Social Screening Report

Strengthening Capacity to Enhance the Laboratory Facilities at Fruit Research and Development Institute-Horana

Sri Lanka Agriculture Sector Modernization Project (ASMP)

Prepared for Project Management Unit of the Agriculture Sector Modernization Project

Democratic Socialist Republic of Sri Lanka, Ministry of Agriculture (MOA)

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ABBREVIATIONS

AI	Agriculture Instructor
ASMP	Agriculture Sector Modernization Project
ASC	Agrarian Service Center
ATDP	Agricultural Technology Demonstration Park
CBO	Community-Based Organization
DSD	Divisional Secretary Division
EMF	Environmental Management Framework
EMP	Environmental Management Plan
ESR	Environmental Screening Report
ESS	Environmental and Social Standards
FO	Farmers Organization
FPO	Farmers' Production Organization
FRDI	Fruit Research and development Institute
GAP	Good Agricultural Practices
GND	Grama Niladhari Division
GoSL	Government of Sri Lanka
IDA	International Development Association
IEE	Initial Environmental Examination
LGA	Local Government Authority
MOA	Ministry of Agriculture
MOPI	Ministry of Primary Industries
NIRP	National Involuntary Resettlement Policy
NGO	Non-Governmental Organization
OP	Operational Policy
PAP	Project Affected Persons
PCR	Physical Cultural Resources
PMP	Pest Management Plan
PMU	Project Management Unit
SCS	Seed Certification Service
SIA	Social Impact Assessment
SIMP	Social Impact Mitigation Plan
SLRs	Sri Lanka Rupees
SSR	Social Screening Report

A. SUBPROJECT IDENTIFICATION

Subproject Title	Strengthening Capacity to Enhance the Laboratory Facilities at Fruit Research and Development Institute- Horana
Parent Project Objectives (briefly)	The World Bank Funded **Agriculture Sector Modernization Project** is aligned with the Country Partnership Strategy (CPS) 2013-2016. The project seeks to contribute to two CPS focus areas, namely: "Supporting structural shifts in the economy" and "Improved living standards and social inclusion" through: (a) improving agricultural productivity and competitiveness to strengthen the links between rural and urban areas and facilitate Sri Lanka's structural transformation; (b) providing and strengthening rural livelihood sources, employment opportunities in agriculture and along agriculture value chains, as well as market access for the poor, bottom 40 percent, and vulnerable people, thereby improving income sources and livelihood security in lagging rural areas; and (c) contributing to improved flood and drought management, through project's linkages to the water and irrigation sectors and a climate-smart agriculture approach. The project is also to promote diversification, value addition and increased competitiveness in the agriculture sector. **The project has three components.** (01) Agriculture Value Chain Development (02) Productivity Enhancement and Diversification Demonstrations (03) Project Management, Monitoring and Evaluation The Ministry of Agriculture (MOA) is responsible for the implementation of Component 2: **Productivity Enhancement and Diversification Demonstrations**. The component aims at supporting smallholder farmers to produce competitive and marketable commodities, improve their ability to respond to market requirements, and move towards increased commercialization. Component 2 comprises the following sub-components: 2.1: Farmer Training and Capacity Building 2.2: Establishment of Modern Agriculture Technology Parks 2.3: Production and Market Infrastructure Supporting; (i) Rehabilitation of small-scale irrigation infrastructures (ii) Improvement of selected production and market access roads and construction of new field access tracks to improve transportation, access to markets and accessibility for agricultural machinery (iii) Village level storage and product handling facilities 2.4: Analytical and Policy Advisory Support- Activities to be supported under this sub-component would include technical assistance to: (i) Evaluate policies and regulations and recommend adjustments, reforms or new policies needed to make agriculture more competitive, responsive to market demand, gender sensitive, sustainable, and resilient; (ii) Undertake strategic market analysis for promoting new and high value exports, and analyze the changes needed in the policy, regulatory and institutional framework, or public investments needed to address the binding constraints to the evolution of high impact value chains;

	(iii) Evaluate the social and economic impact of policies and public expenditures and make recommendations on course corrections to improve the efficiency and effectiveness of public expenditures. (iv) Undertake external and independent monitoring and evaluation functions, including formal impact evaluations of government programs and investments, to provide the critical learning and feedback loop into the ministries' decision-making processes. It would also support: (v) Annual conferences on Sri Lanka's agricultural policy; (vi) Equipment, office furniture, and communications technology for MOA's proposed Center of Excellence The development objectives of Agriculture Sector Modernization Project for Sri Lanka are to support increasing agriculture productivity, improving market access, and enhancing value addition of smallholder farmers and agribusinesses in the project areas. Up to now, ASMP has launched its activities in nine districts of seven provinces of the country. Project Management Unit (PMU) and Provincial Project Management (PPMUs) directly implement the two kinds of subproject activities that mainly consist of Productivity Enhancement and Diversification Demonstrations and the infrastructure development programs. The Department of Agriculture (DOA) acts as the main project partner agency of Productivity Enhancement and Diversification Demonstrations. DOA's activities consist of designing subprojects, training farmers, monitoring subprojects' activities, and involving the troubleshooting of the program. The agricultural research stations play a remarkable role in ASMP's activities by providing technical inputs and introducing new hybrid varieties to the farmers. Further, analyzing soil & crop samples of the farmers and giving recommendations for the fertilizer usage, investigating pest and disease attacks of the crops, and giving viable mitigation measures to overcome the issues timely are services provided by the agricultural research stations**.** Strengthening the capacities of Agricultural Research Stations, seed production farms, and seed certification service is identified as the subcomponent of ASMP. Inventing new crop varieties and expansion of hybrid seed production is one of the main sustainable factors of the ASMP's activities to achieve its development objectives. Meantime, it will facilitate supply the of high-quality hybrid seed requirements and finally contribute to enhancing the productivity of the field crops, vegetable, and fruit farming sector in Sri Lanka
Project proponent	Project Management unit, Agriculture Sector Modernization Project (ASMP), Ministry of Agriculture (MOA)
Implementing agency	Agriculture Sector Modernization Project (ASMP) implementing through Department of Agriculture
Project Management Team	A PMU was established under the Ministry of Agriculture to implement proposed project activities. **Project Director** Agriculture Sector Modernization Project Ministry of Agriculture No. 123/2 Pannipitiya Road, Battaramulla

	Tel: +94 112 877 550, Fax: +94 112 877 546 Email: projectdirectorasmp2@hotmail.com Web: https://www.asmp.lk/ **Environmental and Social Safeguards Specialist** Agriculture Sector Modernization Project Ministry of Agriculture No. 123/2 Pannipitiya Road, Battaramulla Tel: +94 112 877 550, Fax: +94 112 877 546 Email: sanjayadms@hotmail.com Web: https://www.asmp.lk/ **Nature of Consultations and Inputs Received** Consultations with Environmental and Social Safeguard Specialist/ PMU, DOA officials and field visits to the project

B. SUBPROJECT LOCATION

Location $6^0 45'10.00"$ N $80^0 03'32.41"$ E	The subproject's activities will be mainly implemented in Fruit Research and Development Institute (FRDI)- Horana. FRDI is located in Kananvila 5.8 km away from the Horana city in Horana DSD of Kaluthara district in the Western Province Under this subproject, Strengthening Capacity to Enhance the Laboratory Facilities at Fruit Research and Development Institute (FRDI)- Horana will be implemented. The location maps are annexed as Annex 2.  **Figure 1: Location of the FRDI- Horana**
Definition of Project Area / Project Impact area	Fruit Crop Research and Development Institute is one of crop research institute of Development of Agriculture, Ministry of Agriculture, Sri Lanka. It was first established as a Fruit Crop Research and Development Centre on 6th October 2001 at DOA farm at Kananvila. The Centre was administratively under Horticulture Research and Development Institute at this time. In 2013, It become the 4th crop institute of the department and mandatory responsibility was conducting research and development activities for the uplifting of the fruit crop sector in the country.

	The area where the FRDI is located, belongs to agro-ecological zone- low country wet zone (WL1). The surrounding area is predominantly rolling undulated areas where the majority of lands are used as home gardens. Rainfed paddy cultivation is a scattered area but not on a commercial scale. There are small-scale plantation crop growers and Tea and Rubber are the main plantation crops that are grown by the farmers. Except for small-scale farmlands, plantation company-owned large extent land of the area is covered by plantation crops. The land extent belongs to FRDI- Horana is about 85 ha (212 acres) and a major portion of the research station is covered by perennial fruit-bearing trees. Meanwhile, the land plots close to research station premises have been utilized for the ongoing research trials.  **Figure 2: Ongoing trail of fruit research at FRDI** There are nine (9) sub-centers affiliated with FRDI and these sub-centers are specialized to conduct the area-specific fruit varieties researches and deliver other support services to the farmers and service seekers. The sub-centers are; 1. Fruit Crop Research & Development Station- Peradeniya 2. Plant Virus Indexing Centre- Homagama 3. Agricultural Research Station- Maduruketiya 4. Agricultural Research Station- Muthukandiya 5. Citrus Research Station- Bibile 6. Rambutan Research Unit- Eraminigolla 7. National fruit Variety Conservation Center- Kundesale 8. Sustainable Agriculture Research and Development Center- Makandura 9. Agriculture Research Station- Rahangala
Adjacent land and features	The total land extent under FRDI- Horana is about 85ha (212 acres) and it includes research station buildings, staff quarters, and cultivation area. The area where FCRDI is located belongs to Horana DS division of the Kaluthara district in Western Province. The area belongs to the low country wet zone. This research station mainly aims generation and primary dissemination of technologies to improve the productivity, quality, and profitability of fruit farming. The mandate of FRDI is the development and dissemination of appropriate technologies to increase commercial fruit production in the country and improve the living standard of farmers. There are no privately owned lands adjacent to FCRDI but it is surrounded by small-scale plantations, paddy fields, and home gardens. No commercial dwellings or other government institutes located adjacent area.

Figure 3: Cultivation plots of the research center

C. SUBPROJECT JUSTIFICATION

Need for the project (What problem is the project going to solve)	The Agriculture Sector Modernization Project (ASMP) seeks to contribute to two Country Partnership Strategy (CPS) focus areas, namely: "Supporting structural shifts in the economy" and "Improved living standards and social inclusion" through (a) improving agricultural productivity and competitiveness to strengthen the links between rural and urban areas and facilitate Sri Lanka's structural transformation; (b) providing and strengthening rural livelihood sources, employment opportunities in agriculture and along agriculture value chains, as well as market access for the poor, bottom 40 percent, and vulnerable people, thereby improving income sources and livelihood security in lagging rural areas; and (c) contributing to improved flood and drought management, through project's linkages to the water and irrigation sectors and a climate-smart agriculture approach. The project is also to promote diversification, value addition and increased competitiveness in the agriculture sector. The development objectives of Agriculture Sector Modernization Project for Sri Lanka are to support increasing agriculture productivity, improving market access, and enhancing the value addition of smallholder farmers and agribusinesses in the project areas. Up to now, ASMP has launched its activities in nine districts of seven provinces of the country. Project Management Unit (PMU) and Provincial Project Management (PPMUs) directly implement the two kinds of subproject activities that mainly consists with Productivity Enhancement and Diversification Demonstrations and the infrastructure development programs. The Department of Agriculture (DOA) acts as the main project partner agency of Productivity Enhancement and Diversification Demonstrations. DOA's activities consists with designing of subprojects, training farmers, monitoring subprojects' activities and involving the troubleshooting of the program. The agricultural research stations play

	remarkable role in ASMP's activities by providing technical inputs, and introducing new hybrid varieties to the farmers. Further, analyzing soil & crop samples of the farmers and giving recommendations for the fertilizer usage, and investigating pest and disease attacks of the crops and giving viable mitigation measures to overcome the issues timely are services provided by the agricultural research stations. Sri Lanka is an ideal location for tropical horticulture. The country can grow many types of tropical fruits throughout the year. Favorable natural conditions including its tropical sites, two monsoons a year, geographic, and good soil conditions would lead to year-round cultivation of these crops in different parts of the island. At present, in Sri Lanka, around 855,000 metric tons of fruit are produced annually (Department of Census and Statistics, 2012). Out of the total production merely 80, 595 metric tons of fruit are exported (Department of Customs, 2012). Agricultural exports as a whole generated 24% of Sri Lanka's export earnings (USD 2.3 billion) in 2012 (CBSL, 2013). Exports of Fruits and vegetables represented USD 32 million (<2 %) of total agricultural exports. However, the most significant aspect of this sector is the increasing trend of growth in exports. Meantime, Sri Lanka imports apples, grapes, pears, pomegranates, oranges, mandarin (Yellow), and many fruits as fresh fruits for local consumption. With current importation restrictions and government policies, there is good potential for enhancing fruit production for local consumption and the export market. ASMP together with DOA has implemented several fruit farming cluster programs and promoted the farmers' groups on the cultivation of passion fruit, pineapple, mango, yellow mandarin, soursop, etc. in the previous rounds of ASMP. Now, the farmers' groups (clusters) are getting direct benefits from the cluster programs. During the implementation of the fruit cultivation promotion project, FRDI has played major roles in introducing high yielding area-specific varieties, giving fertilizer and other crop management recommendations, and involving to redress the issues in crop management (especially in Pest and disease management) The services of the research stations have extended to increase productivity and profitability of fruit crops farming, make available quality produces and resource conservation, and eco-friendly fruit farming. The main aims/targets of the research and the development activities of these research station are; • Increased productivity and profitability of fruit farming • Minimized seasonality thus avoiding gluts and lean periods in production • Increased the availability of quality produce for both local and export market • Resource conservation and eco-friendly vegetable farming • Minimized post-harvest losses and improved value addition The conventional farming techniques and the fruit crops varieties are not enough to produce the country's fruit requirement and supply the products for the export market. Promotion of fruit farming and production results in good

	health conditions through increasing nutrients level of people while it earns the foreign exchange by achieving the export market. The service of FRDI is a national requirement since it directly influence on the country's production and income. To achieve the above national aims and goals, FRDI have few main objectives. They are; • To make available improved fruit varieties with farmer acceptance • To make available associated technologies for high productivity and profitability • To make available eco-friendly plant protection technologies • To minimize post-harvest losses and enhanced value addition • To assure availability of quality seeds and planning materials for stakeholders • To popularize and aware stakeholders on fruit crop related technologies The need of this subproject emphasizes that productive enhancement, diversification, and practicing good agricultural practices in fruit farming under ASMP is an essential integral part of the agriculture modernization activities. But existing research and laboratory facilities of the station is not enough the cater to the farmers and the country requirements. Strengthening infrastructure and Technological/Technical capacities of the Department of Agriculture is an essential need to ensure provision services and follow-up support for the farmer production organization (FPOs) established under Component 2 of the ASMP. Enhancing the research and laboratory facilities of FRDI- Horana will be a sustainable solution for the continuing of modern technologies that are introduced to the farmers by ASMP. Hence, ASMP proposes to enhance the laboratory facilities of the above station. Therefore, launching of capacity building program to enhance the research and laboratory facilities of the fruit research and development institute is an essential and mandatory requirement of the agriculture sector modernization.
Purpose of the project (What is going to be achieved by carrying out the project)	The project will directly result the enhancements of irrigation facilities at FRDI- Horana. Ultimately, it gives the benefits to the farmers who have engaged in fruits cultivation in the country. The following purposes will be achieved by implementing the subproject. • Improving the research activities and other related technological and technical capacities of the research station of excellence is imperative to achieve the objectives of the ASMP, especially in terms of sustainability through continuous interventions. • Ensure the FRDI's technical and technological service such as soil testing, issuance of site-specific fertilizer recommendations, the introduction of new varieties suitable for different agro-ecological regions including their management packages to the farming communities in the project areas during and after completion of the ASMP. • Providing technical support to the farmers to improve crop productivity, especially in the established SL-GAP farms through the services

	provided by the Centers of Excellence and the Extension and Training arms of the DOA, and Provincial Departments of Agriculture. • Fruit quality assurance by auditing and issuing of SL-GAP certificate to the GAP farms established through the involvement of the Center of Excellence and with the assistance of the Seed Certification Service in the DOA, which regulates the auditing of SL-GAP farms. • Support the establishment of productive model farms, including GAP Model Farms, in the project sites through technological intervention from the Centers of Excellence, including the production of Orange, Pineapple, Guava, Passion fruit, and Banana. • Continuous laboratory monitoring programs to be carried out island-wide on pesticide residues, contaminants, and pollutants in the agriculture environment comprise of food, soil, and water and monitoring programs for periodic assessment of toxicity of pesticides to pests, natural enemies, and beneficial organisms for maintaining the sustainability of model farms The ultimate effort of the ASMP is to establish good agriculture practices (GAP) in the farming activities by introducing new technologies.
Beneficiaries	Sri Lanka has 46 agro-ecological zones with a wide variation in soil and climate. Each zone is characterized by specific climate and soils making it possible to cultivate number of different types of fruit crops, about 55 varieties. A fruit is a plant part that is eaten as a dessert or snack having sweet taste, but in botany a fruit is a structure of varying morphological composition, forming after fertilization to contain the reproductive bodies. Fruits are widely accepted as an important component of a healthy diet and adequate consumption could help to reduce a wide range of diseases. There are many fruit species and consequently a great diversity of fruits exists in Sri Lanka. The present economic growth will create a higher demand for fruits in the local market, to be met by a higher production. Hence, the fruit sector also has a greater potential to increase the income, employment opportunities and the nutrition and health status of the people. Fruits and vegetables are very good sources of vitamins, minerals, antioxidants and dietary fibre. Consuming a wide variety of fruits and vegetables regularly reduces the risk of obesity, diabetes, coronary heart diseases and cancers and protects against the effect of ageing. Therefore, consumption of variety of fruits and vegetables helps to fulfill most of the micronutrient requirements which needed for vital functions of the body such as metabolism and immunity. At least five varieties of fruits and vegetables should be consumed each day as a part of healthier life. World Health Organization (WHO) has recommended that an adult needs a minimum 200 grams of fruits per day. Sri Lanka's per capita consumption of fruits (88.2 grams) remains far below the required average daily intake (200 grams) for a balanced diet. Despite the availability of many delicious fruits, Sri Lanka imported 76,139.3 metric tons of fruits valued at LKR 12.9 billion during 2017, while exporting 31,320 metric tons valued at LKR 6.3 billion. Although, there being a demand for Sri Lanka fruits in abroad, the country faces a serious problem in finding exportable quality fruits in sufficient quantities on a continuous basis is a

	major constraint. A few districts lead the production of fruits at present in Sri Lanka. However, the statistics still not available for newly liberated areas in the North and East Provinces. There are few mediums to large scale orchards as fruit cultivation, mainly for banana, pineapple, papaya and mango. Semi commercial farmers whose individual extent of land for fruit cultivation does not exceed one hectare. Further, different types of fruits that are unevenly distributed are found either protected or cultivated in home gardens. Sri Lanka has over 60 varieties of underutilized crops and most of these species are found in wild or in home gardens. The share of agriculture in Sri Lanka's GDP was approximately 7% in 2019. Out of the total population in Sri Lanka, 27.1% engage in agricultural activities. Agriculture accounted for 7.4% of the GDP (gross domestic product) in 2020. Under this subproject, ASMP hopes to Strengthen Capacity to Enhance the Irrigation Facilities at Fruit Research and Development Institute (FRDI)-Horana that directly benefits all the farmers who are engaging in fruit production in Sri Lanka. The farmers and entrepreneurs who have undertaken the agriculture production and the industry related to fruit processing will receive the direct benefits from this subproject and ultimately, the whole nation gets benefits as the consumers. Indirectly, the enhancement of the FRDI activities will positively affect fruit production and it will result in the fruit export income while saving fruit import costs and foreign exchange.
Alternatives considered (Different ways to meet the project need and achieve the project purpose)	The existing agricultural fruit crops laboratory services of the government sector are half fulfilled the country's requirement. Even though there is private sector involvement, their services are very narrow and are limited to their own needs only. Hence, there is a gap to be filled and the government sector involvement is essential. The agriculture sector keeps trust in the government sector service since there is trustworthy service and DOA has improved human capital to deliver the service. Therefore, ASMP together with DOA have identified the need for a subproject and decided to enhance the laboratory services through the capacity building program. There is no alternative to be considered since there is well established system in the sector.

D. SUBPROJECT DESCRIPTION

Proposed start date (duration)	March 2022 (02 Months)
Proposed completion date	April 2022
Estimated total cost	SLRs 93.008 Mn
Land ownership	FRDI-Horana is located on the state land that is under the purview of the DOA.
Planned interventions	This subproject is mainly focusing to purchase and supply the equipment that needs to strengthen the research facilities at FRDI- Horana and upgrade the laboratory facilities at FRDI. For strengthening research facilities at FCRDI- Horana, the following laboratories will be equipped by ASMP**.**

	• Plan Science Lab • Soil Science Lab • Biotechnology/Molecular Biology Lab • Plant Pathology Lab • Entomology Lab • Plant Breeding Lab • Food Science Lab For strengthening laboratory facilities at FRDI- Horana, the following equipment will be provided; • Water bath – digestion of samples (open bath) (1 unit) • Fully automated Kjeld Hal system – Nitrogen analysis (1 unit) • Water purification unit – making distilled water (1 unit) • pH Meter - measuring acidity/baseness of samples (1 unit) • Analytical Balance – weighing the samples (1 unit) • Top Pan Balance – weighing the samples • Ion meter with selective electrodes - To determine ionic
Beneficiary selection criteria and process	The whole capacity building program pertaining to the department of agriculture was collectively negotiated by MOA, DOA and ASMP. Then, DOA has prepared the capacity building needs with participation of the relevant research institutions, planting material production center and the seed certification service. Accordingly, the subproject activities were identified by the sector experts in the DOA.
Vulnerable groups and Gender	Generally, agriculture sector development directly gives benefits to vulnerable groups and women since the majority (80%) of the farmers and agriculture sector laborers belong to the low-income category. The project helps to enhance the farmers' livelihood and the food security for low-income community.

E. DESCRIPTION OF THE SOCIOECONOMIC CONDITIONS

Institute Profile	There are nine (9) main divisions that come under FRDI- Horana. Out of nine divisions six divisions have its laboratory facilities within the premises and research activities have been undertaken by the well-experienced & qualified research staff that consists of Director, Deputy Director (Research), Principal Agriculture Scientist, Assistant Directors Agriculture (Research), Research Assistants, and Technical Assistants. As the main divisions, there are; 1. Agronomy Division 2. Soil Science Division 3. Biotechnology Division 4. Pathology Division 5. Entomology Division 6. Plant Breeding Division 7. Socio Economics Division 8. Farm Division 9. Training Division Apart from these research divisions, FRDI- Horana has eight (8) laboratory facilities that have been established to conduct research and experiments. Plan Science, Soil Science, Biotechnology, Molecular Biology, Plant Pathology,

Entomology, Plant Breeding, and Food Science are the main laboratories that help to FCRDI activities.

Under the separate divisions, the following services are been delivered;

- Development of new varieties of high yielding improved varieties of fruit suitable for irrigated and rainfed conditions with pest, disease and drought resistance quality.
- Development of plant protection strategies to minimize crop losses due to pest and diseases
- Identification of pest and diseases attacks for the fruit and develop the suitable management practices
- Development of improved agronomic practices to reduce the cost of production, to increase the productivity of agricultural lands and crops.
- Testing the adaptability of new improved varieties and technologies.
- Minimizing the post-harvest losses and improve the value addition of fruits
- Developing Improved soil and water conservation methods and soil fertility management practices

More ever, the soil science division of FRDI conducts analytical tastings to check the nutrient contents of the compost fertilizers. These samples are sent by the farmers, private companies, and other government institutions more than previously since the government has taken the policy decision to promote organic agriculture. The lab records revealed that FRDI has conducted more than 2,000 compost fertilizer analyses during last year (2021). Further, the Soil Science division of the research center is continuing research to produce high nutritional value compost fertilizer with crop characteristics such as susceptibility to pests and diseases. Already they have proven success in the research. This is an additional service provided by the FRDI on the current national need of the country.

DOA annually allocates funds for the recurrent expenditures of the laboratories. But existing equipment and the facilities are not enough to expand the labs' services. These labs should be equipped to expand their service to produce hybrid varieties of the fruits and other services.

Figure 4: Operating Labs in Research Station

As the subproject, there are no civil works or cultivation activities are listed as the subproject's activities. Supplying equipment to enhance the laboratory facilities is the main activity of the subproject. Further, there is a well-established system for the present labs' operations. Hereafter will discuss the matters linked to the lab operation stage.

All the lab operations are followed by the standard operating procedure (SOP). SOP is a set of written instructions that describes, in detail, how to perform a laboratory process or experiment safely and effectively. Labs have written SOPs when work involves the use of hazardous materials (chemical, radioactive, and biological) or physical hazards.

Figure 5: The safety measures adopted in the laboratories

Project Benefits	The project will directly result the Strengthening Capacity to Enhance the laboratory Facilities at Fruit Research and Development Institute (FRDI)- Horana.

	Ultimately, it gives the benefits to the farmers and entrepreneurs who have engaged in fruit production, marketing and the processing industry in the country and the consumers as well who can reach healthy foods. The following benefits will be achieved by implementing the subproject. • Increased productivity and profitability of fruit farming • Minimized seasonality thus avoiding gluts and lean periods in production • Increased the availability of quality produce for both local and export market • Resource conservation and eco-friendly vegetable farming • Minimized post-harvest losses and improved value addition The ultimate effort of the ASMP is to establish good agriculture practices (GAP) in the farming activities by introducing new technologies.
Social Impact	The proposed subproject will be implemented within the government premises which is earmarked for the fruit research and development institute's activities. Hence there is no direct contact of subproject activities with the community. As the subproject activities, supply of equipment and accessories for the currently operating laboratories of FRDI are only included. There is no construction or rehabilitation activities are included in to this subproject. Hence, there is no social impact emerging by the subproject activities. There are no assets or activities that will be disturbed or affected by the subproject activities. The magnitude of the proposed project interventions is very low. accordingly, the anticipated negative social impacts of the proposed project will be minor or insignificant. Since there is no activity related to the subproject other than the supply of equipment and accessories for the currently operating laboratories, no possible impacts are anticipated due to subproject implementation. There is a well-established operation and management system for the labs, hence no social impacts are anticipated during the subproject operation period too.
Mitigation Measures	Not applicable

F. STAKEHOLDERS ENGAGEMENT AND PUBLIC CONSULTATION

1. Stakeholders and Public consultation	
Stakeholders' engagements	The Department of Agriculture is the main project partner agency of this subproject. The staff of the research stations jointly prepared their capacity needs and submitted them to the ASMP. Several discussions were undergone to finalize the subproject activities between the research stations' staff and the ASMP. For more transparency, the research stations' staff were represented the technical evaluation committee of this subproject. The ASMP PMU staff conducted site visits, consultations with DOA's officials during subproject identification and designing stages.

Table 1: Responsible Officers in ASM Project Activities

SN	Name	Designation	Contacts
1	Mr. W.D. Lesley	Director	0711845221 doadfrd@gmail.com wdlesly@yahoo.com
2	Ms.K.A. Renuka	Principle Agriculture Scientist	0773 437412 karenuka43@gmail.com
3	Dr. Pradeepa Alahakoon	Principle Agriculture Scientist	0718 112774
4	Ms.A.K. Pushpakumari	Senior Scientist (Entomology)	0714 436795 shyamapk2003@yahoo.com
5	Mr. Indika Atapattu	Assistant Director of Agriculture (Research)	0713216955 indikaatapattu@yahoo.com
6	Ms.T.M.N.D. Thennakoon	Assistant Director of Agriculture (Research)	0714419327 nadika74@yahoo.com
7	Mr. S.D.D.N. Sandanayake	Farm Manager (Agriculture Instructor)	0718013561

Stakeholders' consultation

During the social and environmental screening process, the staff of FRDI-Horana were consulted. Meantime ASMP has taken actions to conduct the stakeholders' consultation starting from the subproject identification stage up to finalizing the subproject's design. It was a good tool to maintain transparency among the stakeholders. Due to the impact of the fruitful consultation process undertaken by the ASMP, the research station's staff is well aware of the subproject activities and their objectives. Meantime, they have negotiated and decided the real requirements that they want to enhance the research facilities of the stations.

Table 2: Consultation outputs

Locations / Sub Units / Fields Visited	Participants with Designations	Matters Discussed
FRDI at Horana on 11.01.2022		
Director's Office	Mr.W.D. Lesley- Director (Research)	Overall capacity building plan on strengthening laboratory facilities and infrastructure development for hybrid seed production and other services
Soil Laboratory	Ms.K.A.Renuka- Principle Agriculture Scientist	Routine functions of the lab and overall environmental and social risks/impacts
Pathology Laboratory	Dr. Pradeepa Alahakoon- Principal Agriculture Scientist	Routine functions of the lab and overall environmental and social risks/impacts
	Ms. Hansamala Jayawardhana- Program Assistant	
Entomology Laboratory	Ms.A.K. Pushpakumari- Senior Scientist (Entomology)	Routine functions of the lab and overall environmental and social risks/impacts
	Mr. Indika Atapattu Assistant Director of Agriculture (Research)	
Plant Science Laboratory	Ms. M.G.N.E. Mahagollage (Research Assistant)	

	Ms. Ms. M.P.T.S. Karunasena (Research Assistant)	Routine functions of the lab and overall environmental and social risks/impacts	
Molecular Biology Laboratory	Ms.T.M.N.D. Thennakoon Assistant Director of Agriculture (Research)	Routine functions of the lab and overall environmental and social risks/impacts	
Food Laboratory			
Proposed water tank construction location	Mr. Tharindu (Assistant Farm Manager)	Locations of irrigation facility improvement and its socio-environment impacts	
Proposed agro-well construction location			
Field lake/pond to be expanded			

G. GRIEVANCE READDRESSED MECHANISM (GRM)

A GRM will be in place to promptly address any grievances including any unforeseen impacts that may arise during the implementation phase of the project, at no cost to the people. Field level grievances will record by FRDI- Director by keeping the registry on their premises. The ASMP, and DOA official will facilitate resolving the grievance. The middle level grievances committee will operate at the DOA office to address the issues which are unsolved or when the affected person is not satisfied with the decision at the field level. The third tier of GRM will operate at PMU headed by the Project Director of ASMP with technical support from the Social Development Specialist to address the issues which are not solved at the initial stages.

H. IMPLEMENTATION AND MONITORING

1. Monitoring

Considering the magnitude of the proposed project interventions, the anticipated social impacts of the proposed activities will be none. There won't be any significant negative social impacts envisaged from the proposed project during implementation. Therefore, it is not necessary to have a complex monitoring system. However, it is necessary to ensure there are no violations of the regulations and conformity to the national and World Bank standards and guidelines pertaining to environmental and social safeguards.

Therefore, the contractor should be aware of the project management to ensure social management compliance during the implementation of the project. The Director -FRDI will undertake the internal monitoring activities with close coordination of ASMP-PMU. Implementation of social and environmental safeguards compliance will be monitored by the social and environmental safeguard specialist at ASMP-PMU.

I. SCREENING OF POTENTIAL SOCIAL IMPACTS

Probable Involuntary Resettlement Impacts	Yes	No	Not known	Details
Will the intervention include new physical construction work?		√		Only supplying equipment and accessories for the currently

Probable Involuntary Resettlement Impacts	Yes	No	Not known	Details
				operating laboratories of FRDI
Does the intervention include upgrading or rehabilitation of existing physical facilities?		√		NA
Is the intervention likely to cause any permanent damage to or loss of housing, other assets, resource use?		√		No such impacts are anticipated
Are the sites chosen for this work free from encumbrances and is in possession of the government/community land?		√		Selected land belongs to DOA and vested to Fruit Research and Development Institute (FRDI)
Is this subproject intervention requiring private land acquisitions?		√		No land acquisition taken place
If the site is privately owned, can this land be purchased through negotiated settlement?				N/A
If the land parcel has to be acquired, is the present plot size and ownership status known?				N/A
Are these land owners willing to voluntarily donate the required land for this sub-project?				N/A
Whether the affected land owners likely to lose more than 10% of their land/structure area because of donation?				N/A
Is land for material mobilisation or transport for the civil work available within the existing plot/ Right of Way?		√		N/A
Are there any non-titled people who are living/doing business on the proposed site/project locations that use for civil work?		√		N/A
Is any temporary impact likely?		√		N/A
Is there any possibility to move out, close of business/ commercial/ livelihood activities of persons during constructions?		√		No such impacts are anticipated
Is there any physical is placement of persons due to constructions?		√		No such impacts are anticipated
Does this project involve resettlement of any persons? If yes, give details.		√		No such impacts are anticipated
Will there be loss of /damage to agricultural lands, standing crops, trees?		√		No such impacts are anticipated
Will there be loss of incomes and		√		No such impacts are anticipated

Probable Involuntary Resettlement Impacts	Yes	No	Not known	Details
livelihoods?				
Will people permanently or temporarily lose access to facilities, services or natural resources?		√		No such impacts are anticipated
Are there any previous land acquisitions happened and the identified land has been already acquired?		√		No such impacts are anticipated
Are any indigenous people living in proposed locations or affected/benefited by the project intervention?		√		No such impacts are anticipated

There are no possible social impacts that are anticipated due to implementation of this subproject.

Key project activities	Potential Social Effects	Significance of Social effect with mitigation in place[1]
Supplying of equipment and accessories for the laboratories of FRDI	NA	

SOCIAL RISKS & IMPACTS

Activities	Land requirements	Risk of exclusion of vulnerable groups	Construction impacts	Risks due to labour influx	Risk of livelihood impacts	Public/ occupational health and safety	COVID19 risks
Supplying of equipment and accessories for the laboratories of FRDI	Land owned by DOA						

INFORMATION ON AFFECTED PERSONS

Any estimate of the likely number of households that will be affected by the sub project?

- [√] No. [ ] Yes. If yes, approximately how many? …….
- No. of HHs losing <10% of their productive assets **- N/A**
- (land/cowshed/shops) …… **N/A**

[1] NS - Effect not significant, or can be rendered insignificant with mitigation, SP - Significant positive effect, SN - Significant negative effect, U - Outcome unknown or cannot be predicted, even with mitigation

• No. of HHs losing 10% or more of their productive assets?..... **N/A**
Are any vulnerable households affected? [√] No. [ ] Yes. If yes, please briefly describe their situation with estimated numbers of HHs? N/A
What are the needs and priorities for social and economic betterment of vulnerable people who are affected by this project? N/A

J. SCREENING DECISION and recommendations

After reviewing the answers above, it is determined that the subproject is:

[ ] Categorised as a 'B' project, an Abbreviated Resettlement Action Plan is required

[√] Categorised as a 'C' project, only the Social Screening/ Due Diligence Report is required

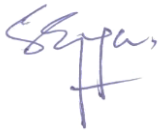
K. SOCIAL MANAGEMENT PLAN (SMP)

Not applicable

L. CONCLUSION

The proposed Strengthening Capacity to Enhance the Laboratory Facilities at Fruit Research and Development Institute- Horana well augers with enhancing the DOA's capacities. It aligns with the sustainability of the agriculture sector modernization under ASMP. The proposed activities will not have impacts in relation to land acquisition or involuntary resettlement. The impacts that can arise can be considered modest and can be reversed with mitigation action.

M. DETAILS OF PERSON RESPONSIBLE FOR THE SOCIAL SCREENING

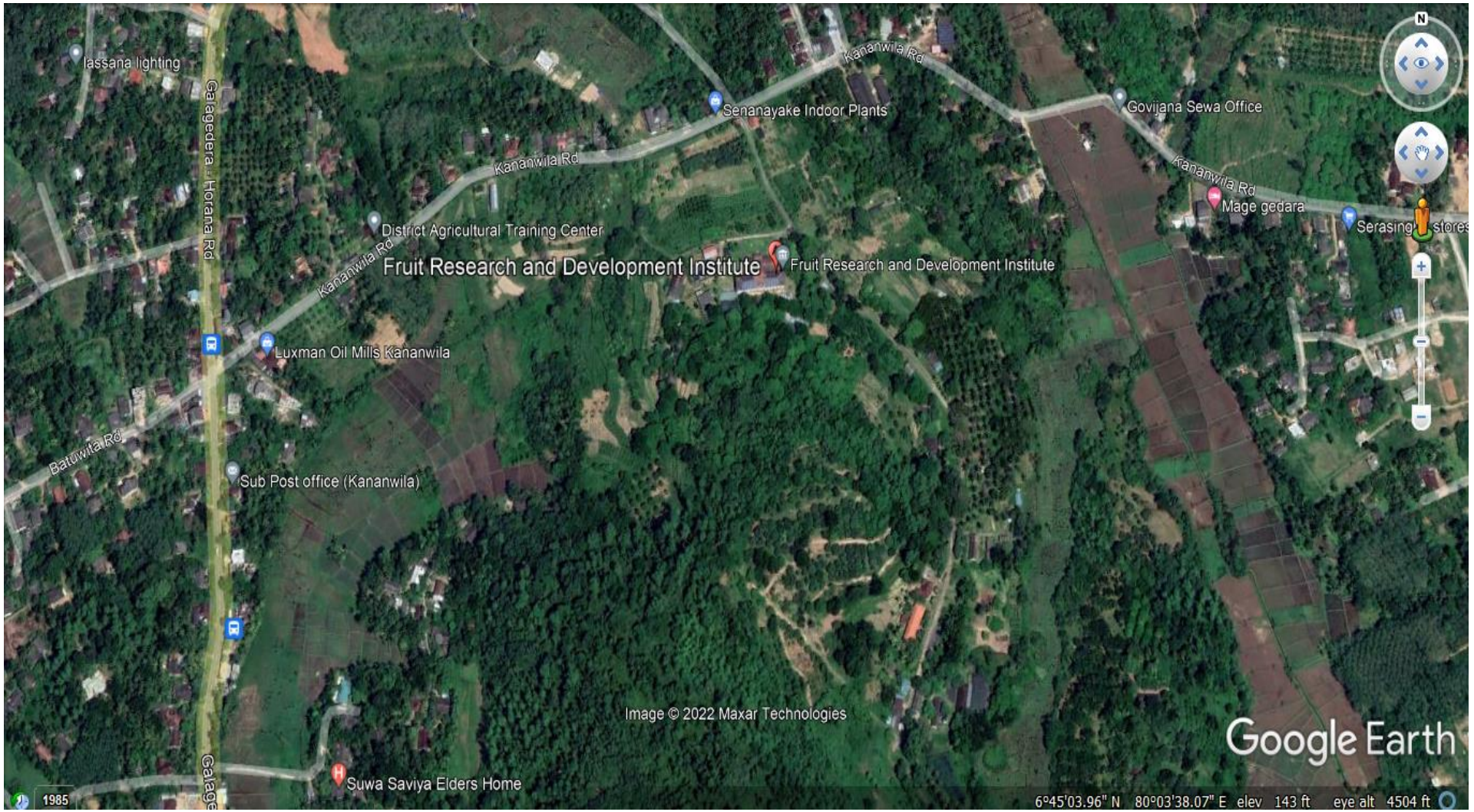
Screening conducted and reviewed by **D.M. Sanjaya Bandara** **Environment and Social Safeguard Specialist** Agriculture Sector Modernization Project **Name/Designation/Contact information**	**Date** **February 2022**  **Signature**
Screening report recommended by **Dr. Rohan Wijekoon** **Project Director** Agriculture Sector Modernization Project **Name/Designation/Contact information**	**Date** **February 2022**  **Signature**

ANNEX 1: LIST OF REFERENCES

1) https://asmp.lk/the-project/
2) https://doa.gov.lk/home-page/
3) http://scsdoa.lk/index.php
4) https://doa.gov.lk/frdi-home-english/
5) http://www.harti.gov.lk/images/download/reasearch_report/new1/report_no_221.pdf

ANNEX 2: PROJECT LOCATION MAPS

1. Fruit Research and Development Institute- Horana



Source: Google Map

ANNEX 3: INTERIM GUIDELINES ON COVID-19 OF WORLD BANK

ESF/SAFEGUARDS INTERIM NOTE: COVID-19 CONSIDERATIONS IN CONSTRUCTION/CIVIL WORKS PROJECTS

This note was issued on April 7, 2020 and includes links to the latest guidance as of this date (e.g. from WHO). Given the COVID-19 situation is rapidly evolving, when using this note it is important to check whether any updates to these external resources have been issued.

1. INTRODUCTION

The COVID-19 pandemic presents Governments with unprecedented challenges. Addressing COVID-19 related issues in both existing and new operations starts with recognizing that this is not business as usual and that circumstances require a highly adaptive responsive management design to avoid, minimize and manage what may be a rapidly evolving situation. In many cases, we will ask Borrowers to use reasonable efforts in the circumstances, recognizing that what may be possible today may be different next week (both positively, because more supplies and guidance may be available, and negatively, because the spread of the virus may have accelerated).

This interim note is intended to provide guidance to teams on how to support Borrowers in addressing key issues associated with COVID-19, and consolidates the advice that has already been provided over the past month. As such, it should be used in place of other guidance that has been provided to date. This note will be developed as the global situation and the Bank's learning (and that of others) develops. This is not a time when 'one size fits all'. More than ever, teams will need to work with Borrowers and projects to understand the activities being carried out and the risks that these activities may entail. Support will be needed in designing mitigation measures that are implementable in the context of the project. These measures will need to take into account capacity of the Government agencies, availability of supplies and the practical challenges of operations on-the-ground, including stakeholder engagement, supervision and monitoring. In many circumstances, communication itself may be challenging, where face-to-face meetings are restricted or prohibited, and where IT solutions are limited or unreliable.

This note emphasizes the importance of careful scenario planning, clear procedures and protocols, management systems, effective communication and coordination, and the need for high levels of responsiveness in a changing environment. It recommends assessing the current situation of the project, putting in place mitigation measures to avoid or minimize the chance of infection, and planning what to do if either project workers become infected or the work force includes workers from proximate communities affected by COVID-19. In many projects, measures to avoid or minimize will need to be implemented at the same time as dealing with sick workers and relations with the community, some of whom may also be ill or concerned about infection. Borrowers should understand the obligations that contractors have under their existing contracts (see Section 3), require contractors to put in place appropriate organizational structures (see Section 4) and develop procedures to address different aspects of COVID-19 (see Section 5).

2. CHALLENGES WITH CONSTRUCTION/CIVIL WORKS

Projects involving construction/civil works frequently involve a large work force, together with suppliers and supporting functions and services. The work force may comprise workers from international, national, regional, and local labor markets. They may need to live in on-site accommodation, lodge within communities close to work sites or return to their homes after work. There may be different contractors

permanently present on site, carrying out different activities, each with their own dedicated workers. Supply chains may involve international, regional and national suppliers facilitating the regular flow of goods and services to the project (including supplies essential to the project such as fuel, food, and water). As such there will also be regular flow of parties entering and exiting the site; support services, such as catering, cleaning services, equipment, material and supply deliveries, and specialist sub-contractors, brought in to deliver specific elements of the works.

Given the complexity and the concentrated number of workers, the potential for the spread of infectious disease in projects involving construction is extremely serious, as are the implications of such a spread. Projects may experience large numbers of the work force becoming ill, which will strain the project's health facilities, have implications for local emergency and health services and may jeopardize the progress of the construction work and the schedule of the project. Such impacts will be exacerbated where a work force is large and/or the project is in remote or under-serviced areas. In such circumstances, relationships with the community can be strained or difficult and conflict can arise, particularly if people feel they are being exposed to disease by the project or are having to compete for scarce resources. The project must also exercise appropriate precautions against introducing the infection to local communities.

3. DOES THE CONSTRUCTION CONTRACT COVER THIS SITUATION?

Given the unprecedented nature of the COVID-19 pandemic, it is unlikely that the existing construction/civil works contracts will cover all the things that a prudent contractor will need to do. Nevertheless, the first place for a Borrower to start is with the contract, determining what a contractor's existing obligations are, and how these relate to the current situation.

The obligations on health and safety will depend on what kind of contract exists (between the Borrower and the main contractor; between the main contractors and the sub-contractors). It will differ if the Borrower used the World Bank's standard procurement documents (SPDs) or used national bidding documents. If a FIDIC document has been used, there will be general provisions relating to health and safety. For example, the standard FIDIC, Conditions of Contract for Construction (Second Edition 2017), which contains no 'ESF enhancements', states (in the General Conditions, clause 6.7) that the Contractor will be required:

- to take all necessary precautions to maintain the health and safety of the Contractor's Personnel
- to appoint a health and safety officer at site, who will have the authority to issue directives for the purpose of maintaining the health and safety of all personnel authorized to enter and or work on the site and to take protective measures to prevent accidents
- to ensure, in collaboration with local health authorities, that medical staff, first aid facilities, sick bay, ambulance services and any other medical services specified are available at all times at the site and at any accommodation
- to ensure suitable arrangements are made for all necessary welfare and hygiene requirements and for the prevention of epidemics

These requirements have been enhanced through the introduction of the ESF into the SPDs (edition dated July 2019). The general FIDIC clause referred to above has been strengthened to reflect the requirements of the ESF. Beyond FIDIC's general requirements discussed above, the Bank's Particular Conditions include a number of relevant requirements on the Contractor, including:

- to provide health and safety training for Contractor's Personnel (which include project workers and all personnel that the Contractor uses on site, including staff and other employees of the Contractor and Subcontractors and any other personnel assisting the Contractor in carrying out project activities)
- to put in place workplace processes for Contractor's Personnel to report work situations that are not safe or healthy
- gives Contractor's Personnel the right to report work situations which they believe are not safe or healthy, and to remove themselves from a work situation which they have a reasonable justification to believe presents an imminent and serious danger to their life or health (with no reprisal for reporting or removing themselves)
- requires measures to be in place to avoid or minimize the spread of diseases including measures to avoid or minimize the transmission of communicable diseases that may be associated with the influx of temporary or permanent contract-related labor
- to provide an easily accessible grievance mechanism to raise workplace concerns

Where the contract form used is FIDIC, the Borrower (as the Employer) will be represented by the Engineer (also referred to in this note as the Supervising Engineer). The Engineer will be authorized to exercise authority specified in or necessarily implied from the construction contract. In such cases, the Engineer (through its staff on site) will be the interface between the PIU and the Contractor. It is important therefore to understand the scope of the Engineer's responsibilities. It is also important to recognize that in the case of infectious diseases such as COVID-19, project management – through the Contractor/subcontractor hierarchy – is only as effective as the weakest link. A thorough review of management procedures/plans as they will be implemented through the entire contractor hierarchy is important. Existing contracts provide the outline of this structure; they form the basis for the Borrower to understand how proposed mitigation measures will be designed and how adaptive management will be implemented, and to start a conversation with the Contractor on measures to address COVID-19 in the project.

4. WHAT PLANNING SHOULD THE BORROWER BE DOING?

Task teams should work with Borrowers (PIUs) to confirm that projects (i) are taking adequate precautions to prevent or minimize an outbreak of COVID-19, and (ii) have identified what to do in the event of an outbreak. Suggestions on how to do this are set out below:

- The PIU, either directly or through the Supervising Engineer, should request details in writing from the main Contractor of the measures being taken to address the risks. As stated in Section 3, the construction contract should include health and safety requirements, and these can be used as the basis for identification of, and requirements to implement, COVID-19 specific measures. The measures may be presented as a contingency plan, as an extension of the existing project emergency and preparedness plan or as standalone procedures. The measures may be reflected in revisions to the project's health and safety manual. This request should be made in writing (following any relevant procedure set out in the contract between the Borrower and the contractor).

- In making the request, it may be helpful for the PIU to specify the areas that should be covered. This should include the items set out in Section 5 below and take into account current and relevant

guidance provided by national authorities, WHO and other organizations. See the list of references in the Annex to this note.

- The PIU should require the Contractor to convene regular meetings with the project health and safety specialists and medical staff (and where appropriate the local health authorities), and to take their advice in designing and implementing the agreed measures.

- Where possible, a senior person should be identified as a focal point to deal with COVID-19 issues. This can be a work supervisor or a health and safety specialist. This person can be responsible for coordinating preparation of the site and making sure that the measures taken are communicated to the workers, those entering the site and the local community. It is also advisable to designate at least one back-up person, in case the focal point becomes ill; that person should be aware of the arrangements that are in place.

- On sites where there are a number of contractors and therefore (in effect) different work forces, the request should emphasize the importance of coordination and communication between the different parties. Where necessary, the PIU should request the main contractor to put in place a protocol for regular meetings of the different contractors, requiring each to appoint a designated staff member (with back up) to attend such meetings. If meetings cannot be held in person, they should be conducted using whatever IT is available. The effectiveness of mitigation measures will depend on the weakest implementation, and therefore it is important that all contractors and sub-contractors understand the risks and the procedure to be followed.

- The PIU, either directly or through the Supervising Engineer, may provide support to projects in identifying appropriate mitigation measures, particularly where these will involve interface with local services, in particular health and emergency services. In many cases, the PIU can play a valuable role in connecting project representatives with local Government agencies, and helping coordinate a strategic response, which takes into account the availability of resources. To be most effective, projects should consult and coordinate with relevant Government agencies and other projects in the vicinity.

- Workers should be encouraged to use the existing project grievance mechanism to report concerns relating to COVID-19, preparations being made by the project to address COVID-19 related issues, how procedures are being implemented, and concerns about the health of their co-workers and other staff.

5. WHAT SHOULD THE CONTRACTOR COVER?

The Contractor should identify measures to address the COVID-19 situation. What will be possible will depend on the context of the project: the location, existing project resources, availability of supplies, capacity of local emergency/health services, the extent to which the virus already exist in the area. A systematic approach to planning, recognizing the challenges associated with rapidly changing circumstances, will help the project put in place the best measures possible to address the situation. As discussed above, measures to address COVID-19 may be presented in different ways (as a contingency plan, as an extension of the existing project emergency and preparedness plan or as standalone procedures). PIUs and contractors should refer to guidance issued by relevant authorities, both national

and international (e.g. WHO), which is regularly updated (see sample References and links provided in the Annex).

Addressing COVID-19 at a project site goes beyond occupational health and safety, and is a broader project issue which will require the involvement of different members of a project management team. In many cases, the most effective approach will be to establish procedures to address the issues, and then to ensure that these procedures are implemented systematically. Where appropriate given the project context, a designated team should be established to address COVID-19 issues, including PIU representatives, the Supervising Engineer, management (e.g. the project manager) of the contractor and sub-contractors, security, and medical and OHS professionals. Procedures should be clear and straightforward, improved as necessary, and supervised and monitored by the COVID-19 focal point(s). Procedures should be documented, distributed to all contractors, and discussed at regular meetings to facilitate adaptive management. The issues set out below include a number that represent expected good workplace management but are especially pertinent in preparing the project response to COVID-19.

(a) ASSESSING WORKFORCE CHARACTERISTICS

Many construction sites will have a mix of workers e.g. workers from the local communities; workers from a different part of the country; workers from another country. Workers will be employed under different terms and conditions and be accommodated in different ways. Assessing these different aspects of the workforce will help in identifying appropriate mitigation measures:

- The Contractor should prepare a detailed profile of the project work force, key work activities, schedule for carrying out such activities, different durations of contract and rotations (e.g. 4 weeks on, 4 weeks off).
- This should include a breakdown of workers who reside at home (i.e. workers from the community), workers who lodge within the local community and workers in on-site accommodation. Where possible, it should also identify workers that may be more at risk from COVID-19, those with underlying health issues or who may be otherwise at risk.
- Consideration should be given to ways in which to minimize movement in and out of site. This could include lengthening the term of existing contracts, to avoid workers returning home to affected areas, or returning to site from affected areas.
- Workers accommodated on site should be required to minimize contact with people near the site, and in certain cases be prohibited from leaving the site for the duration of their contract, so that contact with local communities is avoided.
- Consideration should be given to requiring workers lodging in the local community to move to site accommodation (subject to availability) where they would be subject to the same restrictions.
- Workers from local communities, who return home daily, weekly or monthly, will be more difficult to manage. They should be subject to health checks at entry to the site (as set out above) and at some point, circumstances may make it necessary to require them to either use accommodation on site or not to come to work.

(b) ENTRY/EXIT TO THE WORK SITE AND CHECKS ON COMMENCEMENT OF WORK

Entry/exit to the work site should be controlled and documented for both workers and other parties, including support staff and suppliers. Possible measures may include:

- Establishing a system for controlling entry/exit to the site, securing the boundaries of the site, and establishing designating entry/exit points (if they do not already exist). Entry/exit to the site should be documented.
- Training security staff on the (enhanced) system that has been put in place for securing the site and controlling entry and exit, the behaviors required of them in enforcing such system and any COVID - 19 specific considerations.
- Training staff who will be monitoring entry to the site, providing them with the resources they need to document entry of workers, conducting temperature checks and recording details of any worker that is denied entry.
- Confirming that workers are fit for work before they enter the site or start work. While procedures should already be in place for this, special attention should be paid to workers with underlying health issues or who may be otherwise at risk. Consideration should be given to demobilization of staff with underlying health issues.
- Checking and recording temperatures of workers and other people entering the site or requiring self-reporting prior to or on entering the site.
- Providing daily briefings to workers prior to commencing work, focusing on COVID-19 specific considerations including cough etiquette, hand hygiene and distancing measures, using demonstrations and participatory methods.
- During the daily briefings, reminding workers to self-monitor for possible symptoms (fever, cough) and to report to their supervisor or the COVID-19 focal point if they have symptoms or are feeling unwell.
- Preventing a worker from an affected area or who has been in contact with an infected person from returning to the site for 14 days or (if that is not possible) isolating such worker for 14 days.
- Preventing a sick worker from entering the site, referring them to local health facilities if necessary or requiring them to isolate at home for 14 days.

(c) GENERAL HYGIENE

Requirements on general hygiene should be communicated and monitored, to include:

- Training workers and staff on site on the signs and symptoms of COVID-19, how it is spread, how to protect themselves (including regular handwashing and social distancing) and what to do if they or other people have symptoms (for further information see WHO COVID-19 advice for the public).
- Placing posters and signs around the site, with images and text in local languages.
- Ensuring handwashing facilities supplied with soap, disposable paper towels and closed waste bins exist at key places throughout site, including at entrances/exits to work areas; where there is a toilet, canteen or food distribution, or provision of drinking water; in worker accommodation; at waste stations; at stores; and in common spaces. Where handwashing facilities do not exist or are not adequate, arrangements should be made to set them up. Alcohol based sanitizer (if available, 60-95% alcohol) can also be used.
- Review worker accommodations, and assess them in light of the requirements set out in IFC/EBRD guidance on Workers' Accommodation: processes and standards, which provides valuable guidance as to good practice for accommodation.
- Setting aside part of worker accommodation for precautionary self-quarantine as well as more formal isolation of staff who may be infected (see paragraph (f)).

(d) CLEANING AND WASTE DISPOSAL

Conduct regular and thorough cleaning of all site facilities, including offices, accommodation, canteens, common spaces. Review cleaning protocols for key construction equipment (particularly if it is being operated by different workers). This should include:

- Providing cleaning staff with adequate cleaning equipment, materials and disinfectant.
- Review general cleaning systems, training cleaning staff on appropriate cleaning procedures and appropriate frequency in high use or high-risk areas.
- Where it is anticipated that cleaners will be required to clean areas that have been or are suspected to have been contaminated with COVID-19, providing them with appropriate PPE: gowns or aprons, gloves, eye protection (masks, goggles or face screens) and boots or closed work shoes. If appropriate PPE is not available, cleaners should be provided with best available alternatives.
- Training cleaners in proper hygiene (including handwashing) prior to, during and after conducting cleaning activities; how to safely use PPE (where required); in waste control (including for used PPE and cleaning materials).
- Any medical waste produced during the care of ill workers should be collected safely in designated containers or bags and treated and disposed of following relevant requirements (e.g., national, WHO). If open burning and incineration of medical wastes is necessary, this should be for as limited a duration as possible. Waste should be reduced and segregated, so that only the smallest amount of waste is incinerated (for further information see WHO interim guidance on water, sanitation and waste management for COVID-19).

(e) ADJUSTING WORK PRACTICES

Consider changes to work processes and timings to reduce or minimize contact between workers, recognizing that this is likely to impact the project schedule. Such measures could include:

- Decreasing the size of work teams.
- Limiting the number of workers on site at any one time.
- Changing to a 24-hour work rotation.
- Adapting or redesigning work processes for specific work activities and tasks to enable social distancing, and training workers on these processes.
- Continuing with the usual safety trainings, adding COVID-19 specific considerations. Training should include proper use of normal PPE. While as of the date of this note, general advice is that construction workers do not require COVID-19 specific PPE, this should be kept under review (for further information see WHO interim guidance on rational use of personal protective equipment (PPE) for COVID-19).
- Reviewing work methods to reduce use of construction PPE, in case supplies become scarce or the PPE is needed for medical workers or cleaners. This could include, e.g. trying to reduce the need for dust masks by checking that water sprinkling systems are in good working order and are maintained or reducing the speed limit for haul trucks.
- Arranging (where possible) for work breaks to be taken in outdoor areas within the site.
- Consider changing canteen layouts and phasing meal times to allow for social distancing and phasing access to and/or temporarily restricting access to leisure facilities that may exist on site, including gyms.

- At some point, it may be necessary to review the overall project schedule, to assess the extent to which it needs to be adjusted (or work stopped completely) to reflect prudent work practices, potential exposure of both workers and the community and availability of supplies, taking into account Government advice and instructions.

(f) PROJECT MEDICAL SERVICES

Consider whether existing project medical services are adequate, taking into account existing infrastructure (size of clinic/medical post, number of beds, isolation facilities), medical staff, equipment and supplies, procedures and training. Where these are not adequate, consider upgrading services where possible, including:

- Expanding medical infrastructure and preparing areas where patients can be isolated. Guidance on setting up isolation facilities is set out in WHO interim guidance on considerations for quarantine of individuals in the context of containment for COVID-19). Isolation facilities should be located away from worker accommodation and ongoing work activities. Where possible, workers should be provided with a single well-ventilated room (open windows and door). Where this is not possible, isolation facilities should allow at least 1 meter between workers in the same room, separating workers with curtains, if possible. Sick workers should limit their movements, avoiding common areas and facilities and not be allowed visitors until they have been clear of symptoms for 14 days. If they need to use common areas and facilities (e.g. kitchens or canteens), they should only do so when unaffected workers are not present and the area/facilities should be cleaned prior to and after such use.
- Training medical staff, which should include current WHO advice on COVID-19 and recommendations on the specifics of COVID-19. Where COVID-19 infection is suspected, medical providers on site should follow WHO interim guidance on infection prevention and control during health care when novel coronavirus (nCoV) infection is suspected.
- Training medical staff in testing, if testing is available.
- Assessing the current stock of equipment, supplies and medicines on site, and obtaining additional stock, where required and possible. This could include medical PPE, such as gowns, aprons, medical masks, gloves, and eye protection. Refer to WHO guidance as to what is advised (for further information see WHO interim guidance on rational use of personal protective equipment (PPE) for COVID-19).
- If PPE items are unavailable due to world-wide shortages, medical staff on the project should agree on alternatives and try to procure them. Alternatives that may commonly be found on constructions sites include dust masks, construction gloves and eye goggles. While these items are not recommended, they should be used as a last resort if no medical PPE is available.
- Ventilators will not normally be available on work sites, and in any event, intubation should only be conducted by experienced medical staff. If a worker is extremely ill and unable to breathe properly on his or her own, they should be referred immediately to the local hospital (see (g) below).
- Review existing methods for dealing with medical waste, including systems for storage and disposal (for further information see WHO interim guidance on water, sanitation and waste management for COVID-19, and WHO guidance on safe management of wastes from health-care activities).

(g) LOCAL MEDICAL AND OTHER SERVICES

Given the limited scope of project medical services, the project may need to refer sick workers to local medical services. Preparation for this includes:

- Obtaining information as to the resources and capacity of local medical services (e.g. number of beds, availability of trained staff and essential supplies).
- Conducting preliminary discussions with specific medical facilities, to agree what should be done in the event of ill workers needing to be referred.
- Considering ways in which the project may be able to support local medical services in preparing for members of the community becoming ill, recognizing that the elderly or those with pre-existing medical conditions require additional support to access appropriate treatment if they become ill.
- Clarifying the way in which an ill worker will be transported to the medical facility, and checking availability of such transportation.
- Establishing an agreed protocol for communications with local emergency/medical services.
- Agreeing with the local medical services/specific medical facilities the scope of services to be provided, the procedure for in-take of patients and (where relevant) any costs or payments that may be involved.
- A procedure should also be prepared so that project management knows what to do in the unfortunate event that a worker ill with COVID-19 dies. While normal project procedures will continue to apply, COVID-19 may raise other issues because of the infectious nature of the disease. The project should liaise with the relevant local authorities to coordinate what should be done, including any reporting or other requirements under national law.

(h) INSTANCES OR SPREAD OF THE VIRUS

WHO provides detailed advice on what should be done to treat a person who becomes sick or displays symptoms that could be associated with the COVID-19 virus (for further information see WHO interim guidance on infection prevention and control during health care when novel coronavirus (nCoV) infection is suspected). The project should set out risk-based procedures to be followed, with differentiated approaches based on case severity (mild, moderate, severe, critical) and risk factors (such as age, hypertension, diabetes) (for further information see WHO interim guidance on operational considerations for case management of COVID-19 in health facility and community). These may include the following:

- If a worker has symptoms of COVID-19 (e.g. fever, dry cough, fatigue) the worker should be removed immediately from work activities and isolated on site.
- If testing is available on site, the worker should be tested on site. If a test is not available at site, the worker should be transported to the local health facilities to be tested (if testing is available).
- If the test is positive for COVID-19 or no testing is available, the worker should continue to be isolated. This will either be at the work site or at home. If at home, the worker should be transported to their home in transportation provided by the project.
- Extensive cleaning procedures with high-alcohol content disinfectant should be undertaken in the area where the worker was present, prior to any further work being undertaken in that area. Tools used by the worker should be cleaned using disinfectant and PPE disposed of.
- Co-workers (i.e. workers with whom the sick worker was in close contact) should be required to stop work, and be required to quarantine themselves for 14 days, even if they have no symptoms.

- Family and other close contacts of the worker should be required to quarantine themselves for 14 days, even if they have no symptoms.
- If a case of COVID-19 is confirmed in a worker on the site, visitors should be restricted from entering the site and worker groups should be isolated from each other as much as possible.
- If workers live at home and has a family member who has a confirmed or suspected case of COVID-19, the worker should quarantine themselves and not be allowed on the project site for 14 days, even if they have no symptoms.
- Workers should continue to be paid throughout periods of illness, isolation or quarantine, or if they are required to stop work, in accordance with national law.
- Medical care (whether on site or in a local hospital or clinic) required by a worker should be paid for by the employer.

(i) CONTINUITY OF SUPPLIES AND PROJECT ACTIVITIES

Where COVID-19 occurs, either in the project site or the community, access to the project site may be restricted, and movement of supplies may be affected.

- Identify back-up individuals, in case key people within the project management team (PIU, Supervising Engineer, Contractor, sub-contractors) become ill, and communicate who these are so that people are aware of the arrangements that have been put in place.
- Document procedures, so that people know what they are, and are not reliant on one person's knowledge.
- Understand the supply chain for necessary supplies of energy, water, food, medical supplies and cleaning equipment, consider how it could be impacted, and what alternatives are available. Early pro-active review of international, regional and national supply chains, especially for those supplies that are critical for the project, is important (e.g. fuel, food, medical, cleaning and other essential supplies). Planning for a 1-2 month interruption of critical goods may be appropriate for projects in more remote areas.
- Place orders for/procure critical supplies. If not available, consider alternatives (where feasible).
- Consider existing security arrangements, and whether these will be adequate in the event of interruption to normal project operations.
- Consider at what point it may become necessary for the project to significantly reduce activities or to stop work completely, and what should be done to prepare for this, and to re-start work when it becomes possible or feasible.

(j) TRAINING AND COMMUNICATION WITH WORKERS

Workers need to be provided with regular opportunities to understand their situation, and how they can best protect themselves, their families and the community. They should be made aware of the procedures that have been put in place by the project, and their own responsibilities in implementing them.

- It is important to be aware that in communities close to the site and amongst workers without access to project management, social media is likely to be a major source of information. This raises the importance of regular information and engagement with workers (e.g. through training, town halls, tool boxes) that emphasizes what management is doing to deal with the risks of COVID-19. Allaying fear is an important aspect of work force peace of mind and business continuity. Workers should be given an opportunity to ask questions, express their concerns, and make suggestions.

- Training of workers should be conducted regularly, as discussed in the sections above, providing workers with a clear understanding of how they are expected to behave and carry out their work duties.
- Training should address issues of discrimination or prejudice if a worker becomes ill and provide an understanding of the trajectory of the virus, where workers return to work.
- Training should cover all issues that would normally be required on the work site, including use of safety procedures, use of construction PPE, occupational health and safety issues, and code of conduct, taking into account that work practices may have been adjusted.
- Communications should be clear, based on fact and designed to be easily understood by workers, for example by displaying posters on handwashing and social distancing, and what to do if a worker displays symptoms.

(k) COMMUNICATION AND CONTACT WITH THE COMMUNITY

Relations with the community should be carefully managed, with a focus on measures that are being implemented to safeguard both workers and the community. The community may be concerned about the presence of non-local workers, or the risks posed to the community by local workers presence on the project site. The project should set out risk-based procedures to be followed , which may reflect WHO guidance (for further information see WHO Risk Communication and Community Engagement (RCCE) Action Plan Guidance COVID-19 Preparedness and Response). The following good practice should be considered:

- Communications should be clear, regular, based on fact and designed to be easily understood by community members.
- Communications should utilize available means. In most cases, face-to-face meetings with the community or community representatives will not be possible. Other forms of communication should be used; posters, pamphlets, radio, text message, electronic meetings. The means used should take into account the ability of different members of the community to access them, to make sure that communication reaches these groups.
- The community should be made aware of procedures put in place at site to address issues related to COVID-19. This should include all measures being implemented to limit or prohibit contact between workers and the community. These need to be communicated clearly, as some measures will have financial implications for the community (e.g. if workers are paying for lodging or using local facilities). The community should be made aware of the procedure for entry/exit to the site, the training being given to workers and the procedure that will be followed by the project if a worker becomes sick.
- If project representatives, contractors or workers are interacting with the community, they should practice social distancing and follow other COVID-19 guidance issued by relevant authorities, both national and international (e.g. WHO).

6. EMERGENCY POWERS AND LEGISLATION

Many Borrowers are enacting emergency legislation. The scope of such legislation, and the way it interacts with other legal requirements, will vary from country to country. Such legislation can cover a range of issues, for example:

- Declaring a public health emergency

- Authorizing the use of police or military in certain activities (e.g. enforcing curfews or restrictions on movement)
- Ordering certain categories of employees to work longer hours, not to take holiday or not to leave their job (e.g. health workers)
- Ordering non-essential workers to stay at home, for reduced pay or compulsory holiday

Except in exceptional circumstances (after referral to the World Bank's Operations Environmental and Social Review Committee (OESRC)), projects will need to follow emergency legislation to the extent that these are mandatory or advisable. It is important that the Borrower understands how mandatory requirements of the legislation will impact the project. Teams should require Borrowers (and in turn, Borrowers should request Contractors) to consider how the emergency legislation will impact the obligations of the Borrower set out in the legal agreement and the obligations set out in the construction contracts. Where the legislation requires a material departure from existing contractual obligations, this should be documented, setting out the relevant provisions.

ANNEX

WHO Guidance

Advice for the public

WHO advice for the public, including on social distancing, respiratory hygiene, self-quarantine, and seeking medical advice, can be consulted on this WHO website:
https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public

Technical guidance

Infection prevention and control during health care when novel coronavirus (nCoV) infection is suspected, issued on 19 March 2020

Coronavirus disease (COVID-19) outbreak: rights, roles and responsibilities of health workers, including key considerations for occupational safety and health, issued on 18 March 2020

Risk Communication and Community Engagement (RCCE) Action Plan Guidance COVID-19 Preparedness and Response, issued on 16 March 2020

Considerations for quarantine of individuals in the context of containment for coronavirus disease (COVID-19), issued on 19 March 2020

Operational considerations for case management of COVID-19 in health facility and community, issued on 19 March 2020

Rational use of personal protective equipment for coronavirus disease 2019 (COVID-19), issued on 27 February 2020

Getting your workplace ready for COVID-19, issued on 19 March 2020

Water, sanitation, hygiene and waste management for COVID-19, issued on 19 March 2020

Safe management of wastes from health-care activities issued in 2014

Advice on the use of masks in the community, during home care and in healthcare settings in the context of the novel coronavirus (COVID-19) outbreak, issued on March 19, 2020

ILO GUIDANCE

ILO Standards and COVID-19 FAQ, issued on March 23, 2020 (provides a compilation of answers to most frequently asked questions related to international labor standards and COVID-19)

MFI GUIDANCE

IDB Invest Guidance for Infrastructure Projects on COVID-19: A Rapid Risk Profile and Decision Framework