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Ministry of Agriculture
கமத்தொழில் அமைச்சு

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விவசாய நவீனமயமாக்கல் திட்டம்
Agriculture Modernization Project

Social Screening Report

Rehabilitation of Pump House, Installation of Solar Panels and Water Pumps, Construction of an Overhead Tank and Laying PVC Pipes at RB Canal bank of Muthiyankattu Tank in Thaddayamalai GND (Pump No. 4&5)-Lift Irrigation

Sri Lanka Agriculture Sector Modernization Project (ASMP)

Prepared for Project Management Unit of the Agriculture Sector Modernization Project

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

Updated: October 2021

Table of Contents

List of tables and figures

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

A. Subproject Identification

Subproject title	Rehabilitation of Pump house, installation of solar panels and motors, construction of an overhead tank, and laying PVC pipes along RB canal bank of Muthiyankattu Tank in Thaddayamalai GND (Pump No 4&5)- Lift Irrigation as per the design done by Irrigation Department -NP
Parent Project Objectives (briefly)	The Agriculture Sector Modernization Project (ASMP) aims at supporting the Government of Sri Lanka's effort to modernize the agriculture sector through the Country Partnership Strategy (CPS). The project seeks to contribute to two CPS focus areas, namely: "Supporting structural shifts in the economy" and "Improved living standards and social inclusion" through (a) improving agricultural productivity and competitiveness to strengthen the links between rural and urban areas and facilitate Sri Lanka's structural transformation; (b) providing and strengthening rural livelihood sources, employment opportunities in agriculture and along agriculture value chains, as well as market access for the 40 percent poorer and vulnerable people, hence improving income sources and livelihood security in lagging rural areas; and (c) contributing to improved flood and drought management, through project's linkages to the water and irrigation sectors and a climate-smart agriculture approach. The Project Development Objectives are to support increasing agriculture productivity, improving market access, and enhancing value addition of smallholder farmers and agribusinesses in the project areas.
Project proponent	Project Management unit, Agriculture Sector Modernization Project (ASMP), Ministry of Agriculture
Implementing agency	Agriculture Sector Modernization Project (ASMP) through Department of Irrigation
Project Management Team	Provincial Project Management Unit (PPMU) has been established in northern province 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 **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. • Ability to save water in the reservoir for next seasonal cultivation and minimise water crisis during Yala season. • Effective mechanism to attract young farmers for commercial agriculture. • Almost all the farmers cannot cultivate their entire farmland (3 acers) due to lack of water • All farmers are waiting till completion of the project to extend the land area for the cultivation

B. Subproject Location

Location	Mullaitivu District was declared in 1979 and is located in the Northern Province of Sri Lanka. The District is bounded by Jaffna and Killinochchi District from the North, Sea from the East, Trincomalee and Vavuniya Districts from the South, Mannar District from the West, and a small part of the South. The absolute location of the District is longitude 090 14/ N & latitude 800 32/ E. The total land area of the District is approximately 2616.9 sq. km This District accounts for 3.87% of the country's total land area. The District has six Divisional Secretary Divisions namely Maritimepattu, Puthukkudiyiruppu, Oddusuddan, Thunukkai, Manthai East, Welioya. There are 127 Grama Niladari Divisions & 624 Villages. Administratively the District belongs to part of the Vanni electoral District and having five Pradesiya Saba's sub Office. Selected project locations belong to the Oddusudan DSD and it represents around 24% of the total land area of the Mullaitivu district. Oddusudan DSD has 27 GND and the selected project locations belong to the Thaddayamalai village which is in the Thaddayamalai GN division. Solar panels will be installed on top of the Groundnut producer society-building and it will be contributing 40 KWh to the main grid (this is the same installation discussed under Pump 6&7 ESR). Pump house is attached to the RB canal of the Muthiyankattu tank and the overhead tank will be at a different location. The Overhead tank is around 480 m away from the pump house. All below location maps are shown in Annexure 2. 1) Pump House (4&5)- $9^0$11'33" N, $80^0$38'35" E 2) Overhead tank of pump 4&5 - $9^0$11'29.9" N, $80^0$38'20.3" E 3) Ground nut producer society building – $9^0$11'52"N, $80^0$38'41"E Muthiyankattu Major Irrigation scheme is one of the dedicated tanks for Food Crop Production in Sri Lanka. Of the 6,000 acres command area, 4,100 acres are fed by gravity irrigation system while the remaining 1,900 acres are fed by the lift irrigation system. Originally, the lift irrigation scheme was established in the late 1960s for dried chili and red onion production. However, farmers of the area have abandoned the cultivation due to conflict, displacement, and liberalization of food commodity imports in the past years. As a result, the lift irrigation systems were not in operation and were left in dilapidated conditions for a long period. Especially, the

	Right Bank (RB) canal of the tank has been designed for the lift irrigation for the command area.
Definition of Project Area / Project Impact area	The proposed development activities include rehabilitation of the existing Pump house located on the Right Bank of Muthiyankattu Tank in Thaddayamalai which belongs to the Thaddayamalai GN division. Further, motors will be installed at the same location while overheads tank to be constructed in a different location to cover entire selected farmlands. Supplying and laying of PVC pipes and Construction of Pipelining structures of RB canal will be facilitating to all the beneficiaries identified in Annexure 3. Pipe laying will be taking place along the road and either side will be disturbed during pipe laying. Lands are generally flat terrain. Either side of the proposed area contains both cultivated and bare lands. Mullaitivu is an agricultural economy-based district and rice production is the main agricultural activity undertaken by farmers in lowlands. Almost all farmers have both lowlands and uplands for their livelihood activities. However, Thaddayamalai RB canal farmers don't have a well-established and managed irrigation system, farmers cultivate paddy on a lowland in one term (Maha Seasons) per year. During Yala season (May to August), cultivation activities are limited to paddy on lowlands with water scarcity. Farmers have cultivated perennial crops such as coconut and mango on upland for their household consumption. Since it is receiving high rainfall during the Maha season (September to March), some farmers are cultivating seasonal crops on their uplands. During the Yala season, seasonal crops such as groundnuts, Chili, and various vegetables are cultivating by using open well/tube well water. However, open well/tube well water is not sufficient to cultivate their entire land, and most of the time only around 1acer is cultivated. One existing pump is in operational condition and only 4, 5 farmers are getting benefit from it. Further, 40KWh solar panels will be installed on top of the Groundnut producer society-building and concession will be applicable to the electricity bill of the motors. Groundnut producer society building is the common solar panel installation point and 40KWh capacity is for both pump houses. Hence, proposed pump house rehabilitation initiatives will benefit the farmers in Thaddayamalai by providing enough water to increase their acreage and yield and it will ensure sustainability in the agriculture sector.
Adjacent land and features	Oddusuddan DS Division is one of the divisions among the six DS divisions in Mullaitivu District. There are 27 GN Divisions in the Oddusuddan DS Division. On the northern border of this DS division there are Puthukkudiyiruppu DS division of Mullaitivu district and Karaichchi DS division of Kilinochchi district, and on the eastern border is the Maritimepattu DS division. Similarly in the southern border Vavuniya North DS division of the Vavuniya district and in the western border is Thunukkai and Mathai east DS divisions. The total extent of the division is 618sq.km, and this DS division is the largest one consisting of 28% of the land area of the district. The Land Cover of the District mainly includes Agricultural Lands, Home Gardens, Forest Lands, and Water Bodies. The total land area of the District is 261,690ha. Approximately 13% of the total land area consists of agriculture; Forest Lands cover nearly 69%; Home Garden accounts for 6%.

	All selected locations are in the Thaddayamalai GN division which belongs to the Oddusudan DS division. RB canal of Muthiyankattu Tank is feeding water to paddy lands during the paddy season. The rehabilitation centre is right next to the RB canals and the land belongs to the department of irrigation. New motors will be installed in the pump house. However, adjoining lands are owned by farmers, and most of the farmers are having 3-acre upland plots for crop cultivation. 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. The Overhead tank of pumps 4&5 will be at 9011'29.9" N, 80038'20.3" E, and the selected location is belonging to the department of irrigation. Throughout the length of the proposed PVC pipes laying, both sides are agricultural lands out of the majority is on-field cultivation. In-between there are houses of the owners of the same lands. Solar panels will be installed on top of the existing Ground nut producer society building.

Figure 1: Existing condition of Pump 4

Figure 2: Existing condition of Pump 5

Figure 3: Selected location for overhead Tank

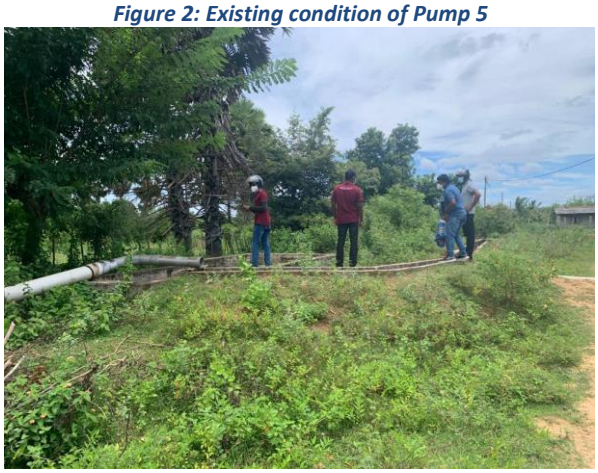


Figure 4: Selected location for overhead Tank

C. Subproject Justification

Need for the project (What problem is the project going to solve)	Dried Chili production and value addition under the lift irrigation schemes project in Mullaitivu, ASMP project is engaged in rehabilitating irrigation pumps and pipe laying for irrigation water distribution to farmer fields will be rehabilitated. The existing pump house at Thaddayamalai contains two pumps (Pump 4&5) and the area is now outdated and dysfunctional. Agricultural activities in the area especially vegetable and fruit cultivations are mainly depending on pump water. Due to the inefficiency and dysfunctionality of these two pumping stations, local farmers are facing a lot of difficulties in finding water, and most of their cultivations are destroyed due to insufficient water especially during the dry periods. Currently, selected beneficiaries cultivate two seasons per year using water from open wells and tube wells by confirming that they will go for three times cultivation per year if they are provided enough water from the proposed project. Further, almost all farmers are having 3-acre land plots and most farmers cultivate only half of their total land area due to insufficient water. Rehabilitation of pump house with new motors and laying of PVC pipes to distribute water among the beneficiaries will provide sufficient water to cultivate entire land plots of selected farmers with high frequency and high yield. Overhead tanks are designed to develop the pressure required for the operation of an on-farm drip irrigation system in the scheme. Water will be pumped to the overhead tanks directly and gravitational force will create the required pressure required to the on-farm drip irrigation system. In addition, below objectives to be achieved to increase the economy of selected farmers. a. To rehabilitate lift irrigation system to expand dried chili production b. To introduce and demonstrate efficient and effective water management in dried chili production c. To organize farmers for group marketing and value addition
Purpose of the project *(what is going to be achieved by carrying out the project)*	Dried Chili production and value addition under the lift irrigation schemes project in Mullaitivu is driven to achieve the below objects. a) To expand dried chili production b) To introduce and demonstrate new technology for enhanced productivity and value addition in dried chili production c) To organize farmers for group marketing and value addition To achieve these objectives, the ASMP project is engaged in rehabilitating a set of dilapidated lift irrigation pumps and water distribution infrastructure in Muttaiyankaddu to improve water accessibility. Under this project, irrigation pumps (4&5) at Thaddayamalai and pipe laying for irrigation water distribution to farmer fields in the area will be rehabilitated. Dysfunctional pump stations will be functional and irrigated water will be able to pump for local cultivation taking place based on the Right Bank and Left Bank of Muthiyankattu Tank. Construction of overhead tanks will help develop the pressure required for the operation of an on-farm drip irrigation system in the scheme. Therefore, local farmers' difficulties in finding water will be reduced, cultivation frequency will be increased from twice a year to thrice a year, an increase of yield of their cultivations, encourage farmers to cultivate more lands, and farmers who have left cultivation will be

	encouraged to start farming activities again. At last, increase regional and national agriculture productivity. A total of 40 farmers (37 families) will be benefitted from the project and it will cover 80 acres of uplands. Overhead tanks and PVC laying will ensure the accessibility of the pumped water and both availability and accessibility drive towards the sustainable economy in various ways as follows. • Increased the amount of individually cultivated lands up to 3 acres • Cultivation frequency will be increased up to thrice a year • New crops/projects will be introduced based on the water abundancy • The young generation will be attracted to seasonal crops • Women involvement to be increased New employment opportunities will be available with the increased cultivation
Beneficiaries	Based on a need assessment conducted by ASMP, PDOA, and Dept. of Irrigation, we identified about 40 farmers living on 80 acres of land are urgently requiring water for irrigation to cultivate dried chili and groundnut in Thaddayamalai. They are willing to cultivate about 80 acres of chili (8months) and 80 acres of groundnut in the same plot after the chili crop is harvested leaving the balance extent for perennials and homestead. In this project, the Pump house will be rehabilitated and new motors will be installed. PVC pipelining and overhead tanks will be taken place covering all above beneficiaries in Thaddayamalai, about 80 acres of land will get pressurized irrigation water supply throughout the year for one crop of dried chili and another crop of groundnut in a year. The cycle can be continued year after year. Solar-powered energy will be transferred to the grid and return will be dealt with the electricity bill of the motors. There are about 40 leading farmers will be selected with existing plantations in the most suitable locations with maximum exposure to a large number of farmers. Since the project is very keen on women's participation, high priority was given to select women-headed families to get on board at least 30% of female representation for the project. The selection of such farmers will be carried out with the participation of farmer organizations of the area, agriculture instructors, agriculture research and production assistant, agriculture scientist of PPMU, etc. The surrounding community will be benefitted from different income generation opportunities with the increase of agricultural activities. Consistent water availability and accessibility will be ensured by the project and it will maintain the continuity of agricultural activities. Hence, daily paid employment opportunities will increase significantly, and also employment opportunities at processing centers, intermediate trading, organic fertilizer production, and transportation opportunities will be there with the increase of agricultural activities.
Alternatives considered (different ways to meet the project need and achieve the project purpose)	The "site alternative" would mean the feasibility of meeting the project needs at the selected cluster. Thaddayamalai has well-established farmer organizations already and the production of seasonal crops is available immediately. There are experienced ground nuts, chili, and vegetable farmers and all these upland cultivations rely on water abundance. Most of the farmers have large-scale, low flat farmer-based lands with a lack of water. These farmers are capable of cultivating their entire uplands 3 times per year if sufficient water is available. Further, 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. Moving of existing pump house and rehabilitation of pumps 4&5 will ensure the extraction of water. Overhead tanks and PVC laying will be taking place to distribute water among the selected farmers with the pressure required for the operation of an on-farm drip irrigation system in the scheme, and it will increase the accessibility of water. Further, 40KWh solar panels will be installed to generate renewable energy and it will be directly benefitted to reduce the electricity cost of motors. On-farm technological applications will be introduced by ASMP with the dry chili cluster development plan. The "no-action" alternative would mean that no pump rehabilitation undertake by the ASMP and hence no irrigational 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 Thaddayamalai.

D. Subproject Description

Proposed start date (duration)	October 2021
Proposed completion date	March 2022
Estimated total cost	LKR 47 million allocated including for solar installations
Land ownership	Pump House and Overhead Tanks – Department of Irrigation, Northern Province Laying of pipes – Along the road edge belongs to the Department of Irrigation, Northern Province
Planned interventions	Planned interventions of the project includes • Rehabilitation of Pump house • Installation of two motors (pump 4&5) • Laying of PVC lines covering all beneficiaries • One overhead tank • Installation of 40KWh solar panels • Training, capacity building, and extension
Beneficiary selection criteria and process	Oddusudan DS division has well-established farmer organizations already and production of dry Chili is available immediately. There are experienced Chili farmers who rely on Chili along with the other crops for livelihood. Most of the farmers have large-scale, low flat farmer-based lands with low water accessibility. ASMP provides both ground-level infrastructure developments and advances technological support by utilizing resources for farmer mobilization and capacity building through a strategic partnership. Further, 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 selection criteria looked at the farmers' available lands and priority was given for the farmers who can utilize a minimum of 1/2 acre for the Chili production. Since the project is very keen on women's participation, high priority was given to select women-headed families based on land availability. The project will target to ensure that about 30% of the selected beneficiaries would be women. Further, vulnerable and marginalized disabled farmers having a minimum of 1/2 acre were selected as long as they have the ability to carry out the cultivation activities. Further, the willingness of participation of existing farmers and the young farmers were considered as a key selection criterion to become a member of the project. Hence, vulnerable groups and youth will also be given importance in the selection criteria. As per the above criteria, Thaddayamalai village consists of 40 farmers for the dry Chili cluster project, and rehabilitation of pump house (4&5) and PVC laying will be beneficial for the all above selected 40 farmers. Further, the electricity bill of the motors will be paid by the farmer organization and concession benefits of the solar panel will be given to the farmer organization.
Vulnerable groups and Gender	Out of the 27, Grama Niladhari's (GN) Thaddayamalai is one GN division in the Oddusuddan DS division which has been selected for the implementation of the Agriculture Sector Modernization Project (ASMP). There are four villages namely Thaddaiyamalai, Periyasalampan, Poonthoddam, and Murukanoor. The land area of the GN division is nearly 471.0 ha. The GN division has 267 families consisting of 799 members. The number of males is 385 and the females account for 414. The population density in the division is 1.69 per hectare which is very low. The entire population was displaced and resettled gradually after the cessation of the civil war in 2009. The ethnic composition of the GN division is Sri Lankan Tamils. All 267 families are Tamils. All the families in the GN division are Hindus. Though there are about 267 families, about 200 families having about 600 acres of high land living in the lift irrigation are presently cultivating groundnut only in Maha season, and those who have dug wells were able to continue the same cultivation in Yala season too. Based on a need assessment conducted by ASMP, PDOA, and Dept. of Irrigation, it has identified about 85 farm families living in 255 acres of land are urgently requiring water for irrigation to cultivate dried chili and groundnut in Thaddayamalai and Thoddiyadi. Pump 4&5 belongs to Thaddayamalai and 37 families are covered through the project which denotes an 80-acre land area. Though there are 37 families, 40 individual farmers are identified. Women headed families and low-income families will be exposed to the project to get the economic benefits. The surrounding community will be benefitted from different income generation opportunities with the increase of agricultural activities. Consistent water availability and accessibility will be ensured by the project and it will maintain the continuity of agricultural activities. Hence, daily paid employment opportunities will increase significantly, and also employment opportunities at processing centers, intermediate trading, organic fertilizer production, and transportation opportunities will be there with the increase of agricultural activities.

E. Description of the socioeconomic environment

Community Profile

Oddusuddan DS Division is one of the divisions among the six DS divisions in Mullaitivu District. There are 27 GN Divisions in the Oddusuddan DS Division. On the northern border of this DS division there are Puthukkudiyiruppu DS division of Mullaitivu district and Karaichchi DS division of Kilinochchi district, and on the eastern border is the Maritimepattu DS division. Similarly in the southern border Vavuniya North DS division of the Vavuniya district and in the western border is Thunukkai and Mathai east DS divisions.

The current land use pattern in the division could be identified under seven major categories such as home gardens, agricultural lands, non-agricultural lands, forest lands, wetlands, other lands, and water bodies. Home gardens are houses with a considerable extent of land for cultivation. Topographically the landscape varies from rolling to undulating of the total extent of 5.2 km overly wavy shape. It has 8% land Cultivated areas and non-agriculture area 2%. Out of the balance area, natural forest land covers is 65%, scrubland is 10% and plantation forest land covers 1.1%. The DS division has potential resources for the development activities. There are forest resources available in the areas. People's main economic activities are crop cultivation and animal husbandry (Livestock). Paddy and other vegetable crops are cultivated under both gravities and lift irrigation systems. Livestock farming has been developed due to the availability of pastureland in adjoining forest areas. However, it has not developed as a modern and high-tech dairy farm with high breed cows but more of traditional species yielding low income and minimum cost.

Out of the 27, Grama Niladhari's (GN) Thaddayamalai is one GN division in the Oddusuddan DS division which has been selected for the implementation of the Agriculture Sector Modernization Project (ASMP). There are four villages namely Thaddaiyamalai, Periyasalampan, Poonthoddam, and Murukanoor. The land area of the GN division is nearly 471.0 ha.

The GN division has 267 families consisting of 799 members. The number of males is 385 and the females account for 414. The male-female ratio is 0.93 as per the statistical handbook of 2019. This GN division is reflecting the national pattern of the male-female ratio. The population density in the division is 1.69 per hectare which is very low. The entire population was displaced and resettled gradually after the cessation of the civil war in 2009. The ethnic composition of the GN division is Sri Lankan Tamils. All 267 families are Tamils. All the families in the GN division are Hindus.

Age structure and gender distribution of the GN division's population is given below in the following table.

Table 1: Age Structure and Gender Distribution of GN Population

Age	Male	Female	Total	Age	Male	Female	Total
0-05	10	09	19	19-30	177	175	**352**
6-10	20	22	42	31-60	96	114	**210**
11-18	22	26	48	≥ 60	60	68	**128**
Total	**52**	**57**	**109**	**Total**	**333**	**357**	**690**

Source;- Oddusuddan DS Divisional Statistical Handbook 2020

Only 79.3% of the population is economically active in the GN division. Nearly 16.0% of the population is above 60 years of age and 13.6% of the population is below 18 years of age. The average family size in the GN

	division is 3.0. As per the age structure, 86.3% of the population should have registered as voters eligible for voting in the public elections. However, only 52.0% of the population has registered themselves with the Department of Elections and has the right to vote. This is equivalent to 3.8% of the total registered voters in the DS division. Major income sources of the majority of families is crop cultivation and sale of milk and cow dunk from their cattle herd. The paddy lands in the vicinity of major tanks are cultivable in the Yala and Maha seasons. There are two Agrarian Service Centers in the DS division servicing for the farmers by providing inputs such as chemical fertilizers at subsidized prices and paddy and other seeds. There are 10 small scale enterprises such as mills, shops, and tailoring in the GN division Mullaitivu District is one of the poorest districts in Sri Lanka. Poverty levels measured using the poverty indicators or poverty definitions are not available for the GN division. However, the indirect measure of poverty can be measured by the number of Samurdhi beneficiaries in the division. Samurdhi is a poverty alleviation program introduced in Sri Lanka providing monthly cash grants for selected families using several criteria such as family size, monthly income, and the age structure of the children. Accordingly, there are 122 families out of 267 are receiving Samurdhi in the GN division. Almost 44.0% of the families are living in poverty and receiving Samurdhi monthly cash grant. Twenty-five families or 9.0% of the families are receiving rupees 1,500 per month and 11.9 % of the families are getting rupees 2,500 per month and 23.1% of the families considered as most vulnerable are receiving rupees 3,500 per month (Divisional Statistical Handbook 2019). Further, there are 92 members in the division who is receiving P.A.M.A grant provided by the Government for helpless people. Moreover, there are 39 widows, 22 orphans who lost their both parents, and 15 disabled people in the division. Available social and economic infrastructure is mostly accounted for by the DS division rather than the GN division. The Zonal Education Department covering the DS division is functioning in Mankulam junction along Jaffna - Kandy road next to Mankulam Maha Vidiyalayam. There are 27 functioning schools in the Oddusuddan DS division servicing 4,046 students with a teacher's strength of 333. The overall student-teacher ratio is 12.1 in the year 2019. Out of the 27 schools, there are 3 1AB schools two 1C schools and 7 types two schools, and eleven types III schools, In the total number of pupils 51.4% are male and 48.6% are female reflecting the population pattern. Among the student population, approximately 92.0% of the students are studying in the primary and secondary level while 8.0% of them are in the post-secondary or G.C.E (A/L) classes. There is no school in the GN division. There is a divisional hospital in the Oddusuddan DS division with 22 beds for indoor patients, three medical officers, and four nursing staff. In the year 2019, the divisional hospital has treated 29,597 outdoor and 1,957 indoor patients. This divisional hospital has treated more indoor and outdoor patients compared to Mankulam Base Hospital which is having more facilities than the divisional hospital. Further, Oddusuddan is a separate MOH division having an office in the town. In the Thaddayamalai GN division, there is no Gramodaya Health Centre. The Road network in the DS Division is well developed with RDA, RDD, and Pradeshiya Saba roads. There are 54.76 kilometers long A class roads and 12.30 kilometers of B class roads, and 62.98 kilometers of C&D class

	roads, maintained by RDD. Further, there are 186 tar, gravel, and soil roads maintained by Pradeshiya Sabha. The Pradeshiya Sabha roads are mainly soil roads connecting interior villages and town centers. As this division comes under the dry zone, it receives rain from November to January during the northeast monsoon and occasionally thundershowers in April May, and June. Now the pattern has changed due to climatic change and the rainfall is unpredictable. This DS Division has a number of tanks, but many villages have a shortage of drinking water especially during the dry season. There are Kanakarayan Aru, Kuruvichchai Aru, and Peraru important rivers passing through this division. Muthiyankaddukulam, the major tank in the DS division is maintained by the Provincial Irrigation Department and 142 minor irrigation tanks are maintained by Agrarian Development. The major tank benefits 2000 families and irrigates 6,112 acres of Paddy land and other crops such as pes nut, vegetables, chili, and fruit crops are irrigated lift irrigation from the main canals. There are two sports clubs in the GN division. They are Barathy and Kalaimagal sports clubs. The major commercial activities are conducted by the Muthaiyankaddu MPCS located in Vithiyaouram having 16 branches in the DS division. One such branch located in the Muthaiyankaddukulam GN division is not functioning currently. Rural Development Society (RDS) and Women Rural Development Society (WRDS) are social-based organizations. The main objective of this Society is to develop villages through the participation of the rural communities. 24 RDS and 25 WRDS are functioning in Oddusuddan D.S Division. In the Thaddayamalai GN division, both RDS and WRDS are functioning. Moreover, there is a youth club and a sports club in the GN division. There is three registered Hindu temple in the GN division. Community participation in the above community organizations are satisfactory.
Project Benefits	The project 'Dried Chilli Production and Value addition under Lift Irrigation Schemes in Mullaitivu', aims to provide benefits for farmers by achieving below objects a. To expand dried chili production b. To introduce and demonstrate new technology for enhanced productivity and value addition in dried chili production c. To organize farmers for group marketing and value addition To achieve these objectives, the ASMP project is engaged in rehabilitating a set of dilapidated lift irrigation pumps and water distribution infrastructure in Muttaiyankaddu to improve water accessibility. Under this project, irrigation pumps (4&5) at Thoddiyadi and pipe laying for irrigation water distribution to farmer fields in the area will be rehabilitated. Dysfunctional pump stations will be functional and irrigated water will be able to pump for local cultivation taking place based on the Right Bank and Left Bank of Muthiyankattu Tank. Construction of overhead tanks will help develop the pressure required for the operation of an on-farm drip irrigation system in the scheme. Therefore, local farmers difficulties in finding water will be reduced, cultivation frequency will be increased from twice a year to thrice a year, an increase of yield of their cultivations, encourage farmers to cultivate more lands and farmers who have left cultivation will be encouraged to start farming activities again. At last, increase regional and national agriculture productivity.

	A total of 40 farmers will be benefitted from the project and it will cover 80 acres of uplands. PVC laying will ensure the accessibility of the pumped water and both availability and accessibility drive towards the sustainable economy in various ways as follows. • Increased the amount of individually cultivated lands up to 3 acres • Cultivation frequency will be increased up to thrice a year • New crops/projects will be introduced based on the water abundancy • Young generation will be attracted to seasonal crops • Women involvement to be increased • New employment opportunities will be available with the increased cultivation • Productive Land preparation methods with consistent water supply • Water conservation/Management and water accessibility will be improved • Sustainable farm income will be increased • Identify international market opportunities • Training and awareness will Strengthen skills, talents and knowledge to undertake and manage all activities of commercial Organisation
Social Impact	Subsequently, the magnitude of the proposed project interventions will be scattered within the selected area. No land acquisition is required, and no resettlement impacts are anticipated. Farmers are expected to directly benefit through improved water accessibility and input supply/management, better and more efficient technologies for production and post-harvest, improved market linkages as well as opportunities for value addition. Furthermore, farmers would benefit from the capacity building through farmer training. Hence, farmers will get direct economic advantages and the surrounding community benefited from direct and indirect employment opportunities, especially daily paid employment opportunities and the Post-harvest Processing Centre related activities, which are planned to be implemented in parallel. During the discussions had with farmers, it was highlighted that the young generation at present in these areas are subjected to local migration and looking for different types of employment opportunities with soft skills rather than engage in agriculture. This is mainly due to the unavailability of sufficient water for smooth cultivation. Further, they claimed that the existing agricultural activities do not ensure the consistent monthly income and stable income in the agriculture sector would be a key point to get the attraction of the youth. Hence, rehabilitation of pump house will ensure the continuous accessibility of water and it will be a good prospect for the youth to have a stable income and it prevents local employment migrations. The anticipated negative social impacts of the proposed project will be minor or insignificant. Summarised social impacts and mitigation measures are shown in table 2. However, the following impacts are listed to get emphasis in the project selection and implementation. 01. Exclusion of vulnerable groups in the beneficiary selection 02. Construction impacts such as noise, vibrations, dumping of excavated soil and siltation of water bodies 03. Labour influx during construction/pipe laying (about 10-15 labourers and about 5 officers)

	04. Public/ occupational health and safety hazards, and on impacts on the environment during the construction period 05. All environmental related issues identified in the EMP will also have a serious impact on the society
Mitigation Measures	Proposed migratory measures for the negative social impacts listed above. **01. Exclusion of vulnerable groups in the beneficiary selection** Proposed beneficiaries are selected based on the availability of a minimum of 1/2 acre land for the Chili cultivation and the willingness of the participation. The rest of the farmers will be covered through future expansions. Marginalize disabled farmers who have a minimum of 0.5 acres of cultivated lands were considered by analysing the ability to carry out the cultivation activities. However, the selection norm of the project is underscored to select 40% female beneficiaries and give more attention to the vulnerable groups. Thus, 40% of project beneficiaries are expected to be female farmers in the area; each one having a minimum of 0.5 acres of farmland. **02. Construction/Rehabilitation impacts such as noise, vibrations and dumping of cleared vegetation excavated soil** Anticipated impacts due to the construction will be generic and most of the impacts will be mitigated by following good construction practices. Noise and vibration will be reduced by maintaining the construction machinery and limit the construction activities in the daytime only. The excavated soil will be used to rehabilitate the surroundings on the wells and landscaping of the area. Further, ASMP addressed the migratory measure detailed to be implemented during the construction **03. Labour influx during construction/laying pipes** The Contractor should restrict recruiting Alien labourers. Labour will be hired where possible from the local community and the contractor will give priority to women when hiring. Worker Code of Conduct will be included as part of the employment contract - that establishes the workers' commitment in attitudes and behaviour preventing, combating, and responding Gender-Based Violence (GBV). During implementation, robust measures will be implemented to prevent sexual harassment/GBV including training of workforce and sanctions for non-compliance (e.g. termination). **04. Public/ occupational health and safety Hazards, and on impacts on environment** All measures in the Environment Management Plan (EMP) will be implemented in regard to management. Necessary COVID19 safety measures and protocols will be implemented as per the government, WHO and World Bank interim guidelines on COVID-19 (Annex 6) by all construction workers. Training and awareness will reduce the direct exposure to minimise the risk.

Table 2: Social Risks & Impacts and Mitigation Measures

Activities	Land requirements	Risk of exclusion of vulnerable groups	Construction impacts	Risks due to labour influx	Risk of livelihood impacts	Public/ occupational health and safety Hazards	COVID19 risks
Beneficiary selection	land owned by beneficiary	Yes					
Construction and Pipe laying Activities							
➢ Material transportation and storage			Yes	Yes		Yes	Yes
➢ Vegetation clearing	land owned by Department of Irrigation		Yes	Yes		Yes	Yes
➢ Repairing of Pump House	land owned by Department of Irrigation		Yes	Yes		Yes	Yes
➢ Fixing of pumps	land owned by Department of Irrigation		Yes	Yes		Yes	Yes
➢ Excavation, and disposal of waste			Yes	Yes		Yes	Yes
➢ Demolition and Removal of structures			Yes	Yes		Yes	Yes
➢ Excavation of trenches			Yes	Yes		Yes	Yes

F. Social Management Plan (SMP)

#	Issues/ Impacts and risks	Mitigation measures	Institutional responsibility		Mitigation cost
			Implementation	Supervision/ monitoring	
1	Vulnerable groups in the beneficiary selection	• 30% of project beneficiaries will be female farmers in the area who has minimum of 0.5 acer of farmlands • Marginalise disable farmers who has minimum 0.5 acer of farm lands will be considered by analysing the ability of carrying out the cultivation activities. • Excluded farmer of the project will be covered through future expansions	Provincial Office, GN, Irrigation DS	PMU – Social and Environment Specialist	Included in EMP.
2	Public complaints and lack of community awareness and support for the project implementation	• Residents in the area will be briefed of the project, its purpose, design and outcomes with comprehensive discussion. Consultations will be repeated once the contractor is mobilised. • The GRM will be established to receive and resolve complaints/ grievances related to disturbances caused by construction including GBV related issues. • Awareness will be created of the GRM among community and contact details will be publicly displayed to report grievances	Social/Environment safeguard officer / PPMU Engineer	PMU	Included in EMP
3	Construction related disturbances from noise, Vibration, Dumping of excavated soil & dust	• All measures in the EMP will be implemented in regard to management of construction related impacts including impacts to the environment including pollution, deforestation, soil erosion and management of solid waste • A copy of the SMP and EMP should be available at all times at the project supervision office on site • An Officer will be appointed to implement & monitor social/environment safeguards mitigations measures during construction	Contractor	Social/Environment safeguard specialist	Included in EMP
4	Labour Influx related issues (e.g. GBV)	• Local labour will be hired where possible and contract will give priority to women when hiring • Worker Code of Conduct will be included as part of the employment contract - that defines workers' commitment in	Contractor	Social/Environment safeguard specialist	Included in construction cost.

#	Issues/ Impacts and risks	Mitigation measures	Institutional responsibility		Mitigation cost
			Implementation	**Supervision/ monitoring**	
		attitudes and behaviour preventing, combating and responding GBV • Contractor will implement robust measures to prevent sexual harassment/GBV including training of workforce and sanctions for non-compliance (e.g. termination)			
5	Public/ occupational health and safety Hazards, and on impacts on environment	• All measures in the EMP will be implemented in regard to management. • Introduction of drone technology to conduct disease surveys and to apply pesticides by minimising human contact • Provide training and awareness on safe use of fertilisers and chemicals. Monitoring of handling practices/equipment handling by safeguard specialist and provide onsite trainings • Necessary COVID19 safety measures and protocols will be implemented as per Government, WHO and WB guidelines by all construction workers	Contractor	Social/Environment safeguard specialist	Included in EMP

G. Stakeholders Engagement and Public consultation

01. Stakeholders' engagements

The provincial PMU of the ASMP and the safeguard specialist have conducted a field investigation with the farmers and relevant stakeholders and identified the proposed subprojects for the development. The deputy project director- northern province and all the line agencies (project engineer, agricultural scientist), and all the chairs of Farmer Organisations have extended cooperation for chilli cultivation using lift irrigation at the selected area. Beneficiaries of pump 4&5 have formed a farmer organisation and it includes 40 farmers.

02. Public consultation

The consultation was held with the support of the Deputy Project Director, Project Engineer, and 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 rehabilitate and distribute water 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 rehabilitate the pump house and provide water immediately starting from next season onwards. Further, the following comments were taken during the discussions held with farmers in the selected area.

Farmers cultivate paddy on a lowland in one term (Maha Seasons) per year. During Yala season (May to August), cultivation activities are limited to paddy on lowlands with water scarcity. Farmers have cultivated perennial crops such as coconut and mango on upland for their household consumption. Since it is receiving high rainfall during the Maha season (September to March), some farmers are cultivating seasonal crops on their uplands. During the Yala season, seasonal crops such as groundnuts, Chili, and various vegetables are cultivating by using open well/tube well water. Further, livestock farming is common in the area. Discussions were had with nearby farmers and gathered information is summarized below.

R. Ananatharupan is the secretary of the Ganesapuram groundnut producer farmer society. He has four children and having 3 acres own farmland and 6 acres of rent land. Only a part of the land is cultivated twice a year using open well water and the water from pump 4. Currently, pump 4 is maintained by 4 farmers and they use the pump for their cultivation activities for around 12 acres. The current water level of the open well is around 20 feet below the ground level. However, he is getting piped water for drinking and eagerly looking to have the pump house in place to expand the cultivation. Groundnuts, Green peace, and green chili are the main crops he is entitled to, and the closest market is Oddusudan. Livestock farming is also continuing with the cultivation activities.

K. Karunananthan has 4 family members including himself and he is having 6 acres of farmland including 3-acre paddy land. Only a part of the highland slot is used to cultivate per season. He is also getting water from pump 4 and open the well. Only two seasons are cultivated. Chili, Kurakkan, Long bean, and green peace are his main crops and waiting to extend the cultivation up full land (3 acres) per season.

S.Nickelace is a farmer who has 3 family members including himself and a 3-acre highland is used to cultivate using open well water. Pubalasingam also has 3 acres of highlands, but he is using water from pump 4.

All these farmers can expand their cultivation lands up to 3 acres. Further cultivation frequency will be thrice per year if the project is on board sooner.

Figure 5: Photographs of existing damaged pump house

H. Grievance Readdressed Mechanism (GRM)

A GRM will be in place to promptly address any grievances including any unforeseen impacts that may arise during the implementation phase of the project, at no cost to the people. Field level grievances will record by Farmer Organisations by keeping the registry on their premises. The ASMP, irrigation, and DS official will facilitate resolving the grievance. The middle/tier 2 level grievances committee will operate at the provincial PMU/ regional project office to address the

issues which are unsolved or when the affected person is not satisfied with the decision at the field level. The third tier of GRM will operate at PMU headed by the Project Director of ASMP with technical support from the Social Development Specialist to address the issues which are not solved at the initial stages.

I. Implementation and Monitoring

1. Social Auditing/Monitoring Committee

A social auditing committee will be established with the participation of the community and the stakeholders of the area. An awareness session will be conducted to select social auditing committees about the project interventions and they are responsible for the project implementation. In addition, the Safeguards Specialist of ASMP will periodically monitor the effectiveness of implementation of ASMP.

2. Monitoring

Considering the magnitude of the proposed project interventions and the infrastructure development projects at the selected area, the anticipated social impacts of the proposed activities will be minor or insignificant. There won't be any significant negative social impacts envisaged from the proposed project during the rehabilitation stages with the implementation of the given SIMP. Further, there will not be significant negative social impacts during the infrastructure development activities assuming all the proposed mitigation actions are taken appropriately. Therefore, it is not necessary to have a complex monitoring system. However, it is necessary to ensure there are no violations of the regulations and conformity to the national and World Bank standards and guidelines pertaining to environmental and social safeguards.

Therefore, the contractor should be aware of the project management to ensure social management compliance during the implementation of the project. The following is recommended as a set up for a monitoring committee to monitor activities of the proposed project.

Chairperson: - Provincial Deputy Director of ASMP

Members (representatives from the following institutions):

01. Environmental and Social Safeguards specialist of the ASMP or his representative
02. Divisional Secretariat Oddusudan or DS representative;
03. Department of Irrigation or Representative;
04. GN Thaddayamalai;
05. Thoddiyadi farmer organisation members;
06. Village representatives from the village

J. Social Impact Screening Checklist

Probable Involuntary Resettlement Impacts	Yes	No	Not known	Details
Will the intervention include new physical construction work?	√			PVC pipe laying and overhead tanks will be constructed. Pump houses will be rehabilitated

Probable Involuntary Resettlement Impacts	Yes	No	Not known	Details
Does the intervention include upgrading or rehabilitation of existing physical facilities?	√			Existing pump house will be rehabilitated
Is the intervention likely to cause any permanent damage to or loss of housing, other assets, resource use?		√		
Are the sites chosen for this work free from encumbrances and is in possession of the government/community land?		√		All selected project locations are government owned lands
Is this subproject intervention requiring private land acquisitions?		√		No land acquisition taken place
If the site is privately owned, can this land be purchased through negotiated settlement?				N/A
If the land parcel has to be acquired, is the present plot size and ownership status known?				N/A
Are these land owners willing to voluntarily donate the required land for this sub-project?				N/A
Whether the affected land owners likely to lose more than 10% of their land/structure area because of donation?				N/A
Is land for material mobilisation or transport for the civil work available within the existing plot/ Right of Way?	√			The accesses to proposed sites are free from other encumbrances. No extra land requirement identified by the engineering team as lower scale involvement to the infrastructures
Are there any non-titled people who are living/doing business on the proposed site/project locations that use for civil work?		√		
Is any temporary impact likely?	√			Noise, vibration, dumping of excavated soil dumping etc., Traffic and conveyance during construction of roads and some interruption of conveying water during drainage rehabilitations in the construction and labour management measures area given in the SMP
Is there any possibility to move out, close of		√		

Probable Involuntary Resettlement Impacts	Yes	No	Not known	Details
business/ commercial/ livelihood activities of persons during constructions?				
Is there any physical is placement of persons due to constructions?		√		
Does this project involve resettlement of any persons? If yes, give details.		√		
Will there be loss of /damage to agricultural lands, standing crops, trees?		√		
Will there be loss of incomes and livelihoods?		√		
Will people permanently or temporarily lose access to facilities, services or natural resources?		√		
Are there any previous land acquisitions happened and the identified land has been already acquired?		√		
Are any indigenous people living in proposed locations or affected/benefited by the project intervention?		√		

K. Screening Decision on Categorisation

Assuming that all mitigation measures are implemented as proposed, the following effects can be predicted during the infrastructure development activities.

Key project activities	Potential Social Effects	Significance of Social effect with mitigation in place 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
Rehabilitation Activities (Renovation Pump house and PVC laying)		
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. and public inconvenience	NS

Key project activities	**Potential Social Effects**	**Significance of Social effect with mitigation in place** 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
Material transportation and storage	Emission of dust, generation of noise, disturbance to natural drainage, traffic congestion, public inconvenience	NS
Repairing of Pump House	Emission of dust, generation of noise and disturbance to community including farmers, and households	NS
Fixing of pumps	Emission of dust, generation of noise, disturbances to the community, leakage/oil spills, solid wastes	NS
Excavation, and disposal of waste	Excavation of trenches with significant sizes will collect significant amount of waste which will lead to several environmental issues such as blockage of drainage, siltation of RB Canals, disturbances to the local households, etc.	U
Demolition and Removal of structures	Emission of dust, generation of noise, disturbance to local traffic	NS
Excavation of trenches	Deep excavations would result in collapsible vertical soil faces increased susceptibility to soil erosion leading to embankment failures. This may lead to hectic traffic congestion	NS

Are any vulnerable households affected? [√] No. [ ] Yes. If yes, please briefly describe their situation with estimated numbers of head of household (HH)?
Any estimate of the likely number of households that will be affected by the subproject? • [√] No. [ ] Yes. If yes, approximately how many? ……. • No. of HHs losing <10% of their productive assets - **N/A** • (land/cowshed/shops)…… **N/A** • No. of HHs losing 10% or more of their productive assets?..... **N/A**
What are the needs and priorities for social and economic betterment of vulnerable people who are affected by this project? **N/A**

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

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

[√] Categorised as a 'C' project, no Aquatic Resource Alteration Permit is required, only the Social Screening/ Due Diligence Report is required

L. Details of Approval and Submission

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

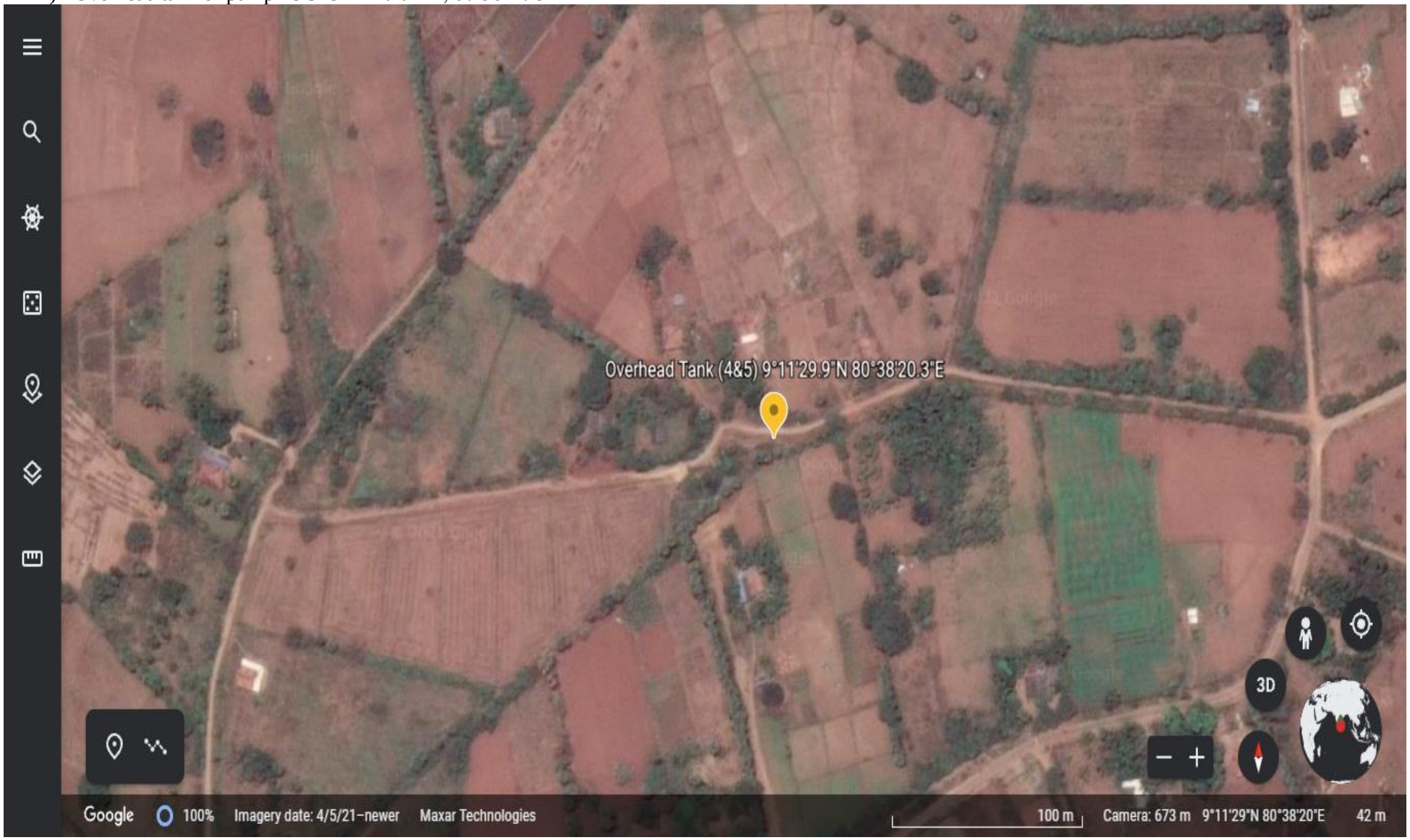
Annexure 1: List of References

1) https://luppd.gov.lk/images/content_image/downloads/pdf/llrc_mullaitivu.pdf
2) Natural Resources Management Centre, Department of Agriculture, Peradeniya

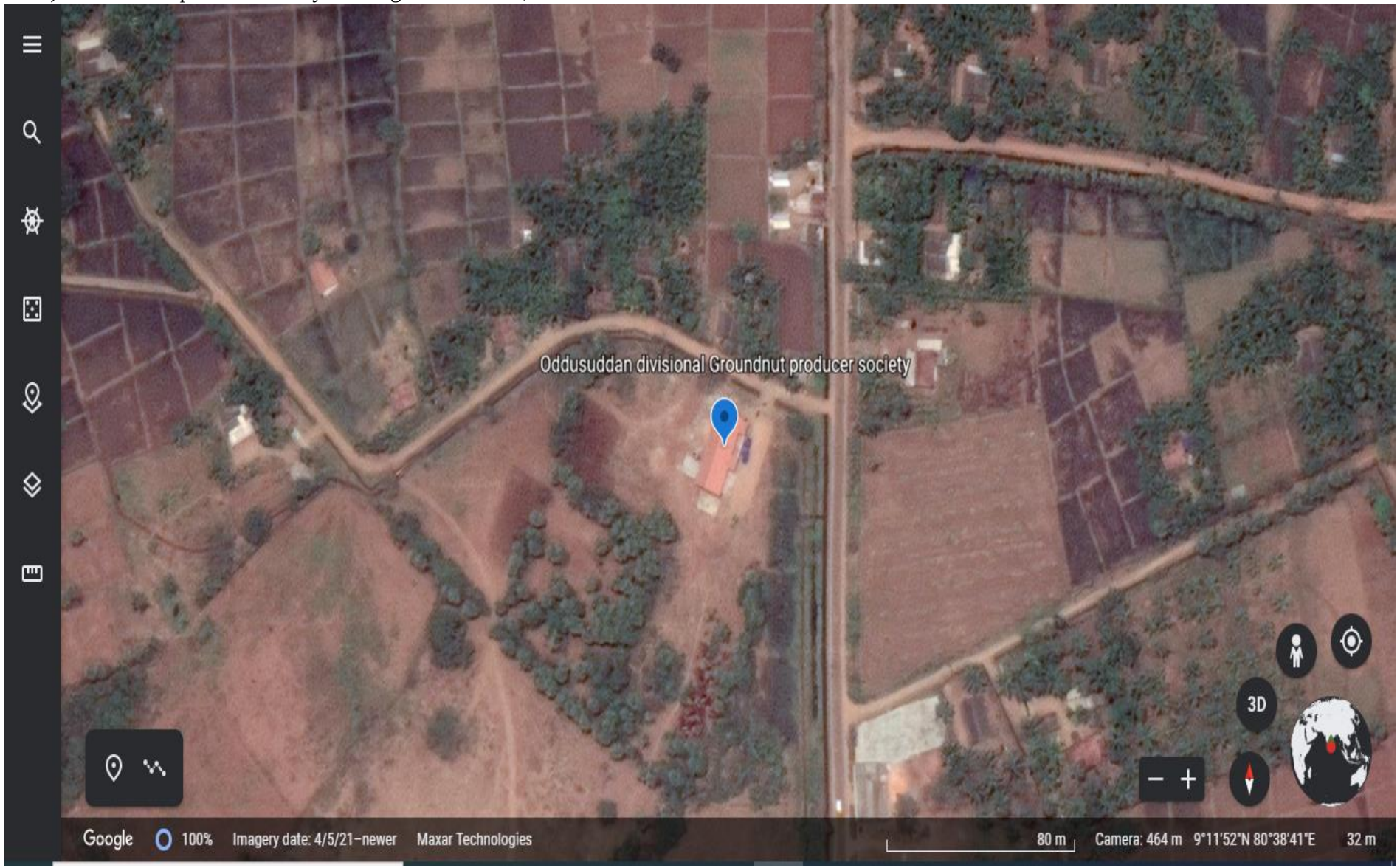
Annexure 2: Project location maps

1) Pump House (4&5)- $9^0$11’33” N, $80^0$38’35” E

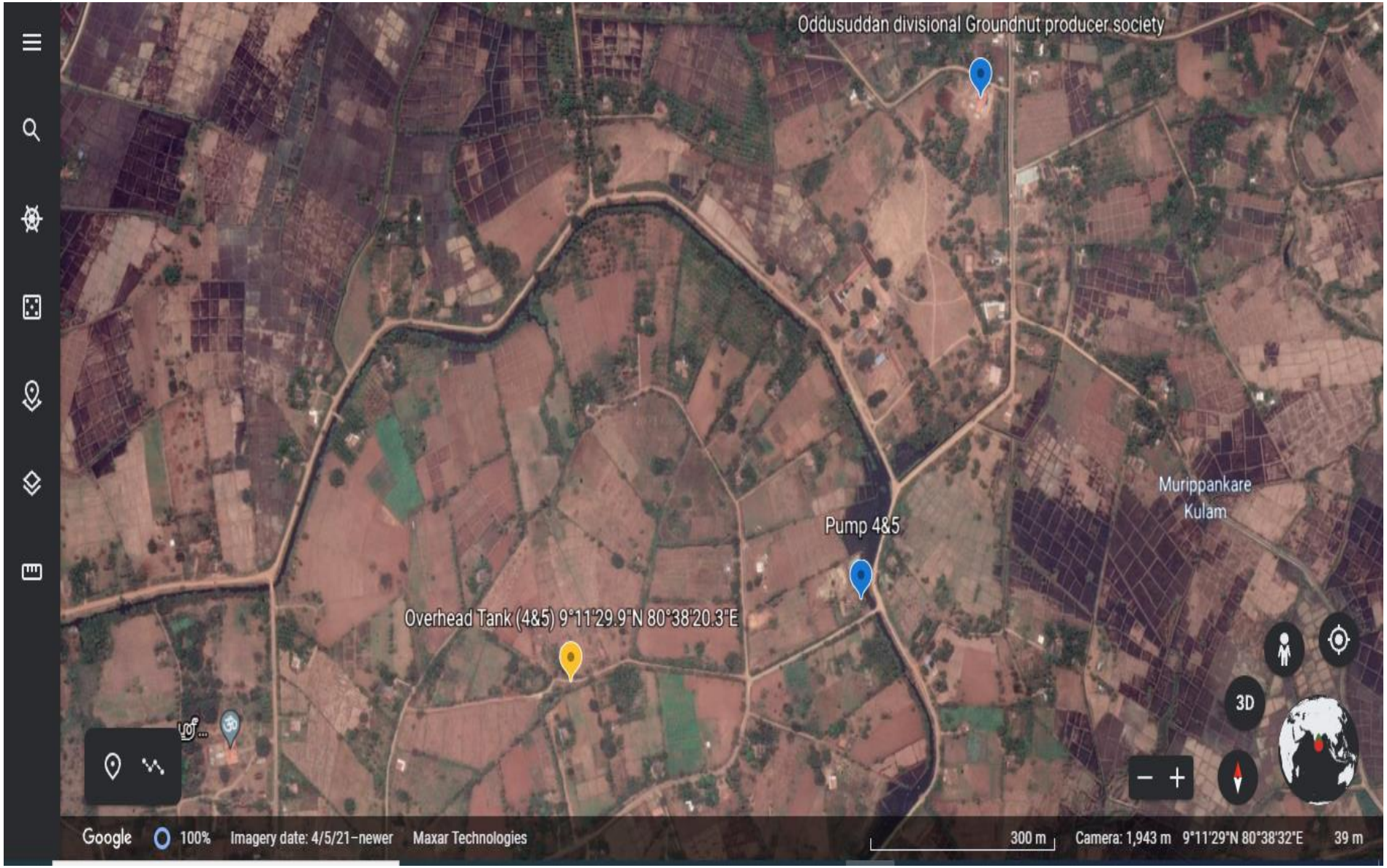
4) Overhead tank of pump 4&5- $9^0$11’29.9” N, $80^0$38’20.3” E



2) Ground nut producer society building – $9^0$11’52” N, $80^0$38’41” E

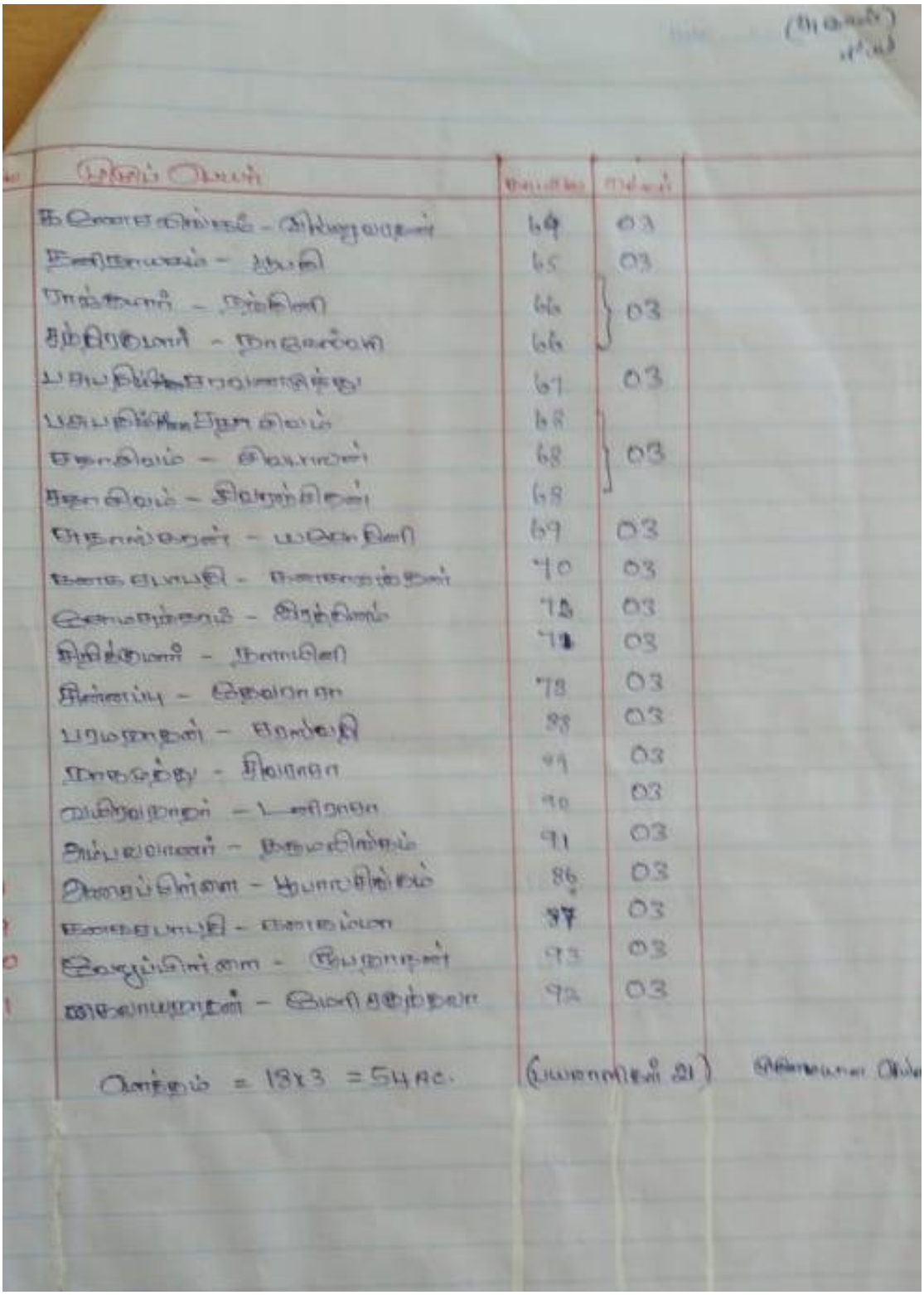


3) All three locations



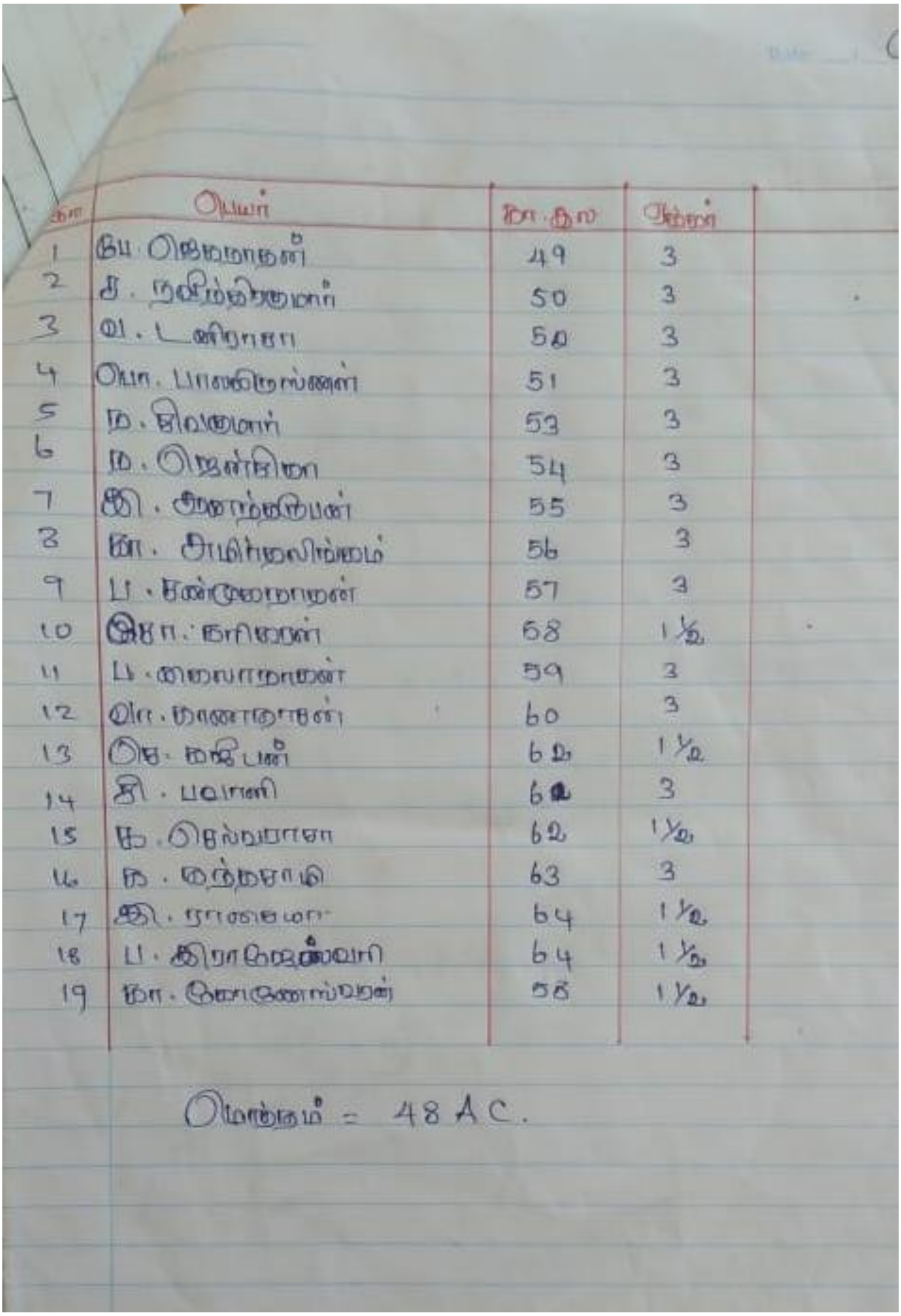
Annexure 3: Beneficiaries list

Beneficiaries of Pump 4



[illegible]	64	03
[illegible]	65	03
[illegible]	66	03
[illegible]	66	
[illegible]	67	03
[illegible]	68	
[illegible]	68	03
[illegible]	68	
[illegible]	69	03
[illegible]	70	03
[illegible]	75	03
[illegible]	76	03
[illegible]	78	03
[illegible]	88	03
[illegible]	89	03
[illegible]	90	03
[illegible]	91	03
[illegible]	86	03
[illegible]	87	03
[illegible]	93	03
[illegible]	92	03
[illegible] = 18x3 = 54 Ac.		

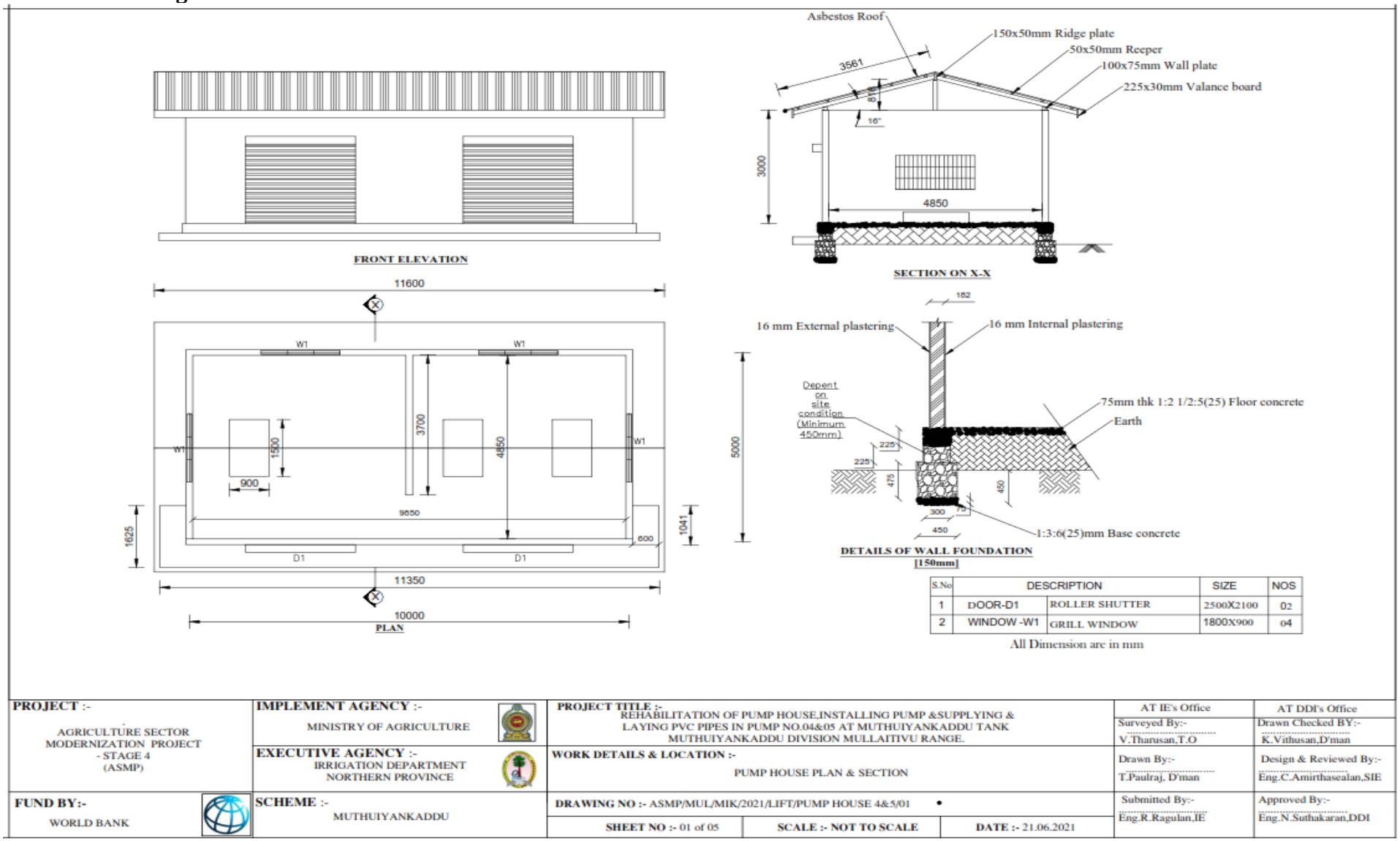
Beneficiaries of pump 5



இல	பெயர்	கா.து	ஏக்கர்
1	கு. ஜெகநாதன்	49	3
2	சி. நவீந்திரகுமார்	50	3
3	வி. டனிராசா	50	3
4	பொ. பாலகிருஸ்ணன்	51	3
5	ந. சிவகுமார்	53	3
6	ந. ஜென்சிகா	54	3
7	சி. அனந்தசிவன்	55	3
8	கா. அமிர்தலிங்கம்	56	3
9	ப. சண்முகநாதன்	57	3
10	இரா. சிறிதரன்	58	1½
11	ப. கைலாசநாதன்	59	3
12	வே. ஞானநாதன்	60	3
13	செ. சசீபன்	62	1½
14	சி. பவானி	62	3
15	மு. செல்வராசா	62	1½
16	ந. கந்தசாமி	63	3
17	சி. ராசையா	64	1½
18	ப. இராசேஸ்வரி	64	1½
19	கா. கோணேஸ்வரன்	58	1½

மொத்தம் = 48 AC.

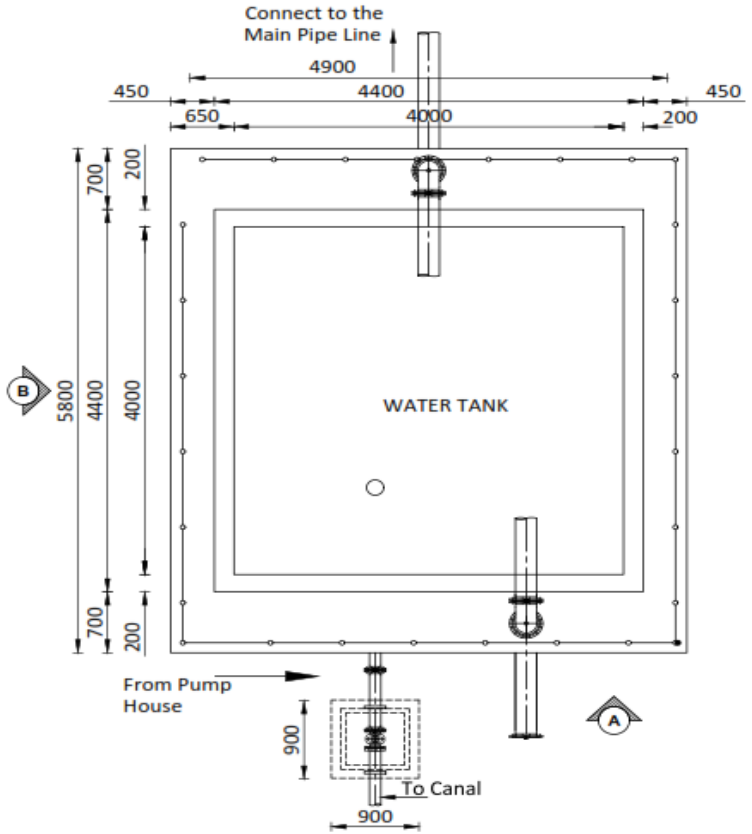
Annexure 4: Design of the Overhead tanks



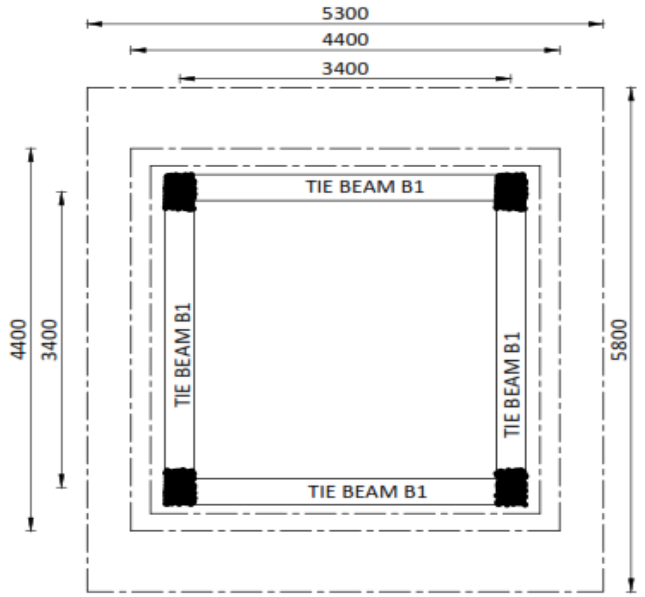
S.No	DESCRIPTION		SIZE	NOS
1	DOOR-D1	ROLLER SHUTTER	2500X2100	02
2	WINDOW -W1	GRILL WINDOW	1800X900	04

All Dimension are in mm

PROJECT :- AGRICULTURE SECTOR MODERNIZATION PROJECT - STAGE 4 (ASMP)	**IMPLEMENT AGENCY** :- MINISTRY OF AGRICULTURE	**PROJECT TITLE** :- REHABILITATION OF PUMP HOUSE,INSTALLING PUMP &SUPPLYING & LAYING PVC PIPES IN PUMP NO.04&05 AT MUTHUIYANKADDU TANK MUTHUIYANKADDU DIVISION MULLAITIVU RANGE.	AT IE's Office	AT DDI's Office
	EXECUTIVE AGENCY :- IRRIGATION DEPARTMENT NORTHERN PROVINCE	**WORK DETAILS & LOCATION** :- PUMP HOUSE PLAN & SECTION	Surveyed By:- V.Tharusan,T.O Drawn By:- T.Paulraj, D'man	Drawn Checked BY:- K.Vithusan,D'man Design & Reviewed By:- Eng.C.Amirthasealan,SIE
FUND BY:- WORLD BANK	**SCHEME** :- MUTHUIYANKADDU	**DRAWING NO** :- ASMP/MUL/MIK/2021/LIFT/PUMP HOUSE 4&5/01	Submitted By:- Eng.R.Ragulan,IE	Approved By:- Eng.N.Suthakaran,DDI
		SHEET NO :- 01 of 05 / **SCALE** :- NOT TO SCALE / **DATE** :- 21.06.2021		



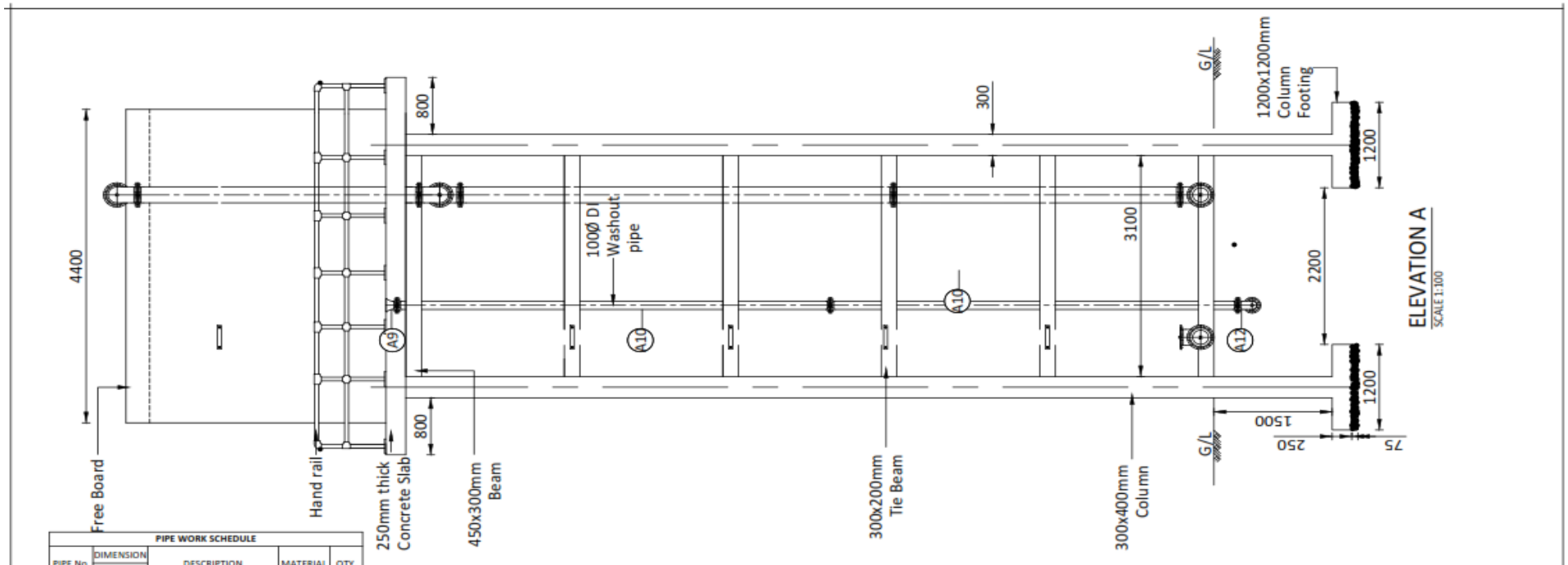
PLAN VIEW
SCALE 1:100



COLUMN LAYOUT PLAN
SCALE 1:100

Note:-
01. All Dimensions are in millimeters.
02. Concrete mix to be 1:1 1/2:3(20mm) with characteristic strength of 20N/mm2
03. Clear Cover to Reinforcement should be 25mm.
04. Characteristic strength of steel
High yield steel - 460N/mm2
Mild steel - 250N/mm2

PROJECT :- AGRICULTURE SECTOR MODERNIZATION PROJECT - STAGE 4 (ASMP)	**IMPLEMENT AGENCY** :- MINISTRY OF AGRICULTURE	**PROJECT TITLE** :- REHABILITATION OF PUMP HOUSE,INSTALLING PUMP &SUPPLYING & LAYING PVC PIPES IN PUMP NO.04&05 AT MUTHUIYANKADDU TANK MUTHUIYANKADDU DIVISION MULLAITIVU RANGE.	AT IE's Office	AT DDI's Office
	EXECUTIVE AGENCY :- IRRIGATION DEPARTMENT NORTHERN PROVINCE	**WORK DETAILS & LOCATION** :- OVERHEAD TANK DETAILS	Surveyed By:- V.Tharusan,T.O Drawn By:- T.Paulraj, D'man	Drawn Checked BY:- K.Vithusan,D'man Design & Reviewed By:- Eng.C.Amirthasealan,SIE
FUND BY:- WORLD BANK	**SCHEME** :- MUTHUIYANKADDU	**DRAWING NO** :- ASMP/MUL/MIK/2021/LIFT/PUMP HOUSE 4&5/OH.TANK/01 **SHEET NO** :- 05.a of 05 | **SCALE** :- NOT TO SCALE | **DATE** :- 21.06.2021	Submitted By:- Eng.R.Ragulan,IE	Approved By:- Eng.N.Suthakaran,DDI

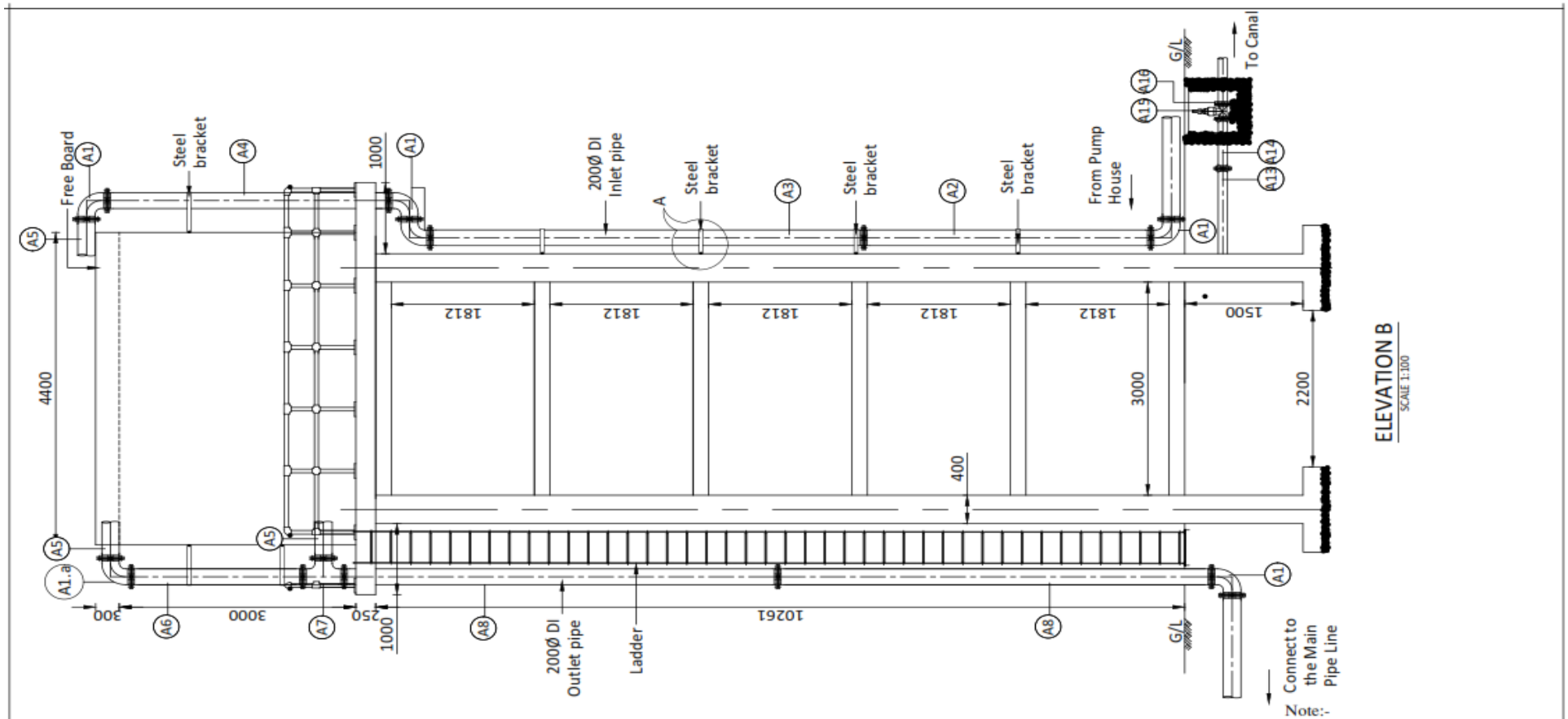


PIPE WORK SCHEDULE

PIPE No.	DIMENSION ND (mm)	DESCRIPTION	MATERIAL	QTY.
A1	200	FLANGE 90° BEND	DI	4
A1.a	200	FLANGE 90° BEND	DI	2
A2	200	DOUBLE FLANGE PIPE	DI	1
A3	200	DOUBLE FLANGE PIPE	DI	1
A4	200	DOUBLE FLANGE PIPE	DI	1
A5	200	FLANGE & SPIGOT PIPE	DI	1
A6	200	DOUBLE FLANGE PIPE	DI	1
A7	200x200	FLANGE TEE	DI	1
A8	200	DOUBLE FLANGE PIPE	DI	1
A9	100	BELL MOUTH	DI	1
A10	100	DOUBLE FLANGE PIPE	DI	1
A11	100	DOUBLE FLANGE PIPE	DI	1
A12	100	FLANGE 90° BEND	DI	1
A13	100	DOUBLE FLANGE PIPE	DI	1
A14	100	DOUBLE FLANGE WITH PUDDLE	DI	1
A15	100	SLUICE VALVE	DI	1
A16	100	FLANGE ADAPTOR	DI	1

Note:-
01. All Dimensions are in millimeters.
02. Concrete mix to be 1:1 1/2:3(20mm) with characteristic strength of 20N/mm2
03. Clear Cover to Reinforcement should be 25mm.
04. Characteristic strength of steel
High yield steel - 460N/mm2
Mild steel - 250N/mm2

PROJECT :- AGRICULTURE SECTOR MODERNIZATION PROJECT - STAGE 4 (ASMP)	**IMPLEMENT AGENCY** :- MINISTRY OF AGRICULTURE	**PROJECT TITLE** :- REHABILITATION OF PUMP HOUSE,INSTALLING PUMP &SUPPLYING & LAYING PVC PIPES IN PUMP NO.04&05 AT MUTHUIYANKADDU TANK MUTHUIYANKADDU DIVISION MULLAITIVU RANGE.	AT IE's Office	AT DDI's Office
	EXECUTIVE AGENCY :- IRRIGATION DEPARTMENT NORTHERN PROVINCE	**WORK DETAILS & LOCATION** :- OVERHEAD TANK DETAILS	Surveyed By:- V.Tharusan,T.O Drawn By:- T.Paulraj, D'man	Drawn Checked BY:- K.Vithusan,D'man Design & Reviewed By:- Eng.C.Amirthasealan,SIE
FUND BY:- WORLD BANK	**SCHEME** :- MUTHUIYANKADDU	**DRAWING NO** :- ASMP/MUL/MIK/2021/LIFT/PUMP HOUSE 4&5/OH.TANK/02 **SHEET NO** :- 05.b of 05 | **SCALE** :- NOT TO SCALE | **DATE** :- 21.06.2021	Submitted By:- Eng.R.Ragulan,IE	Approved By:- Eng.N.Suthakaran,DDI



Note:-
01. All Dimensions are in millimeters.
02. Concrete mix to be 1:1 1/2:3(20mm) with characteristic strength of 20N/mm2
03. Clear Cover to Reinforcement should be 25mm.
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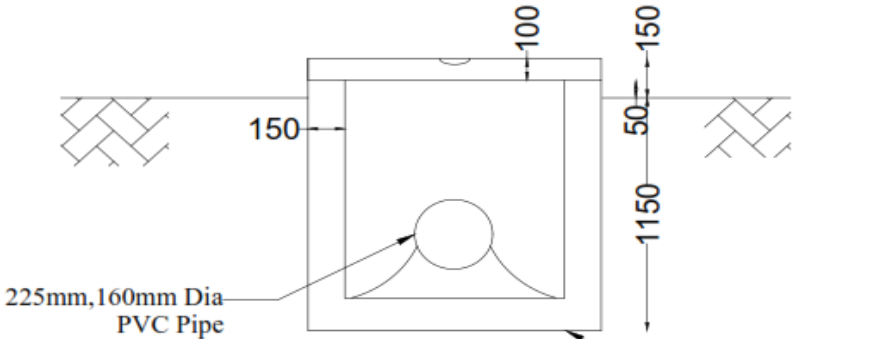
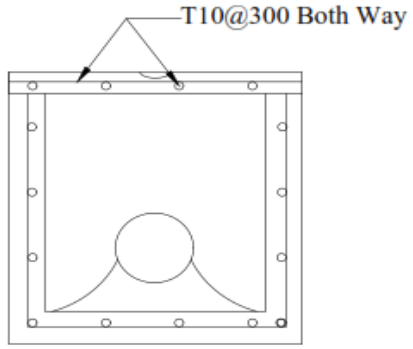
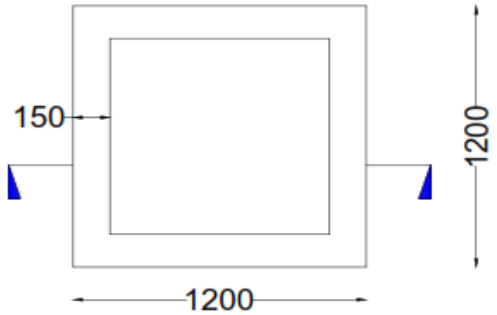
PROJECT :- AGRICULTURE SECTOR MODERNIZATION PROJECT - STAGE 4 (ASMP)	**IMPLEMENT AGENCY :-** MINISTRY OF AGRICULTURE	**PROJECT TITLE :-** REHABILITATION OF PUMP HOUSE,INSTALLING PUMP &SUPPLYING & LAYING PVC PIPES IN PUMP NO.04&05 AT MUTHUIYANKADDU TANK MUTHUIYANKADDU DIVISION MULLAITIVU RANGE.	AT IE's Office	AT DDI's Office
	EXECUTIVE AGENCY :- IRRIGATION DEPARTMENT NORTHERN PROVINCE	**WORK DETAILS & LOCATION :-** OVERHEAD TANK DETAILS	Surveyed By:- V.Tharusan,T.O	Drawn Checked BY:- K.Vithusan,D'man
			Drawn By:- T.Paulraj, D'man	Design & Reviewed By:- Eng.C.Amirthasealan,SIE
FUND BY:- WORLD BANK	**SCHEME :-** MUTHUIYANKADDU	**DRAWING NO :-** ASMP/MUL/MIK/2021/LIFT/PUMP HOUSE 4&5/OH.TANK/03	Submitted By:- Eng.R.Ragulan,IE	Approved By:- Eng.N.Suthakaran,DDI
		SHEET NO :- 05.c of 05 **SCALE :- NOT TO SCALE** **DATE :-** 21.06.2021		



SECTION X-X

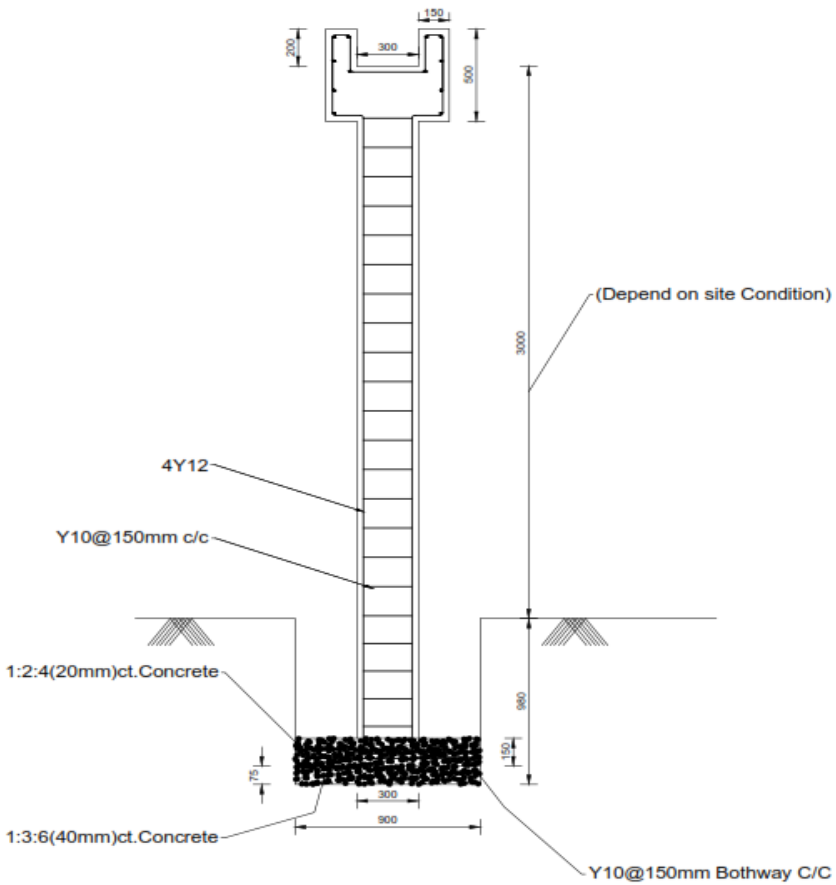


R/F DETAILS

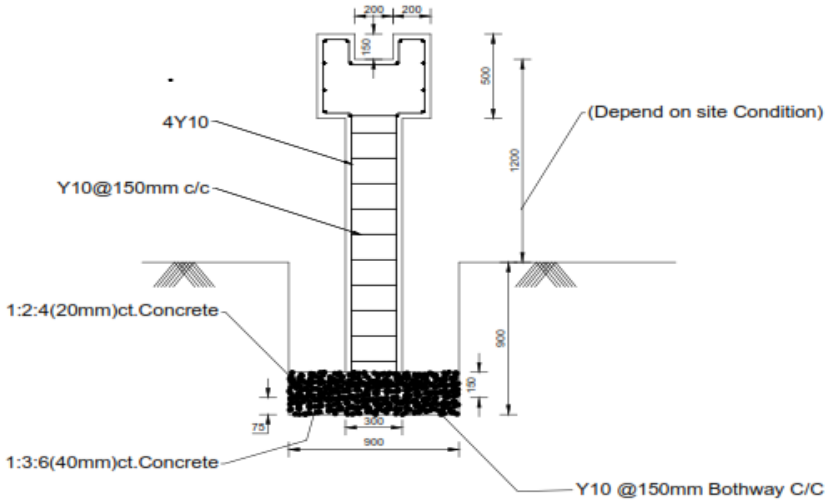


MANHOLE PLAN

PROJECT :- AGRICULTURE SECTOR MODERNIZATION PROJECT - STAGE 4 (ASMP)	**IMPLEMENT AGENCY :-** MINISTRY OF AGRICULTURE	**PROJECT TITLE :-** REHABILITATION OF PUMP HOUSE,INSTALLING PUMP &SUPPLYING & LAYING PVC PIPES IN PUMP NO.04&05 AT MUTHUIYANKADDU TANK MUTHUIYANKADDU DIVISION MULLAITIVU RANGE.	AT IE's Office	AT DDI's Office
	EXECUTIVE AGENCY :- IRRIGATION DEPARTMENT NORTHERN PROVINCE	**WORK DETAILS & LOCATION :-** MANHOLES DETAILS	Surveyed By:- V.Tharusan,T.O Drawn By:- T.Paulraj, D'man	Drawn Checked BY:- K.Vithusan,D'man Design & Reviewed By:- Eng.C.Amirthasealan,SIE
FUND BY:- WORLD BANK	**SCHEME :-** MUTHUIYANKADDU	**DRAWING NO :-** ASMP/MUL/MIK/2021/LIFT/PUMP4&5/MANHOLES/01 •	Submitted By:- Eng.R.Ragulan,IE	Approved By:- Eng.N.Suthakaran,DDI
		SHEET NO :- 04 of 05 / **SCALE :- NOT TO SCALE** / **DATE :-** 21.06.2021		

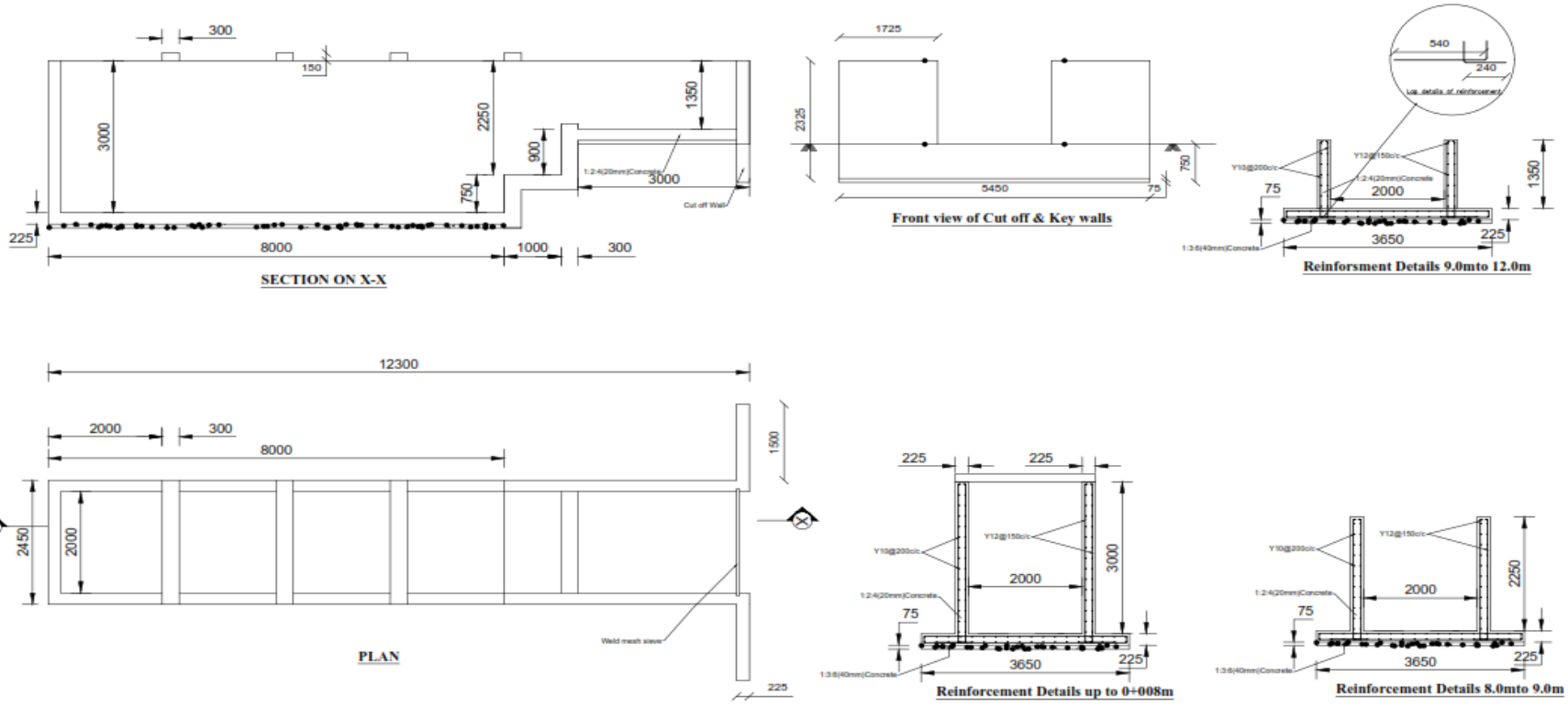


Details for Delivery pipes bearing piller



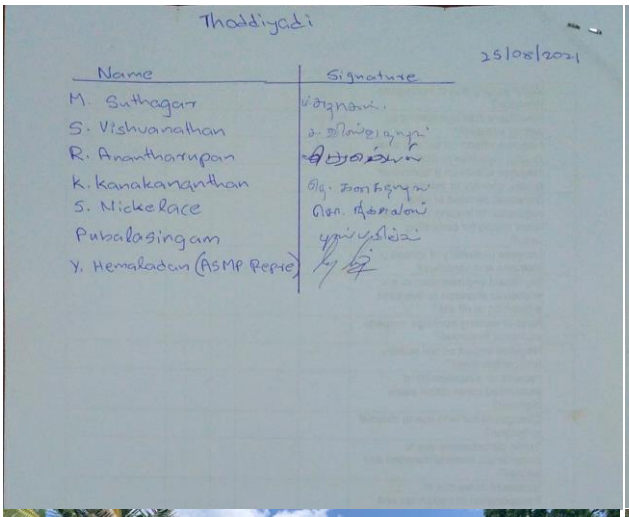
Details for Foot valve bearing piller

PROJECT :- AGRICULTURE SECTOR MODERNIZATION PROJECT - STAGE 4 (ASMP)	**IMPLEMENT AGENCY** :- MINISTRY OF AGRICULTURE	**PROJECT TITLE** :- REHABILITATION OF PUMP HOUSE,INSTALLING PUMP &SUPPLYING & LAYING PVC PIPES IN PUMP NO.04&05 AT MUTHUIYANKADDU TANK MUTHUIYANKADDU DIVISION MULLAITIVU RANGE.	AT IE's Office	AT DDI's Office
	EXECUTIVE AGENCY :- IRRIGATION DEPARTMENT NORTHERN PROVINCE	**WORK DETAILS & LOCATION** :- FOOT VALVE & DELIVERY PIPE BEARING PILLERS DETAILS	Surveyed By:- V.Tharusan,T.O / Drawn By:- T.Paulraj, D'man	Drawn Checked BY:- K.Vithusan,D'man / Design & Reviewed By:- Eng.C.Amirthasealan,SIE
FUND BY:- WORLD BANK	**SCHEME** :- MUTHUIYANKADDU	**DRAWING NO** :- ASMP/MUL/MIK/2021/LIFT/PUMP4&5/PILLERS/01	Submitted By:- Eng.R.Ragulan,IE	Approved By:- Eng.N.Suthakaran,DDI
		SHEET NO :- 03 of 05 / **SCALE** :- NOT TO SCALE / **DATE** :- 21.06.2021		



PROJECT :- AGRICULTURE SECTOR MODERNIZATION PROJECT - STAGE 4 (ASMP)	**IMPLEMENT AGENCY :-** MINISTRY OF AGRICULTURE	**PROJECT TITLE :-** REHABILITATION OF PUMP HOUSE,INSTALLING PUMP &SUPPLYING & LAYING PVC PIPES IN PUMP NO.04&05 AT MUTHUIYANKADDU TANK MUTHUIYANKADDU DIVISION MULLAITIVU RANGE.	AT IE's Office	AT DDI's Office
	EXECUTIVE AGENCY :- IRRIGATION DEPARTMENT NORTHERN PROVINCE	**WORK DETAILS & LOCATION :-** SUCTION BAY PLAN & SECTION	Surveyed By:- V.Tharusan,T.O	Drawn Checked BY:- K.Vithusan,D'man
FUND BY:- WORLD BANK	**SCHEME :-** MUTHUIYANKADDU	**DRAWING NO :-** ASMP/MUL/MIK/2021/LIFT/PUMP4&5/SUCTION BAY/01	Drawn By:- T.Paulraj, D'man	Design & Reviewed By:- Eng.C.Amirthasealan,SIE
		SHEET NO :- 02 of 05 / **SCALE :- NOT TO SCALE** / **DATE :-** 21.06.2021	Submitted By:- Eng.R.Ragulan,IE	Approved By:- Eng.N.Suthakaran,DDI

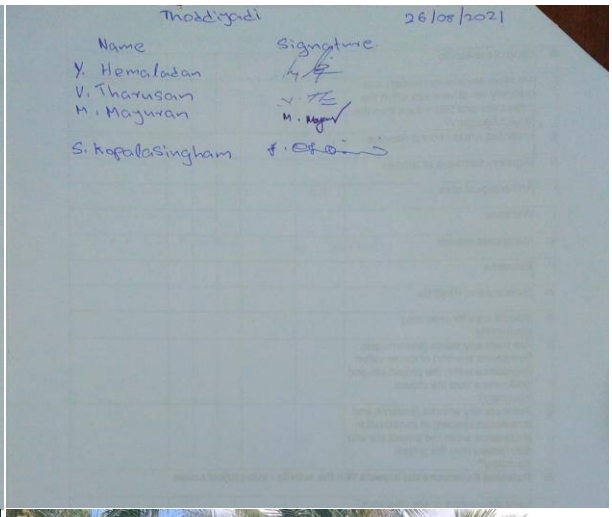
Annex 5: Attendance sheets of public consultation and its photographs



Thoddiyadi

25/08/2021

Name	Signature
M. Suthagar	
S. Vishvanathan	
R. Anantharupan	
K. kanakanandhan	
S. Nickerace	
Pubalasingam	
Y. Hemaladan (ASMP Repre)	



Thoddiyadi 26/08/2021

Name	Signature
Y. Hemaladan	
V. Tharusan	
M. Mayuran	
S. Kapalasingham	

Annex 6: 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.

7

- 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

INTERIM GUIDANCE ON COVID-19 **VERSION 1: APRIL 7, 2020**

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

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

14