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Ministry of Agriculture
கமத்தொழில் அமைச்சு

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Agriculture Modernization Project

Social Screening Report

Strengthening Capacity to Enhance Planting Material Production of Vegetables- Purchasing of Land Vehicles, Rehabilitation of Cold Storage Facility and Strengthening Seed Processing Facility at HORDI, and Dodangolla

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)

February 2022

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ABBREVIATIONS

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

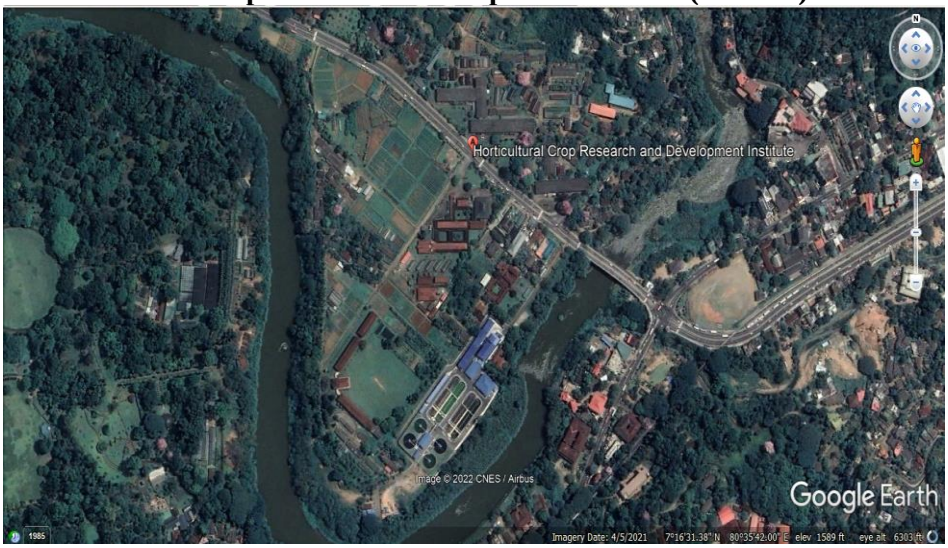
A. SUBPROJECT IDENTIFICATION

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

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

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

B. SUBPROJECT LOCATION

Location 1. HORDI @ Gannoruwa $7^0$16'25.70" N $80^0$36'08.89" E 2. University Experimental Station @ Dodangolla $7^0$17'07.21" N $80^0$42'28.24" E	The subproject's activities will be mainly implemented in 3 different locations. They are; 1. Horticultural Crops Research and Development Institute (HORDI) at Gannoruwa- The institute is located at Gannoruwa 8 km away from Kandy city in Yatinuwra DS division of Kandy district in Central Province. 2. University Experimental Station at Dodangolla, Kundasale- University experimental station is located at Dadangolla 11.7km away from Kandy city in Kundasale DS division of Kandy district in Central Province Under this subproject, construction of Polytunnels and Thermo-Gradient Tunnels will be implemented for strengthening the research and seed production facilities of the station. The location maps are annexed as Annex 2. **1. Horticultural Crops Research Development Institute (HORDI)- Gannoruwa**  **Figure 1: Location of HORDI @ Gannoruwa** **2. University Experimental Station at Dodangolla**

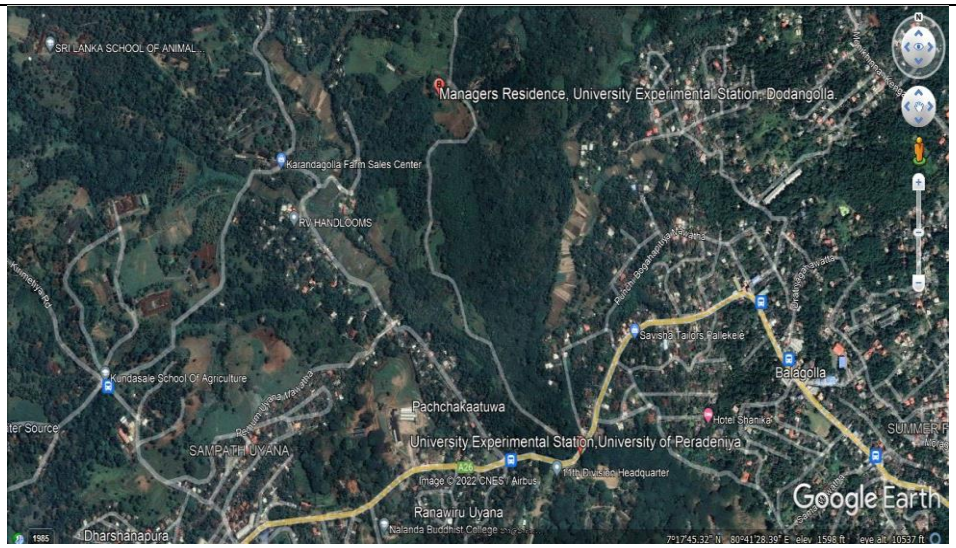


Figure 2: Location of University Experimental Station @ Dodangolla

Definition of Project Area / Project Impact area

1. Horticultural Crops Research and Development Institute (HORDI)

The Horticultural Crop Research and Development Institute (HORDI) is vested with the responsibility of technology development concerning vegetables, root and tuber crops and floriculture. The research program focuses on the development of improved crop varieties, new propagation methods, post-harvest and food processing methods, the use of protected culture and ensuring better plant health with fewer defendants on chemicals. It is situated at Gannoruwa Peradeniya, coordinating the network of RARDCS, ARSS and horticultural farms.

History of HORDI

The Department of Agriculture was established in 1912 and the Division of Research was one of its important sections that provide scientific information for establishment of major plantation crops, tea, rubber coconut and other plants of economic and ornamental importance.

Three separate institutions for tea, rubber and coconut were established and thereafter the Division of Research in the Department of agriculture placed the emphasis on peasant agriculture and established the Central Agricultural Research Institute.

The foundation stone for new laboratories of the Central Agricultural Research Institute was laid in Gannoruwa on 21 June 1958 by the Honorable S.W.R.D Bandranayake. Honorable Dudley Senanayaka, late Prime Minister of Ceylon, formally declared the Institute open on 6th August 1967. Apart from the administrative Headquarters housed in the institute, there were Research divisions of Agricultural Botany, Agricultural Chemistry, Plant Pathology, Entomology, Horticulture, Food technology, Minor plantation crops, Tobacco & soil conservation and Statistics.

With re-structure of the Department of Agriculture, three national Institutes were formed in 1994 to conduct research and development activities on horticulture, rice & field crops. The Central Agriculture Research Institute at Gannoruwa was renamed as Horticultural Crop Research and Development Institute to carryout efficient and intensive research & development work on horticulture.

	 **Figure 3: Horticultural Crops Research and Development Institute** There are ten sub units comes under HORDI. Regional wise research activities are carried out at these sub stations with coordination of HORDI. **2. University Experimental Station- Dodangolla** The University Experimental Station is based at Dodangolla, Kundasale in the mid country intermediate zone (IM3) in Sri Lanka. The farm was established in 1968 for the purpose of utilizing for the undergraduate academic program offered by the Faculty of Agriculture, University of Peradeniya and provides great support in outreach training program and research opportunities, offered for various government, private and non-government organizations in the country and promote collaborative research with foreign universities, on agriculture and allied field of study.  **Figure 4: A research activity in a polytunnel at University Experimental Station** The farm occupies 79 ha (195 Acres) of land which is extending from sloppy landscape to flat landscape. Meanwhile, experimental station buildings, students and staff accommodation buildings, polytunnels, and the road network covers considerable land extent. The surrounding area is predominantly from sloppy landscape to flat landscape areas where the land use is mixed (agriculture, residential, commercial and scrublands).
Adjacent land and features	

C. SUBPROJECT JUSTIFICATION

Need for the project (What problem is the project going to solve)	The Agriculture Sector Modernization Project (ASMP) seeks to contribute to two Country Partnership Strategy (CPS) focus areas, namely: "Supporting structural shifts in the economy" and "Improved living standards and social inclusion" through (a) improving agricultural productivity and competitiveness to strengthen the links between rural and urban areas and facilitate Sri Lanka's structural transformation; (b) providing and strengthening rural livelihood sources, employment opportunities in

	agriculture and along agriculture value chains, as well as market access for the poor, bottom 40 percent, and vulnerable people, thereby improving income sources and livelihood security in lagging rural areas; and (c) contributing to improved flood and drought management, through project's linkages to the water and irrigation sectors and a climate-smart agriculture approach. The project is also to promote diversification, value addition and increased competitiveness in the agriculture sector. The development objectives of Agriculture Sector Modernization Project for Sri Lanka are to support increasing agriculture productivity, improving market access, and enhancing the value addition of smallholder farmers and agribusinesses in the project areas. Up to now, ASMP has launched its activities in nine districts of seven provinces of the country. Project Management Unit (PMU) and Provincial Project Management (PPMUs) directly implement the two kinds of subproject activities that mainly consist with Productivity Enhancement and Diversification Demonstrations and the infrastructure development programs. The Department of Agriculture (DOA) acts as the main project partner agency of Productivity Enhancement and Diversification Demonstrations. DOA's activities consist with designing of subprojects, training farmers, monitoring subprojects' activities and involving the troubleshooting of the program. Strengthening infrastructure and Technological/Technical capacities of the Department of Agriculture is an essential need to ensure provision services and follow up support for the farmer production organization (FPOs) established under the Component 2 of the Agriculture Sector Modernization Project (ASMP). This is further to the basic field facilities established for basic seed production of chilly and maize (FIELD CROPS CENTER), vegetables including potato (VEGETABLES CENTER) and the fruit crops (FRUIT Center), which the centers of excellence of the relevant crop categories established at Mahailuppallama (including Kilinochchi and Aralaganiwila), Gannoruwa/ Kundasale/ Dondagolla/ Seetha Eliya Complex, and Horana, respectively. Furthermore, addressing issues related to food safety are pivotal owing to the increased trend of non-communicable diseases in Sri Lanka, thus, prompting people be more health conscious in terms of food they consume. This is true for both processed or packed food as well as fresh produce. Though some of the safety standards and traceability systems are available for processed food, food safety certification for fresh agricultural produce is still a new concept to Sri Lankan consumers. Hence, apart from having basic seed production to support enhanced productivity drive and farmer livelihood development through the component 2 of the ASMP, fulfilling requirement of certified safe food is considered important through the promotion of SL- GAP program, which is in existence Sri Lanka since 2015. Insufficient production, scattered producers, non-continuous supply, poor marketing channels, and low consumer awareness on GAP-certified products have become major issues as at present that required immediate solutions. At present there is a gap in market requirement and the supply of GAP-certified products. Hence, expanding the SL-GAP program among the FPOs under the ASMP would provide quality agriculture

	produce at a lower price while providing high income for the SL-GAP farmers. Strengthening of seed and planting material production facilities of HORDI at Gannoruwa, and University Experimental Station at Dodangolla will be a sustainable solution for the continuing of modern technologies that are introduced to the farmers by ASMP. Therefore, launching of capacity building program at these institutions to enhance the quality assurance of agricultural products is an essential and mandatory requirement of the agriculture sector modernization. Agriculture in Sri Lanka is one of the sectors which has been given a prominent focus for a number of years where paddy cultivation is identified as the most important crop. However, over the years the horticulture sector which includes fruits and vegetables has been gaining significant prominence and is a major contributor to the overall agriculture sector. Sri Lanka's ability to grow a variety of fruits and vegetable crops year-round under different climatic zones has led to a keen interest both locally and internationally to further develop this sector due to the identified high potential. In recent times the potential and interest for the horticulture sector has intensified due to government policy and the Covid pandemic. The present domain of the horticulture industry in Sri Lanka is evolving and includes cultivation, plant propagation, breeding of plants, production of crops, plant physiology as well as biochemistry and genetic engineering. The use of biotechnology is also poised to enter the domain of horticulture in Sri Lanka. Sri Lanka's smallholder farmers are faced with increasing risks related to the impacts of climate factors, socio-economic conditions, technology transfer issues. Risk has always been a factor for farmers, and there are many traditional methods of risk management that have been developed over generations, including cultivation techniques, crop varieties, irrigation systems, soil management, natural insect and pest control, integrated crop-livestock systems, and livelihood diversification. In addition to employing these traditional methods, farmers can benefit from technology and modern knowledge to better manage their risks on different levels, such as agro-meteorological advisory, climate projections, crop insurance schemes, value addition, micro-irrigation, mechanization, or reduction of post-harvest losses. As a holistic approach, enhancing farmer capacities, agricultural input supply, and value chain is a sustainable effort for the industry. Meantime, the enhancement of the DOA's capacity as the main project partner agency of the ASMP is a mandatory requirement that should be accelerated for the better performance of the agriculture sector development. The ultimate effort of the ASMP is to establish good agriculture practices (GAP) in the farming activities by introducing new technologies. Therefore, strengthening of the seeds and planting material production facilities of HORDI at Gannoruwa and University Experimental Station at Dodangolla is considered an essential and timely need for quality assurance of agricultural products which can be utilized by other public and private sector agencies to enhance the safe food and good health of the people in Sri Lanka.
Purpose of the project	The project will directly result the strengthening of planting material production facilities at HORDI- Gannoruwa and University Experimental Station- Dodangolla. Ultimately, it gives the benefits to the farmers who have

(What is going to be achieved by carrying out the project)	engaged in vegetable cultivation in the country. The following purposes will be achieved by implementing the subproject. • Continuing research and development activities of horticultural; crops by HORDI and Faculty of Agriculture-University of Peradeniya and sharing technology and knowledge with local and foreign universities, agriculture schools, private agricultural firms, other academic centers, and stakeholders • Conducting development programs to transfer new technologies which are developed by the research divisions to the agriculture extension officers, vegetable farmers, students (School, School of Agriculture & University) Entrepreneurs in the private sector. • Improve the research extension linkage by coordinating research extension dialogue, technology demonstrations at farmer fields. Coordinating and testing of adaptability on research-proven technologies of HORDI at field level. • Transferring Technologies released by the Food Research Unit and the findings regarding the new disease identification and confirmation through molecular techniques to farmers and other stakeholders • Continuing to diagnose to identify the pest and diseases attacks, nutrient deficiency, and other challenges for the horticultural crop management. Giving recommendations and creating awareness of the stakeholders to overcome the issues. Meantime, conducts the analysis to identify the residual impacts of the agriculture inputs and the management activities. To achieve this objective HORDI carry out soil sample analysis, fertilizer sample analysis, compost analysis, water sample analysis, plant sample analysis, bio-efficacy testing of special fertilizer, training programs, quality analysis laboratory reports, research facilities, advising and consulting, and awareness programs are being conducted • Releasing new crop varieties- Continues research activities to release the high yielding, pest and diseases resistant, drought resistant and high food quality contains crop varieties. • Supplying quality seed and planting material to seed production farmers, private institutions, and other interested groups for multiplication. Through this program, hope to enhance the local seed supplying The ultimate effort of the ASMP is to establish good agriculture practices (GAP) in the farming activities by introducing new technologies.
Beneficiaries	Sri Lanka's agriculture is characterized by a non-plantation sector and a plantation sector. Of the country's approximately 2.3 million hectares of agricultural land, 80 percent is used for non-plantation food crops, comprising rice, maize, fruits, vegetables, and other crops that are primarily grown on smallholder farms. About 1.65 million smallholder farmers operate on average less than 2ha and contribute 80 percent of the total annual food production. Agriculture has been an important driver of poverty reduction and accounted for about one-third of the decline in poverty over the past decade. Poverty reduction in rural areas in Sri Lanka was driven by higher agricultural wages which grew annually by an average of 5.7 percent from 2006 to 2013 and caused rural poverty to fall more rapidly than in other sectors. However, there is a risk that these income gains may not be sustainable if agricultural productivity does not improve and the sector does

	not start to modernize through diversification, commercialization, and value addition. The share of agriculture in Sri Lanka's GDP was approximately 7% in 2019. Out of the total population in Sri Lanka, 27.1% engage in agricultural activities. Agriculture accounted for 7.4% of the GDP (gross domestic product) in 2020. Present challenges of the all-agricultural production sectors are a limited resource (land, irrigation water, etc.), increasing cost for the agricultural inputs such as fertilizers, agrochemicals, and seed & planting materials. Among them, seed and planting material plays a vital role in agriculture inputs. Making seed and planting material available in plenty for safeguarding, maintenance of high standards, and protection of genetic and physical purity of the seed and planting material is the important service that should be delivered for the sector. The successful cultivation of both temperate and tropical vegetables is observed in Sri Lanka. At present the production amounts to about 600,000 Mt annually and no imports are being made to fulfil the country's requirements of vegetables. The yields of major vegetables produced in Sri Lanka as at present are 10–70% below the potential yields in countries like Japan, USA, and India. Further, the per capita vegetable consumption in Sri Lanka is 50% lower than the levels recommended by the World Health Organization (WHO). The vegetable production in Sri Lanka is burdened by decreasing arable lands due to rapid urbanization and ever-increasing demand for food by an exponentially growing population. All the major commercial vegetable-based cropping systems in Sri Lanka predominantly follow the conventional production technologies using agrochemicals. However, there is a growing trend of sustainable vegetable production in organic farms, home gardens, and peri-urban systems. Thus, it is clear that technological innovations are vital in local vegetable cropping to increase yield productivity, production efficiency, food quality, and food safety. Technological trends that would benefit the modern vegetable production in Sri Lanka include rapid multiplication and production of propagules, development of modern nursery techniques, micro irrigation along with fertigation and greenhouse crop production, proper pruning, training and pollination strategies, Good Agricultural Practices (GAP) and Integrated Crop Protection Technologies (ICPT), traceability initiatives, and methods to ensure quality and safety of food. ASMP hopes to enhance the irrigation facilities at Gannoruwa, and Dodangolla that directly benefits to the all the farmers who are engaging in the vegetables production in Sri Lanka. The farmers, and entrepreneurs who have undertaken the agriculture production especially vegetables will receive the direct benefits from this subproject and ultimately, whole nation gets benefits as the consumers. Furthermore, the university students who are pursuing bachelor of science in agricultural science in the faculty of agriculture,at the University of Peradeniya conduct their research activities at the university experimental station in Dodangolla. This subproject will help to increase the research facilities at Dodangolla research station and it will serve the university undergraduates and postgraduate students research activities and it will result in a massive contribution to the agriculture sector in the country.

Alternatives considered (Different ways to meet the project need and achieve the project purpose)	There is no private sector program for conducting research and development activities in the country on horticultural crops. HORDI is the mandatory institution responsible for this service. Currently, HORDI does not have adequate facilities to support the horticultural crops planting material production since they have limited resources. Dissemination of new crops varieties to farmers/ growers needs additional trustworthy support from the outsider. Even though there is private sector involvement in seed production, their services are very narrow and are limited to their own needs only. Hence, there is a gap to be filled and the government sector involvement is essential. The farmers keep trust in the government sector service since there is a trustworthy service and DOA has improved human capital to deliver the service. The faculty of agriculture is the leading academia in agriculture science in Sri Lanka. They have undertaken a remarkable responsibility for the agriculture sector development of the country. For more than seven decades, they have contributed to the sector by introducing modern technology through research activities and producing agriculture professionals in the country. The university experimental capacity has also been identified to be strengthened under ASMP. Therefore, ASMP together with DOA have identified the need for a subproject and decided to enhance the planting material production facilities through the capacity building program. Supplying of land vehicles for HORDI and University Experimental Station, Rehabilitation of existing cold storage facility and strengthening seed processing facility at HORDI are identified as the only alternative under this subproject since it gives the maximum output for the least investment. There is no alternative to be considered since there is well established system in the sector.

D. SUBPROJECT DESCRIPTION

Proposed start date (duration)	March 2022 (02 Months)
Proposed completion date	April 2022
Estimated total cost	SLRs 20.0 Mn
Land ownership	HORDI is located in Gannoruwa on the state land that is under the purview of the DOA. The university experimental station is located on the land that belongs to University of Peradeniya and vested to the Faculty of Agriculture.
Planned interventions	The following activities are included as the civil works of the subproject at three different locations. 1. Purchasing and supply land vehicles for HORDI and University Experimental Stations, Dangolla 2. Rehabilitation of existing cold storage facility at HORDI 3. Strengthening seed processing facility at HORDI

Beneficiary selection criteria and process	The whole capacity building program pertaining to the department of agriculture was collectively negotiated by MOA, DOA and ASMP. Then, DOA has prepared the capacity building needs with participation of the relevant research institutions, planting material production center and the seed certification service. Accordingly, the subproject activities were identified by the sector experts in the DOA.
Vulnerable groups and Gender	Generally, agriculture sector development directly gives benefits to vulnerable groups and women since the majority (80%) of the farmers and agriculture sector laborers belong to the low-income category. The project helps to enhance the farmers' livelihood and the food security for low-income community.

E. DESCRIPTION OF THE SOCIOECONOMIC CONDITIONS

Institute Profile

1. <u>Horticultural Crops Research and Development Institute (HORDI)</u>

The HORDI is a de-centralized organization. The central administration has been established at the head office in Gannoruwa but island wide research and development activities and the services are delivered by the HORDI in addition to services provided by the regional sub units. There are ten sub units comes under HORDI,

1. Regional Agriculture Research & Development Centre – Bandarawela
2. Agricultural Research Station -Seetha Eliya
3. Agriculture Research and Development Center -Girandurukotte
4. Agriculture Research Station -Kalpitiya
5. Agriculture Research Station -Thelijjawila
6. Adaptive Research Unit – Wagolla
7. Adaptive Research Unit – Wariyapola
8. Adaptive Research Unit – Thibbatumulla
9. Adaptive Research Unit – Thabbowa
10. Food Research Unit – Gannoruwa

The HORDI is a prime research and development institute among the agricultural research stations of the country. It consists of all the sections that want to continue the improved research and development activities at a higher standard level. There are Seven Sections that comes under HORDI,

1. Plant Breeding Division
2. Plant Pathology Division
3. Agronomy Division
4. Entomology Division
5. Soil and Plant Nutrition Division
6. Food Contaminant Analytical Division
7. Extension and Communication Division

<u>Plant Breeding Division</u>

Division of plant breeding is employed in developing new vegetable varieties to cope with the market demand, consumer preference, climate change, and biotic & abiotic stresses using conventional and modern breeding tools. In achieving the above goals current research and development activities are being focused on the following area.

- Germplasm collection, evaluation, and selection for rational utilization of germplasm in crop improvement program of vegetable crops
- Development of high-yielding vegetable varieties in cooperated with other preferable quality characters suitable for diverse environments.
- Development of climate-smart varieties to mitigate climate change
- Development of pest and disease-resistant varieties to reduce the usage of chemicals in vegetable cultivation and ensure sustainable agriculture industry

The services delivered by the plant breeding division;

- Production of new vegetable varieties
- Breeder seed production of new varieties produced
- Awareness of farmers
- Training Programs (Farmers, Students, Officers)
- Contributing to Technology Programs (Radio, Television)
- Conducting research on imported seeds and finding out whether they are suitable for cultivation in the country.
- Awareness on techniques (Tissue Culture, Mushrooms)
- Providing planting material

Plant Pathology Division

The Plant Pathology division is responsible for identification of plant diseases, development of integrated disease management packages, fungicides screening, seed and plant health test, advisory service for disease control. New technologies are disseminated by training classes, plant clinics, leaflets, and research papers. The plant pathology division provide following service to the sector;

- Disease Diagnosis and Advisory Service
- Providing Teaching and Training Facilities
- Participate as Resource Persons

Disease identification is one of the major tasks assigned for this division. The plant pathology division of HORDI continues a remarkable duty in prior identification of pest and disease attacks' outbreaks and taking necessary actions to mitigate the vulnerable situations. Currently, the division has been modified to detect and confirm diseases through molecular biology techniques. Using this technique, the following new diseases were traced during the recent period;

1. **Aloe vera** soft rot (Dickya chrysanthemi)
2. Target spot of **tomato** (Corynespora cassiicola)
3. Corynespora blight of **cucurbits** (Corynespora cassiicola)
4. Bacterial wilt of **cucurbits bean and weed** hosts (Ralstonia solanacearum)
5. Fusarium crown and root rot of **tomato** (Fusarium radices-lycopersici)
6. **Moringa** (Drumstick) diseases (Drechelera sp.) and (Lasiodiplodia theohromae)
7. **Tomato** canker disease (Clavibacter michiganensis subsp. Michiganensis)
8. **Watermelon** fruit blotch (Acidovorax avenae)

Agronomy Division

The main activity of the division is conducting agronomic research with the propound objective of increasing the production and productivity of vegetables, ornamentals, and root and tuber crops.

Through the developing agronomic technologies, the division is working to minimize the gap between potential and actual yield and quality of the crops and increase the overall vegetable and root & tuber crops production of the nation.

The division offers a different kinds of agronomy related services to the public, mainly on vegetables, flowers, and root and tuber crop cultivations and home gardening.

Services

- Provision of planting material and seeds of traditional - varieties for farmers that requested.
- Solving farmers problems on vegetables
- Participating for research extension dialogues requested by extension divisions.
- Participating and conducting lectures for pre-seasonal training programs

Entomology Division

The main activity of the division is conducting research and development activities related to the diagnosis and management of pests in vegetables and root crops

Soil and Plant Nutrition Division

Division of Soil and Plant nutrition mainly conducts research on soil fertility, plant nutrient management, organic farming, environmental pollution, food safety, and soil microbiology and soil physics relevant to vegetables. The division promotes farmers for soil test-based fertilizer application in the food crop sector. Further provides analytical services on request for soil, plant, water, and chemical fertilizers, compost, and manures and offers advice on their use of them. The division also undertakes training programs on soil fertility and plant nutrition, correct use of fertilizers, organic farming with special reference to nutrient and soil management, and other related topics for farmers, students, extension officers, and the interested public. Students from universities and other government and private institutions are being trained for the laboratory analytical works of organic farming. The division consists of laboratories for soil, fertilizer, plant, water analysis, and Soil microbiology. These are equipped with required instruments to measure essential soil chemical, physical and microbial properties. Soil and fertilizer laboratories are accredited for analyzing pH, EC. Phosphorus, Potassium, Micronutrients (Fe, Cu, Mn, Zn), secondary nutrients (Ca, Mg), total trace metals (As Cd, Cr, Pb, Fe, Cu, Mn, Zn) in soil and total nitrogen, total and water-soluble phosphorous, total potassium, moisture, and heavy metals (Fe, Cu, Mn, Zn, Pb, Cd, Cr, As) in chemical fertilizer. The following services are provided by the division;

1. Soil Sample Analysis
2. Chemical Fertilizer Sample Analysis

3. Compost Analysis
4. Water Sample Analysis
5. Plant Sample Analysis
6. Bio efficacy testing of special fertilizers
7. Undertake university students' researches
8. Training Programs (school and University)
9. Training Program (Diploma Students)
10. Training on Organic Farming

The main activities that are undertaken by the division are as follows**;**

- Improve fertilizer use efficiency by in introducing new technology.
- Promoting of organic agriculture
- Introduction of compost preparation technology
- Promotion of soil and plant test bored fertilizer recommendation
- Detection of heavy metals in environmental samples
- Testing of micro-nutrient in plant samples
- Conducting research on soil fertility and plant nutrient management, soil physics and soil microbiology

Food Contaminant Analytical Division

Main scope of this division is carrying out analysis on food contaminants. Accordingly, residue analysis for pesticide residues and trace elements in food is being continued at the two separate laboratories. In addition, testing for pesticide formulations are also carried out at a separate laboratory division.

Considering the capacity of the laboratory, per day nearly forty (40) samples can be analyzed as for pesticide residue analysis or elemental analysis. Nearly seventy pesticides can be analyzed as pesticide residues while 13 elements can be analyzed as trace elements including most toxic elements of Arsenic (As), Mercury (Hg), Cadmium (Cd) and Lead (Pb). Nearly 85 equipment are located at the laboratory including high-end equipment of LC-MS/MS, GC-MS, ICP-MS, HPLC, FTIR and two GCs. The following services are produced by the division

- Pesticide residue analysis in food items of fruits, vegetables, rice and water
- Elemental analysis in food items of fruits, vegetables, rice and water
- Elemental analysis in pesticides as impurities
- Conducting under graduate/student training and research studies.
- Quality analysis for pesticides.

Extension and Communication Division

Research proven new findings and improved varieties in related to the vegetables and tuber crops are disseminated to different groups of people including students, government and non-government organization, farmers and entrepreneurs to enhance production and productivity of vegetables and tuber crops. Coordinating, the industrial training program for students under Diploma and University. Research extension linkage is developed by organizing and coordinating demonstration on new technologies and conducting and coordinating research extension dialogue. Division is responsible for compilation and preparation of annual research report. The activities performed by the division;

- Timely editing and updating of technical leaflets
- Technology dissemination by telephone calls, radio program, TV Program, paper articles, exhibitions, workshops, training program and demonstration
- Coordinating the research and extension linkage by conducting and coordinating research extension dialogue.
- Coordinating industrial training program for the undergraduates and diploma students.
- Participate for PTWG and DTC with new findings to extension officers at field level and identified the priority issues and problems for research.
- Coordinating exhibitions

The main service of the division is conducting advisory services at farmer premises by visiting and at the office

2. University Experimental Station- Dodangolla

This station has facilities for residential training programs, agricultural demonstrations and research trials. Students of the University of Peradeniya and students from other Sri Lankan and foreign universities conduct their Bachelors, Masters and Doctoral field experiments at this station. In addition, leading local and foreign private organizations use the unit for research purposes. Very importantly, the unit offers very good facilities for academia of the University of Peradeniya to conduct research programs. The station gives treasured research opportunities for undergraduate and postgraduate levels. The main research areas are.;

- Crop Physiology and Agronomy based research
- Protected Culture and Organic Agriculture
- Site specific soil management
- Land use planning
- Spatial variability of soil properties

Nearly 79 ha (195 acres) extent farmland has separately allocated spaces for the training & research, facilities (for researchers and service seekers), production units, and biodiversity & plantation fields. As well farm conducts training programs in,

- Mushroom Cultivation
- Protected Culture
- Tissue Culture
- Organic Farming and
- Farm Machinery, on the request of outside organizations, farmer groups etc.

This station has residential facilities to accommodate approximately 60 students. The student hostel consists of three dormitories to accommodate males and females separately. Within this hostel premises there is a lecture hall with adequate facilities and lodging facilities, meals and recreation facilities.

A sophisticated glass house, two polytunnels with different levels of shading and net houses are available for research and training activities.

A tissue culture laboratory was established in 2008 for training and production requirements. This laboratory consists of all instruments to practice low-cost

	tissue culture techniques. Presently, the laboratory is being used to produce Anthurium and Banana plantlets for sale. The plant nursery has all the facilities for good management of plants and for plant propagation practical training. These include facilities to conduct training programs on budding, grafting, layering, and other plant propagation techniques using well-trained and skilled staff. This nursery supplies sufficient numbers of quality annual and perennial horticultural crop plants to the plant sales center at the Faculty of Agriculture of the University at Peradeniya and sells the propagules on site at the farm. The mushroom unit was developed in 2009 to enhance the knowledge of mushroom cultivation of undergraduate students and external trainees. The unit is offers practical knowledge on all the techniques of oyster mushroom production. It encourages trainees to initiate mushroom cultivation as self-employment programs. In addition, this unit provides research facilities for undergraduate students and academia of the university. There is a land reserved for organic agriculture experiments. This field has not received any agro chemicals for the last 10 years. The unit has a compost production unit, which is used for practical classes by students and for research. Approximately 25% of the unit is reserved to commercial vegetable and fruit production. A wide range of vegetables and fruits such as mango, banana, jack fruit, Anona and pomegranate are grown on this land. This station has a high degree of bio diversity, with about 150 species of plants within its premises. This is an added bonus, which is used extensively for student practical. The experimental unit offers a unique opportunity for student training, research and demonstrations. Perennial crops, principally Teak, Coffee and Coconut cover approximately 50% of the land area of the farm.  **Figure 5: Ongoing research at a polytunnel** DOA and University of Peradeniya annually allocate funds for the recurrent expenditures to undertake the services and the research activities undertaken by these three institutions but there are low allocations for the capital investment. ASMP and DOA together conduct the consultation sessions with relevant officials and identified to need of strengthening the HORDI and University Experimental Station's services through capacity building component of ASMP
Project Benefits	The project will directly result the establishment of irrigation facilities HORDI- Gannoruwa and University Experimental Station- Kundasale, Ultimately, it gives the benefits to the farmers who have engaged in

	cultivation in the country and the consumers as well who can reach healthy foods. The following benefits will be achieved to the agriculture sector of the country by implementing the subproject. • Development of high-yielding vegetable varieties in cooperated with other preferable quality characters suitable for diverse environments. • Development of climate-smart varieties to mitigate climate change • Development of pest and disease-resistant varieties to reduce the usage of chemicals in vegetable cultivation and ensure sustainable agriculture industry • Production of new vegetable varieties • Breeder seed production of new varieties produced • Conducting research on imported seeds and finding out whether they are suitable for cultivation in the country. • Providing planting material to seed and planting material development center and private parties for multiplication • Provision of planting material and seeds of traditional - varieties for farmers that requested. • Research and development activities related to the diagnosis and management of pests in vegetables and root crops • Improve fertilizer use efficiency by in introducing new technology. • Conducting under graduate/student training and research studies. • Coordinating the research and extension linkage by conducting and coordinating research extension dialogue. • Coordinating industrial training program for the undergraduates and diploma students. The ultimate effort of the ASMP is to establish good agriculture practices (GAP) in the farming activities by introducing new technologies.
Social Impact	The proposed subproject will be implemented within the government premises which is earmarked for the vegetable seed production and research activities. Hence there is no direct contact of subproject activities with the community. As the subproject activities, rehabilitation existing cool room storage facilities at HORDI, supplying of land vehicles for HORDI and University Experimental Station and supplying of equipment required for seed processing to HORDI are included. There is no civil works are included in this subproject. Hence, there is no social impact emerging by the subproject activities. There are no assets or activities that will be disturbed or affected by the subproject activities. The magnitude of the proposed project interventions is very low. accordingly, the anticipated negative social impacts of the proposed project will be minor or insignificant. All environmental related issues and mitigation measure are in the EMP under ESR.
Mitigation Measures	Not applicable

F. STAKEHOLDERS ENGAGEMENT AND PUBLIC CONSULTATION

1. Stakeholders and Public consultation

Stakeholders' engagements

The Department of Agriculture is the main project partner agency of this subproject. The staff of the HORDI, and Agriculture Faculty (University of Peradeniya) jointly prepared their capacity needs and submitted them to the ASMP. Several discussions were undergone to finalize the subproject activities between the HORDI, university staff and the ASMP. For more transparency, the relevant institution staff were represented the technical evaluation committee of this subproject.

The ASMP PMU staff conducted site visits, consultations with DOA's officials during subproject identification and designing stages.

Table 1: Responsible Officers in HORDI Project Activities

SN	Name	Designation	Contacts
1	Dr. (Ms.) S.K. Wasala	Additional Director General of Agriculture (Research)-DOA	samanthiwasala@gmail.com
2	Prof. K.W.L.K. Weerasinghe	Senior Lecturer-Faculty of Agriculture, University of Peradeniya	0714462995
HORDI- Gannoruwa			
3	Ms. W.A.P.G.Weeraratna	Director/ HORDI	gethweerarathna@yahoo.com
Plant Breeding Division			
4	Ms.N.L.A.T.S. Nanayakkara	Head of the Division Assistant Director of Agriculture (Research)	subodhinit@gmail.com
5	Ms. H.M.P.S. Kumari	Assistant Director of Agriculture (Research)	pabakumari68@yahoo.com
6	Ms. H.M.V.T.Welegama	Assistant Director of Agriculture (Research)	tharanganiwelegama@gmail.com
7	Ms. R.G.S.Iroshani	Assistant Director of Agriculture (Research)	shyaliiroshani@gmail.com
8	Ms. N.B.U.Dissanayaka	Assistant Director of Agriculture (Research)	bhagyadissanayaka@ymail.com
Pathology Division			
9	Ms. W.A.P.G.Weeraratna	Agriculture Principal Scientist (Plant Pathology)	gethweerarathna@yahoo.com
10	Ms. M.S.W.Fernando	Assistant Director of Agriculture (Research)	sobashinifernando@gmail.com
Agronomy Division			
11	Ms.D.P.Karunananda	Agriculture Principal Scientist (Agronomy)	dayani.karunananda@gmail.com
12	Ms.K.A.D.S.D. Kahadawaarachchi	Assistant Director of Agriculture (Research)	dilrukshi_sandya@ymail.com
13	Ms.K.H.S.T.Deshabandu	Assistant Director of Agriculture (Research)	khstdeshabandu@yahoo.com
14	Ms. H.M.P.T.K.Hettigedara	Assistant Director of Agriculture (Research)	hettigedara64@yahoo.com
Entomology Division			
15	Mr.S.S.Weligamage	Agriculture Principal Scientist (Entomology)	senaniweligamage@gmail.com

	16	Mr. K.M.D.W.P. Nishantha	Assistant Director of Agriculture (Research)	wpnishantha@yahoo.com
	17	Ms.P.H.Ranaweera	Assistant Director of Agriculture (Research)	ranaweerapra@yahoo.com
	Soil and Plant Nutrition Division			
	18	Ms. N.R.N. Silva	Principal Agriculture Scientist (Soil Science)	renukasilva@yahoo.com
	19	Mrs. K.K.K. Nawarathne	Assistant Director of Agriculture (Research)	kkknawaratna@yahoo.com
	Food Contaminant Analytical Division			
	20	Ms.C.Magamage	Principal Agriculture Scientist (Analytical Chemistry)	champamgmg@gmail.com
	21	Ms.P.W.Y. Lakshani	Assistant Director of Agriculture (Research)	jayayoshil@yahoo.com
	Extension and Communication Division			
	22	Ms.K.A.S. Thilakarathne	Assistant Director of Agriculture (Development)	arunisriya@gmail.com
	University Experimental Station- Dodangolla			
	23	K.G.S.N. Amarasiri	Farm Manager	

Stakeholders' consultation

During the social and environmental screening process, the staff of DOA, University of Peradeniya, and HORDI were consulted. Meantime ASMP has taken actions to conduct the stakeholders' consultation starting from the subproject identification stage up to finalizing the subproject's design. It was a good tool to maintain transparency among the stakeholders. Due to the impact of the fruitful consultation process undertaken by the ASMP, the DOA and University staff are well aware of the subproject activities and their objectives. Meantime, they have negotiated and decided the real requirements that they want to enhance the service of the institute.

Table 2: Consultation outputs

Locations / Sub Units / Fields Visited	Participants with Designations	Matters Discussed
DOA- Peradeniya- 19.01.2022		
ADG (Research) Office, DOA	Dr. (Ms.) S.K. Wasala Additional Director General (Research)	Overall capacity building plan to be implemented with ASMP assistance
Faculty of Agriculture, University of Peradeniya- 19.01.2022		
Faculty of Agriculture	Prof. Buddhi Marambe Senior Professor	Requirement of land vehicles for University Experimental Station
	Prof. K.W.L.K. Weerasinghe Senior Lecturer	
HORDI Gannoruwa-19.01.2022		
Director Office, HORDI	Ms. W.A.P.G.Weeraratna Director/ HORDI	Proposed subproject activities
Analytical Laboratory (Pesticide residuals & Heavy metals)	Ms.P.W.Y.Lakshani, Assistant Director of Agriculture (Research)	• Routine functions of the lab Overall environmental and social risks/impacts • Safety precautions that are implemented • Rehabilitation of existing cool storage and seed processing facilities of the research station
	Ms. Chamila Vaidyarathne Research Assistant	
Sample Receiving Point	Mr.Asanga Panditharathna Sample receiving Officer	
Plant Pathology Division	Ms.Kanchana Dissanayake, Programme Assistant	
	Ms.Shyamali Kohombange	

		Research Assistant	• Waste disposal
		Ms. Nishani Research Assistant	
		Ms.Nishadi Samarakoon Research Assistant	
		Ms.N.M.S.Maheshika Technical Assistant	
		Ms.W.Anurudhdhika Technical Assistant	
		Mr.R.W.Weerasekara Technical Assistant	
	Soil & Plant Nutrition Division	Ms.Renuka Silva Principal Senior Scientist (Soil Science)	
	Microbiology Laboratory	Ms.Kumudu Nawarathna, Assistant Director of Agriculture (Research)	
	University Experimental Station, Dodangolla- 20.01.2022		
	University Experimental Station	Mr.W.M.I.N.D.Abeysingha, Technical Officer	• Farm machinery usage in the station

G. GRIEVANCE READDRESSED MECHANISM (GRM)

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

H. IMPLEMENTATION AND MONITORING

1. Monitoring

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

Therefore, the contractor should be aware of the project management to ensure social management compliance during the implementation of the project. The Director -HORDI and Fram Manager-University Experimental Station will undertake the internal monitoring activities with close coordination of regional research stations officers and ASMP-PMU. Implementation of social and environmental safeguards compliance will be monitored by the social and environmental safeguard specialist at ASMP-PMU.

I. SCREENING OF POTENTIAL SOCIAL IMPACTS

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

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

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

Key project activities	Potential Social Effects	Significance of Social effect with mitigation in place[1]
Supplying land vehicles for HORDI and University Experimental Station, supplying equipment for seed processing unit and upgrading of cool storage facilities at HORDI	NA	

SOCIAL RISKS & IMPACTS

Activities	Land requirements	Risk of exclusion of vulnerable groups	Construction impacts	Risks due to labour influx	Risk of livelihood impacts	Public/ occupational health and safety	COVID19 risks
Supplying land vehicles, equipment for seed processing unit and upgrading of cool storage facilities at HORDI	Premisses owned by DOA						

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

Activities	Land requirements	Risk of exclusion of vulnerable groups	Construction impacts	Risks due to labour influx	Risk of livelihood impacts	Public/ occupational health and safety	COVID19 risks
Supplying land vehicles for University Experimental Station	Premisses owned by University						

INFORMATION ON AFFECTED PERSONS

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

J. SCREENING DECISION and recommendations

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

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

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

K. SOCIAL MANAGEMENT PLAN (SMP)

Not applicable

L. CONCLUSION

The proposed Strengthening Capacity to Enhance Planting Material Production of Vegetables-Purchasing of Land Vehicles, Rehabilitation of Cold Storage Facility and Strengthening Seed Processing Facility at HORDI, and Dodangolla well augers with enhancing the DOA's capacities. It aligns with the sustainability of the agriculture sector modernization under ASMP. The proposed activities will not have impacts in relation to land acquisition or involuntary resettlement. The impacts that can arise can be considered modest and can be reversed with mitigation action.

L. DETAILS OF PERSON RESPONSIBLE FOR THE SOCIAL SCREENING

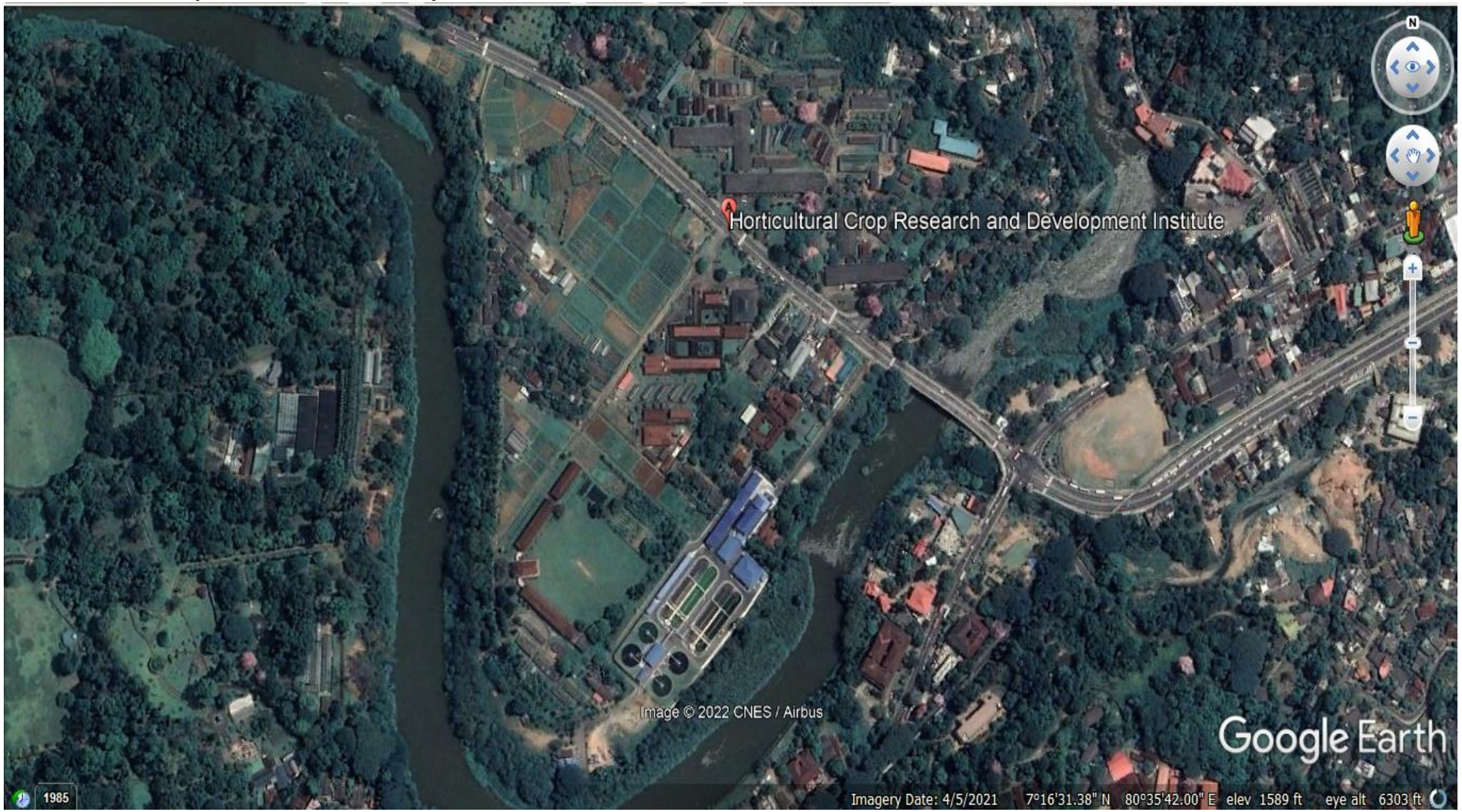
Screening conducted and reviewed by **D.M. Sanjaya Bandara** **Environment and Social Safeguard Specialist** Agriculture Sector Modernization Project **Name/Designation/Contact information**	**Date** **February 2022**  **Signature**
Screening report recommended by **Dr. Rohan Wijekoon** **Project Director**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

ANNEX 1: LIST OF REFERENCES

1) https://asmp.lk/the-project/
2) https://doa.gov.lk/home-page/
3) https://doa.gov.lk/hordi-home/
4) https://doa.gov.lk/spmdc-home-new/
5) http://agri.pdn.ac.lk/farms/dodangolla/index.php

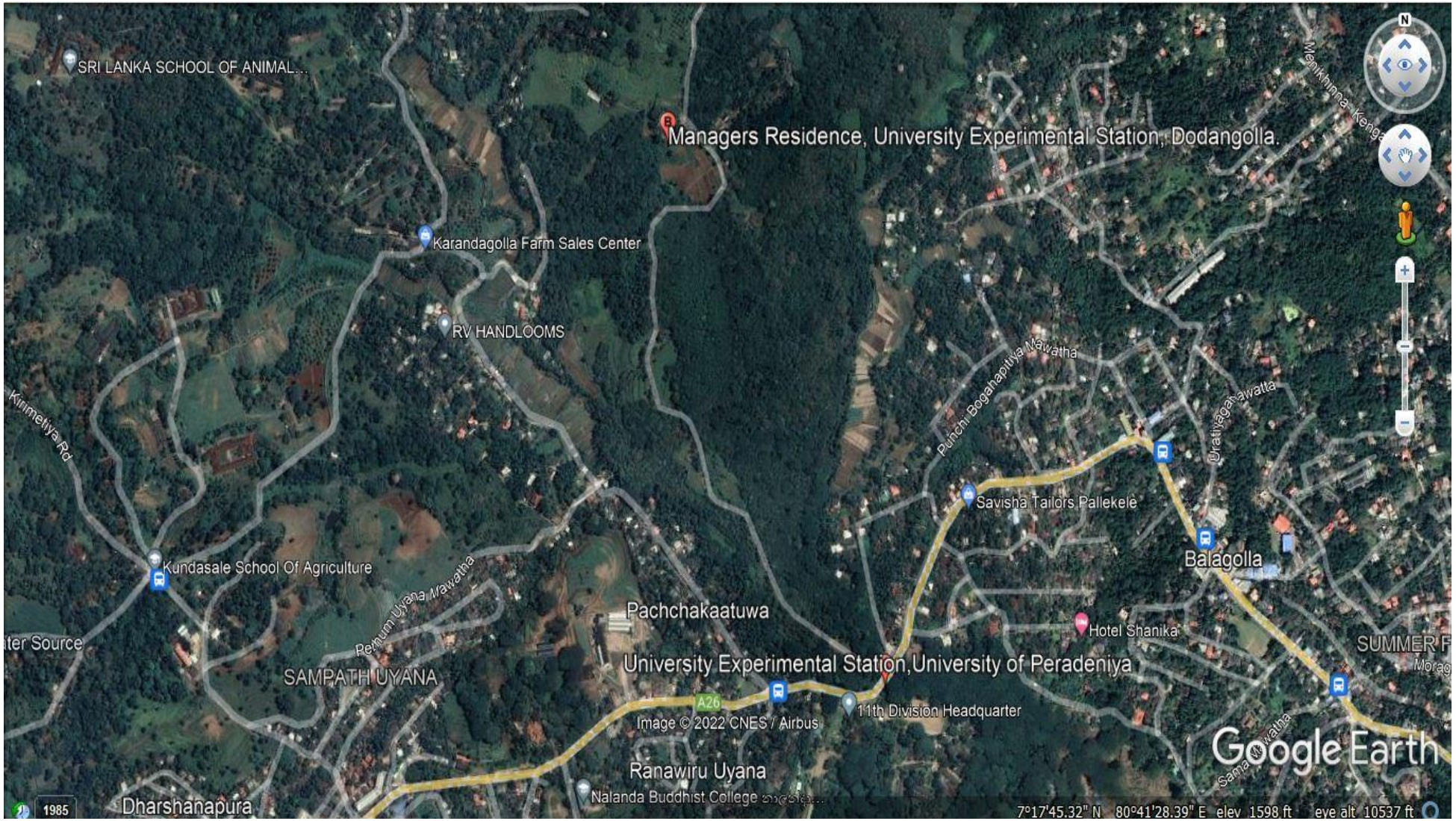
ANNEX 2: GOOGLE MAP/ LOCATION MAP

1. Horticultural Crops Research and Development Institute at Gannoruwa



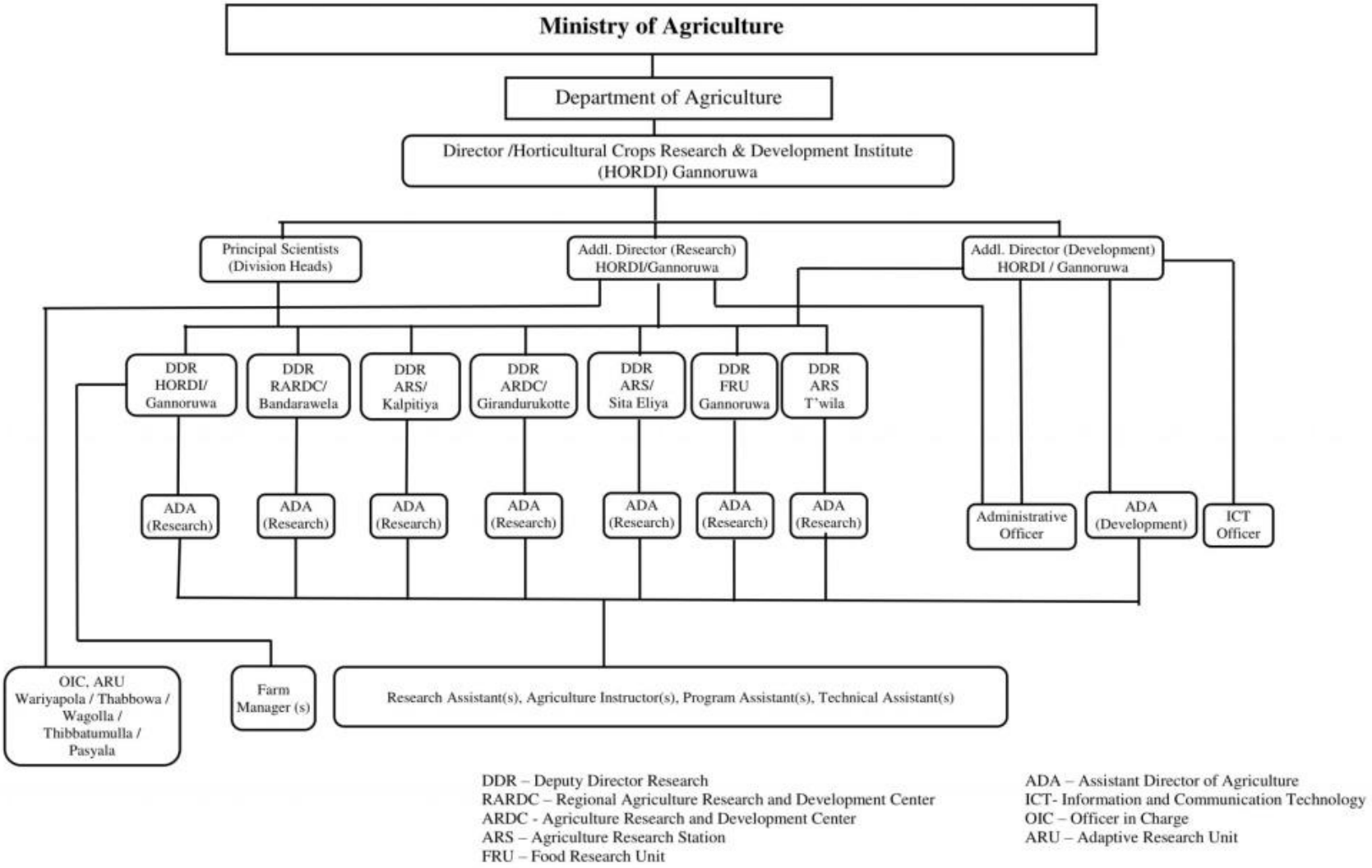
Source: Google Map

2. University Experimental Station at Dodangolla, Kundasale



Source: Google Map

ANNEX 3: ORGANIZATIONAL STRUCTURE OF HORDI



Source: HORDI Home page – Department of Agriculture Sri lanka (doa.gov.lk)

ANNEX 4: ORGANIZATIONAL STRUCTURE OF UNIVERSITY EXPERIMENTAL STATION- DODANGOLLA