

Increasing Agricultural Commercialisation and Enhancing Food Security and Nutrition in Lao PDR: A Framework for Balanced Policy Analysis, Planning and Programming



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1. Introduction

One of the challenges for the Ministry of Agriculture and Forestry (MAF) is to improve Lao farmers' and other agricultural value chain stakeholders' ability to take advantage of commercial high-value commodity production opportunities while also improving food security and nutrition for rural communities and country. Spurred-on by policy design and by benign forces of socio-economic and technological progress, Lao PDR has embarked on a path to promote the dominance of commercial, productivity and profit driven agriculture over the traditional, less productivity-oriented and less market-driven subsistence systems farming and food systems. During the ensuing transition, potentially millions of hectares and hundreds of thousands of farmers are moving from subsistence to for-cash commodity production. In the process, different resource-use, commodity ownership and management strategies as well as new investment schemes are being promoted, introduced and adopted. With increased commoditization of production, entire communities are changing their livelihood strategies and ways of life and are becoming more integrated in the expanding market economy. At the same time, Laos continues to have some of the most adverse and intransigent food insecurity and malnutrition indicators in South East Asia.

This situation calls for balanced¹ policies, approaches and programmes that promote both agricultural commercialisation and enhanced food security and nutrition. The Lao PDR national economy has been growing at a healthy pace over the past few decades. However, balancing increased agricultural commercialisation with enhanced food security and nutrition is not so straightforward for a country like Lao PDR which has many potential exacerbating factors. The exacerbating factors for enhanced food security and nutrition include: the large share (over 70%) of the labour in the agricultural sector; the still large share (over 16%) of GDP originating from agriculture; the relatively greater rate of poverty in rural areas and in agricultural sector compared to urban areas and the non-agricultural sectors; the relatively little amount of capital being generated from or invested into the agriculture sector; the very small average land holding of the farmers that are supposed to achieve these fetes – at only 1 -2 hectares per farmer; the relatively low and sometimes tenuous level of assurance of rights of ownership and/or use of land and other resources; the existence some serious threats to the sustainable management of the natural resource base; challenges in balancing ecological and livelihood functions; and many others.

The principal aim of this paper is to outline a framework for the type of enabling policy, planning and investment and operational environment in Lao PDR that is aimed at supporting and maintaining a sustainable balance between the commercialisation of agriculture and food production and the food security and nutrition goals of the Government. The paper starts off by outlining the overall general development situation, touching on the macroeconomic context of the size, growth rate and of composition of GDP, including the agriculture sector's contribution to GDP. This is followed by an

¹ "Balanced" in this and other incidences in this paper refers to a holistic perspective in which the different, sometimes neutral, sometimes complimentary and sometimes opposing elements and relationships of agricultural commercialisation AND enhanced food security and nutrition are properly identified, considered, arranged, proportioned, regulated.

outline the situation with regard to poverty and food security and nutrition; the role of the agricultural sector in meeting the overall development goals of the country; the on-going Agricultural Development Strategy to 2020 and Vision 2030 and its two core constituent programmes, namely the increased agricultural commercialisation programme and the enhanced food security and nutrition programme; and the Nutrition Sensitive Agriculture (NSA) which was initiated around 2017 in Lao PDR. The paper ends with a presentation the food systems paradigm as the central building block for policies and plans that aspire to promote a balance between increased agricultural commercialisation and the achievement of enhanced food security and nutrition.

The framework will facilitate and enable policy developers and analysts, planners and other stakeholders in the Agriculture and Rural Development Sector to identify

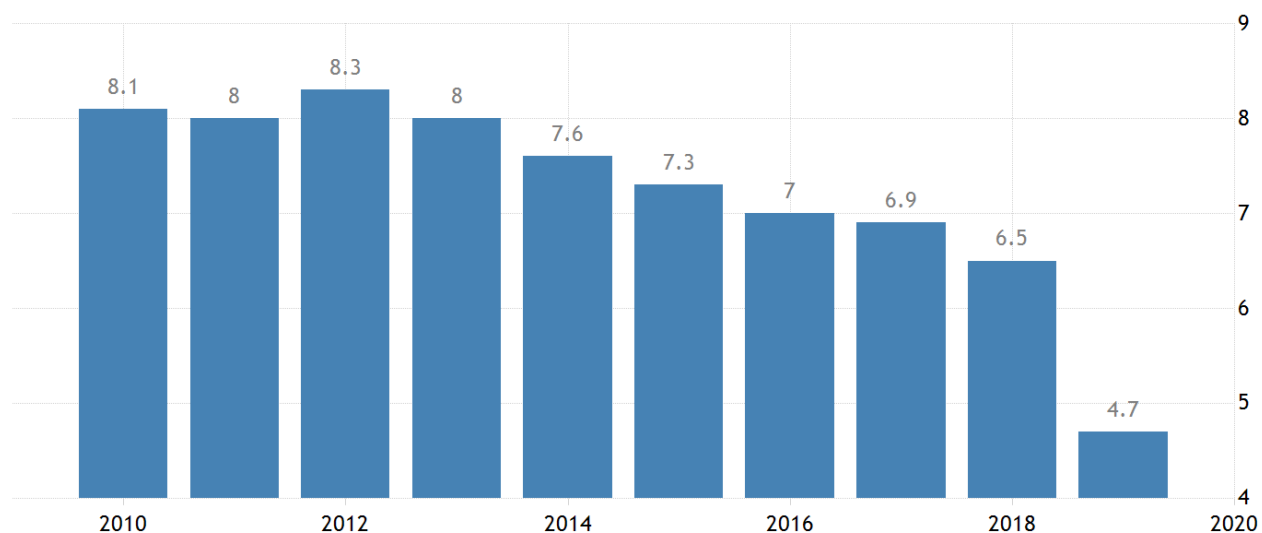
2. Situation

2.1 Macroeconomic Context

(a) Overview

Over the past two decades, Laos has experienced some of the fastest economic growth rates of any country in the world (Diagram1). From a peak of 8.3% in 2012 during the 2008-2019 period, the economy was still growing at a healthy rate of 6.5% in 2018 and 4.7% in 2019. Due to the impact of COVID-19, the economic growth rate is expected to dip to a low of 0.50% in 2020. Assuming that the COVID-19 pandemic is over by the end of 2020, the growth rate may start picking up in 2021 and be back above 5% by 2025.

Diagram 1 – Annual Growth Rate of Real GDP of Laos PDR



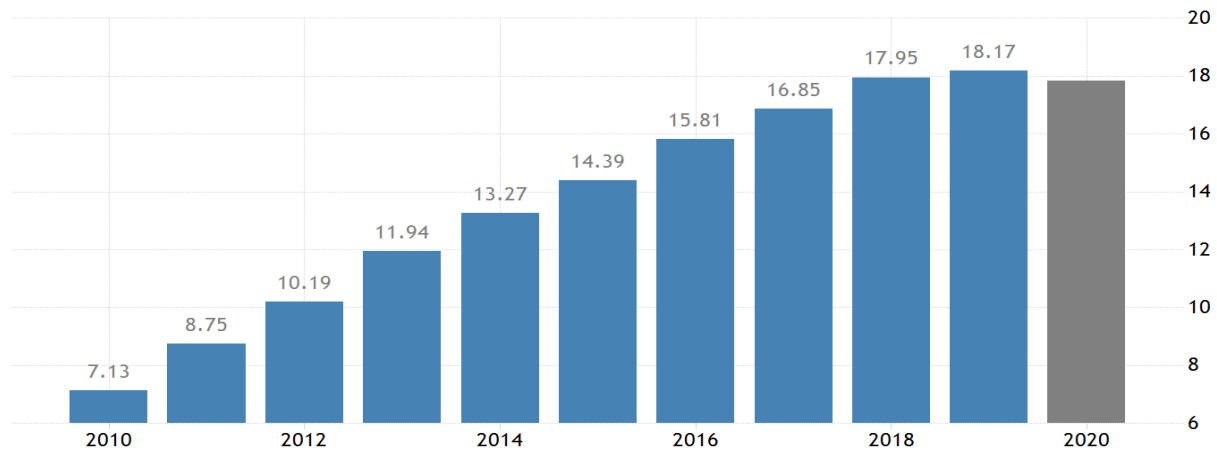
Source: *Tradingeconomic.com | The Bank of Lao PDR*

The strong economic growth has led to phenomenal positive changes in: the overall Gross Domestic Product (GDP); GDP per capita; the underlying sectoral composition of the GDP or country's output; and the rate of poverty in the country.

(b) GDP and GDP per capita

The GDP value of Laos represents around 0.02 percent of the world economy. The annual GDP of Laos from US\$ 7.13 billion in 2010 to US\$ 18.17 billion in 2019 (Diagram 2). Lao PFDR's GDP is expected experience a decline in 2020. In the medium to long-term, the Laos GDP is expected to trend upwards.

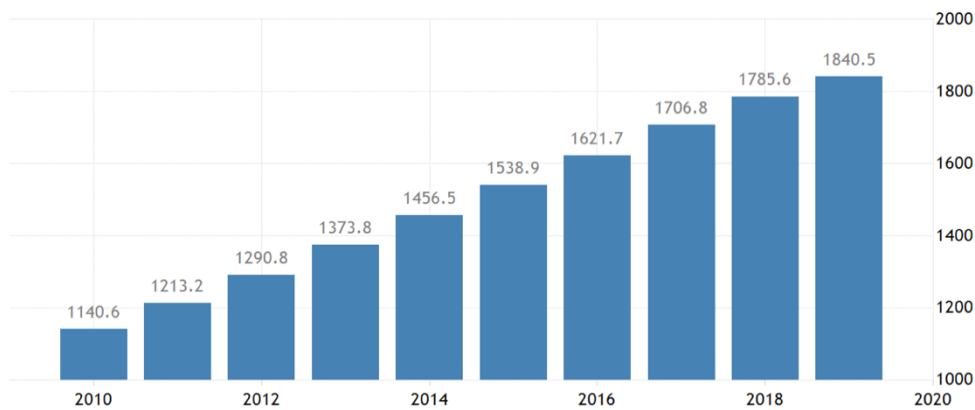
Diagram 2 – Laos GDP – 2008-2016 (Real US \$ billion)



Source: Tradingeconomic.com | The Bank of Lao PDR

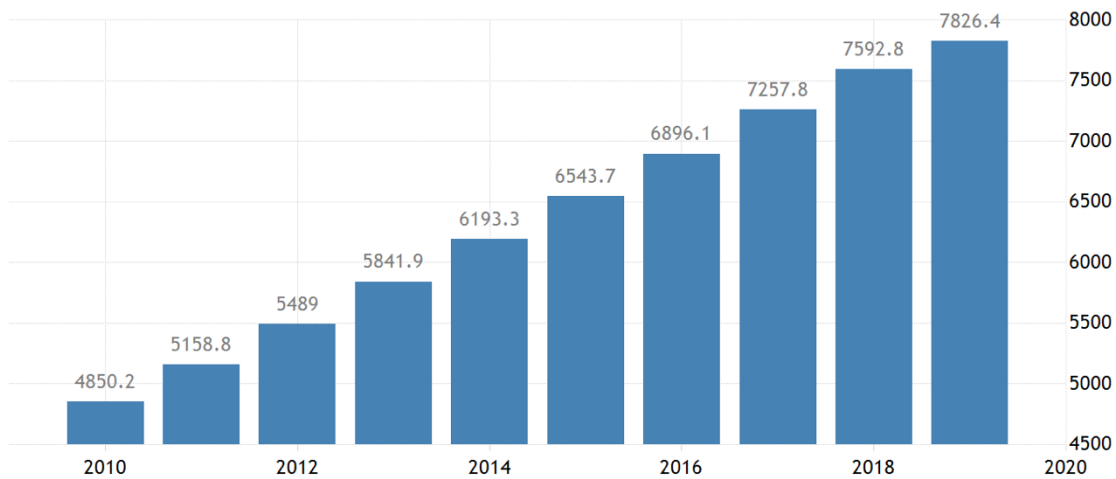
The growth of Laos's total GDP has been matched by a corresponding growth of GDP per capita for Real GDP per capita and Diagram 4 for corresponding GDP in PPP equivalent. Laos's GDP per capita has been rising steadily over the past 10 years, going from real US\$ 1,140.6 (or US\$ 4850.PPP) in 2010 to real US\$ 11,840.5 (or US\$ 7,826.4 PPP) in 2019. Real GDP per capita is expected to surpass \$2,500 in 2020 to be in 2020. Depending on other indicators of sustainable development, Lao PDR is expected to graduate from being a Least Developed Country (LDC) to be a Middle-Income Country (MIC) in 2024.

Diagram 3 – Laos GDP per capita – 2008-2016 (Current US \$)



Source: *Tradingeconomic.com* | *The Bank of Lao PDR*

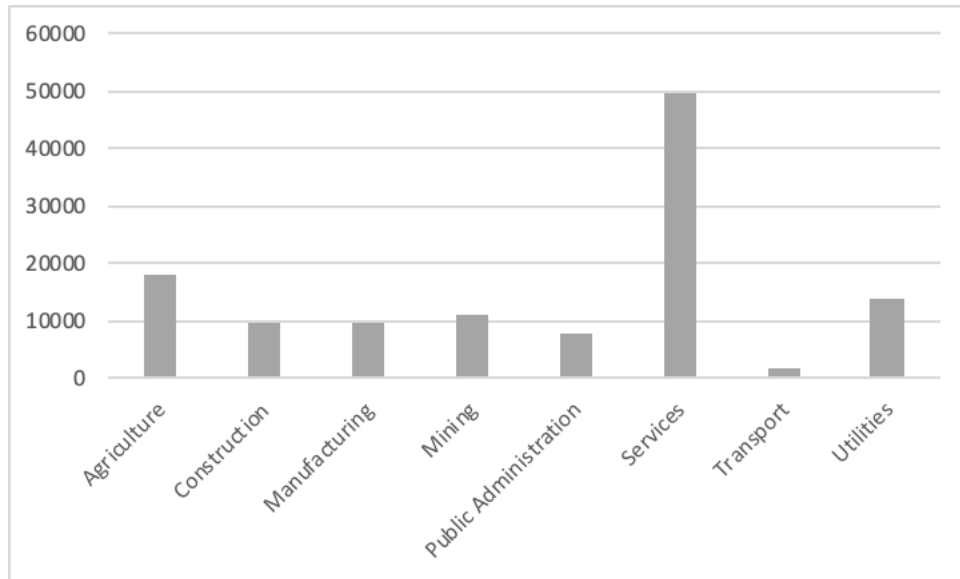
Diagram 4 – Laos GDP per capita in PPP Equivalent – 2008-2016 (PPP US \$)



(c) GDP Composition by Sector

The overall composition of Lao GDP by sector of origin in 2019 was agriculture – 15%; construction and manufacturing – 16%; mining – 9%; public administration – 7%; and other services, including transport and utilities: 53%. (Diagram 5). Laos has a basic, but improving, road system, and limited external and internal land-line telecommunications, and over 80% of households are connected to the national electricity grid. Although Laos' growth has more recently been amongst the fastest in Asia, the country nevertheless remains relatively unindustrialized and has an underdeveloped socio-infrastructure, particularly in rural areas. Most of the growth in the Lao economy has been derived from high-profile foreign direct investment in hydropower dams along the Mekong River; copper and gold mining; logging; and construction. As such, the Lao economy is heavily dependent on capital-intensive natural resource exports.

Diagram 5 – GDP by Sector – 2018 – Kip Billions

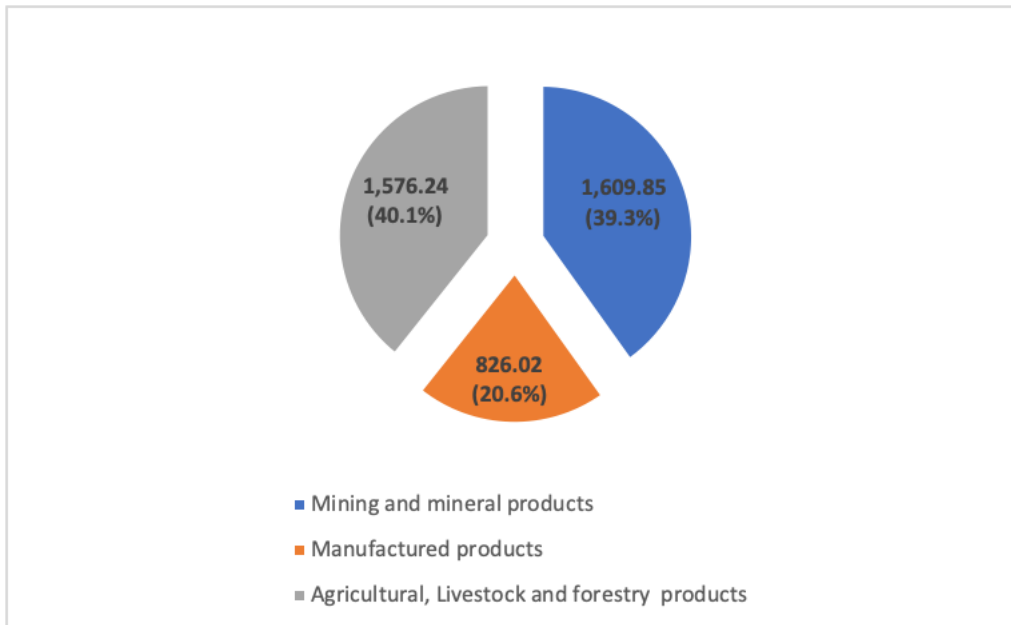


Source: Tradingeconomic.com | The Bank of Lao PDR (Reconstructed)

(d) Trade Situation

Laos gained Normal Trade Relations status with the US in 2004. The country applied for Generalized System of Preferences trade benefits in 2013 after being admitted to the World Trade Organization earlier in the year. Laos began a one-year long chairmanship of ASEAN in January 2016. Laos is in the process of implementing a value-added tax system. The government appears committed to raising the country's profile among foreign investors and has developed special economic zones replete with generous tax incentives, but a small labor pool remains an impediment to investment. Laos also has ongoing problems with the business environment, including onerous registration requirements, a gap between legislation and implementation, and unclear or conflicting regulations.

Diagram 6 – Exports of commodities and their products by major category² (US\$ million)



Source: *Tradingeconomic.com | The Bank of Lao PDR (Reconstructed) – See Annex 3 for more detailed breakdown figures.*

(e) Agriculture Sector in Transition

Until recently, Lao agriculture, which accounts for about 25% of GDP and 73% of total employment, has been dominated by wetland rice cultivation in Lowland areas, with relatively low investment and improved technologies in other crops and in the Uplands areas. Despite the high economic growth rates, the sector has remained predominantly subsistent in nature. This condition is more prominently pronounced in Upland (or Highland) areas.

The crop and livestock sub-sectors have traditionally not played a significant role in the country's foreign trade. The major traditional export products from Laos' agricultural sector have been timber, lumber, plywood, and coffee. Traditionally, the major agricultural imports have been sugar, milk, and long-grain rice. Over the past decade, more liberal policies regarding foreign and domestic investment, commerce, grant of land concessions and contract farming have been adopted. These policies, as well as underlying economic forces have contributed to major expansion of production, value addition and export of traditional commodities. Also, these policy and economic forces have contributed to the development of non-traditional commodities like rubber, cassava, sugar cane, Cavendish bananas, organic vegetables and fruits, foreign pig and cattle breeds, cage- and pond-raised fish, as well as niche commodities like cardamom, Job's tear and sesame.

² Does not include exports of electricity and services.

2.2 Poverty, Food Security and Nutrition Context

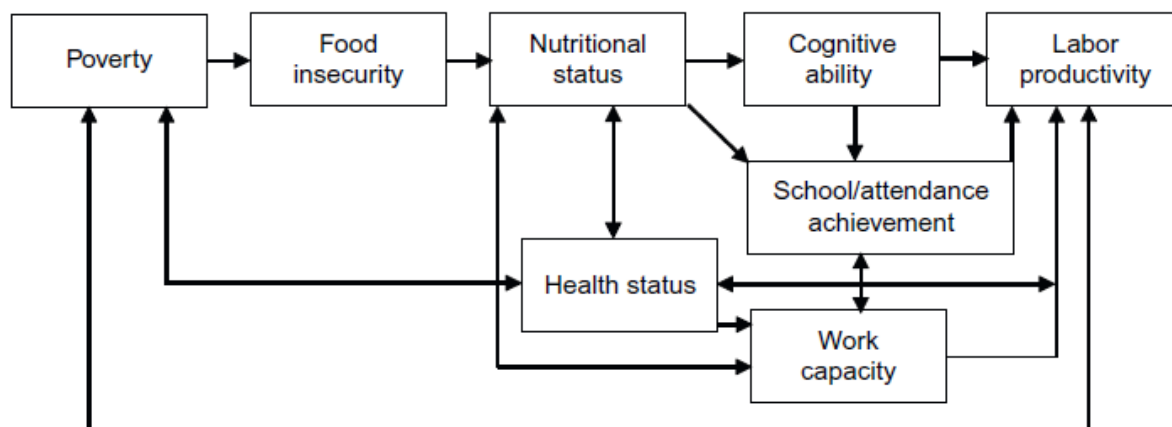
In 2017, Lao PDR was still classified as a least developed country (LDC). After Myanmar, Laos is the country with the second largest proportion of its people living below the poverty line (Table 1). Nevertheless, the country has made considerable progress in poverty alleviation over the past 2 decades. The percentage of people living below the National Poverty Line declined from 46% in 1992 to 23% in 2015. In the process, the country achieved the Millennium Development Goal (MDG) target of halving poverty. However, there is still the challenge now is to ensure that all Lao people benefit in the country's development. The proportion of employed population below US\$ 1.90 purchasing power parity a day in 2012, the majority of whom are subsistence farmers, was 59.4%, reflecting an elevated level of depth of poverty. There is much variation in poverty levels across the various geographical and socio-economic strata, including: urban (better off) vis-à-vis rural (worse-off); lowland (better-off) versus highland (worse-off) – Table 2; distance from and quality of roads; availability of services, such as health, finance and credit, education and agricultural research and extension. Diagram 7 demonstrates the interconnected of poverty, food insecurity and malnutrition, health, cognitive ability, learning outcomes and work capacity.

Table 1 – Poverty Data – Comparison of Association South East Asia Nations member countries

Country	Year	Percent (%)
Brunei Darussalam	2015	<i>N/A (Insignificant?)</i>
Cambodia	2014	14.0
Indonesia	2016	10.9
Lao People's Democratic Republic	2012	23.2
Malaysia	2014	0.6
Myanmar	2010	25.6
Philippines	2015	21.6
Singapore	2015	<i>N/A (Insignificant?)</i>
Thailand	2014	10.5
Viet Nam	2015	7.0

Source: [Basic Statistics 2017](https://www.adb.org/publications/basic-statistics-2017) – ADB - <https://www.adb.org/publications/basic-statistics-2017>

Diagram 7: Interconnectedness of poverty, food security, and nutrition.



Source: (Babu et al. 2017)

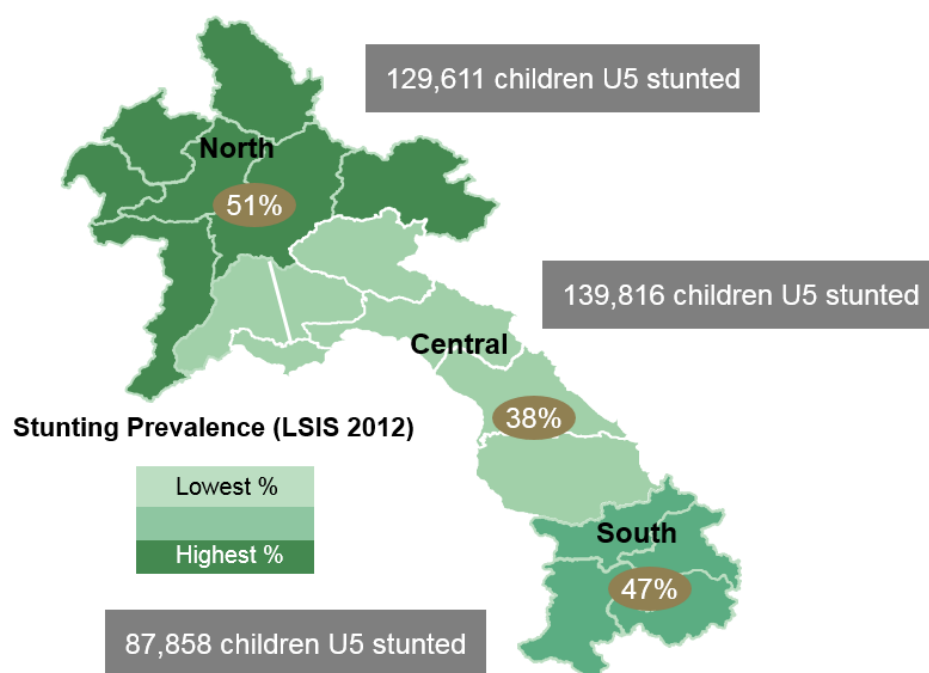
While Lao PDR has managed to reduce the proportion of hungry poor to 23 percent, the 2017 Global Hunger Index still rates hunger levels in the country as “serious”. About 25 per cent of the households are food insecure, meaning that they fall below the nationally defined minimum daily dietary energy supply per caput of 2400 kcal. In addition, many households, especially in remote areas, experience protracted periods during the year when there is no ready supply of staple food items. Malnutrition remains a major challenge. The national stunting rate for children under five year (CU5) is 46%. However, there are marked geographical and socio-economic variations. The stunting rate among CU5 is 38% in the Central Region, 47% in the South and 51% in the North (Diagram 8). By gender, stunting affects 37.6 percent of boys and 33.6 percent of girls (Lao Child Anthropometry Assessment Survey - 2015). Disaggregated by wealth index quintile, stunting rates are: Poorest – 60.6%, Second – 50.2%, Middle – 41.9%, Fourth – 31.7%, and Richest – 19.7%. Thus, even with the dramatic difference in stunting between the richest and the poorest, the rate among the richest is still abnormally high.

Table 2 – Lao PDR Poverty Data – Comparison of Main Geographical Regions, with Rural and Urban

Region	Poverty Head Count	Poverty Gap Index	Poverty Severity Index
Vientiane Capital	5.9	1.5	1.5
Centre			
- Urban	12.9	3.1	3.1
- Rural	26.9	6.0	6.0
North			
- Urban	8.9	1.5	1.5
- Rural	29.9	6.9	6.9
South			
- Urban	16.2	3.5	3.5
- Rural	32.1	8.4	8.4

Source: Lao Statistic Bureau, World Bank, et al: *Where are the Poor? – Lao PDR 2015 Census-Based Poverty Map – June 2016*

Diagram 8 – Stunting rate among children under 5 years old by Region



Source: *Laos Social and Income Survey (LSIS), 2012*

2.3 Susceptibility to Disasters and Climate Change Context

Critical Disasters

Due to the tropical setting, the country is also exposed to a range of hazards, including droughts, floods and storms. The costliest of disasters have taken place after 2009 (GFDRR, 2019). National risk profile of Lao PDR has identified seven major hazards which include the aforementioned, as well as epidemics, earthquakes and unexploded ordinances (UXOs) (NDMC, 2010). Of these, storms and flooding are most frequent occurrences during the monsoon season which runs from May to October, and most notable events include the Typhoon Ketsana in 2009 and Haima in 2011. Localized flooding has been reported in 2013, 2015, 2016 (UNDP, 2018) and most recently in 2018 during storm Son-Tinh. Major rivers such as the Mekong and Sekong flowing through the country contribute to these flood hazards as a significant number of settlements are located on the flood plains. There was a decline in rice yields and harvest in 2018 due to extensive flooding in the South and again in 2019 due to drought in the North. This situation was exacerbated by locust and Fall Army Worm infestations that, respectively, started in 2015 and 2018 and are on-going. Although there has been enough rice in the country to go around, it has been at a higher price, and there are pockets in the country that may be facing rice deficits. Livestock production was affected by African Swine Fever that broke out in 2018.

Climate Change

Due to its low adaptability and its dependence on climate-sensitive natural resources Laos is the world's 73rd most vulnerable country to climate change. As such, climate change is a key challenge facing rural livelihoods. Changing climate patterns, combined with poor access to both markets and diverse livelihoods, further worsen the situation in remote upland areas, where 25 percent of households are food insecure.

COVID-19

Starting in early 2020, the country was severely impacted by the global COVID-19 pandemic. The whole country was in lockdown from 29 March to 03 May 2020. Offices and businesses were suspended, meetings were banned or limited to very few attendees. Movement within the country was curtailed, except for essential services, and international borders were closed. Early and effective containment measures (with only 20 cases of infection and no deaths as at end-July 2020) ensured that COVID-19 an economic crisis not a health one in Lao PDR. The overall economy stopped growing. At least 350,000 or 10% of the labour force were put out of job. The collapse of tourism directly led to unemployment of 50,000 people and loss of over 10% of the GDP. The closure of factories created another 100,000 workers. Over 200,000 Lao labourers returning from Thailand added to a collapse of remittances, unemployment and poverty. It is estimated that, in 2020, instead of a national GDP growth rate of around 6%, the growth rate will be close to zero, and the climb back robust growth will be a slow one.

Coming on top of the aforementioned problems caused by flooding, drought, pestilences and African Swine Fever, COVID-19 presented the agriculture with two additional main problems. One, there was a reduction in domestic demand that was mostly due to the stoppage in tourism arrivals and closing of

hotels, restaurants and other establishments; the total scaling back of New Year and other celebrations; and the overall reduction in income and purchasing power due to unemployment. In particular, the price of vegetables in the urban markets declined by as much 50%, posing a very serious challenge to the Government and growers' efforts to establish and maintain standards for green and organic agriculture. Two, there were some disruptions in the transportation and distribution mechanisms. A slowing down of exports and spoilage of produce, especially of perishables like bananas, watermelon and beans to China caused loss of income for farmers and others in the supply chain. Imports of inputs like seeds, fertilisers and pesticides from neighbouring countries were affected but are expected to resume soon.

Thus, the pandemic is a serious unanticipated challenge to Lao PDR's ambitious hopes for alleviating food insecurity and malnutrition while building up exports of crop and livestock products and accessing inputs in the ASEAN region and beyond.

Mitigation

To tackle the emerging threats, the government has incorporated disaster and climate risk management into policies, institutions and national development plans to enhance resilience of various sectors, including in agriculture and environment, housing and transport (GFDRR, 2019), and has strived to mainstream elements of disaster risk reduction and climate change adaptation activities across national development. With support from development partners, the Government is developing a COVID-19 response plan.

2.4 Socio-Economic Development Policy and Planning Context

(a) Eighth National Socio-Economic Development Plan (8th NSEDP) 2016 – 2020

National Development Goal

The *Eighth National Socio-Economic Development Plan 2016 – 2020* (8th NSEDP) contains the apex national socio-economic development policy of Lao PDR for the years 2016 -2020. The overarching goal of the 8th NSEDP is to graduate from Least Developed Country (LDC) Status to Medium Income Country (MIC) Status by 2020. The 8th NSEDP lays down a target to achieve Middle Income Country (MIC) status by the Year 2020. This is equivalent to a projected per capita income of around Kip 17.00 million or US \$ 2,100 in that year. It is anticipated that by 2020, GDP per capita will be have exceeded amount. The immediate premise for the achievement of MIC Status is the emergence of a sustainably prosperous economy in which both the total gross national income (GNI) and the GNI per capita maintain healthy rates of growth year after year. Hence, the GOL has framed the overall directions of the 8th NSEDP to be in line with the global Sustainable Development Goals. These 8th NSEDP directions, thus, entail:

- 1) **Ensuring continued economic growth** with quality and macro stability; budgeting goes hand in hand with development targets and is consistent with the new environment of industrialization and modernization.

- 2) **Ensuring sustainable development** by bringing together economic development, socio-cultural development and environmental protection; being prepared to handle natural disaster in a timely manner; ensuring integrated rural development and poverty reduction.
- 3) **Strengthening human resources capacity** by improving workforce skills, encouraging more discipline and tolerance; increasing the number of technical experts and specialists; enhancing technical and professional capacity of civil servants, private sectors and entrepreneurs to be able to compete within country and abroad;
- 4) **Maintaining political stability**, together with the accompanying facets of peace, and social order, solidarity, democracy, justice and civilization values embedded in the society; and
- 5) **Actively continuing to widen international cooperation** in line with the Vientiane Declaration principles and for the benefit of all citizen and enhancing favorable conditions for regional and international integration.

In November 2017, GOL outlined and issued the detailed criteria for Lao PDR to graduate from Least Developed Country (LDC) to Middle Income Country (MIC) Status in 2020 via Prime Minister Decree No. 348 of 16 November 2017 (GOL, 2017-1).

Role of the Agricultural Sector and MAF in Achieving National Development Goal

The Ministry of Agriculture and Forestry (MAF) is a central development Ministry of the Government of Lao PDR (GOL). It has a mandate that is critical to the achievement of such a vision of sustainable development. In this regard, MAF has core roles to play in the formulation of policies and law and rules as well the planning, implementation and monitoring of nationally important programmes that are outlined in the 8th NSEDP. These include:

- **Food production** – Ensure nutrition and food security to be sufficient for both rural farming and urban people, by supporting: expansion of rice farming areas; provision of water for irrigation for production areas; production other field, horticultural, and home garden crops to ensure a diversified diet; production of meat, dairy, eggs and aquaculture items.
- **Commercial production** – Strive to expand production of more and higher quality crop and animal/livestock commodities for sale in expanding domestic export markets for fresh and processed items.
- **Forestry and forest resources management** – Pay attention to and support restoration of forestry resources as they are vital component of the upkeep of the richness natural resources base and ecosystems.
- **Rural industries, services and livelihoods** – Promote variety of value-addition goods production and services in rural area to reduce the reliance on natural resources, including: processing of local commodities as well as commodities imported from other places, and agri- and culture-based tourism.
- **Harmonized production chain among large enterprises and small and medium enterprises** – Promote through technical assistance; supporting cooperation and coordination with SME-

supporting international organizations; research and development finance; feasibility studies; and other methods.

- **Domestic and foreign investment** – Promote investment in focused areas, including: creation of facilitating environment to attract investment; inspection, assessment of agricultural and other projects in agricultural / rural areas; building capacity for officials in enterprise registration in industry and commerce sector; and other initiatives.

The 8th NSEDP clearly spells out the future direction of the Lao agriculture sector. The future is defined in terms of loosening the strangle-hold of subsistence production, replacing the latter with for-cash production, and achieving adequate levels of food security and nutrition. This is to principally be achieved through expansion of commercial investment in the agricultural sector, increasing yields and production, and increasing domestic and foreign marketing, trade and exports and consumption of agricultural commodities. The 8th NSEDP contains specific directives and targets on how to achieve increased food supply and agricultural commercialisation (Box 1). Increased commercial rice production, particularly in the Central Lowlands areas, forms the core focus of the NSEDP's directives and targets for the agriculture sector. This is highlighted in the 2012 Rice Policy Study (FAO, World Bank and IRRI, 2012). At the same time the directives and targets do cover the production, trade and consumption of other crop and animal food products.

Box 1 – 8th NSEDP Directions and Targets on Food Supply Production and Commercialisation

Direction

Develop firm and sustainable agriculture and forestry sectors. Continue allocating land for agriculture and production to secure food and commercial production; increase the potential agricultural production of each locality using clean and organic agriculture, and promote intensive agriculture using modern and high-quality techniques. Improve farmer productivity by establishing farm production, production groups, enterprises and the family model using modern techniques and technology in production to ensure the supply of agricultural products as inputs to processing industries and services quantitatively and qualitatively in order to add value to the products. Continue to focus on sustainable recovery, management, protection of forests and forest resources to ensure that Lao PDR is green and sustainably developed.

Targets

Food Supply Production

- Ensure sufficient food supply and nutrition of each kind for all the population.
- Follow the government direction that 10 provinces will focus on rice production (Luang Namtha, Bokeo, Sayabouly, Vientiane, Vientiane Capital, Bolikhamxay, Khammouane, Savannakhet, Saravan and Champasak) to achieve 2.5 million tons by 2020 on an area of 600,000 ha, of which 2.1million tons is for domestic consumption and 400,000 tons for reserves. Extend irrigated water supply from the 315,374 ha currently covered to 476,012 ha by 2020, yielding 4–5 tons per ha. This can supply the people's

consumption of about 2,600–2,700 kcal per person per year, contributing to the nutrition intake of the people (rice, flour, meat, fish, eggs and dairy).

- Ensure average consumption of meat, fish and eggs per capita achieves 65 kg per person per year.
- Produce sweet corn of approximately 228,000 tons, potatoes and starch roots of about 304,000 tons, fruit trees yielding 800,000 tons and vegetables of 1.5 million tons.
- Produce 258,000 tons per year of meat and eggs and 229,500 tons of fish and aquatic animals.
- Increase livestock by 6 percent per year and fishery and aquatic animal breeding by 8–10 percent per year.

Commercial Crop Production

- Strive to increase agricultural goods production quantitatively and qualitatively to meet the domestic processing factories and exports.
- Produce rice for export of 1–1.5 million tons and 500,000–600,000 tons for the processing industry.
- Other crops: produce corn for animal feed of 1.3 million tons; coffee, 120,000 tons; sugar cane, more than 2 million tons; cassava, 1.5 million tons; yellow beans, 50,000 tons; Job’s tears, 213,150 tons, and others. Apart from these, efforts must be put into producing advantageous crop products.
- Livestock Raising: transform natural livestock to farming to generate cattle to 30 percent of total production. Focus on cattle breeds raising and improve it to produce more commercial cattle for sufficient domestic supply and export of cows and buffaloes to neighbouring countries, to yield a meat weight of at least 10,000–15,000 tons equivalent in 2020. To promote commercial livestock, increase fodder and feed products by actively promoting production with a variety of quality grass types for demonstration and use as input for producing animal feed.

Source: Government of Laos PDR [GOL] (2016-1): **8th FIVE-YEAR NATIONAL SOCIO-ECONOMIC DEVELOPMENT PLAN (2016–2020)**, page 99

(b) Agriculture Sector and Food Security and Nutrition Strategies

Agricultural Development Strategy to 2025 and Vision to the Year 2030

These achievement of the NSEDP’s expectations for the agriculture sector is the responsibility of MAF at the centre, Provincial Agriculture and Forestry Offices (PAFO) in the Provinces, and District Agriculture and Forestry Offices (DAFO) in the Districts -- in partnership with farmers, communities, private sector operators, development partners and other stakeholders.

Based on the prioritized roles of the agriculture sector in the 8th NESDP, MAF prepared the *Agricultural Development Strategy to 2025 and Vision to the Year 2030* (ADS). The three major themes of the ADS are:

- Food production / Food Security,
- Commercialisation and
- Forest Development and Management.

National Agricultural Commodity Production and Food Security Programme

In 2015/2016, MAF prepared the National Agricultural Commodity Production and Food Security Programme (NACPFSP) was prepared by MAF in 2015/2016 to operationalise the ADS (Annex 1). The NCPFSP is overseen by the National Commodity Production and Food Security Council, and MAF serves as the Secretariat of the NACPFSP Council. The NACPFSP is in 3 parts:

- **National Rice Sector Policy and follow-up Strategic Action for Development of the Rice and Crops Sector** – with 13 Priority Policy Initiatives.
- **Livestock Development Plan 2016-2020** – with 8 Priority Policy Initiatives; and
- **Forestry Strategy to the Year 2020** – with 8 Priority Policy Initiatives.

Together, these constituent parts of the NACPFSP are commonly referred to as the 13+8+8 Agriculture Policy Initiatives, a term that has become an equivalent and often interchangeable description for the NACPFSP. The NACPFSP is especially linked to the ADS and 8th NSEDP through its targets that have been especially described, in turn, for the three thematic areas of food production and food security, commercial agriculture and forestry. The NACPFSP takes a convergence approach: with MAF as the lead, it brings together a number of additional Ministries and agencies whose work impinges on the implementation of its various policies, plans and programmes. They include: Ministry of Industry and Commerce (MOIC), Ministry of Natural Resources and Environment (MONRE), Ministry of Energy and Mines (MOEM), Ministry of Science and Technology (MOST), Ministry of Planning and Investment (MPI), Ministry of Social Welfare and Labour (MSWL), Ministry of Foreign Affairs (MOFA), Ministry of Finance (MOF), and the (Central) Bank of Laos (BOL).

National Nutrition Strategy 2020 and the National Nutrition Plan of Action 2016 – 2020 (NNS-NNPA)

Through its implementation programmes and targets, the NACPFSP puts a lot of emphasis on commercial production for the domestic and foreign markets. To re-enforce the importance of food security and nutrition, MAF is a signatory to the National Nutrition Strategy 2020 and the National Nutrition Plan of Action 2016 – 2020 (NNS-NNPA). The NNS-NNPA 2016-2020 is overseen by the National Nutrition Council, with the Ministry of Health as its Secretariat. In this regard, MAF is responsible for the planning and implementation of four Priority Interventions of the NNPA 2016 – 2020. Like the NACPFSP, the NNS-NNPA also takes a convergence approach, bringing together three principal Ministries, namely Ministry of Health (MOH), MFA and Ministry of Education (MOE). Together, the 3 Ministries implement 22 Priority Interventions that are deemed necessary to enhance food security and nutrition. The Agriculture Sector is responsible for 4 of these 22 Priority Interventions, namely:

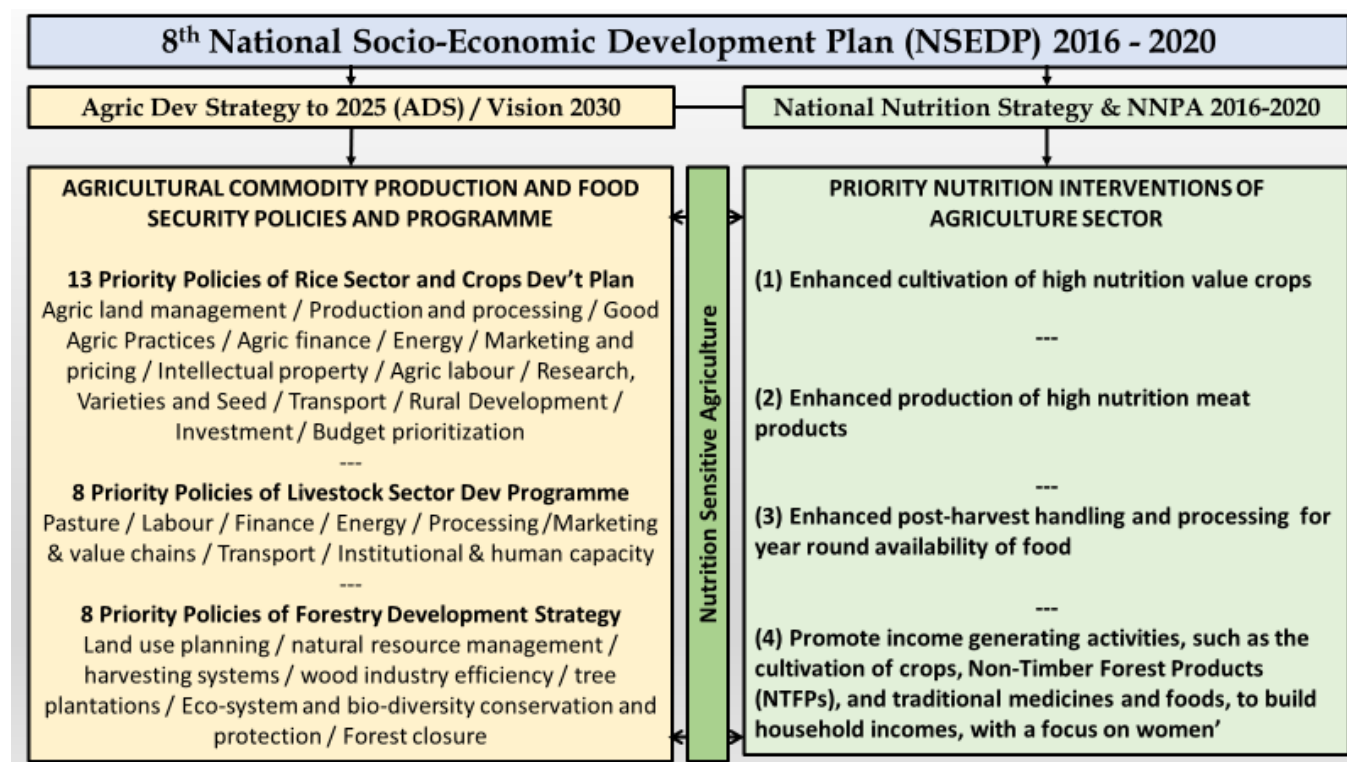
1. Increase the cultivation of crops which have high nutritional value.
2. Produce and promote meat which has protein for household consumption: poultry, fish, and other aquatic life. Provide materials and equipment for production along with the necessary infrastructure: small-scale irrigation, agricultural service units, and so forth.

3. Build post-harvest facilities (including food dehydrators, and food storage facilities) and apply technology to food processing, preservation, and storage so that it remains safe and nutritious as a means of ensuring food availability all year round;
4. Promote income generating activities, such as the cultivation of crops, Non-Timber Forest Products (NTFPs), and traditional medicines and foods, to build household incomes, with a focus on women' (NNSPA).

(c) Nutrition Sensitive Agriculture

The Government of Lao PDR (GOL) has adopted the Nutrition Sensitive Agriculture (NSA) approach to the analysis, planning and implementation of agriculture sector policies programmes and activities. NSA plays a catalytic role that is meant to ensure that agricultural programmes and activities, especially those emphasizing agricultural commercialisation, proactively promote the goals of improved food security and nutrition (Diagram 9).

Diagram 9 – Catalysing the Commercialisation and Food Security and Nutrition Streams – NSA Role



3. Framework for Balanced Agricultural Sector Policy and Planning

This Section presents the concepts of Commercialisation / Commodity Production, Food Security and Nutrition, and Nutrition Sensitive Agriculture. The presentation is used as basis for the drawing together strands of a policy framework that can support the type of balanced sector policy formulation, planning and service delivery that is required to meets the goals of the 8th NSED, ADS 2025 and Vision 2030 and the NSS-NNPA 2016-20 at the various national, sub-national and sectoral levels.

3.1 Agricultural Commercialisation

(a) General Conceptualisation of Agricultural Commercialisation

Commercialisation of subsistence agriculture can take and be achieved in a variety of ways and forms. On the output side, increased marketing of product surpluses can be one way of promoting and evaluating commercialisation. On the input side, increased use of purchased inputs may be another way to promote and evaluate commercialisation. Yet the two streams (that is increased cash crop production and increased use of purchased inputs) are not necessarily exclusive of each other. In fact, one of the challenges of successful commercialisation is to keep these two streams in tandem and supportive of each other. It is important to appreciate that there is no fine distinction between so-called “cash/products crops” and so-called “traditional crops/products”. In Laos, for example, some amounts of so-called “cash products” (such as coffee, cassava organic vegetables and meat of improved pig breeds) are often retained for consumption by respective farming household. Also, some amounts of so-called “traditional crops” (like rice, traditional vegetables and aquatic animals from rice paddies) are frequently marketed. It is also important to appreciate that agricultural commercialisation is conceptually distinct from commercialisation of the rural economy. In Laos, the distinction between these two phenomena is highlighted through the increase in non-agricultural activities and income in rural areas (hydroelectricity generation, mining, road and other infrastructure construction and maintenance, non-agricultural rural industries and services, off-farm employment, etc.). Such developments have occurred with corresponding proportional increases in agricultural commodity production and/or decreases in the subsistence nature of agricultural production. Box 2 contains a number of indicators of commercialisation suggested by participants at two workshops on District planning in the agricultural sector in Laos in December 2018.

Box 2 - Indicators of Commercialisation

$$1(a) \text{ Commercialization of agricultural production (output side)} = \frac{\text{Value of agricultural sales in markets}}{\text{Value of agricultural production}}$$

- ✧ Measures degree of commercialisation of the agricultural economy in the District, in term of for-cash (money income) production as opposed to subsistence production.

$$1(b) \text{ Commercialization of agricultural production (input side)} = \frac{\text{Value of inputs acquired from market agriculture}}{\text{Value of agricultural production}}$$

- ✧ Measures degree of commercialisation of the agricultural economy in the District, in term of use of commercial (from market) inputs as opposed to traditional farm generated inputs.

$$(2) \text{ Commercialization of the rural economy} = \frac{\text{Value of good and services acquired through market transaction}}{\text{Total income}}$$

- ✧ Measures degree of commercialisation of the whole economy of an area, in terms of proportion of the district economy that is market based. Since the rural sector is multi-

sectoral, it may not provide an accurate measure of commercialisation of the agricultural sector as such,

(3) Degree of integration in the cash economy =
$$\frac{\text{Value of goods and services acquired by cash transaction}}{\text{Total income}}$$

- ✧ This is a measure of the overall commercialisation of the economy. It may, hence, not reflect the specific degree of commercialisation of the agricultural sector. But it is good to keep track since it may be difficult to commercialise the agriculture sector if the same not happening in other sectors.

(4) Amount of investment in agriculture – number of investors and value of investment.

(5) Number of farmers in formal relationship with investors

- ✧ Indicates extent of contract farming.

(6) Number of and size (membership) of functioning marketing groups = Number and size of functioning farmer marketing groups in the District.

- ✧ Shows farmer participation in market activities or degree to which farmers are engaging in marketing their products.

(7) Presence of permanent = number or percentage of villages in District/Province/Country with permanent and temporary markets.

- ✧ Markets are central to commercialisation as they are one of the main places that farmers go to dispose of produce, and buy households needs and inputs.

Note: Compiled from MAF Workshops on District Planning in Khammouane and Saravan Province, Dec 2018

(b) Evolution of Agricultural Commercialisation in Lao PDR

In Laos, the commercialisation of agriculture has been promoted and supported as a policy at least since the 1980s. The seeds of the agricultural commercialisation policy appear to have first been laid in the 3rd NSEDP (1981 – 1985) and the 4th NSEDP (1986 – 1990). During these plan periods, GOL started to promoting cash crop production through intensification of agricultural production in selected areas. This strategy was largely part of a general a drive to modernise Lao farmers by facilitating them to transition from traditional sedentary paddy-centred cultivation in the Lowlands and forest-based swidden agriculture in the Uplands to intensive agricultural production that is commercialised and has sustainable linkages to markets.

In the 2000s, GOL started to adopted policies that went far beyond the mere intensification of agricultural production based on traditional Lao producers. In addition, GOL started to, also, promote the opening-up of new geographical areas, the introduction of new (non-traditional crops), the involvement non-traditional investors and production in the sector, and the use of new land, labour and resource ownership and use practices particularly contract farming and concessions. This drive to expand commercial farming arose out of multiple socio-economic forces that includes regional

integration and globalisation and increased demand for raw material (such as rubber, sugar cane, maize, cassava) generated by economic growth in China, Thailand and Vietnam. This resulted in a surge of international, regional and domestic traders, investors, agribusinesses and small-and-medium scale enterprises that seek to position themselves to take advantage of Laos's strategic position as regional base for supplying this growing market. Between 2000 to 2009, the Lao government granted 1.1 million ha of land in the form of state land leases and concessions to domestic and foreign investors for agriculture, forestry, mining, infrastructure, and manufacturing projects, equivalent to five percent of the national land area.

(c) Prevailing modalities of Commercialisation in Lao PDR

Since the 1980s, commercial farming seems to have settled around three main modalities: concessions, contract farming and small-investor farming.

Concession farming involves the type of investment scheme whereby, based on a formal agreement with competent Lao authorities, land is transferred to companies that is transferred to companies which become responsible for all investment and cultivation taking place on it. In effect, Lao Government rents state land at a yearly fee to both domestic and foreign investors. Agriculture is one several types of activities involved; others include tree plantations, mining, hydropower, infrastructure, manufacturing, and real estate. This is usually the preferred form of investors as it maximises the company's control over the land and its produce. Concessions are especially compatible with four GOL policy goals: one, they open-up land that is considered to be underutilised; two, they re-enforce the goal of eliminating swidden cultivation; three, they are a source of foreign direct investment (FDI), and four, they have the potential to provide government with increased revenues. Large concessions have been granted for rubber, maize, sugarcane, cassava, bananas, jatropha and other cash crops. In 2010, MONRE reported that between 2000 to 2009, the Lao government had so far granted 1.1 million ha of land in the form of state land leases and concessions of various kinds, equivalent to five percent of the national land area. Leases can be as long 49 years and sometimes up to 99 years.

There have been some reported actual and potential negative social and environmental impacts of land concessions upon rural communities. One impact is losses in food production, resources for consumption, and sources of income because of the loss of agricultural and forest lands. Often, the land that is given out in concession is land that is already being commonly used and managed by local, rural communities for agricultural production, collection of forest products, and ecosystem services. Loss of access to communal forests is particularly detrimental for rural women, who are often responsible for collecting forest products from such areas and thus have to search longer and harder to collect the same amount as before. Also, ethnic minority groups are often impacted heavily by concessions because they use and manage the upland swidden agriculture and forest landscapes that are most commonly targeted. On the positive side, villagers can receive financial compensation for some of the lands lost, gain better access to road and electric infrastructure, and can earn a cash income from working as wage laborers (especially for plantation projects). However, is evidence some studies that the economic benefits gained do not sufficiently compensate for the lost land, resources, consumption, and income. Environmentally, land concessions have led to deforestation through processes of forest conversion and the expansion of illegal logging networks, the chemical pollution of soils and waterways, and the drying and blockage of local water sources. Lastly, Government revenues

from land concessions have remained limited due to the low tax on land concession. For a long time, official income from concessions in Lao PDR was as low as \$6 per hectare per year, as compared to \$20 and \$ 50 per hectare per year, respectively, in Vietnam and China.

Contract farming involves schemes whereby farmers are provided with critical investment in exchange for a guaranteed share of the profits or the produce. Such investment assistance is usually provided for a combination land, labour, capital, technology and marketing resources and operations (Box 3). Contract farming has the advantage of providing a guaranteed market for the farmer and a secure supply for the trader and/or processor. In contract farming, continue to plant on their own land. As such, farmers have the potential to improve the land rights of smallholders and local communities while also potentially improving land productivity, boosting the local economy, and generating state revenues. However, farmers are often very capital poor and lack knowledge of legal issues and process. Companies, hence, ending up having a disproportionate power compared to the farmers. This often results in unfair contracts that that favour companies in risky situations like crop failure or failure to achieve standard of produce. Over time, GOL has emphasized the “2+3” model as the better approach to using FDI. However, many of the large investment contracts end up in “1+4” arrangements.

Box 3 – Two Main Types of Arrangement in Contract Farming

Contracts formulated in terms of 5 distinct resources/processes: land, labour, capital, technology, and marketing.

“2+3” model – Land and labour are provided by the farmer, and capital, technology, and marketing are provided by the investor. The capital (seedlings, fertilizer, equipment) is provided as a loan while future harvest is divided in a respective 70/30% split (farmer/investor). The aim is to provide villagers with secure access to their land and a stronger sense of ownership in the plantations. Contracts are usually signed for 30 to 35 years for crops ranging from maize and rubber to chilies and pulpwood.

“1+4” model

In some cases, the “1” refers to land and in other cases to labour. Unlike concession farming, villagers still retain rights to their land and often a minority portion of the harvest in addition to wages. In this case, profits and risk are concentrated with the investor. Given the ambiguity in contracting, understanding each contract requires an examination of the broader context in which these schemes occur.

Small formal and semi-formal investor schemes constitute a sizeable proportion of contract farming in some Districts. For example, in Luang Nam Tha, small investor farming (including villager’s own investment) is estimated to be over 80% of the total rubber establishment. However, this type of investment tends to be more dominant in affluent areas and along borders. At times, the investments are done by asset-rich smallholders seeking to convert their land into plantations. These investments are also usually through informal networks. Other times the investments are part of farmer organisation and community initiatives. Whatever the case, they reflect an increasing feeling among smallholder farmers and landowners that they can improve their land tenure and solidify land

entitlement by becoming more involved in the commercial transitions. The execution of these informal investment scheme tends to be free of disputes. Contracting parties usually have a better mutual understanding of the contract terms and share a higher level of mutual trust. The decentralized, voluntary process helps better match villagers' expectations with investor's offers, be it capital, technique, labour or marketing. In many cases, such as coffee, organic vegetables, smallholder rubber and niche herbal crops, transnational connections serve to help villagers start-up and gain access to market information, informal credit, and technical support. Since the government has, so far, been rarely involved small investor schemes, there is often little or no coercion. However, this should not be taken as reason for Government to keep a distance from this commercialisation modality. Rather, because smallholders are the majority of producers and need to be supported, this should serve as a modular example for effective and yet intrusive ways in which Government can support this important section of the agriculture sector.³

3.2 Food Security and Nutrition

(a) General Conceptualisation of Food Security and Nutrition

Diagram 10 illustrates a general conceptual framework for the consideration of food security and nutrition that progressively focuses on the functional elements of availability of food, access to food and utilization of food. Box 4 outlines some of the key indicators used in assessing food security and nutrition.

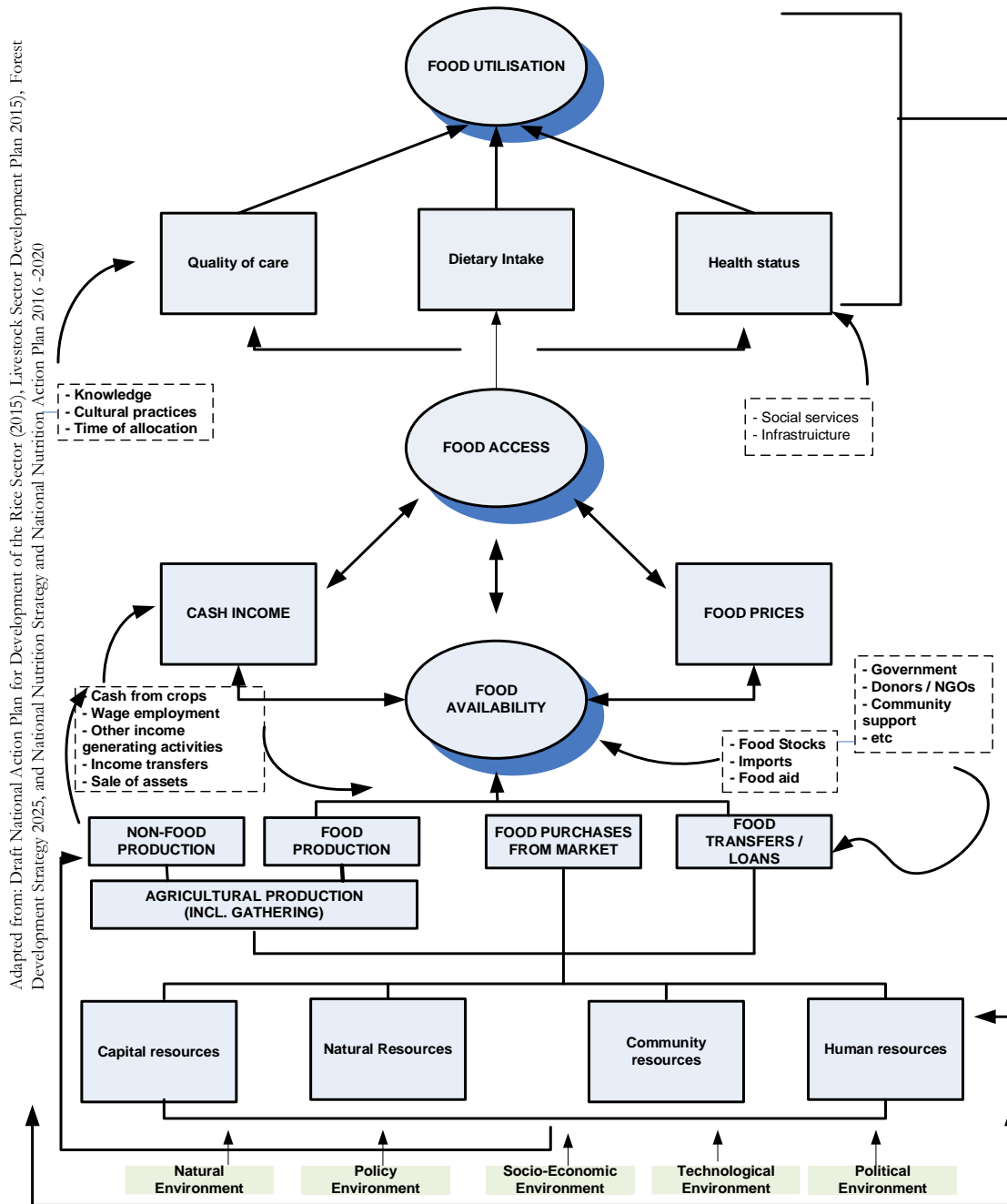
Food security can be defined as a state of permanent availability of, access to and utilisation of sufficient food for a normal and healthy life in society. This definition is based on a very simple premise: what one can eat depends on the amount of food one can get (i.e. what is available and accessible), and whether and how one can effectively utilize the food he/she gets. Thus, what matters is the availability and the ability to, respectively, access and to utilize food. Food insecurity (that is, the opposite of food security), then, indicates a form of vulnerability in the process of food entitlement. For this reason, local level understanding and mapping of vulnerability to food insecurity is an important aspect of the planning of food security.

Nutrition is the distinct aspect of food security that refers the appropriate intake of nutritionally adequate food in relation to the body's dietary needs. Malnutrition refers to all forms of poor nutrition caused by a complex array of factors including dietary inadequacy (deficiencies, excesses or imbalances in energy, protein and micronutrients) and includes both undernutrition and overnutrition. Undernutrition includes being underweight for age, too short for age (stunted), too thin relative to height (wasted) and functionally deficient in vitamins and minerals (micronutrient malnutrition).

³ Cage fisheries is an example of a patently small- and medium-scale operator and potentially lucrative section of the Lao agriculture sector which could do with carefully calibrated Government assistance. To get into cage fisheries, a farmer needs to have simple technological knowledge and a relatively small amount of finance capital. The capital could be recouped with the first or second crop of cage fish. Yet Lao operators have not been able to access either the knowledge or the financial resources to venture into this industry. As a result, cage fisheries is now dominated by Chinese operators who have, somehow, managed to arrive in Laos with the requisite knowledge and capital, and have obtained permits or concessions to operate as "investors".

Overnutrition results in overweight and obesity, which is defined as abnormal or excessive fat accumulation that may impair health.

Diagram 10 – Food Security and Nutrition Conceptual Framework



Box 4 - Indicators of Food Security and Nutrition

Food availability and access <ul style="list-style-type: none">▪ Rice production from 10 Prioritised Rice Growing Provinces*▪ Global Hunger Index*▪ Percentage of households with low or <2,400 KC energy intake
Food Utilisation <ul style="list-style-type: none">▪ Rate of stunting among CU5 (NCHS standard) *▪ Rate of wasting among under CU5 (NCHS standard) *▪ Rate of underweight among CU5 (NCHS standard) *▪ Rate of thinness of women among reproductive aged (WRA) (BMI<18.5kgm-2)▪ Rate of anemia among CU5 (Hemoglobin <11g/dL)▪ Rate of Anemia among women of reproductive age (WRA) (Hemoglobin <12g/dL)▪ Iodine deficiency among school age children (urinary iodine excretion <100µg/L)▪ Iodine deficiency among women of reproductive age (WRA) (urinary iodine excretion <100µg/L)▪ Vitamin A deficiency among CU5 (serum retinol <0.7 g/dL)
Extreme health consequences linked to food insecurity and malnutrition <ul style="list-style-type: none">▪ Infant mortality rate (IMR)▪ Under 5-years old child mortality rate (CU5 MR)▪ Maternal mortality rate (MMR)▪ Poverty Head Count Ration (HCR)

(b) Lao PDR Conceptualisation of Food Security and Nutrition

Many food-related policies and plans recognise that Laos has achieved national self-sufficiency, especially in rice. Nationally, calorie deficiency is less of a challenge. The Lao Economic and Social Survey 5 survey shows that in 2012/13, the average calorie intake per capita per day was 2,751 kcal and this is well beyond 2,100 kcal that is an adequate calorie intake deemed to meet the daily needs of an average Lao person. There are issues with variations in the distribution of food security between different regions and areas of the country, and among various socio-economic strata of the population. These need to be addressed in the policy, planning and implementation frameworks and mechanism.

As highlighted above, there are encouraging indicators regarding food availability and access. Yet, the situation regarding nutrition is much less positive. It appears that a population that apparently produces and has access to adequate amounts of its main staple food commodities also exhibit signs of serious malnutrition. On the average, over 40% of children under five years (CUFY) exhibit high rates of stunting. This is more serious in rural, remote and isolated situations. It remains serious in all income quintiles, varying from around 20% stunting in the richest quintile to over 50% in the poorest

quintile. All this implies that there are serious concerns about the food utilization aspects of food situation Laos.

The NNS-NNPA 2016-2020 outlines a hierarchy causes of malnutrition in Laos. They include:

- **Basic Causes** – attributed to socio-economic and institutional limitations.
- **Underlying Causes** – attributed to food insecurity issues of availability and access, and to health issues of poor mother and childcare, poor environmental hygiene and poor access to health services.
- **Immediate causes** – attributed to inadequate nutritional intake, and food-, water- and vector-borne and infectious diseases.

3.3 Nutrition Sensitive Agriculture in Lao PDR

(a) Lao-PASAN – Nutrition Sensitive Agriculture Programme and Unit

The Government of Lao PDR (GOL) recognises that there are times when commercialisation may work against or just be neutral with regard to food security and nutrition. It is also an on-going concern of GOL and its Development Partners that the level of malnutrition, especially the indicator for stunting among CU5 remains very high. GOL has, hence, adopted the Nutrition Sensitive Agriculture (NSA) approach as a strategy to maximize agriculture's contribution to nutrition. It is, hence, important for Agricultural Planning Offices and planners and implementers at all levels to be aware of and incorporate NSA in their work, and in strategies, policies, plans and programmes and projects that they develop.

NSA stresses the multiple benefits derived from enjoying a variety of foods, recognizing the nutritional value of food for good nutrition, health and productivity, and the social significance of the food and agricultural sector for supporting rural livelihoods. Nutrition-sensitive agriculture also entails targeting poor households, promoting gender equity, and providing nutrition education so that household resources are used to improve household members' nutrition, especially that of women and young children. NSA involves linking agriculture to sectors that address other causes of malnutrition, namely education, health and social protection. In order to properly address the problem of malnutrition, NSA stresses interventions throughout the entire food system, from production to processing, transport, consumption and waste management. Improvements will also be needed in complementary sectors such as health, education, water and sanitation to eliminate the spread of infectious diseases and to share knowledge on successful nutrition practices.

With the support of the EU and FAO, GOL has an NSA policy and planning programme named Lao-PASAN in MAF. Lao-PASAN's main objective is assist GOL, especially through the ARD Sector Working Group, to integrate nutrition-sensitive strategies into agricultural development policies to ensure nutrition-sensitive programs are funded and implemented. PSAN Lao also support development of the type of cross-sectoral coordination that is essential for sustainable, comprehensive advancements in eliminating malnutrition.

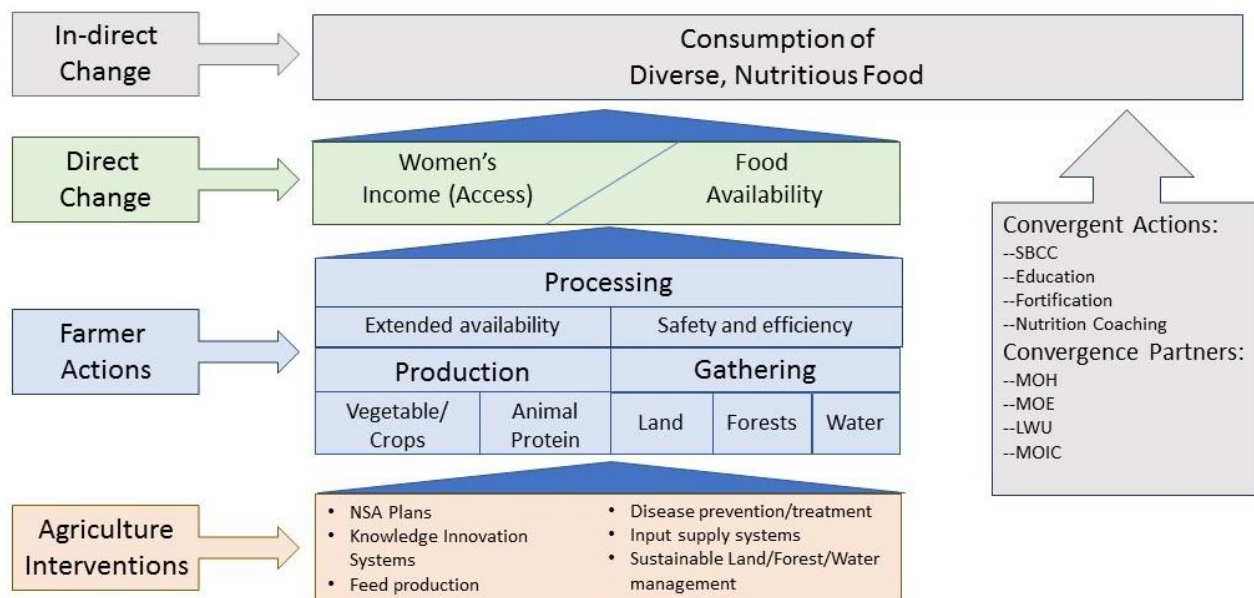
(b) NSA Focus and Pathway to Enhanced Availability of, Access to, and Utilisation of Food

Key areas that are the focus of NSA in Lao PDR include:

- **Making production more sustainable and more diverse:** through supporting more diversity in food production and promoting sustainable production practices like conservation agriculture, water management and integrated pest management can improve nutrition levels without depleting natural resources. Family farming, home gardens and homestead food production projects can make a wider variety of crops available at the local level.
- **Making food more available and accessible:** through planning and implementing policies and measures to increasing agricultural production so the more food available and affordable, which improves both the health and the economic status of the community. In turn, sustained income growth can have a sizeable effect on reducing malnutrition.
- **Making food itself more nutritious:** Fortification can prevent micronutrient deficiencies by enhancing micronutrient content in foods through processing, plant breeding and improved soil fertility. In addition to changes in the agriculture sector, governments can promote nutrition-sensitive agriculture by incorporating nutrition-sensitive concepts into relevant farm policies and programs.

Lao-PASAN, the Lao PDR Nutrition Sensitive Agriculture programme, has identified a four-stage pathway to availability of and access to diverse and nutritious foods and enhancing the nutritional status of the country (Diagram 11). These stages define the pathway to support the implementation of the Agriculture Sector Priority Interventions of the NNPA 2016-2020 under the aegis Good Agricultural Practices (GAP). At the next stage, there is increased production and gathering, of more and diversified crop and animal food, as well as better processing and preservation of food. At the next stage, there increased food availability and access to food as the levels and distribution income improve, and as physical and other socio-economic barriers to better food are removed. Lastly, there is improved consumption of diverse and more nutritious food.

Diagram 11 – Pathway to Improved Availability of, Access to and Consumption of More Diverse and Nutritious Food



Source: Government of Laos PDR (2016-2): **GUIDELINE – Lao Nutrition Sensitive Agriculture: Sub-national Monitoring, Reporting and Data Collection System**, Ministry of Agriculture and Forestry, Department of Planning and Finance, Draft Version for Testing (25 November 2017)

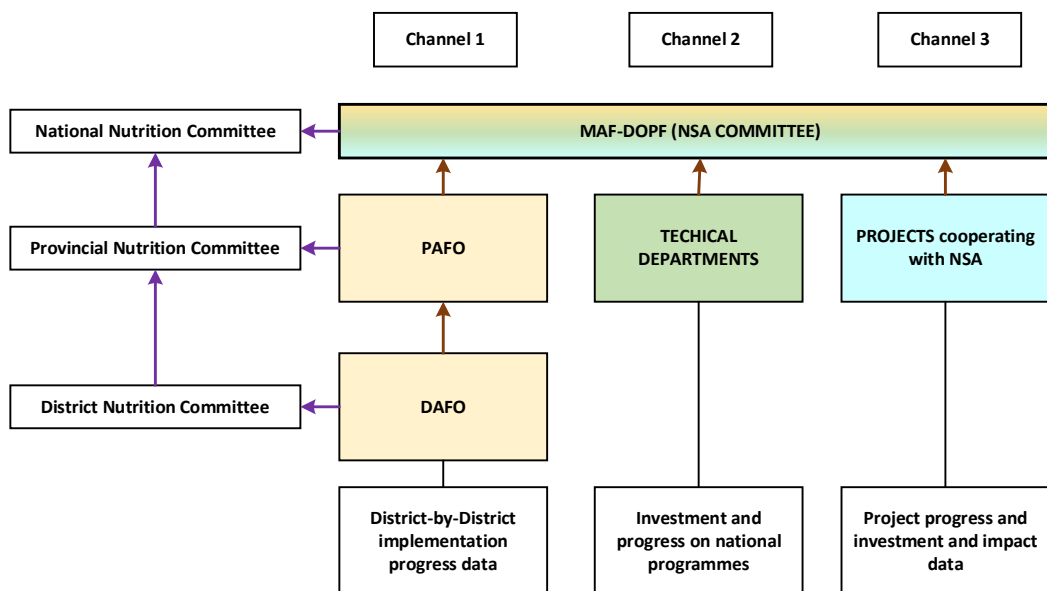
(c) NSA Data and Information, Reporting and monitoring and Evaluation Channels

To facilitate informed policy, planning, programming and implementation decisions, the MAF-NSA Committee will use three channels: Normal Government Reporting by DAFO to PAFO and by PAFO to the Center; Technical Department Reporting; and reporting by field projects in cooperation with cooperating with Lao-PASAN (Diagram 12). In combination, the three channels will facilitate the analysis of:

- The scale and rate of *financial investments* in Nutrition Sensitive Agriculture ventures.
- *Priority NSA activities* that are being carried out; and
- Improved access to and availability of nutritious food.

Lao-PASAN has developed an NSA Data Collection Tool.

Diagram 12 – NSA Data and Information, Reporting, and Monitoring and Evaluation Channel



Source: Government of Laos PDR (2016 - 2): **GUIDELINE – Lao Nutrition Sensitive Agriculture: Sub-national Monitoring, Reporting and Data Collection System**, Ministry of Agriculture and Forestry, Department of Planning and Finance, Draft Version for Testing (25 November 2017)

3.4 Convergence – Food systems

(a) Overview

ADS 2025, Vision 2030 and ACPFSP are each assertive about agricultural commercialisation (or agriculture commodity production) as a vehicle for the increasing GDP and reducing poverty while also enhancing food security and nutrition (FSN). However, there are few specifics in the documents about HOW commercialisation is expected to contribute to the achievement of FSN goals, and how this can be planned. In turn, it is not specific about how the four Agricultural Sector Priority Interventions of the NNS 2025 and NNPA 2016-2020 can be integrated into and synchronised with the mainly commercialisation policies, strategies and programmes of the ACPFSP. This Section presents an outline of the basic relationships of commercialisation and food security and nutrition, and the diverse ways in which the effects and counter-effects of agricultural commercialisation on food security and nutrition work themselves out through the food system.

(b) Efficiency-Based and Needs-Based Approaches

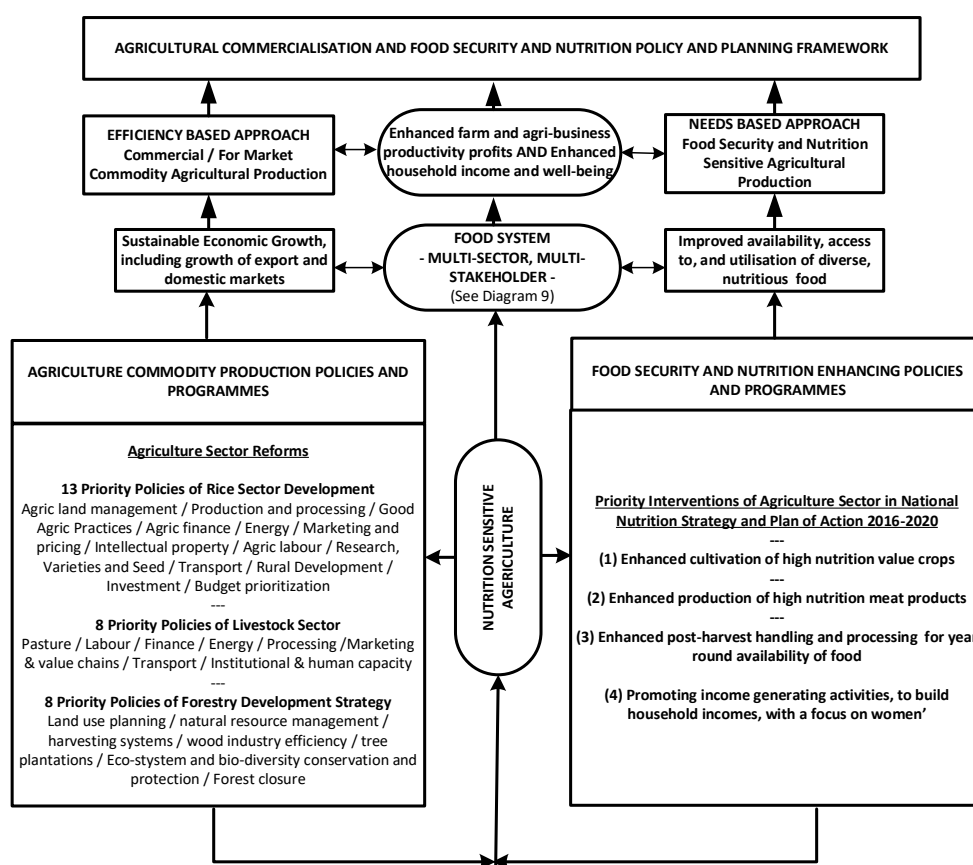
Diagram 13 is an amplified version the relationship between commercialisation, food security and nutrition and nutrition sensitive agriculture that is depicted in Diagram 8. On the one hand, commercialisation of commodity production, represents the EFFICIENCY-BASED APPROACH. On the other hand, the “food security and nutrition” represents the NEEDS-BASED APPROACH to sector development. Rather than being competitive, commercialisation AND food security and nutrition can

be mutually supportive of each other. The two processes are multi-sectoral and multi-stakeholder, and the same institutions, people and processes that drive increased commercialisation can also drive improved food security and nutrition. The convergence occurs at the level where:

- a) more efficient production leads to economic growth which translates into higher revenues and profits and businesses, more income for households, and increased access to food; and
- b) improved availability of, access to, and utilisation of food improves household’s well-being and enables them to participate more meaningfully in productive income-earning activities.

Thus, food security and nutrition can be both a means for development and a result of development.

Diagram 13 – Convergence of Agricultural Commercialisation and Food Security and Nutrition Policies and Plans



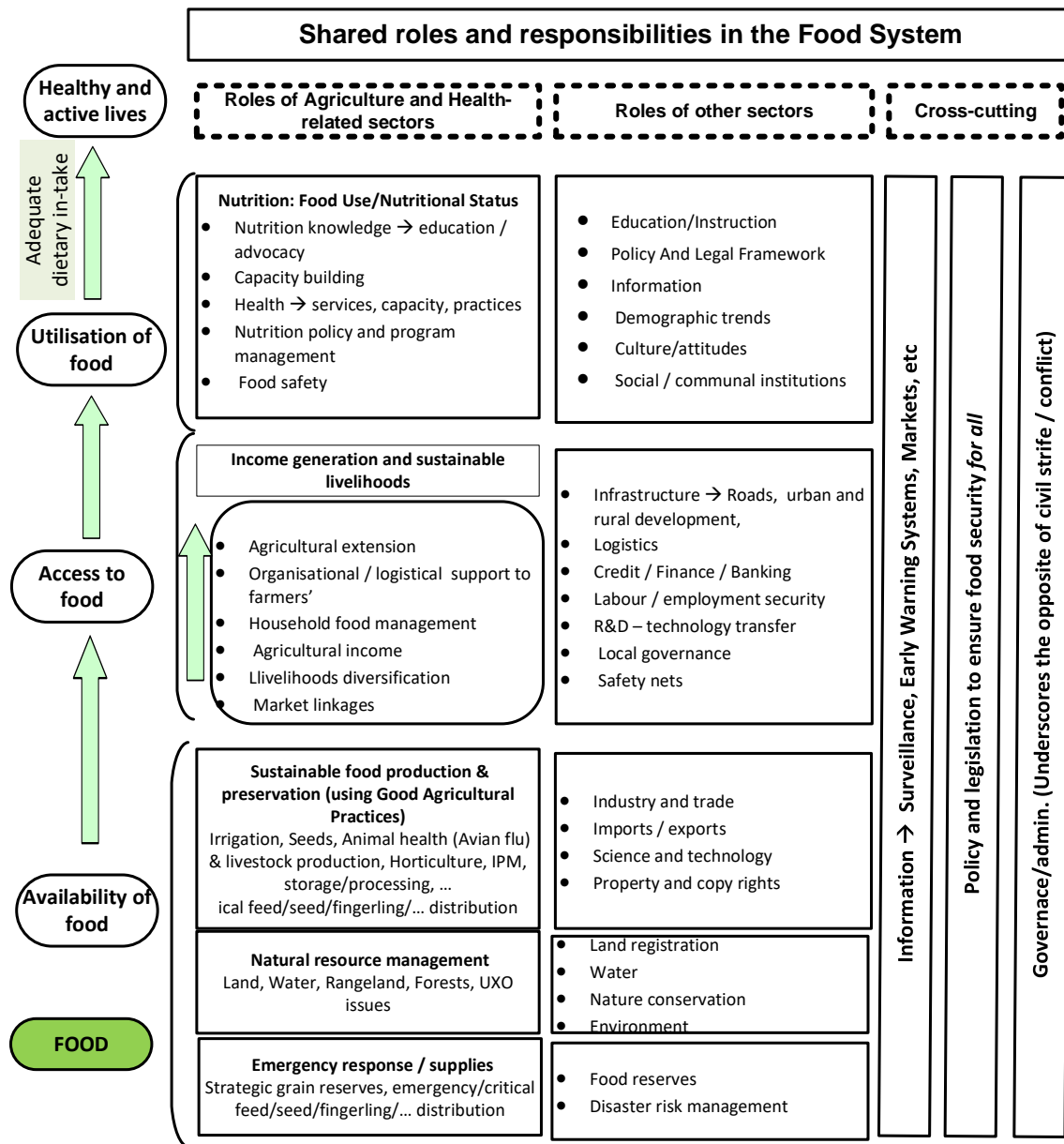
(c) Food Systems

Roles and responsibilities and institutions

It is important to appreciate that whether things are flowing from/into the more efficiency-based commercialisation approach or the more needs-based food security and nutrition approach, everything is part of and happens within food systems. The food system is the collaborative network of individual

and corporate as well as private or public institutions, processes, policies and other factors that integrate sustainable food production, processing, distribution, consumption and waste management in order to enhance the environmental, economic, nutritional and social health of a country or part thereof the country. There are many ways in which a food system could be pictorially depicted. In Diagram 14, the role of the two lead FSN sectors (Agriculture and Health), the roles of other sectors and cross-cutting concerns are on the food availability, access and utilisation concerns.

**Diagram 14 – Food System – Institutional Focus:
 Depicting Roles of Agriculture Sector and Health Sector, Other Sectors and Cross-Cutting Concerns
 in Addressing Food Availability, Access and Utilisation**



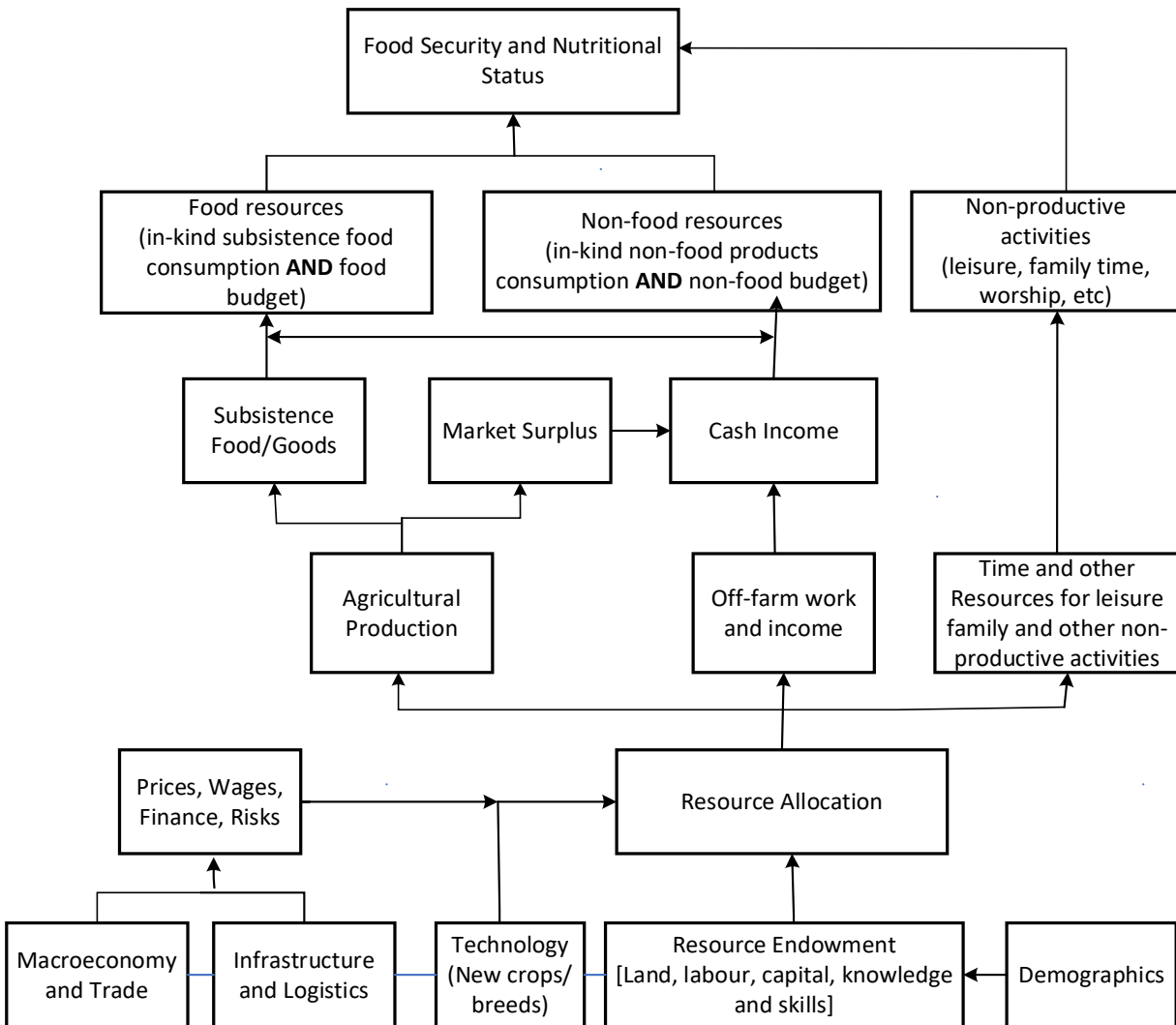
Often in Lao PDR, the term “food security” tends to be used in a narrower sense to refer to the food availability and access aspects of institutional, functional, strategic, planning and programming roles of the Agricultural Commodity Production and Food Security Committee, with MAF functioning as Committee Secretariat and main implementing and coordinating Ministry. “Nutrition”, then, refers to the effective food utilisation roles played by the Nutrition Committee (NNC), with the Ministry of Health (MOH) as Committee Secretariat and main implementing and coordinating Ministry. Despite of these unique Lao PDR distinctives, it is vital to always consider that there is a seamlessness between “food security” and “nutrition”, and that there a lot more sectors, ministries and other institutions involved in and influencing FSN besides MAF and MOH.

Fundamental Relationships

Within the food system, the effects of commercialization on income, consumption, and food security and nutrition are mediated through complex relationships at household and intrahousehold levels. The improvement of the status of a food-deficient and malnourished person has to come about by an improvement in the ability to acquire more food or better-quality food, or both, hence, through the growth of income. An expected increase of production capacity and income motivates a household or individual household members to enter the exchange economy and become more commercialized. Thus, insofar as increased sale of produce, purchase of inputs, and off-farm employment occur on a voluntary basis, and insofar as the responsibilities and preferences within a household ensure sharing of gains, it can be expected that commercialization contributes to a household's food security. In other words, food consumption benefits are assured for all when markets do exist and intrahousehold conflicts do not.

In order to have a sustainable effect on the food security and nutrition of the poor, the income streams resulting from increases in productivity change must reach them, directly or indirectly. This happens through employment expansion, increased returns to farm/household resources, or favorable food-price effects. Commercialization implies increased market transactions for capturing the gains from specialization. Policies that foster commercialization focus on facilitating an open international and domestic trade environment, improving hard and soft infrastructure for opening-up new market opportunities, and ensuring legal security. Ideally, policies to speed up commercialization and technological change move jointly in a reinforcing way.

**Diagram 15 – Food Systems – Focus on Market Impacts:
 Depicting Effects of Agricultural Commercialisation on Income, Non-Productive Activities,
 Consumption and Food Security and Nutrition of Farming Households**



Despite of the mutually supportive elements of commercialisation and food security and nutrition, there exists concern with the potential risks of commercialization for the food security of the poor. There is concern with the effect of commercialisation on people’s desire to engage in activities that are not necessarily economically productive. These include religious observation, family time, physical and mental exercise and leisure.

Hence, those planning for commercialisation and food security and nutrition, need to be aware of some shortfalls of putting too much emphasis on commercialisation. The real world of poor and vulnerable rural households and thin and volatile rural markets causes them to have many structural imbalances and institutional constraints. These include potential market failures and policy problems relating to

food and cash crop markets, deficiencies in land and financial markets, and to absent insurance markets. Also, often, commercialization ends up being implemented by direct government action. This government action includes various forms of compulsion related to the establishment of plantation-type crops (aka concessions), the execution of certain management practices and input use (aka contract farming) and the forced procurement of produce and/or control of movements and prices (aka stabilization). Whenever government acts in any of these compelling ways, it should be only after careful policy-oriented research.

Lastly, it is well understood that on the downstream portion of food security, nutritional improvement is often constrained by the health, sanitation environment, pandemics and other factors are outside the control of the Ministry of Agriculture and Forestry and its immediate stakeholders. These factors are endogenous to government policy and development but are treated as exogenous to our discussions of the household decision-making process. The factors require different forms of coordinating with respective responsible agencies.

3.5 Implications for Policy and Planning

There is a need to bridge the gap between existing policy development and planning approaches, methods and practices in agricultural sector and the dual policy goals of improved commercialisation and enhanced food security and nutrition. Thus, it is important to:

- Create more understanding of the conceptual and operational framework of the commercialisation and food security and nutrition policy and programmes and the role NSA.
- Establish a sound data, information and knowledge bases that address issues and needs of commercialisation and food security and nutrition policy and programmes and the role NSA.
- Be more systematic in identifying problems and assessing needs as a basis for preparation of policies as well as strategic and implementation plans and programmes.
- Ensure that programme and project planning (or the programme and project management cycle), which is the current forte of planning units and activities in the Departments and PAFOs and DAFOs is responsive to and supportive of the policy development cycle and the strategic planning cycle; and
- Strengthen reporting, monitoring and evaluation framework at all levels, especially through development of reporting and M&E methods and indicators that cover all the strategic aspects elements of policy and planning and not just project concerns.

Moving forward, the food systems approach will facilitate the following on-going outputs from the policy and planning processes:

- **Policy and planning framework for commercialisation and food security at the central and decentralised levels**, suggesting ways in which commercialisation and food security and nutrition approaches of MAF are integrated with a bottom-up process in formulating, preparing and implementing local strategies, plans and project formulation, preparation and implementation. This includes consideration of the multi-dimensional, multi-sector and multi-stakeholder of each of

commercialization and food security, as well as the key features of availability of, access to, utilization of and stability of food.

- **Compilation of planning-oriented data at the central and decentralised levels**, providing knowledge insight and understanding of different physio-ecological, technological, cultural and socio-economic in the targeted local areas / Districts. This would mostly comprise the organisation of elements of existing statistics and data systems. For example: Agricultural Statistics (Centre of Agricultural Statistics), Agriculture Census (MAF and Lao Statistics Bureau), agricultural project implementation (PROMIS by DOFC), relief (Department of Survey), weather statistics (Department of Meteorology), industry and service statistics (MOIC), financial statistics (Central Bank), and so forth. The above information categories would be supplemented with information from policy developers' and planners' own observations through surveys, village and farm inspection tours, participatory appraisals and other methods.
- **Profiles of different commodities as well as different administrative (Province/District/Village) areas production areas / zones and communities**, describing the existing situation in relevant commodities and areas, including resources and assets and products, markets, linkages and connectivity, and other features; and also hinting at existing development programmes.
- **Agriculture Development Strategies and Plans at all levels**, based on analysis of issues and prioritization of thrust areas and initiatives for increased production for commercial and food security, markets and value chains, alleviation of poverty, improvement of food security and nutrition, and other improvements of welfare in target areas and among target groups.
- **Monitoring and evaluation and reporting framework and actual documents**, representing ex-ante description of intended actions, and expected changes, outputs and outcomes in target areas and on target groups, based on MAF's existing and new project planning and M&E tools, and also including the NSA data collection and analysis formats and tools.
- **Improved communication and negotiation tools of policy and planning staff at all levels**, incorporating documented communication and negotiation strategies for various used at various stages.

In the immediate period, as part of the on-going preparation of the Agricultural Development Strategy (ADS) for 2021 – 2030, DOPLA and DOPF will work with the ADS Preparation Team to conduct a Food Systems Diagnostic Review of the Pillars⁴, Objectives and Outcomes of Draft ADS. The diagnostic review will involve a two-step process:

- First, an extensive desk review with the Preparation Team and other stakeholders to build a policy, legal, and institutional matrix of multi-stakeholder actors including ministries, agencies, private sector players and other actors who contribute to the food system to identify and/or confirm the policy making process in Lao PDR.

⁴ The three Pillars that have been identified are: (1) Institutions and enabling frameworks, (2) Production structures, productivity and income, and (3) Competitiveness and markets. There will also be provision made in the analysis for Emerging Issues.

- Second, identifying the level nutrition sensitivity and gaps in the Agriculture Development Strategy and compilations of recommendations in finalising ADS 2020 -2030 before submitting it to Government for endorsement and for finalising the prioritisation of the Agricultural Investment Plan for 2021 - 2025.

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ANNEX 1

National Agricultural Commodity Production and Food Security Programme (NACPFSP) – Three Strategic Programmes and their Components

NATIONAL RICE SECTOR DEVELOPMENT IN 10 PRIORITISED PROVINCES – 13 PRIORITY INITIATIVES –	
<p>1) Agricultural land management and development: <i>Improved land use management - more effective and efficient allocation and use of land resources in 10 prioritized rice Provinces; Improved performance of agricultural land registration and titling functions</i></p> <p>2) Promotion of production and processing: <i>Irrigation development; Increased use of improved farm production technologies; Enhanced availability of, access to and use of improved farm inputs, including machinery; Strengthened capacity of extension services staff and farm production groups and cooperative; Improved, more cost-efficient rice milling and other operations to reduce post-harvest losses.</i></p> <p>3) Good Agric Practices: <i>assured safety and quality of sufficient rice along all stages of value chain; Capitalizing on market advantages and opportunities of GAP.</i></p> <p>4) Finance, banking and credit: <i>Improve access by farmers, producers, processors, entrepreneurs, etc to adequate funding</i></p> <p>5) Energy: <i>farmers, input producers and suppliers, processors and other rice value chain operators have access to electricity at affordable cost</i></p> <p>6) Marketing and pricing: <i>Competitive markets and efficient discovery of prices; Grades, quality and standards; access to domestic, regional and global agricultural markets</i></p>	<p>7) Intellectual Property, standards & measurement: <i>Increase in exports of patented or protected Lao PDR rice products</i></p> <p>8) Agricultural labour; <i>Enhanced entrepreneurial acumen and skills among farmers and other agricultural value chain operators; Improved working environment and conditions for agricultural workers</i></p> <p>9) Research and promotion of rice varieties: <i>New and/or improved varieties of rice that are suitable for various areas of Lao PDR; Availability of rice seed</i></p> <p>10) Transport: <i>Stimulation of agricultural production and bringing more people to market economy through provision of access roads that link producing area to markets and to small urban centers.</i></p> <p>11) Rural development: <i>Consolidation of small village settlements into rural towns in line with expansion of rice production, processing and marketing.</i></p> <p>12) Promotion of investment: <i>Increased and sustained investment by the private sector in the Lao PDR rice value chain</i></p> <p>13) Prioritized budget allocation: <i>Government guarantee for funding of item of rice development programme</i></p>
LIVESTOCK DEVELOPMENT – 8 PRIORITY INITIATIVES –	
<p>1) Pasture Development</p> <p>3) Labour</p> <p>5) Finance</p> <p>7) Energy</p>	<p>2) Processing / Slaughterhouses</p> <p>4) Marketing and value chain development</p> <p>6) Transport and logistics</p> <p>8) Institutional capacity and human resources development</p>

**FORESTRY DEVELOPMENT
– 8 PRIORITY INITIATIVES –**

1. National land use planning policy
2. Village based natural resource management
3. Reliable systems for harvest determination
4. Sustainable participatory management and processing of NTFPs.
5. Wood industry performance
6. Tree planting and management
7. Prevention of encroachment, unauthorized activities and biodiversity degradation
8. Forest closure of both permanent and temporary nature

ANNEX 2

Linkages of NACPFSP to Three Major Themes of Agricultural Development Strategy 2020 through Targets

Food production and Food Security

In order to achieve food and nutrition security people will get 2,600-2,700 kcal/day. This will be achieved through an increased availability, accessibility and stock of food products.

- 1) Paddy rice production for food security will reach 3.1 million MT (70% of Glutinous rice)
 - Domestic consumption: 2.1 million MT
 - National Reserve: 0.4000 million MT
 - Domestic processing: 0.600 million MT
 - Seeds: 0.100 million MT
- 2) Production of vegetables, beans, sesame and fruits for consumption:
 - sweet corn will reach 0.228 million MT,
 - taro will reach 0.304 million MT,
 - fruit will reach 0.800 million MT and
 - other plants-vegetable will reach 1.5 million MT
- 3) Livestock production:
 - Meat and eggs will reach 0.258 million MT/year and
 - Fish: 0.300 million MT/year in order to meet an average consumption of 60 kg/person/year

Commercial agriculture

The objective is to make agricultural sector growth ensuring both quantity and quality of products with focus on the domestic, regional and international markets, through the combination of a range of factors including the development of farmers' organizations and the associations / cooperatives of producers and processors. Major targets include:

- 1) Expected 1.5 million MT of rice
- 2) Other cash crops production targets:
 - Maize 1.3 million MT,
 - coffee 0.120 million MT,
 - sugar cane >2.0 million MT,
 - cassava 1.5 million MT,
 - soybean 0.050 million MT and
 - focus on other potential cash crops specific to Lao PDR.
- 3) Promote modern technic for livestock farming (objective 30%) and export up to 0.015 million MT of cow and buffalo meat by 2020.

Forestry :

Targets:

- Improve legal framework, promote fair and equal use of forest resource;
- Increase forest cover up to 70%.
- Secure 51 forest production areas équivalent to 3.1 million ha;
- Restore forest production in 500,000 ha;
- Plant 500,000 ha of forest;
- Improve forest management in 1,500 villages through sustainable planning;
- Continue Reducing Emission from Deforestation and Degradation (REDD).

ANNEX 3

Exports of commodities and their products by major category⁵ (US\$ million)

Laos Exports by Category	Value (US\$ million)	Percentage (%)	Year
Mining and mineral products	1,609.85	40.1	
Mineral fuels, oils, distillation products	1.35	0.0	2019
Ores slag and ash	654.11	16.3	2019
Copper	434.80	10.8	2019
Pearls, precious stones, metals, coins	223.04	5.6	2019
Fertilizers	114.88	2.9	2019
Inorganic chemicals, precious metal compound, isotope	98.27	2.4	2019
Salt, sulphur, earth, stone, plaster, lime and cement	83.40	2.1	2019
Manufactured products	826.02	20.6	
Electrical, electronic equipment	403.66	10.1	2019
Articles of apparel, not knit or crocheted	144.62	3.6	2019
Furniture, lighting signs, prefabricated buildings	80.59	2.0	2019
Footwear, gaiters and the like,	73.14	1.8	2019
Articles of apparel, knit or crocheted	63.19	1.6	2019
Plastics	60.82	1.5	2019
Agricultural, Livestock and forestry products	1,576.24	39.3	
Edible fruits, nuts, peel of citrus fruit, melons	283.92	7.1	2019
Beverages, spirits and vinegar	250.48	6.2	2019
Live animals	229.30	5.7	2019
Rubbers	218.70	5.5	2019
Edible vegetables and certain roots and tubers	157.90	3.9	2019
Sugars and sugar confectionery	127.93	3.2	2019
Tobacco and manufactures tobacco substitutes	84.68	2.1	2019
Coffee, tea, mate and spices	69.51	1.7	2019
Cereals	52.35	1.3	2019

⁵ Does not include exports of electricity and services.

Wood and articles of wood, wood charcoal	52.33	1.3	2019
Milled products, malt, starches, inlin, wheat gluten	49.14	1.2	2019
Total - All exports	4,012.11	100.0	

Source: Tradingeconomic.com | The Bank of Lao PDR (Reconstruct

Annex 4

Main Indicators of Commercialisation and Food Security and Nutrition

Indicators	How observed /Measured	Baseline		2020 Target (8 th NSEDP)	2025 Target (SDG mid-term)	Verification Source
		Year	Baseline value			
Commercialisation						
1(a) Commercialization of agricultural production (output side)	Agricultural market sales as percentage of agricultural GDP (%)					
1(b) Commercialization of agricultural production (input side)	Monetary value of from-market inputs as percentage of agricultural GDP (%)					
2) Commercialisation of the rural economy	Monetary value of market transaction in the rural sector as a percentage of total GDP (%)					
3) Degree of integration into the economy	Monetary value of market transactions in the economy as a percentage of GDP (%)					
(8) Amount of investment in agriculture	Number of agricultural investors and value of agricultural investment (No./Kip)					
(9) Number of farmers in formal relationship with investors	Number of farmers functioning under contract arrangements (No.)					
(10) Membership in functioning marketing groups	Number and size of functioning farmer marketing groups in the District (No./No.)					
(11) Market presence	Number or percentage of villages in District / Province / Country with permanent and temporary markets (No./%)					
Food security and Nutrition						
<i>Food availability and access</i>						
(12) Availability of staple food	Rice production from the 10 Prioritised Rice Growing Districts (MT)					
(13) Global Hunger Index	Composite Index					
(14) Energy in-take	Percentage of households with low <1800 KC energy intake (%)					

<i>Food Utilisation</i>						
(15) Rate of stunting among CU5	NCHS standard (%)					
(16) Rate of wasting among under CU5	NCHS standard (%)					
(17) Rate of underweight among CU5	NCHS standard (%)					
(18) Rate of thinness of women among reproductive aged (WRA)	Percentage of WRA with Body Mass Index (BMI) <18.5kgm-2 (%)					
(19) Rate of anemia among CU5	Percentage of CU5 with Hemoglobin <11g/dL (%)					
(20) Rate of Anemia among women of reproductive age	Percentage of WRA with Hemoglobin <12g/dL (%)					
(21) Iodine deficiency among school age children	Percentage of school age children with urinary iodine excretion <100µg/L (%)					
(22) Iodine deficiency among women of reproductive age (WRA)	Percentage of WRA with urinary iodine excretion <100µg/L (%)					
(23) Vitamin A deficiency among CU5	Percentage of CU% with serum retinol <0.7 g/dL (%)					
<i>Extreme health consequences linked food insecurity and malnutrition</i>						
(24) Infant mortality rate (IMR)	Mortality rate of children under 24 months (No. @ 100,000)					
(25) Under 5-years old child mortality rate (CU5 MR)	Mortality rate of CU5 (No. @ 100,000)					
(26) Maternal mortality rate (MMR)	Mortality rate of mothers giving birth (No. @ 100,000)					
(27) Poverty Head Count Ration (HCR)	Percentage of population living below national poverty line (%)					

