



The World Bank

National Food and Agriculture System Project (P164448)

Combined Project Information Documents / Integrated Safeguards Datasheet (PID/ISDS)

Appraisal Stage | Date Prepared/Updated: 31-May-2020 | Report No: PIDISDSA29690



BASIC INFORMATION

A. Basic Project Data

Country Myanmar	Project ID P164448	Project Name National Food and Agriculture System Project	Parent Project ID (if any)
Region EAST ASIA AND PACIFIC	Estimated Appraisal Date 04-May-2020	Estimated Board Date 30-Jun-2020	Practice Area (Lead) Agriculture and Food
Financing Instrument Investment Project Financing	Borrower(s) Republic of the Union of Myanmar	Implementing Agency Ministry of Agriculture, Livestock, and Irrigation	

Proposed Development Objective(s)

The Project Development Objective (PDO) is to increase agricultural productivity and diversification and to enhance market access for selected value chains in the Project area, and respond to an eligible crisis or emergency.

Components

- Component 1: Agriculture Productivity Enhancement and Diversification
- Component 2: Value Chain Development
- Component 3: Project Management, Coordination and Monitoring & Evaluation
- Component 4: Contingent Emergency Response

PROJECT FINANCING DATA (US\$, Millions)

SUMMARY

Total Project Cost	200.00
Total Financing	200.00
of which IBRD/IDA	200.00
Financing Gap	0.00

DETAILS

World Bank Group Financing



International Development Association (IDA)	200.00
IDA Credit	200.00

Environmental Assessment Category

B-Partial Assessment

Decision

The review did authorize the team to appraise and negotiate

Other Decision (as needed)

B. Introduction and Context

Country Context

1. **With a gross domestic product (GDP) per capita of US\$ 1,325 in 2018, Myanmar is among the poorest countries in Southeast Asia.** It has a population of about 54 million, with above two-thirds living in rural areas. The poverty headcount was estimated at 25 percent in 2017 (down from 48 percent in 2004/05).¹ It is concentrated particularly in rural and conflict-affected areas, with a poverty rate in rural areas of 30 percent compared to 11 percent in urban areas. About 87 percent of the poor, or more than 11 million people, live in rural areas and are more likely to depend on agriculture for their livelihoods.² Poverty has declined more rapidly in urban areas, reflecting sectoral growth. An additional 14 percent of the population are vulnerable to shocks from crop failures, natural disasters, and health setbacks. A sizable proportion of these households rely on agricultural activities as smallholder farmers or as casual employees with low income diversification.

2. **With the COVID-19 crisis, Myanmar's GDP growth for fiscal year 2019/20 is estimated to decline to a range of 2 to 3 percent from 6.3 percent in 2018-2019.**³ Myanmar's economic and political reforms over the past decade were accompanied with strong economic growth and macroeconomic stability. The country's GDP grew at an annual rate of 6.0–8.5 percent during 2014/15–2016/17. This resulted in household income increases and significant progress in improving food security and poverty reduction. However, the COVID-19 pandemic is having a widespread adverse impact on food and agriculture, tourism-related services, and the manufacturing sector and has contributed to extensive supply chain disruptions in the economy. This would significantly slow the pace of poverty reduction and may result in the reversal of previous progress in lifting millions out of poverty. The

¹ Estimates are based on Integrated Household Living Conditions Assessment (2005) and Myanmar Living Conditions Survey (2017).

² Myanmar Living Conditions Survey 2017: Poverty Report 03, June 2019.

³ EAP Economic Update: East Asia and the Pacific in the Time of COVID-19. March 23, 2020.



agricultural and livestock sector is one of the keys sectors that has been adversely affected by the COVID-19 outbreak.

3. Despite the economic growth and decline in poverty achieved prior to COVID-19, poverty and inequality have remained high. The COVID-19 outbreak is likely to aggravate poverty and inequality in the country. The impact of short-term economic fluctuations related to the COVID-19 pandemic is likely to disproportionately harm the poor and vulnerable population. The declines in agricultural production and output prices associated with COVID-19 related food supply disruptions and the reduction in exports will have adverse implication for the nearly 70 percent of the country's population who work in the agriculture sector. Moreover, large variations in poverty incidence exist, across the country. The poverty headcount rates in the Coastal and the Hills and Mountains agro-ecological zones (AEZs) are 44 percent and 40 percent, respectively, while they are 32 percent and 26 percent in the Dry and Delta AEZs, respectively.⁴ The Hills and Mountains and the Coastal AEZs have a lower share of the total population, yet they comprise nearly half of the food insecure population, and about a third are in the bottom quintile of the expenditure distribution. These two AEZs combined have a 40 percent poverty rate, where one in six people struggle to meet their basic food needs.⁵ It is also notable that a majority of Myanmar's conflict-affected communities are in the Hills and Mountain AEZs.

4. Significant challenges also remain regarding access to services and infrastructure, location and ethnic disparities, and social inclusion. The poor have limited access to basic services and infrastructure, including clean water, education, health care, and electricity. Lack of access to markets and services—and indeed social exclusion more broadly—correlates with location, ethnicity, religion, and citizenship status. Gender equality indicators have slowly improved in recent years, but social norms continue to largely delineate spaces available to men and women, significantly affecting, among other things, women's access to the labor market. A recent study shows that there is a gender gap in access to land in terms of holding land use certificates as normally the certificates are issued to household heads, rather than jointly, or to other members of the household.⁶

5. The socio-economic needs of communities in one-third of Myanmar's townships are further compounded by the direct and indirect effects of armed conflict.⁷ There are around two dozen major ethnic armed organizations (EAOs) located in the country's peripheries who have been fighting to secure greater political, economic and social freedoms for ethnic minority groups. The signing of several bilateral ceasefires from 2011 to 2015, and the Nationwide Ceasefire Agreement (NCA) by eight EAOs in 2015 followed by another two in 2018, led to some progress toward peace. However, there has been limited progress in the political dialogue around the NCA since then and around 10 EAOs, including some of the largest in the country, remain outside of the NCA process. Fighting continues in Rakhine, Chin, Shan, Kachin, and Kayin States. Over the past decades, Rakhine State has seen multiple rounds of conflict, notably in August 2017 when violence led to the forced displacement of more than 730,000 Rohingya Muslims⁸ into Bangladesh. This violence has exacerbated communal tensions and

⁴ Myanmar has four AEZs, (Central) Dry, Hills and Mountains, Delta, and Coastal.

⁵ World Bank. 2017. An Analysis of Poverty in Myanmar: Part 02-Poverty Profile.

⁶ MOALI. 2019. Social Assessment - Peaceful and Prosperous Communities Project. P168107.

⁷ The Asia Foundation. 2017. The Contested Areas of Myanmar: Subnational Conflict, Aid, and Development.

⁸ In line with the Report of the Advisory Commission on Rakhine State (2017), the remainder of the document will refer to those who self-identify as Rohingya as "Muslims" or "the Muslim community in Rakhine". This does not include the Kaman Muslims in Rakhine or other Muslims in the country.



deepened social fractures. The Myanmar Humanitarian Response Plan for 2020 identifies more than 273,000 internally displaced people in the country.

Sectoral and Institutional Context

6. **Agriculture plays a vital role in reducing poverty in Myanmar, and further progress in the sector will remain important as the economy continues to evolve.** Agriculture is the source of livelihood for nearly 70 percent of the population and accounts for nearly 30 percent of national GDP and merchandise exports. The agri-food system accounts for some 42 percent of GDP, when forward and backward linkages to primary agriculture are considered. Agricultural growth has significantly helped to reduce poverty. The government's Agricultural Development Strategy (ADS) recognized agriculture's role in achieving food security, increasing foreign exchange earnings through exports, and driving rural development. Indeed, according to the Myanmar Sustainable Development Plan (MSDP, 2018–2030), "agriculture and SME sectors are prioritized as important sources of job creation". More than one-third of the work force identified farming as their primary source of employment and 16 percent are agricultural laborers. The employment share in services and industry was 36 percent and 12 percent, respectively.

7. **As noted above, COVID-19 can create disruptions in the agriculture sector that would have significant impacts on the rural poor and vulnerable groups.** Progress in the agricultural sector has accounted for at least half of the country's poverty reduction between 2005 and 2015. It is the main sector of employment for the poor with 85 percent of the rural population living in a household with one or more members engaged in agriculture. Thus, losses in income from agricultural activities could have a large impact on national poverty. Government response to contain the spread of COVID-19 has itself created disruptions in the agriculture and food system, which include the temporary shut-down of wet markets and animal feed factories, movement restrictions which contribute to labor shortages on- and off-farm and the disruption of logistics and transport systems, and tightened restrictions and slowing-down of cross-border flows. These measures also disrupt the flow of food between production and consumption centers as well access to essential input markets. Domestic supply chain disruptions have resulted in market losses and increased feed costs to poultry farmers and SMEs. The cattle meat market is significantly affected as it is heavily dependent on border trade with China, which has tightened border controls. Recent estimates show that Myanmar's poverty rate could increase from 24.8 to 28.4 percent if incomes from agriculture were to decrease by 50 percent in one quarter and increase to 32.3 percent if the decline lasts two quarters.⁹ This means that among people living in agricultural households, poverty would increase by two to four million people, respectively. It is critical for the government of Myanmar (GoM) to proactively respond to the potential impacts of COVID-19 on the agricultural sector, which will help to continue reducing poverty in the country.

8. **The COVID-19 crisis could affect agricultural production through its effect on the rural labor market, where the crisis has resulted in both agricultural labor shortages and large-scale rural unemployment.** COVID-19 related travel restrictions led to labor shortages for timely harvesting of fruits and other agricultural crops. If mobility restrictions continue, labor shortages may have detrimental effects on the monsoon paddy planting and the harvesting of other crops. Given rice planting is a labor-intensive activity in Myanmar, labor shortages will

⁹ EAP Economic Update: East Asia and the Pacific in the Time of COVID-19. March 23, 2020.



significantly impact rice production. Myanmar received about 80,000 returnees from neighboring countries (including Thailand, Malaysia, and China) resulting in increasing unemployment. Resulting income losses from remittances means that many households will not be able to afford hired labor. The future of the returnees will largely depend on the situation in the countries they returned from and on the procedure these countries apply to receive migrants back. With appropriate measures, agriculture can play a critical role in absorbing some of these returnees, by re-engaging them in agriculture sector, or by providing cash for work activities under irrigation schemes and community infrastructure, while at the same time minimizing the risk of labor shortages in the sector. Agriculture has served as a shock absorber in previous economic crises, such as the Asian and Global Financial Crises, when urban or international migrants lost their jobs and returned to their rural families.

9. The availability of food is not yet a major source of concern, but COVID-19 poses potential risks through multiple channels. In the short to medium-term, the disruption of economic activity due to the lockdown is likely to affect incomes of the rural poor who not only rely on labor but also farmers, rural entrepreneurs, and small businesses and services who are at the frontline of the disrupted supply chains. The upstream activities relating to farming (such as supply of agricultural inputs and services) face major bottlenecks as access to inputs for production are constrained, while transportation of inputs is disrupted as truckers, stevedores, and other transport workers stay home from work and airports, ports, rail, road, and other transport channels have slowed or shut down due to increased screening and border closures. As a result, farmers and other actors in the food supply chain may find it extremely difficult to plant and harvest as well as transport and sell their produce. Despite the COVID-19 pandemic, appropriate measures need to be taken for agriculture production to continue, and thus to mitigate the food insecurity risks and possible increases in rural poverty levels. Labor-intensive development and management of infrastructure can help address the temporary unemployment levels, and also improve agriculture productivity in the longer-term by securing access to irrigation and improving drainage facilities during the coming monsoon season and beyond.

10. Myanmar's agriculture has ample potential for growth and value addition as well as for inclusive rural growth and poverty alleviation. Myanmar has abundant natural resources, a youthful workforce, and diverse farming systems. Its relatively untapped upstream and downstream agricultural value chains have a clear competitive advantage to meet the increasing food demand from the growing middle class in the country and the region. Increasing urbanization and income growth are also changing the dietary preferences and spending patterns of the population. All these developments are expected to accelerate and create growth opportunities for farmers and the private sector across all segments of the value chain and contribute to overall sectoral growth.

11. Yet, the pace of agricultural growth remains slow and unstable, primarily attributed to low productivity. Agriculture grew by an average of 2.5 percent annually between 2010 and 2017, and by 1.3 percent in 2017/2018. This growth was roughly half the rates in China and Thailand during the same stage of their economic transformation. Myanmar's paddy productivity, both land and labor productivity, is among the lowest in Asia. Non-paddy crops (including beans and pulses, fruits and vegetables, tea, and oil crops) have shown stronger yield growth in the past few years and provide opportunities for export growth and improving nutrition. Low productivity is the result of multiple factors, including inadequate supply of public goods such as agricultural research and extension services, low supply of certified and improved seeds, low input (fertilizer and chemicals) quality, and poor knowledge among farmers about proper fertilizer usage. The COVID-19 pandemic is likely to



increase these challenges by reducing farmers' access to agricultural inputs and creating disruptions in market infrastructure and logistics, which will affect input supply and distribution with likely price effects. The possibility of input supply delays due to border closures, export restrictions depressing prices, and difficulties in access to domestic buyers, affects farming decisions and productivity in the coming crop seasons.

- **Seeds.** Close to 80 percent of farmers in Myanmar are still using ordinary seeds, whereas the remaining use either certified or hybrid seeds. These farmers largely use own saved seeds. The public seed production system currently focuses on hybrid rice varieties and needs to broaden its scope to include planting materials for a more diverse range of other crops, including horticulture crops. Myanmar has enacted a Seed Law in 2011, which establishes the rules and regulations for the seed sector related to the government, seed laboratories and private sectors engaged in the seed businesses. However, private sector involvement in seed production and multiplication, has been limited, due to the lack of technical support, access to finance, and difficulties of doing business. While the Seed Policy (2011) aims to promote the supply of quality seeds through private sector participation, the country has insufficient facilities for certification, quality control and testing.
- **Fertilizers.** Farmers often underapply or over apply fertilizers, as they have insufficient knowledge about the fertility of their soils. This is compounded by the lack of access to appropriate tools such as mobile testing laboratories that undertake on-site soil fertility tests. Fertilizer quality is a widespread concern in Myanmar as most stakeholders—including farmers, government officials, and many in the private sector— do not have confidence in the quality of the fertilizers available in the country.¹⁰ These apprehensions include adulteration problems (for example, mixing of granular single superphosphate with granular triple superphosphate and selling it as the latter or adulteration with inferior products); mislabeling of bags to mislead farmers as to the brand of fertilizer; and selling in undersized bags. According to an OECD report in 2014, most farmers surveyed indicated that they were unable to determine whether the fertilizer purchased (either imported or purchased domestically) was adulterated.¹¹ This calls for the Department of Agriculture (DOA), which is responsible for fertilizer inspection, to strengthen its quality assurance services.
- **Agricultural extension.** Farmers' access to agricultural extension services is limited, due to weak institutional capacity. The ratio of extension staff to farm family is low (nearly 1 to 585, where an extension worker covers 5,081 acres of cropland).¹² In addition, the extension outreach was geared mostly toward paddy. There is an insufficient number of extension officers to transfer the appropriate knowledge and technologies to farmers for paddy and non-paddy crops and to provide the necessary feedback from the farmers to the agriculture research community. This is particularly true in Myanmar's more rural zones, as well as in areas that are considered conflict affected. Not only will this limited extension coverage adversely affect the capacity of extension agents to support farmers to improve their farm productivity, but it will also affect capacity development of farmers on the downstream side, such as access to markets. The government is keen to revitalize the extension system by enhancing technical capacity and increasing

¹⁰ International Fertilizer Development Center (IFDC), 2018.

¹¹ OECD Investment Policy Reviews: Myanmar 2014.

¹² "Current Status of Agricultural Extension in Myanmar. MOALI, 2017.



efficiency and coverage, including through using digital technologies. The COVID-19 crisis has exposed the limitations of the traditional agricultural extension system where extension agents visit farmers or organize farmer meetings, which are currently not allowed due to movement restrictions.

- **Agricultural research.** Agriculture research and development (R&D) is underfunded and fragmented, and it suffers from weak human resource capacity. The median share of agricultural growth and poverty reduction effects attributed to agricultural research are estimated to be 15 percent and 10 percent, respectively. Yet, agricultural research was the most underfunded function in the sector. In 2016/17, Myanmar's total spending on agricultural research was a meagre 0.04 percent of agricultural GDP, which is 15 times less than the average in other Asian countries and 62 times less than the average in developed countries. Agricultural research is also fragmented across many agencies, without close collaboration among them. It suffers from significant gaps in human resources, which limits the capacity to translate agricultural research findings into improved farming practices. Largely due to limited resources, current efforts tend to explore technologies that mostly benefit larger-scale agriculture in the country's Central and Dry AEZs. Broadening this program, through decentralization efforts of agriculture research to other regions, in a targeted manner, will considerably benefit smallholders in mountainous and coastal areas, including ethnic minority and conflict affected communities.

12. **Growth in the sector has been volatile due to the damaging impact of climate change and extreme weather events, such as El Niño.** In 2012, Myanmar was ranked the country most at-risk to climate shocks within Asia-Pacific, due to the wide range of hazards including, floods, cyclones, earthquakes, landslides, and tsunamis. In addition, it ranked second out of 187 countries in the Global Climate Risk Index during 1999–2018.¹³ In 2015/16, for instance, the El Niño event and the accompanying drought in the central and dry areas resulted in a significant drop in production of key export crops such as sesame, beans and pulses. Agriculture growth recovery since El Niño has been slow. According to Myanmar's Climate Change Strategy and Action Plan (MCCSAP) 2016–2030, there will be a general increase in temperature, with more days of extreme heat and rainfall, and other extreme weather events like droughts, floods, and cyclones. These extreme weather events will result in high demand for irrigation water in pre- and post-monsoon periods. The MCCSAP, which builds on the Intended Nationally Determined Contribution (INDC 2015) and Myanmar's Climate-Smart Agriculture (CSA) Strategy (2015), indicates that the agriculture, fisheries and livestock sectors should adopt climate-resilient and environmentally sound adaptation technologies and climate-smart management practices, supported by international and domestic finance. These include applying new technologies and modifying existing ones to enable the adoption of CSA practices. To conduct the necessary systematic research, Myanmar requires the support of technical experts, access to modern tools, and relevant apparatus.

13. **Myanmar's agricultural policies that primarily focused on paddy have limited diversification in the sector, with undesired implications for nutrition.** According to the 2017 Public Expenditure Review, spending on irrigation (54 percent) and on extension services focused on rice, at the expense of other diverse and profitable crops. While the ADS envisages the sector's shift toward diversification and away from rice concentration, rice still accounted for 35 percent of agricultural output and pulses/beans accounted for another 17 percent. Together, these crops constituted just over 67 percent of gross crop output in 2016, only slightly lower than their 72 percent

¹³ Global Climate Risk Index 2020.



share a decade earlier. Rice, pulses and beans occupy about 75 percent of the cultivated area in Myanmar, with rice occupying about 60 percent of the total sown acreage. Myanmar is experiencing some increased production of livestock products, fisheries, fruit, and various industrial crops (including tea, cotton, and sugarcane). Owing to increasing incomes in urban areas and the recent increase in agricultural diversification, around 15 percent of rural households are estimated to earn some income from producing horticultural products, thereby also facilitating more diverse diets. Investment in diversification also stands to benefit parts of the country which are, on average, more likely to be conflict-affected and where ethnic minority groups reside. These largely upland zones have received comparatively little technical and material support in the agricultural sector to-date.

14. Besides the above farm level challenges, Myanmar's agriculture has been characterized by limited value-addition primarily due to poor value chain facilities and services. The COVID-19 outbreak has further exposed weaknesses in market infrastructure and logistics. Exports of agricultural raw materials accounted for one-third of Myanmar's merchandise trade in 2017 (compared to just 13-14 percent in both Thailand and Vietnam). Although this share already represents a slight decline compared to previous years, it is considerably higher than in other countries in the region. Imports of agricultural raw materials represented a smaller share of overall merchandise imports, at 15 percent of the total in 2017, but this share was also among the highest observed in the region. These findings suggest that a lot of the value addition is happening outside the country. The primary factor limiting value addition is poor value chain infrastructure, which inhibited the establishment of forward and backward linkages within the agriculture and food system. Poor or costly drying infrastructure, inadequate storage, cold chain and processing facilities, and limited quality assurance services hinder farmers and agribusinesses to add value to their produce. For instance, studies reported an estimated post-harvest loss of 25–40 percent of total fresh horticulture produce due to factors such as: (a) improper time of harvest; (b) inadequate post-harvest technologies and treatment, processing and storage facilities, impeding consistency in quality; and, (c) high transport costs.¹⁴

15. Myanmar's agriculture exports have been constrained by a poor enabling environment, including restrictive regulatory systems and weak institutions as well as standards and infrastructure that are not on a par with international standards. Myanmar launched the Good Agriculture Practice (GAP) Protocol and Guidelines program in 2017, with support from the International Finance Corporation (IFC). Yet, it has been adopted by less than 500 farmers.¹⁵ Lack of accredited laboratories, limited use of certified seeds, poor mapping of soil fertility and inefficient fertilizer application are among the limiting factors to expand GAP adoption. Myanmar's regulatory agencies are currently severely resource constrained, lacking sufficient certified laboratories, testing equipment, and qualified operational personnel.¹⁶ Accreditation toward international standards, such as ISO 17025,¹⁷ as well as other sector specific accreditation schemes (for example, sugar and seeds testing), will help improve the enabling environment for Myanmar agriculture to become competitive in the global market and also ensure compliance with the highest sanitary and phytosanitary measures. There are only a few accredited 17025 laboratories in the country. It is important to address the constraints faced by these

¹⁴ GAFSP (Global Agriculture and Food Security Program). 2016. Agribusiness Country Diagnostic - Myanmar.

¹⁵ IFC.2020. Implementing Good Agricultural Practices in Myanmar.

¹⁶ OECD. 2015. Development Pathways Multi-Dimensional Review of Myanmar Volume 2. In-depth Analysis and Recommendations.

¹⁷ ISO 17025 is the international standard for testing and calibration laboratories. It is a set of requirements those laboratories use to show that they operate a quality management system and that they are technically competent.



agencies, identify and develop trade strategies, and establish partnerships with the private sector to effectively support these strategies, while the government retains oversight and legal authority over their implementation.

16. Myanmar has been transitioning from a country with a centrally planned economic system, in which production and marketing were controlled by the Government, to a country that encourages the private sector to participate in production and value chain development. At the same time, the continuous fragility and conflict have been detrimental to private sector participation in agricultural value chain development. Myanmar's economy is transforming, and there is need to leverage the power of competition and create space for the private sector to generate inclusive economic opportunities, service delivery, and access to markets. However, structural transformation remains incomplete and is impeded by a restrictive business climate and the high cost of doing business, especially for small and medium enterprises (SMEs). Myanmar is ranked 137th (of 160 countries) according to the 2018 World Bank's Logistics Performance Index, the lowest in the Association of Southeast Asian Nations (ASEAN). Linkages to global value chains are largely underdeveloped. About 40 percent of the population, mostly in rural areas, lacks basic access to all-season roads, limiting access to markets.

17. Agricultural fragmentation and a predominance of poorly organized smallholders are key challenges to create strong market linkages for farmers. The sector is dominated by small-scale farmers who are not well organized, limiting opportunities to achieve the economies of scale needed for the development of SME agribusinesses. While they comprise three quarters of the farm households, small-scale farmers hold just 27 percent of the net sown area in the country.¹⁸ These farmers are less attractive for private input suppliers and output buyers, because the average costs of input provision or aggregating outputs to/from these farmers are quite high. This also implies costly service delivery. They are therefore likely to be excluded from forward and backward linkages in the agricultural value chain development, such as from contract-farming schemes. Unless they receive adequate capacity building on establishing groups and cooperatives, individual farmers will have significant challenges and limited bargaining power to play key roles in value chain development, especially in creating strong market linkages with buyers. Myanmar's Fruit, Flower and Vegetable Producer and Exporter Association (MFFVPEA) has been organizing its members (farmers, traders, and other value chain actors) into 'clusters' to improve product quality and (export) market linkages for some value chains. Consultations with representatives of the MFFVPEA indicated that the cluster approach has been vital in enhancing farmer linkages with other value chain actors such as crop buyers, wholesalers, distributors, exporter and suppliers of support services. Some of the relatively successful clusters include mango and small farmer schemes such as the potato groups and farmer markets.

18. There remains a gender gap in productivity due to the limited access to information, technologies, services, and resources among women farmers. A recent study shows that the average production per farm for female-headed households is 10 percent lower than male headed households (6.43 tons for male-headed farms and 5.82 tons for female-headed farms).¹⁹ There exists qualitative and anecdotal evidence showing that the gender gap in productivity is primarily a result of the gender gap in "access" to information, technologies, extension services, and resources such as credit and agricultural land.²⁰ Women are expected to do lighter work

¹⁸ FAO. 2016. Social Inclusion and Gender.

¹⁹ World Bank. 2019. Myanmar Rice and Pulses: Farm Production Economics and Value Chain Dynamics.

²⁰ FAO, MOALI and UN Women.2016. Including Women and their Priorities in Agriculture



– such as breeding small livestock, cultivation and planting, weeding, collecting fuel and water, tending kitchen gardens, preparing food, and small trading or marketing. Women are also involved in processing of agricultural products. These activities are in addition to women's roles as primary caregivers.²¹ Therefore, agricultural technologies for women – traditional work that are light but labor-intensive – tend to be overlooked in technology support. Women are less likely to receive information on improved agricultural technologies in comparison to men. Moreover, women are less likely to have access to information and market, due to limited mobility, especially in conflict-affected areas.²² While Myanmar has low penetration of formal financial services in the rural areas, it is reported to be even more difficult for women to access loans directly, as these are generally made available only to heads of household.²³ Women have less access to landownership as they are not represented on the decision-making bodies related to land.²⁴ Male-headed farms are on average 0.3 hectares larger than female headed farms.²⁵

19. The impact of COVID-19 is likely to be disproportionately higher on women and other vulnerable population groups (VPGs). Because of lower market power vis-a-vis input suppliers and output traders, costs for inputs are often higher and prices for output typically lower for female relative to male farmers and for small-scale than large scale farmers. As commercial transactions are affected by COVID-19 movement restrictions, the risk is that weaker bargaining power may exacerbate the impact of the crisis on women and other VPGs relative to men and wealthy farmers. Similarly, with relatively small-scale farms, increases in transport costs due to supply chain disruptions may create a disincentive for an intermediary to purchase output from smallholders and prioritize large-scale farmers with larger volumes of output per trip or transaction. Furthermore, due to women's frontline interactions as key players in food markets, caregivers, and healthcare providers, they face a higher risk of exposure to COVID-19. One solution to reduce the vulnerability of women and other smallholder farmers is to lower their transaction costs by aggregating the demand for inputs and supply of outputs and coordinating all payments and disbursements of products. This would also increase their market power and reduce physical contact with market actors. This can be done by fostering and leveraging networks of female and smallholder farmers at the community level through existing self-help groups or other women's groups.

20. Myanmar is well positioned to leverage the power of digital technologies to enhance the coverage and efficiency of its agriculture extension system to reach small-scale farmers, women, and other VPGs, including those in remote and conflict affected states and regions where access to agriculture services is constrained. In addition to the near-universal cellphone coverage, Myanmar has one of the highest smartphone penetration rates (80 percent) in developing countries enabling extensive use of smartphones. Agricultural extension workers could use digital applications that could easily run on their cellphones to more efficiently serve a greater number of farmers. Extension services, such as soil testing geo-tagged to the farmer location and cell number, combined with weather information, could provide customized information on appropriate fertilizer application. Market information can easily be collected, aggregated, analyzed, and disseminated to farmers using text and Viber

²¹ Swiss Peace, GDI and UN Women. 2015. *Why Gender Matters in Conflict and Peace: Perspectives from Mon and Kayin States, Myanmar*, Yangon.

²² FAO, MOALI and UN Women.2016. Including Women and their Priorities in Agriculture

²³ OXFAM. 2014. Delivering Prosperity in Myanmar's Dry zone: Lessons from Mandalay and Magwe on Realizing the Economic Potential of Small-scale Farmers.

²⁴ Pierce, C., L. Hurtle and J. Bainbridge. 2018. *Gendered experiences of land confiscation in Myanmar: Insights from eastern Bago Region and Kayin State*. Yangon.

²⁵ World Bank. 2019. *Myanmar Rice and Pulses: Farm Production Economics and Value Chain Dynamics*.



messages. Applications, such as a disease identification app that use a smartphone camera and artificial intelligence (AI) technology, can be made available with a relatively small investment. These technologies can also be critical to mitigate COVID-19 impacts on farmers as digital extension services can be used to raise awareness on COVID-19 and food safety, among others. Such digital platforms and services can also serve as a foundation for immediate financial response in case of future crises.

21. **The sectoral transformation will require a shift away from the traditional strategy of food self-sufficiency toward a resilient, inclusive, competitive, and environmentally sustainable (RICE) agriculture and food system that takes advantage of Myanmar's diverse farming systems with a greater private sector engagement.²⁶** With the COVID-19 pandemic situation, it has become even more important and urgent to strengthen institutional capacities to manage an emerging array of risks, including those related to nutrition, environment, economic inclusion, and conflict. Myanmar has the potential to expand its range of agricultural export products and destinations. It has had some success in doing so. Myanmar's National Export Strategy (NES) has identified several priority sectors, including agricultural subsectors, through which it will strengthen sustainable inclusive export-led growth.²⁷ Building on its NES, Myanmar could identify several candidates for further value chain development, in particular: fruits and vegetables, sugarcane, tea, cotton, and livestock, which can integrate smallholders to markets for high value products. Investments especially in the horticulture and livestock sectors can promote inclusive growth, as women are particularly active in these sectors while men dominate the trading of paddy, pulses and oilseeds.²⁸

C. Proposed Development Objective(s)

Development Objective(s) (From PAD)

The Project Development Objective (PDO) is to increase agricultural productivity and diversification and to enhance market access for selected value chains in the Project area, and respond to an eligible crisis or emergency.

Key Results

22. The key PDO-level results indicators include the following:

- Increased yield of the selected value chain commodities²⁹ (percent)
- Increased area of non-paddy crops (ha)
- Increased sales of targeted farmers participating in value chain clusters (percent)
- Number of beneficiaries reached with agricultural assets or services (CRI, disaggregated by gender and by vulnerable population group).

D. Project Description

23. The project has four components and has applied the Inclusion and Peace Lens (IPL) across components. The IPL is a series of questions aimed at ensuring projects are inclusive, that they do-no-harm in general and

²⁶ World Bank, 2019. From rice to RICE, Integrated strategies for MMR to realize a more resilient, inclusive, competitive and environmentally sensitive food system.

²⁷ The Republic of Union of Myanmar National Export Strategy, Ministry of Commerce, 2015.

²⁸ A Strategic Agricultural Sector and Food Security Diagnostic for Myanmar, 2014

²⁹ The preliminarily selected value chains include fruits, tea, cotton, sugarcane, and meat (cattle) value chains. Further value chains may be added in accordance with the criteria set out in the PIM.



specifically in conflict affected areas, and that they support peacebuilding where possible. The project aims at ‘economic inclusion’ of smallholder farmers, including small-scale cattle farmers, with a strong focus on Vulnerable Population Groups (VPGs), returning migrants, and women, who are more likely to be excluded from agriculture related interventions.

24. As an immediate response to the COVID-19 pandemic, the project will support the restoration of the agriculture supply chain by supporting farmers timely access to inputs, which has been disrupted by the global and local lock down and limited movement. At the recovery stage, the project will support the strengthening of the agriculture sector by: developing digital extension services to raise awareness on COVID-19 and food safety; strengthening digital agriculture technology; developing online transaction platforms for inputs; and supporting value chain development such as by linking farmers with markets. The project will strengthen and accelerate the ongoing agricultural systems transformation in the country and improve the institutional capacity of the agricultural research and extension systems and the enabling business environment for an expanded private sector role in the selected value chains. The project will also support Myanmar’s agriculture sector to become resilient to future global shocks by investing in testing and certification facilities which are in compliance with International Standards, to enable Myanmar to diversify trade destinations.

25. **Component 1: Agriculture Productivity Enhancement and Diversification (US\$140.33 million).** This component focuses on improving agricultural productivity and diversification at the farm level by: (a) strengthening the agricultural Research & Development (R&D) system; (b) improving the quality and utilization of agricultural inputs; (c) strengthening agricultural extension services, including through the use of digital technologies; and (d) improving irrigation and drainage infrastructure, which will provide support to rural poor households through labor intensive cash for work (CFW) activities. As an immediate response to COVID-19, the project will support farmers to access agriculture inputs and will generate labor-intensive work to employ rural population, particularly returnees from outmigration. It will also provide support to the delivery of COVID-19 related communications and other extension services through digital platforms (including SMS, MMS, social media, web-based video conferencing, and other machine-assisted communications). It aims to enhance the knowledge of and access to technologies by farmers and agri-enterprises to make Myanmar’s agriculture more productive and diversified, responsive to market demands, and more climate-resilient.

26. ***Subcomponent 1.a: Strengthening Agricultural Research and Development System.*** The project will strengthen the national R&D system to make it more responsive to farmers’ needs, to market demands, and to emerging needs in terms of reducing climate vulnerabilities and improving climate resilience. The project will support: (a) upgrading selected regional research and development facilities under the Department of Agriculture Research (DAR) of MOALI to facilitate decentralization of agricultural research; (b) carrying out capacity building activities for MOALI’s research staff and supporting research on climate resilient varieties and climate smart agriculture; and (c) carrying out capacity building activities to adopt farmers’ participatory research at selected regional research and development facilities.

27. A preliminary list of regional research and development facilities has been identified during preparation in accordance with the presence of existing regional research centers and farms which require upgrading for providing better quality of research in the local area. The preliminary list includes existing research centers/farms in those townships with high levels of monetary and non-monetary poverty (as captured by the Multi-Dimensional



Disadvantage Index-MDI) and in those townships with a high concentration of ethnic minorities, especially in the Hills and Mountain AEZs. It also includes the existing research centers/farms in conflict affected townships, such as Kyaukme, Kentung and Lashio (Shan), Mohnyin (Kachin), Loikaw (Kayah), and Dawei (Tanintharyi). These facilities are existing government facilities, and the catchment areas are in the vicinity of these facilities. Due diligence will be conducted during the first two years of implementation prior to the final selection of these townships (TSs), including conflict analysis and consultation with the full range of stakeholders, including ethnic minority groups, ethnic service providers and, where feasible and in-line with due diligence responsibilities, EAOs. The list will be kept updated in the Project Implementation Manual (PIM).

28. *Upgrading regional research facilities.* The project will facilitate decentralization of agricultural research to the regions and states by upgrading the existing regional research centers and regional research farms under Department of Research (DAR). The decentralization process is expected to effectively respond to localized needs for agricultural technologies and knowledge, and to promote better coordination and linkages between the agriculture extension services and the agricultural research system at regional and township levels.

29. *Strengthening research capacity for Climate Smart Agriculture (CSA) and marketable varieties.* The project will strengthen the research capacity of the staff of the selected regional research centers and regional research farms by upgrading their knowledge on climate resilient varieties and by supporting research on new climate smart technologies, climate resilient varieties/seeds, and marketable varieties of crops (particularly non-paddy). These include fruits, vegetables, and sugarcane, which will be promoted in the selected areas under Component 2 (value chain development).

30. *Adopting farmers participatory research.* The project will support carrying out capacity building activities to adopt farmers' participatory research at the supported regional research centers and research farms. Rigorous communication will be conducted through existing networks such as farmers TV, village level farmers groups and lead farmers, as well as TS level extension workers, on participatory research opportunities. The communication campaign will reach out to smallholder farmers (owning less than five acres of land) and Vulnerable Population Groups (VPGs), which are defined as the segment of the population that includes ethnic and religious minorities, economically/socially disadvantaged people (like the landless), and farmers in conflict-affected, remote, and geographically disadvantaged areas as well as female-headed households and women farmers. Participatory research is expected to improve responsiveness to farmers' localized demands and needs through direct discussions, consultations and testing on locally adaptable marketable varieties, climate resilient varieties and seeds as well as CSA technologies.

31. Further, the project will support the regional research centers/farms to hold on-farm demonstrations, to ensure to reach out to those who cannot access TV or the Internet, or live outside of areas where extension workers operate, particularly in the remote areas with high concentration of ethnic minorities.

32. ***Subcomponent 1.b: Improving the Quality and Utilization of Agricultural Inputs.*** The project will provide support for increasing the market supply of certified seed varieties and quality fertilizers and will promote a more sustainable, climate resilient, and cost- effective use of fertilizers among farmers. The specific activities include: (i) facilitating access to agricultural inputs as immediate COVID-19 relief; (ii) designing and implementing of a financial support mechanism through e-vouchers for agriculture inputs; (iii) strengthening public-private



partnership in the inputs supply chain; (iv) enhancing farmers' knowledge on appropriate fertilizer use; (v) strengthening the seed production system and certification systems; and (vi) strengthening the fertilizer inspection system.

33. *Facilitating access to agriculture inputs.* Due to the lockdown and restricted movement, agriculture input supply has been disrupted since March 2020. On top of the loss of income from remittances, a study estimates that the disruption will affect agriculture production³⁰ and that immediate response is critical. As a COVID-19 relief response, the project will provide support to the MOALI Cooperatives Department (Coops Dept.) and the Department of Agriculture (DoA) to facilitate interventions to ensure access to emergency "production packages" for smallholder farmers such as providing paper-based vouchers to enable them to access inputs in a timely manner. The package may include fertilizer for the 2020 monsoon season and other inputs for the following dry season as necessary.

34. The project will have a rigorous targeting mechanism to capture farmers who are vulnerable to COVID-19. The geographical targeting criteria include areas where: i) a significant number of poor households reside; ii) a significant number of households are involved in agricultural activities; iii) there is a high prevalence of malnutrition; iv) there is a high prevalence of returnees or households dependent on remittance; and, iv) limited logistical obstacles exist or where the cooperatives network is strong. Based on available data, the preliminary list will likely include selected TSs in Ayeyarwady Region and Shan State.³¹ The beneficiary selection criteria will be defined in a fair and inclusive manner and will focus on small-scale and female-headed farm households and VPGs as defined in the Beneficiary section. The voucher will be distributed to beneficiaries (both cooperative members and non-members) through the cooperative network and will allow them to obtain the input package at local shops. The local staff of MOALI Cooperatives Department will redeem the vouchers at the township level. Based on the lessons from this intervention, the project will then support MOALI to develop a "smart subsidy program" (that is, an e-voucher system) that can be used for future input support programs. The e-voucher system will be integrated with the e-extension system that the project will support under Subcomponent 1.c.

35. *Supporting e-voucher for agriculture inputs.* The project will provide support to design a support program for agricultural inputs, which will be based on an electronic voucher ("e-voucher") mechanism in line with the ADS policy (Outcome 1.8). The project will finance piloting of the e-voucher system. The e-voucher scheme, if successful, will be scaled up by MOALI in subsequent years. A voucher scheme is a "smart-subsidy" program to buy agricultural inputs from input dealers at a reduced price with the voucher issued by the Government, while increasing demand for inputs to help the input market to be commercially sustainable. It is expected to promote the usage of quality inputs, such as certified seeds, and to promote the growth of private input supply systems. Given the high penetration of smartphone in Myanmar, an e-voucher instead of traditional paper-based voucher can be considered as the distribution mechanism to enhance the efficiency and transparency of the operation.

36. The project will support MOALI to design the program with key policy elements including: (i) a clear objective that enables better targeting of beneficiaries and better selection of the input package; and (ii) an exit

³⁰ IFPRI, Assessing the Impacts of Covid-19 on Myanmar's economy, May 2020

³¹ Shan State and Ayeyarwady region has i) more than 1.5 million of poor exist (Myanmar Living Condition Survey 2017: Report 3-Poverty Report), ii) the greatest number of stunted children live (MS-NPAN (<https://www.mohs.gov.mm/page/7190>), and iii) significant land area is sown for monsoon rice and maize production (GAIN, Union of Burma - Grain and Feed 2018 Annual Report). The Shan state is the third state in the country both in terms of receiving remittance (Myanmar Living Conditions Survey 2017) and the number of migrants (<https://www.iom.int/countries/myanmar>).



strategy with a budgetary cap and a program timeline. Key activities for e-voucher scheme design include: (i) digital data base development based on beneficiary survey and farmer registration;³² (ii) digital platform building; (iii) sensitization for both farmers and input suppliers/dealers; and (iv) program maintenance and capacity building for the maintenance. The beneficiary database and the digital platform of e-voucher have a significant synergy with the e-extension services (Component 1.c). The program will partner with various private actors such as input suppliers, input distributors, mobile money operators, IT companies, Human Center Design professionals, and ag-tech companies.

37. *Strengthening Public-Private Sector partnership to restore inputs supply chain.* The project will support DoA to enhance its coordination and partnership with private sector agriculture input suppliers, who have confirmed its sufficient stock of inputs, but whose movement has been limited due to the lock down situation. More specifically, the project will enable DoA to formally establish frequent and regular meetings with the private sector in the selected TSs, develop communication campaign on agro-logistics movement, and support the development of certificate for agro-logistics companies to allow them to move to different TSs. Learning from the experiences of China and the Philippines, MOALI's frequent and formal contacts with input suppliers, operators, and logistic companies will be accompanied by the issuance of certificates or "passes", which will be able to help reduce continued disruption to the supply chain due to the inadequate communication and coordination between different layers of the Government.

38. *Strengthening farmers knowledge on area-specific fertilizer utilization.* This project will support the development of Myanmar's area-specific fertilizer recommendation system, which will build on the analytical work and lessons from Wageningen University and Research's technical support to national governments on the topic. The current nation-wide single standard for fertilizer applications will be replaced by area, soil, and crop specific fertilization recommendations, which will result in more tailored fertilizer recommendations to be specifically adapted to the respective areas, reducing fertilizer use and GHG emissions. In situations where there is shortage of chemical fertilizers due to COVID-19 related disruptions, the area specific fertilizer recommendation application which provide alternative fertilizers, such as organic compost. The app will support farmers in deciding about the balance between animal manure, other organic manure (e.g. compost), and/or chemical fertilizer and recommend amounts to be applied. This activity will be implemented in the selected districts in five regions (Mandalay, Magway, Bago, Ayeyarwady, and Sagaing) and will specifically target women, smallholder farmers, marginal and landless farmers, and ethnic minorities. Rigorous communication will be conducted through existing network such as farmers TV, village level farmers groups and lead farmers, as well as TS level extension workers, in these targeted regions, to reach out to smallholder farmers, ethnic minorities, economically/socially disadvantaged people (like the landless), as well as female-headed households and women farmers. To ensure a broad and inclusive coverage, the project will support the development of a digital platform that will be accessible to end users both through a smartphone app and an online tool.

39. *Strengthening seed production, certification and quality control system.* As a COVID-19 medium term recovery activity to strengthen the agriculture seed supply system, the project will support various levels of seed cooperatives to upgrade their production system to produce quality seeds. The project will provide technology and training to seed cooperatives in the selected regions and states. The project will upgrade the seed testing

³² Due diligence will be made and standards on appropriate use of data will be applied to prevent misuse of personal data.



laboratories in Pyinmana township in Naypyitaw (NPT), Hmawbi township (Yangon), and Maharaungmyay township (Mandalay), which will inspect and certify the quality of seeds produced in the country both for local use and for exports. The project will support these laboratories to obtain International Seed Quality Assurance accreditation, under the International Seed Testing Association (ISTA). Accreditation with ISTA would allow them to test the quality of imported seeds. Further, the project will upgrade the seed processing units in the selected seed testing facilities in Ayeyarwady, Shan, and Magway, where private sector seed processors are not present.

40. *Strengthening fertilizer inspection capacity.* The project will build a new fertilizer inspection laboratory which is under the Land Use Division (LUD) of MOALI at the border area with China (Muse Township, Shan State) and will strengthen the associated staff's analytical and inspection capacity on marketed fertilizers. Myanmar imports over 80 percent of its fertilizer, mostly from China, which enters the country mainly through Muse, which is one of the conflict-affected townships. The laboratory will be built in the existing MOALI compound and is not expected to be the subject of contention or contest. It is expected to enhance the market supply of quality fertilizers as a result of improved inspection, and thereby support MOALI with the enforcement of the Fertilizers Law of 2002 (as amended in 2015), which directed the market supply of inspected fertilizers.

41. ***Subcomponent 1.c: Strengthening Agriculture Extension Services through Digital Technologies.*** The project will support developing digital extension package and expanding its outreach, upgrading the training facilities to be digitally enabled, building the capacity of extension workers, and conducting specific outreach measures to benefit small farmers and VPGs. This subcomponent will have a key role in economic inclusion and the COVID-19 response, especially in terms of creating awareness and information sharing tools.

42. *Developing digital content of extension services and dissemination.* The project will support development of digital content of extension packages, including on-farm management techniques, GAP, post-harvest technologies, CSA technologies and practices, improved varieties, sustainable use of agriculture inputs, and market information with aggregation and analysis. As an immediate response to COVID-19, the extension messages will include COVID-19 related awareness issues, such as hand-washing and social distancing, food safety, and animal health related issues as per the guidance of Ministry of Health. The extension materials will also include information on climate resilient farming practices such as the use of heat and drought resistant varieties, sustainable use of agriculture inputs such as reduced fertilizer use, reduced tillage to improve soil carbon content, use of agricultural waste (bagasse, rice husks, etc.), rangeland management, water management techniques to increase water efficiency use, and provide farmers with information on mechanisms to reduce their exposure to climate change induced natural disasters such as weather insurance. In addition, it will include materials on precautionary measures and proper handling of pesticides, and risks related to pesticide exposure, which will specifically benefit landless agricultural laborers. Considering the risks to farmers of unexploded ordnances (UXOs) and landmines in the conflict-affected areas, it will include information on landmine and UXO risks related to agricultural activities. In view of the country's challenges in addressing malnutrition and diet diversity, advice on these topics will also be provided, to specifically benefit women. Digital content will include the use of short films and visual information to avoid exclusion of illiterate population and to reach more women. Evidence from Digital



Green indicated that women farmers react more effectively to visual contents and short films, taken by peer farmers through pico-projector, rather than conventional extension services.³³

43. The project will support the dissemination of digital extension messages through existing platforms such as the Farmer TV Channel, Facebook and by private sector mobile phone application providers, text, and Viber messages (which are commonly used in Myanmar) as well as the extension network, the Agri-Business News Journal and other farmer journals to reach a wide range of producers and farmers in the project area.

44. Furthermore, the project will support the upgrading of the ICT facilities in the regional extension training centers in the selected townships in NPT, Yangon, Mandalay, Magway, and Bago Regions so that the current extension services become more digitally enabled. The project will also support the provision of mobile facilities and ICT technology for extension services and material support to disseminate knowledge and techniques in other selected TSs. The project will support provision of mobile laboratories in the selected TSs, which will be equipped with small-scale laboratory facilities and audio equipment for dissemination of knowledge in efficient use of agri-inputs and improved production technologies. The project will also support capacity building activities of extension workers in these TSs on digital technologies.

45. Finally, the project adopts a conflict sensitive approach. The Project will include some conflict-affected townships, which range from those that are minimally and historically affected by armed violence to those that are presently affected in some manner. As such, many also contain pockets of territory either contested or controlled by EAOs (usually township's more remote and rural sections). To ensure the “inclusion” of farmers in such areas, the project will support “knowledge transfer” from government research farms and value chain research facilities within the target township (and without any physical interventions/activities of the project in contested areas) through: (i) township on-farm demonstration/extension camps to share information; (ii) Training of Trainers (ToT) (also held in existing government facilitates); and (iii) digital extension messages through existing networks. Such knowledge transfer will be facilitated through ethnic service providers and/or community-based organization representatives that are trusted by non-government stakeholders. The proposed TOT will be either facilitated by the TS extension workers who will be trained on conflict sensitive approach or farm advisers working in community-based organizations (CBOs), civil society organizations (CSOs), and nongovernmental organizations (NGOs). The details will be determined during the initial years following consultation with key stakeholders and will be specific and adapted to the situation in each TS.

46. ***Subcomponent 1.d: Improving Irrigation and drainage infrastructure.*** Under this subcomponent the project aims to mitigate the impacts of the COVID-19 pandemic on agricultural production and rural unemployment by investing in maintenance and rehabilitation activities in existing irrigation schemes, drainage and flood protection works serving some 50,000 acres, mainly using labor-intensive cash for work (CFW) approaches. The project will also support the establishment and strengthening of Water User Groups (WUG) and the improvement of farmer owned water management infrastructure, which is needed to create cropping flexibility for farmers and more equitable and efficient water distribution. Higher value but lower water consuming crops and new water saving irrigation technologies will be introduced. These are expected to contribute to improved agriculture performance in the beneficiary farms and an increase in cropped area

³³ Evidence from Digital Classroom, Digital Green: <https://www.digitalgreen.org/blogs/digital-classrooms-for-farmers/>



with the same amount of water so that the original command area would be provided with water. The sub-component also contributes to food security by ensuring water availability for farmers.

47. Irrigation and Water Utilization Management Department (IWUMD) has experiences in conducting labor intensive CFW by employing communal workers in the local villages. The project will support specific targeting criteria so that most affected people will be able to participate in the CFW program, such as returning migrants, households who lost remittances, and other types of VPGs. WUGs will serve as an intermediary in selection and engagement of the targeted beneficiaries for CFW. These criteria and selection process, as well as wage scale will be defined, in coordination with other CFW projects within MOALI and will be included in the PIM.

48. The preliminary list includes existing irrigation and drainage schemes in Mandalay, Sagaing, Magway, Bago, and Ayeyarwady regions the maintenance and rehabilitation activities. In addition, CFW for minor repair work, such as canal cleaning, and special maintenance will be conducted in Kachin, Kayah, and Mon States and the NPT region. The final selection of the irrigation schemes will be based on the criteria presented in the PIM. The preparation and incorporation of safeguard requirements should be completed in accordance with the ESMF prior to the filed implementation.

49. The project is seeking for exception of riparian notification under OP/BP 7.50 (international waterways) for the irrigation rehabilitation work. New irrigation activities that would trigger the notification requirement under OP/BP 7.50 have been excluded, and this will be specified in PIM.

50. **Component 2: Value Chain Development (US\$49.32 million).** This component focuses to enhance value chain development and to expand market access of selected value chains by: (a) financing value chain facilities and services; (b) supporting value chain clusters (VCCs) and farmers cooperatives by strengthening market linkages and promoting contract farming; and (c) financing value chain related laboratories to meet international standards. It aims to enhance value chain actors' access to technology and value chain services to improve product quality. The project is expected to strengthen the capacity of VCCs, cooperatives, and other value chain actors to connect to markets and be able to respond to market requirements more effectively. The project will help lay the foundation for fostering public-private partnerships with locally relevant and credible businesses, expanding opportunities for capturing high-value markets, enhancing Myanmar's agriculture and agribusiness to better compete with imports and in the international markets, thus diversifying its trade destinations, which will in long-term, strengthen agriculture resilience to future global shocks.

51. ***Sub-component 2.a: Supporting Value Addition and Market Access.*** The project will support activities that will contribute to increased value addition of the selected value chains and expand farmers' market access by creating VCCs, strengthening cooperatives, and promoting partnerships between these clusters/cooperatives and the private sector.

52. MOALI has identified a preliminary list of value chains, which include, fruit, tea, cotton, sugarcane, and (cattle) meat, aiming primarily to promote international and regional exports and also import substitution (in the case of sugarcane). The selection of these value chains was based on multiple criteria, including their contribution to diversification (and contribution to enhancing nutrition); value addition opportunities; suitability in the selected AEZs; domestic, regional, and international market demand trends; and (to some extent) their role in promoting inclusion. For instance, the fruit and meat value chains create huge opportunities for all these aspects. With



increasing demand from urban centers both domestically and in the regional market, the fruit and meat subsectors have a large value addition potential in the country.³⁴ Women are heavily involved in the fruit sectors. Cattle value chain activities will also benefit landless farmers. Furthermore, inclusion of tea, cotton, and cattle meat was considered important, as these commodities are mainly exported to China, and as a result, these sectors are likely to be hard hit by COVID-19 until the Chinese market returns to normal. Myanmar is also targeting high end tea markets, including in Europe and the United States, for its specialty tea³⁵ Improving tea quality and standards will be critical to comply with the requirements of these markets and to reap premium price benefits and to diversify its trade destinations. Tea production and value addition are predominantly undertaken by ethnic minorities such as the Pa-O and Palaung in Shan state, and other minorities in Chin and Kachin States. Some of the targeted TSs are also post or conflict-affected. Tea is a labor-intensive value chain, hence landless agricultural laborers will gain access to job opportunities by the establishment of demonstration farms in tea growing areas. Cotton, which is one of Myanmar's national strategic export crops and one of the few crops where genetic modification is allowed in the country, has experienced a rise in price and demand, primarily from China, where half of Myanmar's cotton is exported.³⁶ The sugarcane value chain, on the other hand, directly supports more than half a million farmers and the livelihood of many others, who are casual workers working as harvesters and in sugar mills.

53. The preliminary list of the selected value chains will be further reviewed during the initial years of implementation, based on the further consultations with the private sector, additional diagnostics on market demand, and MOALI's strategic priorities. The final selection of the value chains will be specified in the PIM.

54. *Value chain facility and research.* The project will support investments that are important to increase value addition of selected value chains, which include: value chain research; identification of major climate risks and their impacts on the value chains; construction/upgrading and installation of climate resilient and energy efficient value chain facilities such as cold storage and processing facilities, demonstration farms and training centers, and artificial insemination services. The investments will also include capacity building and awareness raising on post-harvest technologies, cold storage management, cattle breeding (including artificial insemination services), and other technologies and knowledge relevant to value addition. It will promote climate smart value chains through the assessment of major climate risks and their impacts on the selected value chains and the development of associated climate smart adaptation strategies. These investments will enhance competitiveness and value addition by, for instance, by extending the shelf life of the selected fruit products.

55. More specifically, these activities include: (a) support to research on quality-oriented cotton and silk in Mandalay; (b) financing post-harvest (cold storage) facilities, demonstration farms for improving fruit quality, and research on post-harvest technologies at six horticulture research farms;³⁷ (c) construction and installation of energy efficient processing and packaging facilities for different tea varieties. This activity also includes research

³⁴ Export from the livestock sector increased by about 36 percent between 2011/2012 and 2017/18. In May 2019, the GoM has relaxed some of the livestock trade policies and this has increased demand from neighboring countries especially from the China market.

³⁵ Myanmar can receive a higher price from these markets, with current reports showing prices to be higher by 25 percent.

³⁶ The value of Myanmar's cotton export was three times more between 2013/2014 and 2016/2017 (reaching US\$10 million). This trend is expected to grow even faster because of the trade issues between China and the United States where China sources most of its domestic cotton demand.

³⁷ These research farms (TSs) include the Doe Kwin farm (Pyinoolwin), Pinlaung farm (Pinlaung), Heho farm (Kalaw), Namlatt farm (Taunggyi), Myitkyina farm (Myitkyina), and Kyawboat farm (Hakha).



for high quality tea production and processing technology;³⁸ (d) promotion of artificial insemination service and upgrading natural breeding units in multiple townships located in NPT, Sagaing, Magwe, Mandalay, Yangon, and Bago; (e) upgrading sugarcane research farms in NPT, Bago, and Magwe to promote sugarcane varietal improvement for better quality and climate resilience; and (f) upgrading and construction of cold storage facilities for livestock and dairy products. All these facilities will be in the MOALI compound or within the Government land. During implementation, wherever possible, private capital co-financing, based on agreed joint business plans can be used to finance the long-term management of these facilities to promote its business sustainability. For all facilities, an environment and social safeguards plan to ensure appropriate safeguard measures, particularly on waste management, will be prepared.

56. *Expanding market access.* As part of the COVID-19 recovery response and for long term sustainable development, it will be critical to link farmers with markets, inputs suppliers, and financial services. The project will establish and support VCCs and cooperatives and create market linkages by facilitating regular public-private engagement platforms. This supports the ADS's overall strategy to promote "contract farming" and market linkages. Myanmar already has extensive successful experience in promoting contract farming for rice, which could be further scaled up.

57. First, the project will support the formation of VCCs of farmers and the strengthening of selected existing cooperatives, which are formal groups registered under the Department of Cooperatives. The selection criteria for locations include (i) proximity to the value addition facilities to be supported by the project; (ii) those TSs who can benefit from digital extension services under Component 1.c; and (iii) TSs with higher poverty counts as per Myanmar's MDI. Within the selected TSs, formation of these clusters will be facilitated by the planning and extension divisions of the Department of Agriculture (DoA), MOALI with an aim to particularly target smallholders, women, and VPGs. While farmers will participate based on self-selection, the project will conduct outreach activities to attract VPGs and will ensure participation is fair, inclusive and transparent.³⁹ In addition, women lead farmers (WLF) will be identified during the process of formation of VCCs to serve as facilitators between the extension workers and women farmers participating in VCCs.⁴⁰ The Department of Cooperatives will identify those targeted cooperatives from the existing list of cooperatives.

58. Secondly, these VCCs and cooperatives will be supported through a range of technical advisory services and capacity building to enable them to achieve measurable targets in terms of improved product/service specifications (such as quality, quantity, and delivery conditions) through the value addition facilities to be supported by the project. The project will provide demand driven organizational development and entrepreneurial training to VCCs and cooperatives. There will be a special emphasis on business planning, CSA practices and technologies, quality control, financial planning, market analysis, marketing, and dealing with middlemen, traders, retailers, and wholesalers. The project will also provide capacity building in post-harvest handling in priority value chains to minimize losses and reduce perishability. The project will then provide capacity building in capturing value, by promoting quality enhancing and pre-processing activities, such as cleaning, grading, sorting, and packaging. In order to ensure that women farmers participate, the selected WLFs will

³⁸ This activity will be implemented at six townships in the states of Shan, Chin, and Kachin.

³⁹ The selection criteria will be laid out in the PIM.

⁴⁰ The WLF model will build on the experiences initiated by MEDA with successes of engaging women farmers. It was tested in Myanmar since 2019 in a limited scale.



demonstrate good agricultural and business practices, new technologies, and act as mentors to groups of women farmers who participate in the VCCs and cooperatives. Capacity building support can be extended to VCC partners, such as agro-input dealers, so that they have access to additional training resources via smartphone or TV to ensure social distancing by clients at their stores and to avoid multiple handling of stock by staff and clients to the extent possible.

59. Finally, these VCCs and cooperatives will be linked with processors, buyers, marketing entrepreneurs and financial institutions through the public-private sector partnership platforms to be established by the project. WLFs are expected to participate in these platforms and represent women farmers and facilitate their linkage with buyers, input suppliers, and creditors. Through the regular platforms, VCCs and cooperatives will enhance their knowledge and familiarity with the required quantity and quality specification for their agriculture products to gain the premium prices. Buyers and processors will know better about their potential source of inputs and agriculture products. The project will assist VCCs and cooperatives to access markets and microfinance sources by supporting their ICT infrastructure and through provision of financial advisory support by the private sector. This integrated approach for value chain actors supports the MOALI's strategic policy for the promotion of contract farming.

60. While the ADS recognizes the importance of private sector participation, MOALI has less experience in engaging the private sector in value chain related investments and financial access. Several mechanisms will be applied to attract midstream and downstream value chain actors (processors and buyers) to the proposed platforms and to be linked with the VCCs. During the first year of implementation, the project will organize consultation workshops with the private sector in the selected townships to identify potential private sector partners. During the consultation, the project will leverage existing IFC clients to engage private sector players, particularly agro-enterprises. The project will also work in close collaboration with private sector associations, including MFFVPEA which has extensive experience in forming the clusters and facilitating linkages with buyers. Considering that access to rural/agricultural finance is low in Myanmar compared to its regional peers,⁴¹ the project will facilitate access to finance for farmers indirectly by encouraging them to join the regular platform. It is expected that the formation and operation of VCCs with value addition technical support from the project can make them relatively more bankable. The project will link with the on-going World Bank financed Financial Sector Development Project (FSDP, P154389), which supports technical capacity building of the Agriculture Development Bank. Building on lessons from the recent pilot project of Digital Credit for Smallholders through the Korea-World Bank Partnership Facility, the project will also explore supporting the VCCs to link with existing micro-finance institutions in the selected TSs. Further buyers and processors participating in the platform may be willing to extend credit to value chains during the planting season provided the latter agree to supply quality outputs at harvest (contract-farming).

61. ***Sub-component 2.b: International Standard Certification and Animal Disease Control.*** The project will support investments to improve laboratory infrastructure, equipment, and human capacity needed to ensure international standard certification (such as ISO 17025 and other applicable international standards). These investments are intended to overcome market failures that currently limit exports of Myanmar's crops and animal products in markets with high quality standards. This will be fostered through research on new crop varieties or

⁴¹ Enabling Business for Agriculture Myanmar Country Profile. World Bank, 2019.



enhancement of local varieties (which are activities under component 1), and by increasing the areas and crops covered by GAP. This enables the national GAP standard to align with the ASEAN GAP (and global GAP), thereby enhancing export opportunities for certified producers in the medium and long run.

62. *Laboratories with ISO standard.* The project will support upgrading and establishment of new laboratories that will be critical to achieve international quality accreditation and GAP standards. These facilities will consider climate resilience and energy efficiency solutions. More specifically, the project will support the following laboratories.

- The Plant Biotechnology Laboratory in Yangon will be upgraded to be able to develop climate resilient crop varieties and to improve food safety and nutrition through cloning and genetic crossing. The project will also install an accredited biosafety laboratory facility to develop and test crops genetically modified through DNA technologies, particularly the cotton value chain. The project will also upgrade laboratory facilities that will support promotion of geographic indication (GI) products, such as mango and Pawan San rice, which are local special varieties known in Myanmar. The project will support the laboratory to meet the requirements for ISO 17025 accreditation.
- The project will support upgrading of the Land Use Laboratory in Yangon and finance the construction of a new one in NPT. It will support these laboratories to meet the requirements for accreditation under ISO 17025, so that they facilitate and support implementation of global GAP. This support will upgrade the laboratory facilities to (a) analyse soil, plant, and irrigation water quality to detect and prevent contamination and (b) provide services to fertilizer importers and dealers by issuing analysis certification. These services are important to upgrade the Myanmar GAP, which is currently not recognized in export destination countries, to global (or ASEAN) GAP.
- The Sugarcane Quality National Reference Laboratory in NPT will be upgraded to meet the requirements for an accreditation under the International Commission for Uniform Methods in Sugar Analysis scheme. This will enable the country to improve the quality of sugarcane and to develop new varieties and possibly reduce sugar imports.

63. *Animal Disease Control.* The project will provide support to the livestock sector by laying the foundations for the establishment of disease-free zones for foot-and mouth- disease (FMD). The potential for exports of animals and animal products from Myanmar is limited by the ongoing presence of FMD, leading to economic losses for cattle farmers. The project will finance the purchase of laboratory reagents (test kits) for testing important animal diseases including FMD; assessment of specific epidemiology of FMD including its prevalence, spatial distribution, and transmission pathways; and designing and implementing an FMD control program that includes measures such as vaccinations and ongoing surveillance eventually leading to the establishment of disease-free zones. The goal is to transit the designated zone from free with vaccination to free without vaccination. In the short term and as a response to the COVID-19 pandemic, the project will strengthen quarantine services and centers to ensure that animal movement (from outside and within the country) are safe and meet health standards. It will also strengthen laboratory capacities in disease diagnosis and building awareness to extension and veterinary workers on one health approach. The project will also support awareness creation campaigns at community level on food safety and animal health.



64. *Capacity building.* The project will support a comprehensive capacity building for staff of these laboratories and the development of business plans, safeguard measures and a human resource plan. Several positions in most laboratories are occupied by women. For instance, about 65-73 percent of DoA staff working for the land use and sugar cane divisions are women. Hence, women staff are specifically targeted for capacity building/training opportunities. Prior to the investment, a comprehensive business assessment and skill set analysis, as well as relevant policy compliance reviews will be conducted. Each laboratory will develop a plan for regular consultation with the private sector to strengthen relationships, establish collaboration when appropriate, and identify priority areas for driving skills development and investments. Consultations with the Ministry of Commerce (MoC) are also expected to be reinforced, to enhance decision-making processes and actionable plans by MOALI management. This will be accompanied by a safeguard plan to ensure appropriate safeguard measures, particularly on waste management, are in place. The laboratories will also have a human resource development plan, which will identify skills gaps and other learning needs, to strengthen the capacity of the entire MOALI's technical personnel, including for higher education and hands-on skills in a harmonized manner, such as dedicated training sessions delivered by a third party and consultants with recognized capacity in the relevant fields of interest. Specific programs will be developed to achieve more efficient practices, to best leverage the increased technical capabilities, and foster staff motivations to achieve them.

65. **Component 3: Project Management, Coordination, and Monitoring & Evaluation (US\$10.35 million).** Activities under this component will support effective project management systems for financial management (including internal and external auditing), procurement, social and environmental safeguards management at the Union, state, and township levels (including attention to peace and inclusion, marginalized/vulnerable population groups, and gender); and monitoring and evaluation (M&E, including the baseline, midline and final impact assessment surveys). In addition to conventional project management and M&E functions, this component also includes building capacity of the MOALI's (Department of Planning) to strengthen its policy level coordination and M&E capacity to manage various programs and policies under the Ministry. In addition, considering that restricted movement may continue, the project will support building the capacity of the Project Management Unit (PMU) to leverage field-appropriate ICT tools for remote supervision and monitoring as well as third party monitoring.

66. **Component 4: Contingent Emergency Response (US\$0 million).** Following an eligible crisis or emergency, the recipient may request the World Bank to reallocate project funds to support emergency response and recovery. The project will prioritize emergencies having significant impact on agriculture, livestock, and rural development. The Contingent Emergency Response Component (CERC) would draw upon the uncommitted credit resources from other project components to cover emergency response, relief, and rehabilitation activities. MOALI will develop a Contingent Emergency Response Implementation Plan (CERIP) for the project acceptable to the World Bank, which will be a condition of disbursement within three months of project effectiveness. Triggers for the CERC, acceptable to the World Bank, will be clearly outlined in the CERIP. Disbursements will be made against an approved list of goods, works, and services required to support crisis mitigation, response, and recovery.



E. Implementation

Institutional and Implementation Arrangements

67. MOALI will be the implementing agency for the project. MOALI is responsible for the development and management of agricultural support services, livestock sector, and irrigation and water management (Figure 2). With a staff of over 70,000, it is one of the largest ministries and covers a wide range of activities, including agricultural research and extension services, agricultural inputs, mechanization, and irrigation and water management.

68. The project will be governed at the union level in NPT by the National Project Steering Committee (NPSC). The main functions of the NPSC include providing policy and strategic guidance to project implementation and resolving any issues of a policy nature that might arise during project execution. It is envisaged that the NPSC will involve other relevant ministries including the MoC, which has a mandate for export promotion (Department of Trade) and MoE, who has a mandate to establish National Quality Infrastructure in Standardization, Accreditation and Metrology (National Standards and Quality Department). The NPSC will be chaired and co-chaired by the Deputy Minister and the Permanent Secretary of MOALI, respectively, and its members will include Director Generals of DOP, DOA, DAR, IWUMD, Livestock Breeding and Veterinary Department (LBVD), and the Cooperative Department (CoopDept). The NPSC meeting will be held every six months. The PMU will serve as the NPSC's secretariat. The NPSC will be set up through a special order from the Minister of MOALI not later than three months after the project's effectiveness.

69. The PMU will be established, not later than three months after the effectiveness, within DOA, which is the focal department for the project and will have the mandate to implement the project. The PMU will be managed under the direction of the project director. The project director will ensure that the project implementation is closely aligned with the strategic plans of MOALI, coordinate the work between various departments, and ensure that the project receives proper attention of the MOALI senior management to resolve urgent implementation issues. The day-to-day operation of the PMU will be managed by a project manager, who will be recruited through a competitive external recruitment process. The PMU staff will include both seconded MOALI staff and consultants: FM specialist; national procurement specialist; M&E specialist; safeguard specialist; and technical support staff, depending on the evolving needs. The PMU will ensure that annual work plans and budget are prepared, budgeted, and implemented on time and that management of project funds is in line with the provisions of the project's eligibility guidelines. The PMU will be responsible for the project's financial management (FM), procurement, and safeguards functions together with DOA Financial and Procurement Divisions who second their staff to the PMU.

70. Project implementation will be carried out by the six technical departments (DOA, DOP, DAR, LBVD, IWUMD, and CoopDept through their central-, regional-, district-, and TS-level structures. DOA will be the focal department for the overall project, DAR will lead subcomponent 1.a on R&D; and IWUMD will lead subcomponent 1.d. The CoopDept will coordinate with DOA for subcomponent 1b; and LBVD will lead livestock-related activities of subcomponent 2.a. A Project Working Committee (PWC) will be established, not later than three months after the effectiveness, to support effective project implementation and to overcome project constraints, review project work plans and project progress, resolve implementation bottlenecks, and provide guidance on any other matters as requested by the PMU.



71. The project will be governed at the township level by the township Agricultural Development Committee (ADC). The ADCs are TS level structural coordination bodies and have a broad-spectrum representation of TS level stakeholders. They cover representatives of all respective departments of MOALI Hluttaw (Parliament) members. The ADCs are chaired by the General Administration Office under the Ministry of the Office of the Union Government and the DOA Township/District Manager led ADCs in some townships/districts. The main function of the ADC under the project is to provide a platform for joint (MOALI-farmers-private sector) planning and monitoring of project activities in the project areas. ADC would have to ensure coordination of project activities between implementing departments, participate in the bottom-up formulation of the annual work plans, review implementation progress, and provide guidance to field staff. The Project envisages to involve private sector representatives, associations (livestock, seed, and crops), agricultural centers and universities in the meetings of the ADCs to enhance coordination and partnerships. Implementation of the project activities at township level will be coordinated by Project Implementation Committees (PICs). The PIC is a sub-committee under the ADC, and it includes field level staff of the implementing MOALI departments (DOA, DAR, IWUMD, LBVD, and Coop Dept) who follow the work plans developed by the respective departments for Components 1 and 2.

72. Extension workers (DOA), research farm officers (DAR), township IWUMD officers, veterinarian officers (LBVD), and township cooperative syndicate chairmen are assigned as the district/township implementers. They are based at the township-level, locally recruited, are familiar with the local context and the agriculture and livestock conditions, and they speak the local languages. They will reach out to farmers and producers with information, trainings, and demonstration to the small farmers including women and ethnic minority.

F. Project location and Salient physical characteristics relevant to the safeguard analysis (if known)

The project will primarily target seven regions (Ayeyarwady, Bago, Mandalay, Magwe, Sagaing, Thanintharyi, and Yangon), five states (Chin, Kachin, Kayah, Mon, and Shan), and one Union Territory (NPT) in three AEZs (Dry, Hills and Mountains, and Delta). The project will have flexibility to adjust the project targeted areas, based on the phased approach, which will allow for conducting appropriate due diligence first and which will be based on the emerging needs. These targeted regions and states in the three AEZs have a higher presence of agriculture production. Moreover, the Dry AEZ has been increasingly affected by climate change and shortage of rainfall. Further, the Dry Zone (Mandalay, Magwe and Sagang), Ayeyarwady region, and Shan State are known to have a high levels of out-migration; and an influx of returnees and loss of remittance income are expected in these places because of the global pandemic of COVID-19 and the resultant lockdown. Thus, priority was given to these states and regions from both because of agricultural growth prospects and emerging needs. The project will also support national reference laboratories which will serve farmers and agro-enterprises nationwide.

**G. Environmental and Social Safeguards Specialists on the Team**

Marcel Robert Frederik, Social Specialist
Khine Thwe Wynn, Environmental Specialist
Thiha Ko Ko, Social Specialist

SAFEGUARD POLICIES THAT MIGHT APPLY

Safeguard Policies	Triggered?	Explanation (Optional)
Environmental Assessment OP/BP 4.01	Yes	<p>The proposed project activities and investments focus on increasing agricultural productivity and diversification and enhancing market access for targeted value chains in the country. As a response to the COVID-19 pandemic, the Project has expanded its scope and will support the recovery of the agriculture sector through four components.</p> <p>For the expended scope as a response to the COVID-19 pandemic, the Environmental and Social Action Plan (ESAP) is prepared and attached to the ESMF as addendum. During early phase of implementation, the project will revise the ESMF, conduct additional required assessments, consultation and prepare the necessary instruments, including RPF, CPPF, CPP as identified in the ESAP. After additional consultations, the revised ESMF and other instruments will be re-disclosed.</p> <p>Component 1 will aim to enhance agriculture productivity and diversification . Component 2 focuses on value Chain Development. Under Component 1 and 2, construction or upgrading facilities will involve cold storage and processing facilities, and demonstration farms and training centers, and artificial insemination services. Labor-intensive Cash for work (CfW) for agriculture productivity enhancement activity is included under the Component 1 in order to mitigate the impacts of the COVID-19 pandemic on agriculture production and rural unemployment by investing in</p>



rehabilitation of existing irrigation and drainage works including rehabilitation of distributary canal and water courses, and strengthening of embankment for protection of flood and sea water intrusion. Component 3 includes project management, coordination, and monitoring and evaluation. This component will ensure effective project management; including (i) supports for the implementation of the project's environmental and social safeguards instruments, and (ii) technical inputs from the safeguards specialists into TA's Terms of References – ensuring safeguards aspects are mainstreamed. Component (4) is for Contingent Emergency Response.

Overall, the proposed project is expected to deliver a number of environmental benefits, such as improved soil and water management practices considering the agro-ecological context of the project intervention area. The project will also contribute to an integrated pest and disease management through the adoption of sustainable practices by supplying biological controls; the use of natural enemies to manage population of pest organisms.

The proposed project is a Category B project under the World Bank environmental and social screening guidelines as the activities and investments are not likely to cause significant or irreversible environmental impacts. Potential environmental and social impacts can be mitigated. Major potential environmental impacts are limited to the following categories: (i) Rehabilitation of existing irrigation and drainage works (ii) Construction of new and upgrading of infrastructure / facilities; (iii) Maintenance and operation of facilities (e.g. cold storage facilities); (iv) Agriculture and livelihood activities; and (v) Use and management of the pesticides.

Main potential social risks are related to: (i) potential land acquisition for the irrigation system rehabilitation; (ii) possible use by farmers of land



within the government compounds where facilities will be constructed; (iii) legacy issues of the government facilities; and (iv) potential exclusion or direct impacts of ethnic minorities, landless farmers, women-headed households or other vulnerable groups. Any social assessment conducted during implementation will assess these social risks.

NFASP consists of series of activities with exact scope and design work remains to be determined. Under these circumstances, impacts cannot be pre-determined. An environmental and social management framework (ESMF) has been prepared which includes:

1. Sub-project typologies
2. Safeguards screening criteria and eligibility
3. Assessment of potential environmental and social impacts of possible activities and investments
4. For each typology, expected ES instruments are defined based on type, scope and depth of required mitigation measures
5. Provision of ready-to-implement mitigation measures through standardized instruments, generic environmental management plan (ECoP, EMP, etc.), and standardized guidelines such as standards on hazardous waste management, health and safety management system for laboratories. During initial years of the Project, safeguards instruments (ESMPs or ECoPs) will be prepared for the activities in accordance with the screening outcomes, once its scope and design of upgrading have become very clear.
6. Institutional arrangement and capacity to implement the ES instruments
7. Budget provision to implement the ES instruments.

The project will not finance category "A" investments. The only activities which fall into the Category B after screening of site sensitivity are eligible under NFASP. The project will also not finance activities on irrigation schemes that depend on dams that have a high risk, or significant and complex safety issues that will require significant



and complex improvements and present significant risks to the environment and population and that are require reclassification of the project as a category A project.

During project preparation, a site-specific environmental and social management plan (ESMP) was prepared for an activity (livestock) where location, scope and design are known. The ESMP highlights that activities to be conducted are not expected to have significant environmental and social impacts. Potential main impacts are related to the manure from cattle farms, site preparation for cattle housings, and occupational health and safety. Mitigation measures will include (a) installing proper ventilation inside the facilities (barn, laboratory, and plant); (b) changing feeding practices; (c) managing manure to reduce CH₄ and N₂O emissions; (d) covering manure storage facilities; (e) avoiding manure or fertilizer application while soil is saturated with water; (f) providing a safe distance of the cattle housing buildings at least 30 m away from well or water intake; (g) ensuring proper disposal of wastewater generated from AI laboratory; and (h) providing adequate personal protective equipment for workers at the facilities (cattle breeding, cattle housing, AI laboratory, and LN₂ production).

Performance Standards for Private Sector Activities OP/BP 4.03	No	The policy prescribes “Natural Habitats” as areas where (i) the ecosystems’ biological communities are formed largely by native plant and animal species, and (ii) human activity has not essentially modified the area’s primary ecological functions. Direct adverse impacts on the natural habitats are not expected. Regarding the livestock-related activities , no potential land use changes including the conversion of forests and other natural habitats to pasture for ranges is expected since the proposed activities are going to be in fully developed area with already historically converted land with no nearby forests nor natural habitats. This policy is triggered as a precaution to ensure that any affected natural habitats are adequately protected, because some of
Natural Habitats OP/BP 4.04	Yes	



		<p>the project sites may take place nearby parks or protected areas. The ESMF provides screening mechanism for proposed activities to exclude any activities that would involve significant conversion or degradation of natural habitats.</p>
Forests OP/BP 4.36	No	<p>No impacts on natural forests will result from works on any of the project sites as wall works will be carried out within the existing boundaries. The proposed project's ESMF will screen out and exclude any clearing or effects on forest lands.</p>
Pest Management OP 4.09	Yes	<p>The policy is triggered because pesticide use is a necessity in agricultural activities in the region. The ESMF will promote Integrated Pest Management as standard practice. A screening mechanism has been included in the ESMF to determine if there are any sub-projects or activities with significant pest management issues; if so, then a separate Pest Management Plan (PMP) will be required to ensure that these materials are well managed for those activities. Guidance for PMP is included in the ESMF which will be further developed and implemented by MOALI during project implementation stage. The project will fund an integrated pest and disease management which will support the adoption of sustainable pest and disease management practices by supplying biological controls; the use of natural enemies to manage population of pest organisms.</p>
Physical Cultural Resources OP/BP 4.11	Yes	<p>This policy is triggered to ensure that any "chance finds" or other physical cultural resources during excavation or other earth-moving activities are adequately protected. Project's ESMF has included chance find procedure which requires that should any areas of potential cultural importance or artefacts be identified, works should stop and the government related agencies (SPIU or Department of Archaeology, National Museum and Library) should be contacted. No work should continue until approval has been sought from these agencies.</p>
Indigenous Peoples OP/BP 4.10	Yes	<p>Myanmar is one of the most ethnically diverse countries in Asia, and the project will fund activities in areas where ethnic minorities are present. Both under Component 1 (Agriculture Productivity Enhancement and Diversification) and Component 2 (Value Chain Development), there may be risks that</p>



ethnic minorities do not have equal and culturally appropriate access to benefits and may not be adequately consulted in decision making. Under the additional COVID19 activity on Irrigation schemes, there is the potential risk of direct impact through land acquisition.

Ethnic minorities will be deliberately targeted and included as project beneficiaries (as part of the Vulnerable Population Groups (VPGs), to ensure that they will be beneficiaries as anybody else from improved seeds/breeds and other project benefits. To ensure that they are meaningfully consulted and appropriately compensated if impacted directly, OP 4.10 has been triggered. Considering that the exact scope and design of the projects work remains to be determined, MOALI prepared, a draft CPPF and included as a stand-alone section of the project's ESMF. For activities where ethnic minorities are present, MOALI will conduct a social assessment and ensure that free, prior and informed consultations are held to reach broad community support and prepare Community Participation Plans (CPPs) as required under the CPPF.

The draft CPPF was disclosed in January 2020 as part of the ESMF and consultation meetings were completed by in the first week of March 2020. These consultation meetings included consultations in the conflict affected townships in Shan and Kayah states with CSOs, ethnic group organizations and farmers groups. Feedback received from the consultations have been incorporated in the project design and CPPF.

Further consultations will be conducted during project implementation in accordance with the phased approach. During the initial years of implementation, if ethnic minorities are found to be present, a Community Participation Plan (CPP) will be prepared.

The CPPF will be updated as part of the update of the ESMF, to reflect the changed project activities and scope.

Involuntary Resettlement (OP/BP 4.12) policy is triggered on the basis that the irrigation system rehabilitation could require land acquisition for any

Involuntary Resettlement OP/BP 4.12

Yes



of its components, such as spoil area's, worker camps etc. The other project components will primarily support the upgrading of capabilities and facilities on existing government facilities and infrastructure- research/demonstration farms. The foot print will be small scale. Although project activities will take place within the physical footprint of the existing government facilities, it is possible that additional small strips of land may be required to enlarge the footprint of the facilities to accommodate new buildings or that farmers/ cattle ranchers are using the land within these government compounds and require to enforce access restrictions. Any land acquisition will not be funded through World Bank financing.

Considering that the exact scope and design of the project works remains to be determined, a Resettlement Policy Framework (RPF) has been prepared and disclosed as a stand-alone section of the ESMF report. The RPF will not allow for voluntary land donations, since the land owners are not direct project beneficiaries. The draft RPF was disclosed in January 2020 as part of the draft ESMF and consultation meetings were completed by March 2020. Feedback received from the consultations have been incorporated in the project design and RPF. The ESMF provides screening mechanism to exclude any activities that has land legacy issues

The RPF will be updated as part of the update of the ESMF, to reflect the changed project activities and scope.

Although the Project will not finance construction of new dams, the irrigation systems financed by the Project will involve schemes connected to existing dam. The OP is triggered as the performance of the Bank financed project (or in this case, rehabilitation of existing schemes) is dependent on an existing dam. Dam safety assessment will be performed in line with OP 4.37. The Project will arrange for an independent dam specialist to: (1) inspect/evaluate safety status and its performance history, (2) review/evaluate the Operation and Maintenance (O&M) procedures, and

Safety of Dams OP/BP 4.37

Yes



Projects on International Waterways OP/BP 7.50	Yes	<p>(3) provide a written report of findings and recommendations for any remedial or safety-related measures. Based on the results from this assessment, the project will develop safeguards instruments and Emergency Preparedness and Response Plan for each connecting dam and scheme. The project will also not finance activities on irrigation schemes that depend on dams that have a high risk, or significant and complex safety issues that will require significant and complex improvements and present significant risks to the environment and population and that are require reclassification of the project as a category A project.</p> <p>The Policy is triggered to this Project because the activities will involve the “use or potential pollution” of the Ayeyarwady River, which is an international river, and of the Salween/Thanlwin River which is an international river shared between China, Thailand and Myanmar.</p> <p>Under the proposed project, existing irrigation and drainage systems will be rehabilitated to restore efficient operations, improve management, and to introduce higher value but lower water consuming crops and new water saving irrigation technologies. This is expected to improve agriculture productivity of the farm holdings and restoration of cropped area without any increase in water use, so that the complete original command area would be provided with water. There will be no change in nature and scope of the existing schemes and no expansion of the command area of the irrigation systems in these regions.</p> <p>Given the scope of works under the proposed Project, it is the assessment of the Task Team that the Project activities will not affect the quantity or quality of water available to other riparian countries nor will they be affected by changes in the water use of other riparian countries. The exceptions to the notification requirement was cleared with the Legal Department, and the memo to the RVP prepared by the team and approved on 30 May 2020.</p> <p>Concerning pollution prevention due to the proposed laboratories which may pose substantial high risks of pollution due to lack of capacity for</p>
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		hazardous waste management, the ESMF provides screening mechanism to exclude high risk laboratories that would result pollution of any international waters.
Projects in Disputed Areas OP/BP 7.60	No	Not relevant to the project.

KEY SAFEGUARD POLICY ISSUES AND THEIR MANAGEMENT

A. Summary of Key Safeguard Issues

1. Describe any safeguard issues and impacts associated with the proposed project. Identify and describe any potential large scale, significant and/or irreversible impacts:

The proposed project is a Category B project under the World Bank environmental and social screening guidelines as the activities and investments are not likely to cause significant or irreversible environmental impact. The proposed project finance was originally US\$85 million and scheduled for Board approval in FY21. However, given the urgency to respond to the COVID-19 crisis in the country and particularly in the agriculture sector, the Government of Myanmar requested the World Bank to scale up the project finance to include COVID-19 response activities as well as more townships and beneficiaries. In support of the government's request, the project financing has been increased to US\$ 200 million, and the Board date has been advanced to June 2020.

In order to accelerate preparation and meet the new project board date, the team received approval on May 18, 2020 from the CD, (i) to apply paragraph 12 of Section III of the Bank Policy: Investment Project Financing to the proposed project, due to a situation of a natural disaster or man-made crisis; and (ii) to process the Project under condensed procedures, pursuant to the Bank's procedure "Preparation of Investment Project Financing—Situations of Urgent Needs of Assistance or Capacity Constraints".

The restricted movement for both the Government and the World Bank as well as accelerated Board date did not allow the client to update the existing safeguards instruments and prepare the new additional instruments nor carryout the needed consultations and disclosures. Therefore, approval from the Regional Vice President (RVP) was obtained on May 29, 2020, to defer the preparation of safeguard instruments for newly added activities until the project implementation phase.

The safeguard category will remain as category B, given the nature of these new additional activities, which include the irrigation rehabilitation and maintenance through labor-intensive work (component 1.d), agriculture inputs support through voucher (Component 1.b), support to seed cooperatives (component 2.a).

The original ESMF is being updated to include the additional activities and to include specific sections addressing the additional requirements to fully comply with OP/BPs -Involuntary Resettlement (OP/BP 4.12) and Indigenous Peoples (OP/BP 4.10), which were already triggered in the original ESMF, and to comply with additional OP/BPs on Safety of Dams (OP/BP 4.37) and Projects in International Waterways (OP/BP 7.50). An exception to the riparian notification under OP/BP 7.50 for the irrigation rehabilitation works was approved by the RVP on May 28, 2020. The dam safety assessments of the irrigation schemes dependent on dams will be conducted prior to any works commencement, and



irrigation schemes that depend on dams that have a high risk, or significant and complex safety issues will not be eligible under the project. New irrigation activities that would trigger the notification requirement under OP/BP 7.50 will be excluded, and this will be specified in Project Implementation Manual.

Accordingly, An Environmental and Social Action Plan (ESAP) was therefore prepared, outlining the additional safeguards measures MOALI will prepare during the early phase of implementation. During early phase of implementation, the project will revise the ESMF, conduct additional required assessments, consultation and prepare the necessary instruments, including RPF, CPPF, CPP as identified in the ESAP. After additional consultations, the revised ESMF and other instruments will be re-disclosed.

Environmental and Social Management Framework (ESMF): NFASP consists of series of activities with exact scope and design work remains to be determined. Under these circumstances, impacts cannot be pre-determined. An environmental and social management framework (ESMF) has been prepared with the main objective is to ensure that the activities to be financed under the Project would not create adverse impacts on the local environment and local communities and the residual and/or unavoidable impacts will be adequately mitigated in line with the WB's safeguard policy.

The ESMF will guide the implementing agencies under MOALI to adequately screen and address environmental and social impacts of the proposed activities thereby determining the appropriate environmental and social category. Specifically, the objectives of this ESMF are to:

- assess the potential environmental and social impacts of the proposed project, whether positive or negative and propose mitigation measures which will effectively address these impacts;
- establish clear procedures for the environmental and social planning, review, approval and implementation of sub-projects to be financed under the project;
- specify appropriate roles and responsibilities, and outline the necessary reporting procedures, for managing and monitoring environmental and social concerns related to sub-projects;
- consider different alternatives, options, and relevant mitigation measures during project preparation and implementation;
- determine the training, capacity building and technical assistance needed to successfully implement the provisions of the ESMF;
- address mechanisms for public consultation and disclosure of project documents as well as redress of possible grievances; and
- establish the project funding required implementing the ESMF requirements.

The framework covers requirements for: (i) adequate safeguard screening including impacts on natural habitats, forests, and cultural resources; (ii) impact assessment and development of mitigation measures for construction and operation activities and procedures for chance findings; (iii) procedures for preparation, review, and clearance of safeguards instruments during implementation; (iv) safeguards implementation, supervision, monitoring, and reporting; (v) institutional strengthening and capacity building programs; and (vi) institutional arrangements and budget. The ESMF also includes a screening checklist to exclude all investment proposals that may cause significant or irreversible social and environmental impacts. The ESMF identifies the requirements for the preparation of an Environmental and Social Management Plans (ESMP) for a proposed activity to comply with the WB's and Government's regulations on EIA. In order to address possible, but not likely, impacts on land acquisition and indigenous peoples, the ESMF also includes a Resettlement Policy Framework and a Community Participation Planning Framework as stand-alone sections.



Both components 1 and 2 include mitigation measures to ensure that the local communities affected by the project works are properly notified of the timing and scope of the planned works and disturbances are minimized. Such minimization of disturbances may include limiting working hours to daylight, special precautions when the work is carried out near children's institutions or traffic management including, if required, the establishment of alternative temporary traffic routes.

In accordance with the original ESMF and ESAP for new additional activities, potential major environmental impacts and proposed mitigation measures are listed below; while the moderate and minor environmental impacts are described in more detail in the ESMF.

a). Identified potential impacts related to construction of new and upgrading of value chain services/facilities are noise, dust, sedimentation, waste disposal, management of storm water, and health and safety of workers and nearby communities. The project will implement mitigation measures that avoid or minimize air, water and land pollution and noise pollution from civil works through the application of good engineering designs and good practices for construction by incorporating environmental mitigation measures (e.g. control of works, dust prevention measures, proper management of hazardous and non-hazardous site wastes and surplus materials, Code of Conduct etc.,) in the technical design and tender documents.

b). As part of response to the COVID-19 pandemic, Cash for Work (CFW) involving rehabilitation of distributary canal and water courses, and strengthening of embankment for protection of flood and sea water intrusion are proposed under the project. These schemes are exiting small and medium sized schemes, Potential Environmental risks are limited to the construction-related activities are related to noise, dust, waste disposal, management of storm water and community and workers health and safety. These impacts can be readily managed through standard mitigation measures, Code of Conducts for OHS, good engineering designs and good practices for civil construction and transport-related impacts. The project will update the ESMF accommodating potential impacts and risks from this activity. For those schemes which will involve connecting to the existing dams, the project will also arrange for an independent dam specialist to (1) inspect/evaluate safety status and its performance history, (2) review/evaluate the O&M procedures, and (3) provide a written report of findings and recommendations for any remedial or safety-related measures. Dam safety assessment will be performed in line with OP 4.37. Based on the results from this assessment, the project will develop safeguards instruments and the Emergency Preparedness and Response Plan for each connecting dam and scheme in prior to work commencement.

The project will exclude the irrigation schemes which involve dams with high risk, or significant and complex safety issues that will require significant and complex improvements and present significant risks to the environment and population and that are require reclassification of the project as a category A project. There is the potential risk for land acquisition for a range of activities, including but not limited to: (i) establishment of construction camp; (ii) temporary construction roads; (iii) improvement of access roads requiring widening of such roads/ bridge approaches; (iv) requirement for widening of irrigation channels; (v) need for borrow pits for construction materials; (vi) spoil disposal area's to dispose of the materials removed when repairing the existing channel and (vii) encroachment. Each of these potential issues/activities will potentially require land acquisition, either temporarily or permanently. Activities risk directly impacting Ethnic groups as well as their exclusion from participation in Water User Groups.

c). Identified potential impacts due to maintenance and operation of facilities are as follow but not limited to (i)



impact on water quality, (ii) impact from hazardous materials and substances, (iii) impact from hazardous and non-hazardous waste, (v) impact on occupational health and safety, (vi) impact on community health and safety, and (vii) workplace risks such as sexual harassment. The potential impact on water quality may be resulted due to the discharge of untreated processed water, or disposal of accidental or mismanaged polluted waste water from the facilities such as in value chain facilities, and laboratories including mobile laboratories.

In order to avoid, minimize and mitigate the potential impacts from the proposed activities involving maintenance and operation of facilities, appropriate mitigation measures are suggested in ESMF to develop and implement (i) ES instruments such as ECoP, ESMP/EMP and OHS, as well as (ii) guidelines for bio-safety protocol as well as storage for chemical materials at laboratories. The ES instruments will ensure – among others – wastewater generated from facilities and laboratories to public drain are adequately treated and disposed, all hazardous materials are stored and transported properly to prevent spills, non-hazardous wastes are managed properly, and ensure installation of required safety facilities and use of appropriate PPEs in the laboratories.

As part of managing risks for the laboratories which are pre-identified as high risk, those laboratories will be rolled out to a later stage of project implementation. This will allow the PMU to apply/execute measures in reducing the associated risks to a safer level and eligible for funding. ESMF has included pre-identified ‘high risk’ laboratories and measures considered for risk reduction and management. Investments related to safeguards measures will be supported by the Project.

d). Potential impacts associated with agricultural and livelihood activities are localized, site specific and manageable with known technical approaches. Potential impacts include health and safety of project-affected peoples during the project life cycle, particularly in regards to the safe use and handling of chemical materials. Mitigation measures include the implementation of ECoP, site specific ESMP, and Good Agricultural Practice (GAP) that promotes organic farming and crop rotation system.

e). Unintentional use of restricted hazardous materials in agro sector and laboratories may lead serious environmental concerns as well as health and safety of workers and nearby communities. In order to avoid procurement of prohibited chemicals including banned/restricted pesticides, insecticides, herbicides and other restricted hazardous materials for laboratories supported under the project, the project will ensure that the negative list for banned hazardous materials is adopted and applied. Training for staffs on the use and handling of hazardous materials will also be made available.

Rehabilitation and construction of test laboratories and cold storage facilities are not expected to result in land acquisition impacts, since these investments are expected to take place on land already owned by the respective departments of MOALI. However, at some locations, farmers may currently be using part of this land for farming activities such as cattle grazing. There is potential risk of elite capture of private capital co-financing the operation of storage facilities. Clear criteria and transparency is required. Under both Components there may be risks that ethnic minorities do not have equal and culturally appropriate access to benefits, and may not be adequately consulted in decision making. This risk will be mitigated through screening for the presence of ethnic minorities in the project area in the project preparation phase. If ethnic minorities are found to be present, a Community Participation Plan (CPP) will be prepared.

The component on Improved Quality and Utilization of Inputs through voucher systems has the risk of exclusion of



vulnerable households and those accessing the subsidy late if there is a cap on the funding.

The contractors may mobilize several workers from outside the project areas for construction and rehabilitation of facilities. Because of the small scale of the works, the number of workers are expected to be limited at any site. This may generate potential social risks for communities living in the project area, such as violence with local youth, gambling, drug proliferation, and the risk of disease transmission (e.g., sexually-transmitted diseases such as HIV, syphilis, etc.), particularly among local women. However, these impacts will be mitigated through the implementation of measures proposed in the project ESMF including: Code of Conduct training for workers and construction supervision teams on required lawful conduct in the host community and on HIV/AIDS awareness, strict enforcement of drug abuse and traffic laws, and ensuring payment of adequate salaries for workers to reduce incentives for theft and gambling. The PMU will be responsible for closely monitoring and mitigating potential risks caused by labor influx to communities in the surrounding project areas.

2. Describe any potential indirect and/or long term impacts due to anticipated future activities in the project area:

No significant potential long term indirect impacts are anticipated in the project area. The project may induce some negative effects in some activities such as impact on air and water quality and soil contamination, noise impacts, impact from hazardous and non-hazardous waste, and labour influx which of those are mostly related to construction related activities and operation of some laboratories. If any land acquisition is required for the irrigation system rehabilitation, then this is expected to be minor. The project will not fund activities which have a legacy issue. The project will also exclude the activities related to the irrigation schemes which involve dams with high risk that will require significant and complex improvements and present significant risks to the environment and population and that are require reclassification of the project as a category A project. Through the support provided by the project, it is expected that each environmental and safeguard unit will be able to ensure that: (i) projects and programs implemented by the ministry are duly screened for their environmental and social impacts, and, where appropriate, the relevant safeguard instruments are prepared, submitted to consultation, disclosed and executed in a timely manner; (ii) bidding documents for constructions include the relevant environmental and social aspects that the contractors must consider in their proposals; (iii) work contracts include appropriate provisions of the implementation of the environmental and social aspects; and (iv) contractors effectively implement the ESMPs and ESCOPs.

3. Describe any project alternatives (if relevant) considered to help avoid or minimize adverse impacts.

Not relevant.

4. Describe measures taken by the borrower to address safeguard policy issues. Provide an assessment of borrower capacity to plan and implement the measures described.

MOALI will be the implementing agency for the Project. The PMU engaged an experienced ES safeguards consultant to prepare the ESMF, which addresses the project-related environmental and social issues, and sets out principles and procedures to address the environmental and social impacts of activities.

MOALI's knowledge of specific World Bank policies is not extensive but it has experience working with Bank financed projects. For example, MOALI has demonstrated its capacity to effectively implement elaborated social safeguards arrangements in the context of the ADSP. To ensure resources are available to support the implementation of the ES



safeguards instruments, the following arrangement will be applied: (i) ES Focal officers will be in place, including one environmental officer and one social officer represent DOA, one ES officer represents DAR, and one ES officer represents LBVD; one environmental officer and one social officer represent IWUMD (ii) The PMU's Safeguards Consultant Team which will consist of six (6) consultants – two international consultants for each environment and social, and four national consultants, two each for environment and social – and will support the ES Focal officers; and (iii) At the activities level, there will be focal persons for each participating divisions. For those schemes which will involve connecting to the existing dams, the project will also arrange for an independent dam specialist. The environmental and social safeguards unit of each participating department will be responsible for (i) ensuring that sub-projects implemented by each department are in compliant with safeguards requirements, and (ii) reporting on environmental and social aspects.

Successful implementation of the proposed activities will depend among others on the effective implementation of the environmental and social management measures outlined in the ESMF. The implementing stakeholders will require training on the ES safeguards but at various intensities to facilitate and accommodate needs in meeting their roles and responsibilities. Capacity building should be viewed as more than training. It is human resource development and includes the process of equipping individuals with the right skills and access to information, knowledge and training that enables them to perform effectively. Therefore, as part of the overall capacity building efforts, the project will include awareness raising activities in addition to technical training. The ESMF has included a comprehensive plan for awareness raising activities and technical training. Budget provision for this capacity building effort is also included in the overall project's funding, outlined in the ESMF.

MOALI updated the original ESMF by including new additional activities and including the ESAP. The updated ESMF was disclosed on the MOALI website on June 1, 2020.

Safeguard Implementation, Monitoring, and Training: The Implementing Agency (IA) will be responsible for implementing and monitoring the environmental and social safeguard instruments (ESMF, ESIA, RPF, CPPF and ESMPs) through their dedicated environmental and social focal points. During project implementation, MoALI will be responsible for preparing and ensuring the effective implementation of safeguard measures for both project components and regularly liaising with local authorities and communities. The IA will also include the ESMP requirements into the standard tender documents to be used as a basis for contractors to implement environmental management for the construction and renovations.

Grievance and Redress Mechanism (GRM): The project ESMF include a GRM to provide a framework to handle complaints about safeguards compliance, address grievances, and quickly settle disputes. The GRM will become operational at project effectiveness. As part of overall implementation of the activity, the GRM will be established by the Environmental and Social Unit or designated focal points of the PMU. It will be readily accessible, handle grievances and resolve them as quickly as possible. The key processes and elements of the GRM include, procedures for submission of complaints and grievance resolution, responsible persons, and contact information. The complaints can be received in verbal or writing forms, by telephone, fax, or email. They can be sent to the local authorities, contractors, construction supervision engineers, or the independent environmental monitoring consultants. The complaints will also be logged in the record system and sent to the responsible person, who will take action.

5. Identify the key stakeholders and describe the mechanisms for consultation and disclosure on safeguard policies,



with an emphasis on potentially affected people.

The key stakeholders are relevant ministries, council committees, farmers, Myanmar Agri Food Co., Ltd. (MAF), Myanmar Agribusiness Public Corporation (MAPCO), universities, relevant CSOs/NGOs, project beneficiary groups (mango farmer groups, livestock farmer groups, fruits and vegetables groups), media such as farmer channels and MOALI social media, and communities that are in close proximity to the project sites.

The draft ESMF was disclosed locally on 24 January 2020 on DOA's website (http://www.doa.gov.mm/doa/index.php?route=pavblog/blog&blog_id=102) and, upon approval, it will be disclosed on the World Bank's InfoShop. Public consultation on the draft ESMF started in September 2019 with MOALI and was completed in March 2020. These consultation meetings included consultations in the conflict affected townships in Shan and Kayah states with CSOs, ethnic group organizations and farmers groups. The feedback received from the consultations has been incorporated in the project design and the ESMF. Stakeholder consultation will continue during project implementation.

The draft ESMP on Promotion of Artificial Insemination Service and Upgrading of Natural Breeding for the Development of Cattle Production in Myanmar (AI & NB) was disclosed in January 2020. Consultation in Sagaing, Myinmu Township was conducted on 17 February 2020. The feedback received from the consultations has been incorporated in the project design and ESMP. The updated ESMP was publicly disclosed by MOALI in April 2020.

The updated ESMF with the Environmental and Social Action Plan (ESAP) as addendum has been publicly disclosed by MOALI on June 1.

The revised ESMF and additional necessary instruments, including RPF, CPPF, CPP as identified in the ESAP will be redislosed by MOALI. Additional consultations will be conducted with relevant stakeholders such as cooperative members, households in the Ayarwaddy and Shan state who might benefit from voucher scheme, water users and residents in the exiting irrigation schemes proposed for rehabilitation work.

B. Disclosure Requirements

Environmental Assessment/Audit/Management Plan/Other

Date of receipt by the Bank	Date of submission for disclosure	For category A projects, date of distributing the Executive Summary of the EA to the Executive Directors
24-Jan-2020	24-Jan-2020	

"In country" Disclosure

Myanmar
01-Jun-2020

Comments

The draft ESMF was disclosed locally on 24 January 2020 on DOA's website (http://www.doa.gov.mm/doa/index.php?route=pavblog/blog&blog_id=102) The updated ESMF with attached ESAP



as addendum was disclosed locally on 1 June 2020 on DOA's website.
(http://www.doa.gov.mm/doa/index.php?route=pavblog/blog&blog_id=111)

Resettlement Action Plan/Framework/Policy Process

Date of receipt by the Bank
24-Jan-2020

Date of submission for disclosure
24-Jan-2020

"In country" Disclosure

Myanmar
24-Jan-2020

Comments

The draft RPF was disclosed locally on 24 January 2020 as part of the draft ESMF on DOA's website
(http://www.doa.gov.mm/doa/index.php?route=pavblog/blog&blog_id=102)

Indigenous Peoples Development Plan/Framework

Date of receipt by the Bank
24-Jan-2020

Date of submission for disclosure
24-Jan-2020

"In country" Disclosure

Myanmar
24-Jan-2020

Comments

The draft CPPF was disclosed locally on 24 January 2020 as part of the draft ESMF at DOA website
(http://www.doa.gov.mm/doa/index.php?route=pavblog/blog&blog_id=102)

Pest Management Plan

Was the document disclosed prior to appraisal?

Yes

Date of receipt by the Bank

24-Jan-2020

Date of submission for disclosure

24-Jan-2020

"In country" Disclosure



Myanmar

24-Jan-2020

Comments

The Guidance for Pest Management Plan was disclosed locally on 24 January 2020 as part of the draft ESMF on DOA's website (http://www.doa.gov.mm/doa/index.php?route=pavblog/blog&blog_id=102).

If the project triggers the Pest Management and/or Physical Cultural Resources policies, the respective issues are to be addressed and disclosed as part of the Environmental Assessment/Audit/or EMP.

If in-country disclosure of any of the above documents is not expected, please explain why:

C. Compliance Monitoring Indicators at the Corporate Level (to be filled in when the ISDS is finalized by the project decision meeting)

OP/BP/GP 4.01 - Environment Assessment

Does the project require a stand-alone EA (including EMP) report?

Yes

If yes, then did the Regional Environment Unit or Practice Manager (PM) review and approve the EA report?

Yes

Are the cost and the accountabilities for the EMP incorporated in the credit/loan?

Yes

OP/BP 4.04 - Natural Habitats

Would the project result in any significant conversion or degradation of critical natural habitats?

No

If the project would result in significant conversion or degradation of other (non-critical) natural habitats, does the project include mitigation measures acceptable to the Bank?

NA

OP 4.09 - Pest Management

Does the EA adequately address the pest management issues?

Yes

Is a separate PMP required?

No

If yes, has the PMP been reviewed and approved by a safeguards specialist or PM? Are PMP requirements included in project design? If yes, does the project team include a Pest Management Specialist?



NA

OP/BP 4.11 - Physical Cultural Resources

Does the EA include adequate measures related to cultural property?

Yes

Does the credit/loan incorporate mechanisms to mitigate the potential adverse impacts on cultural property?

Yes

OP/BP 4.10 - Indigenous Peoples

Has a separate Indigenous Peoples Plan/Planning Framework (as appropriate) been prepared in consultation with affected Indigenous Peoples?

Yes

If yes, then did the Regional unit responsible for safeguards or Practice Manager review the plan?

Yes

If the whole project is designed to benefit IP, has the design been reviewed and approved by the Regional Social Development Unit or Practice Manager?

Yes

OP/BP 4.12 - Involuntary Resettlement

Has a resettlement plan/abbreviated plan/policy framework/process framework (as appropriate) been prepared?

Yes

If yes, then did the Regional unit responsible for safeguards or Practice Manager review the plan?

Yes

OP/BP 4.37 - Safety of Dams

Have dam safety plans been prepared?

No

Have the TORs as well as composition for the independent Panel of Experts (POE) been reviewed and approved by the Bank?

NA

Has an Emergency Preparedness Plan (EPP) been prepared and arrangements been made for public awareness and training?

No

OP 7.50 - Projects on International Waterways

Have the other riparians been notified of the project?

NA



If the project falls under one of the exceptions to the notification requirement, has this been cleared with the Legal Department, and the memo to the RVP prepared and sent?

Yes

Has the RVP approved such an exception?

Yes

The World Bank Policy on Disclosure of Information

Have relevant safeguard policies documents been sent to the World Bank for disclosure?

Yes

Have relevant documents been disclosed in-country in a public place in a form and language that are understandable and accessible to project-affected groups and local NGOs?

Yes

All Safeguard Policies

Have satisfactory calendar, budget and clear institutional responsibilities been prepared for the implementation of measures related to safeguard policies?

Yes

Have costs related to safeguard policy measures been included in the project cost?

Yes

Does the Monitoring and Evaluation system of the project include the monitoring of safeguard impacts and measures related to safeguard policies?

Yes

Have satisfactory implementation arrangements been agreed with the borrower and the same been adequately reflected in the project legal documents?

No

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