integration with Line Sectors and Regional and International Initiatives</p> <hr/> <p data-bbox="1032 467 2092 616"><i>Objective: to ensure effective and collaborative implementation of MoNRE vision, strategy and action plan including MEAs related to natural resources and environment to ensure mutual benefits and to reduce cumulative and trans-boundary impacts:</i></p> <p data-bbox="1032 639 1767 671">The following strategies will support all visions and goals</p> <p data-bbox="1032 711 2092 895">4.1 Effectively and efficiently coordinate and cooperate with line sectors (at central and local levels) and regional and international organisations, to ensure implementation of MoNRE vision, strategy and action plan including MEAs related to natural resources and environment Vision 2 Goal 2.7, V3 Goal 3.3 V 4 Goal 4.1</p> <p data-bbox="1032 906 2092 1090">4.2 Effectively and efficiently report the progress of the implementation of MoNRE vision, strategy and action plan, including MEAs related to natural resources and environment, to ensure information and data sharing for better management of shared natural resources, to reduce cumulative and trans-boundary impacts.</p>

Vision Objective 2030	Vision Target by 2030	Strategy 2025
		<p data-bbox="1032 280 2087 363">Theme 5 Building MONRE Institutional Capacity effectively, efficiently and sustainably</p> <hr/> <p data-bbox="1032 424 2018 491"><i>Objective: to ensure MONRE has capacity to achieve the MoNRE mandate (Visions towards 2030 and goal towards 2025):</i></p> <p data-bbox="1032 517 1771 549">The following strategies will support all visions and goals</p> <p data-bbox="1032 571 2078 683">5.1 Improve and develop the necessary legislations, guidelines, mechanisms and procedures for sustainable implementation of the MoNRE mandate Vision 2 Goal 2.1, 2.7, V 3 Goal 3.2, 3.3 and 3.4</p> <p data-bbox="1032 692 2047 804">5.2 Implement short and long term human resource development and management plans to ensure sufficient, efficient and competent technical staff to fulfil the MoNRE mandate.</p> <p data-bbox="1032 810 2007 922">5.3 To ensure that MoNRE has the funding sources and sufficient available budget with easy access and timely transfer of the budget to ensure fulfilment of the MoNRE mandate.</p>

10.2 Annex 2 Summary of NRE Legal and MEAs

Lao Legal in Natural Resources and Environment

The Constitution of Lao People's Democratic Republic is the main and the most high-ranking legislatures of Lao PDR that governs the regime in the country. The Constitution declares that Lao PDR protects and promotes the investment by all domestic economic and foreign investment with the aim of stabilizing and developing the national economy continuously and to improve the material and spiritual living conditions of the multi-ethnic people of the country. All organization and citizens bear the obligation under the Constitution to protect the environment and natural resources, including material or resources at the land surface and underground, forest, animals, water resources and an atmosphere in general.

Law on Environmental Protection No.29/NA, dated 18 December 2012

The Environmental Protection Law defines principles, regulations and measures relating to the management, monitoring, protection, control, preservation and rehabilitation of both natural environment and social environment. Based on the Environmental Protection Law, every person has commitments to protect the environment which consists of generally (i) the commitment to prevent environment against any natural or manmade events; (ii) the commit to control pollution not to exceed the national pollution and environmental quality standard; and (iii) the commitment to control and dispose of toxic chemical and waste properly.

In particular, in terms of the commitment to prevent the natural environment and social environment, it is required that the Integrated Spatial Planning, the Strategic Environmental Assessment, Initial Environmental Examination, Environmental and Social Impact Assessment or the Environmental Management of Household Business shall be conducted, prepared and submitted to Ministry of Natural Resources and Environment for their comment and, for certain circumstances, approval in the form of the certificate (for instance, the Environmental Compliance Certificate approving the Initial Environmental Examination or the Environmental and Social Impact Assessment).

Law on Land No.4/NA, dated 21 October 2003

The Land Law determines the regime on the management, protection and use of land within Lao PDR. Based on the Land Law, every parcel of land of Lao PDR is under the ownership of the national community in which the State is in charge with the centralized and uniform management of the land throughout the country. The allocation of land, however, can be granted to individuals, families and economic organizations for use, lease or concession; and foreign individuals and organizations of such person for lease or concession. The land within Lao PDR is categorized pursuant to their land-use purposes and the change of the use of land from one category to another can only be made with the prior approval of the concerned management authorities, in particular the Department of Land Management under the Ministry of Natural Resources and Environment. It should be noted, however, that the Land Law is currently under revision.

Law on Forestry No.6/NA, dated 24 December 2007

The Forestry Law determines the basic principles, regulations and measures on the sustainable management, preservation, development, utilization and inspection of forest resources and forestland. Based on the Forestry Law, natural forest and forestland is the property of the national community and the State manages those natural forests and forestlands through centralization and unity throughout Lao PDR. Every person has the duties to protect, conserve and develop the forests and forestland. Forest are categorized into 3 types under the Forestry Law, including: (i) the Protection Forest; (ii) the Conservation Forest; and (iii) Production Forests. The different classification of forest would lead to the different level of forestry activities permitted in each category of forests, ranging from the most stringent one with the highest level of approval required for the Protection Forest to the Production Forest. In addition, under the Forestry Law, a Forest Resource Development Fund is established to ensure the preservation and development of forest and forest resources effectively. It should be noted, however, that the Forestry Law is currently under revision.

Law on Water and Water Resources No. 02-96, dated 11 October 1996

The Water Law defines the principles, regulations and measures governing the sustainable management, exploitation, development and use of water and water resources within Lao PDR in sufficient quantity and of sufficient quality to satisfy the national needs as to protect the natural environment. Based on the Water Law, the Government acts on behalf of the people to manage and to evenly and equitably share the uses of the water. Individuals and organizations will only be entitled to use water and water resources for specific purposes when the concerned authority grants the relevant authorization, except for the small-scaled use for the household consumption and use without any business purposes that no prior approval is required. In addition, the Water Law also defines that the Government shall also be entitled to declare the Water and Water Resources Protected Zone within which every person shall be restricted from performing certain types of activities, except with the expressed and specific approval granted by the Government. It should be noted, however, that the Water Law is under revision.

Law on Agriculture No. 01/98 NA, dated 10 October 1998

The Agriculture Law determines the principles, regulations and measures relating to the agricultural production business to expand the national economic and also to ensure that no environmental impact or hazard will be caused. In general, any person who is permitted to conduct the agriculture business shall be obliged under the Agriculture Law not to contaminate the agricultural soil and land and shall also be obliged to protect environment. It is prescribed under the Agriculture Law that the Government allocates the particular parcel of land to be the Agricultural Land. In case that any person intends to use the designated Agricultural Land or intends to convert the Agricultural Land for other utilization purpose, such person shall get the prior approval from the Government. Also, the Agriculture Law provides the specific chapter to define about the environmental protection that anyone shall comply with during their agricultural operation.

Law on Aquatic Animal and Wildlife No. 07/NA, dated 24 December 2007

The Aquatic and Wildlife Law determines the principles, regulations and measures relating to the activities that involves the aquatic and wildlife animal to promote the sustainable reproduction, increased expansion and utilization of the aquatic and wildlife animals. Every person shall have the obligation to preserve, protect, improve and utilize the aquatic and wildlife animals pursuant to the applicable laws and shall implement all the necessary measures to prevent and mitigate any adverse impact on those animals. All of the aquatic and wildlife animals under the Aquatic and Wildlife Law are categorized into 3 types, including: (i) the prohibited aquatic and wildlife animal – any activities that will be undertaken relating to this type of animals shall be subject to prior approval of the Government; (ii) the protected aquatic and wildlife animal - this type of animal shall be subject to a specific and special management, monitoring and protection measures; and (iii) the general aquatic and wildlife animal which can be used freely; provided that the utilization of this type of animal shall be undertaken pursuant to the applicable laws and to ensure that it will not be extinguished nor it will cause any impact to the environment. Under the Aquatic and Wildlife Law, the Aquatic and Wildlife Protection Fund is also established in the same fund as the Forest and Forestry Resources Fund.

Law on Fishery No. 03/NA, dated 9 July 2009

The Fishery Law determines the principles, regulations and measures relating to the establishment, operation, management and monitoring of the fishery activities to ensure the sustainable protection, improvement and utilization of all the aquatic animals. In general, the Fishery Law defines that every person has the obligation to preserve, protect, improve and use the aquatic animal in pursuant to the applicable laws and shall have the obligation to implement all the necessary measures to mitigate any adverse impacts on the aquatic animals. Like other laws, the aquatic animals under the Fishery Law is categorized into 3 main types: (i) prohibited species – the utilization of this type of aquatic animals shall be subject to prior approval from the Government; (ii) protected species – the local administration will be the competent authority who will define this type of aquatic animals and approve the utilization of them; and (iii) general species – anyone shall be entitled to use this type of aquatic animals freely; provided that they shall ensure that they shall not be extinguished and no environmental impact will be caused. It is prescribed under the Fishery Law that the Ministry of Agriculture and Forestry, in coordination with other relevant line agencies both in the central and local level, will prepare the Fishery Strategic Plan that will define the plan relating to the management, protection and improvement of the fishery in the future.

Law on Mineral No. 02/NA, dated 20 December 2011

The Mineral Law determines the principles, regulations and measures relating to the sustainable and efficient management, protection and utilization of mines and mineral resources within Lao PDR. Under the Mineral Law, all of the mineral resources within Lao PDR belong to people of Lao PDR as a whole and is supervised centrally by the Government. Every person bears the responsibility and obligation to protect the mines and mineral resources. Based on the Mineral Law, there are 3 types of mineral resources areas categorized, including: (i) the Area Permitted for any Mining Activity; (ii) Reserved Area under which the mineral resources are reserved for specific purposes of utilization; and (iii) Restricted Area under which all of the mining activities are prohibited. The mining development phases under the Mineral Law are generally divided into (i)

the prospecting, surveying and feasibility study phase with the maximum period of 3 years with the possible extension of 2 years and in the maximum area of not exceeding 300 square kilometre; and (ii) the exploiting and processing phase with the maximum period of 20 years with the possible extension of 5 years upon approval. One of the main obligations that the mining concession holder has is to protect the national and social environments. Also, it should be noted that the Government shall be entitled under the Mineral Law to participate in the shareholding structure of the mining concession holding company if they exercise such right within the specified period of time.

Law on Electricity No. 03/NA, dated 20 December 2011

The Electricity Law determines the principles, regulations and measures relating the establishment, operation, management and monitoring of the electricity business to ensure the efficient production and operation of those electricity. Any entity who intends to operate the electricity concession business is obliged to apply for the concession from the Ministry of Planning and Investment under the following sequences: (i) entry into the Memorandum of Understanding; (ii) entry into the Project Development Agreement; and (iii) entry into the Concession Agreement. The condition precedent for the entry into the Project Development Agreement or the Concession Agreement is that the project developer shall get the approval of the Feasibility Study Report and the Initial Environmental Examination/the Environmental and Social Impact Assessment (as the case may be) from the relevant authority. The maximum concession period for the electricity concession business is 30 years from the Commercial Operation Date. The level of the approving authority of each of the power concession business will be differed depending on the production capacity of the project, ranging from District Administration to the National Assembly (at the production capacity of more than 100 MW).

Law on Promotion of Investment No. 02/NA, dated 8 July 2009

The Investment Promotion Law determines the principle, regulation and measures relating to the promotion and protection of the domestic and foreign investment. It is prescribed under the Investment Promotion Law that the State promotes the investment in every type of business sectors in any area of Lao PDR, except for the area that may impair the public security or except for the activity that will cause an adverse impact on the environment, public health or national culture. Every investor is obliged under the Investment Promotion Law to protect and improve environment, security and safety within their investment area and the neighboring community. The investments under the Investment Promotion Law are categorized into 3 types, including: (i) Concession Business under which the investment shall apply for the concession license and enter into the concession agreement with the Government as represented by the Ministry of Planning and Investment; (ii) General Business under which investment only needs to apply for the incorporation and registration from the Ministry of Industry and Commerce; and (iii) Special Economic Zone and Specific Economic Zone development which will be subject to a specific scheme and regulation. All forms of promotion, privileges and protection that will be granted to the qualified investment are prescribed under the Investment Promotion Law. Also, all the main and key obligations of the investor are prescribed therein as well.

Law on Investment of Government No. 08/NA, dated 26 November 2009

The Government Law determines the principles, regulations and measures relating to the initiation, approval, implementation, management and monitoring of the investment of the Government to ensure the compliance with the Socio-Economic strategic plan and policy with an aim to ensure that all these investments will be transparent, beneficial to the economic and society and protective to the environment. The Government Investment Law defines the type and size of each investment by the Government and prescribes the process for the approval, the implementation and the monitoring of each investment by the Government.

Presidential Edict on the Rate of the Land Rental and Concession Fee No. 02/PR, dated 18 November 2009

The Land fee Rate Edict defines the standard rate of the state land rental fee and concession fee that will be applied nationwide to any type of activity that acquires the lease or concession over the state land. The rates prescribed under the Land Fee Rate Edict are minimum rate. The actual rental fee or concession free rate will be subject to the final agreement specifically made between each person and the Government; provided that the agreed rate shall be subject to the re-assessment or evaluation every 5 years. In general, the rental fee or concession fee will be differed pursuant to the type of the operation over such parcel of land and also pursuant to the location of the land itself. The more remote and less infrastructure the land is, the less the rental fee or the concession fee will be structured and defined.

Prime Minister's Decree on Land Lease and Land Concession No. 135/PM, dated 25 May 2009

The Land Concession Decree defines the main principles relating to the state-land lease and concession. In general, if the leased or concession land is a state-owned land, the Government shall be entitled to grant the lease or concession. If the land that will be subject to the lease or concession includes the private-owned lands, a separate agreement shall be entered into between the lessee or the concessionaire with the landowner first to avoid requesting for involuntary displacement or reclamation. However, if the displacement or reclamation is unavoidable, the Land Concession Decree also prescribes the formula for the calculation of the compensation that the project developer shall pay to the affected persons. Also, the Land Concession Decree defines clearly and comprehensively the approval procedure and the approving authority for the grant of each type of concession or leased lands. Finally, the Land Concession Decree prescribes the maximum area and maximum period of time that the lease and concession can be granted for each purpose of the lease or concession. It should be noted, however, that the Land Concession Decree is under revision, along with the Land Law.

Prime Minister's Decree on Compensation and Resettlement of People Affected by Development Projects No. 192/PM, dated 7 July 2005

The Resettlement Decree defines principles, rules and measures to mitigate adverse social impacts and to compensate damages that result from involuntary acquisition or repossession of land and fixed or movable assets that consequently affect the community livelihood and income sources. The first step that every project shall undertake is to make every attempt to avoid the displacement or assets reclamation. If the displacement or reclamation is unavoidable, the main principles defined under the Resettlement Decree is that the project developer shall ensure that the project-affected persons are compensated and assisted to improve or maintain their pre-

project incomes, livelihood and living standards, and are not worse off than they would have been without the project or activity. The Resettlement Decree defines the basic requirements or entitlements that the project developer shall comply with for to ensure the project-affected rights. It is also prescribed under the Resettlement Decree that special attention should be given to the vulnerable groups, in particular the ethnic groups. The project developer shall be obliged to prepare the detailed Social Impact Assessment and the Resettlement Action Plan and submit the same to Ministry of Natural Resources and Environment's approval. It should be noted, however, that the Resettlement Decree is under revision.

Prime Minister's Decree on the Protection Forest No. 333/PM, dated 19 July 2010

The Protection Forest that will be managed, protected and conserved under the Protection Forest Decree includes the total area of 8,200,000 hectares. The Protection Forests in Lao PDR is defined under the Protection Forest Decree to be allocated and classified into 2 zones: (i) the Absolutely Prohibited Zone; and (ii) the Utilize-under-Management zone. The Protection Forest Decree defines the criteria for the determination and approval of the Protection Forest. The use of forestry products in the Protection Forest will only be permitted for the utilization of non-prohibited trees and forestry products for the family or traditional consumption. The use of land within the Protection Forest will only allowed for the natural tourism or recreation purpose in the designated areas. The Ministry of Agriculture and Forestry is delegated to take leadership role in coordinating with relevant sectors to organize the special units to be responsible for the Protection Forest.

Prime Minister's Decree on the Forestry and Forest Resources Development Fund No. 38/PM, dated 21 February 2005

The Forest and Forestry Resources Development Fund's establishment, management and monitoring are prescribed under the Forestry Fund Decree. The purpose of the Fund is to mobilize financial resources that shall be used to support and strengthen the protection of the forest, forestry land and forestry resources. Ministry of Agriculture and Forestry is the competent authority supervising the Fund through the Fund Committee. The main source of fund contributed into the Fund comes from the contribution of the investors operating the forestry activities. The utilization of the proceeds in the Fund will be spent nationwide, not specifically for certain projects or activities, depending on the determination of the Fund Committee.

National Policy on Environmental and Social Sustainability of the Hydropower Sector in Lao PDR No. 561/CPI, dated 7 June 2005

The Hydropower National Policy has been enacted by the Committee for Planning and Investment to give a clear policy on the sustainable development of the hydropower sector in Lao PDR. It is defined under the Hydropower National Policy that the sustainable development of the hydropower sector is founded on 3 important principles of: (i) economic sustainability; (ii) social sustainability; and (iii) ecological sustainability to avoid irreversible environmental impacts. This Hydropower National Policy shall be applied to the large dams that have installed capacity of higher than 50 Megawatts or have the inundating area of more than 10,000 hectares of land at their full supply level.

It should be noted, however, that the Hydropower National Policy is under revision by the Ministry of Energy and Mines.

National Policy on Health Impact Assessment approved under the Prime Minister's Decree No. 54/PM, dated 23 March 2006

Under the HIA National Policy, it is prescribed that it is of a great necessity that the Health Impact Assessment shall be conducted in parallel with the Environmental and Social Impact Assessment. It is prescribed under the HIA National Policy that all development projects that may have a potential to negatively impact the health of the people of all ethnic groups shall be obliged to conduct the Health Impact Assessment pursuant to the policy and principles specified thereunder. The Ministry of Public Health is the competent authority under the HIA National Policy to supervise and approve the Health Impact Assessment.

Renewable Energy Development Strategy in Lao PDR approved under the Prime Minister's Decree No. 324/GOL, dated 11 October 2011

The Renewable Energy Strategy has been enacted with an aim to develop new renewable energy resources which are not yet widely explored in Lao PDR to replace the non-renewable energy, including biomass energy (biofuel or biogas), solar energy, wind and small hydropower (up to 15 MW). The Government declares under the Renewable Energy Strategy that it aims to increase the share of renewable energies to 30% of the total energy consumption in 2025 and tentatively to reach 10% of the total transport energy consumption from biofuel to reduce the importation of fossil fuel. The Renewable Energy Strategy also defines a general concept of promotion and development for each of the renewable energy project as well as the financial incentives in various forms that will be provided for the investor who invests in the renewable energy business as specified under this Strategy. Ministry of Energy and Mines is the main agency responsible for renewable energy coordination. A clear implementation road map up to 2025 is also prescribed under the Renewable Energy Strategy.

Agreement on the National Environmental Standards No. 2734/PMO.WREA, dated 7 December 2009

The National Environmental Standards defines the National Environmental Standards as the basis for environmental monitoring and pollution control on water, soil, air and noise both in the sense of the ambient environmental standards and emission standards. This National Environmental Standards shall apply to any relevant persons, enterprise and organization in order to protect the environment and to control pollution in Lao PDR equally. The National Environmental Standards prescribes all the governing parameters that each person shall comply with both in general context and specific context for each specific activity or specific business sector. Ministry of Natural Resources and Environment is the competent authority who will govern and monitor the compliance of all the governing parameters defined.

It should be noted, however, that the National Environmental Standards is under revision pursuant to actual circumstance and also to be fully in compliance with the Environmental Protection Law (2012).

"EIA Instructions"

Ministerial Instruction on the Process of Initial Environmental Examination of the Investment Projects and Activities No. 8029/MONRE, Ministerial Instruction on the Process of Environment and Social Impact Assessment of the Investment Projects and Activities No. 8030/MONRE and Ministerial Agreement on the Endorsement and Promulgation of List of Investment Projects and Activities required to conduct the Initial Environmental Examination or the Environmental and Social Impact Assessment, dated 17 December 2013 (collectively referred to as the “EIA Instructions”)

EIA Instructions have been enacted to implement the Environmental Protection Law provisions relating to the environmental prevention through the preparation and conductance of the Initial Environmental Examination (IEE) or the Environmental and Social Impact Assessment (ESIA). EIA Instructions aims to ensure the uniformity in the conductance of those Environmental Impact Assessment Reports (either IEE or ESIA) and its Environmental and Social Management and Monitoring Plan. EIA Instructions define clearly which type and size of the investment projects and activities shall be obliged to conduct the Environmental Impact Assessment and in which form (IEE or ESIA). Also, EIA Instructions define clearly and distinctively what are the project developer’s obligations and what would be the role, mandate and responsibility of the Governmental Agencies, which will be led by the Ministry of Natural Resources and Environment in terms of the Environmental Impact Assessment process.

EIA Instructions cover every process and stage of the Environmental Impact Assessment, from the Screening process – the Scoping and Terms of Reference process (in case of the ESIA) – the actual Assessment and Determination process of the mitigation as well as monitoring measures – the Approval process of the Environmental Impact Assessment in the form of the issuance of the Environmental Compliance Certificate - the Implementation process of the mitigation and monitoring measures – the Review and Revision process of the mitigation and monitoring measures and the Monitoring process of the implementation of those measures.

The Multilateral Environmental Agreements ratified by Lao PDR are as follows:

United Nations Framework Convention on Climate Change (UNFCCC)

- UNFCCC was signed in 1992, which aims at achieving stabilisation of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system.
- This Convention was ratified in Laos on 4 Jan 1995, with the main obligations to provide information on emission and removals of greenhouse gases and details of the activities; and to submit national reports on implementation of the Convention to the Conference of the Parties (COP).

Kyoto Protocol

- It was signed on 1997. It is an international agreement linked to the United Nations Framework Convention on Climate Change, which commits its Parties by setting internationally binding emission reduction targets.

- It was ratified in Laos on 6 Feb 2003, with the main obligation to recognize that developed countries are principally responsible for the current high levels of GHG emissions in the atmosphere and it places a heavier burden on developed nations.

UNFCBD: Convention on Biological Diversity 1992; + Cartagena Protocol on Bio-safety 2004.

- It aims at conserving biological diversity and providing equitable sharing of the benefits arising from the utilisation of genetic resources.
- The Convention was ratified in Laos on 20 Sep 1996, with the main obligations to establish management structures; to report regularly; and to protect biological diversity from risks of living/genetically modified organisms and biotechnology.

UNCDD: United Nations Conventions to Combat Desertification was signed in 1994,

- It aims at forging a global partnership to reverse and prevent desertification/land degradation and to mitigate the effects of drought in affected areas in order to support poverty reduction and environmental sustainability.
- This Convention was ratified in Laos on 20 Sep 1996, with the main obligation to improve the living conditions for people in drylands, to maintain and restore land and soil productivity, and to mitigate the effects of drought.

Vienna Convention and Montreal Protocol

- It was signed in 1985 and 1987 respectively. The Vienna Convention acts as a framework for the international efforts to reduce the production and consumption of ozone-depleting substances. Vienna Convention does not include legally binding reduction goals for the main chemical agents causing ozone depletion. These are laid out in the accompanying Montreal Protocol which provides a timetable on which the production of the substances must be phased out and eventually eliminated.
- The Convention and Protocol was ratified in Laos on 21 Aug 1998, with the main obligations to ban ozone depleting substances; and to report annually on its production, import and export of each of the substances it has committed to address.

CITES: Convention on International Trade in Endangered Species of Wild Fauna and Flora

- It was signed in 1973, with the aim at regulating and restricting trade of species of wild animals and plants – a system of certification for imports and exports.
- It was ratified in Laos on 30 May 2004, with the main obligations to set up administrative and scientific bodies to manage the trade of endangered species; to ensure, that all relevant authorities in the country, especially the customs, are fully aware of the regulations; and to report the number of species imported/exported annually to CITES secretariat.

Stockholm Convention

- It was signed in 2001, with the aim of protecting human health and the environment by banning the production and use of some of the most toxic chemicals.

- It was ratified in Laos on 28 Jun 2006, with the main obligation is to prohibit and/or eliminate the production and use, as well as the import and export, of the intentionally produced Persistent Organic Pollutants that are listed in Annex A to the Convention (Article 3).

Rotterdam Convention

- It was signed 1998, with the aim at promoting shared responsibilities in relation to importation of hazardous chemicals.
- It was ratified in Laos on 9 Oct 2010, with the main obligations to exchange of information on a very broad range of chemicals listed on the convention; to inform other Parties of each national ban or severe restriction of a chemical; and to use proper labelling, include directions on safe handling.

Mekong Agreement

- Lao PDR is one of the partners in the Mekong Agreement on 5th April 1995, together with Thailand, Cambodia, and Vietnam the purpose to develop work programmes and strategies that best serve its mission to provide effective support for sustainable management and development of water and related resources.

ASEAN Cooperation on Natural Resources and Environment

- Lao PDR become the member of ASEAN in 1997 which consist of 9 member countries within the South East Asia region. Currently, there are cooperations on natural resources and environment such as: cooperation on forestry resources (ASOF); cooperation on mineral resources (CCOP); cooperation on environment (ASOEN); cooperation on meteorology and Hydrology and disaster under ASEAN cooperation on science and technology (AMMST); and initial cooperation on land resource under the cooperation framework on natural resources and environment, and other MEAs.

The Hyogo Framework for Action

- It is the international UN framework for disaster risk reduction, to which Lao PDR is a signatory. The post-2015 framework for DRR will be adopted in March 2015 in Sendai Japan.