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Ministry of Agriculture
கமத்தொழில் அமைச்சு

ENVIRONMENTAL SCREENING REPORT

Passion Fruit Collection, Preliminary Processing, and Storage Unit for Passion Fruit Producer Groups in Kilinochchi and Mullaitivu


Sri Lanka Agriculture Sector Modernisation Project (ASMP)

Prepared for Project Management Unit of the Agriculture Sector Modernization Project

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

Updated: February 2022

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ABBREVIATIONS

ASMP	Agriculture Sector Modernization Project
DSD	Divisional Secretary Division
EMP	Environmental Management Plan
GND	Grama Niladari Division
LKR	Sri Lanka Rupees
MOA	Ministry of Agriculture
PMU	Project Management Unit
WQI	Water quality index
RDS	Rural Development Society
WRDS	Women Rural Development Society

Agriculture Sector Modernization Project

Environmental Screening Report

1. PROJECT IDENTIFICATION

Project title	Passion Fruit Collection, Preliminary Processing and Storage Unit for Passion Fruit Producer Groups in Kilinochchi and Mullaitivu.
Project Proponent	Agriculture Sector Modernization Project (ASMP), Ministry of Agriculture

2. PROJECT LOCATION

Location (*Relative to the nearest town, highway*)	Kilinochchi District is located in the Northern part of Sri Lanka where geographically most of the area of the District lies on the mainland. The District has a total extent of 1,681.41 km2 of which 1,237.11 km2 is covered with land area and inland water covers an area of 444.30 km2. It is bordered by Jaffna District on the North, Mullaitivu District on the Eastern and Southern borders, and Mannar District on the Western and Southern borders. Administratively, Kilinochchi District is divided into four Divisional Secretary Divisions, namely Karachchi, Kandawalai, Ponakari, and Pachchilaipalli. Karachchi DS division Office is in the heart of Kilinochchi town center near the District Secretariat Office, Kilinochchi railway station, and Karachchi Pradeshiya Saba on the western side of Kandy-Jaffna A9 road. Hereinafter the "Passion fruit collection, preliminary processing, and storage unit" will be called as Passion fruit processing centre. The selected location for the Passion fruit processing centre belongs to the Karaichchi DSD and there are 42 Grama Niladhari divisions in the Karachchi DS division. Akkaraya GN is one of the 42 GN divisions selected for the Agriculture Sector Modernization Project (ASMP). GN division number is KN/05 and bounded by Skandapuram GN (KN/04) in the West, Konavil GN division (KN/06) in the North, Malayalapuram GN division (KN/09) in the East and Mullaithivu district border in the South. The collection centre is expected to be located in the Akkarayan GN division in Kilinochchi district which is closer to other GN divisions including the GN divisions of the Mullaitivu district. As a greater number of farmers are engaged in passion production in Kilinochchi, the collection centre is thus located in Kilinochchi. However, it will also process the produce from Mullaitivu in this centre. Selected location is directly accessible via Pallawarayankaddu-Manniyakulam- Kilinochchi road, around 11 Km distance from the Murukandy Pilleyar Kovil. Further, it is around 650 m away from the Akkarayan Hospital. The proposed processing centre location map is attached shown in Figure 1 while figure 2 shows the existing conditions of the selected land.

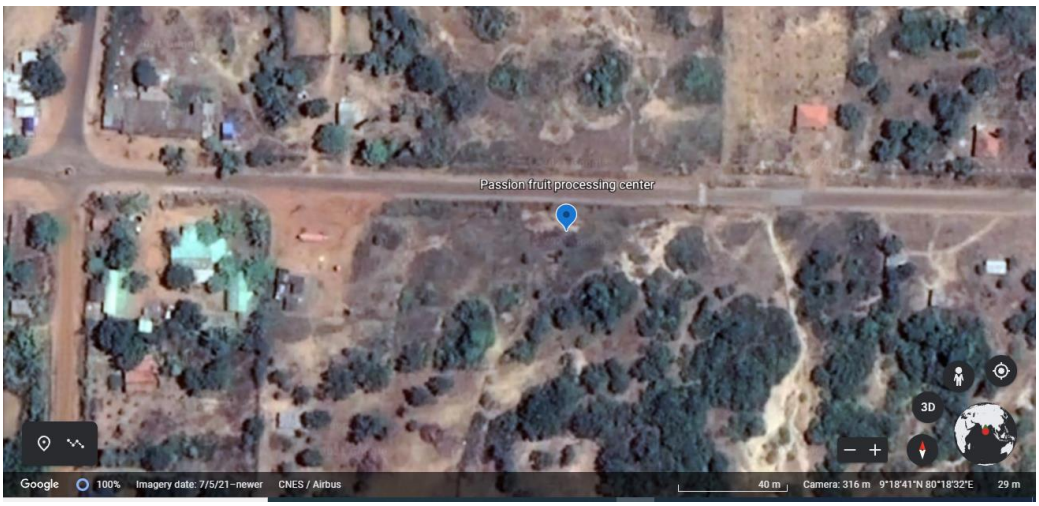


Figure 1: Selected location of Passion Fruit Processing Center – 9018'41" N, 80018'32" E

Figure 2: Existing environmental condition of the selected land

Definition of Project Area *(The geographical extent of the project & areas affected during construction)*	Eight GN divisions from these 3 DS divisions are actively engaged with passion fruit cultivation and one common location was selected to construct the processing center. All these farmers from 8 GN divisions namely Akkarayan, Skandapuram, Unionkulam, Mudkompan, Vannivilankulam, Ampalpuram, Therankandal, and Yogapuram will take the benefits from the proposed processing center and it will be constructed in the Akkarayan GN division which belongs to the Karachchi DS division. As a greater number of farmers are engaged in passion production in Kilinochchi, the collection center is thus located in Kilinochchi. However, it will also process the produce from Mullaitivu in this center. A bare land slot of 0.5 Acre has allocated for this Passion Fruit Processing Centre. Adjoining to the particular land there is a filling station and it is around 90m away from the selected location. The site is located 200m away from the Akkarayankulam Junction and Akkarayan police station is also located in the junction itself. North of the selected land is bound to the main road and filling station is bound to western while southern & eastern bound to bare lands. The main income sources are crop cultivation and livestock rearing. In the GN division, there are lands cultivated under major and minor irrigation schemes and rainfed. Under the major irrigation, 1330 Acres are being cultivated in the last Maha season. Further, 110 Acres were cultivated under the minor tanks, and under the rainfed condition, 110 acres were cultivated in the division. The families in the GN division have neat cattle, buffalos. Goats and poultry as livestock. Most of these adjacent lands are used to cultivate groundnuts, chili, and vegetables. Perennial crops such as coconut and Mango are also found. Permits/deeds were available for all farmers and No features appeared in the 50 m boundary of the selected land. Closest main structure is filling station and it is

	around 90 m away from the selected land. Figure 3 shows the boundaries of the selected land and the 50 m surrounding boundary.  ***Figure 3: Selected land and the 50m Surrounding boundary***
Adjacent land and features	According to the available information of Kilinochchi district, a major component of the land extent is of dense forest which is 20.1% of the total, secondly for paddy cultivation which is 19% and thirdly as for cultivation of other crops 14.9%. When the total extent of Kilinochchi District is considered, 97.4% consists of land area while 2.6% is internal reservoirs. 50.6% of the total extent of the district comprised cultivated land, 24.4 of uncultivated land, and 25% forest cover. The proposed location is in the Akkarayan GN division which belongs to the Karachchi DS division. The proposed land is a bare land and it belongs to the department of agriculture. A filling station is in the adjacent land of the proposed site and it is around 90m away from the selected location. Further, the Akkarayan police station is around 120 m away from the selected land. East & south of the land is bounded to bare lands and none of sensitive environmental features are found. The closest farmland is around 80 m away and most of these adjacent lands are used to cultivate groundnuts, chili, and vegetables. Perennial crops such as coconut and Mango are also found. Permits/deeds were available for all farmers and No main structures were found other than houses near the project area.

3. PROJECT JUSTIFICATION

Need for the project (*What problem is the project going to solve*)	About 100 farmers in Kilinochchi and another 50 farmers in Mullaitivu have commenced passion fruit cultivation in the year 2020. About 100 mt have so far been sold or supplied to Cargills (Pvt) Ltd and other collectors. As both producer societies do not have a collection centre of their own, producer groups have to visit each member's field and collect their produce for sale. Further, in this instance producer groups sells the product without grading. If they were able to collect at one place, they will be able to grade it and sell it at a higher price than at present. Thus, a collection centre is necessary for the members to bring their produce to one location and do the value addition like grading, packing, etc. before disposal In the past one-year period, producer groups sold their raw produce ranging from Rs 50 to Rs 120 per kg. Thus, there is a high-income fluctuation for farmers. During high heat and festivals periods, they fetched very high prices. Again, in rainy and also in lockdown periods prices fell far below, and sometimes they could not even dispose

	of their products and were allowed to go to waste. If the producer group can do some initial processing like extracting the pulp from fruit and keep it under refrigerator condition until the next peak price period, they will be able to get higher income. Thus, processing the excess produce during the glut period is very essential for the producer groups to get higher margins for their membership. As a greater number of farmers are engaged in passion production in Kilinochchi, the collection centre is thus located in Kilinochchi. However, it will also process the produce from Mullaitivu in this centre. In the same collection centre, a processing unit consisting of fruit pulp extraction, sterilization, packing, and storage equipment will be established to cater to the above need.
Purpose of the project (*What is going to be achieved by carrying out the project*)	Passion fruit processing centre under the ASMP project in Karachchi is driven to achieve the below objects. a) To introduce machinery to improve the quality of Passion fruit b) To provide storage facilities prior to releasing to the market c) To introduce various value-added products to the market d) To increase direct marketing opportunities Simply, the ultimate purpose of the overall project is to have sustainable income generation by agricultural activities. About 100 farmers in Kilinochchi and another 50 farmers in Mullaitivu have commenced passion fruit cultivation in the year 2020. About 100 mt have so far been sold or supplied to Cargills (Pvt) Ltd and other collectors. The collection centre is expected to be located in the Akkarayan GN division in Kilinochchi district which is closer to other GN divisions including the GN divisions of the Mullaitivu district. As a greater number of farmers are engaged in passion production in Kilinochchi, the collection centre is thus located in Kilinochchi. However, it will also process the produce from Mullaitivu in this centre. In the same collection centre, a processing unit consisting of fruit pulp extraction, sterilization, packing, and storage equipment will be established to cater to the above need. Finally, products should have required value additions to be competitive in the market, and the proposed processing centre will full fill the requirements in different ways. Currently, direct selling is taking place, and required qualities are not possible to control by the farmers. Fruit pulp heaters, fruit pulping machines will make sure the relevant qualities are met. Wastage of these types of fruits is higher due to lack of acceptable storage conditions and providing a proper storage facility is also can be considered as a key purpose of the project. Further, different value-added products will be directly exposed to the market without any interference from intermediate buyers. In addition, the below objectives are to be achieved to increase the economy of selected farmers. • Increased the amount of individually cultivated lands of passion fruit • Young generation will be attracted to the passion fruit cultivation • Women involvement to be increased • New employment opportunities will be available with the increased cultivation
Alternatives considered (*Different ways to meet the project need*	The “site alternative” would mean the feasibility of meeting the project needs at the selected cluster. Kilinochchi and Mullaitivu have well-established farmer organizations already and the production of Passion fruit is available immediately. About 100 farmers in Kilinochchi and another 50 farmers in Mullaitivu have commenced passion fruit cultivation in the year 2020. As both producer societies do

and achieve the project purpose)	not have a collection center of their own, producer groups have to visit each membership field and collect their produce for sale. Further, in this instance producer groups sells the product without grading. If they were able to collect at one place, they will be able to grade it and sell it at a higher price than at present. Thus, a collection center is necessary for the members to bring their produce to one location and do the value addition like grading, packing, etc. before disposal. Further, If the producer group can do some initial processing like extracting the pulp from fruit and keep it under refrigerator condition until the next peak price period, they will be able to get higher income. Thus, processing the excess produce during the glut period is very essential for the producer groups to get higher margins for their membership. An attitude and market-led vision of field staff are highly acceptable. Hence, the selected area is highly supportive to meet the project needs within a short period of time with the expected quality. The "technology alternative" would mean different technology applications to meet the project needs at the selected cluster. If the producer group can do some initial processing like extracting the pulp from fruit and keep it under refrigerator condition until the next peak price period, they will be able to get higher income. Thus, processing the excess produce during the glut period is very essential for the producer groups to get higher margins for their membership. In the same collection center, a processing unit consisting of fruit pulp extraction, sterilization, packing, and storage equipment will be established to cater to the above need. However, traditional value additional post-harvesting practices will not produce high-quality competitive products to the market. The "no-action" alternative would mean that no processing centre construction by the ASMP and hence value addition and quality enhancing support for the existing cultivators in the selected area. That will lead the same agricultural activities and economy of farmers won't increase. Therefore, conventional farm practices, low productivity, low quality, and low income will continue to dominate the economy of the farmers, and the agriculture sector will not develop in Akkarayan.

4. PROJECT DESCRIPTION

Proposed start date	October 2021
Proposed completion date	June 2022
Estimated total cost	LKR 20 million
Present land ownership	Department of Agriculture, Northern Province (consent letter is attached in annexure 3)
Description of the project (*With supporting material such as maps, drawings etc. attached as required*)	Construction of passion fruit processing center is to be completed under ASMP and project location is selected to have maximum output. Kilinochchi and Mullaitivu districts already have passion fruit farmers and continuity of sustainable income is distracted due to a few difficulties. A building of 18mx 10m size will be constructed under the project to house fruit collection, grading, washing, processing activities, and also storage of both raw and processed products at the centre. The floor plan is provided by NIPHM is attached in annex 4. The equipment required for pulp extraction, sterilization, packing, and

	storage will also be procured. The floor plan of the proposed processing unit is attached in annexure 4. Currently, the project has identified farmers from 3 different DS divisions namely Karachchi, Manthai East, and Thunukkai. 8 GN divisions from these 3 DS divisions are actively engaged with passion fruit cultivation and one common location was selected to construct the processing center. All these farmers from 8 GN divisions will take the benefits from the proposed processing center and it will be constructed in the Akkarayan GN division which belongs to the Karachchi DS division. As a greater number of farmers are engaged in passion production in Kilinochchi, the collection center is thus located in Kilinochchi. However, it will also process the produce from Mullaitivu in this center. A collection center is necessary for the members to bring their produce to one location and do the value addition like grading, packing, etc. before selling. In the past one-year period, producer groups sold their raw produce ranging from Rs 50 to Rs 120 per kg. Thus, there is a high-income fluctuation for farmers. During high heat and festivals periods, they fetched very high prices. Again, in rainy and also in lockdown periods prices fell far below, and sometimes they could not even dispose of their products and were allowed to go waste. If the producer group can do some initial processing like extracting the pulp from fruit and keep it under refrigerator condition until the next peak price period, they will be able to get higher income. Thus, processing the excess produce during the glut period is very essential for the producer groups to get higher margins for their membership.

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/ Deputy Project Director – Northern Province Agriculture Sector Modernization Project Ministry of Agriculture Tel:+94 773 876 364 **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 • Great potential to increase Farmer income with less labour and inputs. • Opportunities for young generations to engage with Passion fruit cultivation with sustainable income • Effective mechanism to attract young farmers for commercial agriculture. • Almost all the farmers can compete with value-added products in the market • All farmers are waiting till completion of the project to extend the land area for the cultivation

5. DESCRIPTION OF THE EXISTING ENVIRONMENT

5.1 PHYSICAL FEATURES – ECOSYSTEM COMPONENTS	
Topography and terrain	The typical topography of the Kilinochchi district consists of undulating to rolling, mantled plains stretching down to the coast with large masses of lagoon forming the Jaffna peninsula. The area is extremely flat and low-lying terrain where elevations range from 1.0m to 3.5 m. The highest ground level is 11 m above mean sea level (AMSL). The landforms include floodplains, coastal plains, sand dunes, and beaches. The area experiences typical dry zone climate conditions of Sri Lanka. Climate is characterized by distinct wet and dry seasons. The major rainy season occurs from October to February. This period covers the Second Inter-monsoon and North-East monsoon periods. Minor rains occur during April and May during the First Inter-monsoon. Annual precipitation ranges from 696 mm to 1325 mm while the mean annual precipitation is approximately 1235 mm. The North-East monsoon rain (October to January) accounts for more than 75% ~ 80% of the annual rainfall. Despite overall lower rainfall figures, the area is located in the "DL3" Agro-climatological region. DL3 Agro-climatological region receives an average rainfall of 1300~1400 mm annually. The temperature in the area usually ranges from 26°C to 33°C. As per the records, the average temperature is 28.2 ºC, and the maximum and minimum averages are 33.3 and 21.4 °C respectively.
Soil (*type and quality*)	Kilinochchi District is located in a region with distinct geology and aquifer conditions. Phanerozoic rocks consisting of alluvial and lagoonal clay, silt and sand, and beach and dune sand characterize the coastal belt. These formations in combination with the prevalent flat terrain with minimal or no significant undulations have given rise to a very low runoff generation situation. As a result, concentrated surface flows can be observed during storm events in the area. Frequent inundation of the area during regional floods is due mainly to the rising water level in Jaffna Lagoon as a result of the rising water level. The overburdened soil in the area consists of alkali and saline soils of various textures mixed with soils formed with old alluvium soils. Akkarayankulam is located in the "DL3" Agro-climatological region. DL3 Agro-climatological region receives an average rainfall of 1300~1400 mm annually. Major soil groups of DL3 are Red Yellow Latosol; Rogosols with Flat and slightly undulating terrain. The soil is fertile and fortified with minerals which allows any kind of crop growth. The soil structure of the district is as follows: Red and Yellow lateson – 12.04%, Flat to slightly undulating terrain – 27.96%, Solarized of solo check flat terrain – 25.96%, Alluvial soil of various drainage and texture – 11.99%, Raga soil on the recent beach and dourer sand flat terrain – 17.99%, Eroded land – 04.06%.
Surface water (*Sources, distance from the site, local uses and quality*)	Five water catchments are found within the 2 km distance from the selected location and the Akkarayankulam tank is the largest among them. However, any of these will not be negatively impacted during both construction and operational stages. Closest surface water catchment is around 500 m away from the selected land and it is in high elevate than the proposed land. This catchment is not used by surrounding community and no specific usages were identified.
Ground water (*Sources, distance from the site, local uses and quality*)	In the Kilinochchi district deep confined aquifers of more than 60m deep have a relatively high recharge rate. The sedimentary limestone is highly faulted and it separates the aquifer into a series of isolated blocks, thus forming a number of separate groundwater basins. Based on field investigations, it is not possible to exactly quantify the availability, yield, and capacity within the project area. The groundwater table could be observed at 5-6m depth from the ground surface. The water table goes deeper during the dry season, however, it rises up during the rainy season. Groundwater is

	used for drinking purposes through dug wells, however, "hard water" is found in the project area. Agricultural wells are a common sight in the area which is used to extract groundwater to irrigate small areas of high-value crops or to provide a supplementary and secure source of water for the paddy crop. Closer to lagoons and the shoreline there is a possibility of contaminating groundwater with salts. The proposed construction activities and the operational activities of the passion fruit centre do not impact any of these groundwater resources negatively. However, if the proposed land requires a tube well/dug well to extract water for the construction activities or operational activities, it is required to get Water Resource Board yield report before the establishments.
Air quality (*Any pollution issues*)	Any major air pollution sources in the vicinity of the project site are not recorded. Small scale industries and traffic may cause air pollution within the area. However, https://www.breezometer.com/air-quality-map/air-quality/sri-lanka/kachchilamadu shows that the Air Quality Index (AQI US) of Akkarayan is 62/500 and $PM_{2.5}$ is the dominant pollutant.
5.2 ECOLOGICAL FEATURES – ECOSYSTEM COMPONENTS	
Vegetation (*Trees, ground cover, aquatic vegetation*)	The District has a total extent of 1,681.41 km2 of which 1,237.11 km2 is covered with land area and inland water covers an area of 444.30 km2. Out of the total land area of 132,499 ha in Kilinochchi District, 32,149.2 ha is covered by Dry Monsoon Forest, while 5026.6 ha and 424.0 ha are under sparse forests and mangrove according to forest cover assessment of the Forest Department in 1,999 (Forest Department, 2016). The coverage under forests is 37,599.8 ha (28.4%) of the total land area. There are two wildlife-protected areas in Kilinochchi District under two different conservation statuses namely, National Parks and Nature Reserves. None of these are captured within a 500m radius from the proposed location. However, in particular to the site and its 50m radius, the vegetation is just limited to few Palu trees and few thorn bushes including Wewal plants.
Presence of wetlands	Geographically Kilinochchi District could be categorized as flat with less than 10%v slope. There are 4 major, 5 medium, and 394 minor tanks all over the District connected to conserve rainwater. When the total extent of Kilinochchi District is considered, 2.6% is internal reservoirs. There are 3 tanks found within a 1 km distance from the selected project location and the Akkarayankulam tank is the largest among them. Further, canals cascading through the Akkarayankulam tank are found. There is a small tank within a 500m radius from the selected location and any anticipated negative impacts were not identified.
Fish and fish habitats	There are two Agrarian service Centres in the Kilinochchi district. One such service centre is located in Akkarayankulam and it is providing services to its members. Inland fisheries are also promoted in perineal and seasonal water bodies by stocking species very popular and having demand in the south. The fishermen in the division have formed a fisheries co-operative society and this organization is providing required services to fishermen and benefiting them in all aspects. There are possibilities for inland fishing development in Major Tanks. The fishing sector takes an important place in generating employment opportunities and income facilities for a considerable number of families in this district. Akkarayankulam tank and associated waterways can be identified as fish habitats around the selected area. The reservoir provides important habitats for a wide range of species including migratory birds and waterfowl, amphibians, and fish. Any of these will not be affected during both the construction stage and the operational stage of the proposed centre.

Birds (*waterfowl, migratory birds, others*)	The Akkarayankulam Tank and associated vegetation, natural scrublands, and abandoned paddy fields can be potential bird habitats including migratory birds. Many large birds such as owls, eagles, and hawks hunt rodents. Also, aquatic bird species such as cranes, storks, and herons feed on insects and crabs that pose a threat to rice production.
Presence of special habitat areas (*special designations and identified sensitive zones*)	There are significant amount of Forest Reserves (shrub Forest) in Akkarayankulam, Skanthapuram and Konavil GNDs and not falling within 500m radius of the land. However, forest reserves will be there within 2km radius from the site. There are no Wildlife protected areas located in closer distance to the Site. The selected project area has not been identified as a special habitat area. However, the Akkarayankulam tank provides important habitats for a wide range of species including migratory birds and waterfowl, amphibians, and fish. Many of these species also comprise a large part of the daily nutritional intake. The tanks also benefit neighbouring farmers by providing a habitat for bio-control agents, which consume pests such as insects, crabs, and rodents. The surrounding canals also provide a habitat for a variety of flora. The Akkarayankulam tank is 1.2 Km away from the proposed project location and anticipated negative impacts were not identified.
5.3 OTHER FEATURES	
Residential/Sensitive Areas (*E.g., Hospitals, Schools*)	Commonly, there are few churches are found and two of them are within 1 Km distance from the proposed location. The closest school is called Eeswaran Vidyalayam and it is around 865m away from the proposed project location. However, there are few public service offices such as the Police station, Hospital, Agrarian services centre and filling station are within 1 Km distance from the selected location.
Traditional, economic and cultural activities	There are 42 Grama Niladhari divisions in the Karachchi DS division. Akkarayanklam GN is one of the 42 GN divisions selected for the Agriculture Sector Modernization Project (ASMP). GN division number is KN/05 and bounded by Skandapuram GN (KN/04) in the West, Konavil GN division (KN/06) in the North, Malayalapuram GN division (KN/09) in the East and Mullaithivu district border in the South. There are six villages in the GN division, and the highest population is in Puthumurripu village, and the least population is in Salomnagar village. The total number of families in the GN division is 787 and the number of members is 2,460. The average size of the family is a little more than 3 and the male-female ratio is 0.485. The female population in the GN division is more than the male population. The majority of families are Tamils. Out of the 787 families, 99.5% of them are Tamils and only 4 families are Sinhalese. Religious wise composition of the GN division population is 402 families Hindus, 381 families Christians, and 4 families Buddhist. In other words, 54.7% of the population is Hindus 45.o% are Christians and the remaining population is Buddhists. Out of the total of 787 families 181of they are women-headed families and there are 13 differently able children in the division. The main income sources are crop cultivation and livestock rearing. In the GN division, there are lands cultivated under major and minor irrigation schemes and rainfed. Under the major irrigation, 1,330 Acres are being cultivated in the last Maha season. Further, 110 Acres were cultivated under the minor tanks, and under the rainfed condition, 110 acres were cultivated in the division. The families in the GN division have neat cattle, buffalos. Goats and poultry as livestock. In the year 2020, the milk collected in the division was 60,525 litters. Around 255 people are employed and getting salary income. However, major income sources are crop farming and livestock rearing. Moreover, there are 19 civil pensioners, two teachers,

	and nine W&OP pensioners getting monthly income for the services they have done prior to retirement. There are two schools namely Akkarayankulam MV and Akkarayankulam primary schools in the GN division. Akkarayankulam MV is a 1AB type school having classes from year 6 to year 13. The total number of students in this school is 687 with 353 males and 334 females. The number of teachers is 41 and the students' staff ratio is 16.76. In primary school, the total number of students is 142 and the male students are 78, and female students are 64. There are 8 teachers, and the student-staff ratio is 17.75. It is a type III school with classes from year 1 to ear 5. These schools have open wells, tube wells, water tanks, male, female, and teacher's toilets. Two registered pre-schools are functioning with two teachers and 32 students. There is a District Hospital in Akkarayankulamn with 86 beds and a required number of doctors, nurses, and other staff. The average duration of stay of a patient is 1.33 days and the bed occupancy rate is 13.46. Nearly 110 families have access to common and water seal toilets and there is a need for toilets to improve sanitary conditions. There are two Agrarian service Centres in the Kilinochchi district. One such service centre is located in Akkarayankulam and it is providing services to its members. Inland fisheries are also promoted in perineal and seasonal water bodies by stocking species very popular and having demand in the south. The fishermen in the division have formed a fisheries co-operative society and this organization is providing required services to fishermen and benefiting them in all aspects. Farmers have 12 registered Farmer Organizations (FO) consisting of 817 female and 1,626 male members. These organizations are assisting the farmers to obtain seeds, fertilizer at subsidized prices, and other services provided by the Government. Nearly 771 houses have access to electricity but still, there are 50 odd houses to be connected to the main electricity grid. Few small-scale trading centres and businesses places such as hardware shops, fancy shops, food shops, telephone repair shops, cycle repair shops, and computer repair shops are available in the division. Moreover, Community organizations such as RDS and WRDS are actively engaged in community activities. There are four RDS and four WRDS societies working with Government support and supervision for the development of the division. Government officers like GN, SDO, and EDO are attached to the GN division assisting the rural organization. In addition, there is a youth club, two sports clubs, and a cultural organization involving people in social activities and enhancing social harmony. There are three Hindu Temples and seven Christian Churches in the GN division. There are four community centres functioning as small libraries providing newspapers for reading and space for gathering, and five Samurdhi small groups encouraging savings among members, and one Samurdhi bank in the division. Both men and women are actively participating in these community organizations.
Archaeological resources (*Recorded or potential to exist)*	Figure 1 shows the archaeological resources of the northern province. As per the map, there are 11 archaeological reserves found in the Kilinochchi district. Further, ancient history begins with the identification of Iranaimadu as the starting point of the first human inhabitation. At that time, the people of the District were doing Agriculture, Fishing, hunting, and livestock also they had the saving habit of the above at the same time. There are four major irrigation tanks including Iranaimadu, five Medium Tank and a minor irrigation tank are available in this district and it's believed that the people who lived here had the knowledge of technique and culture of arts. As the Historical reputation of the District, Uruththirapuram Sivan Temple, Pulyampokkanai Nagathampiran Temple, Mannitthalai St. Antony's Church,

	Paalaitivu St. Antony's Church, Ponnaveli Sivan Temple, and Poonagary fort, and Iyakkachchi fort are being situated. The proposed construction activity is close to a few churches and no archaeological reserves were found.

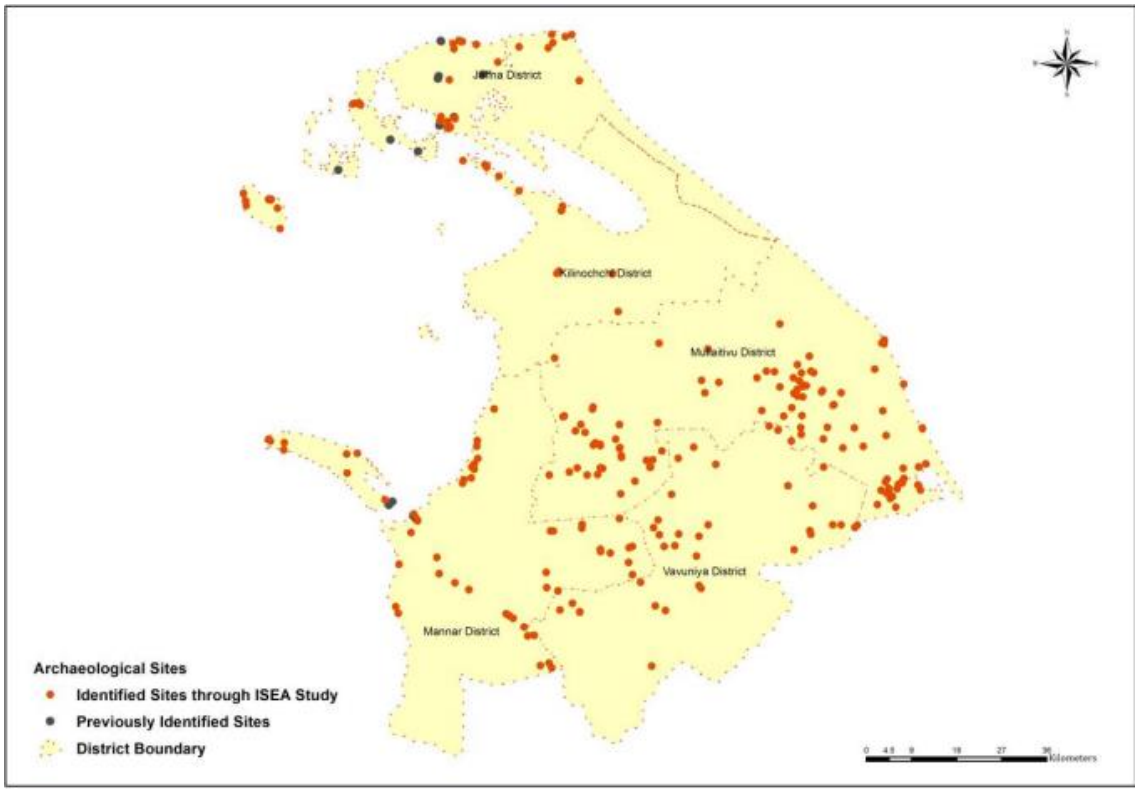


Figure 1: Archaeological Reserves in Northern Province

6. PUBLIC CONSULTATION

The consultation was held with the support of the project director, project engineer, agricultural scientist of the Northern Province, and the project coordinator of the selected DS division. Overall project implementation and future plan were discussed with them and deep level information was collected. They were trying hard to construct the processing centre as soon as possible to the beneficiaries.

Farmer gatherings were not conducted due to the pandemic situation. However, on-field discussions were conducted with benefitted farmers while ensuring COVID 19 safety precautions. The conclusion of the consultation was clear, and it was to construct the processing centre immediately. Further, the following comments were taken during the discussions held with farmers in the selected area. The summary of public consultation is shown below:

Name	Details	Matter Discussed/ Suggestions

M. Rasaiya	is 75 years old farmer who has 5 acres of permit farmland	Only a part of the land is cultivated twice a year using open well & tube well water. The current water level of the open well is around 20 feet below the ground level. Currently, he has 0.5 acres of passion fruit cultivation and selling the fruits to an intermediate buyer. Hence, eagerly looking to have the proposed passion fruit processing center to get the maximum economic benefits. He is not happy with the current market price of passion fruit and waiting to put collective effort through the farmers who are engaging with the processing center. Passion fruits, Dry chili, and Mango are the main crops he is entitled to, and livestock farming is also continuing with the cultivation activities.
S. Yogalingam	59 years old S. Yogalingam has four family members including himself and he is having around 1 acer of passion fruit cultivation	He is having a total of 3 acres of permitted farmland and water is used from the tube well. However, he is using drip irrigation technology for passion fruit cultivation, and weekly around 100kg of passion fruits are produced to the local market. Manual weeding is used once in two months and compost fertilizers are used for the crops. Only two seasons are cultivated with the rest of the crops. Market accessibility is his main concern and he assumes that direct buyers will come to the processing center.
S. Karunananthan	Is a 55 years old farmer having 5 family members including himself?	He has 2 acres of permit lands and only a 0.5-acre land slot is used to cultivate the passion fruits. Water is used from both open well & tube well. The rest of the land is used to cultivate banana & coconut and a few common seasonal crops.
S. Mayutharan	Is a 38 years older farmer having 5 family members including himself?	He is also having 2 acres of permit land and only a 0.5-acre land slot is used to cultivate the passion fruit. The rest of the land is used to cultivate seasonal vegetables along with coconut. Water is used from an agro well and waiting to extend the passion fruit cultivation with the expected benefits out of the processing center. Livestock farming is also continuing with the cultivation activities. He will be a key person managing farmer organization activities at the processing center as well.
K. Thayagaran	Has 4 family members including himself and he is having 2.5 acres of farmland including 0.5 acres of passion fruit land.	Tube well water is used for the cultivation and manioc and groundnut are the main crops cultivated apart from the passion fruit. He is also waiting to extend the cultivation up to full land (3 acres) per season with the completion of projects.

- **Existing issues due to an unavailability of a processing centre**

During high heat and festivals periods, they fetched a very high price. Again, in rainy and also in lockdown periods prices fell far below, and sometimes they could not even dispose of their products and were allowed to go waste. If the producer group can do some initial processing like extracting the pulp from fruit and keep it under refrigerator condition until the next peak price period, they will be able to get higher income. Thus, processing the excess produce during the glut period is very essential for the

producer groups to get higher margins for their membership. If they were able to collect at one place, they will be able to grade it and sell it at a higher price than at present. Thus, a collection center is necessary for the members to bring their produce to one location and do the value addition like grading, packing, etc. before disposal

- **Direct access to the market**

As both producer societies do not have a collection center of their own, producer groups have to visit each membership field and collect their produce for sale. Further, in this instance producer groups sells the product without grading. In the past one-year period, producer groups sold their raw produce ranging from Rs 50 to Rs 120 per kg. Thus, there is a high-income fluctuation to farmers and farmers looking to have a higher and stable price in the future.

Concerns were raised from beneficiaries that they are not competent enough to challenge the current market with the existing quality of the fruit. Less damaged, and fresh-looking passion fruit is having a high price at the market and that is to be obtained from the freezers. Further, they will be exposed to the market as a united farmer organization and it will reduce the high price fluctuation with the higher bargaining power. Different value-added products of passion fruit will be readily available for the market and intermediate buying will be reduced.

- **Expansion of Passion fruit cultivation**

With the availability of high-quality value-added products in hand, farmers will get economic benefits by directly engaging with the local market. There is a list of benefits that will be there to attract the cultivation of Passion fruit and value addition to the end product at the proposed processing centre will make sure the high-quality product is in the market at a higher price. This will increase the income of farmers and more engagement is expected.

- **Failure on export market**

One of the main objectives of the project is to full fill the local market-based production and doubt were highlighted that what will happen if local market demand is lower than the supply. Are there any options available in the local market for excessive production?

Figure 2: Current compost fertilizer production practices

Figure 3: Public Consultations

7. ENVIRONMENTAL EFFECTS AND MITIGATION MEASURES

7A. SCREENING FOR POTENTIAL ENVIRONMENTAL IMPACTS

	Screening question	Yes	No	Significance of the effect (Low, moderate, high)	Remarks
1	Will construction and operation of the Project involve actions which will cause physical changes in the locality (topography, land use, changes in water bodies, etc.?)	√		Low	Construction will take place on bare land. The construction activities will slightly change the topography and will have an impact on the natural drainage patterns of the locality. Debris/unsuitable excavated or clearing material should not be disposed of improperly. It is required to have an approved drainage plan by the local authority before commencing the construction activities.
2	Will the Project involve use, storage, transport, handling or production of substances or materials which could be harmful to human health or the environment or raise concerns about actual or perceived risks to human health?	√		**Low**	In terms of the construction of the building will have substances that could harm human health and the environment such as cement? During the construction transport of material and construction activities including vegetation removal, site preparation, and material piles will emit dust and fugitive particles. However, as the affected area is small, and mitigation is straightforward; therefore the significance of the effect can be considered as low.
3	Will the Project produce solid wastes during construction or operation?	√		**Low**	During the construction of the building, excavated material and debris will be generated and the contractor is responsible to manage this waste properly until it is disposed of properly. Solid waste collected on the site should be disposed of by the contractor himself at a suitable location. During the operation, solid waste will be generated such as residual crops from the value addition process. Since it is an operation centre having machinery, there will be disposable machinery or related parts with less frequency. Solid waste collected on the site should be disposed of by the farmer via an approved local authority.
4	Will the Project release pollutants or any hazardous, toxic or noxious substances to air?		√		No any chemical or any hazardous substance use anticipated.

	Screening question	Yes	No	Significance of the effect (Low, moderate, high)	Remarks
5	Will the Project cause noise and vibration or release of light, heat energy or electromagnetic radiation?	√		**Low**	During the construction of the processing centre, noise and vibration impacts can be anticipated. Site clearing, excavation, backfilling, compaction, loading, and unloading of materials are potential sources of noise and vibration during construction. Further, Noise and vibration impacts can be anticipated during operational activities of the processing enter.
6	Will the Project lead to risks of contamination of land or water from releases of pollutants onto the ground or into surface waters, groundwater or coastal wasters?	√		**Low**	Wash offs from material stockpiles, sedimentation of surface waterways.
7	Will the project cause localized flooding and poor drainage during construction Is the project area located in a flooding location?	√		**Low**	Selected land is a bit sloped towards the road and it is a waterlogging area during the rainy season. The exact construction point is a bit higher but there will be minor issues if natural drainage along with the canal got distractions due to construction activities.
8	Will there be any risks and vulnerabilities to public safety due to physical hazards during construction or operation of the Project?	√		**Low**	All the safety measures deployed in "Best Engineering Practices" need to be adopted during the construction period. Safety issues in terms of injuries due to construction work, using heavy machinery could be anticipated. However, such incidences can be avoided with proper precautions exercised on health and safety aspects.
9	Are there any transport routes on or around the location which are susceptible to congestion or which cause environmental problems, which could be affected by the project?		√		Selected location is adjacent to the main road. But there won't be any impact during the construction stage
10	Are there any routes or facilities on or around the location which are used by the public for access to recreation or other facilities, which could be affected by the project?		√		Selected location is adjacent to the main road. But there won't be any impact during the construction stage.

	Screening question	Yes	No	Significance of the effect (Low, moderate, high)	Remarks
11	Are there any areas or features of high landscape or scenic value on or around the location which could be affected by the project?		√		No areas or features with high landscape or scenic value on or around the location.
12	Are there any other areas on or around the location which are important or sensitive for reasons of their ecology e.g. wetlands, watercourses or other water bodies, the coastal zone, mountains, forests which could be affected by the project?		√	**Low**	No important or sensitive areas on the project location are affected by the project.
13	Are there any areas on or around the location which are used by protected, important or sensitive species of fauna or flora e.g. for breeding, nesting, foraging, resting, migration, which could be affected by the project?		√		
14	Is the project located in a previously undeveloped area where there will be loss of green field land	√			Bare land slot is used for the construction and clearing of vegetation is required.
15	Will the project cause the removal of trees in the locality?		√		No removal of trees required during construction
16	Are there any areas or features of historic or cultural importance on or around the location which could be affected by the project?	√		**Low**	Akkarayan Methodist church is around 375m away from the selected location.
17	Are there existing land uses on or around the location e.g. home gardens, other private property, industry, commerce, recreation, public open space, community facilities, agriculture, forestry, tourism, mining or quarrying which could be affected by the project?	√		**Low**	A filling station is in the adjacent land of the construction of the processing centre and it is around 90m away from the selected location. Further, Akkarayan police station is next to the filling station
18	Are there any areas on or around the location which are densely populated or built-up, which could be affected by the project?	√		**Low**	Closest built up is the filling station. No densely populated or built-up areas affected by the project.

	Screening question	Yes	No	Significance of the effect (Low, moderate, high)	Remarks
19	Are there any areas on or around the location which are occupied by sensitive land uses e.g. hospitals, schools, places of worship, community facilities, which could be affected by the project	√		**Low**	The filling station is 90m away from the location while the police station is around 130m away. Further, Akkarayan Methodist church is around 375m away from the selected location while Akkarayan hospital is 650m away from the selected land.
20	Are there any areas on or around the location which contain important, high quality or scarce resources e.g. groundwater, surface waters, forestry, agriculture, fisheries, tourism, minerals, which could be affected by the project?		√		3 tanks are within 1 km distance and closest tank is around 500m away. Anticipated impacts are not found.
21	Are there any areas on or around the location which are already subject to pollution or environmental damage e.g. where existing legal environmental standards are exceeded, which could be affected by the project?		√		No any location where any environmental standards exceeded or have environmentally polluted.

7B. Environmental Management Plan

Contractor's responsibility for mitigating adverse environmental issues raised during agricultural activities

SN	Potential Environmental Impacts and Risk Level	Key project activities causing the impact	Mitigation Measures proposed and action to be implemented by the Contractor
1	Public complaints and lack of community support for the project implementation	• Information Disclosure among Stakeholders • Community Outreach activities including training	• Discussions should be conducted with the beneficiary farmers including women, and youth • The beneficiary farmers selection based on the criteria which were developed at stakeholders meeting and identifying of beneficiary farmers were undertaken transparently • Residents in the area will be briefed on the project, purpose and design, and outcomes with a comprehensive discussion • Communication and training activities focusing on women, youth, and farmers who are poor in communication • The contractor should take note of all impacts, especially temporary issues and safety hazards that will be of concern to the cropping pattern of the farmers. All possible impacts will be mitigated as stipulated in the EMP to mitigate them • The contractor will maintain a log of any grievances/complaints and actions are taken to resolve them • A copy of the EMP should be available at all times at the project supervision office on site
2	Spreading COVID 19 virus	• All activities	• The contractor must ensure that all workers, including managers are well trained on COVID 19 safety precautions published by health ministry. • Follow Interim Guidelines on COVID-19 issued by the WB for Construction activities (Annexure 5)
4	Exposing and damaging of physical cultural resources (PCR)	• Site preparatory work • Vehicle and machinery movements	• Upon discovery of physical cultural material during project implementation work, the following should be carried out • Immediately stop construction activities • With the approval of the resident engineer delineate the discovered site area. • Secure the site to prevent any damage or loss of removable objects. In case of removable antiquities or sensitive remains, a night guard should be present until the responsible authority takes over. • Through the Resident Engineer, notify the responsible authorities, the Department of Archaeology, and local authorities within 24 hours. • Submit a brief chance to find the report, within a specified time period, with the date and time of discovery, location of discovery, description of finding, estimated weight and dimension of PCR, and temporary protection implemented.

SN	Potential Environmental Impacts and Risk Level	Key project activities causing the impact	Mitigation Measures proposed and action to be implemented by the Contractor
			• Responsible authorities would be in charge of protecting and preserving the site before deciding on the proper procedures to be carried out. • An evaluation of the finding will be performed by the Department of Archaeology who may decide to either remove the PCR deemed to be of significance, further excavate within a specified distance of the discovery point and conserve on-site, and/or extend/reduce the areas demarcated by the contractor, etc. This should ideally take place within about 7 days. • Construction work could resume only when permission is given from the Department of Archaeology after the decision concerning the safeguard of the heritage is fully executed.
5	Spreading of Invasive Alien Species	• Vegetation clearing • Material transportation • Desilting	• Close monitoring of transportation, storage of borrowing material for the spread of any invasive species must be done. • Vehicles should be covered during transportation of cleared vegetation to and from the construction site. • Borrow material to be brought from properly identified borrow pits and quarry sites, the sites should be inspected in order to ensure that no invasive plant species are being carried with the burrowing material. • Washing the vehicles should be conducted periodically to prevent carrying any invasive species • The construction site should be inspected periodically to ensure that no invasive species are establishing themselves at the site. • Good housekeeping
6	Noise Pollution & Vibration that can affect nearby structures	• Operation of equipment and machinery. • Material storage and transport • Use of hammer type pile driving will generate high noise and vibration.	• Working time for noise/vibration generation activities should be restricted and carried out only from 6.00 am to 6.00 pm. • All equipment and machinery should be operated of noise not to exceed 75 dB (during construction) as practical as possible. Regularly maintenance of all construction vehicles and machinery to meet noise control regulations stipulated by the CEA in 1996 (Gazette Extra Ordinary, No 924/12). If the construction activities happen during the night-time, it is necessary to maintain the noise level at below 50 dB. • Use of mechanically driven saw blades for tree felling will make the noise levels restricted to only a short period of time. • Construction equipment and machinery should be maintained in good condition. The contractor shall submit the list of high noise/vibration generating machinery & equipment to the PE for approval

SN	Potential Environmental Impacts and Risk Level	Key project activities causing the impact	Mitigation Measures proposed and action to be implemented by the Contractor
7	Air Pollution including dust generation that can affect nearby vegetation and households	• Site Preparation activities setting up of material storage yards, and removal of vegetation • Transport of construction material and storage on site	• In the construction method statement, the contractor should clearly designate areas for maintaining material stockpiles, waste stockpiles, labor camps, and vehicle maintenance yards. These dust-emitting sources should be located away from human activity and natural drainage paths as much as possible. • All heavy equipment and machinery shall be fitted in full compliance with the national and local regulations. • Stockpiled soil and sand shall be slightly wetted before loading, particularly in windy conditions. • The site should be wetted at least 2/3 times a day during dry weather to keep dust levels low. • Vehicles transporting soil, sand, and other construction materials shall be covered. Limitations to the speeds of such vehicles are necessary. Transport through densely populated areas should be avoided. • Regular and proper maintenance of construction vehicles and machinery to avoid air emissions. • There should be no burning of wastes on-site. • Until removal to arranged disposal sites, waste from demolition shall be held stockpiled in a place with minimal interference with local drainage paths and obstruction to traffic, local residents.
8	Solid Waste Disposal	• Site clearing • Construction waste • Waste from labour resting areas	• The contractor shall make a list of all types of waste resulting from the construction activity, and obtain direction from the LA on possible disposal sites for each waste type. • Any hazardous type of waste shall be dealt with special care and instructions from the LA. • The contractor shall document all types and quantities of waste generated and removed from the site and the disposal locations. • The contractor shall remove waste from the site each day and dispose of the waste in the LA approved site/s.
9	Blocking of surface drainage paths leading to localized flooding and ponding of water	• Site Preparation including provision of access roads, material/waste piles	• Until transported out to arranged disposal sites, debris and waste from site preparation work and desilting shall be stockpiled in a place with minimal interference with local drainage paths and obstruction to traffic and local residents. The contractor shall identify areas for stockpiling material and waste. • The stockpiles should be suitably covered to minimize wash-offs to nearby waterways. • If impacts to surface drainage cannot be avoided leading to ponding of rainwater and inconvenience to people, the contractor must provide an adequate surface drainage system to safely remove water from the site to the canal to avoid on-site ponding or flooding. • Proper planning to avoid construction during the rainy season.

SN	Potential Environmental Impacts and Risk Level	Key project activities causing the impact	Mitigation Measures proposed and action to be implemented by the Contractor
			• Preventing total blockage of streams / providing alternative drainage paths during construction. • It is required to have an approved drainage plan by local authority before commencing the construction activities.
10	Public/occupational safety hazard	• Site clearing, storage of equipment, material etc. • Increased traffic of heavy vehicles for material transportation • Noise and vibration of construction machinery	**Training** 1. The contractor must ensure that all workers, including managers, are trained on occupational health and public safety risks and mitigation measures for the site, prior to commencement of construction. **Personal Protective Equipment** 2. All workers will be provided with necessary PPEs (basic should include a safety helmet, protective footwear, and high visibility jackets). 3. In addition, the contractor shall maintain in stock at the site office, gloves, ear muffs, goggles, dust masks, safety harness, and any other equipment considered necessary. 4. A safety inspection checklist should be prepared to take into consideration what the workers are supposed to be wearing and monitoring. **Site Delineation and Warning Signs** 5. The entire construction site should be delineated using devices such as cones, lights, tubular markers, orange and white stripes, and barricades to inform oncoming vehicular traffic and pedestrians in the area about work zones. 6. All digging and installation work items that are not accomplished should be isolated and warned of by signposts and flash lamps in the nighttime. 7. Dangerous warning signs should be raised to inform the public of particular dangers and to keep the public away from such hazards. 8. Trenches should be progressively rehabilitated once work is completed. 9. Overloading of vehicles with materials should be controlled 10. Construction wastes should be removed as much as possible within 24 hours from the site to ensure public safety. 11. The safety inspection checklist must look to see that the delineation devices are used, whether they are appropriately positioned if they are easily identifiable, and whether they are reflective. **Equipment safety**

SN	Potential Environmental Impacts and Risk Level	Key project activities causing the impact	Mitigation Measures proposed and action to be implemented by the Contractor
			12. Work zone workers use tools, equipment, and machinery that could be dangerous if used incorrectly or if the equipment malfunctions. Inspections must be carried out to test the equipment before it is used so that worker safety can be secured. Inspections should look for evidence of wear and tear, frays, missing parts, and mechanical or electrical problems. **Emergency Procedures** 13. An emergency aid service must be in place at the worksite. 14. During health and safety training, site staff should be properly briefed as to what to do in the event of an emergency, such as who to notify and where to assemble in an emergency. This information must be conveyed to employees by the site manager on the first occasion a worker visits the site. **Construction camps** 15. Construction camps should have adequate sanitation facilities for construction workers to control the transmission of infectious diseases. 16. Avoid housing workers in camps and provide socio-economic benefits locally by employing local people. If there is no alternative to employing workers from elsewhere, locate accommodation camps away from communities on land acquired from willing sellers. Provide labor camps with adequate sanitation, waste disposal, and health facilities according to labor laws. Clear work campsites after use and reinstate vegetation. Conduct programs to raise worker awareness of HIV/AIDS. **Information management** 17. Develop and establish the contractor's own procedure for receiving, documenting, and addressing complaints from the affected public and nearby communities. 18. Provide advance notice to local communities by way of information boards or leaflets about the schedule of construction activities, interruption to services and access, etc.
11	Damage to Flora and Fauna	• Vegetation clearing	• Speed limits and operating times for the construction vehicles should be imposed. • Due consideration should be given to carefully clearing of vegetation avoiding the destruction of habitats of fauna. • The de-silted matter shall immediately be disposed of off to pre-decided disposal sites.

SN	Potential Environmental Impacts and Risk Level	Key project activities causing the impact	Mitigation Measures proposed and action to be implemented by the Contractor
			• The contractor will take reasonable precautions to prevent workmen or any other persons from removing and damaging any flora (plant/vegetation) and fauna (animal) including fishing in any water body and hunting of any animal. • If any wild animal is found near the construction site at any point of time, the contractor will immediately upon discovery thereof acquaint the Engineer and carry out the Engineer's instructions for dealing with the same. • The Engineer will report to the nearby Forest Department /Department of Wild Life Conservation (range office or divisional office) and will take appropriate steps/ measures if required in consultation with the forest officials. • It is recommended to do the project work in day time only.
12	Soil erosion, sedimentation of nearby waterbodies and low-lying areas	• Construction work • Removal of topsoil • Vegetation clearance	• Soil stockpiles and other construction material should not be placed within the bed or banks of the tanks or canal. • Installing and maintaining permanent erosion and sediment control measures such as silt traps to avoid sediment runoff into the tank and nearby waterways. • It is required to have an approved drainage plan by the local authority before commencing the construction activities.
Post construction phase			
14	Clearing/Closure of Construction Site/Labour Accommodations		• Contractor to prepare site restoration plans for approval by the engineer. The plan is to be implemented by the contractor prior to demobilization. This includes burrowing sites and storage yards as well • On completion of the works, all temporary structures will be cleared away, all rubbish cleared, excreta or other disposal pits or trenches filled in and effectively sealed off and the site left clean and tidy, at the contractor's expenses, to the entire satisfaction of the engineer.
15	Solid waste	• Operational stage passion fruit related organic waste, general household waste & machinery parts.	• Any hazardous type of waste shall be dealt with special care and instructions from the LA. • The farmer societies shall document all types and quantities of waste generated and removed from the site and the disposal locations. • The farmer societies shall remove waste from the site each day and dispose of the waste in the LA-approved site/s.

SN	Potential Environmental Impacts and Risk Level	Key project activities causing the impact	Mitigation Measures proposed and action to be implemented by the Contractor
16	Environmental Enhancement/ Landscaping		• Landscape plantation, including turfing shall be taken up as per either detailed design or typical design guidelines given as part of the Bid Documents. • The contactor also shall remove all debris, piles of unwanted earth, spoil material, away from the site and disposed at locations designated or acceptable to the Engineer or as per the stipulated waste management criteria of this EMP
17	Greenhouse gas emission	• Use of electricity during processing activities (Electricity usage for machineries) • Use of refrigerant	• The farmer society shall use eco-friendly refrigerants such as HFC and HFO • The farmer society shall get recommendation for the efficient machineries by experts • Fundamental practices of electricity saving should be followed in addition to options such as use of Solar power
18	Contamination of Soil and Water Resources due to discharge of wastewater	• Discharges of wastewater	• Wastewater generate should not be discharged to outside site • Primary trapping and treatment methods can be followed

8. COST OF MITIGATION

№	Environmental mitigation measure	Cost (LKR)	Remarks
1	Information Boards, leaflets	50,000	Safety signage, awareness leaflets & COVID 19 sign boards
2	On site first aid facilities	25,000	
3	Safety equipment	150,000	Basic should include sanitizers, safety helmet, protective footwear and high visibility jackets.
4	Site delineation and barricading material and equipment	75,000	
5	Waste removal from site	35,000	Desilted material, waste from vegetation clearing, labour camps (amount is only for construction phase)
6	Drainage improvement	250,000	Provide hume pipes, culverts, drains, etc.

9. CONCLUSION AND SCREENING DECISION

Summary of environmental effects:

Assuming that all mitigation measures are implemented as proposed, the following effects can be predicted

Key project activities	**Potential Environmental Effects**	**Significance of environmental effect with mitigation in place[1]**
Material transportation and storage	Emission of dust, generation of noise and disturbance to community including farmers, and households	NS
Vegetation clearing	Clearing of vegetation will collect significant amount of waste which will lead to several environmental issues such as blockage of drainage, siltation of downstream, damage to habitats, spreading of invasive species etc.	NS
Construction of building	Emission of dust, generation of noise and disturbance to community including farmers, and households	NS
Processing activities	Solid waste generation from passion fruit related value addition and machinery parts will lead minor environmental issues. Generation of noise and disturbance to Ground nut producer farmer society building activities. Further, use of electricity will lead to the resource depletion.	NS

[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

10. EMP IMPLEMENTATION RESPONSIBILITIES AND COSTS

The overall responsibility of ensuring compliance with safeguard requirements lies with PMU while the contractor will be responsible for implementing the provisions of the EMP. In addition, the PMU will be directly responsible for reviewing the proposed design to ensure that all design-related mitigation measures mentioned herein are implemented with the support and supervision of the PMU. The overall supervision will be carried out by the in-house staff of the PMU supported by the Provincial Deputy Project Director who is responsible for the overall supervision of the proposed project. Any consequent design modification will be reflected in the project cost.

Environmental monitoring will be carried out largely through visual observations and compliance monitoring using the checklist provided in the EMF by the Provincial project engineer of the PMU and the contractor jointly. The Environmental and Social Safeguards Specialist will need to visit the site on a monthly or quarterly and report on issues and performance on EMP implementation to the PMU.

11. SCREENING DECISION RECOMMENDATION

The majority of the potential adverse effects can be classified as general construction-related impacts and can be mitigated on-site with proper engineering interventions. Designs should incorporate drainage plan to ensure storm water drainage is not disturbed properly during construction and operation. These potential impacts are temporary in nature. It is recommended to start the project work avoiding night-time work. To avoid drainage problems being created during the construction stage, it is proposed to implement an approved drainage plan by the Department of Irrigation, Northern Province, and avoid construction activities during the rainy season.

Further, it is required to obtain Environmental Protection License (EPL) Type A or B depending on the number of workers during the operation of the processing centre. Implementation of the Environmental Management Plan is sufficient to mitigate the identified impacts.

12. DETAILS OF PERSONS RESPONSIBLE FOR THE ENVIRONMENTAL SCREENING

Screening conducted and reviewed by **D.M. Sanjaya Bandara** **Environment and Social Safeguard Specialist** Agriculture Sector Modernization Project Name/Designation/Contact information	**Date** **December 2021**  **Signature**
Screening report recommended by **Dr. Rohan Wijekoon** **Project Director** Agriculture Sector Modernization Project Name/Designation/Contact information	**Date** **December 2021**  **Signature**

Annex 1: List of References

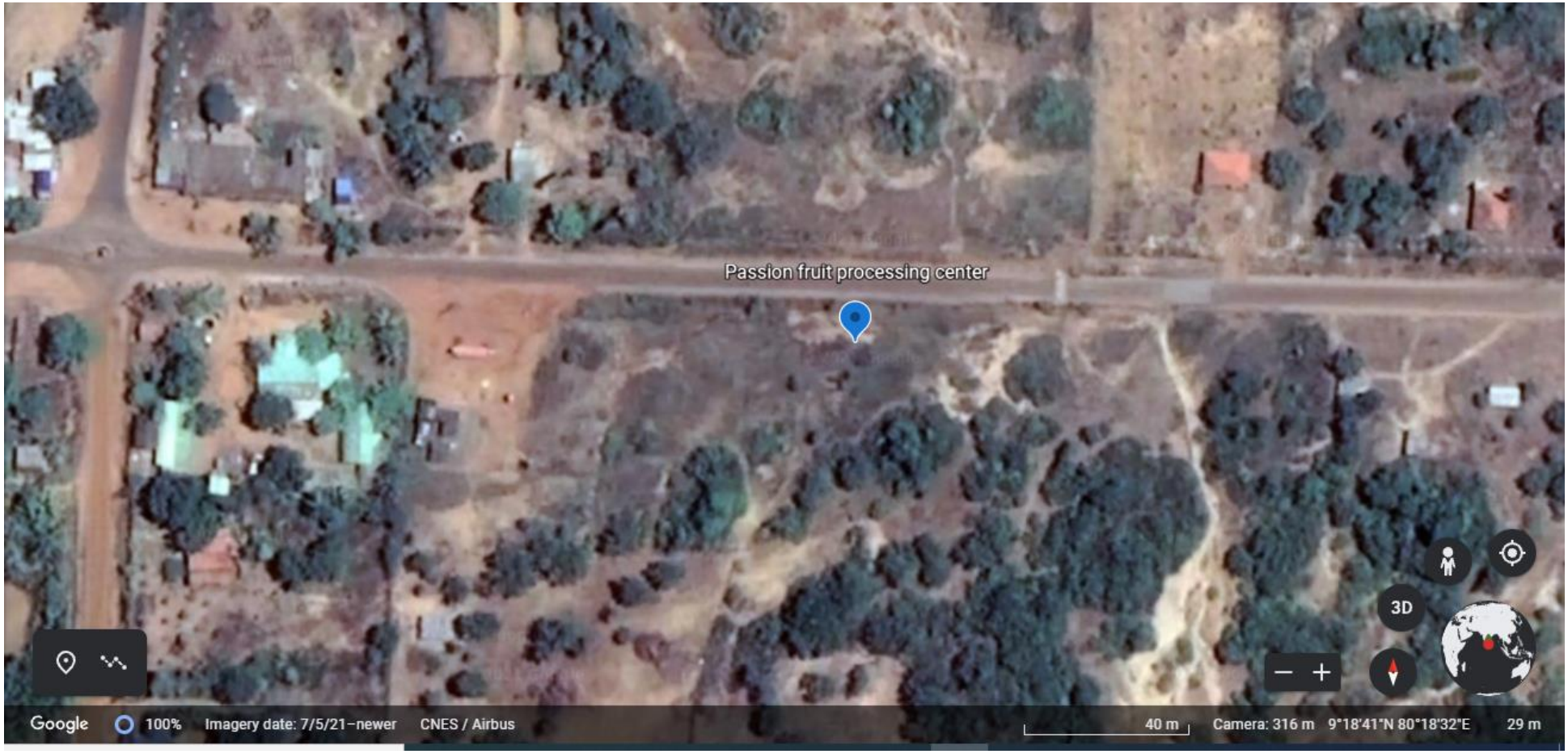
1) https://www.agrimin.gov.lk/web/images/pdf/CSIAP%20EAMF%2006-09-2018-3.pdf

2) *EML Consultants, 2017. Environmental Assessment for the Proposed Septage Treatment Facilities at Kilinochchi, Water Supply and Sanitation Improvement, Project (WASSIP), Ministry of City Planning and Water Supply, Pg 29-42*

3) https://biwta.portal.gov.bd/sites/default/files/files/biwta.portal.gov.bd/page/f3ca1ff6_95b0_4606_849f_2c0844e455bc/2020-10-01-11-04-ad9ef55c947057f54b4f4f76f5be54ff.pdf

Annex 2: Project location maps

Proposed location for the processing centre



Annex 3: Consent Letter from Department of Agriculture, Northern Province

பிரதி மாகாண விவசாயப் பணிப்பாளர் அலுவலகம்,
கிளிநொச்சி.
නියෝජ්‍ය පළාත් කෘෂිකර්මාධ්‍යක්ෂ කාර්යාලය,
කිලිනොච්චිය.
OFFICE OF THE DEPUTY PROVINCIAL DIRECTOR OF AGRICULTURE KILINOCHCHI.

My No. NP/DAGRI/KDC/TECH/2021/LS3/V14 | Your No. | Date 18.10.2021

மாகாண பிரதிப் பணிப்பாளர்,
விவசாய நவீனமயமாக்கல் திட்டம்,
வடக்கு மாகாணம்.

19 NOV 2021

கொடித்தோடை பழ உற்பத்தியாளர்களிற்கான பதனிடல் கட்டடம் அமைத்தல் – அக்கராயன்குளம்.

மேற்படி விடயம் தொடர்பாக, கொடித்தோடை பழ உற்பத்தியாளர்களிற்கான பதனிடல் கட்டடம் அமைப்பதற்காக கீழ்வரும் எல்லைகளைக் கொண்ட காணியினை வழங்குவதில் எமக்கு எந்தவித ஆட்சேபனையும் இல்லை என்பதனை தயவுடன் அறியத்தருகின்றேன்.

வடக்கு – அக்கராயன்குளம் வன்னேரிக்குளம் வீதி
கிழக்கு – அரச காணி
தெற்கு – அரச காணி
மேற்கு – அரச காணி

திரு.பொ.அற்புதச்சந்திரன்.
பிரதி மாகாண விவசாயப் பணிப்பாளர்
கிளிநொச்சி.

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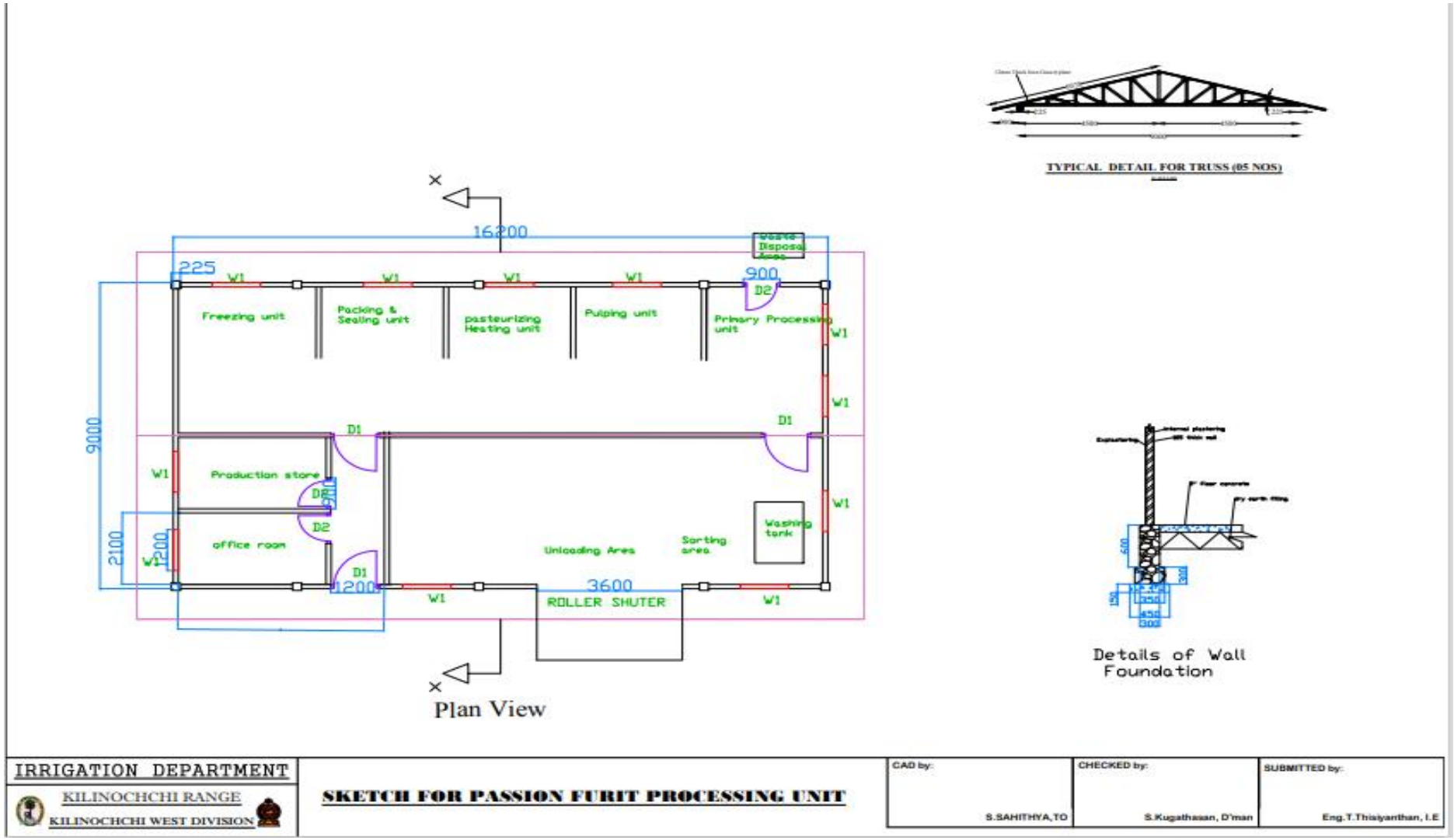
பிரதி – மாகாண விவசாயப் பணிப்பாளர், வடமா – தயவுடன் தகவலுக்காக

Telephone No. 0212285726 | Fax No. 0212285726 | E-Mail kilinochchidda@gmail.com

This letter was addressed by Deputy Provincial Director - killinochchi to the Deputy Project Director - PPMU - NP (ASMP). The Subject was Costruction of passion fruit pulping process enter at Akkarayan - killinochchy.
The content was that DDA - killinochchi agreed to provide The land for constructing the building to ASMP - PPMU - NP. The land has following direction.
North - Akkarayan vanneri kulam
East - government land
West - "
South - "

P. Pradeep
P.Piradeepan
Provincial Senior Engineer
Agri. Sector Modernization Project
Northern Province

Annex 4: Floor plan of processing unit



Annex 5: 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

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KfW DEG COVID-19 Guidance for employers, issued on 31 March 2020

CDC Group COVID-19 Guidance for Employers, issued on 23 March 2020

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