Kingdom of Cambodia
Nation Religion King

Royal Government of Cambodia

National Agricultural Development Policy 2022-2030

"Transforming Cambodian Agriculture into a Modern, Competitive, Inclusive, Climate-resilient, and Sustainable Sector"

Approved by Council of Ministers
at the Plenary Meeting on 09 September 2022

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List of acronyms

4Ps	Aublic–Private–Producer/Agricultural Cooperative Partnerships
AC	Agricultural Cooperative
ADB	Asian Development Bank
NADP	National Agricultural Development Policy
AIF	Agro-Industry Federation
ARDB	Agricultural and Rural Development Bank
ASDP	Agricultural Sector Strategic Development Plan
ASEAN	Association of Southeast Asian Nations
ASMP	Agricultural Sector Master Plan
CAA	Cambodian Fishermen's Association
CARD	Council of Agricultural and Rural Development
CCC	Cambodia Chamber of Commerce
CDC	Council for the Development of Cambodia
CIAS	Cambodia Inter-Census Agriculture Survey
CRA	Cambodia Rubber Association
CSDG	Cambodian Sustainable Development Goal
DP	Development Partner
EDC	Electricité du Cambodge
EFPC	Economic and Financial Policy Committee
ELC	Economic Land Concession
ENSO	El Niño–Southern Oscillation
FAO	Food and Agriculture Organization of the United Nations
GAP	Good Agricultural Practices
GDP	Gross Domestic Product
GDCE	General Department of Custom and Excise
HRD	Human Resources Development
ICT	Information and Communication Technology
IDP	Industrial Development Policy
kcal	Kilocalorie
M&E	Monitoring and Mvaluation
MAFF	Ministry of Agriculture, Forestry and Fisheries
MCS	Ministry of Civil Service
MEF	Ministry of Economy and Finance
MFI	Microfinance Institution
MISTI	Ministry of Industry, Science, Technology & Innovation
MLVT	Ministry of Labour and Vocational Training
MME	Ministry of Mines and Energy
MOC	Ministry of Commerce
MOE	Ministry of Environment
MOEYS	Ministry of Education, Youth and Sport
MOJ	Ministry of Justice
MOP	Ministry of Planning
MOT	Ministry of Tourism
MOPH	Ministry of Public Health
MRD	Ministry of Rural Development

List of acronyms (End.)

MoV	Means of Verification
MOWRAM	Ministry of Water Resources and Meteorology
MPT	Ministry of Post and Telecommunication
NBC	National Bank of Cambodia
NIS	National Institute of Statistics
NSDP	National Strategic Development Plan
PIP	Public Investment Programme
RD	Relevant Department
R&D	Research and Development
RGC	Royal Government of Cambodia
RS	Rectangular Strategy
RUA	Royal University of Agriculture
SEZ	Special Economic Zone
SME	Small and Medium Enterprises
SME	Bank Small and Medium Enterprise Bank
SPS	Sanitary and Phyto-Sanitary Standards
TWG	Technical Working Group
TWG-AW	Technical Working Group on Agriculture and Water
TWG-FSN	Technical Working Group on Food Security and Nutrition
UNDP	United Nations Development Programme
WFP	World Food Programme

Preface

The Royal Government of Cambodia (RGC) has made great efforts to bring about peace, national security, unity and complete territorial integrity under its "win-win" policy framework since the end of 1998. From that moment, the Kingdom of Cambodia stepped out determinedly on the path towards peace, as a unified nation, working under a clear development and cooperation framework. In this context, the Cambodian economy has performed strongly, with average annual growth in gross domestic product of more than 7 percent over the past two decades, reflecting the rapid development of its industry, manufacturing, construction, agriculture, services, tourism and real estate sectors.

The Royal Government of Cambodia (RGC) has a long-term vision to transform Cambodia into an upper-middle-income country by 2030 and a high-income country by 2050. In this sense, the RGC also has the ambition to modernize the agriculture sector so it can become competitive, inclusive and resilient to climate change in a context of environmental sustainability.

The National Agricultural Development Policy (NADP) 2022-2030 was prepared in accordance with this long-term vision. Its main objectives are to increase agricultural gross value-added by 3 percent per annum. To reach these agricultural development objectives in the next 10 years, the RGC has identified as its main policy goal to increased agricultural growth and high competitiveness through the provision of high-quality services, which result in a good, safe and nutritious food supply, as well as taking into account sustainable land, forestry and fishery resource management. Additionally, the NADP contributes to the Cambodian SDGs 2030, especially Zero Hunger of Goal #2 by achieving ensuring food security and supplying affordable, safe and nutritious foods to ensure the health and well-being of the population, and increasing sustainable agricultural growth.

The RGC strongly encourages concerned stakeholders to facilitate the execution of the National Agricultural Development Policy 2022-2030 through defined actions, using the increased support available through domestic financing as well as external resources from development partners and the private sector to speed up implementation. This will enable the policy to bear fruit in an efficient and effectivemanner.

The RGC would like to convey its desire that all relevant and concerned ministries and institutions at all levels participate and cooperate closely in the implementation of the priority policy actions, and also to appeal to the international community to provide further support, both financial and technical, to the successful and efficient implementation of the NADP policy.

I would also like to express my gratitude to the Economic and Finance Policy Committee, the Ministry of Agriculture, Forestry and Fisheries, concerned institutions and development partners, all of which have been actively involved in the process to formulate the NADP 2022–2030. I encourage all parties involved remain committed to fully and effectively implementing the long-term vision of transforming Cambodia into an upper-middle-income country by 2030 and a high-income country by 2050.

Prime Minister

Samdech Aka Moha Sena Padei Techo HUN SEN

Executive Summary

The Royal Government of Cambodia (RGC) has a long-term vision to transform Cambodia into an upper-middle-income country by 2030 and a high-income country by 2050. Connected to this, the RGC also has the ambition to modernize the agriculture sector so it can become competitive, inclusive and resilient to climate change in a context of environmental sustainability.

The National Agricultural Development Policy (NADP) 2022-2030 provides broad guidance for the sector implementation to line ministries of the RGC, development partners (DPs) and private sector. It defines four main areas and thematic policies for intervention: (1) Modernizing and commercializing the agricultural value chain; (2) Public and private investments in the agriculture sector; (3) Growing sustainably and increasing resilience to climate change; and (4) Institutional reforms and cross-cutting issues.

The overall policy development goal is to increase agricultural growth with high competitiveness and inclusivity by providing high-quality products, which result in food safety and nutrition, while taking into account sustainable management of land, water, forestry and fishery resources. In order to achieve this policy goal, 4 strategic policy objectives defined for implementation including:

(1) Enhance the competitiveness of agricultural value chains,
(2) Increase support for infrastructure in agriculture and agri-business facilitation,
(3) Promote sustainable land, forestry and fishery resource management and
(4) Strengthen institutional management and regulatory reforms, HRD and address emerging challenges.

The focus is on strategies to increase agricultural productivity and growth, and promote agricultural exports, and on facilitating the transition to modern, sustainable food systems. The NADP framework has been aligned with the Cambodian Sustainable Development Goals (CSDGs) 2030, the Rectangular Strategy (RS) Phase IV, the National Strategic Development Plan (NSDP) 2019–2023, Agricultural Sector Development Plan (ASDP), 2019-2023 and Cambodia's Industrial Development Policy (IDP) 2015–2025, Cambodia's Roadmap for Food Systems for Sustainable Development 2030, Strategic Framework and Programs for Economic Recovery and to Promote Cambodia's Economic Growth in Living with COVID-19 in the New Normal for 2021-2023. The NADP is also aligned with other relevant policy documents including National Cassava Policy Framework 2020-2025, One Village One Product Movement Strategic Plan in Agricultural Sector 2020-2026, and Cambodia Digital Economy and Society Policy Framework 2021-2035.

The NADP 2022-2030 adopts two approaches: (1) Food Security level and (2) Agricultural Commercialization and Policy Intervention level based on the agricultural value chain approaches. In support of the implementation of NADP 2022-2030, the detailed Agricultural Sector Master Plan (ASMP) 2030 has been developed.

The above-mentioned strategies concentrate on the preparation and execution of a concrete policy framework relying on close collaboration and coordination mechanisms to ensure effective implementation of the NADP towards 2030.

The implementation of the NADP requires significant funding from three main sources: the national budget, DP budgets and private sector investments. The concerned ministries and institutions will continue to set out the main programmes, sub-programmes and clusters of activities in the effort to ensure effective national and DP budget allocations that respond to the indicators set out in the NADP. The concerned ministries and institutions thus need to develop detailed projects to consolidate into the Public Investment Programme (PIP) Three-Year Rolling Plan in accordance with the instructions of the RGC.

The Economic and Financial Policy Committee (EFPC) plays an important role in coordination to promote the effective implementation of the NADP. The successful implementation of the NADP 2022-2030 will also depend on the regional and global situation, as well as domestic conditions, including instability and geopolitical crisis, which may have direct or indirect impacts on the processes of agricultural modernization, agricultural trade competition, productivity in the free-market economy and levels of private investment. A sub-M&E framework should be in place at all levels in this regard.

Strong commitment and coordination represent the basis for success, in that they can turn planning into actions through efforts to increase and utilize domestic resources and mobilize resources from DPs and the private sector, with the end goal of high-quality and effective implementation.

1 Introduction

1.1 General trends in the agri

The RGC considers the agriculture sector one of the country's leading sectors, one that has contributed to Cambodia's economic development, poverty reduction and growth in gross domestic product and incomes through agricultural exports. It also provides jobs and revenues to many rural households that make a living through agriculture. In this sixth mandate, the RGC has promulgated the Rectangular Strategy Phase-IV and the National Strategic Development Plan (NSDP) 2019–2023 to improve the preconditions and supportive environment for in-depth reform in Cambodia in achieving the Sustainable Development Goals (SDGs). The main strategy of the RGC in agriculture is to focus primarily on productivity enhancement and competition, leading to structural transformation in the sector as well as economic diversification into activities with high value-added.

Growth in the agriculture sector fluctuates and varies according to the impacts of climate change (rainfall, drought and flooding). The average growth was about 1.7 percent in 2017 before dropping to 1.1 percent in 2018. Since 2020, the COVID-19 pandemic has impacts on the economic growth, but the agricultural sector increased around 0.5 percent (expected to increase 1.4 percent in 2021).

The share of the agriculture sector in GDP has decreased from 33.9 percent to 20.8 percent within the past 10 years. However, the growth in the total value-added of agriculture is a clear statement on the development of sector within the past two decades. Agricultural value-added increased from 15,938 billion riels in 2010 to 22,786 billion riels in 2019, with average growth of 4 percent per annum.

The share (%) of agricultural sub-sectors in agriculture in the past 10 years demonstrates that crop production takes the biggest share, consisting of 58–59 percent of total agricultural production. Fisheries stands in second place, with a share of 22–24 percent; livestock production takes up 11 percent and forestry production between 6.7 percent and 7 percent.

The share of agricultural labor in total employment dropped from 54 percent in 2010 to 35.5 percent in 2020 and is forecast to decrease around 23–25 percent by 2030. This progressive decrease represents a great opportunity for mechanization, which is replacing current labor and responding to the lack of labor in agricultural production. The use of agricultural machinery for land preparation has reached about 98 percent currently, with 70–75 percent in rice harvesting.Amid the COVID-19 outbreak, the main sectors boosting Cambodian economic growth such as construction, garment and footwear industries, and tourism was hit by the virus, but the agricultural sector has been considered as a potential sector and used as resilience measures to cope with the COVID-19 crisis and to restore economic growth.

However, the agriculture sector still faces several challenges in particular low productivity that require to focus on the supply of seed quality standards and capacity to disseminate modern and appropriate agricultural techniques and provide adequate irrigation systems. Moreover, Cambodia needs to promote processing industry in the sector by subsidizing the electricity price and facilitating logistics and supplying inputs agricultural value chains. Only around 10 percent of Cambodia's harvested products are processed in the country including 37 percent of red corn, 17 percent of rice, 14 percent of mango, 8 percent of cassava and 3 percent of cashew nut. At the meantime, Cambodia's

agricultural products exported to neighbouring countries are still informal and in raw products. However, Cambodia's agricultural commodities still potentially exist for growth such as vegetable, fish, meat especially pork that Cambodia is not able to meet the demands of the markets, therefore, Cambodia needs to import them from the neighbouring countries to fill this gap.

1.2 Progress and challenges in sub-sectors

1.2.1 Crop production

The average growth in paddy rice production in the past 10 years has been at about 3.1 percent per annum (going from 8.2 million tons in 2010 to 10.8 million tons in 2019 and 12.21 tons in 2021). The paddy rice surplus has seen noticeable growth, from 3.9 million tons in 2010 to 5.75 million tons in 2019 and 6.9 tons in 2021. The paddy rice yield increased from 2,970 kg/ha in 2010 to 3,335 kg/ha in 2019. The average annual growth in rice cultivated areas is about 2.4 percent (due to intensive farming system practices), and that of harvested areas is about 2.2 percent, while the average yield is increasing by about 2 percent per year.

Rice production has fluctuated every year over the past 10 years. It increased by 5.72 percent in 2009, 8.75 percent in 2010 and 5.83 percent in 2012. The serious droughts in 2013 and 2015 slowed growth. In 2016, the rainfall situation was sufficient throughout the country; as a result, rice production increased by about 6.6 percent. In 2017, the rate of growth decreased slightly to 5.69 percent, it was at 3.35 percent in 2018. In 2021, rice production reached to 11.6 percent. It is clear that climatic conditions have a great influence on the production of rice as well as other crops. The enhancement of agricultural irrigation capacity is therefore one of the main policy directions for agriculture sector development.

There are still some key challenges in the rice sector in Cambodia, they include: (1) Many rice millers often lack financial capitals to purchase rice during a harvest season. Therefore, a big proportion of rice products are informally exported to the neighboring countries; (2) there is a lack of certified seed supplies, especially the highly valued Sen Kra Ob seed; (3) there is a lack of water for rice cultivation, especially during dry season while farmers more rely on rain water during the rainy season; (4) Farmers have a limited knowledge of friendly-environment technologies and innovations such as land preparation, and the use of seeds, chemical fertilizers and insecticides; (5) there is no crop calendar properly developed according to the climate change issue in order to mitigate potential risks from droughts and floods; (6) No crop zoning and mappings a are not specifically developed in order to ensure high seasonal and quality products for better prices; and (7) Agriculture extension service is still limited.

The production of subsidiary crops has also fluctuated every year over the past 10 years. Production reached over 6.14 million tons in 2010 and increased dramatically to over 14.72 million tons in 2014 and 16.64 million tons in 2018 (with average growth of 13 percent in the past 10 years). The growth of subsidiary crops was at about 5 percent in 2009 and 9.6 percent in 2015 but only 1.4 percent in 2018 as a result of a severe outbreak of mosaic disease in cassava production. In 2021, industrial crops increased up to 19 million tons.

Cassava crop contributes to a domestic production around 3-4 percent in the agricultural value chains. In the last 5 years, the cassava production annually increased by 13 million tons per annum, in which 15 percent was used for a domestic processing while 85 percent were exported overseas, especially to the neighboring countries. In a medium term, the demand of cassava-made products

is predicted to rise while other countries have reduced, which is potentially good for Cambodia to promote cassava processing industry for economically added values. However, the potential benefits may not be achieved due to many existing systematic and institutional coordination challenges, namely: (1) Unregularly unstable supply of cassava products, disrupting between 4 and 6 months value chain processing per year; (2) A lack of processing infrastructures such as drying and storage facilities in rural communities, forcing farmers and local traders to sell raw cassava to neighboring countries; (3) High input costs for processing; (4) Limited coordination in cassava trades; (5) A lack of high-standard quality seeds; (6) A lack of technical guidance on new technologies for farmers to use low inputs with higher yields with standard quality; (7) Taking into consideration of establishing Cassava Cooperatives or Associations, which are easy to instruct them on how to use better seeds, techniques, fertilizers and better-equipped mechanization.

The cashew nut production is considered significantly potential industrial crop in Cambodia. In the last five years, the cashew crop was increasingly grown up, remarkably increased between 24 percent from 93,944 tons in 2015 to 208,769 tons in 2019 thanks to favorable market conditions and demands for cashew products. Due to a limited domestic processing capacity, 97 percent of raw cashews has been exported to the neighboring countries. However, there are some challenges of processing capacity due to the following factors: (1) Processing companies are usually facing investment financial capitals to purchase raw cashew at farm gates during the peak season; (2) Establishment of cashew farmer associations or cooperatives is still limited causing fragmented supplies , which is difficult for the processing companies to collect the products; (3) Farmers have limited knowledge of new technologies to control diseases and to proper manage a cashew farm; (4) there are high cost inputs; (5) there is a limitation of business facilitation in the sector.

Mango production was remarkably progressed in the last 10 years. Mango cultivated areas surged about 124,000 ha in 2019 compared to 24,000 ha in 2010. While the harvested areas were about 91,000 ha, which could yield 144 million tons. Despite strong progress, the mango processing and formal exports of fresh mango are still comparatively limited. In 2019, 5 percent of the processed and fresh mangoes of the total products were formally exported. This is due to value chain fragmentation issues such as: (1) A lack of technologies, which mango can yield seasonally regular, overuse of agriculture inputs leading to high costs with lower production and low competitiveness (2) Instable supply chains of mango for processing companies and exports due to a lack of mango associations or cooperatives and contract farming; (3) A lack of systems in compliance with the sanitary and phyto-sanitary standards (SPS) and other standards required by the importing countries; and (4) A lack of Vapor Heat Treatment (VHT) system to to kill eggs and larvae of fruit flies parasitizing inside the mango, facing many constraints for mango exports.

Rubber plantation is remarkably developed, expanding the cultivated area from 181,400 ha in 2010 to 405,600 ha in 2019, accounting for 13.09 percent an annual growth. Rubber production reached 42,250 tons in 2010 and had increased to 287,630 tons in 2019, accounting for 22.36 percent annual growth). In 2021, rubber production reached 368,000 tons increased by 5,4 percent compared to 2020. Moreover, rubber exports increased from 42,000 tons in 2010 to 282,000 tons in 2019 (a seven-fold increase during the past 10 years). About 366,300 tons of total final rubber products were exported in 2021, increased by 8,3 percent compared to 2020. The global rubber demands were approximately 1,370 million tons (with the supply of 1,376 million tons) while rubber exports are expected to have a higher demand up to 177 million tons with the supply capacity of 169 million

tons in 2025. Key challenges of rubber production include: (1) Low production due to poor planting materials , limited adaption of new technologies, lack of extension services and new researches in rubber sector; (2) lower prices of rubber due to a lack of rubber markets for communities or rubber associations, very limited manufacturing processing industries, and lack of certified rubber products for exports while large quantity of unprocessed rubbers illegally exported to neighboring countries; (3) The shortage of labour in rubber sector due to relatively poor working conditions compared to other manufacturing sectors or services.

However, the total export of agricultural products (based on data collected through the formal SPS monitoring system) have increased since 2013, in which the volume has reached 3.6 million tons equivalent to US$1 billion (while only 680,000 tons in 2012). In 2019, the exported products were about 4.8 million tons equivalent to US$1500 million (increased by 33 percent). In 2021, a total export of the agricultural products was up to 7.98 million tons.

Official export of milled rice (based on data collected through the formal SPS monitoring system) have surged 105,000 tons (equivalent to 630,000 tons) in 2010 and increased to 620,000 tons (equivalent to US$440 million) in 2019 (increased by 6 times during the past 10 years). In 2021, the official milled rice export achieved 617,000 tons. Informally, an export of paddy rice to neighboring countries are estimated over 2 million tons per year.

1.2.2 Animal health and production

Livestock production has also seen remarkable development during the past 10 years, despite some existing challenges. Generally, livestock production by both farmer households and commercial farms has seen average growth of 5.53 percent per annum. Cattle production has decreased by 2.43 percent and buffalo production by 4.8 percent, while pig production has increased by 0.79 percent and poultry production (chickens and ducks) by 7.14 percent, in terms of annual average growth. Animal production among farmer households and commercial farms increased from 27 million heads in 2010 to 4,585 million heads in 2019 (from US$1,458 million to US$1,827 million). In 2021, nationwide animal production soared 5,996 million heads. It is noteworthy that cattle production among farmer households has decreased by an average of 2.47 percent per annum (3.48 million heads in 2010 to 2.77 million head in 2019) owing to a lack of labour in rural areas caused by migration, a decreasing tendency to use animals (cattle and buffalos) as a tractive force and an expanding trend towards using tractors and machinery services to replace the missing labour force.

Pig production by farmer households and commercial farms are still not yet noticeably developed (2.2 million heads in 2010 and 3 million heads in 2017; and decreased to 2.18 million heads in 2019). The slow growth in pig production is the result of high costs of production, which makes it hard to compete with neighboring countries, as well as animal diseases (African Swine Fever and other diseases). Regarding poultry production, there has been remarkable progress in both farmer households and commercial farming, with an increase from 21.9 million heads in 2010 to 40.3 million heads in 2019 (or from US$109 million to US$404 million). It is clear that the share in animal-raising taken up by farmer households has decreased over the past five years, going from 80 percent in 2015 to 65 percent in 2020. The share of animal-raising carried out by commercial farms had thus increased to 35 percent in 2020. Basically, animal raising farms have surged from 1,090 farms in 2017 to 1,293 farms in 2020. Nevertheless, some challenges still remain critical: (1) high costs of production especially animal feed (around 70 percent of total production costs), and medical

treatments, leading to difficulty to compete with neighboring countries; (2) lack of good quality of breeds of chicken, pig and cattle; (3) lack of financial investment in the sector; (4) infectious diseases and zoonotic diseases; (5) lack of extension services to encourage farmers to raise animals in household level to generate incomes; (6) Inadequate supply of high quality and low costs of animal feeds from domestic factories or encourage farmers to produce their own animal feeds.

1.2.3 Fisheries production

In-depth reform in fisheries has been actively developed, allowing Cambodian people, especially small-scale fishers, to increase their production. The "Community fisheries with no offense" approach is being implemented vigorously so that community fisheries can contribute to the sustainable management and preservation of fishery resources. As a result of the reform, the Law on the Amendment of Articles 6, 41, 42, 43 and 95 of the Law on Fisheries was promulgated by the Royal Decree (ន.ស/រ.ក.ម/0506/011) dated on 21 May 2006. The Law was rolled out by the Royal Decree (ន.ស/រ.ក.ម/1117/015) dated on 22 November 2017. It is a turning point in fisheries reform in terms of adjusting roles and responsibilities as well as responding to social needs in Cambodia. Moreover, the new law on fisheries has been formulated for an inclusive and sustainable development and implementation.

In the past 10 years, the total amount of fisheries production (inland fisheries, marine fisheries and aquaculture) has seen notable growth, with annual average growth of 5 percent, from 550,000 tons in 2010 to over 856,4000 tons in 2021. Inland fisheries production increased from 405,000 tons in 2010 to 479,000 tons in 2019 (average growth of 1.9 percent per year) while marine fisheries production rose from 85,000 tons in 2010 to over 122,000 tons in 2019 (4.1 percent) and aquaculture production from 60,000 tons in 2010 to over 307,000 tons in 2019 (19.9 percent).

Even though, there is a good progress in fisheries, key constraints still remain and need to be addressed: (1) Illegal fishing still continues despite some firm measures taken; (2) the majority of the existing community fisheries have limited capacity and they are dependent on fishery resources; (3) R&D on fisheries and aquaculture are still limited; (4) Flooded forests and mangrove forests are decreasing through illegal logging; (5) lack of new technologies to raise fish and lack of high quality of breeds; (6) lack of direct access to markets as relying on local collectors, leading to price fluctuation; (7) lack of financial investments; (8) lack of harvesting facilities such as fisheries ports, community purchasing and collecting stations connected to aquaculture farms, electricity, processing and clean water; (9) lack of special zones for large scales of commercial aquaculture farms located near water sources and markets; and (10) Fishing conservation areas and natural fish breeds have not been fully implemented.

1.2.4 Forestry production

Forestry reform is being implemented vigorously through the strengthening of management capacity, especially to combat illegal logging and activities related to wildlife species, as well as many other tasks. Forestry sector contributes to sustainable development and improves local livelihoods, employment and poverty reduction. Order 01 BB dated 7 May 2012 on measures for strengthening and increasing the effectiveness of the management of Economic Land Concessions (ELCs) by suspending already-approved ELC companies who did not implement ELC investment contracts.

Under a new reform policy, the RGC transferred 13 protected-forest areas and 5 productive forest

areas from MAFF to the Ministry of Environment (MOE), and 73 ELCs from MOE to MAFF to manage. Reforestation is receiving careful attention in Cambodia. The RGC has permitted reforestation and the restoration of forests on degraded forest land through cooperation with the private sector. MAFF issued the Private Forest Rules which are aimed at determining principles in establishing and developing private forests. Over the past 10 years, reforestation of both public and private reached over 408,000 ha.

Community forestry has developed significantly. By 2021, 636 forestry communities were established, covering 522,273 ha in which 536 forestry communities were formally registered. Moreover, 449 forestry community agreements and 106 forest community plans were approved.

Notably, the increasing population is integral to increasing use of forestry products. The transformation from forest land into agricultural and residence land create more pressure on natural forest and its ecological systems. Illegal logging still remains an issue. Although law enforcements and regulation have been actively implemented, land encroachments still continue. Forestry communities were established but there is lack of technical and financial supports for effective operation and management.

1.3 Global and regional trends in agricultural sector

The world population will climb from almost 8 billion people today to 8.5 billion in 2030. This figure is expected to surge to almost 10 billion in 2050, with food demand simultaneously growing. The world population will be increasingly well fed by 2030 (FAO, 2017).

By 2030, regional market demand and supply are expected to grow significantly, and this represents an excellent opportunity for Cambodia to develop its agricultural production to fulfil market needs, exploiting its potential and its competitive and comparative advantages. Cambodian agricultural exports can strategically target international markets, in particular Europe, India, Association of Southeast Asian Nations (ASEAN) countries, China, Korea and Japan. This would primarily include rice, rubber, cassava, corn, cashew nuts, pepper, mangos, bananas and other agro-industry products. Cambodia must respond to these valuable opportunities by producing high-quality agricultural products, taking into account food safety and regional and international standards.

Patterns of food consumption have changed towards higher-quality and more expensive foods such as meat and dairy products. Developing countries will increasingly depend on imports of cereals, fruit, vegetables, meat and milk. Production of these will not keep pace with demand. By 2030, such countries could be producing only 86 percent of their own cereal needs. There is an increasing preference for healthy food and functional foods, which is pushing up demand for high-quality food raw materials. Compliance with the SPS system and its service delivery should be strengthened for people's wellbeing.

The expansion of farmland for food production will be slower than in the past. In the next 30 years, developing countries will need another 120 million ha for crops. This will require the expansion of irrigated area from 202 million ha today to 242 million ha by 2030, increasing pressure on water resources, which are already scarce in many parts of the world (FAO, 2020).

Promising technologies have emerged that combine increased production with improved environmental protection. Productivity improvements no longer depend on increased input use but can go hand in hand with sustainable, environmentally friendly production systems. Electronic trading platforms for agriculture and food products are becoming more important and standardized (FAO, 2020).

Supply chain interruptions and poverty concerns arising as a result of COVID-19 have put food security and achievements made on nutrition at risk. According to the World Food Programme (WFP), about 130 million lives and livelihoods in 55 countries were already at risk in 2020 (Anthem, 2020). An assessment by the Food and Agriculture Organization of the United Nations (FAO) in 2020 indicates that the COVID-19 crisis may add between 83 and 132 million people to the total number of undernourished in 2020, owing to losing points in global gross domestic product (GDP) growth.

The leaders of the ASEAN countries have developed a roadmap and rolled out their 2025 vision of highly integrated, cohesive, competitive, innovative and dynamic ASEAN states. Within this, it is vital to empower producers, and in particular agricultural cooperatives, to deal with the challenges and to enhance their role in agricultural global value chains (ASEAN Secretariat, 2018).

1.4 National trends in agricultural sector

Population and the agriculture sector: According to the 2019 census, the Cambodian population is at 16,524,482 people, including 1,235,993 migrants working abroad. Around 76.2 percent of the Cambodian population lives in the countryside and relies on agricultural livelihood activities, and in 2020, 35.5 percent of people were employed in agriculture. Notably, rural areas have seen a decreasing dependency on agricultural incomes and continuing out-migration to better-paying jobs. The Cambodian population is expected to reach over 20 million by 2030, and 25 million by 2050. Against this backdrop, educational developments will increase knowledge and skills, which will facilitate and contribute to the country's development and sustainable economic growth. Meanwhile, with living standards improving, the majority of Cambodian people are increasingly considering quality and safety in their food consumption, especially that of fruit, vegetable, fruit, fish and meat.

Climate change: Climate change and the cyclical nature of the El Niño–Southern Oscillation (ENSO) events are having significant long- and short-term impacts on the agriculture sector, with detrimental consequences, in particular for resource-poor producers who do not have access to alternative livelihoods. Cambodia is one of the most vulnerable countries in the world to climate change, largely because of the reliance of many of its farmers on rain-fed agriculture. It is estimated that climate change could reduce GDP by 2.5 percent by 2030 and by 9.8 percent by 2050. This trend would delay Cambodia's accession to upper-middle-income status (UNDP, 2018).

Agricultural productivity and innovation: To meet the changing demand of a growing population, the global agriculture sector will need to double production by 2050 (FAO, 2017). Innovative strategies for the sector will play a key role in combating hunger, in employment creation, in food security and nutrition and in economic growth. Efforts need to be made to attract more investors and innovators to develop new ideas for the benefit of the sector and for Cambodia's rural farmers. Research and development (R&D) should be intensified to find solutions to fit changing and sustainable intensified production systems.

Competition for natural resources: The majority of the rural poor in Cambodian rely on natural resources like land, fish, forests and clean rivers for their livelihoods. Access to these resources is limited and is becoming more restricted with the increased enforcement of laws and regulations guiding land use and environmental protection. The Cambodia Inter-Census Agriculture Survey (CIAS) 2019 (NIS and MAFF, 2021) indicates that, of the total 1.7 million household agricultural holdings in

Cambodia, 11 percent are involved in forestry activities of collecting wood for energy. Another small number of households is engaged in hunting animals, charcoal-making and timber collection. In the meantime, population growth and urbanization are increasingly affecting Cambodia's ecosystems, resulting in environmental degradation and a loss of ecosystem services and biodiversity. Sustainable use of land, water, forests and their services to the economy and to the well-being of Cambodia's population will require increasing attention.

Changing food systems: Food systems encompass all actors, processes and resources of the food value chain and food consumption, and are in a dynamic equilibrium with other systems. There is a need to understand the challenges and gaps in the current food system to reshape it towards one that is sustainable and inclusive, and that produces food that is healthy and nutritious at the same time as being profitable. The National Food Systems Dialogues 2021 will lead to a clear roadmap to help the RGC ensure it has in place a sustainable national food system by 2030.

Food demand and consumption: The availability of rice, the main staple for the Cambodian people, is sufficient at the national level. Domestic demand will change in terms of types and qualities of food desired with Cambodia's evolution to middle-income country status. Notably, dietary habits have already started to shift: meat consumption increases have been observed in urban areas, although rice remains the staple food crop. With incomes increasing, there is an excellent opportunity to increase quality and safety awareness for both consumers and producers and to strengthen demand for a healthy diet.

Gender inequalities in the agriculture sector: Women generally play a key role in food provision and distribution for their family. However, this is despite the fact that women make up 48 percent of the total labour force in Cambodia, and approximately 30 percent of these women are employed in agriculture (ADB 2020). Cambodian women face immense challenges in terms of advancing their economic opportunities: women have less access to land, technology, information and extension services. Addressing gender inequalities by promoting greater participation for women in and benefits from agricultural interventions and decision-making is key to sustainable and inclusive development. Additionally, education, training and technical capacity development are key to increase opportunities for women, both in and outside agriculture.

1.5 Challenges ahead in the agricultural sector

Agricultural productivity: Agricultural productivity is low in Cambodia in comparison with other countries in the region, with the modernization of production systems only now slowly starting. Mechanization and the appropriate use of farm inputs require awareness-raising, capacity-building and access to credit across the sector. The capacity to disseminate modern and appropriate agricultural techniques is still inadequate, in particular in the use of agricultural inputs (seed, fertilizer and agrochemicals), agricultural machinery and post-harvest technology. These factors contribute to high production costs and low productivity, resulting in low competitiveness. Meanwhile, agricultural production systems need to adopt to the increasing trend in labour migration from rural to urban areas. Farmers with little agricultural land cannot benefit from economies of scale and can barely compete as a result of the high costs of production, resulting in low profits.

Climate change adaptation and sustainability: The agriculture sector in Cambodia is highly vulnerable to climate change and to the ENSO cycle. Limited irrigation and diversification and reliance on agrichemicals mean production systems are low in climate resilience. The sector must adopt

climate-resilient technologies and practices to ensure long-term sustainability of the natural resource base while meeting productivity targets. In addition, the sector needs to support national efforts towards climate change mitigation by reducing its contribution to greenhouse gas emissions and carbon sequestration. To achieve this goal, it will be necessary to address the decrease in forest cover in the country, including of mangroves and flooded forest, in recent years, mainly driven by expansion of agricultural land, urbanization and illegal logging. The Tonle Sap basin is highly vulnerable to climate change through changes in rainfall patterns, which is likely to affect the flood pulse system of the lake, with impacts on its fisheries.

Farming structure: The agriculture sector is still dominated by smallholders. Its small-scale family farms are mostly rain-fed, with very limited use of modern inputs. More than a third of smallholders are still subsistence producers. The establishment of agricultural cooperative or association (AC) is a key solution to address the issues, to receive appropriate credits and to implement a contract farming.

The current labour market disruption owing to the COVID-19 pandemic means that jobs in agriculture need to be maintained and is slowing down out-migration. At least in the medium term, this will require solutions for smallholder farming systems in support of agriculture-based livelihoods for a growing population with limited local, regional and international migration and income options. However, depending on the pace of local, regional and international economic recovery, this situation could change quickly, demanding flexible and quick responses in terms of agriculture support measures.

Improving water management remains a key factor in agricultural productivity improvement. Agricultural water supply is still short of farmers' needs, especially during droughts. Appropriate irrigation and drainage systems are nowhere near serving all potential areas. Establishing an agricultural water management framework promoting the application of modern irrigation systems will improve production and increase resilience to climate change. Meanwhile, the management of existing systems is often limited. Investment in system expansion and capacity-building of operators requires urgent attention.

Value addition to agriculture: Only around 10 percent of Cambodia's harvested products are processed in the country, and processed agricultural exports contributed only 5 percent of Cambodia's total exports (by value) in 2020. This thus represents an area of significant potential for investment in value additions job creation and growth.

Agro-industry development is key to increasing the value addition in agricultural commodities, through ensuring the quality and safety of food products and food processing. The establishment of agro-industrial clusters and the facilitation of public–private–producer partnerships will be critical to the development of the sub-sector.

Limited access to quality inputs at affordable prices: Lack of seed quality standards is a key bottleneck. The increasing use of pesticides for vegetable and dry-season rice cultivation is raising more concerns among smallholder farmers and consumers.

Transport and logistics: Cambodia ranked 94th of 137 counties on infrastructure competitiveness during 2017–2018 on the World Economic Forum's Competitiveness Index. However, the logistics costs and storage in Cambodia are considerably higher than those in neighbouring countries. This results in high inputs costs of production and it is difficult for market competitiveness.

Access to finance and credit by smallholder farmers: Microfinance loans to vulnerable groups and

the rural poor by microfinance institutions (MFIs) and private lenders represent a serious concern. Lending to the agriculture sector, and in particular to smallholders, is considered very risky, with very high interest rates putting a great burden on those borrowing. The current COVID-19 situation has made borrowing even more difficult.

Agricultural communities (cooperatives), formed to empower and improve skills, market access, bargaining power and accessibility of technical and credit services, still reach a limited number of farmers.

Capacity development and institutional reforms: Human resource development and the improvement of agricultural technical capacity at the grassroots level need to be accelerated in order to make it possible to provide quality agricultural extension services to farmers in rural areas in an effective way. Institutional reforms will be necessary to bring the required changes in sector management, to improve the effectiveness and efficiency of technical services and administrative management. R&D needs to be strengthened to enable relevant solutions for current and emerging production. Introduced appropriately, modern information and communication technology (ICT) are still limited but digital technologies should be promoted.

Drawing upon global, regional and local trends and challenges, there are related policy interventions that the NADP is employing as guiding messages and instruments to address key emerging issues in the agricultural sector. This ten-year policy is to increase agricultural growth with high competitiveness and inclusivity. It is to support the country's mission to increase the provision of high quality, safe and nutritious food products, while safeguarding land, forest and fishery resources.

2. Vision

The vision for the NADP is "A modern Agriculture Sector which is competitive, inclusive, resilient and sustainable leaded to increase farmers' income as well as the prosperity and wellbeing of the Cambodian people".

3. Overall goal

To increase agricultural growth with high competitiveness and inclusivity by providing high-quality products, which result in food safety and nutrition, while taking into account sustainable management of land, water, forestry and fishery resources.

4. Policy themes

Theme 1: Modernizing and commercializing the agricultural value chain

Theme 2: Public and private investments in the agriculture sector

Theme 3: Growing sustainably and increasing resilience to climate change

Theme 4: Institutional reforms and cross-cutting issues

In order to achieve these four policy themes, four related strategic objectives have been formulated in this regard:

Strategic objective 1: Enhance the competitiveness of agricultural value chains: Focus on productivity enhancement, diversification and profit generation in the value chains of rice, seasonal crops, rubber and other agro-industrial crops, as well as the production of livestock and other commodities with economic potential, and possible agro-industry development, especially the implementation of public–private–producer/agricultural cooperative partnerships (4Ps) for agri-business development. Exploit the potential of smart and digital technologies in sustainable production, plant protection and SPS measures and effective marketing of high-quality products.

Strategic objective 2: Increase support for infrastructure in agriculture and agri-business facilitation: Concentrate on irrigation systems, on-farm water management, solar for irrigation, rural farm-to-market roads, electricity price reduction for enterprises and agricultural communities, promotion of private sector investments in production and processing, access to rural credit and trade facilitation in agriculture.

Strategic objective 3: Promote sustainable land, forestry and fishery resource management: Pay high attention to effective, sustainable management of land resources, water, forestry, non-timber products and wildlife, as well as fishery resources. Increase the climate resilience of production systems and facilitate food system changes towards the supply of affordable, safe and nutritious food.

Strategic objective 4: Strengthen institutional management and regulatory reforms, HRD and address emerging challenges: Focus on strengthening institutional management, law and regulation enforcement, human resource development, R&D and agricultural education and training. Promote gender equality across the sector. Lead the recovery from the COVID-19 pandemic and integrate lessons learned into future crisis responses.

The strategic objectives and the related results to be achieved within agriculture are translated into themes and strategies for policy actions. Further operationalization, including suggested programmes and projects, is outlined in the Agricultural Sector Master Plan (ASMP) 2030.

5. Strategic actions

To achieve the RGC's vision and NADP objectives, key strategic objectives in 2022 are as followed.

Policy theme # 1: Modernizing and commercializing the agricultural value chain

Strategic objective 1: Enhance the competitiveness of agricultural value chains

Strategic objective 1.1: Increase productivity and value addition of crop value chain

- Improve productivity priority crops (paddy rice, vegetables, bananas, mangos, dragon fruit, longan, ornamental plants, cassava, maize, cashews, pepper, sugarcane, durian, sweet potato, chilly and pineapple).
- Increase diversification in production and mitigating risks from mono-cropping value chain.
- Enhance infrastructure development and strengthening, and mechanization of crop production.
- Promote seed industry and management of agricultural inputs.
- Improve the quality and safety of agricultural produce and agribusiness.
- Develop mapping and zoning of agricultural crops.

- Strengthen the capacity of agricultural R&D.
- Strengthen supporting services and human resource development in crop production.

Strategic objective 1.2: Increase productivity and value addition of rubber value chain

- Enhance and improve the rubber production value chain through expanding sustainable rubber production techniques, smallholder rubber cooperatives empowerment, rubber market development.
- Enhance the technical capacity for rubber research and development, thereby increasing the network to transfer technology to rubber producers to improve quality and productivity.
- Promote foreign direct investment in rubber development and financial resources from development partners to support sustainable rubber production and development.

Strategy 1.3: Increase productivity and value addition in animal production value chain

- Implement the Strategic Plan of Animal Production 2016-2025 and update the plan for the next 10 years.
- Enhance competitive and inclusive livestock production (applying good animal practices, improvement of breeds, technologies, quality and safe feed as well as breeding, etc.).
- Promote animal health, veterinary public health and animal well-being (biosafety, death rate reduction, vaccination, husbandry, hygiene of meat, slaughterhouse and labs...).
- Improve extension, capacity-building, training and dissemination of technical practices and strengthen legal implementation.
- Promote partnerships with the private sector and strengthen international cooperation in the animal health and production sub-sector.
- Facilitate private investments in animal production, animal feed factories, vaccine production, and medicines for exports.
- Promote family small-scale animal production in rural areas for more incomes and provide more production inputs for better animal production.

Strategy 1.4: Promote agro-industry development and agri-ecotourism

- Improve and modernize SMEs according to quality and food safety standards.
- Study and establish agro-industrial parks in Cambodia to collectively establish processing enterprises and associations in order to meet the export demands.
- Promote agri-ecotourism through agricultural production value chains and promotion of green bell development for supplies of agriculture products to tourism industries and services.
- Establish and strengthen quality and safety control system of agricultural food production according to the national and international standards.
- Develop and strengthen sustainable and inclusive market systems for agricultural products through contract farming.

Strategy 1.5: Smart technology in value chains

- Take advantage of technological developments and promote modern agricultural technique application, e.g. drip irrigation, pest surveillance, e-phyto certification.
- Promote renewable energy, solar for irrigation, shade houses, high-tech agricultural enterprise.
- Promote and implement agricultural organic production, Good Agricultural Practices (GAP)

and climate-smart agriculture with the integration of smart and modern technology.

- Strengthen agriculture extension by using modern information and communication technology to reach all farmers with a demand-based system and high-quality targeted support.
- Utilize innovative technological systems at all stages of agricultural production to ensure higher quality, safety and efficiency.

Strategy 1.6: Increase productivity and value addition to aquaculture value chain

- Strengthen seed research, enhance breeding production and promote modern fish culture techniques including research on improved natural fish seed and conserve highly economic value fish species. These will maximize fish breeding in order to stock fishes into rivers, lakes, natural ponds, and disseminate to farmers for rice-field culture.
- Determine potential sites, supporting infrastructure and enabling environment for aquaculture development.
- Establish aquaculture clusters or associations in each region in order to accelerate production capacity and to facilitate technical, credit and market extension and supports.
- Develop aquaculture production plan along with specific aquaculture activities based on aquatic species as well as creating vendor/ fish collector clusters with market linkage through a mechanism on aquaculture contract farming between aquaculturists and vendors.
- Facilitate to subsidize low electricity price for aquaculturists to boost aquaculture activities and aquaculture processing plants for export.
- Facilitate better access to low interest credit or loan for aquaculturists with the Agriculture and Rural Development Bank (ARDB).
- Facilitate the possibility for tax or VAT exemption for aquaculture machineries, processing facilities and materials for aquaculture development.
- Study on the possibility to create inland aquaculture special zones in the Cambodia Mekong delta region and the special zones for marine aquacultures for exports.
- Establish aquaculture market plans and supporting transportation of aquaculture products to different distribution sites across provinces/municipals where are reachable to aquaculture clusters.

Strategy 1.7: Increase productivity and value addition of forestry and wildlife value chains

- Improve forestry and wildlife value chains through new technologies and sustainable processing, and strengthen capacity of the community forestry.
- Build capacities on research and forest and wildlife conservations through new technology transfers to all concerned parties in order to improve forest and wildlife, and especially promote researches on high economic values of forests.
- Promote foreign direct investments in forest and wildlife conservation, and mobilize financial resources from development partners to support a sustainable forest production and wildlife conservation.
- Enhance competitive and inclusive forest production through reforestation programmes, especially the high-value economic forests.
- Enhance extension services, capacity building of new technologies and law enforcements and policy rollouts.
- Promote a private and public partnership, and build international cooperation in forestry and wildlife sub-sector.

- Strengthen forestry management, technologies of forest procession based on international standards for exports.

Strategy 1.8: Promote sustainable food system

- Ensure sufficient safe and nutritious food for a growing population to reduce malnutrition, including a gender perspective in all interventions.
- Promote more efficient, inclusive and resilient food systems that are consumer-driven approaches.
- Implement the roadmap towards sustainable food systems designed in Cambodia's Roadmap for Food Systems for Sustainable Development 2030.
- Reduce food losses along the value chain.

Strategy 1.9: Digitalization and e-agriculture technology in value chain

- Establish a digitalized agriculture support system to boost agricultural production, including on-time agricultural information-sharing.
- Develop and implement tools for digitization in agricultural education, training and extension work, and encourage use of digital tools and smart equipment by male and female farmers.
- Establish and facilitate the use of digital platforms for agricultural trade.
- Digitize administration of services, in particular supporting certification systems, issuance of permits and declarations, information exchange between ministries and public information dissemination nationally and internationally.
- Support the development and comprehensive coverage of digital networks across Cambodia, in particular including all rural and agricultural areas, to facilitate the access and use of modern information and communication technology (ICT).
- Pilot ICT-enhanced extension services around particular farm technologies and priority sectors (rice, rubber, animal production).
- Pilot the concept of involving young farmers as facilitators in addition to ICT-trained extension agents supported by smart technology developers.
- Promote the implementation of National Single Window.
- Facilitate the digital assessment and pilot digital platform on investments in forestry and animal husbandry.

Strategy 1.10: Improve market access for small and medium farmers

- Establish agricultural cooperatives to improve market access through business agreement or contract farming approach.
- Improve market access for small and medium farmers through trade fairs rural and urban areas.
- Improve price-setting by producers at the farm gate among key value chain actors.
- Ensure lower costs of production and inputs.
- Enable market access with stable prices during harvesting seasons.
- Improve vertical and horizontal value chain linkages among actors.
- Build trust among value chain actors on agricultural prices.
- Promote tourist activities and ecotourism in agricultural community, forest community, fisheries community, and other potential communities.

Policy theme # 2: Public and private investments in the agriculture sector

Strategic objective 2: Increase support for infrastructure in agriculture and agribusiness facilitation

Strategy 2.1: Increase effectiveness of agricultural irrigation system

- Improve human resource management and development improvement.
- Enhance water resource management and development, and irrigation system extension implementation.
- Strengthen flood and drought management.
- Promote information management on water resource and meteorology.
- Enhance water resource protection and conservation.
- Develop mapping and zoning of agricultural irrigating zones.
- Identify and prioritize of potential irrigation areas.
- Build constructions and renovate of water pumping stations for agricultural irrigation.
- Increase in water use efficiency in irrigated agriculture.
- Encourage to rehabilitate natural ponds, cannels, and lakes to store water in case of droughts and to release floods.

Strategy 2.2: Expand farm-road connections, electricity network and transportation of agricultural products

- Increase the investment and mobilize external resources to build and develop physical infrastructure for supporting agriculture, road connection to farms, markets and agricultural industries.
- Reduce the cost of electricity, expand coverage and increase the stability of supply by building more sub-stations in potential production areas, especially expand electricity networks in main production areas.
- Increase budgets and manage rural electrification funds for agriculture production
- Expand logistic infrastructure, transportation for agricultural products with response to the real needs.

Strategy 2.3: Promote agricultural investment and agribusiness facilitation

- Promote the private sector in agricultural investment, strengthen partnerships in agricultural development and facilitate an investment climate.
- Encourages private international and local investment in agriculture and agro-industry through sound policies, regulations and laws including the amendment of Law on Business and Investment.
- Support in linking the agricultural production and agro-processing (Agro-Industry) in order to increase the value added and promote for the establishment of Agro-Industrial Parks (SEZ for agro-processing) for promoting agricultural exports.
- Expand public and private sector partnership through the creation of Agro-Industry Federation (AIF).
- Continue to adjust the structural adjustment and strengthen technical capacity for public services reduce the costs of doing business by revised some rule and regulations for increasing the efficiency of public services.

- Promote public-and-private partnerships to establish fertilizer and feed factories locally in order to supply local demands with high quality, appropriate price and safety for local, regional and international markets.
- Enhance investments in household wildlife raising for livelihood improvements through private investments.
- Promote investments in industrial-based wood processing.

Strategy 2.4: Agriculture sector finance

- Increase the effective and efficient use of public funding for the development of the agriculture sector, responding to the needs and demands of producers and processors.
- Facilitate the development of adapted financial services and products that serve the needs of both small and medium farms and agribusinesses.
- Increase credit for the agriculture sector and strengthen the Agricultural and Rural Development Bank (ARDB) and the Small and Medium Enterprise Bank (SME Bank) to serve the financial needs of agricultural stakeholders: increase availability and access to (rural) credit.
- Enable more engagement of and access to ARDB to serve the financial needs of value chain actors especially increasing soft loans for non-rice industry, including livestock production, aquaculture and infrastructure support agriculture and create its sub-branches in the provinces (at least 20 Branches in the country) with digital operation.

Policy theme # 3: Growing sustainably and increasing resilience to climate change

Strategic objective 3: Promote sustainable land, forestry and fishery resource management

Strategy 3.1: Promote forestry and wildlife resource management

- Promote forest management and development of climate resilient forests a 10-year forest development action plan with effective implementation plan.
- Increase effectiveness in community forestry development and implement a community forestry plan, develop key principles for community forestry management and improve local livelihoods through agri-forestry system.
- Promote management and development of wildlife and biodiversity, especially the promotion of household and farm level production.
- Promote forestry registration, strengthen effective enforcement of forestry law and other regulations on forest and wildlife conservation.
- Strengthen research to support forest development.
- Strengthen the institutional framework for sustainable management practices related to forestry and wildlife resources.

Strategy 3.2: Promote fishery resource management and aquaculture development

- Promote the implementation of strategic fisheries plan 2015-2024 and update it for the next 10 years.
- Strengthen management and development of community fisheries, especially capacity development for community fisheries to effectively manage and conserve fisheries resources, and improve local livelihoods of community members as well as community management and community refuge pond development.

- Encourage protection and conservation of fishery resources in lakes, canals, rivers and seas, and strengthening of fisheries boundaries.
- Promote fishery extension services on natural fish raising and rice-fish cultures where are geographically applicable in order to increase natural fish production and to reduce chemical fertilizers that impacts on fisheries and biodiversity.
- Promote fishery research and development, with an emphasis on value chain analysis, including post-harvest storage and handling.
- Promote capacity development and technologies to improve small-scale fishers' performance for food security and nutrition and strengthening livelihood options.
- Promote fishery value chain development and export promotion.
- Promote the implementation of marine fisheries management policy.
- Make amendments of Law on Fisheries, enforcement of existing laws and regulations to combat illegal fishing.
- Strengthen gender mainstreaming and eliminate child labor in fisheries sector.

Strategy 3.3: Promote agricultural land resources management

- Implement a National Action Program to Combat Land Degradation in order to increase land productivity in response to agricultural development, livelihood improvement of rural people as well as to contribute to the reduction and adaption to the climate change.
- Prevent land degradation and increase land productivity through the establishment of a policy framework with the corresponding relevant legal documents, in order to increase the application of agricultural land management.
- Develop and implement a concrete action plan to prevent the deterioration of soil and water quality in order to preserve natural resources.
- Improve the conservation of Cambodia's farm land thereby promoting the restoration of watershed areas, the provision of ecological services, the demonstration of agricultural land management practices, and in order to demonstrate the effectiveness of integrated farm land for mechanized agricultural production.
- Strengthen the technical capacity for the implementation of sustainable agricultural land and watershed area management and practices.
- Promote conservation agriculture, including sustainable intensification and agroecology.
- Promote the implementation of strategic plans or agricultural methods to reduce inappropriate chemical use and to promote good agricultural practices.

Strategy 3.4: Strengthen climate resilience

- Promote the sustainable use of natural resources and thereby the implementation of the Climate Change Strategy in Agriculture 2030.
- Promote an effective and sustainable uses of renewable energy through the establishment of a bio-digester policy towards achievement of the SDG goals 2030.
- Promote environmentally friendly production and products through conservation agriculture practices.
- Facilitate Cambodia's agricultural path towards becoming carbon neutral.
- Implement relevant strategies in response to climate change that affects fisheries resources including aquaculture production
- Facilitate and coordinate SDG #12 in order to promote environmentally friendly agricultural production in line with the Agricultural Fertilizer Policy.

Policy theme # 4: Institutional reforms and cross-cutting issues

Strategic objective 4: Strengthen institutional management, regulatory reforms, HRD and address emerging challenges

Strategy 4.1: Reinforce institutional management and HRD

- Reform institutional management into an effective structure, including supportive human resource management and development.
- Strengthen human resource policy implementation in the agriculture sector with gender mainstreaming in HRD, and ensure gender equality in human resource development.
- Strengthen the quality of education through the implementation of the 2030 Master Plan of Agricultural Education Institute, and agricultural education for all relevant stakeholders to provide the possibility to create an attractive professional occupation based on quality and high income.
- Enhance research capacity for agricultural development, produce basic research and applied research linked to market needs, and establish and implement Cambodia agricultural research policy.
- Strengthen extension service capacities in agriculture, forestry and fisheries, attract, mobilize and train young farmers with new agricultural technologies, and strengthen connection of researches and agricultural extensions.
- Establish an agricultural data management and registration system (crops, livestock, forestry, fisheries, etc.) as a basis for managing and forecasting supply and demand for measures to develop the entire agricultural sector.

Strategy 4.2: Developing laws and regulations on the agricultural sector

- Establish laws and law amendments (forestry and fisheries).
- Reinforce the implementation of laws and regulations effectively.
- Review and revise laws and regulations governing activities to complement a supportive environment for agricultural producers, processors and exporters.
- Strengthen dissemination and public awareness on laws and regulations.

Strategy 4.3: Leadership

- Ensure the leadership and workforce in MAFF have the required capacities to effectively and efficiently manage, guide and support the sector and its stakeholders.
- Strengthen capacity to mobilize support and implement NADP policy at national and local levels.
- Promote gender mainstreaming at all stages of the NADP and capacity development of MAFF staff in gender-responsive implementation.
- Provide technical and operational know-how and information needed for NADP implementation and evaluation at the sub-national level.
- Promote mechanisms for agriculture project management unit in order to effectively coordinate the implementation and harmonization of all projects towards the achievement of the NADP.

6. Mechanisms for the NADP Roadmap 2022–2030: policy leadership, coordination and implementation

The above-mentioned strategies concentrate on the preparation and execution of a concrete policy framework relying on close collaboration and coordination mechanisms to ensure effective implementation of the NADP towards 2030. The four thematic policy pillars provide an umbrella for and support implementation of the NADP. The four pillars are not stand-alone components but are mutually reinforcing, based on coordinated action and complementarity with other sectoral policies.

This section describes briefly how the NADP should be guided, implemented, financed and monitored. Key NADP players executing the NADP to achieve its objectives and strategies include MAFF as lead implementer, with relevant line ministries and DPs acting as coordinators in implementation and evaluation (see Figure 1). Figures 1 and 2 also introduced the four steps involved in NADP formulation, implementation and evaluation:

1. **Consultation:** MAFF and the policy formulation team undertook a desk review of relevant policy reports and documents. Policy consultations at the national and sub-national levels were conducted. Key government officials and experts were engaged to ensure their ideas and suggestions were put forward and accounted for in the NADP process.
2. **Responsible ministries and DPs:** The NADP Roadmap enables key providers of financial and technical inputs to collaborate in the NADP rollout responsibly and in a coordinated manner. Technical working groups (TWGs) of which MAFF is already chair or co-chair play an active role here. Supporting the work of other coordination and cooperation bodies ensures the interests of MAFF are represented.
3. **Implementation and coordination:** MAFF and TWGs will lead a collaborative approach and implement both the NADP and the Agricultural Sector Master Plan (ASMP) towards 2030. MAFF will roll out and follow the policy matrix. 4Ps partnerships will accompany the implementation process.
4. **Mechanisms for monitoring and evaluation (M&E):** MAFF and key line ministries will report annually on key progress and trends against NADP indicators. This makes it possible to hold MAFF and all key actors accountable, to review the appropriateness of measures and to fine-tune implementation. The review process will be based on an M&E mechanism that will be developed by MAFF and funded and supported by DPs.

   This mechanism will reach out beyond the master plan in which outcome indicators should be agreed from different ministries and DPs. 7. Financial Resource

7. Financial Resource

Implementation of the NADP 2022-2030 requires significant funding from three main sources: the national budget, DP budgets and private sector investment. The national budget, which comes under the RGC's Public Financial Management Reform Programme, is allocated to relevant ministries, institutions and technical entities. In relation to DPs, they will need to develop their own country partnership strategy in response to the goal and objectives determined in this policy document. Meanwhile, the private sector is providing investment capital to modernize the agriculture sector.

The RGC Public Financial Management Reform Programme is a key policy measure and embodies a clearly defined shift from a centralized budget system to one based on performance and decentralization. Performance-based budgeting involves the allocation of funds linked to actual work carried out within the programme framework, so as to respond to the objective of ensuring that the budget is playing an important role and represents an effective instrument in implementing the RGC's policies.

The concerned ministries and institutions will continue to set out the main programmes, sub-programmes and clusters of activities in the effort to ensure effective national and DP budget allocations that respond to the indicators set out in the NADP. A budget strategic plan will be prepared based on performance and the available funding.

The concerned ministries and institutions thus need to develop detailed projects to consolidate into the Public Investment Programme (PIP)- Three-Year Rolling Plan in accordance with the instructions of the RGC and coordinated by the Ministry of Planning (MOP). In this regard, DPs need to review the PIP project list to use in formulating their development projects in line with their direction and potential.

The concerned ministries and institutions need to attract technical and financial assistance from DPs to contribute to the successful implementation of the NADP. In the meantime, ministries and institutions will continue to use the Technical Working Group on Agriculture and Water (TWG-AW), Technical Working Group on Fisheries (TWG-F), Technical Working Group on Forestry Reform (TWG-FR) and Technical Working Group on Food Security and Nutrition (TWG-FSN) as the base for mobilizing technical and financial assistance to implement the NADP. The concerned ministries and institutions will also continue to use the government–private sector forum to attract more investment, address the challenges facing the private sector and promote entrepreneurship, including among small and medium agricultural enterprises, particularly agribusinesses and agricultural product processing investors, who represent an important contribution to the effective implementation of the NADP.

8. Monitoring and evaluation

Implementation of the various work-plans under the NADP requires effective coordination and active participation from relevant ministries, institutions and technical entities. In this regard, the Economic and Financial Policy Committee (EFPC), chaired by the Ministry of Economy and Finance (MEF), plays an important role in coordination to promote the effective implementation of the NADP. All ministries, institutions and technical entities that are responsible for implementation under the NADP must formulate an implementation mechanism and report results annually to the EFPC as the representative of the RGC. To this end, the EFPC will organize meetings to enable concerned entities to discuss progress and challenges during implementation and to make requests to the RGC. The existing sectoral coordination structure, through the TWGs, will support the EFPC in enabling dialogue, monitoring and reporting.

A large-scale M&E effort will take place in 2023, close to the beginning of the NADP's mandate, involving a detailed study and information collection to verify the indicators set at the level of policy measures and to introduce interventions to promote effective implementation of the NADP. Mid-term progress M&E will be conducted in 2025 and end-line M&E in 2030, to assess results against planned indicators and gauge impacts as stated in the overall goal and specific objectives. Key indicators and targets will be measured against the CSDGs (as stated in each strategy under each theme in the NADP). To facilitate this task, the concerned ministries and institutions, under the leadership of the national EFPC, will restructure the TWGs to enable a comprehensive review and evaluation of the NADP, aimed at improving implementation in harmony with overall national economic growth.

Successful implementation of the NADP will also depend on the regional and global situation, as well as domestic conditions, including instability and geopolitical crisis, which may have direct or indirect impacts on the processes of agricultural modernization, agricultural trade competition, productivity in the free-market economy and levels of private investment. A sub-M&E framework should be in place at all levels in this regard. MAFF, as lead implementer and secretariat, should consolidate through the TWG structure all NADP progress reports in quarterly meetings with line ministries and send these to the chair of the EFPC. To ensure the M&E process is smooth, line ministries will

nominate a focal point (a senior official) to coordinate and report to the chair and MAFF on NADP 2022-2030 progress.

9. Managing risks

Risks remain with regard to the NADP rollout, of course. The implementation stage will be successful if key internal and external factors are identified and mitigated.

1. ***Internal risks:*** the implementation of the NADP involves a wide range of stakeholders at different levels. The NADP's success relies on full participation, coordinated actions with unified commitment to friendly and sound collaboration and partnerships of all concerned parties ranging from government concerned ministries, development partners and private sectors.
2. ***External risks:*** Agriculture in Cambodia is highly vulnerable to climate change. Changes in the frequency and severity of drought, flood and other diseases may not only affect the livelihoods of farmers but may also create uncertainty of the NADP 2022-2030 implementation. Additionally, the newly emerging risks such as the global pandemic of COVID-19 outbreak and the war in Ukraine, which is another burden to the economic development in general, have disrupted supply and demand chains and undermined regional and global trade flows and trade facilitations.

A risk management plan should be formulated to manage these risks and to reduce negative impacts. At the same time, this points to difficulties in building a consensus on policy rollout from key stakeholders' participations and interventions within the bounds of what is considered "technically and financially sound" and "politically possible". In response to these issues, MAFF and other key stakeholders play a key role in analysing risks and exploring different strategic mitigation approaches for the effective and successful implementation of the NADP through the existing coordination mechanism of the Economic and Financial Policy Committee (EFPC).

10. Conclusion

The NADP 2022–2030 is a long-term strategic framework providing a comprehensive roadmap to lead the Cambodian agriculture sector towards sustainable growth by 2030, in line with global socio-economic conditions and in contribution to achieving the vision of the RGC of transforming Cambodia into an upper-middle-income country by 2030 and a high-income country by 2050. The strong will and professional capacity of the ministries and institutions in charge of implementing this policy will combine to achieve the set policy goals and to promote the growth of a sustainable, highly competitive agriculture sector that is resilient in the face of climate change. Unity of purpose among all stakeholders represents a force for success in the implementation of the NADP.

In particular, MAFF has much work to do in implementing the policy and achieving practical results in the future. To accomplish the goals of the NADP, the ministries and technical entities of each sub-sector must strive to carry out their work actively and vigorously through the activities set out in this policy document. The EFPC, meanwhile, needs to strengthen coordination of relevant ministries and institutions in terms of provision of technical and financial support and allocating responsibility for the implementation of activities under this NADP to support agricultural development. Strong commitment and coordination represent the basis for success, in that they can turn planning into actions through efforts to increase and utilize domestic resources and mobilize resources from DPs and the private sector, with the end goal of high-quality and effective implementation.

To this end, all competent authorities, at all levels, will cooperate under the leadership of the EFPC in implementing activities. In addition, the international community will continue to provide technical and financial assistance in support of implementation of the NADP 2022–2030 to achieve fruitful results as planned and expected, with strong commitment to actively contributing to poverty reduction and a bright future in Cambodia.

Annex 1: Indicator of NADP 2022-2030

Objective 1: Enhance the competitiveness of agricultural value chains

Policy measure	Indicator	Indicative progress/performance indicator	MoV/data sources
Strategic objective 1	Gross Value-Added (GVA) of crop production will increase by 3.1 percent per annum 2030	Gross Value-Added of agricultural production increase from 13,130 billion riels in 2019 to 18,372 billion riels by 2030	• MOP (NIS)
	Gross Value-Added (GVA) of livestock production will increase by 2.7 percent per annum	Gross Value-Added (GVA) of livestock production increase from 2,502 billion riels in 2019 to 3,355 billion riels by 2030	• MOP (NIS)
	Rate (%) of processed agricultural product exports compared to total product exports	Rate (%) of processed agricultural product export compared to total product export increase from 5 percent in 2019 to 15 percent by 2030	• MOC • GDCE

Objective 2: Increase support for infrastructures in agriculture and agri-business facilitation

Policy measure	Indicator	Indicative progress/performance indicator	MoV/data sources
Strategic objective 2	Rate (%) of irrigated rice crop capability (rainy and dry seasons) will increase	Rate (%) of irrigated rice crop capability (rainy and dry seasons) will increase from 61.18 percent in 2019 to 70 percent in 2030	• MOWRAM
	Rate (%) of agriculture community is encouraged to apply for favourable electricity tariff in the agricultural sector in line with the strategic framework for the development of the electricity sector.	At least 30% of agriculture cooperatives received with favourable electricity tariff by 2030	• MAFF • MME (EDC)
	The length of farm roads will increase	Length (km) of rural roads constructed at the farm areas for connection	• MRD

Objective 3: Promote sustainable land, forestry and fishery resource management

Policy measure	Indicator	Indicative progress/performance indicator	MoV/data sources
Strategic objective 3	Gross Value-Added of forestry products increase by 1.2 percent per annum	Gross Value-Added of forestry products will increase from 1,490 billion riels in 2019 to 1,699 billion riels by 2030	• MoP (NIS)
	Gross Value-Added of fishery products increase by at least 4.3 percent per annum	At least 30% of agriculture cooperatives received with favourable electricity tariff by 2030	• MoP (NIS)

Annex 2: Matrix List of NADP Strategic Actions

No.	Strategic Actions	Duration/Year			Responsible ministry/ institution
		2021-2023	2024-2026	2027-2030	
A. Modernizing and commercializing the agricultural value chain					
1.	**Increase productivity and value addition of crop value chain** **Indicator** - Value of crops other than paddy increase from 16,000 billion riels in 2019 to 20,800 billion riels by 2030 - Value of rice product increase from 7,400 billion riels in 20191 to 9,756 billion riels by 2030 - Growth (%) of agricultural exports increase from 7 percent during 2020-2025 and 6 percent during 2026-2030				- MAFF and relevant department - MEF - MoWRAM - MRD - M0C - MISTI - Relevant private sectors
1.1	Improve productivity improvement of priority crops through the support of modern agricultural techniques	✓	✓	✓	
1.2	Increase diversification in production and mitigating risks from mono-cropping value chain	✓	✓	✓	
1.3	Enhance Infrastructure development and strengthening, and mechanization of crop production	✓	✓	✓	
1.4	Promote seed industry and management of agricultural inputs	✓	✓	✓	
1.5	Improve quality and safety of agricultural produce and agribusiness	✓	✓	✓	
1.6	Develop mapping and zoning of agricultural crops	✓	✓	✓	
1.7	Strengthening the capacity of agricultural R&D	✓	✓	✓	
1.8	Strengthening supporting services and human resource development in crop production	✓	✓	✓	
2.	**Increase productivity and value addition of rubber value chain** **Indicator** - Increase rubber tapping area from 250,500 ha in 2019 to 331,000 ha in 2030 - Increase rubber production from 287,600 tonnes in 2019 to 463,000 tonnes by 2030 - Increase from US$377 million in 2019 to US$961 million in 2030				- MAFF and relevant departments - MEF - MoC - MISTI - CDC - CRA - SME Banks - ARDB
2.1	Enhance and improve the rubber production value chain through expanding sustainable rubber production techniques, smallholder rubber cooperatives empowerment, rubber market development	✓	✓	✓	
2.2	Enhance the technical capacity for rubber research and development, thereby increasing the network to transfer technology to rubber producers to improve quality and productivity	✓	✓	✓	
2.3	Promote foreign direct investment in rubber development and financial resources from development partners to support sustainable rubber production and development	✓	✓	✓	
3.	**Increase productivity and value addition in animal production value chain** **Indicator** - Total animal product values increase from 7,308 billion riels in 2019 to 9,600 billion riels by 2030 - Rate (%) of local meat supply increases from 80 percent in 2019 to 90 percent in 2030 - Animal raising for commercial purpose increases from 30 percent in 2019 to 63 percent by 2030.				
3.1	Implement the Strategic Plan of Animal Production 2016-2025 and update the plan for the next 10 years	✓	✓	✓	- MAFF and relevant departments - MEF - MoC - MISTI - CDC - MME (EDC) - SME Banks - ARDB
3.2	Enhance competitive and inclusive livestock production (applying good animal practices, improvement of breeds, technologies, quality and safe feed as well as breeding, etc.)	✓	✓	✓	
3.3	Promote animal health, veterinary public health and animal well-being (biosafety, death rate reduction, vaccination, husbandry, hygiene of meat, slaughterhouse and labs...)	✓	✓	✓	
3.4	Improve extension, capacity-building, training and dissemination of technical practices and strengthen legal implementation	✓	✓	✓	

No.	Strategic Actions	Duration/Year			Responsible ministry/ institution
		2021-2023	2024-2026	2027-2030	
3.5	Promote partnerships with the private sector and strengthen international cooperation in the animal health and production sub-sector	✓	✓	✓	
3.6	Facilitate private investments in animal production, animal feed factories, vaccine production, and medicines for exports	✓	✓	✓	
3.7	Promote family small-scale animal production in rural areas for more incomes and provide more inputs for potential farmers.	✓	✓	✓	
4.	**Promote agro-industry development and agri-ecotourism** **Indicator** - Rate (%) of processed agricultural product export compared to total product export Target: 10 percent of total export volume by 2025 and 15 percent by 2030				
4.1	Improve and modernize SMEs according to quality and food safety standards	✓	✓	✓	- MEF - MAFF - MISTI - MoC - CDC - MoT - CCC
4.2	Study and establish agro-industrial parks in Cambodia to collectively establish processing enterprises and associations in order to meet the export demands	✓	✓		
4.3	Promote agri-ecotourism through agricultural production value chains and promotion of green bell development for supplies of agriculture products to tourism industries and services	✓	✓	✓	
4.4	Establish and strengthen quality and safety control system of agricultural food production according to the national and international standards	✓	✓	✓	
4.5	Develop and strengthen sustainable and inclusive market systems for agricultural products through contract farming	✓	✓	✓	
5.	**Smart technology in value chains** **Indicator** - Rate (%) of agricultural producers/farms with at least a GAP certification increases Target: at least 50 percent of cooperative's farms have GAP certificates by 2030 - Rate (%) of renewable energy use in agriculture production increases				- MAFF and relevant departments - MEF - MISTI - MPT - MME (EDC) - SME Bank - ARDB - Relevant associations and private sectors
5.1	Take advantage of technological developments and promote modern agricultural technique application, e.g. drip irrigation, pest surveillance, e-phyto certification	✓	✓	✓	
5.2	Promote renewable energy, solar for irrigation, shade houses, high-tech agricultural enterprise	✓	✓	✓	
5.3	Promote and implement agricultural organic production, Good Agricultural Practices (GAP) and climate-smart agriculture with the integration of smart and modern technology	✓	✓	✓	
5.4	Strengthen agriculture extension by using modern information and communication technology to reach all farmers with a demand-based system and high-quality targeted support.	✓	✓	✓	
5.5	Utilize innovative technological systems at all stages of agricultural production to ensure higher quality, safety and efficiency.	✓	✓	✓	
6.	**Increase productivity and value addition to aquaculture value chain** **Indicator** - Value of aquaculture production will be increased 615 million $ in 2019 to 1,200 million $ by 2030				- MAFF and relevant departments - MEF - MoC - MoWRAM - MISTI - MME (EDC) - MoE - CAA - ARDB
6.1	Strengthen seed research, enhance breeding production and promote modern fish culture techniques including research on improved natural fish seed and conserve highly economic value fish species. These will maximize fish breeding in order to stock fishes into rivers, lakes, natural ponds, and disseminate to farmers for rice-field culture	✓	✓	✓	
6.2	Determining potential sites, supporting infrastructure and enabling environment for aquaculture development.	✓	✓		

No.	Strategic Actions	Duration/Year			Responsible ministry/ institution
		2021-2023	2024-2026	2027-2030	
6.3	Establish aquaculture clusters or associations in each region in order to accelerate production capacity and to facilitate technical, credit and market extension and supports	✓	✓	✓	
6.4	Develop aquaculture production plan along with specific aquaculture activities based on aquatic species as well as creating vendor/ fish collector clusters with market linkage through a mechanism on aquaculture contract farming between aquaculturists and vendors	✓	✓		
6.5	Facilitate to subsidize low electricity price for aquaculturists to boost aquaculture activities and aquaculture processing plants for export	✓	✓		
6.7	Facilitate better access to low interest credit or loan for aquaculturists with the Agriculture and Rural Development Bank (ARDB)	✓			
6.8	Study on the possibility to create inland aquaculture special zones in the Cambodia Mekong delta region and the special zones for marine aquacultures for exports	✓			
6.9	Establish aquaculture market plans and supporting transportation of aquaculture products to different distribution sites across provinces/municipals where are reachable to aquaculture clusters	✓	✓		
7.	**Increase productivity and value addition of forestry and wildlife value chains** **<u>Indicator</u>** - Cash value of plantation wood production increase 15 percent per annum				
7.1	Improve forestry and wildlife value chains through new technologies and sustainable processing, and strengthen capacity of the community forestry	✓	✓	✓	- MAFF and relevant departments - MEF - MoC - MISTI - MoE - CDC - Relevant private sectors
7.2	Build capacities on research and forest and wildlife conservations through new technology transfers to all concerned parties in order to improve forest and wildlife, and especially promote researches on high economic values of forests	✓	✓	✓	
7.3	Promote foreign direct investments in forest and wildlife conservation, and mobilize financial resources from development partners to support a sustainable forest production and wildlife conservation	✓			
7.4	Enhance competitive and inclusive forest production through reforestation programmes, especially the high-value economic forests	✓			
7.5	Enhance extension services, capacity building of new technologies and law enforcements and policy rollouts	✓	✓	✓	
7.6	Promote a private and public partnership, and build international cooperation in forestry and wildlife sub-sector	✓	✓	✓	
7.7	Strengthen forestry management, technologies of forest procession based on international standards for exports	✓	✓	✓	
8.	**Promote sustainable food system**				- MAFF and relevant departments - MEF - CARD - MoP - MoC - MISTI - MoPH
8.1	Ensure sufficient safe and nutritious food for a growing population to reduce malnutrition, including a gender perspective in all interventions	✓	✓	✓	
8.2	Promote more efficient, inclusive and resilient food systems that are consumer-driven	✓	✓	✓	
8.3	Implement the roadmap towards sustainable food systems designed in Cambodia's Roadmap for Food Systems for Sustainable Development 2030	✓	✓	✓	
8.4	Reduce food losses along the value chain	✓	✓	✓	
9.	**Digitalization and e-agriculture technology in value chain**				- MAFF and relevant departments - MEF
9.1	Establish a digitalized agriculture support system to boost agricultural production, including on-time agricultural information-sharing	✓	✓	✓	

No.	Strategic Actions	Duration/Year			Responsible ministry/ institution
		2021-2023	2024-2026	2027-2030	
9.2	Develop and implement tools for digitization in agricultural education, training and extension work, and encourage use of digital tools and smart equipment by male and female farmers	✓	✓		- MoP - MISTI - MPT - Ministry of Information - MoEYS - MLVT - Relevant private sectors
9.3	Establish and facilitate the use of digital platforms for agricultural trade	✓	✓		
9.4	Digitize administration of services, in particular supporting certification systems, issuance of permits and declarations, information exchange between ministries and public information dissemination nationally and internationally	✓	✓	✓	
9.5	Support the development and comprehensive coverage of digital networks across Cambodia, in particular including all rural and agricultural areas, to facilitate the access and use of modern information and communication technology (ICT)	✓	✓	✓	
9.6	Pilot ICT-enhanced extension services around particular farm technologies and priority sectors (rice, rubber, animal production)	✓	✓	✓	
9.7	Pilot the concept of involving young farmers as facilitators in addition to ICT-trained extension agents supported by smart technology developers	✓	✓		
9.8	Promote the implementation of National Single Window	✓	✓	✓	
9.9	Facilitate the digital assessment and pilot digital platform on investments in forestry and animal husbandry	✓	✓	✓	
10.	**Improve market access for small and medium farmers**				- MAFF and relevant departments - MEF - MoC - MRD
10.1	Establish agricultural cooperatives to improve market access through business agreement or contract farming approach	✓	✓	✓	
10.2	Improve market access for small and medium farmers through trade fairs rural and urban areas	✓	✓	✓	
10.3	Improve price-setting by producers at the farm gate among key value chain actors	✓	✓	✓	
10.4	Ensure lower costs of production and inputs	✓	✓	✓	
10.5	Enable market access with stable prices during harvesting seasons	✓	✓		
10.6	Improve vertical and horizontal value chain linkages among actors	✓	✓	✓	
10.7	Build trust among value chain actors on agricultural prices	✓	✓		
10.8	Promote tourist activities and ecotourism in agricultural community, forest community, fisheries community, and other potential communities	✓	✓	✓	
B. Public and private investments in the agriculture sector					
1.	**Increase effectiveness of agricultural irrigation system** **<u>Indicator</u>** - Rate (%) of potential areas irrigated for rice (wet and dry season) increases Target: increases from 61.18% in 2019 to about 70% in 2030				- MoWRAM - MEF - MAFF - Relevant private sector
1.1	Improve human resource management and development improvement	✓	✓	✓	
1.2	Enhance water resource management and development, and irrigation system extension implementation	✓	✓	✓	
1.3	Strengthen flood and drought management	✓	✓	✓	
1.4	Promote information management on water resource and meteorology	✓	✓	✓	
1.5	Enhance water resource protection and conservation	✓	✓	✓	
1.6	Develop mapping and zoning of agricultural irrigating zones	✓	✓		
1.7	Identify and prioritize potential irrigation areas	✓	✓		
1.8	Build constructions and renovate water pumping stations for agricultural irrigation	✓	✓	✓	
1.9	Increase in water use efficiency in irrigated agriculture	✓	✓	✓	
1.10	Encourage to rehabilitate natural ponds, cannels, and lakes to store water in case of droughts and to release floods	✓	✓	✓	

No.	Strategic Actions	Duration/Year			Responsible ministry/ institution
		2021-2023	2024-2026	2027-2030	
2.	**Expand farm-road connections, electricity network and transportation of agricultural products** **Indicator** - Length (km) of rural roads constructed at the farm areas for connection - 30 percent of the agricultural cooperatives access to the favourable electricity tariff				- MRD - MEF - MPWT - MME (EDC) - MAFF and relevant departments
2.1	Increase the investment and mobilize external resources to build and develop physical infrastructure for supporting agriculture, road connection to farms, markets and agricultural industries.	✓	✓	✓	
2.2	Reduce the cost of electricity, expand coverage and increase the stability of supply by building more sub-stations in potential production areas, especially expand electricity networks in main production areas	✓	✓	✓	
2.3	Increase budgets and manage rural electrification funds for agriculture production	✓	✓		
2.4	Expansion of logistic infrastructure, transportation for agricultural products with response to the real needs.	✓	✓	✓	
3.	**Promote agricultural investment and agribusiness facilitation** **Indicator** - Foreign Direct Investment in agriculture and agro-industry increase 10 percent per annum				
3.1	Promote the private sector in agricultural investment, strengthen partnerships in agricultural development and facilitate an investment climate	✓	✓	✓	- MEF - MAFF and relevant departments - CDC - MoC - CCC
3.2	Encourages private international and local investment in agriculture and agro-industry through sound policies, regulations and laws including the amendment of Law on Investment	✓	✓	✓	
3.3	Support in linking the agricultural production and agro-processing (Agro-Industry) in order to increase the value added and promote for the establishment of Agro-Industrial Parks (SEZ for agro-processing) for promoting agricultural exports	✓	✓		
3.4	Expand public and private sector partnership through the creation of Agro-Industry Federation (AIF)	✓			
3.5	Continue to adjust the structural adjustment and strengthen technical capacity for public services reduce the costs of doing business by revised some rule and regulations for increasing the efficiency of public services.	✓	✓	✓	
3.6	Promote public-and-private partnerships to establish fertilizer and feed factories locally in order to supply local demands with high quality, appropriate price and safety for local, regional and international markets	✓	✓	✓	
3.7	Enhance investments in household wildlife raising for livelihood improvements through private investments	✓	✓	✓	
3.8	Promote investments in industrial-based wood processing	✓	✓	✓	
4.	**Agriculture sector finance** **Indicator** - ARDB loans to agriculture sector increase Target: rate (%) of loans for non-rice increase from 23 percent in 2019 to 47 percent by 2030				- ARDB - NBC - MEF - MAFF - SEM Bank
4.1	Increase the effective and efficient use of public funding for the development of the agriculture sector, responding to the needs and demands of producers and processors	✓	✓		
4.2	Facilitate the development of adapted financial services and products that serve the needs of both small and medium farms and agribusinesses	✓	✓		
4.3	Increase credit for the agriculture sector and strengthen the Agricultural and Rural Development Bank (ARDB) and the Small and Medium Enterprise Bank (SME Bank) to serve the financial needs of agricultural stakeholders: increase availability and access to (rural) credit	✓	✓	✓	

No.	Strategic Actions	Duration/Year			Responsible ministry/ institution
		2021-2023	2024-2026	2027-2030	
4.4	Enable more engagement of and access to ARDB to serve the financial needs of value chain actors especially increasing soft loans for non-rice industry, including livestock production, aquaculture and infrastructure support agriculture and create its sub-branches in the provinces (at least 20 Branches in the country) with digital operation.	✓	✓	✓	
C. Growing sustainably and increasing resilience to climate change					
1.	**Promote forestry and wildlife resource management** **Indicator** - Total value-add of wood production increase from 1,490 billion riels to 1,699 billion riels by 2030 - Community forestry income increase 25 percent per annum				
1.1	Promote forest management and development of climate resilient forests a 10-year forest development action plan with effective implementation plan	✓	✓	✓	- MAFF and relevant departments - MEF - MoE departments - MEF - MoE
1.2	Increase effectiveness in community forestry development and implement a community forestry plan, develop key principles for community forestry management and improve local livelihoods through agri-forestry system	✓	✓	✓	
1.3	Promote management and development of wildlife and biodiversity, especially the promotion of household and farm level production	✓	✓	✓	
1.4	Promote forestry registration, strengthen implementation of laws on forestry and regulations regarding forestry and wildlife	✓	✓	✓	
1.5	Strengthen research to support forest development	✓	✓	✓	
1.6	Strengthen the institutional framework for sustainable management practices related to forestry and wildlife resources	✓	✓	✓	
2.	**Promote fishery resource management and aquaculture development** **Indicator** - Value of wild catch increase from 4,800 billion riels in 2019 to 5,732 billion riels by 2030				
2.1	Promote the implementation of strategic fisheries plan 2015-2024 and update it for the next 10 years	✓	✓	✓	- MAFF and relevant departments - MEF - MoE
2.2	Strengthen management and development of community fisheries, especially capacity development for community fisheries to effectively manage and conserve fisheries resources, and improve local livelihoods of community members as well as community management and community refuge pond development	✓	✓	✓	
2.3	Encourage protection and conservation of fishery resources	✓	✓	✓	
2.4	Promote fishery extension services on natural fish raising and rice-fish cultures where are geographically applicable in order to increase natural fish production and to reduce chemical fertilizers that impacts on fisheries and biodiversity	✓	✓	✓	
2.5	Promote fishery research and development, with an emphasis on value chain analysis, including post-harvest storage and handling	✓	✓	✓	
2.6	Promoting capacity development and technologies to improve small-scale fishers' performance for food security and nutrition and strengthening livelihood options	✓	✓	✓	
2.7	Enhance fishery value chain development and export promotion	✓	✓	✓	
2.8	Promote the implementation of marine fisheries management policy	✓	✓	✓	
2.9	Make amendments of Law on Fisheries, enforcement of existing laws and regulations to combat illegal fishing	✓	✓	✓	
2.10	Strengthen gender mainstreaming and eliminate child labor in fisheries sector	✓	✓	✓	

No.	Strategic Actions	Duration/Year			Responsible ministry/ institution
		2021-2023	2024-2026	2027-2030	
3.	**Promote agricultural land resource management**				- MAFF and relevant departments - MEF - MoE
3.1	Implement National Action Programme to Combat Land Degradation in response to agricultural development, livelihood improvement of rural people as well as to contribute to the reduction and adaption to the climate change	✓	✓	✓	
3.2	Prevent land degradation and increase land productivity through the establishment of policy framework and relevant legal documents, increase the application of agricultural land management	✓	✓	✓	
3.3	Develop and implement the concrete action plan to prevent the deterioration of soil and water quality to preserve natural resources	✓			
3.4	Improve the conservation of Cambodia's farm land thereby restoration of watershed areas, provision of ecological services and promote the demonstration of agricultural land management practices	✓	✓	✓	
3.5	Strengthen the technical capacity for the implementation of agricultural land management and practices	✓	✓	✓	
3.6	Promote agricultural conservation, and sustainable and ecological agriculture intensification	✓	✓	✓	
3.7	Promote the implementation of strategic plans or agricultural methods to reduce inappropriate chemical use and to promote good agriculture practices	✓	✓	✓	
4.	**Strengthen climate resilience**				- MoE - MAFF and relevant departments - MEF - MME (EDC)
4.1	Promote the sustainable use of natural resources thereby implementation of Climate Chang Strategy in Agriculture 2030	✓	✓	✓	
4.2	Promote an effective and sustainable uses of renewable energy through establishment of bio-digester policy towards achievement of the SGD goals 2030	✓	✓	✓	
4.3	Promote environmentally friendly production and products through livelihood and conservation practices	✓	✓	✓	
4.4	Facilitate Cambodia's agriculture path towards becoming carbon neutral	✓	✓	✓	
4.5	Implement relevant strategies in response to climate change that affects the fisheries resources including aquaculture production	✓	✓	✓	
4.6	Facilitate and coordinate SDG #12 to promote environmentally friendly agricultural production in line with the Agricultural Fertilizer Policy	✓	✓	✓	
	D. Institutional reforms and cross-cutting issues				
1.	**Reinforce institutional management and HRD**				- MAFF and relevant departments - MEF - MCS - MLVT
1.1	Reform institutional management into an effective structure, including supportive human resource management and development	✓	✓		
1.2	Strengthen human resource policy implementation in the agriculture sector	✓	✓	✓	
1.3	Strengthen the quality of education through the implementation of the 2030 Master Plan of Agricultural Education Institute, and agricultural education for all relevant stakeholders to provide the possibility to create an attractive professional occupation based on quality and high income	✓	✓	✓	
1.4	Enhance research capacity for agricultural development, produce basic research and applied research linked to market needs, and establish and implement Cambodia agricultural research policy	✓	✓	✓	
1.5	Strengthen extension service capacities in agriculture, forestry and fisheries, attract, mobilize and train young farmers with new agricultural technologies, and strengthen connection of researches and agricultural extensions.	✓	✓	✓	
1.6	Establish an agricultural data management and registration system (crops, livestock, forestry, fisheries, etc.) as a basis for managing and forecasting supply and demand for measures to develop the entire agricultural sector.	✓	✓	✓	

No.	Strategic Actions	Duration/Year			Responsible ministry/ institution
		2021-2023	2024-2026	2027-2030	
2.	**Developing laws and regulations in the agricultural sector**				- MoJ - Ministry of Interior - MEF - MAFF and relevant departments
2.1	Establish laws and law amendments (forestry and fisheries)	✓	✓		
2.2	Reinforce the implementation of laws and regulations effectively	✓	✓	✓	
2.3	Review and revise laws and regulations governing activities to complement a supportive environment for agricultural producers, processors and exporters	✓	✓	✓	
2.4	Strengthen dissemination and public awareness on laws and regulations	✓	✓	✓	
3.	**Leadership**				
3.1	Ensure the leadership and workforce in MAFF have the required capacities to effectively and efficiently manage, guide and support the sector and its stakeholders	✓	✓	✓	- MAFF and relevant departments
3.2	Strengthen capacity to mobilize support and implement NADP policy at national and local levels	✓	✓	✓	
3.3	Promote gender mainstreaming at all stages of the NADP and capacity development of MAFF staff in gender-responsive implementation	✓	✓	✓	
3.4	Provide technical and operational know-how and information needed for NADP implementation and evaluation at the sub-national level	✓	✓	✓	
3.5	Promote mechanisms for agriculture project management unit in order to effectively coordinate the implementation and harmonization of all projects towards the achievement of the NADP	✓	✓	✓	

Figure 1: Public–Private–Producer/agricultural cooperative Partnerships (4Ps)