

Project Administration Manual

Project Number: 48218-006

Loan and/or Grant Number(s): {LXXXX; GXXXX; TXXXX}

August 2022

Nepal: Nuts and Fruits in Hilly Areas Project

ABBREVIATIONS

ADB	–	Asian Development Bank
APFS	–	audited project financial statements
COVID-19	–	coronavirus disease
CPMU	–	Central Project Management Unit
DMF	–	design and monitoring framework
DOAD	–	(provincial) Directorate of Agriculture Development
FY	–	fiscal year
GAFSP	–	Global Agriculture and Food Security Program
GESI	–	Gender Equality and Social Inclusion
ha	–	hectare
IA	–	implementing agency
MOALD	–	Ministry of Agriculture and Livestock Development
NARC	–	Nepal Agricultural Research Council
NCFD	–	National Center for Fruit Development
PFI	–	partner financial institutions
SMR	–	social monitoring report
SPS	–	ADB Safeguard Policy Statement (2009)
TA	–	technical assistance
TASF	–	Technical Assistance Special Fund

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Project Administration Manual Purpose and Process

The project administration manual (PAM) describes the essential administrative and management requirements to implement the project on time, within budget, and in accordance with the policies and procedures of the government and Asian Development Bank (ADB). The PAM should include references to all available templates and instructions either through linkages to relevant URLs or directly incorporated in the PAM.

The Ministry of Agriculture and Livestock Development (MOALD), National Center for Fruit Development (NCFD), Nepal Agricultural Research Council (NARC), Directorate of Agriculture Development (DOAD) of provincial agriculture ministries in Province 1, Bagmati, Gandaki, Karnali, and Sudurpashchim are wholly responsible for the implementation of ADB-financed projects, as agreed jointly between the borrower and ADB, and in accordance with the policies and procedures of the government and ADB. ADB staff is responsible for supporting implementation including compliance by MOALD, NCFD, NARC and DOADs in Province 1, Bagmati, Gandaki, Karnali and Sudurpashchim of their obligations and responsibilities for project implementation in accordance with ADB's policies and procedures.

At loan and grant negotiations, the borrower and ADB shall agree to the PAM and ensure consistency with the loan and grant agreements. Such agreements shall be reflected in the minutes of the loan negotiations. In the event of any discrepancy or contradiction between the PAM and the loan and grant agreements, the provisions of the loan and grant agreements shall prevail.

After ADB Board approval of the project's Report and Recommendations of the President (RRP), changes in implementation arrangements are subject to agreement and approval pursuant to relevant government and ADB administrative procedures (including the Project Administration Instructions) and upon such approval, they will be subsequently incorporated in the PAM.

I. PROJECT DESCRIPTION

1. The project will increase agricultural income of approximately 40,000 beneficiary farm households in 100 municipalities in hilly areas of five provinces – Province 1, Bagmati, Gandaki, Karnali and Sudurpashchim. This will be achieved through (i) the development of approximately 10,000 hectares (ha) of fruit and nut orchard development, value-addition to nuts and fruits produced by 30,000 households, and institutional capacity building for nursery and horticulture sector management; and (ii) vegetable and other nutritious crop production in 1,000 ha and its marketing by 10,000 smallholder households who are not capable of investing in fruit and nut orchard development in the project provinces.

2. The project is aligned with the following impacts: (i) livelihoods of rural households improved; and (ii) resilience of farmers to climate change improved.¹ The project will have the following outcome: beneficiary farmers' agricultural income from climate resilient horticulture farming increased. This will be achieved through improved nursery management, enhanced production and productivity in orchards, enhanced value addition and commercialization of fruits and nuts. The project will also support smallholders in the same project areas, who would not have been able to invest in commercial fruit and nut farming, to generate income through vegetable and other crop farming.

3. The project will have the following outputs:²

4. **Output 1: Institutional capacity for nursery and horticulture sector management improved.** To ensure a sufficient supply of quality planting materials for fruit and nut crops, the project will support the establishment of partnership with at least 40 nurseries. Also, at least 10 private nurseries will be equipped to manage disease-free planting materials. At the national level, the project will (i) prepare nursery standards and regulations and an inspection system; (ii) upgrade horticulture station and/or center facilities for testing, cleaning, and maintenance of planting materials, and nursery quality control; (iii) train horticulture station and/or center staff, and organize knowledge exchange programs and workshops to meet internationally accepted sanitary and phytosanitary standards; (iv) upgrade private nurseries to ensure healthy and quality material production, and transfer genetic technologies to private nurseries; (v) commission research on more climate-resilient and adaptable varieties of fruits and nuts; (vi) develop a nursery certification scheme and roll out with volunteer private nurseries; and (vii) train and certify cooperatives and private input suppliers that service project clusters. At the provincial level, the project will support (i) the development of interactive crop suitability maps at a crop variety level through the integration of climate, soil and landscape information; and (ii) land classification and zoning for orchard development. Output 1 will be implemented by Nepal Agricultural Research Council (NARC), National Center for Fruit Development (NCFD) and provincial Directorate of Agriculture Development (DOAD) in each of five provincial agricultural ministries.

5. **Output 2: Production and productivity of project farmers increased.** This output will develop about 10,000 ha of new orchards for almond, apple, avocado, citrus (lime, mandarin, and sweet orange), kiwi, macadamia, pecan, and walnut production; and enhance productivity through (i) the preparation of the packages of practice incorporating climate analysis, soil management, variety recommendation and crop husbandry, drip irrigation and management, and overall orchard

¹ Government of Nepal. Ministry of Agricultural Development. 2016. [Agricultural Development Strategy 2015 to 2035](#). Kathmandu.

² See Attachment B. Detailed project output description for detailed project implementation approaches and roles/responsibilities.

management, including good agricultural practices (GAP), integrated pest management, harvest techniques and storage, and beekeeping;³ (ii) training about 30,000 fruit and nut farmer households in the packages of practice through (a) farmer group facilitators ensuring the inclusion of women (at least 30%) and disadvantaged groups (at least 20%) in project beneficiaries and in decision-making positions and strengthening farmer group formation; (b) private technical service and input providers; (c) farmer-to-farmer extension programs, identifying lead farmers and training them to demonstrate climate change adaptation and best practices; and (d) developing and promoting a digital technology-based farm advisory system.

6. In line with government regulations, the project will provide financial support through partial grants for farmers and cooperatives.⁴ The project will provide (i) 50% of investment costs for farmers, farmer groups, and cooperatives; and (ii) 40% for agri-enterprises for the development of new orchards and drip irrigation systems on a reimbursement basis.⁵ The project will also provide a grant to farmers based on the plant survival rate.⁶ This plant survival grant is an incentive to encourage farmers to implement better farm management resulting in a higher plant survival rate.

7. The project will establish a credit guarantee fund (CGF) for smallholder horticulture farmers who face challenges in accessing formal rural finance. The project will make time deposits of \$6 million to up to three partner financial institutions, to be released in line with the CGF agreement to be signed between partner financial institutions and the project and on the approval of the CGF management committee.⁷ This scheme aims to unlock about \$70 million of investment from beneficiaries by guaranteeing a portion of the credit risk of the project beneficiaries on a first loss basis.

8. The project will also explore the potential of carbon credit gain from horticulture farming in abandoned agricultural land as an additional income source. The project will conduct a study on the feasibility of accessing carbon finance from the voluntary market and the benefit-sharing mechanism and identify carbon financing from verified carbon sequestration benefits from orchards. Once the government endorses the benefit-sharing mechanism, the project will address policy gaps in voluntary carbon market access, monitor and report the verified carbon units, and develop payment indicators.⁸

9. In addition to 30,000 fruit and nut farmer households, the project will support about 10,000 smallholder farmers with less than 0.2 ha (4 *ropani*), who are unable to invest in commercial fruit and nut orchard development, in producing irrigated off-season vegetables and wet season

³ GAP are standards of practices that address environmental, economic, and social sustainability for on-farm processes, and result in safe and quality food and non-food agricultural products. Compliance with GAP is verified through a certification process carried out by the government sector or private agencies.

⁴ The draft business promotion act, which the Ministry of Agriculture and Livestock Development (MOALD) was reviewing in August 2021, indicates that the maximum ceiling of subsidies for horticultural orchard development is 50%, with a subsidy ceiling of 50% for farmers, farmer groups, and cooperatives; and 40% for agri-enterprises.

⁵ The responsibilities at the local, provincial, and central levels and the beneficiary selection criteria and scope of eligible investments are detailed in the Project Administration Manual, Attachment D: Partial Subsidies for Farmers and Agri-enterprises (accessible from the list of linked documents in [Appendix 2](#)).

⁶ A plant survival monitoring system will be established as part of the project monitoring and evaluation scheme and the land database system establishment (output 1). The project assumes 80% survival and allocates \$0.5 of grant incentives per surviving plant. This incentive will be provided for the first 2 years of orchard establishment.

⁷ The estimated time deposit schedule, CGF management committee composition, and the short-listing and selection criteria for partner financial institutions are in the Project Administration Manual, Attachment C: Credit Guarantee Fund for Smallholder Horticulture Farmers (accessible from the list of linked documents in [Appendix 2](#)).

⁸ The terms of reference of this service are in the Project Administration Manual, Attachment J: Detailed Terms of Reference (accessible from the list of linked documents in [Appendix 2](#)).

nutritious food crops.⁹ The GAFSP has approved grants to finance the following activities: (i) vegetable grower identification and their capacity building through farmer group formation; (ii) extension of drip irrigation and rural financing support for vegetable and other crop production on 1,000 ha; and (iii) partial grants for the establishment of vegetable value addition equipment and infrastructure at three levels: cooperative, local and agribusiness.¹⁰ Output 2 will be implemented by NCFD and provincial DOAD in each of five provincial agricultural ministries.

10. **Output 3. Value addition to hilly area horticulture produce enhanced.** This output will enable hilly area horticulture farmers to be directly engaged in various horticulture value chains and access more diverse or profitable marketing opportunities. This will be achieved through (i) preparing a business plan at the local government level, promoting agriculture and/or horticulture cooperatives and commodity-specific marketing associations to aggregate fruit, nuts and other crop produce, and manage the quality of horticultural products; (ii) developing training programs and training of cooperatives and associations in post-harvest management, food safety control system such as Hazard Analysis and Critical Control Points (HACCP), financial management, business, marketing, and entrepreneurship, while promoting female leadership; (iii) supporting the preparation of a contract between cooperatives and buyers; and (iv) developing or upgrading of horticulture value chain equipment and infrastructure, such as harvesting handling equipment, traceability systems, commodity storage and collection centers, and orchard predator fencing.¹¹

11. For the horticulture value chain equipment and infrastructure, the project will provide \$12.5 million in matching grants to (i) cooperatives,¹² (ii) agribusiness and service providers,¹³ and (iii) provincial and/or local governments.¹⁴ The Competitive Grants Management Committee will review and approve the grant applications.¹⁵ Output 3 will be implemented by NCFD and provincial DOAD in each of five provincial agricultural ministries.

⁹ Farmers with less than 0.2 ha will be encouraged to produce irrigated vegetables during the dry season and nutritious food crops (e.g., buckwheat, various millets, naked barley, amaranth and various pulses) during the wet season.

¹⁰ The project will establish convergence with the World Food Programme activities of establishing and operating farmer nutrition schools to access and use food for improved dietary diversity financed by the GAFSP.

¹¹ HACCP is a systematic approach to the identification, evaluation, and control of food safety hazards. HACCP attempts to avoid hazards rather than inspect finished products. In the United States, for example, HACCP programs are mandatory for juice and meat.

¹² Any grant per cooperative will not exceed \$100,000, and the total project's support for cooperatives is estimated to be \$4 million to cover harvesting handling equipment and facilities for primary washing, sorting, grading, packaging, short-term storage, and quality control.

¹³ Grants will be capped at \$200,000 each, and the total project's support is estimated to be less than \$2 million to cover traceability systems, certification systems, internet-based marketing, organic production, and cold chain linkages.

¹⁴ A grant ceiling will be \$150,000 each, and the provincial and/or local governments are required to cover 50% of investment costs. The total project's support for local level infrastructure is estimated to be less than \$6.5 million.

¹⁵ The committee composition and the beneficiary contribution requirements are detailed in the Project Administration Manual, Attachment E: Matching Grant Programs (accessible from the list of linked documents in [Appendix 2](#)).

II. IMPLEMENTATION PLANS

A. Project Readiness Activities

Table 1: Project Readiness Activities

Indicative Activities	2022				Responsible Agency
	Jul	Aug	Sep	Oct	
Advance contracting actions (CW01-A, CW01-B, G01, G05-A, and G06)					NCFD, NARC, DOADs
Advance contracting actions (CS02-A, CW05 (A-E), and CS06)					NCFD and ADB
Establish project implementation arrangements					MOALD, DOADs, NARC
ADB Board approval					ADB
Loan and grant signing					ADB, MOF
Government legal opinion provided					MOF
Government budget inclusion					MOF
Loan and grant effectiveness					ADB

ADB = Asian Development Bank; DOAD = (provincial) Directorate of Agriculture Development; MOF = Ministry of Finance; NARC = Nepal Agricultural Research Council; NCFD = National Center for Fruit Development
Source: ADB.

B. Overall Project Implementation Plan

Table 2: Overall Project Implementation Plan¹⁶

Indicative Activities	2022 (Y0)	2023 (Y1)	2024 (Y2)	2025 (Y3)	2026 (Y4)	2027 (Y5)	2028 (Y6)	2029 (Y7)
A. DMF								
Output 1. Institutional capacity for nursery and horticulture sector management improved								
Activity 1.1 Crop and land suitability assessment								
Activity 1.2 Land use database, and land classification and zoning								
Activity 1.3 Nursery standards, regulations and inspection system								
Activity 1.4 Horticulture station/center facility upgrade								
Activity 1.5 Staff training								
Activity 1.6 Cooperative and private input supplier training								
Activity 1.7 Private nursery and lab facilities enhancement								
Activity 1.8 Research on varieties								
Activity 1.9 Nursery voluntary certification								
Output 2. Production and productivity of project farmers increased								
Activity 2.1 Farmer group facilitation								
Activity 2.2 Sourcing planting materials								
Activity 2.3 POPs development and training								
Activity 2.4 AgTech based advisory platform operationalization								
Activity 2.5 Farmer-to-farmer extension								
Activity 2.6 Carbon sequestration measurement								
Activity 2.7 Orchard and vegetable farming land development								
Activity 2.8 Credit Guarantee Fund								
Activity 2.9 Drip irrigation								
Output 3. Value addition to hilly area horticulture produce enhanced								
Activity 3.1 Cooperative promotion								
Activity 3.2 Cooperative training								
Activity 3.3 Matching grant to cooperatives								

¹⁶ Table 2 shows the key implementation activities on a quarterly basis, which will be updated annually and submitted to ADB with contract and disbursement projections for the following year.

Indicative Activities	2022 (Y0)				2023 (Y1)				2024 (Y2)				2025 (Y3)				2026 (Y4)				2027 (Y5)				2028 (Y6)				2029 (Y7)			
Activity 3.4 Matching grant to agro-enterprises													•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Activity 3.5 Public value addition infrastructure and equipment													•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Activity 3.6 Food safety workshops										•																						
B. Management Activities																																
M&E system development					•	•																										
M&E system operation					•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
GESI Action Plan activities					•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Semi-annual and midterm review					•		•		•		•		•		•		•		•		•		•		•		•		•		•	
Project completion report preparation																																

AgTech = agricultural technologies; CPMU = central project management unit; DMF = design and monitoring framework; GESI = gender equality and social inclusion; M&E = monitoring and evaluation; PIU = project implementation unit; POP = packages of practice.
 Source: Asian Development Bank.

III. PROJECT MANAGEMENT ARRANGEMENTS

C. Project Implementation Organizations: Roles and Responsibilities

Table 3: Project Implementation Organizations

Project Implementation Organizations	Management Roles and Responsibilities
Project steering committee (PSC)	<p>Chair: Secretary MOALD</p> <p>Members:</p> <ul style="list-style-type: none"> • Joint Secretary, NPC • Joint Secretary, International Economic Cooperation Coordination Division, MOF • Executive Director, NRB • Executive Director, NARC • Joint Secretary, Office of Prime Minister and Council of Ministers • Joint Secretary, Planning and Development Cooperation Coordination Division, MOALD • Joint Secretary, Agriculture and Livestock Business Promotion Division, MOALD • Director General, Department of Agriculture, MOALD • Director General, Department of Food Technology and Quality Control, MOALD • Chief, Plant Quarantine and Pesticide Management Center, MOALD • Registrar, Department of Cooperatives • Secretaries of respective provincial agriculture ministries of Province-1, Bagmati, Gandaki, Karnali, and Sudurpashchim Provinces (who are Chair of provincial project steering committees)^a • Chief, Finance section, MOALD • Representatives of partner financial institutions • Representative of Financial Comptroller General Office • Representatives of the Agriculture and Forestry University and the Institute of Agriculture and Animal Science of Tribhuvan University. <p>Project Director, Chief of the NCFD, shall be the Member Secretary of the PSC. Independent professionals, representatives from academia, and the ADB/NRM representatives will be invited as observers as needed.</p> <p>The PSC will be responsible for the following:</p> <ul style="list-style-type: none"> • Ensure collaboration among federal, provincial, and local levels for the effective implementation of the project and address any implementation issues • Ensure timely and effective implementation of project activities and achievement of project outcome, rectifying any problems that arise during implementation • Promote policy, administrative and legislative reforms to achieve project's goals

Project Implementation Organizations	Management Roles and Responsibilities
	<ul style="list-style-type: none"> • Review and approve the annual project work program and budget • Review quarterly financial management reports, and semi-annual environment and social safeguards monitoring reports • Review semiannual and annual project implementation progress reports • Review internal and external audit observations and recommendations and monitor seven IAs' implementation of these recommendations in a timely fashion • Monitor the use of credit guarantee fund and provide recommendations based on biannual review of the fund <p>The PSC meeting will be convened biannually, but additional meetings will be convened as needed.</p>
<p>Provincial project steering committee (PPSC) in each of respective provincial agriculture ministries in Province 1, Bagmati, Gandaki, Karnali and Sudurpashchim</p>	<p>Chair: Secretary of the respective provincial agriculture ministry (see footnote a)</p> <p>Members: Representatives from</p> <ul style="list-style-type: none"> • Provincial Office of the Chief Minister and Council of Ministers • Policy and Planning Commission • Ministry of Economic Affairs and Planning • Relevant ministry of Forest and Environment • Provincial Treasury Controller Officer • NARC Provincial Regional Directorate • Agriculture Development Directorate • Ministry of Energy, Water Resource and Drinking Water • Ministry of Physical Infrastructure Development • Administration and Cooperative Development Division, respective provincial agriculture ministry • Food Security and Agribusiness Promotion Division, respective provincial agriculture ministry • Land Resources Mapping Division, respective provincial agriculture ministry • Chief, Horticulture Farm Centers • Gender focal person, respective provincial agriculture ministry <p>Provincial Project Manager (Chief of DOAD) shall be the Member Secretary of the PPSC.</p> <p>Representatives from academia and from farmer organizations and civil society organizations will be invited as observers.¹⁷</p> <p>The PPSC will be responsible for the following:</p> <ul style="list-style-type: none"> • Review and approve the annual provincial-level work program and budget, coordinating with existing or new provincial programs and activities to maximize development impact of the project

¹⁷ Civil society organizations will be invited to apply for the position of project implementation service providers. To avoid conflicts of interest, the PPSC will invite them as observers, not as members.

Project Implementation Organizations	Management Roles and Responsibilities
	<ul style="list-style-type: none"> • Ensure timely and effective implementation of project activities and achievement of project outcome, rectifying any problems that arise during implementation • Coordinate with respective provincial agriculture ministry and NCFD in relation to effective project implementation, budget provision, and dispute resolution • Coordinate among different participating local governments, AKCs and other relevant stakeholders to ensure effective project implementation • Review internal and external audit observations and recommendations and monitor IA's implementation of these recommendations in a timely fashion • Review quarterly progress report including financial management report and environment and social safeguards reports • Review annual project implementation progress reports <p>The PPSC meeting will be convened biannually, but additional meetings will be convened as needed.</p>
<p>Executing agency: Ministry of Agriculture and Livestock Development (MOALD)</p>	<p>The EA shall be responsible for overall coordination, implementation, and monitoring of the project. A working committee of the MOALD shall be established to discuss project matters within the EA. More specifically, the EA will:</p> <ul style="list-style-type: none"> • Provide overall strategic planning and make timely decisions on all matters related to effective project management • Ensure adequacy of overall project financing and secure annual budget allocations for implementation • Lead coordination among implementing agencies • Oversee overall financial management including undertaking financial audits and implement recommended actions • Ensure compliance of loan and grant covenants, and environmental and social safeguards, and facilitate corrective actions as required • Be responsible for providing the status report to the PSC on the use of credit guarantee fund consolidating input from partner financial institutions (supported by a Credit Guarantee Fund Team, comprising 3 rural finance consultants and 5 province-based farm loan facilitators, in the CPMU) • Ensure that a Central Project Management Unit (CPMU) is fully staffed, operational and sufficiently funded • Support ADB project review missions • Ensure compliance with ADB Safeguard Policy Statement (SPS, 2009) and national requirements
<p>Implementing agency 1: NCFD</p> <p>Supported by Central Project Management Unit (CPMU)</p>	<p>The IA-1 or NCFD will function as the secretariat to the MOALD/EA and as the overall project's focal point to ADB, supported by the CPMU. In addition, the IA-1 will lead project implementation at the central level.</p> <p>Chief, NCFD will head CPMU as Project Director and serve as the focal contact with ADB. Staffing details of the CPMU are provided in the PAM Attachment A.</p>

Project Implementation Organizations	Management Roles and Responsibilities
	<p>The IA-1, supported by the CPMU, will be responsible for the following:</p> <p>General Project Administration</p> <ul style="list-style-type: none"> • Manage overall day-to-day project implementation • In coordination with PIUs (NARC and five DOADs), be responsible for (i) preparing annual contract awards and disbursement projections; (ii) requesting budgetary allocations for counterpart funds; (iii) collecting and retaining supporting documents; and (iv) preparing and sending withdrawal applications to ADB • Maintain separate advance accounts for each ADB financing source • Maintain separate book of accounts for the project, prepare consolidated project financial statements and cause them to be audited separately on an annual basis • submit the audited project financial statements (a consolidated one for the entire NAFHA project) to ADB within 9 months from the end of the fiscal year • Ensure implementation of the GESI/AP • Conduct and coordinate project review missions • Prepare quarterly progress reports for submission to ADB by consolidating implementation progress reports from the implementing agencies • Establish project performance monitoring system, including monitoring of the GESI/AP and a website for disclosure of project information • Ensure performance monitoring and supervision of consultants engaged • Monitor and ensure compliance with loan and grant covenants • Carry out baseline, midterm, and project completion surveys • Prepare project completion report at the end of the project and submit it to ADB <p>Technical Oversight and Support</p> <ul style="list-style-type: none"> • Prepare annual work plan and budget for the activities to be implemented by the IA-1 • Commission research on more adaptable and resilient varieties of fruits and nuts • Manage partial subsidies for farmers and cooperatives (payments greater than NRs 5 million) • Recruit and supervise contractors under output 1 and output 3 • Prepare nursery standards, regulation, and inspection system (implementation of output 1 activities) • Develop and roll out a pilot nursery certification scheme with participating private nurseries (implementation of output 1 activities) <p>Safeguards Compliance</p> <ul style="list-style-type: none"> • Take overall responsibility for environment and social safeguards by monitoring and ensuring compliance with ADB's SPS 2009, government requirements, and other related

Project Implementation Organizations	Management Roles and Responsibilities
	<p>requirements in project documents particularly safeguards monitoring reports and tender documents</p> <ul style="list-style-type: none"> • Address safeguards issues from affected people following the grievance redress mechanisms established in the project • Consolidate project's safeguard monitoring results updated by PIUs, and provide consolidated input to the project progress and safeguard monitoring reports • Submit semi-annual environmental and social monitoring reports to ADB.
<p>Implementing agency 2: DOAD, Ministry of Agriculture, Province 1</p> <p>Implementing agency 3: DOAD, Ministry of Agriculture and Livestock Development, Bagmati</p> <p>Implementing agency 4: DOAD, Ministry of Land Management, Agriculture, Cooperatives and Poverty Alleviation, Gandaki</p> <p>Implementing agency 5: DOAD, Ministry of Land Management, Agriculture and Cooperatives, Karnali</p> <p>Implementing agency 6: DOAD, Ministry of Land Management, Agriculture and Cooperatives, Sudurpashchim</p>	<p>Led by Chief of DOAD of the respective provincial agriculture ministry (see footnote a), the IA 2-6 will be responsible for the following:</p> <ul style="list-style-type: none"> • Ensure timely delivery of outputs • Ensure that PIUs are fully staffed, operational and sufficiently funded • Monitor and ensure compliance with loan and grant covenants, and environmental and social safeguards related to the work at the provincial and local levels, and facilitate the implementation of safeguard plans • Ensure implementation of the GESI/AP
<p>Project Implementation Unit 1: DOAD, Ministry of Agriculture, Province 1</p> <p>Project Implementation Unit 2: DOAD, Ministry of Agriculture and Livestock Development, Bagmati</p> <p>Project Implementation Unit 3: DOAD, Ministry of Land Management, Agriculture, Cooperatives and Poverty Alleviation, Gandaki</p> <p>Project Implementation Unit 4: DOAD, Ministry of Land Management, Agriculture and Cooperatives, Karnali</p>	<p>A Project Implementation Unit (PIU) at the provincial level will be established within DOAD of each province. A PIU will support each provincial IA (i.e. IA 2-6) for implementing provincial level activities. The PIU will be led by Chief of DOAD as Project Manager who will serve as the provincial-level focal. Staffing details are provided in Attachment A.</p> <p>General Project Administration</p> <ul style="list-style-type: none"> • Manage overall day-to-day project implementation at the province level • Lead annual province level project planning and budgeting. • Maintain separate book of accounts for the project, maintain separate control registers in an agreed format and prepare project financial reports and statements as required • Support the project audit and address audit observations in a timely manner • Submit claims and supporting documentation or copies of such documentation to the CPMU, retain supporting documents, submit all reporting requirements, including financial statements

Project Implementation Organizations	Management Roles and Responsibilities
<p>Project Implementation Unit 5: DOAD, Ministry of Land Management, Agriculture and Cooperatives, Sudurpashchim</p>	<ul style="list-style-type: none"> • Manage project management support consultant deputed to the province • Coordinate project review missions and prepare progress reports with the CPMU • Support the CPMU to carry out baseline, midterm, and outcome surveys • Establish province-level project performance monitoring system, including monitoring of the GESI/AP and for disclosure <p>Technical oversight and support</p> <ul style="list-style-type: none"> • Support NCFD to supervise contractors that are implementing outputs 1, 2 and 3 at provincial level • Manage subsidy for orchard development (payments up to NRs5 million) • Implement nursery standards, regulations, and inspection system at provincial level • Support NCFD to roll out pilot nursery certification scheme with participating private nurseries • Manage cooperative development and capacity building (output-3) • Upgrade horticulture station/center facilities for germplasm maintenance, testing production technologies, sapling quality check, and transfer of genetic technologies to private nurseries <p>Safeguards compliance</p> <ul style="list-style-type: none"> • Monitor and ensure safeguards compliance with ADB's SPS 2009, government requirements, and other related requirements particularly safeguards monitoring reports and tender documents at provincial level • Address grievances related to the project following the grievance redress mechanisms established in the project and provide safeguards monitoring inputs to the CPMU • Facilitate public consultations with project beneficiaries and other stakeholders at the provincial level
<p>Implementing agency 7: NARC</p> <p>Supported by Project Implementation Unit 6: NARC</p>	<p>Led by Executive Director, NARC, the IA 7 will be responsible for the following:</p> <ul style="list-style-type: none"> • Prepare an annual work plan and budget of project-supported NARC stations • Monitor and ensure compliance with loan and grant covenants, and environmental and social safeguards, and facilitate the implementation of safeguard plans • Ensure that the project-supported NARC stations' compliance with ADB's procurement regulations and upgrade horticulture station facilities for testing and cleaning mother plants, and generation-1 germplasm maintenance, utilizing budget in a timely manner • Ensure implementation of the GESI/AP • Coordinate project review missions and prepare progress reports • Maintain separate book of accounts for the project, maintain separate control registers in an agreed format and prepare project financial reports and statements as required

Project Implementation Organizations	Management Roles and Responsibilities
	<ul style="list-style-type: none"> • Support the project audit and address audit observations in a timely manner • Submit claims and supporting documentation or copies of such documentation to the CPMU • Support the CPMU to carry out baseline, midterm, and outcome surveys • Contribute to the implementation of nursery standards, regulations, and inspection system • Address grievances related to the project following the grievance redress mechanisms established in the project and provide safeguards monitoring inputs to the CPMU <p>The PIU-6 will be established under the NARC to coordinate the implementation of output 1 activities. PIU-6 will be headed by Project Manager, appointed by NARC as the focal to the project and staffed with NARC's accountant officer. CPMU-based consultants will also support NARC for project administration.</p>
Project implementation related committees	<ul style="list-style-type: none"> • MOALD working group committee to coordinate the EA's work (supported by CPMU) • Competitive Grants Management Committee (CGMC) to review and approve matching grant proposals (related to Schemes 3, 4, 5 and 6) on a competitive basis^a • Local Level Coordination Committees (LLCC) (related to Scheme 2) to (i) advertise a call for expressions (EOI) of interest for partial subsidies for farmers and cooperatives for orchard, vegetable and other farming land development; (ii) conduct preliminary screening of EOIs; (iii) make a selection recommendation to the PIU-led or CPMU-led Subsidy Management Committee (SMC), depending on the size of orchard investment (investment beyond NRs. 5 million goes to the CPMU-led SMC) • Subsidy Management Committees (SMC) (related to Scheme 2) to review and approve orchard development applications after LLCC's recommendation. SMCs will be formed at both CPMU and PIU levels (investment beyond NRs. 5 million goes to the CPMU-led SMC) • Credit Guarantee Fund Management Committee (CGFMC) to review and approve time deposits to PFIs and to ensure the compliance of the credit guarantee fund related covenants (scheme 1). CGFMC will be supported by a Credit Guarantee Fund Team, comprising 3 rural finance consultants and 5 province-based farm loan facilitators, in the CPMU.
PFI	<ul style="list-style-type: none"> • Conduct financial due diligence for loans proposed by project beneficiaries, supported by project-financed loan facilitators • Propose loans for guarantee issuance to MOALD through the CPMU credit guarantee fund team • Issue loans to eligible project beneficiaries according to government and ADB policies and requirements • Maintain separate ledger account and accounting records for the funds received under the project • Prepare a statement of utilization of funds annually and cause it to be audited by independent auditor

Project Implementation Organizations	Management Roles and Responsibilities
	<ul style="list-style-type: none"> • Submit the audited statement of utilization of funds and audited entity financial statements (AEFS) to MOALD working group committee through CPMU annually
ADB	<ul style="list-style-type: none"> • Review overall implementation of the project including compliance with loan and grant agreements and ADB guidelines • Conduct regular loan review missions • Review and issue no-objection to procurement and disbursement documents • Overall coordination and advisory support • Review and disclose safeguards screening and monitoring reports

ADB = Asian Development Bank; AKC = agriculture knowledge center; AP = action plan; DOAD = Directorate of Agriculture Development; DTCO= District Treasury Controller's Office; EA = executing agency; FCGO = Financial Comptroller General Office; GESI = gender and social inclusion; IA = implementing agency; LLCC = local-level coordination committee; MOALD = Ministry of Agriculture and Livestock Development; NARC = Nepal Agricultural Research Council; NCFD = National Center for Fruit Development; NRB = National Rastra Bank; PFIs = partner financial institutions; PPSC = provincial project steering committee; PSC = project steering committee; PTCO= Provincial Treasury Controller's Office; SMC = subsidy management committee; TSA = treasury single account.

^a Respective provincial agriculture ministries refers to the following: Ministry of Agriculture in Province 1, Ministry of Agriculture and Livestock Development in Bagmati, Ministry of Land Management, Agriculture, Cooperatives and Poverty Alleviation in Gadaki, Ministry of Land Management, Agriculture and Cooperatives in Karnali, and Ministry of Land Management, Agriculture and Cooperatives in Sudurpashchim.

^b There are six different financing schemes to be implemented under the project: (i) Scheme 1: credit guarantee fund; (ii) Scheme 2: partial subsidies for farmers and cooperatives; (iii) Scheme 3: matching grants for cooperatives; (iv) Scheme 4: matching grants for agri-enterprises; (v) Scheme 5: matching grants for local-level infrastructure; and (vi) Scheme 6: matching grants for private nursery upgrading.

Source: ADB.

D. Key Persons Involved in Implementation

Executing Agency

Ministry of Agriculture and Livestock Development

Mr. Govinda Prasad Sharma
Secretary
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Email address: sharmaqv@hotmail.com

Asian Development Bank

Environment, Natural Resources and Agriculture Division, South Asia Department

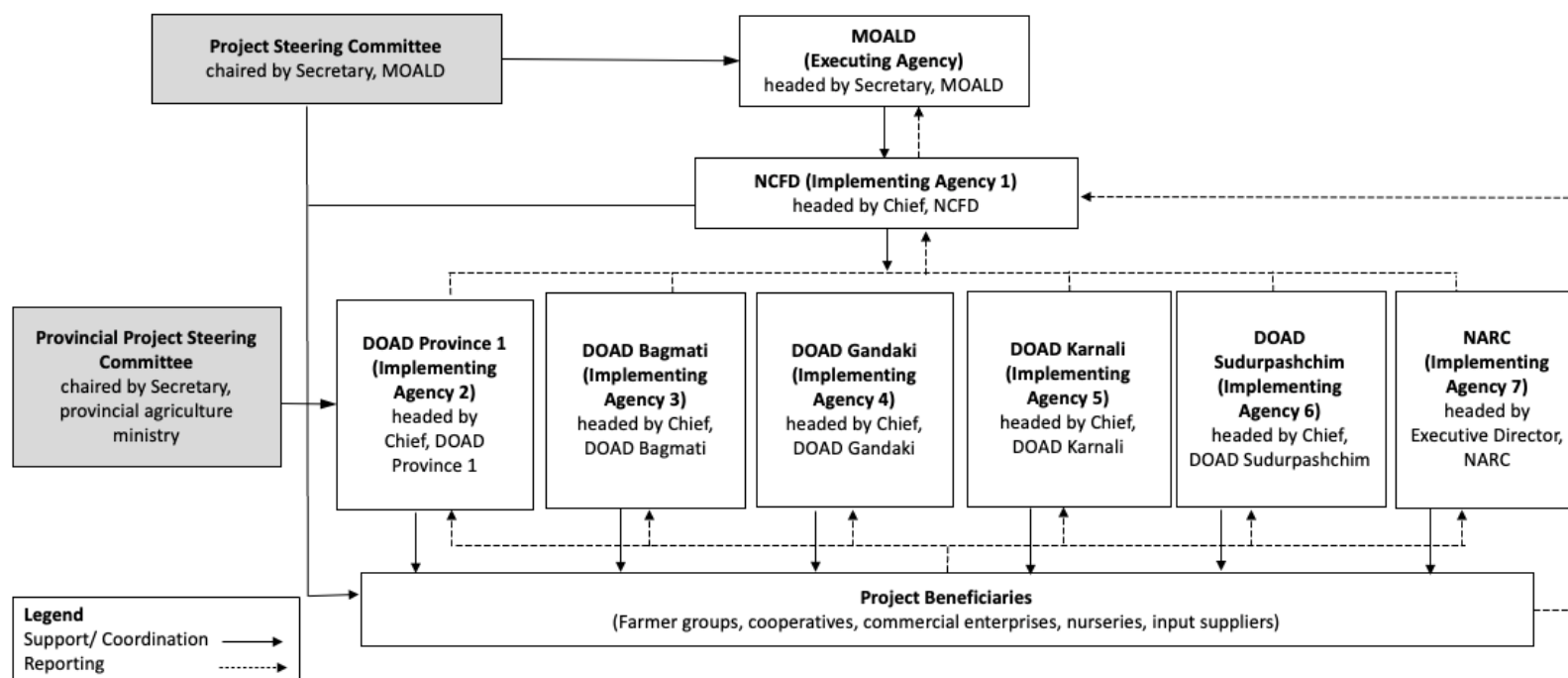
Ms. Mio Oka
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E. Project Organization Structure

Figure 1: Project Organization Chart



CPMU = Central Project Management Unit; DOAD = (provincial) Directorate of Agriculture Development; MOALD = Ministry of Agriculture and Livestock Development; MOF = Ministry of Finance; NARC = Nepal Agricultural Research Council; NCFD = National Center for Fruit Development; PIU = Project Implementation Unit

Source: Asian Development Bank.

IV. COSTS AND FINANCING

12. The project is estimated to cost \$93.45 million (Table 4).

Table 4: Project Cost Estimates (\$ million)

Item	Amount ^a
A. Base Cost^b	
1. Institutional capacity for nursery and horticulture sector management improved	14.25
2. Production and productivity of project farmers increased	49.12
3. Value addition to hilly area horticulture produce enhanced	16.12
4. Project management	8.54
Subtotal (A)	88.04
B. Contingencies^c	3.55
C. Financing Charges During Implementation^d	1.86
Total (A+B+C)	93.45

^a Includes taxes and duties of \$3.02 million. Such amount does not represent an excessive share of the project cost. The government will finance taxes and duties of \$3.02 million by the government sources.

^b In mid-2021 prices as of 10 January 2022, using an exchange rate of \$1.00 = NRs119.

^c Physical and price contingencies, and a provision for exchange rate fluctuation are included.

^d Includes interest and other charges on all sources of financing. Includes interest of 1.0% per year during the grace period and 1.5% during the amortization period.

Source: Asian Development Bank.

13. The government has requested (i) a concessional loan of \$60 million from ADB's ordinary capital resources, and (ii) a grant not exceeding \$10 million from ADB's Special Funds resources (Asian Development Fund) to help finance the project. The loan will have a 32-year term, including a grace period of 8 years; an interest rate of 1.0% per year during the grace period and 1.5% per year thereafter, and such other terms and conditions set forth in the draft loan and grant agreements.

14. The summary financing plan is in Table 5. ADB will finance the expenditures in relation to civil works, equipment, consulting services, guarantee fund and matching grants for farmers, cooperatives and agro-enterprises. The government will finance any shortfall in the finances if required. The Global Agriculture and Food Security Program (GAFSP) will provide grant cofinancing of \$9 million to be administered by ADB. In support of the project, GAFSP will provide parallel collaborative cofinancing of \$3 million on a grant basis, to be administered by World Food Programme.¹⁸

Table 5: Summary Financing Plan

Source	Amount (\$ million)	Share of Total (%)
Asian Development Bank		
Ordinary capital resources (concessional loan)	60.00	64.2
Special Funds resources (ADF grant) ^a	10.00	10.7
Global Agriculture and Food Security Program (grant)	9.00	9.6
Government of Nepal	14.45	15.5
Total	93.45	100.0

ADF = Asian Development Fund.

^a ADF 13 thematic pool supporting regional cooperation and integration.

Source: Asian Development Bank estimates.

¹⁸ The GAFSP-funded WFP technical assistance will complement the project through the establishment of village-level farmer nutrition schools that will enable villages to increase access to and availability of food for improved dietary diversity from farmers' fields. It will also address food processing and preservation, and link with health sessions on water, sanitation, and hygiene (WASH), infant and young children feeding, in-door air pollution, and maternal care and nutrition.

A. Cost Estimates Preparation and Revisions

15. Cost estimates were prepared by ADB using data from primary and secondary sources and in consultation with MOALD and seven implementing agencies. Cost estimates for civil works and equipment under output 1 were developed by seven IAs based on the Nepal Schedule of Rates for 2020 and partially 2021. All the remaining cost estimates are based on unit cost and rates prevailing in Nepal in January 2022. During implementation, the CPMU and PIUs will be responsible for updating cost estimates, and this will be coordinated by the CPMU. Revisions to planned withdrawal applications will require prior approval from ADB.

B. Key Assumptions

16. The following key assumptions underpin the cost estimates and financing plan:

- (i) Exchange rate: NRs. 119 = \$1.00 (as of 10 June 2022).
- (ii) Price contingencies based on expected cumulative inflation over the implementation period are as follows:

Table 6: Escalation Rates for Price Contingency Calculation

Item	2023	2024	2025	2026	2027	2028	2029	Average
Foreign rate of price inflation	1.7%	1.8%	1.8%	1.8%	1.8%	1.8%	1.8%	1.77%
Domestic rate of price inflation	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%

Source: Asian Development Bank estimates.

C. Detailed Cost Estimates by Expenditure Category

Table 7: Detailed Cost Estimates by Expenditure Category^a

	NRs Million	\$ million	% of Total Base Cost
A. Investment Costs			
1. Civil works (includes scheme 5)	977.32	8.03	9.1%
2. Consulting services	523.71	4.29	4.9%
3. Equipment and materials	130.59	1.07	1.2%
4. Vehicles	72.79	0.60	0.7%
5. Capacity building	1,903.46	15.59	17.7%
6. Credit guarantee fund (scheme 1)	714.00	6.00	6.8%
7. Partial subsidies for farmers and cooperatives (scheme 2)	4,272.43	35.90	40.8%
8. Matching grants for cooperatives (scheme 3)	464.10	3.90	4.4%
9. Matching grants for agri-enterprises (scheme 4)	202.30	1.70	1.9%
10. Matching grants for private nurseries (scheme 6)	371.88	3.13	3.5%
Subtotal (A)	9,632.58	80.20	91.1%
B. Recurrent Costs			
1. Salaries and allowances	405.82	3.32	3.8%
2. Operation and maintenance	551.97	4.52	5.1%
Subtotal (B)	957.79	7.84	8.9%
Total Base Cost	10,590.37	88.04	100.0%
C. Contingencies			
1. Physical	76.58	0.63	0.7%
2. Price	1,192.10	2.92	3.3%
Subtotal (C)	1,268.68	3.55	4.0%
D. Interest during implementation (D)	227.15	1.86	2.1%
Total Project Cost (A+B+C+D)	12,086.20	93.45	106.1%

^a Climate mitigation is estimated to cost \$23.89 million and climate adaptation is estimated to cost \$51.01 million.
Notes: Numbers may not sum precisely because of rounding.
Source: Asian Development Bank estimates.

D. Allocation and Withdrawal of Loan and Grant Proceeds

Table 8. Allocation and Withdrawal of ADB Loan Proceeds

No	Item	Amount Allocated for ADB Loan Financing (\$)	Percentage and Basis for Withdrawal from the Loan Account
1	Civil works – horticulture stations	5,100,000	
	Civil works – horticulture stations and other works (output 1 and output 2)	2,200,000	70% of the total expenditure claimed
	Civil works – Scheme 5 (output 3)	2,900,000	50% of the total expenditure claimed
2	Consulting services	550,000	12% of the total expenditure claimed
3	Equipment & materials	1,280,000	100% of the total expenditure claimed
4	Capacity building	540,000	100% of the total expenditure claimed
5	Credit guarantee fund (scheme 1) ^a	6,000,000	100.0% of the total expenditure claimed
6	Matching grants (scheme 3, 4 and 6)	8,730,000	100.0% of the total expenditure claimed
7	Partial subsidies for farmers and cooperatives (scheme 2)	32,500,000	
	All subsidies except plant survival incentives	30,100,000	97% of the total expenditure
	Planting survival incentives	2,400,000	50% of the total expenditure
8	Remuneration for contractual staff	640,000	100% of the total expenditure claimed
9	Operation & maintenance	2,780,000	100% of the total expenditure claimed
10	Unallocated	14,000	
11	Interest charges	1,866,000	100.0% of amount due
	Total	60,000,000	

^a Linked to ADB approval of the credit guarantee fund committee's endorsement of time deposits to eligible partner financial institutions (condition for withdrawal per the Loan Agreement).
Source: ADB estimates.

Table 9. Allocation and Withdrawal of ADB Grant Proceeds ^a

No	Expenditure Item	Amount \$	Basis for Withdrawal from the Grant Account Percentage and Basis for Withdrawal from the Grant Account
1	Capacity building for farmer groups and cooperatives (output 2)	9,435,000	70% of the total expenditure claimed
2	Vehicles	562,000	100% of the total expenditure claimed
3	Unallocated	3,000	
	Total	10,000,000	

^a ADF grant will finance \$10 million as a grant.

Source: ADB estimates.

Table 10. Allocation and Withdrawal of GAFSP Grant Proceeds ^a

No.	Expenditure Item	Amount \$	Percentage and Basis for Withdrawal from the GAFSP Account
1	Consulting services for project implementation, infrastructure design/supervision and survey	4,090,000	88% of the total expenditure claimed
2	Capacity building for farmer groups and cooperatives (output 2)	3,930,000	30% of the total expenditure claimed
3	Partial subsidies for farmers and cooperatives (scheme 2)	980,000	3% of the total expenditure claimed
	Total	9,000,000	

GAFSP = Global Agriculture and Food Security Program.

^a GAFSP will finance \$9 million as a grant.

Source: ADB estimates.

E. Detailed Cost Estimates by Financier

Table 11: Detailed Cost Estimates by Financier (\$ million)^a

Item	ADB Loan		ADB Grant ^b		GAFSP Grant		Government ^o		Total Cost	
	Amount	% of Cost Category	Amount	% of Cost Category	Amount	% of Cost Category	Amount	% of Cost Category	Amount	Taxes and Duties
A. Investment Costs										
1. Civil works ^c	4.78	58.1%	-	-	-	-	3.45	41.9%	8.23	0.30
2. Consulting services ^d	0.51	11.8%	-	-	3.78	88.2%	-	-	4.29	-
3. Equipment & materials ^e	0.97	82.9%	-	-	-	-	0.20	17.1%	1.17	0.10
4. Vehicles ^f	-	-	0.56	87.5%	-	-	0.08	12.5%	0.64	0.10
5. Capacity building ^g	0.45	3.1%	8.71	59.9%	3.63	25.0%	1.75	12.0%	14.54	1.80
6. Scheme 1 ^h	6.00	100.0%	-	-	-	-	-	-	6.00	-
7. Scheme 2 ⁱ	32.52	90.6%	-	-	0.98	2.7%	2.40	6.7%	35.90	-
8. Scheme 3 ^j	3.90	100.0%	-	-	-	-	-	-	3.90	-
9. Scheme 4 ^k	1.70	100.0%	-	-	-	-	-	-	1.70	-
10. Scheme 6 ^l	3.13	100.0%	-	-	-	-	-	-	3.13	-
Subtotal (A)	53.96	67.9%	9.27	11.7%	8.40	10.6%	7.87	9.9%	79.50	2.40
B. Recurrent Costs										
1. Remuneration and salary ^m	0.59	17.7%	-	-	-	-	2.73	82.3%	3.32	-
2. Operation and maintenance ⁿ	2.52	48.3%	-	-	-	-	2.70	51.7%	5.22	0.70
Subtotal (B)	3.11	36.4%	-	-	-	-	5.43	63.6%	8.54	0.70
Total Base Cost (A+B)	57.07	64.9%	9.27	10.5%	8.40	9.6%	13.30	15.1%	88.04	3.00
C. Contingencies										
1. Physical contingencies	0.33	52.4%	-	-	-	-	0.30	47.6%	0.63	-
2. Price contingencies	0.74	25.4%	0.73	24.9%	0.60	20.6%	0.90	29.2%	2.92	-
Subtotal (C)	1.07	30.1%	0.73	20.5%	0.60	17.0%	1.15	32.4%	3.55	-
D. Financial Charges During Implementation	1.86	100.00%	-	-	-	-	-	-	1.86	-
Total Project Cost (A+B+C+D)	60.00	64.2%	10.00	10.7%	9.00	9.6%	14.45	15.5%	93.45	3.00
% Total Project Cost		64.2%		10.7%		9.6%		15.5%		100%

Note: Numbers may not sum precisely because of rounding.

- ^a The Project's total mitigation cost is estimated to be \$23.89 million and adaptation cost is estimated to be \$51.01 million.
- ^b The ADF-13 will finance \$10.00 million of the ADB grant.
- ^c Includes scheme 5 for local level public value chain infrastructure that is allocated with \$5.00 million. The project will cofinance 50% of the costs of local infrastructure, and provincial/local governments will finance the remaining 50% of the costs.
- ^d Consulting services amount to 4.5% of the project costs.
- ^e Equipment and materials as listed in the procurement plan.
- ^f Vehicles to be procured are for project site inspection by NCFD and five DOADs and for planting material relocation and roll-out of nursery certification system by horticulture centers/stations.
- ^g Capacity building amounts to 2.41% of ADB loan.
- ^h Credit guarantee fund
- ⁱ Partial subsidies for farmers and cooperatives. For plant survival incentives, 50% contribution will be from provincial/local governments.
- ^j Matching grants for cooperatives
- ^k Matching grants for agri-enterprises
- ^l Matching grants for private nurseries
- ^m Includes government staff's salary, per diem and travel costs, and contractual staff's remuneration, per diem and travel costs.
- ⁿ Horticulture resource center/station facility maintenance and operations costs of vehicle, office equipment and horticulture resource center facilities such as greenhouses and shed houses.
- ^o Salaries and operating expenses related to PIUs will be born by respected provincial governments.

Source: Asian Development Bank estimates.

F. Detailed Cost Estimates by Outputs and/or Components

Table 12: Detailed Cost Estimates by Outputs and/or Components (\$ million)^a

Item	Output 1: Institutional capacity for nursery and horticulture sector management improved		Output 2: Production and productivity of project farmers increased		Output 3: Value addition to hilly area horticulture produce enhanced		Project Management		Total
	Amount	%	Amount	%	Amount	%	Amount	%	
A. Investment Costs									
1. Civil works ^b	3.19	37.2%	-	-	5.04	62.8%	-	-	8.23
2. Consulting services ^c	-	-	0.20	4.7%	0.40	9.4%	3.68	85.9%	4.29
3. Equipment & materials ^d	1.05	88.9%	0.02	1.9%	-	-	0.10	9.1%	1.17
4. Vehicles ^e	0.47	72.1%	-	-	-	-	0.17	27.9%	0.64
5. Capacity building ^f	2.66	23.8%	6.80	43.6%	5.08	32.6%	-	-	14.54
6. Scheme 1 ^g	-	-	6.00	100.0%	-	-	-	-	6.00
7. Scheme 2 ^h	-	-	35.90	100.0%	-	-	-	-	35.90
8. Scheme 3 ⁱ	-	-	-	-	3.90	100.0%	-	-	3.90
9. Scheme 4 ^j	-	-	-	-	1.70	100.0%	-	-	1.70
10. Scheme 6 ^k	3.13	100.0%	-	-	-	-	-	-	3.13
Subtotal (A)	10.50	14.0%	48.92	61.0%	16.12	20.1%	3.95	4.9%	79.50
B. Recurrent Costs									
1. Remuneration and salary ^l	0.60	17.9%	0.20	5.9%	-	-	2.53	76.1%	3.32
2. Operating & maintenance ^m	3.15	54.3%	-	-	-	-	2.07	45.7%	5.22
Subtotal (B)	3.75	38.9%	0.20	2.5%	-	-	4.60	58.6%	7.84
Total Base Costs	14.25	16.2%	49.12	55.8%	16.12	18.3%	8.54	9.7%	88.04
C. Contingencies									
1. Physical contingencies	0.27	42.4%	-	-	0.25	40.2%	0.11	17.3%	0.63
2. Price contingencies	0.64	22.0%	0.53	18.0%	1.06	36.2%	0.69	23.7%	2.92
Subtotal (C)	0.91	25.6%	0.53	14.9%	1.31	36.9%	0.80	22.6%	3.55
D. Interest During Implementation	0.27	14.5%	1.24	66.7%	0.29	15.6%	0.07	3.8%	1.86
Total Project Costs (A+B+C+D)	15.43	16.8%	50.89	55.6%	17.72	19.3%	9.41	10.3%	93.45

Note: Numbers may not sum precisely because of rounding.

^a The Project's total mitigation cost is estimated to be \$23.89 million and adaptation cost is estimated to be \$51.01 million

^b Includes scheme 5 for local level public value chain infrastructure that is allocated with \$5.00 million under output 3. The project will cofinance 50% of the costs of local infrastructure, and provincial/local governments will finance the remaining 50% of the costs.

^c Consulting services amount to 4.5% of the project costs.

^d Equipment and materials as listed in the procurement plan.

^e Vehicles to be procured are for project site inspection by NCFD and five provincial DOADs and for planting material relocation and roll-out of nursery certification system by horticulture centers/stations.

- ^f Capacity building amounts to 2.41% of ADB loan.
 - ^g Credit guarantee fund for horticulture farmers and rural agribusiness enterprises.
 - ^h Partial subsidies for beneficiary farmers. For plant survival incentives, 50% contribution will be from provincial/local governments.
 - ⁱ Matching grants for cooperatives.
 - ^j Matching grants for agrienterprises.
 - ^k Matching grants for private nurseries.
 - ^l Includes government staff's salary, per diem and travel costs, and contractual staff's remuneration, per diem and travel costs
 - ^m Horticulture resource center/station facility maintenance and operations costs of vehicle, office equipment and horticulture resource center facilities such as greenhouses and shed houses.
- Source: Asian Development Bank estimates.

G. Detailed Cost Estimates by Year

Table 13: Detailed Cost Estimates by Year (\$ million)^a

Item	2023	2024	2025	2026	2027	2028	2029	Total
A. Investment Costs								
1. Civil works ^b	1.22	1.23	1.73	1.22	1.21	0.81	0.81	8.23
2. Consulting services ^c	0.63	0.52	0.67	0.68	0.68	0.65	0.46	4.29
3. Equipment & materials ^d	0.58	0.46	0.12	-	-	-	-	1.17
4. Vehicles ^e	0.64	-	-	-	-	-	-	0.64
5. Capacity building ^f	1.28	2.03	1.68	3.27	3.27	2.05	0.96	14.54
6. Scheme 1 ^g	0.12	0.60	1.56	1.86	1.86	-	-	6.00
7. Scheme 2 ^h	0.37	2.51	6.24	7.69	8.73	9.40	0.96	35.90
8. Scheme 3 ⁱ	-	-	0.60	1.20	1.20	0.45	0.45	3.90
9. Scheme 4 ⁱ	-	-	0.43	0.43	0.43	0.43	-	1.70
10. Scheme 6 ^k	1.00	1.38	0.38	0.38	-	-	-	3.13
Subtotal (A)	5.84	8.74	13.41	16.73	17.38	13.78	3.64	79.50
B. Recurrent Costs								
1. Remuneration and salary ^l	0.51	0.51	0.51	0.49	0.48	0.41	0.40	3.32
2. Operating & maintenance ^m	0.58	0.62	1.33	0.69	0.64	0.65	0.70	5.22
Subtotal (B)	1.09	1.13	1.84	1.18	1.12	1.06	1.11	8.54
Total Base Costs	6.93	9.87	15.25	17.92	18.50	14.83	4.75	88.04
C. Contingencies								
1. Physical Contingencies	0.12	0.09	0.08	0.10	0.09	0.07	0.08	0.63
2. Price Contingencies	0.14	0.22	0.35	0.53	0.64	0.56	0.48	2.92
Subtotal (C)	0.26	0.31	0.44	0.62	0.74	0.63	0.56	3.55
D. Interest During Implementation	0.01	0.05	0.13	0.24	0.37	0.49	0.58	1.86
Total Project Costs (A+B+C+D)	7.15	10.23	15.85	18.78	19.60	15.96	5.88	93.45

Note: Numbers may not sum precisely because of rounding.

^a The Project's total mitigation cost is estimated to be \$23.89 million and adaptation cost is estimated to be \$51.01 million.

^b Includes scheme 5 for local level public value chain infrastructure that is allocated with \$5.00 million under output 3. The project will cofinance 50% of the costs of local infrastructure, and provincial/local governments will finance the remaining 50% of the costs.

^c Consulting services amount to 4.5% of the project costs.

^d Equipment and materials as listed in the procurement plan.

^e Vehicles to be procured are for project site inspection by NCFD and five provincial DOADs and for planting material relocation and roll-out of nursery certification system by horticulture centers/stations.

^f Capacity building amounts to 2.41% of ADB loan.

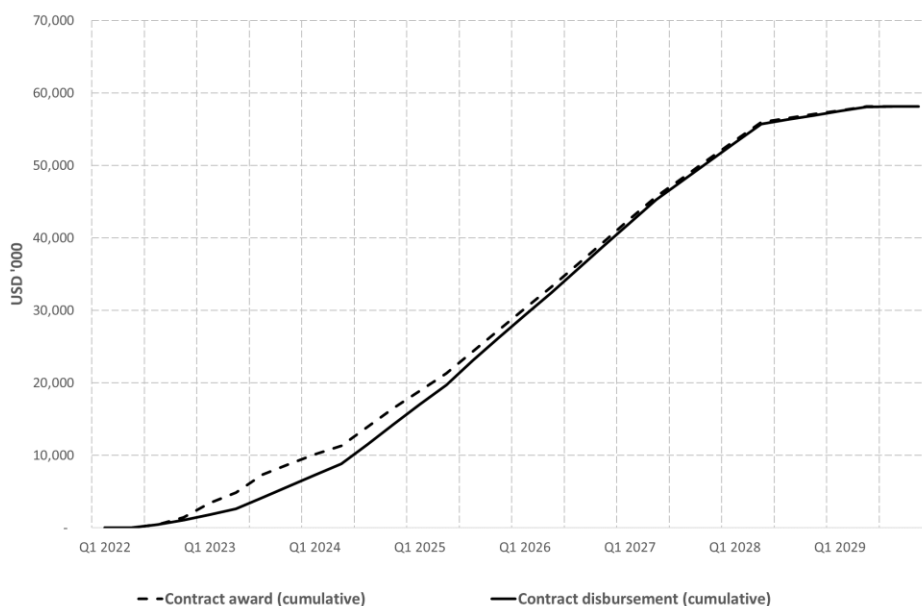
^g Credit guarantee fund for horticulture farmers and rural agribusiness enterprises

- ^h Partial subsidies for beneficiary farmers. For plant survival incentives, 50% contribution will be from provincial/local governments.
 - ⁱ Matching grants for cooperatives
 - ^j Matching grants for agrieenterprises
 - ^k Matching grants for private nurseries
 - ^l Includes government staff's salary, per diem and travel costs, and contractual staff's remuneration, per diem and travel costs
 - ^m Horticulture resource center/station facility maintenance and operations costs of vehicle, office equipment and horticulture resource center facilities such as greenhouses and shed houses
- Source: Asian Development Bank estimates.

H. Contract and Disbursement S-Curve

17. The estimated contract awards and disbursement progress over the implementation period for the ADB loan, ADB grant, and ADB-administered funds are shown in Figure 1. The total projected disbursements should be equal to the loan and grant amounts up to 4 months after loan and grant closing.

Figure 2: Contract Award and Disbursement S-Curve Projections – ADB Loan



Source: ADB estimates

Table 14: Contract Awards and Disbursement – ADB Loan (\$ million) ^a

Year	Contract Awards (\$million)					Disbursements (\$ million) ^b						
	Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4	Total		
2023	2.48	2.41	2.48	1.43	8.80	0.52	0.43	1.72	1.87	4.54		
2024	1.34	1.21	2.60	2.57	7.72	1.58	1.54	2.87	2.07	8.06		
2025	2.39	2.39	2.98	2.98	10.74	3.73	2.72	3.31	3.10	12.86		
2026	2.98	2.98	3.12	3.12	12.20	3.09	3.09	3.23	2.22	11.63		
2027	3.12	3.12	2.56	2.56	11.36	4.19	3.88	2.62	2.61	13.30		
2028	2.56	2.56	0.55	0.55	6.22	2.61	2.61	0.60	0.59	6.41		
2029	0.55	0.55	-	-	1.10	1.58	1.55	0.04	0.03	3.20		
	Total contract awards					58.14	Total disbursement					60.00

^a Exclude interest charges during implementation.

Source: Asian Development Bank estimates.

Figure 3: Contract Award and Disbursement S-Curve Projections – ADB Grant

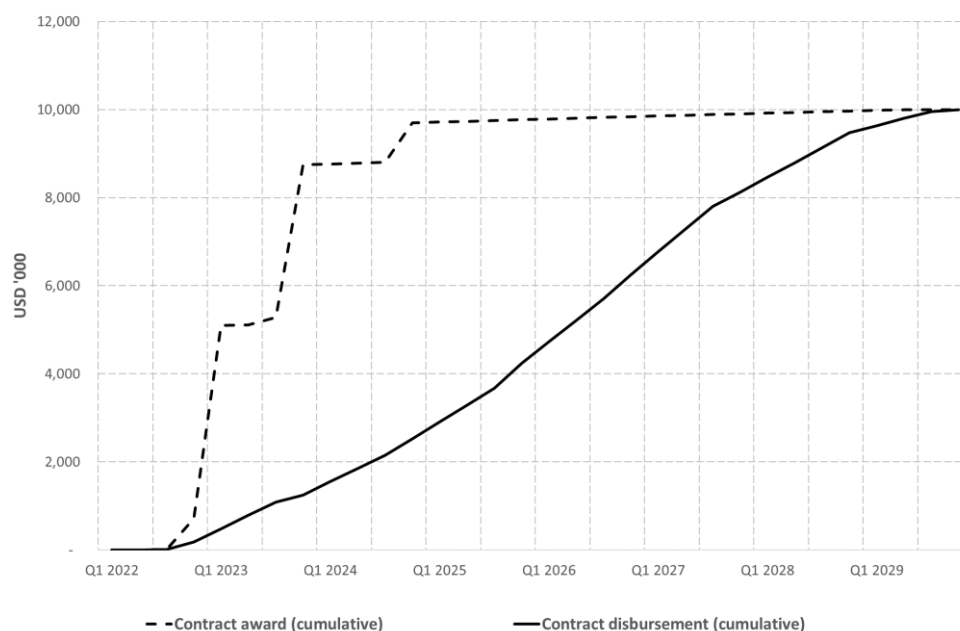


Table 15: Contract Awards and Disbursement – ADB Grant (\$ million)

Year	Contract Awards (\$million)					Disbursements (\$ million)				
	Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4	Total
2023	4.37	0.71	0.16	3.46	8.70	0.30	0.61	0.17	0.16	1.24
2024	0.01	0.02	0.02	0.90	0.95	0.30	0.30	0.30	0.38	1.28
2025	0.02	0.02	0.02	0.01	0.07	0.38	0.38	0.38	0.56	1.70
2026	0.02	0.02	0.02	0.02	0.08	0.49	0.49	0.49	0.54	2.01
2027	0.02	0.02	0.02	0.02	0.08	0.52	0.52	0.52	0.32	1.88
2028	0.02	0.02	0.02	0.02	0.08	0.34	0.34	0.34	0.34	1.36
2029	0.02	0.02	-	-	0.04	0.17	0.17	0.15	0.04	0.53
	Total contract awards				10.00	Total disbursement				10.00

Figure 4: Contract Award and Disbursement S-Curve Projections – GAFSP Grant

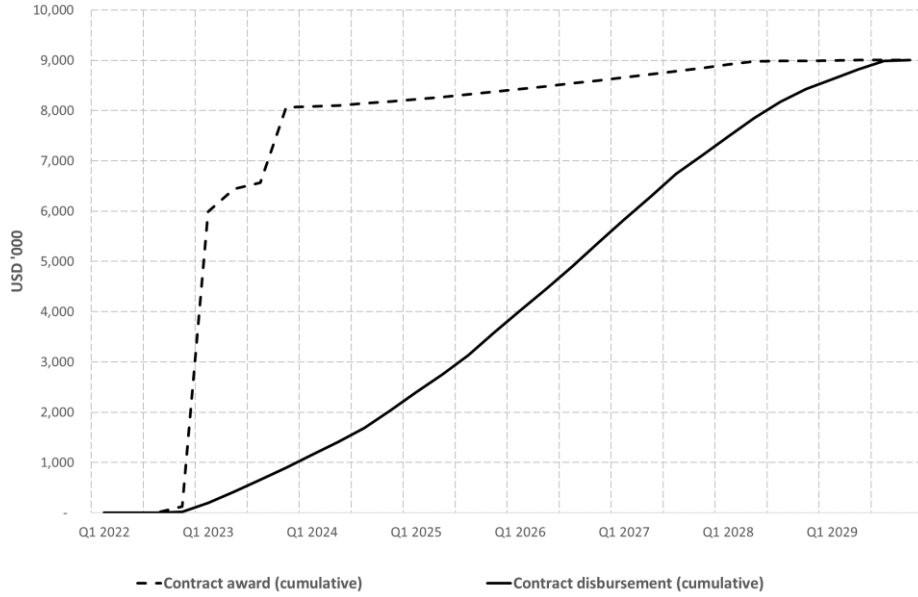
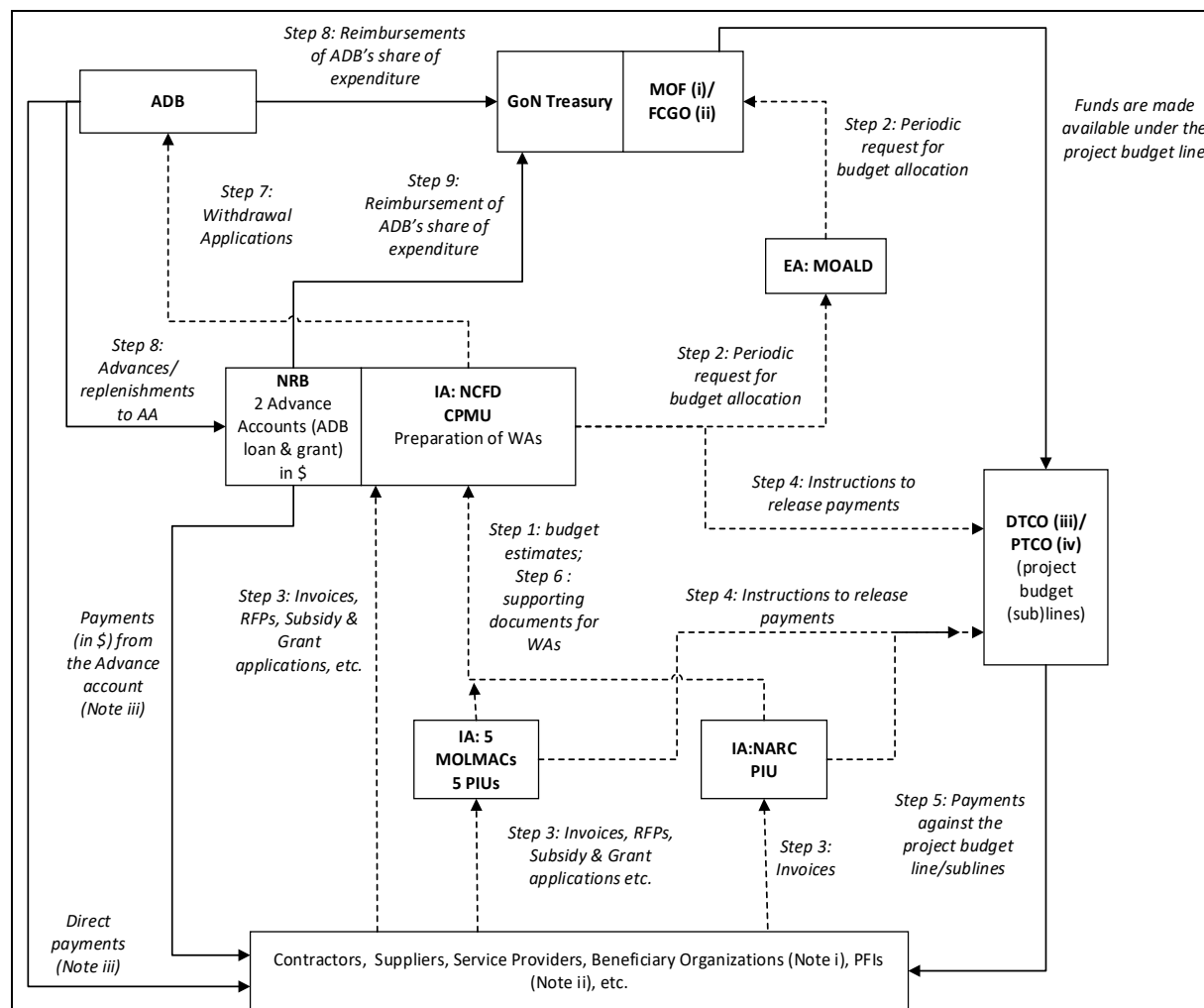


Table 16: Contract Awards and Disbursement – GAFSP Grant (\$ million)

Year	Contract Awards (\$million)					Disbursements (\$ million)				
	Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4	Total
2023	5.86	0.57	0.13	1.50	8.06	0.17	0.30	0.19	0.22	0.88
2024	0.02	0.02	0.04	0.06	0.14	0.25	0.25	0.28	0.34	1.12
2025	0.04	0.04	0.05	0.05	0.18	0.36	0.36	0.37	0.45	1.55
2026	0.05	0.05	0.06	0.06	0.22	0.44	0.44	0.44	0.47	1.79
2027	0.06	0.06	0.06	0.06	0.24	0.46	0.46	0.46	0.37	1.74
2028	0.06	0.06	0.01	0.01	0.14	0.37	0.37	0.32	0.26	1.32
2029	0.01	0.01	-	-	0.02	0.19	0.20	0.19	0.02	0.60
	Total contract awards				9.00	Total disbursement				9.00

I. Fund Flow Diagram

Figure 5: Fund Flow Chart



Legend:

Flow of Funds = →

Flow of documents = →

AA= advance account, ADB= Asian Development Bank, CPMU= Central Project Management Unit, FCGO: Financial Comptroller General Office, GoN= Government of Nepal, DTCO= District Treasury Controller's Office, MOALD = Ministry of Agriculture and Livestock Development, MOF= Ministry of Finance, MOLMAC= Ministry of Land Management, Agriculture and Cooperative (referring to provincial agriculture ministries), NARC= Nepal Agricultural Research Council, NCFD= National Centre for Fruit Development, NRB= Nepal Rastra Bank (Central Bank); PIU= Project Implementation Unit, PTCO= Provincial Treasury Controller's Office, WA= withdrawal application.

- **Step 1:** NARC and each provincial IA submit their respective project budget estimates annually to NCFD for consolidation.
- **Step 2:** NCFD submits the consolidated project budget to MOALD for review in accordance with GON procedures. Subsequently the consolidated project budget is submitted to MOF for approval.
- **Step 3:** Contractors, suppliers, service providers, grantees, beneficiary organizations, etc. submit invoices/request for payments to NCFD, NARC and provincial DOADs.

- **Step 4:** NCFD, NARC and each provincial IA review the received invoices and other supporting documentation and instruct the DTCO/PTCO to execute the payment.
- **Step 5:** DTCO/PTCO make the payment to contractors, suppliers, service providers, grantees, beneficiary organizations etc. based on the instructions received.
- **Step 6:** NARC and each provincial IA submit supporting documentation to the NCFD CPMU to enable the CPMU to prepare withdrawal applications.
- **Step 7:** NCFD CPMU prepares the withdrawal applications in accordance with ADB's disbursement handbook and submits them to ABD using the Client Portal for Disbursements (CPD).
- **Step 8:** ADB disburses the amounts either directly to the GON treasury or to the advance accounts based on the instructions included in the withdrawal application.
- **Step 9 (if applicable):** GON treasury account is reimbursed from the respective advance account.

Additional notes:

- (i) The subsidy and matching grant proceeds are transferred to a bank account belonging to the beneficiary organization/grantee and subsequently the eligible portion will be claimed from ADB under the reimbursement or replenishment procedure;
- (ii) The Credit Guarantee Funds proceeds will be disbursed to a separate (ledger) bank account maintained by the partner financial institutions; and, will be claimed from ADB under the reimbursement or replenishment procedure;
- (iii) In general, all project expenditures will be prefinanced by the GON and subsequently claimed from ADB. The CPMU may also make payments: (i) directly from the advance accounts (e.g. payments in US\$ to international consultants or (ii) using the direct payment disbursement method in accordance with the requirements set out in the ADB loan disbursement handbook. Under the direct payment method, ADB pays the contractor, supplier, or service provider directly based on a withdrawal application submitted by the CPMU.

V. FINANCIAL MANAGEMENT

A. Financial Management Assessment

18. A financial management assessment (FMA) has been conducted for NCFD, NARC and five provincial agriculture ministries (hereafter referred as Directorate of Agriculture Development (DOAD)) in accordance with ADB's Guidelines.¹⁹ The FMA focused on fund flows, staffing, accounting policies and procedures, internal controls, financial reporting and monitoring and internal and external audit. The purpose of the FMA is to ensure that adequate financial management arrangements are in place for the proposed project.

19. The financial management arrangements of the project will support federalism and will be based on country financial management systems, policies, and procedures. Supplementary FM arrangements have been included in the project administration manual (PAM) to: (i) facilitate efficient flow of funds under the ADB loan and grant; (ii) ensure the project complies with ADB's financial reporting and audit requirement as well as disbursement procedures; and (iii) ensure that the loan and grant accounts are closed in a timely fashion.

20. The FMA found that the implementing agencies have adequate financial management capacity as applicable to: (i) record the required financial transactions; (ii) provide reliable annual financial statements and audit reports in a timely manner; and (iii) safeguard the financial assets. Moreover, the FMA found that NCFD has the capacity to administer the advance fund and Statement of expenditure (SOE) procedure up to a ceiling of \$50,000 in accordance with ADB's disbursement procedures. However, the pre-mitigation FM risk is assessed as *Substantial* mainly because of the following: (i) decentralized fund flow involving several implementing agencies, (ii) the implementing agencies lack experience in ADB's financial management requirements and disbursement procedures, (iii) inadequate accounts staff and frequent staff turnover, (iv) delays in disbursement of matching grants and (v) the detailed financial management arrangements related to the credit guarantee fund have not yet been finalized. These risks will be mitigated by (i) appointing qualified financial staff to the CPMU and PIUs; (ii) engaging financial management experts to support the project on intermittent basis; (iii) providing continuous training in ADB's disbursement systems as well as financial reporting and audit requirements; (iv) including comprehensive financial information in the quarterly project progress reports; and (v) establishing a clearly defined process for approval and disbursement of matching grants. Moreover, no project funds will be transferred to Partner Financial Institutions (PFI) to implement the Credit Guarantee Fund, until a due diligence acceptable to ADB has been conducted on each PFI, the detailed FM arrangements have been agreed between ADB and the government, and the guarantee fund agreement has received ADB's no-objection. The implementing agencies will maintain separate books of accounts for the project and the consolidated project financial statements will be audited annually by an auditor acceptable to ADB, following auditing standards acceptable to ADB. The detailed financial management risks and mitigations measures are provided in Table 17.

¹⁹ Technical Guidance Note on Financial Management Assessment (2015), ADB

Table 17: Financial Management Inherent and Control Risk Assessment

Risk	Risk Assessment	Risk Description	Mitigation Measures
Inherent Risk			
1. Country-specific	Substantial	Absorption capacity of the government departments for capital expenditure, slow implementation and timeliness of counterpart financing may pose a challenge.	Close monitoring of the activities and timeliness of counterpart funds throughout the project implementation.
2. Entity-specific	Moderate	MOALD has experience with implementing ADB and WB assisted projects.	Not applicable
3. Project-specific	Substantial	The project will be implemented by several implementing agencies and in remote locations. The project is expected to make many small payments.	Project specific risk mitigation actions will also include the establishment of: <ul style="list-style-type: none"> Competitive Grants Management Committee to review and approve grant proposals; and Local Level Coordination Committees and Subsidy Management Committees to review and approve subsidy applications.
Overall Inherent Risk	Substantial		
Control Risk			
1. Implementing entity	Substantial	Complex implementation arrangements involving several implementing agencies and the implementing agencies lack experience in implementing ADB financed projects.	A CPMU in NCFD, and a PIU in NARC and each of five DOADs have been established. The CPMU will have the overall responsibility for preparing WAs and consolidating financial information and ensuring full compliance with ADB's FM requirements.
2. Fund flow	Moderate	Complex flow of funds with several implementing agencies which may cause reconciliation issues and delays in disbursement of ADB funds.	Most project expenditures are expected to be prefinanced by GoN. The project may also make use of the advance fund and direct payment disbursement procedure. Separate advance accounts to be maintained by the NCFD CPMU but no funds are to be advanced to the other IAs. All WAs will be prepared by NCFD CPMU based on supporting documentation provided by NARC and the DOADs.
		There may be delays in the release of counterpart funds.	Assurances to be sought from GoN to provide adequate & timely counterpart funds to the project.
		The PFIs to implement the guarantee fund have not been identified and the modalities for the Credit Guarantee Fund have not been finalized.	Due diligence to be conducted for each of the PFIs in accordance with ADB's requirements before entering into a guarantee fund agreement with the respective PFI. The guarantee fund agreement between MOALD/NCFD and each PFI must be developed and submitted to ADB for its no-objection.
		There may be delays in the release of grant/subsidy proceeds	Templates for grant/subsidy agreements with beneficiary organizations to be submitted to ADB for non objection. Grants and subsidies will be disbursed on a reimbursement basis, subject to

Risk	Risk Assessment	Risk Description	Mitigation Measures
3. Staffing	Substantial	<p>Inadequate accounts staff in most IAs.</p> <p>Frequent turnover of finance and accounting staff.</p> <p>Lack of knowledge and experience with ADB procedures and systems.</p>	<p>submission of invoices or audited utilization certificates. The timely release of grant/subsidy proceeds to be monitored as part of the QPRs.</p> <p>Qualified FM/accountants' staff to be assigned to the CPMU and each of the PIUs to work full time for the project.</p> <p>Experienced FM consultants/experts to be engaged on an intermittent basis as part of the project implementation support consultancy package.</p> <p>Continuous training in ADB procedures and systems to be ensured on a regular basis to enhance the FM staff understanding in ADB's FM requirements and disbursement procedures.</p>
4. Accounting policies and procedures	Substantial	Existing government policies, procedures and systems will be followed, which may not fully meet ADB's reporting requirements.	<p>Each PIU will maintain separate control registers for: (i) grants/subsidies approved and disbursed; and (ii) reimbursement claims submitted to the CPMU. The CPMU will maintain a consolidated registers for: (i) grants/subsidies approved and disbursed; (ii) WAs submitted to ADB; and (iii) expenditures claimed from ADB under the SOE procedure.</p> <p>The CPMU and each PIU will maintain an Audit Issues Resolving Action Plan as per OAG prescribed format and will conduct joint meetings to monitor the status of past external audit observations and internal audit recommendations and ensure corrective measures are undertaken in a timely manner.</p> <p>The project specific budget, and accounting codes and, disbursement as well as financial reporting practices will be documented in a project FM manual to be disseminated to the PCU and each PIU.</p>
5. Internal audit	Substantial	Internal audit function generally weak	<p>FCGO/PTCO shall include the proposed project in their audit scope. The internal audit observations shall be shared with to respective agencies (NCFD, NARC, DOADs) management for responses and implementation of corrective actions as applicable.</p> <p>Representatives from the FCGO/PTCO in the will be included in the inception missions and FM training events to sensitize them about the project specific activities and risks to make the internal audits more efficient and effective.</p>
6. External audit	Substantial	Audit to be conducted by the OAG in accordance with National Audit standards. The decentralized flow of funds and implementation	NCFD will cause the consolidated project financial statements to be audited by the OAG in accordance with the statement of audit needs agreed between ADB and OAG. The audit will be supported by the regular NCFD and provincial agriculture ministry audits. The management letter

Risk	Risk Assessment	Risk Description	Mitigation Measures
		arrangements may lead to incomplete audits and delays in APFS submission to ADB.	will outline the identified internal control weaknesses (if any) separately for each IA. NCFD, through its CPMU, will submit the consolidated APFS to ADB within 9 months after the end of the financial year.
7. Reporting and monitoring	Substantial	The decentralized financial reporting arrangements may lead to incomplete, fragmented and inconsistent financial reporting.	NARC/PIU and each of the DOAD shall prepare quarterly financial reports within 30 days after the end of the reporting period. The NCFD/CPMU shall consolidate the financial information to be included in the quarterly progress reports to be submitted to ADB within 60 days after the end of the reporting period. NARC/PIU and each of the DOAD shall prepare their respective project financial statements in a uniform manner and submit them to the NCFD within two months after the end of the fiscal year. NCFD/CPMU shall prepare consolidated project financial statements according to agreed format within four months after the fiscal year.
8. Information systems	Moderate	NCFD, NARC and DOADs are using the government software called CGAS e-payment system. However, direct payments and USD payments made from the advance account will have to be manually included in the system. The project financial reports are created manually in excel based on the CGAS information.	NCFD/CPMU to use the ADB systems LFIS and Client Portal for disbursement (CPD) to conduct quarterly reconciliations of consolidated project accounts and ADB disbursement records, and keep track of direct payments as well as advances, replenishments to the advance accounts and liquidations. NCFD, NARC and DOADs to explore solutions to maintain, compile and consolidate project specific control registers, and automate quarterly financial reporting to the extent possible for the project in the agreed format.
Overall Control Risk	Substantial		

21. ADB, NCFD, NARC and each DOAD have agreed to implement an action plan as key measures to address the deficiencies. The financial management action plan is provided in Table

Table 18: Financial Management Action Plan

Risk area	Agreed Action	Responsible Entity	Agreed Completion Date
Staffing	Assign qualified accountants to the CPMU and each of the PIU.	FCGO together with NCFD, NARC and DOADs	By 1 October 2022
Staffing	Engage FM specialists/experts on an intermittent basis to support the CPMU and the PIUs in: (i) collecting supporting documentation	NCFD/CPMU	By loan effectiveness

Risk area	Agreed Action	Responsible Entity	Agreed Completion Date
	preparing WAs in accordance with ADB disbursement handbook and (ii) consolidated project financial reports in a format agreed with ADB.		
Capacity building – ADB requirement	Provide training in ADB disbursement procedures and systems (CPD & LFIS) and financial reporting and audit requirements.	NCFD, NARC and each DOAD and ADB	By inception and thereafter annually
Capacity building- use of GON systems	<p>Organize trainings for all project accounts staff assigned to NCFD, NARC and each DOAD in the set up and correct use of: P/LMBIS, CGAS, TSA, FMIS (Ministerial Financial Management Information System) including report generation and the use of project accounting and budget codes.</p> <p>Document the project specific budget, and accounting codes and, disbursement as well as financial reporting practices in a project FM manual to be disseminated to the CPMU and each PIU.</p> <p>Submit the agreed project FM manual for ADB's approval</p>	<p>NCFD CPMU, and FCGO</p> <p>NCFD CPMU, NARC and DOADs</p> <p>NCFD CPMU</p>	<p>By loan effectiveness</p> <p>By 31 July 2022</p> <p>By 31 October 2022</p>
Accounting	<p>Maintain separate control registers for: (i) grants & subsidies approved and disbursed; (ii) reimbursement claims submitted to the CPMU; and (iii) status of internal /external audit recommendations/observations.</p> <p>Maintain consolidated control registers for: (i) grants and subsidies approved and disbursed, (ii) WAs submitted to ADB, (iii) expenditures claimed from ADB under the SOE procedure and (iv) status of internal /external audit recommendations/observations.</p>	<p>NARC/PIU and DOADs</p> <p>NCFD/CPMU</p>	<p>From loan effectiveness onwards</p> <p>From loan effectiveness onwards</p>
Records management	<p>All supporting documents (or copy of such documents) to support expenditures claimed from ADB under SOE must be sent to NCFD/CPMU.</p> <p>File and all supporting documentation in an orderly manner and maintain regular back-ups to support ADB's SOE reviews and annual project audits.</p>	<p>NARC/PIU and DOADs</p> <p>NCFD/CPMU</p>	<p>Monthly</p> <p>From loan effectiveness onwards</p>
Internal controls	<p>Maintain Audit Issues Resolving Action Plan as per OAG prescribed format.</p> <p>Conduct joint meetings to monitor the status of past external audit observations and internal audit recommendations and ensure corrective measures are undertaken in a timely manner.</p>	<p>NCFD/CPMU, NARC/PIU and DOADs</p> <p>NCFD/CPMU, NARC/PIU and DOADs</p>	<p>From loan effectiveness onwards</p> <p>Semiannually</p>

Risk area	Agreed Action	Responsible Entity	Agreed Completion Date
Internal audit	<p>Ensure the project is included in the periodic internal audits conducted by FCGO/PTCO.</p> <p>Include representatives from the FCGO/PTCO in the inception missions and FM training events to sensitize them about the project activities and risks.</p> <p>Resolve and implement all significant audit observations and recommendations made by FCGO/PTCO related to the project.</p>	NCFD, NARC and DOADs	<p>Annually</p> <p>Inception mission and thereafter every two years during implementation</p> <p>Within six months after the receipt of the internal audit report throughout the project implementation</p>
External audit	<p>Ensure the project is included in the audit plan of the OAG and sensitize OAG on the scope of the audit and project specific audit requirements.</p> <p>Cause the consolidated project financial statements to be audited separately by OAG in accordance with the statement of audit needs agreed between ADB, and OAG.</p> <p>Submit the audit report, audited consolidated project financial statements and the consolidated management letter with breakdown of audit observations by implementing agency to ADB.</p>	NCFD/CPMU	<p>Within two months after loan effectiveness</p> <p>Annually throughout the project implementation</p> <p>Within nine months after the end of the fiscal year</p>
Quarterly Financial reporting	<p>Prepare quarterly financial reports in an agreed format and submit to the NCFD CPMU for consolidation.</p> <p>Include consolidated financial management information in the quarterly progress reports and submit to ADB.</p>	<p>NARC and DOADs</p> <p>NCFD/CPMU</p>	<p>Within 30 days after the end of the reporting period</p> <p>Within 60 days after the end of the reporting period</p>
Annual Financial reporting/ statements	<p>Prepare project financial statements in an agreed format and submit to the NCFD/ CPMU for consolidation.</p> <p>Prepare consolidated project financial statements in a format agreed with ADB.</p> <p>Issue an annual management assertion of responsibility to the external auditor and authorize the auditor to have access to the project documents maintained by the respective agency.</p>	<p>NARC and DOADs</p> <p>NCFD/CPMU</p> <p>NCFD, NARC and DOADs</p>	<p>Within two months after the end of the fiscal year</p> <p>Within four months after the end of the fiscal year</p> <p>Within two months after the end of the fiscal year</p>

Risk area	Agreed Action	Responsible Entity	Agreed Completion Date
Information systems	<p>Record all expenditures, including direct payments and payments from the advance account (if any) in CGAS using the project specific codes/account heads.</p> <p>Develop efficient and reliable IT solutions to share, consolidate and compile project control registers to facilitate quarterly financial reporting to ADG.</p> <p>Use ADB systems LFIS and Client Portal for disbursement (CPD) to reconcile project accounts and ADB disbursement records and keep track of direct payments as well as advances, replenishments and liquidations to the advance account.</p>	<p>NCFD, NARC and DOADs</p> <p>NCFD/CPMU</p> <p>NCFD, NARC and DOADs</p>	<p>Throughout project implementation</p> <p>Within six months after loan effectiveness</p> <p>Monthly from first loan disbursement throughout project implementation</p>
Grants/subsidies	<p>Develop subsidy/ matching grant agreement templates between the NCFD/DOAD and the beneficiary organization/grantee, and obtain ADB's non-objection.</p> <p>Report any noncompliance significant delays in submission of audited utilization certificates, applicable, as part of the QPRs</p>	<p>NCFD/CPMU, DOADs and MOALD/MOF</p>	<p>By loan effectiveness</p> <p>Quarterly</p>
Guarantee Fund	<p>Conduct due diligence of each of the PFIs that will manage the guarantee fund.</p> <p>Prepare the credit guarantee fund operational guidelines, including a draft CGF agreement with PFIs, for MOF's review and approval, and for ADB's non-objection.</p> <p>Credit guarantee fund agreement signed between MOALD/NCFD and each of the PFIs after MOF's review and clearance, and ADB's non-objection.</p>	<p>ADB, MOALD and MOF</p> <p>NCFD/CPMU, MOALD and MOF</p> <p>NCFD/CPMU, MOALD and MOF</p>	<p>Before first disbursement to each PFI</p> <p>Before first disbursement to each PFI</p> <p>Before first disbursement to each PFI</p>

ADB = Asian Development Bank; CPD = Client Portal for Disbursements; CPMU = Central Project Management Unit; DOAD = (provincial) Directorate of Agriculture Development; LFIS = Loan and Grant Financial Information System; FCGO = Financial Comptroller General Office; FM = financial management; MOF = Ministry of Finance; NARC = Nepal Agricultural Research Council; NCFD = National Center for Fruit Development; OAG = Office of the Auditor General; PFI = partner financial institutions; PTCO = Provincial Treasury Control Officer; SOE = statement of expenditures; WA = withdrawal application.

B. Disbursement

1. Disbursement Arrangements for ADB and ADB-administered GAFSP Funds

22. The ADB loan, ADB grant, and GAFSP grant proceeds will be disbursed in accordance with ADB's Loan Disbursement Handbook (2017, as amended from time to time), and detailed

arrangements agreed upon between the government and ADB.²⁰ The project will make use of the advance fund, direct payment, and the reimbursement procedure.

23. NCFD, through its CPMU, and with inputs from NARC and each provincial agriculture ministry through its DOAD will be responsible for: (i) preparing annual contract awards and disbursement projections; (ii) requesting budgetary allocations for counterpart funds; (iii) collecting supporting documents; and (iv) preparing and sending withdrawal applications to the ADB. Project staff are encouraged to avail of this training to help ensure efficient disbursement and fiduciary control.

24. **Advance fund procedure.** NCFD will, immediately after loan effectiveness, establish and manage three separate advance accounts, one for the ADB loan, one for the ADB grant, and one for the GAFSP grant, at the Nepal Rastra Bank for financing eligible expenditures. The currency of the advance accounts will be US dollars. The advance accounts are to be used exclusively for the ADB's share of eligible expenditures. The NCFD, who will establish the advance accounts in its name, is accountable and responsible for proper use of advances to the advance account.

25. The total outstanding advance to the respective advance account should not exceed the estimate of ADB's share of expenditures to be paid through the advance account for the forthcoming 6 months. NCFD may request for initial and additional advances to the advance accounts based on an Estimate of Expenditure Sheet setting out the estimated expenditures to be financed through the advance accounts for the forthcoming 6 months.²¹ For every liquidation and replenishment request of the advance accounts, the borrower will furnish to ADB (i) a statement of account (bank statement ending balance) issued by the bank where the advance account is maintained, and (ii) the advance account reconciliation statement (AARS) reconciling the above-mentioned bank statement against Ministry of Finance's (MOF) records.²² Supporting documents should be submitted to ADB or retained by NCFD in accordance with ADB's Loan Disbursement Handbook (2017, as amended from time to time) when liquidating or replenishing the advance accounts.

26. **Statement of expenditure (SOE) procedure.**²³ The SOE procedure may be used for reimbursement of eligible expenditures and liquidation of the advance account. The ceiling of the SOE procedure is the equivalent of \$50,000 per individual payment. Supporting documents and records for the expenditures claimed under the SOE should be maintained and made readily available for review by ADB's disbursement and review missions, upon ADB's request for submission of supporting documents on a sampling basis, and for independent audit. The NCFD, through its CPMU, will be responsible for preparing liquidation and replenishment of their respective advance account. Procedures for establishing and operating the advance account and SOE procedures are detailed in the ADB's Loan Disbursement Handbook (2017, as amended from time to time). NCFD will collect full documentation (or certified copies) from NARC and each DOAD to support expenditures claimed from ADB under SOE documentation to facilitate ADB's SOE reviews. The original supporting documentation will be duly filed in a secure place by the respective entity and backed up digitally on a weekly basis.

²⁰ The handbook is available electronically from the ADB website: <https://www.adb.org/documents/loan-disbursement-handbook>

²¹ Estimate of Expenditure sheet is available in Appendix 8A of ADB's Loan Disbursement Handbook (2017, as amended from time to time).

²² Follow the format provided in Appendix 8B of ADB's Loan Disbursement Handbook.

²³ Statement of Expenditure forms are available in Appendix 7B and 7D of ADB's Loan Disbursement Handbook (2017, as amended from time to time).

27. With regards to the subsidies, matching grants and the Credit Guarantee Fund, the supporting documentation listed in Table 19 must be submitted to ADB together with the WA incase the SOE ceiling as specified by ADB is exceeded. Otherwise, they should be retained by the NCFD for annual audit of project financial statements and/or ADB's review. ADB reserves the right to request submission of such documents, if deemed necessary.

Table 19: Supporting Documents for Partial Subsidies, Matching Grants and Credit Guarantee Fund

Category	Supporting Documentation to be Submitted to ADB	Supporting Documentation to be Retained	ADB Disbursement Procedure
Partial Subsidies for farmers and cooperatives	Beneficiaries/Beneficiary organizations payment request or equivalent (indicating date, amount, and bank account details) and official receipt, bank transfer record or other proof of payment Detailed list of approved/sanctioned beneficiaries/beneficiary organizations by the Local Level Coordination Committee/Subsidy Management Committee	Eligibility information including documentation evidencing the subproject approval by the Local Level Coordination Committee/Subsidy Management Committee Approved Subsidy agreement/application including the terms and conditions of disbursement and other documents as required in the subsidy agreement or equivalent	Reimbursement/replenishment
Matching Grant	Grantee's payment request or equivalent, (indicating date, amount, and bank account details) and official receipt, bank transfer record or other proof of payment Detailed list of approved/sanctioned grantees by the Competitive Grants Management Committee	Grant eligibility information including documentation evidencing the subproject approval by the Competitive Grants Management Committee Grant agreement including the terms and conditions including the terms and conditions of disbursement, and other documents as required in the grant agreement.	Reimbursement/replenishment
Credit Guarantee Fund	The CGF agreement with the PFIs including the terms and conditions which refer to payment of advance and progress payments, breakdown of amount due, and other documents as required in the grant agreement. The PFI's payment request, (indicating date, amount,	Eligibility information including documentation evidencing the subproject approval by the Local Level Coordination Committee/Subsidy Management Committee	Reimbursement/replenishment

Category	Supporting Documentation to be Submitted to ADB	Supporting Documentation to be Retained	ADB Disbursement Procedure
	and bank account details) and official receipt, bank transfer record or other proof of payment CGF management committees' approval of the transfer or equivalent for time deposit to PFIs		

CGF = Credit Guarantee Fund, PFI = partner financial institution.

Source: Asian Development Bank.

28. Before the submission of the first withdrawal application, the borrower should submit to ADB sufficient evidence of the authority of the person(s) who will sign the withdrawal applications on behalf of the government, together with the authenticated specimen signatures of each authorized person. The minimum value per withdrawal application is stipulated in the ADB's Loan Disbursement Handbook (2017, as amended from time to time). The borrower should ensure sufficient category and contract balances before requesting disbursements. Use of ADB's Client Portal for Disbursements system is mandatory for submission of withdrawal applications to ADB.²⁴

29. **Disbursement of Partial Subsidies and Matching Grants.** The subsidies and matching grants to the beneficiary organizations/grantees will be disbursed in accordance with the disbursement schedule specified in the subsidy/matching grant agreement. The subsidies and matching grants will be disbursed on a reimbursement basis based on payment request or equivalent (indicating date, amount, and bank account details) and official receipt, bank transfer record or other proof of payment, as well as detailed list of approved/sanctioned grantees issued by the relevant management committee and the funds will be deposited directly by the FCGO/PTCO to a designated bank account maintained by the beneficiary organization/grantee.²⁵ The detailed financial management and disbursement arrangements of the orchard development subsidy scheme is outlined in the Attachment D, and of the matching grant scheme in the Attachment E.

30. **Disbursement of Credit Guarantee Fund.** The funds to the credit guarantee fund for horticulture farmers and rural agribusinesses will be established in partner financial institutions (PFIs) which will be specified later and will be disbursed in accordance with the disbursement schedule specified in the Guarantee Fund agreement.²⁶ Time deposit will be transferred directly by the FCGO/PTCO in tranches based on the endorsement of the Credit Guarantee Fund Committee to a separate bank or ledger account maintained by the PFI. This time deposit will be claimed from ADB as a reimbursement or replenishment. The indicative financial management and disbursement arrangements of the Credit Guarantee Fund, are outlined in PAM Attachment C.

²⁴ The Client Portal for Disbursement facilitates online submission of withdrawal application to ADB, resulting in faster disbursement. The forms to be completed by the Borrower are available online.

²⁵ Audited utilization certificates may be required for grants exceeding an agreed threshold.

²⁶ Participating banks will be selected in consideration of (i) their overall lending capacity; (ii) prior experience or planned pilot work in agri-lending and digital finance; (iii) branch or physical presence in project districts and municipalities; (iv) their ability and track record for creative finance, alongside their experience and openness in working with wholesale lenders and cooperatives.

31. No project funds will be transferred to PFIs to implement the Credit Guarantee Fund, until a due diligence acceptable to ADB has been conducted of each FI, the detailed implementation and financial management arrangements have been agreed between ADB and the government, and the guarantee fund agreement has received ADB's non objection.

2. Disbursement Arrangements for Counterpart Fund

32. All disbursements under government financing will be carried out in accordance with the regulations of the Government of Nepal and accounting principles acceptable to ADB. The EA shall arrange a separate budget line for the project, which will be sub-divided among the NCFD, NARC and each provincial agriculture ministry. NCFD, NARC and each provincial agriculture ministry (through its DOAD), will be responsible for preparing annual budget estimates for their respective outputs/activities. NCFD, through its CPMU, will consolidate the project budget on an annual basis and enter the consolidated budget for the project in the Line Ministry Budget Information System (LMBIS), with the necessary breakdown. NCFD, NARC and each DOAD will record all payments in the CGAS.

33. With the exception of limited transactions in foreign currency, it is expected that all project expenditures incurred by NCFD, NARC and each DOAD will be prefinanced by the GoN and the NCFD, NARC and each DOAD will execute their transactions through the Financial Comptroller General Office (FCGO) and the respective Provincial Treasury Controller Office (PTCO) using the Treasury Single Account (TSA) system against the appropriate budget line/subline. In this regard, NCFD, NARC and each DOAD may coordinate with the FGCO/concerned PTCO to operate a separate project (ledger) account to facilitate the identification of project transactions. Subsequently, NARC and each DOAD will submit full financial documentation (or authorized copies of such documentation to the NCFD to allow the NCFD, through its CPMU, to prepare and submit withdrawal applications to ADB.

C. Accounting and Financial Reporting

34. NCFD, NARC and each DOAD will maintain, or cause to be maintained, separate books and records covering all cash receipts from all funding sources and payments by expenditure category incurred under the project in accordance with Nepal Public Sector Accounting Standards cash basis of accounting and Government of Nepal's accounting policies, which are consistent with international accounting principles. The Government chart of accounts will be used by the implementing agencies but for financial reporting purposes to ADB, the expenditure categories will be aligned with the expenditure categories outlined in the PAM.

35. NCFD, NARC and each DOAD will maintain the following controls registers for the project: (i) register of approved and disbursed subsidies and grants under the project; (ii) register of signed contracts; and (iii) register of claims submitted to the NCFD CPMU (applicable to NARC and each DOAD) and a register of withdrawal applications submitted to ADB (applicable to NCFD). NCFD, through its CPMU, will consolidate these registers on a quarterly basis. NCFD, through its CPMU will conduct at least quarterly reconciliation of the consolidated project books of accounts and ADB disbursement records available in the Loan and Grant Financial Information Services system.

36. NARC and each DOAD will prepare quarterly financial reports and annual project financial statements in the format indicated below and submit these to NCFD CPMU for consolidation within 30 days after the end of each quarter and 60 days after the end of the fiscal year:

- (i) Statement of cash receipts (by financing source: ADB loan, ADB grant, GAFSP grant and government) and payments (by expenditure category) for the current reporting period, past reporting period, and cumulative to date;
- (ii) Statement of claims submitted to the NCFD, for the current reporting period, past reporting period, and cumulative to date; and
- (iii) Notes disclosing the accounting standards and policies used as well as the following breakdown: (a) List of signed contracts; (b) list of approved and disbursed subsidies and grants; and (c) list of claims submitted to the NCFD CPMU.

37. Based on the detailed information extracted from the country's public financial management systems,²⁷ the annual project financial statements prepared by NARC and each DOAD and the supporting documents and disbursement claims and supporting documentation submitted by NCFD and each DOAD, etc., NCFD, through its CPMU, will prepare consolidated project financial statements. The consolidated project financial statement will follow the guidance included in the statement of audit needs (SOAN) agreed between ADB and the Office of the Auditor General (OAG) and the established reporting templates). Accordingly, the expected disclosures in the consolidated project financial statements shall include at least the following:

- (i) Statement of cash receipts (by financing source: ADB loan, ADB grant, GAFSP grant and government) and payments (by expenditure category) for the current reporting period, past reporting period, and cumulative to date;
- (ii) Statement of advance/imprest sub account for each advance account;
- (iii) Statement of disbursement, disclosing all funds claimed from ADB loan, ADB grant, and GAFSP grant by disbursement method, total expenditure claimed for the current reporting period, past reporting period, and cumulative to date;
- (iv) Disbursement claimed under SOE procedure for the reporting period;
- (v) Statement of budgeted vs. actual expenditures. Any significant variances must be duly explained.

38. Notes to the Financial Statements disclosing the used accounting standards and policies and other relevant information and explanations. The notes of the financial statements should include the following additional disclosures: (a) breakdown of expenditures incurred by expenditure category by each implementing entity (NCFD, NARC and each of the DOAD, and (b) a detailed list of all withdrawal applications submitted to, and the amounts paid by ADB. Moreover, in order to provide timely information to ADB on the project's financial progress and the status of financial management, NCFD, based on inputs from NARC and each DOAD, will include consolidated financial information, in a format agreed with ADB, in the Quarterly Progress Reports (QPRs) to be submitted to ADB within 60 days after the end of the quarter. The information provided shall include, inter alia, detailed information on the following: (i) status of each of the actions agreed as part of the financial management action plan; (ii) status of past audit observations; (iii) reconciliation with project books of accounts and ABD disbursement records; as well as (iv) agreed financial management related actions from ADB review missions. A comprehensive template for the consolidated financial information to be included in the QPRs is included in Attachment H of the PAM.

39. **Follow-up and implementation of audit recommendations/recommendations..** In order to strengthen the internal control framework of the project and ensure audit observations and recommendations are implemented in a timely fashion, NCFD, NARC and each DOAD will: (i) maintain an Audit Issues Resolving Action Plan as per OAG prescribed format and (ii) conduct joint review meetings on a semiannual basis to monitor the status of past external audit

²⁷ Expenditures by budget head, sub head and financier, etc. extracted from CGAS and LMBIS

observations and internal audit recommendations to ensure corrective measures are undertaken in a timely manner. The status of audit observations and recommendations will be included in the quarterly progress reports submitted to ADB.

D. Auditing and Public Disclosure

40. NCFD, through its CPMU, will cause the consolidated project financial statements to be audited separately on an annual basis and in accordance with the International Organization of Supreme Audit Institutions Fundamental Auditing Principles by the Office of the Auditor General (OAG). The Statement of Audit Needs agreed between ADB and the OAG will be used as a guide. The scope of audit will cover the entire project, covering all sources and application of funds (including the ADB, the government contribution), as well as books and records and the applicable internal controls maintained by each implementing agency (NCFD, NARC and each DOAD) and as well as other areas that the auditor deems necessary.

41. The audit report of the consolidated project financial statements will include a separate audit opinion, which will cover: (i) whether the project financial statements present a true and fair view or are presented fairly, in all material respects, in accordance with the applicable financial reporting framework; and (ii) whether the loan proceeds were used only for the purposes of the project. As part of the audit report a management letter shall also be provided with a breakdown of the audit observations for each implementing agency. From the second audit onwards, the management letters will include a follow-up on the implementation status of previous audit recommendations (where applicable). The APFS, together with the auditor's opinion, and the management letter will be presented in the English language and submitted to ADB within 9 months from the end of the fiscal year.

42. Compliance with financial reporting and auditing requirements will be monitored by review missions and during normal program supervision, and followed-up regularly with all concerned, including the external auditor.

43. The government, NCFD, NARC, and each provincial agriculture ministry have been made aware of ADB's approach to delayed submission, and the requirements for satisfactory and acceptable quality of the audited project financial statements.²⁸ ADB reserves the right to require a change in the auditor (in a manner consistent with the constitution of the borrower), or for additional support to be provided to the auditor, if the audits required are not conducted in a manner satisfactory to ADB, or if the audits are substantially delayed.

44. ADB reserves the right to verify the project's financial accounts to confirm that the share of ADB's financing is used in accordance with ADB's policies and procedures. Public disclosure of the APFS, including the auditor's opinion on the project financial statements, will be guided by

²⁸ Following is ADB's policy on delayed submission of audited project financial statements:

- (i) When audited project financial statements are *not received by the due date*, ADB will write to the executing agency advising that (a) the audit documents are overdue; and (b) if they are not received within the next 6 months, requests for new contract awards and disbursement such as new replenishment of imprest accounts, processing of new reimbursement, and issuance of new commitment letters will not be processed.
- (ii) When audited project financial statements *have not been received within 6 months after the due date*, ADB will withhold processing of requests for new contract awards and disbursement such as new replenishment of imprest accounts, processing of new reimbursement, and issuance of new commitment letters. ADB will (a) inform the executing agency of ADB's actions; and (b) advise that the loan may be suspended if the audit documents are not received within the next 6 months.
- (iii) When audited project financial statements *have not been received within 12 months after the due date*, ADB may suspend the loan.

ADB's Access to information Policy 2018.²⁹ After the review, ADB will disclose the APFS and the opinion of the auditors on the project financial statements no later than 14 days of ADB's confirmation of their acceptability by posting them on ADB's website. The management letter, additional auditor's opinions, and audited entity financial statements will not be disclosed.

E. Winding Up and Closure of the ADB Loan and Grant Accounts

45. In order to close the ADB loan and grant and GAFSP grant accounts in a timely manner and to comply with ADB's requirements, NCFD, NARC and each DOAD, will ensure that the following measures are undertaken (as applicable):

- (i) All ADB-financed expenditures are incurred before or by the grant closing date;
- (ii) All withdrawal applications including liquidations of the advance account are submitted to ADB preferably by the loan/grant closing date but in no case later than the end of the winding-up period; that is, within four months after the end of the loan closing date;
- (iii) Any unutilized advances are refunded to ADB within two months after the end of the winding-up period;
- (iv) The final consolidated project financial statements are audited by independent auditors (OAG) as agreed with ADB and the APFS and the management letter are submitted to ADB as soon as possible after the loan and grant closing date;
- (v) The final consolidated APFS must include all eligible expenditures incurred up to the loan and grant closing date as well as up to the final withdrawal application submitted to ADB;
- (vi) All past audit observations are resolved in a timely manner; and
- (vii) All project financial records are filed in an orderly manner and stored in a secure location for a for at least 1 year following receipt by ADB of the final audited project financial statements or 2 years after the loan closing date, whichever is later.

VI. PROCUREMENT AND CONSULTING SERVICES

A. Advance Contracting

46. All advance contracting will be undertaken in conformity with ADB Procurement Policy (2017, as amended from time to time) and Procurement Regulations for ADB Borrowers (2017, as amended from time to time). The issuance of invitations to bid under advance contracting will be subject to ADB approval. The borrower, Executing Agency (MOALD) and Implementing Agencies (NARC, NCFD and five provincial agriculture ministries) have been advised that approval of advance contracting does not commit ADB to finance the project.

47. All advance contracting will be carried out in accordance with ADB's Procurement Policy: Goods, Works, Non-consulting and Consulting Services (2017, as amended from time to time) and shall follow the Procurement Regulations for ADB Borrowers (2017, as amended from time to time).³⁰ The issuance of invitations to bid under advance contracting will be subject to ADB approval.³¹

²⁹ Available at <https://www.adb.org/documents/access-information-policy>.

³⁰ Available at: <https://www.adb.org/documents/procurement-regulations-adb-borrowers>

³¹ Bid documents will include clauses to meet ADB and government safeguards requirements, recommendations of the IEE and EMP cleared by ADB.

48. Advance contracting includes tendering and bid evaluation for four works packages, three consulting service packages and two goods packages (Table 20).

Table 20: Advance Actions

Activity	Responsible	Due Date
CS 02-A: POP development		
CS05 (A-E): Farmer group & cooperative facilitation		
CS 06: Project implementation support consultant		
CSRN posting	NCFD	16 Aug 2022
EOI submission deadline	NCFD	16 Sep 2022
Shortlisting and preparation of Submission 1 (EOI evaluation)	NCFD	31 Sep 2022
NO to Submission 1	ADB	8 Oct 2022
Sending RFP, receiving proposals, evaluating technical proposals and preparation of Submission 2	NCFD	12 Dec 2022
Review and approval of Submission 2	ADB	20 Dec 2022
Opening and evaluating financial proposals and preparation of Submission 3	NCFD	15 Jan 2023
Review and approval of Submission 3	ADB	23 Jan 2023
Contract negotiations and signing of contracts	NCFD	15 Feb 2023
Copy of contract sent to ADB	NCFD	16 Feb 2023
CW01-A: NCFD stations and office upgrade		
CW01-B: NCFD high-tech nurseries		
Submission of Bidding Documents to ADB	NARC, NCFD	31 Aug 2022
ADB approval of Bidding Documents	ADB	6 Sep 2022
IFB issuance	NARC, NCFD	11 Sep 2022
Receipt of bids (bidding time)	NARC	10 Oct 2022
BER preparation and submission to ADB	NARC	9 Nov 2022
ADB review and approval of BERs	ADB	17 Nov 2022
Contract signing	NARC	14 Dec 2022
Copy of contracts sent to ADB	NARC	15 Dec 2022
G01: Office equipment, and IT and M&E system		
G05-A: Planting materials until 2023		
G06: Vehicle		
Submission of draft RFQ to ADB	NCFD	31 Aug 2022
ADB approval of RFQ	ADB	6 Sep 2022
Issuance of RFQ	NCFD	10 Oct 2022
Receipt of quotations	NCFD	25 Oct 2022
Evaluation of quotations and submission to ADB	NCFD	11 Nov 2022
ADB review and approval of evaluation of quotations	ADB	18 Nov 2022
Contract signing	NCFD	20 Nov 2022

ADB = Asian Development Bank, BER = bid evaluation report, CS = consulting services, CSRN = consulting services recruitment notice, CW = civil works, EOI = expression of interest, FBER = financial bid evaluation report, IFB = invitation for bids, M&E = monitoring and evaluation, NARC = Nepal Agricultural Research Council, NCFD = National Center for Fruit Development, NO = no objection, POP = packages of practice, RFP = request for proposals., RFQ = request for quotations.

B. Procurement of Goods, Works, and Consulting Services

49. All procurement of goods, works and services will follow ADB Procurement Policy (2017, as amended from time to time) and Procurement Regulations for ADB Borrowers (2017, as amended from time to time). All civil works packages will be tendered using Open Competitive Method and contracts will be awarded based on lowest evaluated substantially responsive bid.

To ensure efficiency, fairness, and transparency, national e-procurement system will be used. The procurement plan is shown in Attachment I.

50. **Electronic procurement (e-procurement).** Tendering of goods and works will be done through the government e-procurement portal, i.e., Nepal Electronic Government Procurement System (Ne-GPS).³²

51. **Civil works.** There are eleven civil works (CW) packages to be procured: CW01-A to CW09. The packages will follow the Standard Bidding Document for the procurement of works – Small Contracts (SBD Works-Small) that has been prepared by ADB for use in contracts valued at generally below \$10 million by open competitive bidding (OCB). OCB with national advertisement will be used for all packages and bidding procedure will be one stage-two envelope (1S2E) for the packages costing higher than NRs. 20 million. ADB's prior review and concurrence are required for all packages. The EA/IAs will ensure conformity of all procurement documents and bid evaluation reports with ADB's Procurement Regulations for ADB Borrowers (2017, as amended from time to time).

52. **Goods.** Request for quotation (RFQ) procedure may be followed for procuring low-value, readily available off-the-shelf goods. There are nine good packages anticipated with estimated values ranging from \$10,000 to \$547,000. RFQ will also be used for all good packages except G04-C (\$547,000), for which OCB through national advertisement will be used. RFQ will be used for purchasing genetic materials (mother plantations, rootstocks, scion varieties, etc.) under the packages G05-A, G05-B and G05-C. OCB through national advertisement will be used for procurement of specialized goods such as laboratory machinery and equipment. Prior review will be used for the goods contracts. As procurement is undertaken and the procurement plan is updated, an assessment on the goods procurement will be made to determine whether the remaining goods packages, at the time of updating the procurement plan, may follow post review (sampling) arrangements.

53. **Consulting Services.** All consultants will be recruited according to the Procurement Regulations for ADB Borrowers (2017, as amended from time to time) and associated staff instructions. The key terms of reference for the consulting services are detailed in Table 20.

54. A firm will be engaged as project implementation support consultants (CS06) to provide management and technical support to the CPMU and PIUs. CS06 will require about 1,200 person-months of national consultants and about 46 person-months of international consultants. Recruitment of CS06 will use ADB's quality- and cost-based selection (QCBS) method with full technical proposal (FTP) and with a standard quality–cost ratio of 90:10. National firms for facilitating farmer groups and cooperatives (CS05-A, CS05-B, CS05-C, CS05-D, and CS05-E) will also be engaged. Civil society organizations will be encouraged to apply.

55. Four other firms will be recruited to provide technical expertise on specific activities, namely: (i) CS01 for tissue culture development, specialized grafting technique and quality control and staff training, private nursery quality control (about 94 national person-months); (ii) CS02-A POP development and POP training (about 42 national person-months); (iii) CS02-B: audio, visual

³² ADB has approved the use of the Nepal Electronic Government Procurement System (Ne-GPS) in ADB-financed projects on 14 May 2021 for procurement of goods, works, and services under Open Competitive Bidding. The portal site is <http://bolpatra.gov.np> which is Nepal's single national portal developed, hosted, monitored, and supported by the Public Procurement Monitoring Office (PPMO), the government agency responsible for procurement policy formulation and the implementation of the e-GP system.

media production; (iv) CS03: crop and land database establishment, Agri-tech advisory platform and staff training (about 72 national person-months); and (v) CS07: local infrastructure design and supervision firm (about 30 international and 42 national person-months). CS02 will use consultants' qualifications selection (CQS) inviting researchers to prepare technical training materials.

C. Procurement Plan

56. The procurement plan is shown in Attachment I. The procurement plan provides: (i) a list of goods, works, and consulting services contract packages that will be processed over the next 18 months with milestone dates for activities; (ii) the proposed methods for procurement of such contracts that are permitted under the loan agreement; and (iii) the related ADB review procedures. The procurement plan will be updated by the CPMU for approval by ADB, at least annually, and more frequently if necessary, and should cover the next 18 months of procurement activities.

D. Consultant's Terms of Reference

Table 20. Outline Terms of Reference for Consultant Contracts

Consulting Services	Key Terms of Reference
Nursery standard development, tissue culture development, quality control and staff training, private nursery quality control (CS01 under Output 1)	<ul style="list-style-type: none"> • Prepare national guidelines for importation, testing, and introduction of climate resilient plants and plant parts for planting • Develop a standard operating procedure for clean plant center establishment and operations • Prepare certification programs and nursery stock production techniques including development of ranking metrics and other requirements for production of quality or clean planting materials • Prepare protocols to support the nursery audit, monitoring, and verification of planting sites and planting materials • Prepare crop specific manuals for field production of clean nursery stocks in field • Develop training programs for clean plant center operations, certification program, nursery stock production, and conduct training of trainers training for field inspectors, lab operators, government agency staff • Disseminate technical knowledge on tissue culture and specialized grafting techniques that are global best practices but not available in the country
Crop and land database establishment and staff training (CS03 under Output 1)	<ul style="list-style-type: none"> • Develop mobile app for data collection and field data collection, assigning ID per each land segment • Identify ownership, crop type, growing condition, crop management practices, irrigation methods, and crop production and sales information through survey • Train field staff to collect data with minimum personal influence and bias on the information • Collect farm households and land-use data three seasons per year. Data entered into the database should be first verified and any errors corrected • Prepare data analysis report
POP development, training media production, POP	<ul style="list-style-type: none"> • Conduct baseline assessment of the selected fruits and nuts, varieties, and land and soil profile of the project areas

Consulting Services	Key Terms of Reference
training (CS02 under Output 2)	<ul style="list-style-type: none"> • Organize and conduct technical workshops inviting international and national horticulture experts • Prepare technical workshop proceedings to be reviewed by NCFD, NARC and provincial ministry's horticulture research centers/stations • Develop draft POPs based on the technical workshops and further analysis, and finalize them after MOALD's review. POPs should cover climate analysis (rainfall, altitude, temperature requirements, etc.), soil (type, organic matter, mineral and micro-elements), varieties (characterizing disease resistance), nursery management, orchard development, crop husbandry, integrated pest management, post-harvest crop management and cool storage technologies. • Assess the training needs of targeted farmers • Create necessary audio-visual materials for easy communication of POPs for dissemination with the farmers • Prepare training material and manual for Training of Trainers in POPs implementation • Organize training of trainers in POPs-based technology and its application and assist NCFD and DOADs in organizing training of farmers through selected trained trainers • Prepare training manual and materials for farmer training • Create a network of crop/fruit experts for supporting farmers in the use of POPs under the project
Project implementation monitoring surveys (CS04 under Output 2)	<ul style="list-style-type: none"> • Prepare methodologies for baseline, mid-term and endline surveys • Arrange and train surveyors • Analyze findings and prepare a survey outcome analysis report for baseline, mid-term and project completion/endline.
Farmer group facilitation and cooperative capacity building (CS05 under Outputs 2 and 3)	<ul style="list-style-type: none"> • Conduct project orientation in the villages on farm income increase through horticulture production (fruits and nuts, and other vegetable and nutritious crops) • Encourage project beneficiaries to collectively participate in the farmer groups and cooperatives, and facilitate organization of farmer groups from among the project beneficiaries development process, with special attention to the participation of the most marginalized-vulnerable groups • Identify potential leaders from among the beneficiaries and assess their readiness & capabilities • Train and coach CHPMAs members in undertaking their roles in high quality horticulture production and community-based market development/access; • Build the capacity of farmer groups to identify, implement. and monitor environmental and social safeguards in subproject planning and implementation • Organize and coordinate farmer groups and cooperatives related meetings, assemblies and workshops • Facilitate resolution of conflicts and grievances to ensure smooth implementation, buy-in and support of all stakeholders • Assist the farmer group and cooperative leaders in identifying and testing market opportunities and building linkages to value chains; • Support rural finance consultants of CPMU and PIU to conduct training on digital payment system and online lending applications as well as the credit guarantee fund scheme

Consulting Services	Key Terms of Reference
	<ul style="list-style-type: none"> • Operationalize a municipality-level horticulture marketing monitoring and evaluation system
Local infrastructure design firm (CS07 under Output 3)	<ul style="list-style-type: none"> • Complete feasibility studies on the current value chain infrastructure capacity, reviewing the existing public and private value chain infrastructure status (location, capacity, utility rate, maintenance, ownership) • Organize a stakeholder consultation workshop inviting MOALD, local government, agri-enterprises, traders, processors and farmer groups, and discuss the needs for improved value chain of horticulture crops • Discuss with international experts for the most suitable technologies to meet hilly area conditions • Prepare engineering design of local small-scale value chain infrastructure including an environmental monitoring report • Construct value chain infrastructure, meeting environmental safeguards guidelines

VII. SAFEGUARDS

57. In compliance with ADB's Safeguard Policy Statement, 2009 (SPS), the project's safeguard categories are as follows.

58. **Environment (category B).** The project is *categorized as B* for environment based on the due diligence and environmental assessment. The project has prepared an Initial Environmental Examination (IEE) for the project-financed components such as (i) orchard and vegetable areas development,³³ (ii) drip irrigation development, (iv) improvement of horticulture center facilities and (iv) private nursery upgrading and interventions under the matching grant.³⁴ Environmental management plan (EMP) for each component are prepared in the IEE. These EMPs outline measures to mitigate all anticipated environment impacts during pre-construction, construction, and operation stages such as localized soil disturbance and moderate workers' health and safety risks. The EMP will be included in bidding documents and contract agreements of contractors, and guide beneficiaries for orchard development and nursery improvements.³⁵ With support from consultants, PIUs at the provincial level will monitor and document the EMP implementation and report to ADB on semi-annual basis. During project implementation, beneficial environmental impacts are expected at the target orchard areas such as improvement of land-cover, creation of carbon sinks and soil-water conservation.

59. The project aims to support existing horticulture research centers/stations by upgrading or developing facilities to produce quality fruit and nut planting materials to (i) align with the international standards, (ii) commission research on climate resilient fruits and nuts varieties, and (iii) improve genetic technologies. There are potential minor occupational health and safety risks due to the small works under Output 1. Adequate environment safeguard measures will be included in the tender documents, which the contractor will comply with to mitigate potential environmental health and safety risks and impacts.

³³ Instead of having individual orchard applicants to prepare an IEE, the project will study the potential impacts of orchard development (scattered cells in total areas up to 25 ha per farmer group) and propose mitigation measures.

³⁴ IEE is based on the project design, and it will be updated when any unanticipated environmental impact occurs during project implementation.

³⁵ Advanced contracting of civil works will include EMP as part of contractor's commitment.

60. In different municipalities of five provinces, 10,000 ha will be developed for fruits and nut production, and 1,000 ha for vegetables and nutritious crops. Minimal environmental impacts such as temporary air quality decline and risks on health and safety of workers are anticipated during the preparation of nurseries and orchards (80% of farmers in hilly areas own less than 0.5 ha of land). At the Annapurna Conservation Area, there will be no biodiversity and habitat related impacts to its natural landscape during project implementation because orchard developments are confined within existing private farmlands and no forest will be converted into new orchards. As compliance with government's environmental safeguards requirement, the project will acquire environmental clearance prior to orchard area development.³⁶ There will be skills development under Output 2 such as (i) improving practices on climate analysis, assessment, and verification of carbon sequestration benefits; (ii) capacity building for sustainable and climate resilient soil, land and crop management; (iii) climate resilient and adaptable fruits and nut variety research and crop husbandry, and (iv) good agricultural practices.

61. **Environmental monitoring reports (EMRs).** The EMRs, covering a 6-month period, will be submitted semi-annually to document the progress on the EMP implementation for each of the project components during both construction and operation stages. The CPMU and each of the PIUs will be supported by the environmental expert of the PIU consultants to monitor EMP implementation. The semi-annual EMRs will be due for submission to ADB within 45 days following the end of the EMR period covered. The PMU will monitor and report environment safeguards activities starting from loan effectiveness until the end of the project and a project completion report is issued by ADB. The semi-annual EMRs will be made available to the public by disclosing on the ADB and MoALD websites after review and acceptance by ADB.

62. **Public consultation and grievance redress mechanism (GRM).** Throughout the project implementation, consultations with beneficiaries and other stakeholder will be conducted on an annual basis. Through the farmer group and cooperative facilitators that reach out to all the project beneficiaries, CPMU and PIUs will keep beneficiaries informed of the project implementation. For other stakeholders, the CPMU and PIUs will use online platforms, brochures, questionnaires, and other forms of media as applicable to provide project information updates and receive feedback. Monitoring the status of COVID-19 at the time of project implementation, the CPMU will put in place measures to manage risks in line with national health protocols as well as the international guidelines. A single GRM will ensure that the affected concerns and grievances on the project's environmental and social performance are received, addressed, and resolved.

63. The CPMU is responsible for the full compliance with the loan agreement, ADB's SPS, and all applicable laws and regulations of the government. The CPMU will be supported by PIUs to ensure compliance with environmental safeguards stated in this PAM and the IEE report. The CPMU, under the overall supervision of Project Director and under the direct responsibility of environment safeguards CPMU consultant, will:

- (i) comply with Government of Nepal's environment protection act 2076 and regulation 2077, and other environment-related statutory requirements of the project in a timely manner;
- (ii) ensure environment safeguards sections and EMP are included in bidding documents and contracts;
- (iii) review and approve the construction EMPs prepared by the Contractor/s, when applicable, with the support of PIUs and consultants;

³⁶ Orchard development will comply with the requirement of Nepal's Environmental Protection Act of 2019 and Environmental Protection Regulations of 2020.

- (iv) ensure the preparation, review, and submission of semi-annual (or as stated on the loan agreement) environmental monitoring reports for disclosure on the ADB's websites;
- (v) implement effective environmental monitoring during pre-construction, construction, and operation phases;
- (vi) review and approve, for submission to ADB, periodic environmental monitoring reports;
- (vii) inform ADB on any unanticipated environmental impact/s occurred during project implementation phase;
- (viii) participate and/or lead public consultations; and
- (ix) ensure grievance redress mechanism, as envisaged in the IEE and in this PAM, is in place and fully operational from the onset of project implementation. Facilitate the resolution of safeguard related grievance from affected people and other stakeholders.

64. The PIUs (1-6), under the overall supervision of provincial project director and under the direct responsibility of provincial environment safeguards consultant, will:

- (i) ensure that the project, and all Contractors and project beneficiaries³⁷ obtain applicable permits, licenses, etc. from the government for construction and operational activities;
- (ii) carry out regular field verification and review environmental compliances by Contractors and beneficiaries during project implementation with the support by PIU consultants;
- (iii) with the support from the PIU consultants, provide and record environmental observations during site-visits, review of monitoring forms or reports prepared by the Contractors, and documentation of issues received through grievance redress mechanism;
- (iv) guide beneficiaries on environment safeguards activities, plans and monitoring;
- (v) with the support from consultants, conduct training and workshops on environmental management, and site induction of all staff and workers³⁸ involved in the project implementation;
- (vi) participate and/or lead public consultations and grievance redress mechanism processes; and
- (vii) if there are any unanticipated environment impacts during project implementation, the PMU, with support from the PISC, will update IEE and EMP, or prepare environmental due diligence report.

65. **Contractor** will perform the following:³⁹

- (i) appoint the contractor's environment, health and safety focal person;
- (ii) obtain necessary environmental license(s), permits etc. from relevant agencies prior to commencement of works;
- (iii) implement, document and report to PIUs all mitigation measures in the EMP and environmental quality monitoring plan;
- (iv) ensure that workers and site supervisors participate in all environmental safeguard related training events by the PMU and PIUs;

³⁷ Beneficiaries of orchard and drip irrigation development, private nursery upgrading and in the matching grant component.

³⁸ The staff and workers will include all engineers, and staff and laborers of contractors.

³⁹ Includes any subcontractor(s) of the contractor.

- (v) ensure compliance with environmental statutory requirements and contractual obligations;
- (vi) participate in resolving issues and complaints from affected people; and
- (vii) implement environmental corrective actions or additional environmental mitigation measures as necessary.

66. If there are any environment safeguard non-compliance during project implementation, the PMU will prepare necessary corrective action plan (CAP), and reflect them in the EMRs. ADB will monitor the PMU's performance on implementing the CAP.

67. The matching grant components will follow the recommendations in the IEE and EMP. Proposals under the matching grant having potential adverse environmental impacts will not be financed by the project's matching grant. The matching grant and subsidized orchard development components will:

- (i) ensure that subproject investments comply with applicable national laws and regulations;
- (ii) apply the prohibited investment activities list of SPS to subprojects financed by ADB;
- (iii) not finance subprojects that are categorized as A for environment;
- (iv) utilize recommendations in the IEE and measures in the EMP for environmental safeguard activities; and
- (v) monitor environmental management activities during implementation.

68. ADB is responsible for the following:

- (i) review environmental monitoring reports, and disclose the final reports on ADB's website;
- (ii) explain policy requirements and safeguard covenants in the loan and grant agreements to CPMU and PIUs;
- (iii) monitor implementation of the EMP through due diligence missions;
- (iv) assist CPMU, if required, in carrying out its responsibilities and in building capacity for safeguard compliance;
- (v) monitor overall compliance of the projects to this PAM; and
- (vi) if necessary, provide further guidance to CPMU on the format, content, and scope of the periodic monitoring reports for submission to ADB.

69. Due to potential government restrictions and COVID-19 risks, adaptive mechanisms can be used to address limitations on public consultations. Surveys and data collection will be conducted through adaptive mechanisms, such as use of online platforms, brochures, questionnaires, and other forms of media as applicable to provide information and receive feedback from the people, beneficiaries, government agencies and other stakeholders. Health and safety may be triggered directly and/or indirectly due to project implementation. Depending on the status of COVID-19, the PMU will put in place measures to manage risks in line with national health protocols as well as the international guidelines.

70. **Involuntary resettlement (category C).** The Project is categorized as C for involuntary resettlement. The project will not involve any involuntary acquisition of land or restriction on land use. Any participation in project activity is based on voluntary choice of the willing participants. The land required for horticulture center/station rehabilitation and upgrade of existing MOALD service facilities will be confined within existing boundary of government premises. No additional land will be required for these activities. Orchard development, value-addition public or private

infrastructure development will be done on private (farmers' own) or government land with no land acquisition nor physical or economic displacement. The specific site of orchard development and value addition infrastructure is yet to be finalized. It will be confirmed only after approval of matching grant proposals on a competitive basis. The proposal will be approved only if the beneficiary/participating farmers shows evidence that the proposed land is either owned or cultivated by themselves or has lease or user right agreement and not claimed by others. The PIU will enter into agreement with project beneficiary farmers ensuring that the agreed criteria will be observed for land utilization.

71. The technical support for irrigation is farm based technical improvement in the existing system and does not involve any land requirement. No common property resources related to land ownership were found during social safeguard and socio-economic household survey and key informant interviews in likely project area. No project activity involving involuntary land acquisition, voluntary donation, or negotiated settlement will be eligible for project financing. The executing agency will ensure- through the quarterly progress report- that any activity undertaken under the project did not have any physical and economic impact.

72. **Subproject screening and categorization.** The EA and IAs are jointly responsible for screening and categorization of each subproject (matching grant, subsidized orchard development applications) on the screening checklist, and ensuring that all the project-financed subprojects are under the category C.

- (i) Category A – A proposed project is classified as Category A if it is likely to involve significant involuntary resettlement impacts. A resettlement plan, including an assessment of social impacts, is required.
- (ii) Category B – A proposed project is classified as Category B if it includes involuntary resettlement impacts that are not deemed significant. A resettlement plan, including assessment of social impact, is required.
- (iii) Category C – A proposed project is classified as Category C if it has no involuntary resettlement impacts. No further action is required.

73. **Indigenous peoples (category B).** The Project is categorized as *B* for indigenous peoples (IP) safeguards. There is presence of indigenous groups in the project areas within the meaning of ADB SPS 2009. Indigenous people constitute about half or more of the population in Province 1, Bagmati, Gandaki provinces, and are a minority in Karnali and Sudurpashchim provinces.⁴⁰ The project target municipalities were finalized based on crop and land suitability assessment, and the project beneficiary farmers will be selected based on their application for the call for expression of interests. The selected municipalities of the project have varying proportions of IPs. IPs in the project municipalities were found living in clustered standalone settlements and were also found in mixed settlements with mainstream population. It is anticipated that indigenous people will be the majority beneficiary.

74. The project has conducted phone-based interviews on 9 cooperatives from three municipalities, socio economic survey and social safeguards survey with 274 households and conducted Key Informants Interviews with community representatives such as IP farmer/cooperatives/ IP representative organizations in selected municipalities. This phone-based social survey results have been used to produce both an indigenous people planning framework

⁴⁰ Government of Nepal, Central Bureau of Statistics. 2014. [Population monograph of Nepal. Volume II social demography](#). Kathmandu.

and the Detailed Poverty and Social Assessment.⁴¹ An Indigenous Peoples Planning Framework has been prepared which delineates screening, impact assessment, designing enhancement measure, consultation, disclosure, reporting and monitoring requirements. The Project's GESI Action Plan and Stakeholder Participation and Communication Strategy also includes activities for indigenous peoples. The project activity selection criteria developed under the project will be applied to ensure that the project will not finance activities having negative impacts on indigenous peoples.

75. The Project is expected to bring positive impacts on the livelihood of the indigenous population in project areas and will not directly or indirectly affect the dignity, human rights, livelihood systems, or culture of these. Some positive impacts are identified due to expected improvement in income/economy of project beneficiaries. IP community may not be able to receive equal benefit due to limited exposure to modern technology and system proposed in the project design. To ensure IP community receives equal benefit from the project activities, project design includes elements of IPP such as capacity development program, training on new technology, partial grants, and farmers facilitation program. The project enables smallholder farmers to gain additional income from farming areas that are being increasingly abandoned in hilly areas by: (i) training production and harvest skills; (ii) supporting finance access through establishing a compensating balance fund; and (iii) and improving their access to markets by building capacities of farmer groups and cooperatives in business planning, financial management and entrepreneurship. The majority of direct project beneficiaries constitute IP population, and only positive impacts are identified. The elements of an IPP has been included in the overall project design in lieu of preparing a separate IPP. The project addresses this risk by engaging at least two facilitators per municipality and help farmer groups.

76. Representatives of Indigenous Peoples communities and organizations will be included in the selection committee at the local level to ensure their equitable access to project benefits. Indigenous peoples were consulted during social safeguard and socio-economic household survey and key informant interviews. Indigenous peoples or farmer groups and associations owned or led by them are encouraged to participate in the project. Considering the limited capacity of EA/IA on social safeguards consultant support will be provided at CPMU and PIU levels. The project will engage at least two facilitators per municipality and help farmer groups develop the group's own management rules which will enable fair cost and benefit sharing.

77. The CPMU and PIU will be responsible for overall impact assessment, planning, implementation, and monitoring of the project activity to ensure compliance with IP safeguard requirements as specified in subproject selection criteria, IPPF, and SPS IR3 requirements. The social safeguard consultant will support CPMU and PIU to ensure social safeguard compliances. ADB will provide necessary capacity development support through training and orientation and issue no objection to the safeguard planning documents. Subproject screening will be mandatory for all subprojects to be financed under the project, and the PIU will report on the status of the screened and processed subprojects to ADB. Each PIU will submit quarterly status and compliance report to CPMU covering IP related progress. CPMU will submit social safeguard monitoring report to ADB on a semiannual basis (refer attached template for report). Semi-annual report shall also explain status of grievance resolution, issue raised, and effectiveness of grievance redress mechanism. ADB will monitor compliance with social safeguard requirements during approval of grant proposals and review missions. The project ensures IP safeguards actions are implemented through: (i) a culturally sensitive approach to information sharing,

⁴¹ Detailed Poverty and Social Assessment report. Accessible from the list of linked document to the report and recommendation of the President.

meaningful consultation, and benefit sharing including specific considerations for women IPs as deemed appropriate;⁴² (ii) participation of IP representatives and traditional institutions in consultation meetings to understand the scope of use of community resources, IP community needs, and impact on their traditional and socio-cultural practices; and (iii) inclusion of indigenous peoples and organizations representatives in the grievance redress committee.

78. The project will submit to ADB semiannual social monitoring report to disclose on the ADB website. The CPMU will provide relevant information, including information from social monitoring reports and screening reports in a timely manner, in an accessible place and in a form and language(s) understandable to IP groups and other beneficiaries. If the indigenous peoples are illiterate, other appropriate communication method will be used. Considering the limited capacity of EA/IA on social safeguards consultant support will be provided at CPMU and PIU levels. Executive agency will provide social safeguard monitoring report to ADB on a semiannual basis. ADB will monitor compliance with social safeguard requirements during approval of grant proposals and review missions.

79. **Prohibited investment activities.** Pursuant to ADB's Safeguard Policy Statement (2009), ADB funds may not be applied to the activities described on the ADB Prohibited Investment Activities List set forth at Appendix 5 of the Safeguard Policy Statement (2009). All financial institutions will ensure that their investments are in compliance with applicable national laws and regulations and will apply the prohibited investment activities list (Appendix 5) to subprojects financed by ADB.

VIII. GENDER AND SOCIAL DIMENSIONS

80. **Gender.** The project is categorized as *effective gender mainstreaming* with a focus to promote women's and disadvantaged groups' (including IPs) empowerment, participation, and inclusion through the project's GESI AP. The operational priorities and targets of Strategy 2030 are addressed and supported through the GESI AP and will be implemented by the project with the support of CPMU and PIU GESI Specialist with support from GESI FPs and Farmer Group Facilitators. To ensure the project can benefit disadvantaged groups (DAGs), the social due diligence report, GESI analysis, GESI baseline and stakeholder participation and communications strategy (SPCS) have been developed.⁴³ To ensure the project effectively achieves the GESI AP targets, the project will establish a management information system (MIS) with the GESI indicators disaggregated by sex, age, caste/ethnicity. GESI activities and time-bound responsibilities of different stakeholders are shown below in Table 21.

81. Through its GESI AP, the project will adopt a GESI responsive strategy which has four pillars of GESI that crosscut all three of the project's technical output areas. The four pillars are i) equitable and meaningful participation of women and DAGs in all agro-sector processes; ii) enhanced access and control over resources and decision-making processes; iii) empowerment and organization of DAGs to develop collective voice and agency to engage in dialogues for

⁴² Indigenous people will be prioritized during information sharing and consultation in project design and implementation and their participation will be ensured by use of local facilitators and using their dialects for communication or translation for them. Consultations with IP women representative organizations will also be undertaken to identify any special needs of IP women groups.

⁴³ Disadvantaged groups" covers both excluded and vulnerable groups. Excluded groups covers women, social identities, LGBTI+, PWDs, geographically isolated, income poor. "Vulnerable groups" covers older persons, disadvantaged youth and migrants. For the purpose of the project, DAGs are specifically divided into 3 subgroups for this project: women, dalits and IPs. Within the IPs, focus will be on highly marginalized, marginalized and disadvantaged IPs.

equitable access and benefit sharing; and iv) capacity building to address structural barriers and power relations in agriculture stemming from gender norms.

82. The GESI AP ensures prioritization of women, landless persons and DAGs to benefit from employment generated by project (civil works and orchard development). Provisions have also been defined to prioritize DAGs to benefit from employment generated by project and their integration into the agriculture and agri-value chain processes. The project will ensure equitable and meaningful participation of women and DAGs (including women, Dalits and IPs) in farmer groups, cooperatives, capacity building opportunities, access to financial services/ credits, land, agriculture inputs including information and in leadership positions, addressing different needs of women, IPs and DAGs.⁴⁴ It will empower and organize women and DAGs to develop collective voice and agency to engage in dialogues for equitable access and benefit sharing. The project will also support to enhance women and DAG's knowledge/skills/capacity to use climate smart technology, enhance capacity on value chain processes (grading, packaging, storage, market linkage etc.) and engage in information sharing and learning (face-to face and through digital technology platforms) to change gender norms prevalent in agriculture. The project will target to ensure minimum inclusion of at least 30% women and 20% DAGs across all outputs. This project will safeguard the interest of women and disadvantaged groups from crop failure risks and from financial and sexual exploitation through linkages with crop /farming insurance schemes and GRM respectively.

83. To ensure successful implementation of the GESI AP, adequate budget will be established and disbursed in a timely manner. Relevant and technically capable staff to fulfil the work will be instituted in line with GESI AP specifications. GESI specialists will be deputed as a core team member per: (i) CPMU (one staff); (iii) PIU (five staff at local PIUs). In addition, there will be one social specialist and one GESI expert hired at CPMU. The GESI expert in the CPMU, together with the relevant gender specialists and government GESI focal person in the PIUs will be responsible for the implementation and monitoring of the GESI AP (Table 21). The GESI Specialist will lead the overall GESI mainstreaming process, ensure development of all GESI guidelines, resource materials and special provisions in all project system/processes and provide technical oversight to all GESI FPs in the PIUs. To support effective implementation and monitoring, training will be conducted to increase capacity among the PMU, PIUs, PFIs, IAs, and contractors. The farmer group facilitators will ensure active participation of women and DAGs in project activities. Progress of the project will be tracked periodically through an MIS.

⁴⁴ Women, IPs and DAGs are often broadly clubbed together in a single broad category, but they are not a homogenous group. The project design considered and addressed their different needs. The GESI AP separated women and DAG women for example.

Table 21. Gender Equality and Social Inclusion Action Plan

Activities	Indicators /Targets	Responsibility	Timeline
Output 1. Institutional capacity for nursery and horticulture sector management improved			
1. Capacity building for nursery and horticulture sector management to improve their technical skills and knowledge	<ul style="list-style-type: none"> At least 90% of women and DAGⁱ staff are trained for nursery and horticulture sector management 	CPMU and PIU GESI Focal Persons and GESI specialists	Inception 1-3 years
2. Promote certification programs and the role of women and or DAGs for their management	<ul style="list-style-type: none"> At least 40% of private nursery operators trained in certification program are women and DAGs. 		
Output 2. Production and productivity of project farmers increased			
3. Raise awareness of project related orientations and information disseminations ⁱⁱ	<ul style="list-style-type: none"> At least 30% women and 20% DAGs (at least 10% of beneficiary DAGs are male) trained 	CPMU and PIU GESI Focal Persons and GESI specialists	Inception 1-3 years
4. Conduct training to farmer groups for group management, facilitation and leadership.	<ul style="list-style-type: none"> At least 50% of project supported farmer groups (in each province) have at least 1 woman and 1 DAGs in key decision-making positions (chairperson, secretary, and treasurer). 	PIU GESI Focal Persons and GESI specialists	Inception, 1-3 years.
5. Select and train lead farmers to implement farmer extension services.	<ul style="list-style-type: none"> Of the total lead farmers engaged in the project at least 30% are women and 20% DAGs. At least 90% of female and 90% of DAG lead farmers receive leadership training. 		
6. Form women and DAGs farmer groups and their networks for cross learning, sharing and collective voices.	<ul style="list-style-type: none"> At least 1 farmer group of women or DAGs formed/activated in each project site (resulting in at least 100 women and DAG farmer groups in 100 municipalities/local level) 5 province-level women and DAGs farmer groups' networks formed. 	PIU GESI specialists, FGF, WDAG FGFs/Lead farmers	1- 6 years
7. Train women and DAGs farmers to enhance their knowledge, skills and access (technical trainings including packages of practices-POP, technology, digital finance payments systems, technical inputs /services-formal credit, agri-inputs, etc.)	<ul style="list-style-type: none"> Training needs assessment to identify specific needs of women and DAGs conducted and incorporated into training modules. Out of all the project HH representatives(farmers) trained in the use of digital applications, 30% are women and 20% are DAGs. Out of 25,000 farmers applying POP, at least 30% are women and 20% are DAGs. 	CPMU and PIU GESI Focal Persons and GESI specialists, and WDAG FGFs/Lead farmers	1- 6 years
8. Prioritize SME applications that engage higher numbers of smallholder farmer, women-headed households and or DAGs households from the project municipality.	<ul style="list-style-type: none"> At least 5 SMEs (1 per Province) with shareholders comprising of smallholder farmers, women-headed and/or DAG's households from the project municipality are selected. 		
9. Ensure employment opportunities for women and DAGs in orchard management and	<ul style="list-style-type: none"> Of the total persons employed in orchard management and value chain infrastructure development, at least 30% are women and 20% are DAGs. 	PIU GESI Focal Persons and GESI specialists	1- 6 years

value chain infrastructure development financed by the project.	<ul style="list-style-type: none"> At least 90% of women reporting receiving equal wage as men for equivalent work as demonstrated by wage sheet managed by the project. 		
10. Include women and DAGs for fruit and nut orchards, and other crop production	<ul style="list-style-type: none"> Out of the project HH representative for fruit, nut and other crop production, at least 30% are women and 20% DAG 		
11. Include women and DAGs plots for pilot demonstrations for drip systems.	<ul style="list-style-type: none"> Out of the total pilot demonstration plots for drip irrigation systems, at least 20% are managed by women or DAG as their HH representatives 	PIUs- GESI, technical officers, Lead farmers, FGF	1- 4 years
Output 3. Value addition to hilly area horticulture crops enhanced			
12. Support formation and capacity building of agriculture cooperatives promoting inclusiveness	<ul style="list-style-type: none"> Out of farmer cooperative members trained in cooperative management, business planning and loan management, at least 30% are women and 20% are DAGs. At least one of the decision-making positionsⁱⁱⁱ are held by women or DAG in project supported cooperatives. Out of project HH that secured formal agri-business investment (fruits, nuts, vegetables and other crops), at least 30% are represented by women and 20% by DAGs 	PIU GESI Focal Persons and GESI specialists, and FGFs, CPMU value chain specialist, GAFSP coordinator	5- 7 years
Strengthening of institutional mechanisms for GESI mainstreaming			
13. Strengthen GESI mainstreaming of implementing agencies.	Designate GESI focal persons in CPMU (1) & PIUs (5). At least 90% of CPMU and PIU staff trained in GESI mainstreaming. At least 90% of farmer group and cooperative facilitators trained in GESI mainstreaming.	CPMU GESI specialist, social safeguard specialist, M&E specialist, GAFSP coordinator	Inception period of each phase
14. Maintain disaggregated information on GESI in the project MIS.	<ul style="list-style-type: none"> GESI baseline established with sex, age, caste, ethnicity, geography and disaggregated data and results. Maintained MIS includes sex, age, caste, and ethnicity disaggregated data of all project activities. Midterm evaluation, reports on women and DAGs status and benefit from project against GESI-AP targets. 	PIU GESI Focal Persons and GESI specialists	1-7 years;
15. Recruit farmer group and cooperative facilitators ensuing inclusion of local women and DAGs	<ul style="list-style-type: none"> Of the total farmer group and cooperative facilitators recruited by the project, at least 30% are women and 20% DAGs from the respective municipality in province 1, 3 and 4, and at least 40% women and 10% DAGs in province 6 and 7. 	PIU GESI Focal Persons and GESI specialists	1-3 years

CPMU = Central Project Management Unit, DAG = Disadvantaged groups, GAFSP = Global Agriculture and Food Security Program, GESI-AP = Gender Equality and Social Inclusion Action Plan, HH = households, M&E = monitoring and evaluation, MIS = monitoring and information system, PIU = Project Implementing Unit, POP = packages of practice, SME = small and medium size enterprises

IX. PERFORMANCE MONITORING, EVALUATION, REPORTING, AND COMMUNICATION

A. Project Design and Monitoring Framework

Impacts the Project is Aligned with Livelihoods of rural households improved (Agriculture Development Strategy 2015–2035) ^a Resilience of farmers to climate change improved (Agriculture Development Strategy 2015-2035) ^a			
Results Chain	Performance Indicators	Data Sources and Reporting Mechanisms	Risks and Critical Assumptions
Outcome Beneficiary farmers' agricultural income from climate-resilient horticulture farming increased	By 2030: a. Agricultural income of beneficiary farmer households increased by at least 10% (OP 1.3) (2021 baseline: not applicable) ^b b. At least 50 municipalities providing agro-climatic data to at least 50% of farmer household beneficiaries (OP 3.2) (2021 baseline: not applicable)	a.–b. Project baseline, midterm, and outcome survey reports	R: Climate change exceeds the current scenarios, inducing more diseases or weather extremes. A: Demand for fruits and nuts continues to grow.
Outputs 1. Institutional capacity for nursery and horticulture sector management improved 2. Production and productivity of project farmers increased	By 2029: 1a. At least 40 private nursery partnerships established (OP 6.1.2) (2021 baseline: 0) 1b. At least 10 private nurseries supported for disease-free sapling management (OP 6.2.1) (2021 baseline: 0) 2a. At least 10,000 hectares of new fruit and nut orchards established, with at least 30% women and 20% DAG household representation ^c (OP 5.3) (GAFSP indicator 2) (2021 baseline: 0) 2b. At least 1,000 hectares of climate smart vegetable and other nutritious crop production areas established, with at least 30% women and 20% DAG household representation (OP 5.3) (GAFSP indicator 2) (2021 baseline: 0) 2c. At least 30,000 households supported for fruit and nut production and marketing, with at least 30% women and 20% DAG households representation (OP 5.3.2) (GAFSP indicator 1) (2021 baseline: 0)	1a. Private nursery sales accounts 1b. Directorate of Agriculture Development nursery inspection records 2a.–f. Quarterly and annual project progress reports	A: The budget provision is sufficient to permanently finance annual nursery regulatory inspections A: Women have time to undertake nursery development and management. A: Cooperatives are interested in providing technical advisory services to member farmers.

Results Chain	Performance Indicators	Data Sources and Reporting Mechanisms	Risks and Critical Assumptions
	<p>2d. At least 10,000 households supported for vegetable production and marketing with at least 30% women and 20% DAG household representation (OP 5.3.2) (GAFSP indicator 3) (2021 baseline: 0)</p> <p>2e. At least 40% of project areas improved through drip irrigation infrastructure, with at least 40% of land managed by women or DAG representatives (OP 5.3.1) (GAFSP indicator 2) (2021 baseline: 0)</p> <p>2f. At least 20,000 farmers reporting increased awareness of “packages of practice”, of which at least 40% are women or from DAG^d (GAFSP indicator 13) (2021 baseline: 0)</p> <p>2g. Guarantee fund for smallholder farmers established (OP 1.3.2) (GAFSP Indicator 5) (2021 baseline: 0%)</p>	<p>2g. PIU and cooperatives’ rural financing database records</p>	
<p>3. Value addition to hilly area horticulture produce enhanced</p>	<p>3a. At least one business plan produced per local government (or municipality) (OP 1.2.2; OP 2.3.1) (GAFSP indicator 4, gender disaggregated) (2021 baseline: 0)</p> <p>3b. Out of farmer cooperative members’ (at least 30% are women and 20% are DAGs) trained, of which at least 80% of farmers report increased knowledge in cooperative management and marketing (OP 1.2.2; OP 2.3.1) (2021 baseline: 0)</p> <p>3c. At least one storage, agri-logistics, and market assets constructed or rehabilitated in at least 50 local governments (OP 5.2.2) (OP 7.2) (GAFSP indicator 8) (2021 baseline: 0)</p> <p>3d. At least one draft contract between cooperatives and buyers prepared per local government (OP 5.2.3) (2021 baseline: 0)</p>	<p>3a. Quarterly and annual project progress reports</p> <p>3b. Training feedback form</p> <p>3c. Quarterly and annual project progress reports</p> <p>3d. Cooperative records, and quarterly and annual project progress reports</p>	<p>R: Monopolistic behavior by private traders or trader cartels undermines cooperative sector competitiveness or market access.</p> <p>A: Private enterprises trust that the project-financed public-private partnership will be market oriented and are motivated to collaborate.</p>

Key Activities with Milestones

1. Institutional capacity for nursery and horticulture sector management improved

- 1.1 Develop interactive crop suitability maps at a crop variety level through the integration of climate, soil, and landscape information (Q4 2023)
- 1.2 Support the establishment and operation of local land use database with land classification and zoning for orchard development (Q4 2025)
- 1.3 Prepare nursery standards, regulations, and inspection system (Q2 2025)
- 1.4 Upgrade horticulture station/center facilities for testing, cleaning and maintenance of planting materials, and nursery quality control (Q2 2025)
- 1.5 Train horticulture resource center staff in molecular marking, mother plantation management, and other nursery management techniques/system; and organize knowledge exchange programs and workshops to meet internationally accepted sanitary and phytosanitary standards (Q1 2029)
- 1.6 Train and certify cooperatives and private input suppliers that service project clusters (Q2 2028)
- 1.7 Support private nursery upgrade to ensure healthy and quality planting material production, and transfer genetic technologies to private nurseries (Q2 2026)
- 1.8 Commission research on more climate-resilient and adaptable varieties of fruits and nuts, and other crop-specific technologies in Nepal (Q3 2027)
- 1.9 Develop a nursery certification scheme and roll out with volunteer private nurseries (Q3 2029)

2. Production and productivity of project farmers increased

- 2.1 Engage farmer group facilitators and establish a ward-level project implementation and monitoring system in partnership with target farmers, promoting female leadership, and gender equality and social inclusion (Q3 2029)
- 2.2 Provide quality planting materials to beneficiary farmers through partnership with private nurseries and support their nursery quality control (Q4 2025)
- 2.3 Prepare packages of practice and train farmers/cooperatives in packages of practice (Q4 2026)
- 2.4 Develop and operationalize an agricultural digital advisory platform for fruit and nut farmers, including female farmers and the vulnerable and/or excluded (Q4 2027)
- 2.5 Develop farmer-to-farmer extension programs, including climate change adaptation measures and good agricultural practices, and build the capacity of lead farmers for running demonstrations (Q3 2029)
- 2.6 Establish foundation for carbon sequestration measurement and financing for fruit and nut orchard management (Q4 2027)
- 2.7 Support the development of fruit and nut orchards and vegetable farming land (quality agriculture input purchase, land preparation, hail nets, and labor [partially financed]) (Q1 2026)
- 2.8 Set up and operate a credit guarantee fund for rural smallholders and agribusinesses, and its digital payment system for transactions and monitoring, in partnership with participating banks and financial institutions (Q4 2029)
- 2.9 Develop and procure drip irrigation, particularly for women and disadvantaged groups (Q1 2026)

3. Value addition to hilly area horticulture produce enhanced

- 3.1 Promote cooperatives and commodity-specific marketing associations to aggregate fruit, nut, vegetable, and other crop produce (Q4 2026)
- 3.2 Strengthen cooperatives and commodity-specific federations; develop training programs; and conduct training for cooperatives and federations on post-harvest management, Hazard Analysis and Critical Control Points, financial management, business, marketing, entrepreneurship, promoting female leadership and gender equality and social inclusion (Q3 2029)
- 3.3 Provide matching grant support to cooperatives for packaging, storage, and quality control (Q4 2028)
- 3.4 Incentivize enterprises that link cooperatives to markets (Q4 2028)
- 3.5 Cofinance provincial or local government planning and investment in public infrastructure for improved marketing, such as collection centers and storage facilities (Q4 2028)
- 3.6 Organize regional workshops to improve the control of fruit, nut, and vegetable trade requirements and horticulture food safety (Q3 2028)

Project Management Activities

Establish a central project management unit and provincial project management units

<p>Establish a project monitoring and reporting system including baseline survey, periodic progress reports, midterm report, and completion report, adopting Food Insecurity Experience Scale as per the GAFSP monitoring and evaluation plan</p> <p>Engage project implementation support staff and consultants</p> <p>Implement the gender equality and social inclusion action plan</p> <p>Operationalize accounting, auditing, and procurement systems</p>
<p>Inputs</p> <p>Asian Development Bank: \$60.00 million loan (concessional ordinary capital resources lending) \$10.00 million grant (ADF-13)</p> <p>GAFSP: \$9.00 million (grant)</p> <p>Government of Nepal: \$14.45 million</p>
<p>Assumptions for Partner Financing</p> <p>World Food Programme: \$3.00 million (parallel collaborative financing grant financed by GAFSP)</p>

A = assumption; ADF = Asian Development Fund; DAG = disadvantaged groups (including women, indigenous peoples, and Dalit); GAFSP = Global Agriculture and Food Security Program; OP = operational priority; PIU = project implementation unit, Q = quarter; R = risk.

- ^a Government of Nepal, Ministry of Agricultural Development. 2016. [Agricultural Development Strategy 2015 to 2035](#). Kathmandu.
- ^b The agriculture income only includes reported cash income and does not include in-kind income, such as agricultural produce for subsistence purposes. The income is calculated as the average of all farmer household respondents and includes outliers.
- ^c Each project beneficiary household will appoint a household representative. This indicator will count the project areas that are managed by these project beneficiary household representatives.
- ^d Packages of practice, among other things, include soil conservation, soil fertility management, natural hazard risk mitigation, drip and fertigation system management, integrated pest management, and crop protection.

Contribution to Strategy 2030 Operational Priorities

Expected values and methodological details for all OP indicators to which this operation will contribute are provided in Contribution to Strategy 2030 Operational Priorities (accessible from the list of linked documents in Appendix 2).

GAFSP Tier 2 Core Indicators⁴⁵

1. Number of people receiving direct benefits (person). Disaggregation: of which, number of females.
2. Land area receiving improved production support (hectare) Disaggregation: area provided with new/improved irrigation or drainage services (hectare)
4. Number of smallholders producers/processors receiving productivity enhancement support (farmer). Disaggregation: of which, female producers/processors
7. Number of processing, storage, and market facilities constructed and/or rehabilitated (facility)
8. Farmers who are supported in accessing improved marketing opportunities (farmer). Disaggregation: of which, female farmers.
13. Number of farmers receiving inputs or service on climate-resilient or sustainable agriculture practices (farmers). Disaggregation: of which, female farmers, and of which, number of farmers adopting technologies or practices received.

Sources: Asian Development Bank and draft GAFSP Revised Monitoring and Evaluation Plan 2022 (tier 2 and tier 3 indicators).

B. Monitoring

84. **Project performance monitoring.** The CPMU shall establish and maintain a systematic project performance management system (PPMS), satisfactory to ADB, within four months of project effectiveness. The CPMU M&E specialists will be responsible for designing and establishing the PPMS in collaboration with the PIUs to ensure the relevance of data, feasible mechanisms for data collection, and procedure for evaluation. The PPMS shall provide implementation progress information for a results-based management system, based on the

⁴⁵ The project is required to report against GAFSP Tier 2 Core Indicators to the GAFSP Coordination Unit on a six-monthly basis.

project's DMF and GESI action plan. Key performance indicators in the DMF and GESI action plan, disaggregated by province, municipality, sex, caste and ethnicity, will be the basis for the PPMS. Progress towards performance target indicators will be monitored during the project life and remedial actions taken by the CPMU as appropriate.

85. The international M&E specialist will be responsible for designing the PPMS, and the national M&E specialist, with support from other team members, will update the PPMS throughout project implementation. ADB will monitor project performance in five aspects, i.e., technical, procurement, disbursement, financial management, and safeguards, through the executing agency's quarterly and annual progress reports prepared by the CPMU, communication with the CPMU and PIUs, and ADB review missions. The CPMU will provide a project completion report within 3 months of the project completion date.

86. **Compliance monitoring.** The CPMU, on behalf of the executing and implementing agencies, will monitor compliance with covenants stipulated in the loan and grant agreement. ADB will monitor the compliance status through the executing agency's quarterly progress reports, communication with the CPMU and PIUs, and ADB review missions, and take necessary remedial measures for any non-compliance.

87. **Safeguards monitoring.** The CPMU is responsible for environmental and social safeguards monitoring. Within the CPMU social and environmental experts will be hired to monitor and manage the safeguards. Starting from loan effectivity, the CPMU will prepare: (i) a semi-annual environmental monitoring report (providing updates on the progress of the EMP implementation during construction and will reduce to annual during the operation and maintenance phase until the project completion report; and (ii) a semi-annual SMR detailing all social safeguards and due diligence implementation activities related and their implementation progress during project execution. The ADB Nepal Resident Mission Safeguards Specialist will provide technical supervision and guidance to the CPMU safeguard Specialist.

88. **Gender and social dimensions monitoring.** The CPMU is responsible for GESI/AP monitoring in collaboration with the PIUs. Within the CPMU a GESI specialist will be hired to monitor and manage the GESI/AP who will be supported by a gender focal person designated in each PIU. Starting from loan effectivity, the CPMU will prepare quarterly gender monitoring reports which will be part of the project quarterly progress report (QPR) providing updates on the progress of GESI implementation during project execution. In addition to quantitative targets, qualitative assessments will also be conducted to generate learning, and adjustments will be made to achieve the GESI/AP targets. The NRM Senior social development Specialist (Gender) from ADB will provide technical supervision and guidance to the CPMU GESI Specialist.

C. Evaluation

89. Project performance will be regularly monitored and rated through ADB's e-Operations project implementation module. ADB's overall loan implementation rating will be made based on five performance indicators: technical, procurement, disbursement, financial management, and safeguards. Such rating will be updated quarterly based on the executing agency's quarterly project progress reports and/or ADB review missions. Within 6 months of physical completion of the project, the MOALD (executing agency) will submit a project output report to ADB.⁴⁶ A baseline survey will be carried out in the first quarter after project effectiveness to establish the baseline

⁴⁶ Project completion report format is available at: <http://www.adb.org/Consulting/consultants-toolkits/PCR-Public-Sector-Landscape.rar>

values. Midterm and outcome surveys will be carried out to estimate changes in agricultural income and climate resilience index ratings of beneficiary households.

90. ADB will conduct an inception mission when the loan and grant become effective. ADB and the government will jointly field review missions of the project twice a year. The missions will: (i) review overall implementation of the project and update, in consultation with the executing agency, the project implementation schedule; (ii) examine existing and potential implementation problems, and find out measures with the executing agency to resolve them; (iii) review progress in procurement and disbursement; (iv) review the loan recipient's compliance with loan covenants and, where there is any noncompliance or delay, discuss proposed remedial measures; and (v) assess the likelihood of attaining the project's outcome.

91. ADB and the government will undertake a midterm review at the beginning of the fourth year of project implementation, to assess implementation status and take appropriate measures—including modification of scope and implementation arrangements, and reallocation of loan and grant proceeds, as appropriate—to achieve the project's outcomes and impact.

92. A final ADB review mission will take place within six months after physical completion of the project. This mission will: (i) assess project performance against targets and benchmarks including any revision(s) as agreed during the midterm review; (ii) identify any incomplete activities, or unused project funds; and (iii) determine the project satisfactory rating. A project completion report will be prepared, in cooperation with the government. In case the project is selected as a sample of projects for project performance evaluation reporting, the project will be subject to more detailed performance evaluation and impact assessment about three or more years after completion.

D. Reporting

93. The CPMU, on behalf of the executing agency, will provide ADB with: (i) quarterly progress reports in a format consistent with ADB's project performance reporting system (Attachment H); (ii) consolidated annual reports including: (a) progress achieved by output as measured through the indicator's performance targets, (b) key implementation issues and solutions, (c) updated procurement plan, and (d) updated implementation plan for the next 12 months; (iii) a baseline survey report within 4 months of project effectiveness; (iv) midterm survey report one month prior to the midterm review mission; and (v) a project output report within 6 months of physical completion of the project. To ensure that projects will continue to be both viable and sustainable, project accounts and the executing agency audited financial statement together with the associated auditor's report, should be adequately reviewed.

E. Stakeholder Communication Strategy

94. The CPMU in coordination with the PIUs will plan and deliver a stakeholder communication strategy to inform key stakeholders in the project areas about the scope of the project and the application procedure to access project benefits. The strategy will pay special attention to ensure that potential women farmers and farmers from disadvantaged groups are reached. To ensure farmers take advantage of the project to transition into commercial fruit and nut farming, the stakeholder communication strategy will focus on: (i) disclosing information on the technical and financial aspects of target fruits and nuts farming; (ii) disclosing information on the application process to avail project subsidies and training opportunities; (iii) engaging key stakeholders to develop a common platform for information sharing; (iv) developing effective

digital networks to link research and agriculture extension; and (v) institutionalizing a grievance redress mechanism.

95. The stakeholder communication strategy will pay special attention to the needs of the disadvantaged groups in the project areas, and in particular to the project areas in the Karnali and Sudurpashchim provinces, where caste-based marginalization, language barriers, and seasonal outmigration are more severe than in other provinces. The project will make an effort to recruit the farmer group facilitators from the project municipalities which will ensure a high degree of ownership and also address special communication needs of those who are better versed in the local dialects. During workshops and training, the project will make an effort to ensure translation services, where required.

Table 22: Stakeholder Communication Strategy

Message	Communication Method	Responsibility	When
<ul style="list-style-type: none"> Project scope, subsidy levels, eligibility criteria, application procedures 	<ul style="list-style-type: none"> Radio program Print media Brochure Social media Workshops Project website 	<ul style="list-style-type: none"> CPMU PIU AKCs Local level Consultants Farmer group facilitators 	Q3 2022 onwards
<ul style="list-style-type: none"> Technical and financial knowledge on fruits and nuts farming Information on financial needs, and access to finance 	<ul style="list-style-type: none"> Brochure Workshops Focus group discussion Face-to-face advisory services Project website 	<ul style="list-style-type: none"> CPMU PIU Consultants 	Q3 2022 onwards
<ul style="list-style-type: none"> Good horticulture practices Post-harvest handling Packaging, branding and marketing Value addition 	<ul style="list-style-type: none"> Training Brochure Workshops Focus group discussion Face-to-face advisory services 	<ul style="list-style-type: none"> NARC research stations and NCFD and provincial farm centers AKCs Lead farmers Consultants Commodity associations 	Q4 2022 onwards
<ul style="list-style-type: none"> Grievance handling 	<ul style="list-style-type: none"> Project website 	<ul style="list-style-type: none"> CPMU and PIUs to establish a grievance redress mechanism 	Q3 2022 onwards

X. ANTICORRUPTION POLICY

96. ADB reserves the right to investigate, directly or through its agents, any violations of the Anticorruption Policy relating to the project.⁴⁷ All contracts financed by ADB shall include provisions specifying the right of ADB to audit and examine the records and accounts of the executing agency and all project contractors, suppliers, consultants, and other service providers. Individuals and/or entities on ADB's anticorruption debarment list are ineligible to participate in ADB-financed activity and may not be awarded any contracts under the project.⁴⁸

97. To support these efforts, relevant provisions are included in the loan and grant agreements and the bidding documents for the project.

⁴⁷ Anticorruption Policy: <https://www.adb.org/documents/anticorruption-policy>

⁴⁸ ADB's Office of Anticorruption and Integrity website: <https://www.adb.org/site/integrity/main>

XI. ACCOUNTABILITY MECHANISM

98. People who are, or may in the future be, adversely affected by the project may submit complaints to ADB's Accountability Mechanism. The Accountability Mechanism provides an independent forum and process whereby people adversely affected by ADB-assisted projects can voice, and seek a resolution of their problems, as well as report alleged violations of ADB's operational policies and procedures. Before submitting a complaint to the Accountability Mechanism, affected people should make an effort in good faith to solve their problems by working with the concerned ADB operations department. Only after doing that, and if they are still dissatisfied, should they approach the Accountability Mechanism.⁴⁹

XII. RECORD OF CHANGES TO THE PROJECT ADMINISTRATION MANUAL

99. {All revisions and/or updates during the course of implementation should be retained in this section to provide a chronological history of changes to implemented arrangements recorded in the PAM, including revision to contract awards and disbursement s-curves.}

⁴⁹ Accountability Mechanism. <http://www.adb.org/Accountability-Mechanism/default.asp>.

Attachment A. Detailed Project Management Structure – CPMU and PIUs

1. The National Center for Fruit Development (NCFD), under the Department of Agriculture of the MOALD, will be the central project management unit (CPMU). The CPMU will be led by Project Director, who is concurrently Chief of the NCFD and supported by a team of government staff and consultants (Table 1).

Table 1: CPMU Organizational Structure

Responsibility	Position	Class (to be confirmed)
Overall project coordination	Project Director	Gazetted class-I officer
Planning, monitoring and evaluation	Senior Agriculture Economist	Gazetted class-II officer
	Agriculture Economist/ Planning Officer	Gazetted class-III officer
Plant protection, agri-extension, and capacity building	Senior Plant Protection Officer/ Senior Agriculture Extension Officer	Gazetted class-II officer
	Agriculture Officer	Gazetted class-III officer
	Agriculture (Technical) Assistant	Non-gazetted class-I
Horticulture development and agri engineering	Senior Horticulture Development Officer	Gazetted class-II officer
	Agriculture Engineer	Gazetted class-III officer
Financial management	Account Officer	Gazetted class-III officer
Administrative support	Nayab Subba (assigned from regular staff of NCFD)	Non-gazetted class-I
	Driver (3)	
	Office helper (2)	
Project management support consultants	Team leader	CS06 - (national-70 PM)
	Financial management specialist	CS06 - (national-70 PM)
	Monitoring and evaluation specialist	CS06 - (national-70 PM)
	Procurement specialist	CS06 - (national-45 PM)
	Rural finance specialist	CS06 - (national-30 PM)
	Social safeguards specialist	CS06 - (national-14 PM)
	Environment safeguards specialist	CS06 - (national-28 PM)
	GESI specialist	CS06 - (national-28 PM)
	GAFFSP coordinator	CS06- (national-46 PM)

CPMU = central project management unit; CS = consulting services; GESI = gender equality and social inclusion; GIS = geographical information system; PM = person months.

2. At the provincial level, project implementing agencies (IAs) are the Directorate of Agriculture Development under agricultural ministries (Table 2).

Table 2: PIU Staffing Requirements at provincial agricultural ministry

Responsibility	Position	Class
Provincial project coordination	Provincial project manager (Chief, DOAD)	Gazetted level 11 officer
Planning and horticulture development	Senior Agriculture Officer	Gazetted level 9/10 officer
	Agriculture economist	Gazetted level 7/8 officer
	Agriculture engineer	Gazetted level 7/8 officer
	Agriculture officer – Gender Focal	Gazetted level 7/8 officer
Financial management	Account officer	Gazetted level 7/8 officer
Administrative support	Office assistant	Non-gazetted level 4/5
	Driver	

Responsibility	Position	Class
	Office helper	
Project management support consultant	Provincial team leader/ horticulture and rural finance backgrounds	CS06 - (national-70 PM)
	Provincial gender and social specialist	CS06 - (national-42 PM)
	Provincial environment specialist	CS06 - (national-42 PM)
	GAFSP provincial coordinator	CS06 - (national-46 PM)

3. At the NARC, the representatives of project-supported research stations are the members of the PIU and responsible for implementation of Output 1. The NAFHA project focal person for NARC shall be assigned as Project Manager and responsible for communication with the CPMU. Other financial management, procurement support will be provided consultants based in the CPMU.

Table 3: PIU Staffing Requirements at NARC

Responsibility	Position	Class
NARC implementation coordination	Project Management (Focal person appointed by NARC)	TBD
Financial management	Account officer	Gazetted class-III officer
Project management support consultant	Supported by CPMU project management support consultant (see Table 1)	CS06

Attachment B. Detailed Project Output Description

Output 1. Institutional capacity for nursery and horticulture sector management improved

1. The objective of Output 1 is for the country to be equipped to ensure the sufficient supply and monitoring of quality and healthy planting materials of selected fruit and nut crops in Nepal. Healthy planting material is the basis of competitive fruit and nut production. Given the lack of quality control mechanism as well as poor quality or absence of planting materials, the country is mostly relying on importation of planting materials from abroad. Increasing institutional capacity for fruit and nut planting material production and quality control will entail five types of work: (i) to prepare nursery law, regulations and standards including improving public nursery organizational structure and defining their roles and responsibility at central, provincial and local levels; (ii) to improve capacities of horticulture center/station staff for research on more adaptable and resilient varieties of fruits and nuts as well as other crop-specific technologies, extension and nursery management (including molecular marking and mother plantation management); (iii) to operationalize a nursery quality control and standards management system; (iv) to strengthen public-private partnership by improving private nurseries' capacity for quality material production; and (v) to strengthen land use management capacities at provincial levels to establish crop area database and zone production clusters.

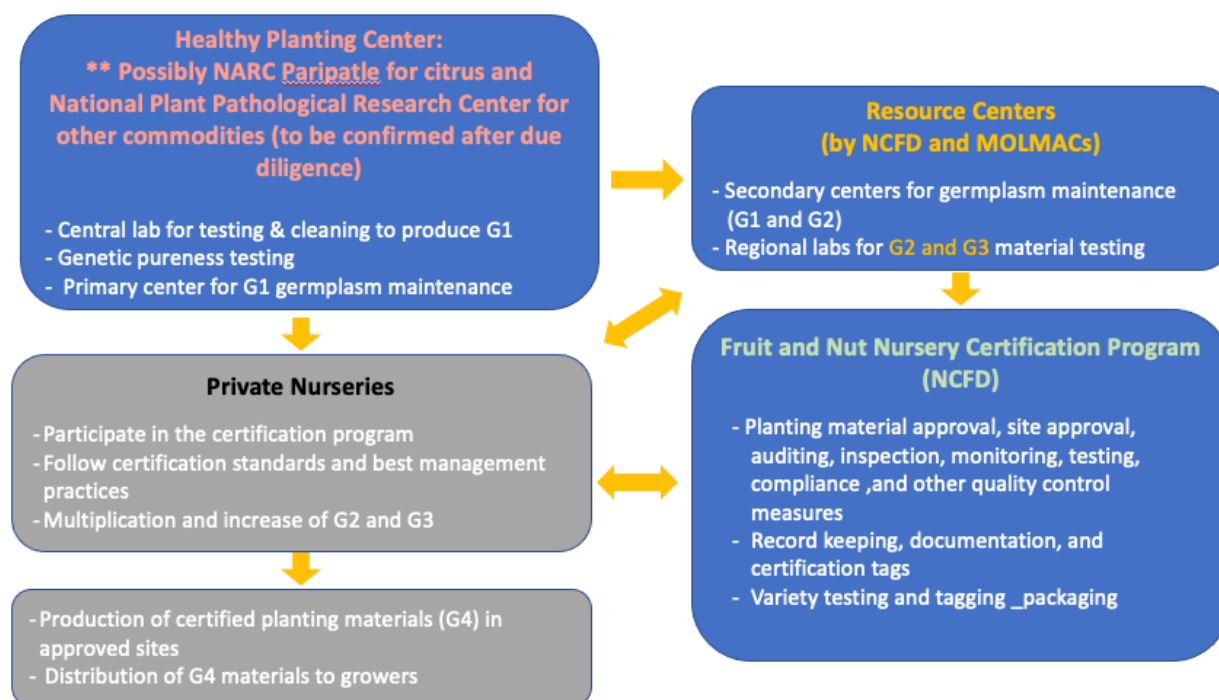
2. This paper considered the following documents and interviews to recommend activities and an implementation approach:

- (i) Nepal: Fruit Development Project (2017).
- (ii) NCFD's strengthening government horticultural development centers.
- (iii) Policy Brief: Agriculture extension service delivery in federal Nepal: emerging challenges and way forward (2019).¹
- (iv) NARC's Model of agricultural research, extension and education linkages for Nepal's federal system (2018).²
- (v) ADB team's situation analysis by Ganesh KC.
- (vi) Proposals from NCFD, NARC and provincial agricultural ministry based horticulture stations/centers consolidated by Kaushal Poudel.

3. It was agreed that the functions of NCFD, NARC and provincial horticulture centers will be pursued under the NAFHA project as following:

¹ Agricultural Extension in South Asia (AESAs). [Agriculture extension service delivery in Federal Nepal: Emerging challenges and way forward](#). Policy Brief. No. 2 June 2019.

² K. Timsina et al. 2018. [Model of Agricultural Research, Extension and Education Linkages for Nepal's Federal System](#). NARC Publication No. 00691-505/2017/18.



1.1 Nursery regulations and standards development

- (1) **Review of the draft Fruit, Flower and Commercial Vegetable Nursery Establishment, Operation and Management Directives** (referred hereafter as Nursery Directives) Currently, the Ministry of Agriculture and Livestock Development (MOALD) is finalizing the draft Fruit, Flower and Commercial Vegetable Nursery Establishment, Operation and Management Directives, 2078 (2021). It proposes to establish a committee at the central level (from MOALD, Horticulture Society, NCFD, floriculture center, potato development center, SQCC, PQPMC, and species and plantation crop), and provincial level (from Directorate of agricultural development, plant quarantine office, Agricultural knowledge center, horticulture farm center, horticulture research center). The Directives should cover the aspects on dissemination of fruit and nut plant varieties, rules of labelling of planting materials, to assure the quality of planting materials.
- (2) **Horticulture station/center operational (or management) guidelines.** As part of Packages of Practice (POP) under output 2, nursery management training materials as well as handling practices with plants and plant-related organisms will be prepared. In consideration of technical POPs, the horticulture station/center operational guidelines will be prepared. These guidelines will consider specialties to be provided by each NARC research station, NCFD horticulture resource center and provincial resource center. According to the Fruit Development Project, DOA's horticulture centers are involved in seed and sapling production, and mother plant conservation whereas NARC farms are doing research on seedling production, fruit production, pest management and post-harvest management. NARC research stations will be tasked to take leading roles in germplasm collection, cultivar collection, indigenous variety collection, observation of breeder germplasm, foundation germplasm, different sapling variety development. NCFD will lead the extension program development and dissemination in partnership with universities, while provincial ministries' operational guidelines will detail the linkage between NCFD's knowledge extension program to AKC and to municipalities and wards.

As common tasks, NARC, NCFD and provincial centers will be tasked to do the following common tasks of germplasm conservation and characterization.

(3) Nursery quality initiative and certification system: This will include the scopes of national implementing regulations (of the Directives), implementing procedures and protocols regarding (mandatory) seedling/planting material certification for distribution of plant varieties. This will support a transition to the certification scheme of nursery operations including supporting private nurseries to improve their business models and product quality for the benefit of fruit and nut growing farmers. This may need a step-by-step approach including: (i) an agreement on planting material categorization and variety registration as per standards³ (Y1); (ii) quality control and standard establishment including a definition of health checks for the specific fruit and nut crops under the classification scheme + soil health checks (Y1); (iii) organizational and methodology of testing and verification of plant varieties and quality (Y1/2); (iv) nursery performance assessment and training for nurseries on the voluntary certification system (training and training material development will be financed by Activity 1.4) (Y2); (v) introduction of voluntary certification procedures and standards and labelling based on experiences in Y1 and Y2); and (vi) transition to a mandatory certification system and national budget support. Under the NAFHA, it can be first rolled out as a voluntary-based scheme, but the project aims to gradually move to a mandatory scheme by the end of the project. Below is an example of the detailed steps in the voluntary certification system roll-out.

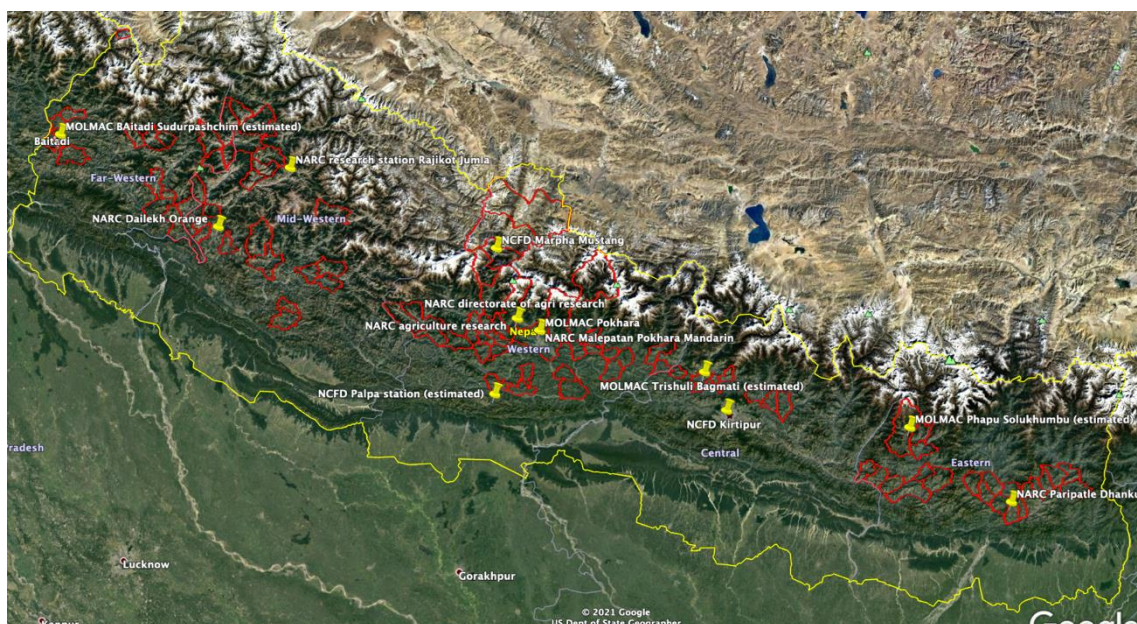
Action
Step I (Y1)
<ul style="list-style-type: none"> Decide of priority fruit and nut species and develop the classification scheme.
<ul style="list-style-type: none"> Develop the regulation on categorization of planting material defining the pre-basic, basic, certified stock, certified material and standard material.
<ul style="list-style-type: none"> Develop the regulations on categorization of planting material defining the pre-basic, basic, certified stock, certified material, and standard material.
<ul style="list-style-type: none"> Define the main requirement for the nurseries
<ul style="list-style-type: none"> Develop the criteria for health checks for specific fruit crops under the classification scheme.
<ul style="list-style-type: none"> Select best/potential nurseries that meeting the classification rules + Nursery application form development.
<ul style="list-style-type: none"> Interest nurseries' application submission.
<ul style="list-style-type: none"> Soil testing requirement for rootstock mother plantation + candidate field of nurseries
<ul style="list-style-type: none"> Isolation requirements based on past occurrences + Isolation area inspection (presence of the sources of infection).
<ul style="list-style-type: none"> Training/coaching of interested nurseries on the scheme requirement procedures and protocols
<ul style="list-style-type: none"> Training of field inspectors including study tours for field inspection.
<ul style="list-style-type: none"> Labelling system establishment.
<ul style="list-style-type: none"> Fruit and nut variety registration.
Step II (Y2)
<ul style="list-style-type: none"> Discuss legal basis for certification.
<ul style="list-style-type: none"> Implementation regulations on the mode and production procedures of fruit and nut planting materials; on quality, packaging and labelling standards of the planting materials; on planting material health checks; on plant health checks.

³ Includes standards on Distinctness, Uniformity, Stability (DUS) and Value for Cultivation and Use (VCU) - for agricultural crops, reflecting on yield, resistance to harmful organisms, response to the environment, and quality characteristic.

<ul style="list-style-type: none"> • Develop health check criteria for different fruit and nut species.
Step III (Y3)
<ul style="list-style-type: none"> • Development of nuclear stock, pre-basic materials for the varieties most demanded by nurseries.
<ul style="list-style-type: none"> • Certification procedures and protocols.

1.2 Upgrading public horticulture resource centers/research station facilities (civil works and goods)

4. The NAFHA project will finance the upgrading of 12 public horticulture stations/centers of NCFD, NARC or Provincial governments. The main objective of this activity 1.2 is to ensure the verified planting materials are provided to project farmers. The project is expected to contribute to long-term capacity building of these horticulture stations/centers that can serve broader areas beyond the project’s target orchards.



5. The project supports production of the following key crops and horticulture station/center located in each target province (summarized in three different formats below):

Province	Estimated project-supported orchards	Horticulture station/center to be supported by the project ⁴
Province 1	<ul style="list-style-type: none"> • Apple 50ha • Orange 900 ha • Lime 500 ha • Avocado 300ha • Kiwi 400ha • Walnut 50ha 	<ul style="list-style-type: none"> • Horticulture Center, Phaplu, Solukhumbu (MoA) • National Citrus Research Program, Paripatle, Dhankuta (NARC)

⁴ Temperate fruit and nut stations for almond, apple, kiwi, pecan, walnut; and Tropical and subtropical fruit and nut crop centers for avocado, citrus, macadamia

Province	Estimated project-supported orchards	Horticulture station/center to be supported by the project ⁴
Bagmati	<ul style="list-style-type: none"> • Orange 300ha • Lime 300ha • Avocado 150ha • Macadamia 300ha • Walnut 100ha 	<ul style="list-style-type: none"> • Sub-tropical Horticulture Development Center, Trishuli, Nuwakot, Ministry of Agriculture and Livestock Development (MoALD) • Warm Temperate Horticulture Center Kirtipur, Kathmandu (NCFD)
Gandaki	<ul style="list-style-type: none"> • Apple 100ha • Orange 800ha • Lime 750ha • Avocado 150ha • Kiwi 150ha • Walnut 250ha • Macadamia 250ha 	<ul style="list-style-type: none"> • Temperate Horticulture Center, Marpha, Mustang (NCFD) • Citrus Fruit Development Center, Tansen, Palpa (NCFD) • Regional Agricultural Research Station, Lumle, Kaski (NARC) • Horticulture Research Station, Malepatan, Kaski (NARC) • Horticulture Development Resource Center, Pokhara (MoLMACPA)
Karnali	<ul style="list-style-type: none"> • Apple 1,450ha • Orange 350ha • Walnut 600ha • Pecan 100ha • Almond 100ha 	<ul style="list-style-type: none"> • Horticulture Research Station, Rajikot, Jumla (NARC) • Horticulture Research Station, Kimugaun, Dailekh (NARC)
Sudurpashchim	<ul style="list-style-type: none"> • Apple 400ha • Orange 250ha • Lime 100ha • Walnut 600ha • Pecan 100ha • Almond 100ha 	<ul style="list-style-type: none"> • Dry Fruit Development Center, Satbanjh, Baitadi (MoLMAC)

⁴Estimated area for each crop may differ during implementation within the total area allocated per province.

Crop	Key research	Key conservation and extension	Testing & cleaning
Apple	<ul style="list-style-type: none"> • Horticulture Research Station, Rajikot, Jumla, Karnali Province (NARC) 	<ul style="list-style-type: none"> • Temperate Horticulture Center, Marpha, Mustang, Gandaki Province (NCFD) 	Pathology and entomology labs of NARC for G1 materials
Almond	<ul style="list-style-type: none"> • Horticulture Research Station, Rajikot, Jumla Karnali Province (NARC) 	<ul style="list-style-type: none"> • Temperate Horticulture Center, Marpha, Mustang, Gandaki (NCFD) • Dry Fruit Development Center, Satbanjh, Baitadi, Sudurpashchim (MOLMAC) 	
Avocado	<ul style="list-style-type: none"> • Horticulture Research Station, 	<ul style="list-style-type: none"> • Horticulture Development Resource Center, Pokhara, Kaski 	

Crop	Key research	Key conservation and extension	Testing & cleaning
	Malepatan, Kaski, Gandaki Province (NARC)	Gandaki Province (MOLMACPA) <ul style="list-style-type: none"> • Sub-tropical Horticulture Development Center, Trishuli, Nuwakot, Bagmati Province (MOLMAC) • Warm Temperate Horticulture Center, Kirtipur, Kathmandu, Bagmati Province (NCFD) 	
Kiwi		<ul style="list-style-type: none"> • Warm Temperate Horticulture Center, Kirtipur, Kathmandu, Bagmati Province (NCFD) • Horticulture Center, Phaplu, Solukhumbu, Province 1 (MOA) 	
Lime (and other citrus fruits)	<ul style="list-style-type: none"> • National Citrus Research Program, Paripatle, Dhankuta, Province 1 (NARC) 	<ul style="list-style-type: none"> • Citrus Fruit Development Center, Tansen, Palpa, Lumbini Province (NCFD) • Horticulture Development Resource Center, Pokhara, Kaski, Gandaki Province (MOLMACPA) 	<ul style="list-style-type: none"> • National Citrus Research Program, Paripatle, Dhankuta, Province 1 (NARC)
Macadamia	<ul style="list-style-type: none"> • Horticulture Research Station, Malepatan, Kaski Gandaki Province (NARC) 	<ul style="list-style-type: none"> • Horticulture Development Resource Center, Pokhara, Kaski (MOLMACPA) Gandaki Province • Sub-tropical Horticulture Development Center, Trishuli, Nuwakot, Bagmati Province (MOALD) 	
Pecan		<ul style="list-style-type: none"> • Warm Temperate Horticulture Center, Kirtipur, Kathmandu, Bagmati Province (NCFD) 	
Walnut	<ul style="list-style-type: none"> • Horticulture Research Station, Rajikot, 	<ul style="list-style-type: none"> • Dry Fruit Development Center, Satbanjh, Baitadi, Sudurpashchim Province (MOLMAC) 	

Crop	Key research	Key conservation and extension	Testing & cleaning
	Jumla, Karnali Province (NARC) <ul style="list-style-type: none"> • Horticulture Research Station, Kimugaun, Dailekh, Karnali Province (NARC) • Regional Agricultural Research Station, Lumle, Kaski, Gandaki Province (NARC) 		

6. The type of horticulture station/center upgrade to be considered by the project will be limited to the following scope:

- High tech nursery/screen house;
- Shade house;
- Seed germination/soil sterilization chamber;
- Tissue culture facilities;
- Irrigation/rainwater harvesting/drainage;
- Staff residential building;
- Laboratory incl. pathogen testing, tissue culture;
- Office + training place + security guard house;
- PCR analysis machine;
- Labor cost for terracing, separate mother plant block establishment, etc.;
- Vehicle and
- Other equipment;

7. In addition, a NCFD office expansion will be financed by under Output 1.

1.3 Staff capacity development on research and extension (technical assistance)

- (1) **Establishment of horticulture research, testing and nursery management network**, comprising of representatives from MOALD, DOA, NCFD, NARC, Provincial agriculture ministries and DOADs, universities, private nurseries, cooperatives as well as commodity-specific knowledge networks.
- (2) **Knowledge exchange portal/platform** developed for 12 research/resource stations/centres. By the end of the project, this can be expanded to all research/resource stations/centres.
- (3) **Research** on climate resilient varieties, other crop specific technologies, pest risk analysis for priority crops.
- (4) **Training or horticulture station/center staff technical knowledge and skills development on tissue culture (of apple and citrus), molecular marking, nursery**

management, certification schemes in partnership with local and international universities, research institutes, horticulture centers, etc.

- (5) **Demonstration farm operation in the horticulture stations/centers for technology transfer** incl. production, pest and disease control, etc.
- (6) **Training of technicians** (by research station/center staff): training material development supported by the project.

1.4 Private nursery participation in nursery quality initiative

7. NCFD will prepare and advertise a call for proposals for private nurseries that are willing to participate in a voluntary private nursery quality control scheme (related to Activiti 1.1.3 nursery quality initiative). The scheme will be operationalized twice during the project implementation. The first batch will be 15 nurseries in 2023 and 25 nurseries will be supported in 2024. A total of 40 nurseries will be supported at the maximum value of \$25,000 for nursery facility expansion, enhancement and quality control system installation as matching grant.

1.5 Crop and land database establishment

- (1) **Development of mobile app for data collection and field data collection as per the survey format.** The app-based inventory will assign an ID for each land segment and identify ownership, crop types, growing conditions, crop management practices, irrigation methods and crop production and sales information. The app will have an auto-sync feature incorporated to avoid data loss while performing field surveys, and the aerial map should be accessible through the app offline.
- (2) **Field survey on beneficiary farmers:**
 - **Crop inventory database of beneficiary farmers:** A crop inventory database will be established for Batch 1 beneficiary farmers in 2023 and Batch 2 farmers in 2024. The consulting firm will draw polygons (plot measurement) using GPS and GIS devices aligning with a cadastral map, assign ID, and collect information of land segments focusing on farmers' field information (ownership and associated-farmer group or cooperative) and land-use information (crop planted, irrigation method, tillage). Crop condition will also be recorded via geo-tagged photographs and videos. Food storage and processing assets will be geotagged. This database will be updated three seasons per year over the project implementation period. Note that the alignment of this database with the production and marketing advisory platform to be developed under the loan project is critical, and the consulting firm should be ready to collaborate with the advisory platform developer.
 - **Comprehensive survey for sample farmers and their field plots:** In collaboration with monitoring and evaluation specialist who is appointed by ADB and will guide sampling, collect survey data at the baseline, over project implementation (3 times a year). Survey questionnaire will be provided by ADB. Key aspects of the survey include: (i) farm household demographics and assets; (ii) farmers' field information; (iii) land-use information including crop production; (iv) irrigation; and later, (v) crop sales. This survey will tell the project about timing of planting, type of land preparation, type of seeds planted, whether or not and how much fertilizers are used, how much labor is used, and the estimated cost of production. Interview with lead farmers will be recorded as video files.

- (3) **Training for data collection, and validation of data inserted from the field.** The consulting firm will train field staff of the DOAD and local governments, cooperative representatives and/or lead farmers/youth from the same village to collect data with minimum personal influence and bias on the information. The list of trainees will be agreed between ADB and the consulting firm in advance. The training will comprise of four sessions: (i) purpose of the survey and which work to be carried out in the field; (ii) clear understanding of data selection criteria and scopes defined; (iii) interviewing techniques, highlighting the importance of confidence-based and trust-based two-way communication during the survey; and (iv) handling of GPS devices and a GIS-based mobile app. The training materials and approach paper will require ADB's no-objection, and ADB's monitoring and evaluation consultant will provide feedbacks and guidance, if necessary, during the preparation of training materials and approach paper.
- (4) **Collection of farm households and land-use data three seasons per year over the project implementation period.** Data entered into the database should be first verified and any errors corrected. Once the advisor platform is developed under the loan project, the satellite images will be used to check the validity of randomly selected sample plots. The consulting firm will be responsible to maintain the accuracy of samples of data at the satisfactory level. Succinct standard operating procedure will be prepared and shared with the National Center for Fruit Development, DOADs and ADB.
- (5) **Data analysis and report.** Prepare a report within one month after a season (total three times a year) over the project implementation period of 2.5 years.

Output 2. Fruit and nut production and productivity of project farmers increased

2.1. Preparation and delivery of packages of practice (POP)

8. The project will contract the preparation and delivery of climate-smart Packages of Practice (POP) for almond, apple, avocado, kiwi, lime, macadamia, orange (mandarin and sweet orange), pecan, and walnut production, and harvest and post-harvest handling. The POP preparation will involve a baseline assessment of existing orchard practices, a desk review of existing harvest and post-harvest handling guidelines for selected horticulture crops, the preparation of draft climate smart POPs, workshop reviews of the draft POPs leading to their finalization, an assessment of farmers training needs, the creation of training material, including web-based audio-visual presentations for each crop POP, designed for easy communication of POPs to farmers, training of POP trainers, and establishing a network of crop/fruit experts able to support farmers in their adoption of POPs. The POPs will include smallholder farmers producing vegetables and indigenous local crops.

9. Each PoP will include the following information:

- **Climate:** An analysis of the rainfall, altitude, and temperature requirements for climate-smart production of the crop
- **Soils:** A detailed description of the soil type, structure, depth, organic matter, and mineral and micro-element requirements for successful crop production.

GIS Map

Each PoP will include a GIS map showing areas in Nepal having suitable climate and soil requirements for the production of the crop. Where sufficient information is available, the maps will include overlays showing the preferred locations for specific varieties.

- Varieties: A list of recommended varieties of the crop that are registered in Nepal, have proven productivity and disease resistance characteristics and strong market demand.
- Nursery management: Good-practice nursery management will be described through step-by-step descriptions of growing medium preparation, disease free root stock selection, plant propagation (seed propagation, grafting, air layering, clonal, etc.), and sapling management to point of sale.
- Orchard development:
 - Site selection, including slope and drainage considerations;
 - spacing and plant density (plants/hectare) specific to recommended varieties/cultivars);
 - Land preparation, layout (including pit size), planting system, planting time, manuring and fertilization etc.
 - Transplanting technique including sapling treatment, mulching and establishment fertilization.
- Crop husbandry:
 - Training of plants;
 - fertigation schedule;
 - Drip irrigation management by crop stage and season/ irrigation schedule;
 - Flowering management, including fertilizer management and use of hormones to stimulate flowering/ micronutrient recommendation schedule.
 - Pruning management;
 - Weed management and other inter-cultural operations;
 - Intercropping options (where possible)
 - Harvesting techniques to minimize damage to fruits and increase their market value;
- Pest and disease control: a detailed description of integrated pest and disease management practices (in tabular format detailing the name, symptoms, causal agent(s) and management of all key pests and diseases).
- Post-harvest crop management: a detailed description of post-harvest crop management including recommended sorting, grading and packaging practices.
- Storage: recommended cool and gas-controlled storage technology for the harvested fruit crops.

10. Technical descriptions in the POPs will, wherever practicable, be accompanied by photographs (with print POPs) and videos (with POP file copies) clearly demonstrating the recommended techniques and identifying the described pests and diseases.

2.2. Farmer capacity building

11. The project will deliver (i) training of trainers to frontline technicians, including government officials, and (ii) train farmers in orchard crop husbandry, harvesting, post-harvest management and marketing. Training will be provided through: (i) government officials, (ii) farmer group facilitators.

12. (iii) private technical service providers, (iv) farmer-to-farmer extension program, identifying lead farmers and training them to demonstrate climate change adaptation and best practices, and (iv) a digital technology-based farm advisory system. **2.2.1. Farmer group and cooperatives facilitation** The project will contract service providers in the five project provinces to: (i) provide specialists in farmers group development and mobilization (ii) cooperative facilitation and capacity building; and (iii) establish a network of trained, locally recruited farmer group facilitators (one junior technical assistant and one social mobilizer) in each local

level to facilitate farmers and coordinate with cooperatives.

13. establish a network of trained, locally recruited farmer group facilitators at Municipal level to facilitate group establishment and initial operation.

14. Once mobilized, farmer groups and cooperatives require capacity building to not only function effectively without external props and financial support but also to grow over time to attain larger goals for their members. This pertains to functions such as record keeping including meeting minutes that promote transparency and trust; group dynamics, such as setting group norms, articulating values, defining a shared purpose, conflict resolution and rules of governance that stimulate solidarity and cohesion; strategic capacities, such as building a shared vision for the future, and networking and business development and advocacy to create value for their members. Group development training materials will be developed through TA support and include: (i) membership training to stimulate behaviors among group members that enhance group cohesiveness, solidarity and efficiency; and (ii) leadership training to develop strategic capabilities of groups; develop resource persons in groups; introduce ideas of participatory planning, vision building and decision making; build capacity for conflict resolution, negotiation, networking and advocacy; knowledge of relevant government/regulatory policies; leadership rotation and good governance practices.

15. The project will support the development of farmer-to-farmer extension (F2FE) through the identification, training, and promotion of lead farmers (LF). F2FE can help in building effective, farmer-centered extension systems and empowering farmers as change agents for improving livelihoods in their communities. Local institutions (cooperatives, farmer groups, etc.) will be engaged to identify potential LFs, provide monitoring and evaluating their performance, thereby helping make the programs more accountable to the community or groups that they serve. Key selection criteria will include being able to read and write in a language commonly used by the farmers, having a good reputation, interest and skill in sharing information, farming skills, and being a full-time resident in the community. A minimum 30% of LFs will be women and 20% will be DAGs.

16. LFs will be trained in the application of POPs relevant to their location and supported technically by the Agricultural Knowledge Centers (AKCs) in their district. They will also receive training in effective communication, how to access information through the internet, in producing local audio-visual material for farmer training and in the maintenance of simple audio-visual equipment (e.g., compact projector). LF training will be an ongoing process throughout the project life. LF roles may include group training, monitoring/ following up, conducting demonstrations, organizing meetings, and acting as a liaison between farmers and AKCs and project agents. LFs will receive a modest stipend to cover their transportation and phone use for work purposes but will not be paid any professional fee. Beneficiary farmers may choose to reward LFs directly for their time.

2.2.2. Digital technology-based farm advisory system

17. The project proposes to exploit the extensive ownership of data-capable mobile phones in rural areas, the rapidly expanding mobile telecommunications network and the decreasing cost of data transfer through the development of appropriate information communication technology systems. This will include: (i) work with the POP developers to digitalize POP recommendations and make them available through the web, including through the Agriculture Management Information System (AMIS) under MOALD; (ii) smart phone-based platforms for interactive communication between: (a) NARC, NCFD and provincial fruit research and demonstration centers; (b) those centers and extension agents servicing project municipalities; (c) extension agents and farmers; and, importantly (d) between farmers; (iii) the establishment of moderated,

mobile phone app-based farmer discussion groups; and (iv) the development and application of apps to assist farmers and cooperatives to market their produce.

18. The digital technology program will be developed by a company or NGO with extensive experience in supporting public-private extension and in the use of information communication technology to support farmer capacity building. In addition to developing the aforementioned technology, the selected service provider will (i) train LFs and AKC staff in the production of short videos that show local farmers demonstrating locally relevant POP practices or sharing how implementing the practice has benefitted them; (ii) train LFs and AKC staff in the use of mobile phones to source relevant technical information, including from the POPs website and to manage moderated phone app-based farmer discussion groups, based on a set of core principles for creating and sharing content and fostering active participation by group members; and (iii) train farmer groups and cooperatives to use phone-based apps to gain direct access to aggregation, transport and marketing services, near real-time market price information and digitized transaction records.

2.3. Enhancing access to rural finance

19. The project estimates a maximum of 30,000 household– 300 households on average in each of the 100 project municipalities – spread across 5 provinces (Province 1, Bagmati, Gandaki, Karnali and Sudurpashchim) will be engaged in nut and fruit farming activities, and a maximum of 10,000 households for vegetable and other nutritious crop production. It is estimated that establishing a 1 hectare orchard under the project will, on average, require a \$4,000 investment and approximately 10% of that amount for annual operating expenses. Although there is a project subsidy of 50% of the investment cost, farmers will still require loans for the full investment (less self-contribution) for at least 6 months to one year, at which point the lender will receive their subsidy against the deliverable of an established orchard. This will be used to pay down the loan capital. The remaining loan will have a repayment schedule that is matched to the cash cycle of the crops, but not exceed 5 years. Relatively large (commercial and semi-commercial farmers) will also require a working-capital facility to manage their seasonal cash-flow requirements.

20. The project will support the design of an agri-financing mechanism that will ensure flow of both medium to long term capital for investment purpose as well as working capital financing for smallholder farmers, SMEs and other actors involved in the key agricultural value chains. The project will encourage lending to the whole of farm for smallholders. These are farmers with mixed farms requiring a range of finance. The design will acknowledge the potential roles for commercial banks as well as smaller microfinance institutions such as local cooperatives and wholesale lenders.

21. The project will set-up a guarantee fund to cover each of the loans that selected financial institutions (FIs) will disburse to project beneficiary farmer groups/cooperatives/ agro enterprises. The project will allocate a sum of \$6 million to partner financial institutions (that signs a Memorandum of Understanding with the project) as a first loss guarantee fund for loans to project beneficiaries.

22. Appropriate Financial Institutions (FIs) will be selected in consideration of: (i) their overall capacity; (ii) prior experience in agri-lending and digital finance; (iii) their physical presence in project priority districts and municipalities; and (iv) their ability and track record for creative finance, alongside their experience and openness in working with wholesale lenders and cooperatives. Selection of the FIs will be subject to standard screening process guided by a 'FI Assessment Checklist After the initial screening process; the FI's selection will be dependent on other ADB requirements including a due-diligence report.

23. To ensure the availability of finance to farmers and actors in remote municipalities, the project will also support the FIs in the development of systems and platforms to facilitate digital finance. The project may support the FIs (as required) in the design and piloting of digital system/platforms that rely on mobile phones/POS device/cards and leverage local agents/merchants (including cooperatives) for loan processing, disbursement, and repayment collection. Project support will be provided to design the required digital systems and may provide cost support to the agent/merchants (and cooperatives) specially to facilitate cash-in/cash-out transactions of the project loan clients.

2.4. Establishing improved orchards and vegetable/nutritious crop farm

24. The project will support the development of up to 10,000 ha of orchards across 5 provinces (Province 1, Bagmati, Gandaki, Karnali and Sudurpashchim) and in 100 municipalities within those provinces. Orchard crops that will be eligible for support include almond, apple, avocado, citrus (lime, mandarin and sweet orange), kiwi, macadamia, pecan and walnut. Farmers in any municipality will be able to choose amongst the 4 most suitable of these crops for their municipality. The list of participating municipalities and the eligible crops within the municipality will be publicly disclosed on the project website and project communication material.

25. All eligible farm households (defined in Attachment D) in the selected 100 municipalities will be eligible to apply for a 50% partial subsidy for eligible orchard establishment costs (defined in Attachment D).⁵ In case a provincial government or local government decides to increase the subsidy level, that incremental amount will be financed by the provincial or local government. Small and medium enterprises (SME) will be eligible for 40% matching grant support, subject to specific conditions, including a minimum 25% of the shareholding in the SME being from landowners on which the orchard is being established. Selected beneficiaries will be required to establish the agreed orchard type and area before being eligible for the subsidy payment. Orchard areas developed by farmer groups will not be less than 20 ropani⁵ (with each group member contributing not less than 4 ropani) or greater than 500 ropani or the maximum subsidy payment of \$250,000, whichever is lower. The project will assist eligible beneficiaries to apply to banks for orchard development financing repayable over a five-year period. The loan will cover up to 80% of the orchard establishment cost, with beneficiaries contributing at least 20% in cash. The subsidy, upon release, will be used to repay an equivalent proportion of the loan.

26. The GAFSP financing will support about 10,000 farm HHs, targeting those HHs who cannot contribute the minimum requirement of 4 ropanis to participate in the orchard establishment program. All farm HHs in the selected 100 municipalities meeting this criterion will be eligible to apply for a 50% partial subsidy for commercial vegetable and indigenous crop farming on up to 4 ropanis.⁶ It is expected that around 40% of the HHs will engage in commercial farming. The remaining 60% are expected to be supported for food and nutrition security through improved kitchen gardening. These households (around 6,000 households) will be provided improved seeds free of cost for two cropping seasons per year. These households will also benefit from the project sponsored training. Farmer groups who come up with joint applications with individual members having less than 4 ropanis will be prioritized to encourage commercialization of vegetables and indigenous crops. Eligible beneficiaries will sign an agreement with the project.

27. The detailed subsidy program administration guidelines is in Appendix D attached to the PAM.

2.5. Assessing and verifying carbon sequestration benefits from orchards

⁵ One hectare = 19.65 ropani

⁶ The term "commercial" as used here means farming with intent to sell their produce.

28. The project will explore the development of a system for securing carbon credits from sustainable smallholder orchard production in Nepal. That work will include: (i) studies on methodologies of carbon sequestration benefit measurement of project-supported fruit and nut trees; (ii) the development of a measurement, reporting and verification (MRV) manual and the systematic application of those MRVs on pilot orchards; (iii) the Identification of private companies willing to investing in carbon neutrality and development of a model agreement; and (iv) the preparation of the manual on the carbon credit utilization for participating farmer communities. As the first step, the following scope of feasibility study will be prepared:

- Additional carbon revenue to the Nuts and Fruits Project: The report will give a detailed account of whether this project is feasible for seeking additional finance from voluntary carbon market based on carbon credits. It will give a detailed account of the compliance process, standards that need to be followed, and a rationale for tapping into carbon revenue. The feasibility study will indicate how a complete project can be developed with monitoring and verification procedures.
- Quantification of total emission reduction credits and revenue that may be generated from this project: Based on the data from the NAFA project, this study will estimate the Verified Carbon Units (VCU) that this project can potentially generate. The total VCU will be estimated at current market value so that a total carbon revenue can be predicted. It will provide guidance on the methodology selected and the standards applied for this project and provide detail on payment indicators.
- Recommendation of project implementation modality and benefit sharing mechanism: The report will suggest various option on how the project can be developed with the finance from the carbon revenue. It will also recommend the project implementation modality such that it meets the quality assurance principles and ways to integrate a monitoring mechanism. The report will give a detailed income across a timeframe corresponding to specific project milestones.
- Way forward for implementation: Considering the national circumstances, the project objectives and the existing practices, the report will suggest steps forward for the NAFA project on integrating carbon finance. What each step will entails will be highlighted. In a broader context, based on this study, it allows for the approach and methodology to be replicated in other areas with similar activity.

2.6. Developing drip irrigation systems

29. To support crop establishment and to sustain production the project will support the development of drip irrigation systems on project supported orchards. The rationale for drip irrigation is based on efficiency of water use, suitability for the topography, accuracy of application and ease of operation.

30. The drip system comprises five main elements: (i) drippers and laterals; (ii) submain; (iii) main; (iv) headworks; and (v) header tank. For cropped areas of 5 ropani or less the drips and lateral will be replaced by hoses, as the irrigated area can readily be managed by manual watering. Both the submain and main are installed below ground level for system resilience, and the lateral with drips above ground along the tree rows. About 25% of participating farmers are expected to plant 4 ropani of orchard without drip irrigation.

31. The drippers will be progressively installed commensurate with tree growth, initially two per tree and additional drippers installed (up to 1 per meter) in subsequent seasons with canopy growth. Drippers could be standardized and pressure compensating but also equipped with small connection pipes for maximum flexibility. The pipes should have minimum hydraulic resistance, maximum flexibility, and easy leak-free connectivity between pipes. The lateral pipe should be

flexible and allow for dripper insertion, mains and submains should be high impact resistant and cost-efficient. Cost-efficient with regards to the installation in the short term and for operational and maintenance costs (pumping- and repair/replacement) in the long term. The headworks, include a screen filter (120 mesh) for removal of organic matter. Depending on the water quality more filters might be needed.

32. The system components will be specified in terms of materials and performance to ensure system reliability and sustainability. The supply and installation of the system will be supported technically through the provision of technical service providers, who will work in collaboration with the Municipality and grower/community association.

33. It is envisaged that pilot plots be established in the initial project year for the purposes of demonstrating the installation and operation and maintenance of the drip systems. These plots will serve as sites for capacity building of farmers, prior to the roll out of the orchard development more generally.

34. While it is expected that the orchards have an adequate and reliable water source within reasonable reach, the project will, where groups of farmers would benefit, also provide limited support for the enhancement of water sources to improve supply reliability, particularly in the spring season. The range of enhancement measures may include improvement to existing structures for collection and diversion of spring and surface water flows, construction of water harvesting structures (such as recharge pits and furrows) to improve spring yields, construction of local storage ponds, structures for snow harvesting, and improvement of shallow groundwater sources (shallow wells). The support, however, will be limited and commensurate with the required incremental improvement in yield required to support the targeted orchards.

Output 3. Value addition to fruits and nuts in hilly areas enhanced

3.1. Cooperative development and capacity building

35. The project will recruit a firm to provide administrative and capacity building services to NAFHA-participating cooperatives. The firm will work with cooperatives to strengthen their statutes, administrative procedures and management capacity, and agriculture/horticulture marketing. It will also work with cooperative members to build their understanding of their roles, rights and responsibilities. All participating cooperatives will receive training in group formation, participation and governance and be offered the opportunity to move to computer-based record and account keeping, including access to web-based information and services. Female leadership will be supported across all cooperative activities, including training specifically targeting female cooperative members.

36. The supporting firm will build cooperative business acumen through **on-demand training on financial management, business planning and entrepreneurship, and post-harvest management**. It will enable interested cooperatives to explore business opportunities related to nut and fruit value addition, particularly in crop procurement and post-harvest management, including crop cleaning, grading, packing, controlled storage and marketing. This will include supporting cooperatives to apply for bank loan and/or grant financing for financially viable investment plans. This could include support for cooperatives to form federated bodies or jointly owned businesses.

3.2. Improved cooperative value addition

37. Cooperatives whose members are interested to invest in nut and fruit collection and value addition will be eligible to apply for matching grant financing (50 percent) for investment in value addition infrastructure including, *inter alia*, crop washing, sorting, grading, cooling, marketing and

processing.⁷ The project will provide training in post-harvest management, financial management, business development, marketing and entrepreneurship while promoting female leadership. All such service provision will be through standardised output-based contracts between the JTs and the cooperative.

38. The project will make available \$7.3,7 million for this activity. Grants will be capped at \$75,000. The co-financing will cover up to 50 per cent of the total cost of each investment, with beneficiary cooperatives financing at least 50 per cent including a minimum 25 per cent in cash and the balance in kind. Cooperatives will, on request, receive support to develop grant applications and be guided in their implementation.

39. Expressions of interest (EOI) from eligible cooperatives will be accepted any time of the year. PIU may solicit EOIs from interested and eligible cooperatives through public notice in provincial level or national media, on an as and when required basis. AKCs will inform cooperatives in their respective areas of any project activity to solicit EOIs.

3.3. Public-private enterprise fund

40. This activity will provide grant funding (up to 40% of investment value) to incentivize agribusinesses and service providers interested to collaborate with cooperatives in nut and fruit value addition and market development. Investments can include "hardware" such as infrastructure and equipment as well as "software" such as traceability and certification systems, internet-based marketing, organic production and other services.

41. Eligible costs may include all reasonable costs essential for the proposed business investment not included in the project negative investment list. Areas of investment could include, inter alia: (i) Innovative business, market and service linkages and market promotions activities; (ii) joint investments in and management of facilities and associated innovative contract or pricing mechanisms; (iii) technology for climate adapted productivity enhancement and value addition in the area of production, post-harvest handling, processing, packaging, transportation and marketing; (iv) aggregator models linking rural cooperatives to higher value urban markets including supermarkets; (v) joint investments in distribution and sales networks; or (vi) certification systems – organic certification, geographic indication, farm to fork traceability, etc.

42. The project will make available \$1.5 million for this activity. Grants will be capped at \$200,000. Eligible applicants will be enterprises registered for at least 3 years and having at least 2 years business experience related to their grant application. Where the grant applicant has foreign investors as shareholders, the foreign ownership shall not be more than 33%. Successful applicants would be required to enter into formal contractual relations with the participating cooperatives if awarded a grant.

3.4. Strengthening local-level infrastructure

43. The project will support applications for grants for 50 percent of the value of market-linked infrastructure investments that provide public good benefits essential to targeted nut and fruit value chain engagement and/or climate change adaptation. Public good infrastructure investment subprojects would be identified and prioritized through: (i) municipality infrastructure plans; (ii) municipal-based cooperative and farmer group development needs; and (iii) local and regional agribusiness development requirements. Investments could include, *inter alia*, public utility connection for project supported investments, commodity storage, market/collection centers,

⁷ While the output 2 finances the farmer groups/cooperatives for training in POP implementation for the first two years, cooperatives may use a part of marching grants from year 3 onwards to employ junior technicians to provide technical advice to cooperative member farmers, including non-project beneficiaries, on the application of crop POPs relevant to the members orchard production.

farmer group orchard fencing or collective irrigation `water access investments. This activity would be structured to cater for innovative demands as they emerge.

44. The project will make available \$5.5 million for this activity. Grants will be capped at \$100,000. Co-financing of the construction costs of public good infrastructure works would be in accordance with the accompanying table. Funds for successful grant applications would be advanced to municipalities by the associated PIU based on municipality investment plans incorporated into the NFDHA annual work plan and budget. All infrastructure investments would be climate change adaptive.

Attachment C. Credit Guarantee Fund for Smallholder Horticulture Farmers (Scheme 1)

A. Rationale

1. **NAFHA smallholder farmers' lending needs and duration.** The NAFHA project aims to engage about 30,000 beneficiary farm households for fruit and nut production and 10,000 households for out of season vegetable and nutritious crop production (average 400 farm households in each of the 100 project municipalities across five provinces of Province 1, Bagmati, Gandaki, Karnali and Sudurpashchim), and their average financing needs are estimated to be around NPR 500,000 – NPR 1m (approx. \$4,000 to \$8,000) per household for orchard development and about \$500 for vegetable production. Investment needs are expected to be less than NPR 1 million (approximately \$8,000) for most of the farming households. For example, \$3,000 for average 20 ropani (approximately 1ha) and additional \$3,000 for drip irrigation if the land size is larger than 4 ropani (approximately 0.2 ha).¹ Even though the project will provide matching grants up to 50% aligned with the MOALD policies, subsidies will be provided upon the validation of receipts and completion of installation of agreed goods, and used to pay down the loan capital. **Hence, farmers need to provide all the financing requirements (i.e., NPR 500,000 – NPR 1m) up-front.** After partial subsidies (50% of the investment) are provided, the remaining loan will have a repayment schedule that is matched to the cash cycle of the crops, but normally up to 5 years not for a short-term.

2. Despite a double-digit growth in the agricultural lending portfolio, access to agricultural finance is challenging, especially for smallholder farmers and agri enterprises in the rural areas. Seventy one percent of total loan volume of the agriculture sector portfolio or 50% of total loan beneficiaries are for commercial agriculture and livestock investments. Smallholder farmers face additional difficulties to access finance due to collateral requirements, absence of verifiable data which creates higher risk perception amongst the banks, and a large number of small-size loans that do not make a business case for banks, particularly for larger ones. Most horticulture sector investment requires medium term loans of about 5 years duration, however, with most bank deposits being short term, banks see medium-to-long term lending as being higher risk, creating a further financial barrier to horticulture and value chain investors accessing suitably structured loan packages.

3. Agricultural value chains of the project have relatively long gestation period and are relatively new in the Nepalese agricultural market. Banks will always be wary of such loans especially if there's no further risk mitigation support. Likely, the project beneficiaries and their collateral (usually agricultural land) may not meet the standard requirement (road access, market value and salability) of the bank. Many of the project locations are remote and target beneficiaries are likely to be scattered. Reaching out to such clients especially with loan products which require regular contact means a sizeable cost for respective bank branches. In the absence of any incentives, the focus and priorities of banks and financial institutions would shift into other areas where the 'opportunity cost' is lower. Market aligned credit risk coverage mechanism such as a 'credit guarantee fund' could encourage banks to lend more to such smallholder farmers and rural enterprises that are perceived to be with high credit risk.

¹ The cost of a 4 ropani orchard with piped water but without drip irrigation is \$2,700. If the land size is smaller than 4 ropani (approximately 0.2 ha), piped water will be used.

4. The project's target beneficiary farmers will still face challenges to access finance for the following reasons:

- (i) Target agricultural products of the projects have a relatively long gestation period and are relatively new in the Nepalese agricultural market. Banks will always be wary of such loans, especially if there's no further risk mitigation support.
- (ii) The project beneficiaries and their collateral (usually agricultural land) mayn't be meet the requirement of the bank. Even though banks may have a policy to accept agricultural land without any road access as collateral, it's mainly practiced to comply with the central bank's mandate.
- (iii) Many of the project locations are remote and target beneficiaries are likely to be scattered (many in not conveniently accessible locations). Reaching out to such clients especially with loan products which require regular contact, means sizeable cost for respective bank branches. In absence of incentives, their focus and priorities would shift into other areas where the 'opportunity cost' is better.
- (iv) As the project focuses on relatively new agricultural value chains, banks' lending products, processes and credit risk management practices (at central level as well as respective provinces/branches) will have to be reviewed and/or aligned to project and market needs.

5. **Banking sector and agricultural financing in Nepal.** As per the report of Nepal Rastra Bank (NRB), based on eight months data, private sector credit from Bank Financial Institutions (BFIs) increased by 12% (from NPR 4,172.78 billion to NPR 4,667.16 billion) by mid-January, 2022.² During the last fiscal year, BFIs' private sector credit had grown by 10.1%. The sector-wise distribution of BFI's total loan shows that the top two sectors are wholesale and retail loans (20%) and consumable loans (18%) while agriculture comprise 8% of the share.³ It is worthwhile to note that NRB mandates commercial banks to increase their Agri-sector loan portfolio to 11% by the end of the current FY. NRB's recent update (Feb 23, 2022) on the Unified Directive 2021 requires banks to lend 12% of its loan in the agriculture sector by the end of current FY i.e., 2021/22. Province-wide distribution of BFI loans demonstrates the lopsided concentration (56%) towards Bagmati while Karnali and Sudurpashchim have the lowest shares at 1% and 3% of the total loan outstanding respectively.⁴

6. Beyond secondary data and sources of information, the project team also held discussions with a number of financial institutions which are active in Agri-lending space. The Small Farmers Development Bank (SFDB) agri portfolio of just over NPR 5 BN is primarily in livestock and dairy. Agricultural Development Bank Limited (ADBL) agriculture portfolio of NPR 34 BN was more mixed in the sectors and included direct agriculture, fishery, forestry, processing and other commercial actors. The commercial banks have a smaller percentage of their portfolio dedicated to agriculture/agribusiness: Sanima Bank has 11% of their total portfolio in what NRB considers agriculture loans. Laxmi has 11% in NRB qualifying agriculture loans. Both of these banks, however, are focused on the upper end of the value chain. Sunrise Bank has 11.5% of its loan portfolio in the agriculture sector with more than 14,000 clients. They have almost NPR 10 billion (USD 83 million roughly) in agri-loans of which almost 70-80% are given to smallholders/semi-commercial activities focused on production, where the maximum loan size is NPR 1.5 M (USD 12,500).

² Nepal Rastra Bank. Current Macro Economic scenario.

³ Nepal Rastra Bank. Current Macro Economic scenario.

⁴ Nepal Rastra Bank's economic activity survey report 2020/21

Table 1: Comparative Figure of Total Loans vis-à-vis Agri Loans (as of Mid-April. 2021)

	NABIL	NICA	Global	ADB L	Sunrise	Laxmi	Sanima
Total Loan outstanding (million)	193,461	259,999	235,543	145,224	96,615	105,986	116, 728
Agriculture, Forest and Fishery loan (million)*	4,278	19,321	9,971	42,143	8,698	4,773	5,992
Ag. Loan to total loan (%)	2.21	7.43	4.23	29.02	9	4.5	5.13

Note: The agricultural loan figure of the banks as per priority lending mandate may differ due to differences in reporting formats

Source: NRB's monthly banking and financial statistics – mid., March 2021

7. **FI lending products' repayment modality.** While most banks express that they lend against cash flow, the scale of this type of lending by individual banks can be limited. This will be critical for the smallholders' access to lending as the orchards will take approximately 3 years to achieve measurable fruit production, and several more years before achieving maximum yields. Consequently, only the smallholders who have multiple sources of income (*which together provide a comparatively high percentage of the total expected income and cash flow of the household unit relative to the orchard investment*) will be able to accept loans that require immediate repayment. In the past, FIs would insist on requiring regular equal installments either monthly or quarterly (what is termed as equated monthly installment (EMI) and equated quarterly installment (EQI), but this requirement is now being relaxed for certain agricultural crops and value chains since provision on grace period and loan loss provisioning were modified under the unified directives 2077, by NRB. Some of the FIs interviewed do provide a grace period prior to insisting on EMI/EQI but this is rare and usually a result of a donor-funded line of credit or, in the case of Sunrise Bank, a result of the loosening of restrictions by the NRB.⁵

8. **Currently available risk management tools.** Product design, sector expertise, pricing, target borrower selection, vetting, collateral system, analysis, credit scoring, HR training, hiring and compensation, monitoring and follow up, rescheduling and refinancing policies are all part of the internal risk management system pertaining to credit origination and management processes. Another risk management tool used within an institution is portfolio diversification policies.⁶ If these internal elements are overlooked or incorrect, external risk management tools will be heavily subscribed to.

- **NRB/Govt has been providing concessional loans (interest subsidized)** to *commercial agriculture, women entrepreneurs* and other deprived segments to promote entrepreneurship for last few years. As of mid-January 2022, BFIs have issued 140,521 such concessional loans with NPR 213.58 billion in loan outstanding. 41% of such concessional loans have been issued under 'commercial agriculture' with an average loan size of NPR 2.3 million and 57% of such loans been issued to women entrepreneurs with an average loan size of NPR 0.92 million.
- The Deposit and Credit Guarantee Fund (DCGF) is the authority which provides a The UKAID Sakchyam project provided a 'guarantee fund' which on average would be around

⁵ Unifed Directives 2077 NRB.

⁶ Here we are only talking of credit risk, not operating risk, reputational risk, liquidity risk etc. There is also no discussion of risk management at the farm level which should be evaluated by the BFI prior to loan approval.

10% of the agreed lending portfolio and worked as 'first loss basis'; it signed such guarantee partnerships with four banks (Bank of Kathmandu(BOK), Machhapuchchhre Bank Limited (MBL), Prabhu and Laxmi) where the highest guarantee fund per bank was around NPR 30 M; the project successfully exited (guarantee fund returned) with all the banks with nominal claims received in either of the guarantee funds. One interesting use of guarantee funds was to leverage cooperatives to provide loans to their members by the bank directly without requiring collateral.⁷

B. Proposed scheme: a market aligned and flexible 'credit guarantee fund' for smallholder horticulture farmers and rural agri-enterprises

The estimated total up-front investment required for project-supported orchards development is approximately US\$ 70 million (NRP 8.36 billion).

Crop	NRs/ha	0	PY 1	PY 2	PY 3	PY 4	PY 5	PY 6	PY 7	Total
Almond	797,770	0	-	15,955	63,822	39,889	39,889	-	-	159,554
Apple	611,020	0	24,441	104,484	243,797	284,124	284,124	-	-	940,971
Apple HD	3,372,490	0	33,725	134,900	539,598	505,874	505,874	-	-	1,719,970
Avocado	633,410	0	-	38,005	88,677	126,682	126,682	-	-	380,046
Kiwi	1,476,340	0	36,909	110,726	110,726	276,814	276,814	-	-	811,987
Lime	794,000	0	7,940	140,538	327,922	416,850	416,850	-	-	1,310,100
Macadamia	693,070	0	-	20,792	83,168	138,614	138,614	-	-	381,189
Orange	645,630	0	25,825	195,626	456,460	500,363	500,363	-	-	1,678,638
Pecan	542,990	0	-	10,860	43,439	27,150	27,150	-	-	108,598
Walnut	546,280	0	40,971	57,359	229,438	273,140	273,140	-	-	874,048
Total incremental invest.	0	0	169,810	829,245	2,187,047	2,589,499	2,589,499	-	-	8,365,100
Cumulative Investment			169,810	999,055	3,186,103	5,775,601	8,365,100	8,365,100	8,365,100	
Bank Finance Required (subsidy)			84,905	414,622	1,093,524	1,294,749	1,294,749	0	0	4,182,550
Bank Finance Required (inv)			67,924	331,698	874,819	1,035,800	1,035,800	0	0	3,346,040
Total Capital Disbursement			152,829	746,320	1,968,343	2,330,549	2,330,549	0	0	7,528,590
Cumulative Capital Inv (non subsidy)			67,924	399,622	1,274,441	2,310,241	3,346,040	3,346,040		
Subsidy Repaid			0	84,905	414,622	1,093,524	1,294,749			
Investment Capital Repayments Yr 1				0	6,792	10,189	16,981	16,981	16,981	
Investment Capital Repayments Yr 2						33,170	49,755	82,924	82,924	
Investment Capital Repayments Yr 3							87,482	131,223	218,705	
Investment Capital Repayments Yr 4								103,580	155,370	
Investment Capital Repayments Yr 5									103,580	
Total Investment Capital Repayments			0	0	6,792	43,358	154,218	334,708	577,560	
Total Investment Loan Outstanding			67,924	399,622	1,267,649	2,260,090	3,141,672	2,806,963	2,229,403	
Total Subsidy Loan Outstanding			84,905	414,622	1,093,524	1,294,749	1,294,749	0	0	
Total Investment Loan Outstanding			152,829	814,244	2,361,172	3,554,839	4,436,421	2,806,963	2,229,403	
Operating Loan Disbursement				149,858	477,915	866,340	1,254,765	1,254,765	1,254,765	
Operating Loan Outstanding				149,858	477,915	866,340	1,254,765	1,254,765	1,254,765	
Total Non subsidy Loan Outstanding			67,924	549,480	1,745,564	3,126,430	4,396,437	4,061,728	3,484,168	
Partial Guarantee Fund %			21%	21%	21%	21%	21%			
Partial Guarantee Fund Addition			14,264	69,657	183,712	217,518	217,518	0	0	
Total Partial Guarantee Fund			14,264	83,921	267,633	485,151	702,668	702,668	702,668	
Partial Guarantee Fund as % of Total (non subsidy) Loan Outstanding			21.0%	15.3%	15.3%	15.3%	16.0%	17.3%	20.2%	
Total partial Guarantee FUND in US dollars (000)			119	699	2230	4043	5656	5656	5656	
% Capital Repaid					10%	15%	25%	25%	25%	

The proposed 'credit guarantee fund' will have following attributes;

- It will provide partial credit guarantee operating under 'first loss' basis. The coverage is expected to be up to 21% of the long-term loan exposure.
- The project will set aside USD 6.0 million as a credit guarantee that will be allocated to participating banks proportionately.⁸ The leverage ratio is 11.9.

⁷ Details of Sakchyam guarantee fund is found here: <https://sakchyam.com.np/sakchyam-supported-heifer-mbl-lending-model-promote-cross-sector-linkages/>

⁸ Appropriate Financial Institutions (FIs) will be selected in consideration of: (i) their overall capacity; (ii) prior experience in agri-lending and digital finance; (iii) their physical presence in project priority districts and municipalities; and (iv) their ability and track record for creative finance, alongside their experience and openness in working with wholesale lenders and cooperatives. Selection of the FIs will be subjected to a standard screening process guided by a 'FI Assessment Checklist'. After the initial screening process; the FI's selection will be dependent on other ADB requirements including a due-diligence report. Currently, ADBL is one of the priority candidates, and one additional government-owned bank and one private bank could be proposed as participating banks.

- The 'guarantee fund' will be parked at the participating bank's non-interest-bearing account.
- The participating bank will be able to lodge a claim to the 'guarantee' once dues from the borrower crosses 90 days. However, the bank will continue its 'recollection' efforts from the borrower and as and when such amount is collected, it will be reimbursed to the project guarantee fund account.
- In case of loan default, the bank will be able to claim 100% of the loan amount from the guarantee fund as long as it meets the loan amount cap for each loan and if it's within the total agreed guarantee fund ceiling.
- After the project period is over, the remaining guarantee fund will be returned to the GoN. The project will prepare an exit strategy, seeking to sustain the guarantee fund scheme of the NAFHA for smallholder horticulture farmers and rural agri-enterprises. One possibility is to maintain it through DCGF.

9. **Participating Bank selection:** Appropriate Financial Institutions (FIs) will be selected in consideration of: (i) their overall capacity; (ii) prior experience in agri-lending and digital finance; (iii) their physical presence in project priority districts and municipalities; and (iv) their ability and track record for creative finance, alongside their experience and openness in working with wholesale lenders and cooperatives. Selection of the FIs will be subjected to a standard screening process guided by a 'FI Assessment Checklist'. After the initial screening process; the FI's selection will be dependent on other ADB requirements including a due-diligence report. *Currently, ADBL is one of the priority candidates, and one additional government-owned bank and one private bank could be proposed as participating banks.*

10. **Farmers' requirements:** For NAFHA beneficiary farmers to access participating banks' loans of which risks are offset by the CBF, these farmers are required to provide collateral.

11. In terms of establishing a bank's claim on the property being proposed as collateral (usually land), banks can establish their claim either as 'direct mortgage' or as 'registered mortgage' on that collateral at the respective local govt. body. A direct mortgage is often cheaper at least for the applicants. A registered mortgage (often considered having better legal grounds) is preferred by the bank but usually costs more for the applicant. It was noted that some banks, including ADBL, have started using their own staff to evaluate smaller loans (up to NPR 2 million in the case of ADBL) by charging NPR 4,000 per applicant for this service. It should be further discussed with participating banks whether holding a land certificate of the orchard land of NAFHA beneficiary farmers could be sufficient to meet their collateral requirements. This collateral will remove the perception of 'risk-free' loans by the project beneficiary farmers, and for participating banks, the CBF functions as a risk mitigation tool.

12. A Guarantee Fund due diligence report including risk management framework, risk validation framework will be prepared and approved by ADB before any guarantee fund is transferred to participating financial institutions.

13. **Incentives to the partner financial institutions:** To ensure the availability of finance to farmers and actors in remote municipalities, the project will also support partner financial institutions in the development of systems and platforms to facilitate digital finance. The project may support the FIs (as required) in the design and piloting of digital systems/platforms that rely on mobile phones/POS devices/cards and leverage local agents/merchants (including cooperatives) for loan processing, disbursal, and repayment collection. Project support will be provided to design the required digital systems and may provide cost support to the

agent/merchants (and cooperatives) especially to facilitate cash-in/cash-out transactions of the project loan clients.

14. CGF Management Committee, which will review and approve the time deposit periodically and aligned with the loan amounts projected, is going to comprise representatives from Joint Secretary, IECCD, MOF; Executive Director, Bank Supervision Department, NRB; Director General, Department of Agriculture, MOALD; and Chief, provincial DOAD. The committees' decisions will be implemented by CPMU supported by three CGF consultants.

Attachment D. Partial Subsidies for Farmers and Agri-enterprises (Scheme 2)

1. As detailed in the project description, the project will provide partial grants for establishing improved orchards, vegetable and other crop farms, and developing drip and non-drip irrigation systems. The draft Business Promotion Act which was reviewed by MOALD in August 2021 indicates that the maximum ceiling of subsidies for horticultural orchard development is 50%. The project aligns the subsidy level to this draft Act as requested by MOALD and sets the subsidy ceiling at 50% for farmers, farmer groups and cooperatives, and 40% for agro-entrepreneurs. Some provincial governments have a scheme with a higher subsidy level than 50% and if provincial ministries decide to follow their higher subsidy scheme, the difference may be financed by the provincial government. MOF's prior concurrence on scheme guidelines will be required before disbursement.
2. The subsidy program (scheme 2) will be managed by CPMU or PIU, depending on the size of the subsidy to be provided. Partial subsidies per application up to NRs5 million will be managed by PIU. Subsidies per application greater than NRs5 million will be managed by CPMU. Subsidies greater than the equivalent of \$100,000 shall require ADB's prior review and no objection.
3. **Local Level Coordination Committee.** A Local Level Coordination Committee (LLCC) shall be established under the chairpersonship of the deputy chief of the local level. Members of the LLCC shall comprise chief administrative officer, representatives from the AKC, PIU, and farmer facilitator under the project. The chief of the local level agriculture unit shall be the member secretary of the LLCC. The LLCC will be responsible for: (i) coordinating at the local level on the project's call for expression of interest; (ii) conducting preliminary screening of expression of interest (land suitability, water source, crop suitability, beneficiary commitment), and making a recommendation to the subsidy management committee at the PIU or CPMU level (depending on subsidy level); and (iii) supporting the PIU and CPMU in carrying out periodic monitoring of project implementation.
4. **Subsidy Management Committee (SMC).** At the CPMU level, the committee shall be chaired by the project director. Members of the CPMU-SMC will be the senior plant protection/extension officer, senior planning officer, national team leader, and GAFSP coordinator. The senior horticulture officer will be the member secretary. The national environment specialist, national gender specialist, and national social safeguards specialist will be consulted on environmental, gender and social safeguards aspects.
5. At the PIU level, the PIU-SMC committee shall be chaired by provincial project manager. Members will be the agriculture officer, agriculture engineer, provincial team leader, and GAFSP provincial coordinator. The planning officer will be the member secretary. The provincial gender specialist and provincial environment specialist will be consulted on gender and environmental issues.
6. The SMCs shall be responsible for reviewing the applications for orchard development, including the drip/non-drip irrigation component and GAFSP applications, and approving the LLCC's recommendations.
7. Eligible beneficiaries will be:
 - (i) **Registered Farmers:** Individual registered farmers or member of farmer group, or member of agriculture cooperative.¹

¹ Under the Cooperative Act 2017; farmer group registered at the agriculture unit of the local level; individual farmer registered in the government's farmer registration management system (farmer.moald.gov.np).

- (ii) **Small and medium enterprises:** Legally registered agribusiness company.²
8. The LLMC will be guided by the following criteria while screening applications:
- (i) **Confirm minimum/maximum land to develop orchard clusters.** Minimum cluster of 20 ropanis in one application (minimum 4 ropanis per plot to make 20 ropanis). The project can finance the partial subsidy on a maximum of 500 ropanis or maximum subsidy equivalent to \$250,000 for one application.
 - (ii) **Confirm smallholder farmer for GAFSP subsidy.** The GAFSP subsidy for commercial vegetable or indigenous crop farming is targeted for households unable to contribute the minimum 4 ropanis for orchard development. The LLMC should certify that the applicant for the GAFSP subsidy is unable to contribute the minimum 4 ropanis for orchard establishment.
 - (iii) **Proof of land ownership.** Check the applicant's land registration certificate for the plot being proposed for the orchard establishment or commercial vegetable farming (ensure applicant does not own more than 4 ropanis).
 - (iv) **Proof of lease.** Check for proof of lease agreement for a minimum of 15 years by the applicant on the proposed plot being proposed for the plantation.
 - (v) **Charter of association for cooperatives.** Check proof of charter of association to undertake commercial farming.
 - (vi) **Agri enterprise registration and tax clearance.** Check proof of registration and confirm proposed orchard establishment location is within the working area as per the business registration. Proof of tax clearance for the previous fiscal year.
 - (vii) **Bank account details and other associated documentation.** Check the applicant's bank account details, and other financial documentation required as per the prevailing laws.
 - (viii) **Water availability.** Check on availability of source of irrigation, and where the source is proposed from an irrigation pond/rainwater harvesting pond, availability of suitable land for it.
 - (ix) **Transportation access.** Check to ensure the proposed plot for the orchard establishment or commercial vegetable farming is within 3 km of a road (all-season or seasonal).
 - (x) **Ability to finance investment cost.** The LLMC will check either (i) proof of loan secured by the applicant to pre-finance the proposed investment cost, or (ii) confirmation letter by the applicant to self-finance the investment cost upfront and ability to self-finance 50% of the total investment cost of the proposed investment.
 - (xi) **Enterprise and business applications** with higher levels of own contribution, that engage higher numbers of smallholders, women-headed households or indigenous peoples from the project municipality as shareholders, provide greater local employment opportunities, and are climate-change responsive will be prioritized for project support.
9. Entities that are the subject of bankruptcy, criminal investigation, fraud or corruption or are in default of contractual agreements will be ineligible.
10. Applicants, with the support of CPMU and PIU, would be required to have an EMP prepared before approval for the subsidy. All investment applications will require to accomplish environmental screening checklist and brief social due diligence report, as will be detailed in the application form.

² Under the Companies Act 2006; Private Firm Registration Act 2014; Industrial Enterprises Act 2020.

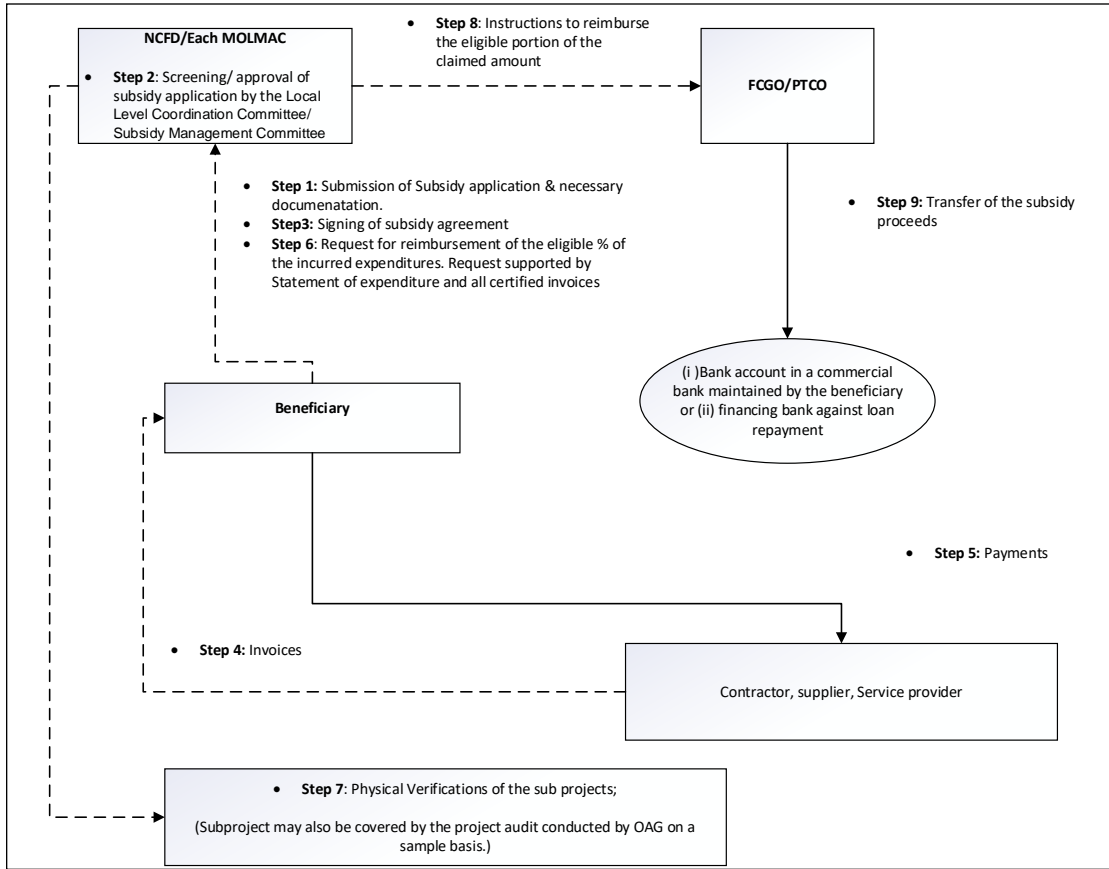
11. The beneficiary will not receive a subsidy payment: (i) for any expenditures made prior to the date of signature of the Agreement; (ii) if the beneficiary investment does not follow the agreed orchard establishment and management plan; (iii) for any amount more than 10% above the investment limit as detailed in the Agreement; (iv) land purchase; (v) items on ADB's Prohibited Investment Activities List; (vi) activities that do not comply with ADB's safeguard policy; and (vii) investments requiring an Environmental Impact Assessment (EIA).

12. **Orchard development.** Successful applicants will sign an Agreement committing them to establish and maintain the agreed orchard type and area for a period of not less than 10 years. The beneficiary will establish the orchard based on an agreed investment schedule and orchard establishment and management plan. The beneficiary is required to cover 20% of the orchard establishment cost in cash and will be assisted to negotiate a bank loan for the remaining portion of the orchard investment, repayable over 5 years. Upon completion of the orchard establishment, confirmed through an on-site inspection, the beneficiary will be paid a subsidy payment of 50% of the orchard establishment cost on eligible items against the submission of payment receipts. The beneficiary will be responsible for all interest charges and principal remaining after the subsidy payment.

13. **Vegetable and other crop farm development.** Successful applicants will sign an Agreement committing them to establish and maintain the agreed farm type and area for a period of not less than 5 years. The beneficiary will establish the farmland based on an agreed investment schedule and management plan. The beneficiary is required to cover 20% of the crop area establishment cost in cash and will be assisted to negotiate a bank loan for the remaining portion if required. Upon completion of the crop area establishment, confirmed through an on-site inspection, the beneficiary will be paid a subsidy payment of 50% of the farming area establishment cost on eligible items against the submission of payment receipts. The beneficiary will be responsible for all interest charges and principal remaining after the

14. The subsidy will be paid on a reimbursement basis based on a request duly signed by the beneficiary indicating the payment instructions and supported by the following documents: (i) a statement of expenditure duly signed, listing all expenditure items incurred and the related amounts; and (ii) supporting documentation for each expenditure item incurred, including invoices and receipts or other evidence of payment. The subsidy payment process is illustrated in the diagram below.

15. The project provides incentives to fruit and nut orchard farmers based on the plant survival rate. Farmer group facilitators will be responsible for providing visual picture and GIS coordinates of the plants through the land database/project management platform and it is estimated to provide approximately \$0.5 per healthy plant. 50% of the budget contribution will be made by local governments.



Attachment E. Matching Grant Programs for Value Chain Infrastructure and Nursery Development (Scheme 3, 4, 5 and 6)

1. The project will establish four competitive matching grant programs: (i) improved cooperative value addition grant; (ii) public-private infrastructure grant; (iii) strengthened local level infrastructure grant; and (iv) private nursery upgrading. All grants will be payable on a reimbursement basis once the planned investment is completed/operational, subject to the submission of an appropriate audited utilization certificate. MOF's prior concurrence on scheme guidelines will be required before disbursement.

- (i) Improved cooperative value addition (Scheme 3) under output 3. Cooperatives that have participated in the project-implemented cooperative development and capacity building program and are interested to invest in nut, fruit, vegetable and other nutritious crop marketing/value addition (e.g., harvesting handling equipment, primary washing, sorting, grading machinery, packaging equipment, short-term storage, marketing) will be eligible to compete for financing from this fund, which will finance up to 50% of approved investment cost. Successful applicant cooperatives will be required to contribute at least 30% in cash or credit and up to 20% in kind. Any grant will not exceed \$100,000.
- (ii) Public-private infrastructure (Scheme 4) under output 3. Agribusinesses and service providers interested to collaborate with cooperatives in nut and fruit value addition and market development will be eligible to compete for financing under this fund, which will finance up to 40% of approved investment cost. Successful applicants would be required to finance the balance of the investment through own financing, with not more than 25% financed in kind. The project will make available \$2.0 million for this activity. Grants will be capped at \$200,000 each. Eligible applicants will be enterprises registered for at least 3 years and having at least 2 years business experience related to their grant application (see below for further requirements). Where the grant applicant has foreign investors as shareholders, the foreign ownership shall not be more than 33%. Successful applicants would be required to enter into formal contractual relations with the participating cooperatives if awarded a grant.
- (iii) Strengthened local level infrastructure (Scheme 5) under output 3. The project will support local-level applications for grants for up to 50% of the value of market-linked infrastructure investments that provide public good benefits essential to targeted nut and fruit value chain engagement and/or climate change adaptation at the local level. The project will make available \$6.0 million for this activity (\$5.5 million for works and \$0.5million for design and construction supervision), and grants will be capped at \$150,000 each and the provincial or local governments would be required to cover the remaining 50% of any investment cost through its own budgetary resources. The project will fully finance the cost of the preparation of engineering designs and bill of quantity estimates for grant-financed infrastructure and the supervision of its construction.
- (iv) Private nursery upgrading (Scheme 6) under output 1. Up to 40 competitively selected orchards will be eligible for matching grants for investments that upgrade the quality and quantity of their seedling production. Matching grants could finance, *inter alia*, the purchase of mother plants and disease-free rootstock, the installation of insect proof shade houses, drip irrigation systems, the expansion and upgrading of seedling growth areas, etc. Matching grant financing of up to 50% of the investment cost would not exceed \$50,000 per nursery and labs – except 5 nurseries at provincial level. In each province of five provinces, 1 private

nursery will be supported up to \$100,000. Private laboratory development could apply for a separate application. Successful applicants would be required to pay the remaining 50% of the cost of eligible investments including at least 30% in cash or credit and up to 20% in kind.

2. Legal entities under the Nepal Companies Act, registered co-operatives and associations, and individuals (with more than five employees), all with relevant experience and registered for taxation purposes, will be eligible to apply for grant financing under the relevant grant category.

3. The NAFHA project will form a Competitive Grants Management Committee (CGMC) to manage the grants program under Output 1 and 3. The team will be chaired by the Senior Horticulture Development Officer/CPMU and include the National Consultant Team Leader, the PMU Account and Planning Officers and the five Provincial Project Managers.¹ The Committee will draw support from other cross-cutting thematic expertise within the PMU. The Planning officer will be the Committee secretary. The Committee will: (i) approve the invitations to bid for grants; (ii) coordinate the process of preliminary screening and field verification of expressions of interest; (iii) coordinate the process of analysis of investment options and business plan development facilitation²; (iv) recommend to the Project Manager for approval (or rejection) of any grant application; and (v) receive and review grant implementation progress reports and make recommendations to beneficiaries and project staff as required.

4. Grant investment proposals can be solicited through a formal public call or informally by using Agriculture Knowledge Centers (AKCs), local administrations, business networks, provincial line agencies, or the Federation of Nepalese Chambers of Commerce and Industry (FNCCI) or their provincial sub-groups. The investment proposal may be accepted at any time of the year.

Financial management arrangements

5. As part of the CGMC due diligence process the following financial management related eligibility criteria/documents will be required/scrutinized:

- (i) Legally registered entity (Certificate of registration and extract from Registrar);
- (ii) Annual Tax Return Report (1 year);
- (iii) Memorandum and Articles of Association;
- (iv) Audited books of Accounts (agribusinesses);
- (v) Should not have any significant audit observations (agribusiness);
- (vi) Permission for the CGMC to collect information from trade partners; and
- (vii) Demonstrated ability to cover the required O&M cost of the assets to be created under the subproject.

6. None of the above entities shall be eligible for support under the following circumstances:

- (i) having gone bankrupt or being liquidated; having its operations managed by courts; signing agreements with creditors, having its operational activities suspended; being subject to procedures concerning these matters or being in a condition due to a similar situation as per national laws or arrangements;
- (ii) being sentenced for offences related to their own business which cannot be appealed;

¹ Provincial Project Managers will participate virtually in Committee meetings.

² This may involve the recruitment of expert consultants to advise the Committee.

- (iii) being convicted of gross abuse related to a business matter which can be confirmed by the CGMC;
- (iv) non-performing obligations related to the payment of social security contributions or tax payments in accordance with the legal provisions in Nepal;
- (v) being subject to an adjudication due to being involved in fraud, corruption, a criminal organization, or other illegal activity which cannot be appealed

7. In-kind contribution may include: equipment, vehicles, buildings and other capital goods and/or raw materials for processing that are available at the time of the grant application. The in-kind contribution must be supported by appropriated documentation stating its value. The documentation must be based on market evaluation undertaken by an independent authorized entity. The PMU would reserve the right to have the assets independently valued.

8. The project would not accept the following costs or assets, neither as the beneficiaries' contribution nor, as expenditures eligible for reimbursement:

- (i) leasing of equipment, land and facilities;
- (ii) working capital;
- (iii) bank charges, cost of guarantees and similar charges;
- (iv) value of intellectual property rights;
- (v) study tours;
- (vi) value of previously existing inventory used for the production of related goods and/or services;
- (vii) general costs involved of an investment subproject proposal development/design (architects', engineers', consultants' and general legal fees, costs of feasibility studies for preparing the Detailed Investment Proposal and costs for acquisition of patents and licenses, etc.);
- (viii) business activities banned by ADB due to negative social or environmental impact and activities deemed illegal by Government of Nepal or ADB.

9. Competitive selection. Applications that meet the due diligence requirements will be evaluated by the CGMC for their competitiveness based on, *inter alia*: (i) the technical quality of the application and projected return on investment; (ii) applicant experience in the proposed field of investment; (iii) the application's inclusiveness, including the potential impact on low income communities and benefit sharing mechanisms; (iv) perceived innovativeness and sustainability of the application; (v) the applicants' willingness to co-invest, with higher own contributions being more favorably evaluated, as will be women headed enterprise applications. Additionally, the selected proposals should meet the following criteria: (i) no involuntary resettlement occurs; (ii) no significant negative environmental impact that will trigger environmental safeguards³; and (iii) no adverse impact on indigenous people.

10. Approval. Subject to a satisfactory due diligence and an assessment of the grant's competitiveness, the grant application submitted by the beneficiary organization, if successful, can be approved by the project director. Subsequently, the NCFD/DOAD will enter into a grant agreement with the beneficiary organization. The grant agreement will clearly specify the financial management and audit requirements as well as disbursement conditions and triggers. All grants will be paid only upon the completion of the agreed investment by the beneficiary. If additional

³ An environmental screening checklist will be accomplished by the PIU to determine potential environmental impacts.

financing is required, the PMU or one of its contracted agents will enable linkage between the beneficiary and project-supported financial institutions.

11. Grant agreement. The agreement between the NAFHA project and the grant recipient shall specify: (i) the duration of the grant; (ii) the amount of grant and amount and nature of the recipient contribution; (iii) the schedule and arrangements for grant payment upon applicant's submission of receipts for approved expenses (**grants will be disbursed upon investment completion**); (iv) the rights and responsibilities of grantor and recipient; (v) procedures for handling conflict of interests; (vi) conditions relating to the effectiveness and termination of the contract; (vii) the method of dispute resolution; and (viii) force majeure and final dispositions conditions.

12. Accounting. Each beneficiary organization will maintain separate books for the subproject transactions including a separate cash book, general ledger, journal register, register of works. In addition, all supporting documentation (proof of payment, work order, bills, utilization certificate, completion certificate interim payment certificate, extension order, etc.) will be kept in a separate file.

13. The amounts approved and disbursed to each beneficiary organization will be included in the grant register maintained by the NCFD/each DOAD.

14. From the ADB loan perspective, the disbursed payments to the beneficiary organization, will be considered as eligible for re-imburement/liquidation from the ABD as part of withdrawal applications. The NCFD/each DOAD will, however, separately monitor all funds advanced to the beneficiary organization until a utilization certificates (AUC) audited by a chartered accountant has been submitted by the respective beneficiary organization to the NCFD/each DOAD demonstrating that the funds have been used for the intended purpose as specified in the matching grant agreement. The amounts approved, disbursed and liquidated through the AUCs as well as any outstanding balance (by beneficiary organization will be included in the grant register maintained by the NCFD/each DOAD.

15. Financial Reporting. The beneficiary organization will produce utilization certificates which are to be audited/certified by a chartered accountant and submitted to the NCFD/each DOAD. The PMU will include in the quarterly progress report a report detailing the following for each beneficiary organization /subproject for the fiscal year to date and cumulative:

- (i) Grant amount approved;
- (ii) Grant amount disbursed for completed subprojects, and
- (iii) A list of all subproject/ beneficiary organizations that have been classified as non-performing.

16. The same information will be disclosed in notes of the project financial statements prepared by the PMU.

17. Audit Arrangements. Each beneficiary organization will have to submit final audited utilization certificates (AUC) certified by a Chartered Accountant, to the NCFD/each DOAD, to trigger any disbursement.

18. Moreover, sub-projects may be audited on a sample basis by the project auditor appointed by the NCFD/each DOAD or by OAG. In this regard, the grant register will be shared with the auditors in advance to facilitate the sampling procedure and the planning of the audit. Each

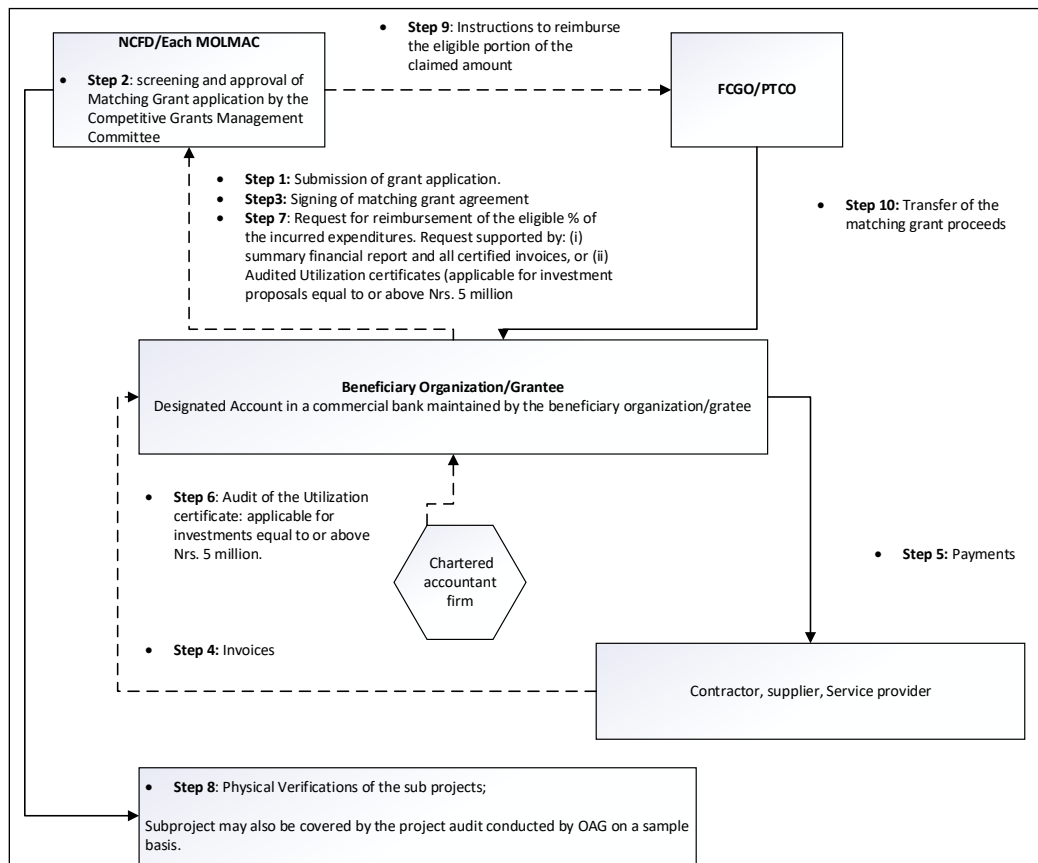
beneficiary organization must comply with the applicable statutory requirements (e.g., submission of Audit Report to the registering authority).

19. Disbursement of matching grant proceeds. The matching grant proceeds payment will be paid in one tranche and on a reimbursement basis subject to:

- a. a written confirmation from the technical staff that a physical inspection of the investment has been conducted and that the investment has been duly completed; and,
- b. receipt for a request of payment or equivalent (signed and dated) by the beneficiary/grantee indicating the payment instructions etc., and supported by either:

- 1. a statement of expenditure (signed and dated), listing all expenditure items incurred and the related amounts, and by full supporting documentation for each expenditure item incurred, including invoices and receipts or other evidence of payment - applicable to all investment proposals below NRS 5 million; or ,
- 2. a utilization certificate/statement of expenditure listing all expenditure items incurred and the related amounts duly certified by an independent auditor (chartered account) – Applicable to all investment proposals equal to or above NRS 5 million.

20. The FM and audit arrangements, flow of funds and flow of financial documentation applicable to the matching grant scheme under are illustrated in the figure below:



Attachment F: Project Targeting

Project Targeting Approach

1. The project design adopted three targeting approaches: (i) geographic targeting by including geographic areas with high concentration of poor people,¹ (ii) capacity-building and empowerment in planning and decision-making through training of cooperative member (mix of landless and land owners) and expansion of cooperative membership to the excluded or poor, and (iii) direct targeting of households that meet eligibility criteria for commercialization of nut and fruit production/processing businesses. For direct targeting, the project supports two types of beneficiaries: (i) smallholders who are willing to invest at least 4 ropani (0.2 ha) of land for fruit and nut production for a period of not less than 10 years, in collaboration with like-minded farmers who are willing to work in a group or through cooperatives;² and (ii) agribusinesses and private nurseries with: (a) higher level of own contribution for matching grant financing, (b) higher number of smallholders, women-headed households or ethnic people households from the project municipality engaged as shareholders, and (c) potential to offer sustainable employment opportunities (e.g., accounting, HR, research, harvesting, processing, marketing jobs) to landless and near landless people.³

2. Additionally, under the Global Agriculture and Food Security Program (GAFSP) project,, those micro smallholders with less than 4 ropani but are interested in hilly area farming will be encouraged for vegetable and other nutritious crop production.

I. Project geographical targeting

3. The project prioritized nine fruit and nut crops: almond, apple, avocado, citrus (lime, mandarin and sweet orange), kiwi, macadamia, pecan, and walnut with the objective of reducing imports and meeting demand for these crops in the future.

4. Crop suitability parameters were developed for each crop and mapped on GIS platform. The applied parameters are summarized in Table 1.

5. The project will support new orchard development in 100 municipalities across five provinces, with a target to establish an additional 10,000 ha of new orchards and 1,000 ha of both irrigated out of season vegetables and rain fed nutritious crops. The full list of selected municipalities is summarized in Table 2. Depending on the number of applications received from interested farmers, the target municipalities could be expanded within the same province or adjacent municipalities in different provinces that has better impacts for produce aggregation. In the event that the target area expansion needs to be considered, this decision will be discussed at the project steering committee and the proposal will be present to ADB for approval before any revised action takes place.

¹ Poverty in terms of standard of living is nearly doubled in mid-western and far-western regions as compared with other three regions.

² The Project estimates that banks normally require at least 20% of the total investment costs as up-front collateral or cash contribution.

³ It is expected that average at least 30% of farmers will own less than 5 ropani of land and at least 60% of beneficiaries own less than 10 ropani in project areas. Note that relatively larger landholders (between 5 and 10 ropani) are also smallholders and vulnerable to external shocks as they rely heavily on remittances.

Table 1. Crop Suitability Mapping Parameters Applied

Crop	Annual Mean Temperature (°C)	Chilling hours (hr)	Soil Texture	Soil Texture Range	Soil (pH)	Soil depth (m)	Elevation (m)	Slope (%)	Aspect (degree)	Humidity (%)	Precipitation (mm)	Sunlight (hr)	Commonly grown and/or Registered (R) varieties
Apple (High chilling varieties)	21-24 (Min to Max: -7-30)	1000-1400 (<7°C) in winter: Dec-Jan	Loam-Silt loam-loamy sand-sandy loam	(7,8,9,11)	5.5-6.5	1.5 to 2	2500 to 3800	3-35%	South West (225±22.5)	<55	250-1000	5-6 hrs	Red Delicious, Royal Delicious, Golden Delicious, Fuji, Gala
Apple (Medium chilling varieties)	21-24 (Min to Max: -7-30)	600 to 1000 (<7°C) in winter: Dec-Jan	Loam-Silt loam-loamy sand-sandy loam	(7,8,11,9)	5.5-6.5	1.5 to 2	1800 to 2500	3-35%	North East (45±22.5)	<55	250-1000	5-6 hrs	Crispin, Red June, Cox's Orange Pippin
Mandarin orange	18-28 (Min to Max: 5-35)		Loamy sands-sandy loam	(4,7,9,11)	5.5-6.5	1.5 to 2	800-1300	3-35%	North East (45±22.5)	70-80	1250-3500	5-6 hrs	Khoku local (R) and other local varieties Dhankuta Local
Sweet orange	18-28 (Min to Max: 5-35)		Loamy sands-sandy loam	(4,7,9,11)	5.5-6.5	1.5 to 2	800-1300	3-35%	North East (45±22.5)	70-80	1250-3500	5-6 hrs	Nepali Junar
Lime	18-28 (Min to Max: 4-36)		Loamy sands-sandy loam	(4,7,9,11)	5.5-6.5	1.5 to 2	500-800	3-35%	South (180±22.5)	70-80	1250-2500	6-7 hrs	Sunkagati-1 (R), Sunkagati-2 (R), Terhathum local (R) and, Indian varieties
Avocado	14-28 (Min to Max: 13-30)	Frost and freezing susceptible	Loam-Silt loam	(4,7,8)	5 to 7	2 to 3	400 to 1200	3-35%	South (180±22.5)	70-80	1000-2500	6-7 hrs	Hass, Ettinger, Fuerte, Reed, Topatopa
Kiwi	10 to 30 (Min-Max: 0-35)	600-800 (<7°C) in winter: Dec-Jan	Loam-Silt loam	(7,8)	6 to 6.5	1 to 1.5	1500-2000	3-35%	North East (45±22.5)	70-80	2000-3500	5-6 hrs	Allison, Bruno, Hayward, Monty
Walnut	21-24 (Min to Max: -7-35)	700 to 1500 (<7°C) in winter: Dec-Jan	Silt loam- clay loam-Clay	(1,4,7,8)	6.0 to 7.0	2 to 3	1700-3000	3-35%	South West (225±22.5)	<55	600-1500	5-6 hrs	Thin Shell, Hartly, Ashley, Payne
Macadamia	20-25 (Min-Max: 10-30)	Frost susceptible	Loamy sands-sandy loam	(4,7,9,11)	5-6.5	1 to 2	300-1000	3-35%	South (180±22.5)	>80	1500-3500	6-7 hrs	
Almond	15-32 (Min-Max: 10-35)	250-500 (<7°C) in winter: Dec-Jan	Loamy sands-sandy loam-sandy clay	(3,4,7,9,11)	7-8.5	2 to 3	1500-2400	3-35%	North East (45±22.5)	<55	300-1500	6-7 hrs	Mission, Jordonella, Ne plus Ultra and Texas
Pecan	20-27 (Min-Max: 0-30)	200-1000 (<7°C) in winter: Dec-Jan	Loamy sands-sandy loam	(4,7,9,11)	5.5-6.5	2 to 3	1200-2000	3-35%	North East (45±22.5)	<55	600-1800	5-6 hrs	

Table 2. List of project target municipalities

1) Province 1

District	Municipality Code	Municipality/ Rural Municipality
	82	Laligurans
	84	Myanglung
	85	Phedap
Dhankuta	74	Chhathar Jorpati
	75	Dhankuta
	77	Mahalaxmi
	78	Pakhribas
Bhojpur	97	Arun
	98	Bhojpur
	100	Pauwadungma
Khotang	124	Halesi Tuwachung
	128	Rawa Besi
	129	Diktel Rupakot Majhuwagadhi
Okhaldhunga	113	Champadevi
	117	Manebhanjyang
	120	Sunoshi
Solukhumbu	111	Solududhkunda
	105	Thulung Dudhkoshi
	106	Mapye Dudhkoshi
Total Priority Districts		7
Total Priority Municipalities		22

2) Bagmati

District	Municipality Code	Municipality/ Rural Municipality
Sindhupalchok	258	Chautara Sangachok Gadhi
	260	Indrawati
	263	Melamchi
Nuwakot	306	Likhu
	311	Tadi
Dhading	327	Netrawati Dabjong
	332	Tripura Sundari
	322	Gajuri
Total Priority Districts		3
Total Priority Municipalities		8

3) Gandaki

District	Municipality Code	Municipality/ Rural Municipality
	437	Galyang
Parbat	465	Jajjala
	466	Kushma
	468	Modi
	470	Phalebas
Mustang	452	Barhagaun Muktihetra
	453	Dalome
	454	Gharapjhong
	456	Thasang
Manang	450	Nashong
	451	Neshyang
	448	Chame
Myagdi	457	Annapurna
	458	Beni
Baglung	471	Badigad
	475	Galkot
	476	Jaimuni
	477	Kantekhola
	478	Nisikhola
Total Districts		10
Total Priority Municipalities		34

4) Karnali

District	Municipality Code	Municipality/ Rural Municipality
Rukum West	564	Banfikot
	566	Musikot
	567	Sani Bheri
Salyan	573	Dhorchaur
	577	Sharada
Jajarkot	628	Chhedagad
	629	Junichande
Dailekh	615	Aathabis
	623	Narayan
	618	Chamunda Bindrasaini
Kalikot	649	Kalika
	652	Naraharinath
Jumla	643	Hima
	646	Sinja
	644	Kanakasundari
Mugu	659	Khatyad
	661	Soru
Humla	668	Tanjakot
	662	Adanchuli
Dolpa	637	Mudkechula
Total Priority Districts		9
Total Priority Municipalities		20

5) Sudurpashchim

District	Municipality Code	Municipality/ Rural Municipality
Achham	692	Bannigadhi Jayagadh
	695	Kamalbazar
	696	Mangalsen
	698	Panchadewal Binayak
	701	Turmakhad
Bajura	671	Budhinanda
	675	Pandav Gupha
	676	Swami Kartik
Baitadi	743	Dasharathchanda
	748	Patan
Bajhang	681	Chabispathivera
	687	Masta
	683	Jaya Prithivi
	680	Bungal
Darchula	761	Shailyashikhar
	756	Lekam
Total Priority Districts		5
Total Priority Municipalities		16

Attachment G: Grievance Redress Mechanism

1. The PMU will establish and maintain a grievance redress mechanism (GRM) to support the social and environmental safeguards of the project. The GRM will receive, evaluate, and facilitate the resolution of impacted people's feedback, including concerns, complaints, and grievances about the social and environmental performance at the level of the Project. The GRM aims to provide a time-bound and transparent mechanism to voice suggestions and appreciations and to resolve social and environmental concerns linked to the project. The project specific GRM is not intended to bypass the government's own redress process, rather it is intended to address stakeholders' concerns and complaints promptly, making it readily accessible to all segments of the community, and is scaled to the risks and impacts of the project. Complainant may access the formal legal system at any time. A dedicated multi-tier GRM will be established to receive, evaluate, and facilitate the concerns and complaints of the affected people if any about the social and environmental performance at the project level. The GRM will aim to provide a time bound and transparent mechanism to voice and resolve social and environmental concerns linked with the project. The GRM shall aim to ensure:

- (i) The basic rights and interests of every person affected by poor environmental or social performance of the project are protected;
- (ii) Concerns arising from the poor environmental or social performance of the project during the conduct of pre-construction, construction and operation activities are effectively and timely addressed; and
- (iii) There is zero tolerance on Sexual Harassment, exploitation, and abuse (SHEA) during all stage of the project.

2. GRM is proposed to be simple, transparent, and responsive. GRM will address only the concerns arising due to the project implementation activities. At the CPMU, a centralized control and monitoring system will be established to provide adequate platform for the GRM, and address issues of all the relevant stakeholders of the project (i.e., farmers, local community, contractors, and other members in the value chain). The GRM will ensure that all grievances of all stakeholders, including from women and disadvantaged groups, are addressed within a time-bound and effective manner. The GRM will include service standards and an implementation modality by assigning Grievance Redressal Officer (GRO) at each PIU, and IAs to handle specific matters related to public grievances / complaints flagged to their respective offices.

3. The GRM will establish multiple channels by which grievances can be received by the CPMU. These can be broadly classified as – online-services (e.g., Toll-Free Helpline for verbal complaint registration via phone and via the Project web-platform, email) and offline/manual (e.g., mail and drop boxes which are located at all ward and municipality offices in project site, all 6 PIUs and CPMU). For all grievances submitted through online mode, PMU will review for sensitivity and confidentiality, before such complaints will be channelled to the GRO at the PIU and IA levels. All grievances submitted manually at drop box and mailed should be channelled through social safeguard specialist and GESI specialists and must be recorded by them into the GRM online system. In the processing of all grievances, GRO, PIUs, and IAs will follow best practices such as adoption of necessary procedures including acknowledging all grievances and complaints and assigning a central tracking number or ID for all grievances alongside basic service standards for the response. GRM will also cover handling of unresolved grievances and complaints through a process of escalation. The unresolved grievances will be transmitted to the next higher level – to CPMU and then ADB. The CPMU will aggregate all grievances to a single consolidated database to monitor the performance of PIUs and IAs and generate aggregate statistics on performance to be publicly disclosed on the project's web-platform. Awareness of grievance redress procedures will be created through the public awareness campaign, with the

help of print and electronic media and radio. Redress through the GRM does not impede access to the country's judicial or administrative remedies.

4. To ensure the GRM is in line with the SPS, the GRM will be culturally appropriate and gender responsive, equipped to receive and facilitate resolution of the Indigenous Peoples' concerns. This will be supported through: (i) membership of the indigenous peoples or their representative at the first tier GRM at field/village level; (ii) availability of the GRM form in local/indigenous dialect; (iii) installation of grievance box at all project locations; (iv) and installation of project billboard in the villages with grievance focal person's contact details and procedure on how to file a complaint, including in local or indigenous dialect. The GRM and its objective and functioning will be explained and shared during the initial project information dissemination to all community people, as part of stakeholder communication strategy, which will be continued to be disseminated in the form of public service announcement (PSA) through local radio/FM stations during all phases of the project (Year 1-7).

5. During project preparation, information regarding the GRM will be disclosed as part of the public consultation process. Feedbacks related to the implementation of the project will be acknowledged, evaluated, and responded to the complainant with corrective action proposed. The outcome shall also form part of the semi-annual monitoring report that will be submitted to ADB.

Principles

6. **Based on Stakeholder Rights.** Project stakeholders are those likely to be directly or indirectly affected, positively or negatively, by project activities. Stakeholders have the following rights under the project:

- **Right to information;**
- **Right against inappropriate intervention by an outside party;**
- **Right to a project free of fraud and corruption.**

7. **Open and Inclusive.** Any stakeholders (including villagers, contractors, project staff, authorities, and other involved parties) may file a feedback and/or a grievance if s/he believes his/her rights, or if any of the project's principles and procedures, has been violated. Anyone may give comments or suggestions about any aspect of the project. Comments, suggestions, appreciation, or questions should be recorded and submitted to the feedback handling focal points at community, district, and state level.

8. **Transparency.** Information about the GRM, including contact details, will be distributed to all participating communities, at public meetings, through brochures/pamphlets in local languages, posted at ward/municipality boards and, to the extent possible, advertised on local radio and FM stations.

9. **Accessibility.** Different channels can be used for filing feedback, including by letter (using locked mailboxes and drop boxes with signboards in each project community), by phone (toll free hotline), email, social media, project website. Community members and stakeholders themselves decide on the best ways to file complaints.

10. **Free.** There is no charge for filing an inquiry and/or a feedback.

11. **Anonymity, Confidentiality, and Security.** All feedback, and especially grievances, are treated confidentially. Feedback is disclosed publicly, but the identity of the feedback giver is treated as confidential and is withheld unless they self-identify. Feedback focal points, and members of FHCs violating this confidentiality are subject to sanctions. All feedback collected via drop box and mail must be opened and recorded by either the GESI specialist/social safeguard specialist with support from feedback handling focal persons at each level (ward/municipality, PIUs & CPMUs).
12. **Quick Action.** A grievance is answered within 15 days of the time the feedback is received. Grievances should be resolved within 60 days of receipt.
13. **Subsidiarity.** Any feedback and grievances are addressed and resolved locally, and at the lowest level, if possible. If a grievance cannot be resolved locally, it is sent to a higher level, within 15 days of receipt.
14. **Objective and Independent.** The grievance focal point assigned to handle feedback or resolve a grievance interviews the person who filed the feedback or grievance, documents the actions taken at the location where the complaint originated, and discloses the response or the resolution taken for the case. Serious feedback and grievances, including any allegations related to the misuse of funds, must be reported to the province-level FHC immediately. Designated PMU staff enter agreed feedback action in the project management information system (MIS), and when and by whom action to resolve any grievance was taken. The province-level feedback committee reviews the feedback MIS data monthly.

Process

15. A FHM will be established with the formation of Grievance Redress Committees (GRC) at three levels: i.e., ward/municipality level, province level and CPMU level.
16. The ward/municipality/community level GRC will comprise of the:
- Ward chairperson and municipality⁷³ (Joint chairpersons);
 - ward/municipality feedback handling focal persons (elected by respective groups);
 - Representatives of women and disadvantaged groups including IPs;
 - A selected representative from the affected community;
 - A representative from local CBO/NGO or locally elected representative from DAG group (e.g., women Dalit member of the ward office);
 - PIU GESI focal person/ Specialist (PIU Feedback handling focal point).
17. The Province level GRC will comprise of the:
- Secretary of provincial agriculture ministry/PA and NCFD (PIU)
 - Representative of Ministry of Social Development
 - PIU GESI Specialist (PIU Feedback handling focal point)
 - A representative from local NGOs or a local person of repute and standing in the Society or an elected representative.
 - A selected representative from the affected community.
18. The CPMU level GRC will comprise of the:
- Project Director, Secretary MOALD;

⁷³ One FHC representatives of both the ward/municipality will be a woman.

- Secretary, MOF;
- Chief of NCFD;
- CPMU Level Environmental Officer;
- CPMU Social Safeguards Officer (CPMU Feedback handling focal point);
- CPMU GESI specialist.

19. All persons involved in project implementation will be trained on how to receive and handle feedback, and how to keep it confidential.

20. The grievance handling process will involve five steps: (1) intake; (2) sorting; (3) verification; (4) action; and (5) follow-up and monitoring.

21. **Step 1: Intake.** A grievance can be filed by anyone, and through different means:

- Verbal communication to a ward/municipality feedback focal point, and/or designated and trained block or district DOH and DIPH feedback handling officers
- Using a feedback envelope and the suggestion box placed at each ward/municipality meeting place/office. The elected ward/municipality feedback handling focal person open the feedback box at least every week and send the report to GESI focal person. Each box is equipped with two locks, with one key each held by the ward/municipality
- Feedback handling officers and with GESI specialist/focal person respectively. Feedback/grievance envelopes from the box must be opened in front of at least two people – e.g., ward/municipality grievance redress officers and Secretaries/ PIU GESI specialists / FP
- Letters to the MOALD at federal and agriculture ministry at province level, ward and municipality offices, and the CPMU at province level
- At meetings and monitoring visits
- E-mails to dedicated e-mail addresses of the MOALD, provincial ministries and the CPMU and PIUs;
- A dedicated phone line for CPMU and PIUs

22. On each province and municipality government website they must conduct "social accountability " that enables a citizen to lodge a complaint through the feedback form under contact section. A dedicated section for grievance handling on project website, also linked to MOALD, provincial ministry/DOAD and ADB sites. Feedback or complaints can be sent at any time to any level (e.g., a grievance can be directed to the ward/municipality, province and central level). If a grievance is related to a community, the complaint is encouraged to report to the province level. If a grievance is related province, it is suggested to report to the CPMU level.

20. At the community level, the elected ward/municipality feedback handling focal persons are the regular primary contact for anyone who wishes to file a feedback/grievance. If an individual prefers, feedback or grievances can be sent to GESI staffs involved in the project implementation, such as PIU GESI focal person/ specialists or CPMU social safeguard/ GESI specialist.

21. Any staff receiving grievances must complete the project grievance form and submit it without delay to the assigned province feedback handling focal point.

22. At the federal level MOALD, MOF or CPMU staff receiving grievances must complete the project grievance form and submit it without delay to the grievance-handling officer of the PMU.

23. **Step 2: Sorting.** The CPMU Monitoring and Evaluation (M&E) officer will maintain a feedback recording system in the project Management Information System (MIS). Feedback will be divided into eight categories:

- Category 1: General inquiries
- Category 2: Feedback regarding violations of policies, guidelines and procedures
- Category 3: Feedback regarding contract violations/breach of contract
- Category 4: Feedback regarding the misuse of project funds
- Category 5: Feedback regarding abuse of power/intervention
- Category 6: complaints against Sexual harassment, exploitation and abuse
- Category 7: Reports of force majeure
- Category 8: Suggestion
- Category 9: Appreciation

24. The CPMU Social Safeguards specialist will be responsible for categorizing feedback received at the federal level and entering it into the project MIS. The municipality level feedback focal points will categorize feedback received at the ward/municipality level and any feedback referred upwards by ward/municipality chairpersons and enter it into the project MIS. Feedback received at ward/municipality level that can be managed locally will be maintained in ward/municipality records and periodically entered into the MIS by the PMU M&E team.

25. Once a grievance has been received, the relevant feedback handling focal points decide how to handle it, including the timeframe within which the case should be resolved, with a timeframe not exceeding 60 days. Feedback relating to:

- a community issue will be handled by the ward/municipality chairpersons. To the extent possible, community feedback/complaints should be addressed at the ward/municipality GRC level, however, the community FHC chairpersons can refer grievances upward to the province GRC;
- a block issue will be handled by the district feedback focal points;
- a province issue will be handled by PIU feedback focal point; and
- Grievances that are of a serious nature (e.g., all allegations of fraud or corruption, and potentially any grievance in categories 2 through 5), the province feedback focal point consult with the CPMU feedback focal point for advice on the appropriate action.

If the person filing the grievance is known, the relevant feedback focal point communicates the timeframe and course of action to the complainant within one week of receipt of the grievance.

27. **Step 3: Verification.** The responsible feedback focal point(s) handling the grievance gather facts and clarify information to generate a clear picture of the circumstances surrounding the grievance. At community level, ward/municipality chairpersons, deputy chairpersons or secretaries will assist their respective focal points to verify grievances. Verification normally includes site visits, a review of documents, a meeting with the complainant (if known and willing to engage), ward/municipality Committee members, and meetings with those who could resolve the issue (including formal and informal community leaders). Feedback related to the misuse of funds may also require meetings with suppliers and contractors and will need to be posted in municipality sites as part of their social accountability process and public hearing/audit.

28. For serious grievances received at the federal level by phone or letter, the CPMU GRC

decides whether (i) to launch its own investigation; or (ii) instruct the province and municipal/ward feedback focal points to conduct an initial investigation at the location where the grievance/problem occurred. If the district-level feedback focal points cannot resolve the grievance, it will, within 15 days, be reported back to the CPMU GRC for further action.

29. Within the allotted period, the results of the verification are presented by the respective feedback focal points to the respective GRCs (dependent on the nature of the complaint) for action.

30. At federal and province level, the respective grievance handler fills in the grievance form and submits it to the CPMU M&E officer who enters it into the project MIS.

31. **Step 4: Action.** Feedback from the community level should be handled and recorded in the wards, if possible. For issues that cannot be resolved within 21 days at the community level, the municipality GRC's review these grievances and the results of the verification and determine the action to be taken. If referred to province level, once the needed action(s) are carried out, the province grievance handler fills in a grievance report and enters it into the MIS.

32. If the actions cannot be carried out, or the grievance cannot be satisfactorily resolved in a reasonable period of time (less than 30 days), the province GRC refers the matter back to the CPMU feedback focal point (Social Safeguards specialist) to review the case and determine the action to be taken.

33. If the complainant is known, the feedback focal point with whom the grievance was filed communicates the action to the complainant. The feedback focal point must seek feedback from the complainant as to whether the action(s) are deemed to be satisfactory. If the action is considered unsatisfactory, the complainant may file a new grievance. A new grievance on an existing case is handled at the next higher level from the initial case. The ward/municipality GRC communicates the action taken as a result of a grievance, to community people at the next ward/municipality meeting.

35. **Step 5: Follow-up and Monitoring.** In its regular supervision visits, the CPMU assess the functioning of the province and ward/municipality GRMs and undertakes spot checks. The CPMU uses the MIS to provide a monthly snapshot of the GRM (number and category of comments received, and grievances/suggestions resolved), including any suggestions received and acted on.

37. The CPMU uses the MIS to report on grievances and FHM feedback in its quarterly implementation progress reports, safeguard monitoring reports, and its annual reports. Reports include information on grievance resolution and trends (number of grievances received, cause of grievance, number resolved, average time taken to resolve a grievance, percentage of individuals having filed a grievance who are satisfied with the action taken, number of grievances resolved at the lowest applicable level, etc.).

38. The CPMU and the ADB review grievance monitoring data as part of regular implementation support missions.³⁹ A review of the grievance handling system (including the grievance of those who have used it) is undertaken during every second year to assess the efficacy of the mechanism and introduce improvements.⁴⁰ The decision of the GRCs is binding, unless vacated by the court of law. The affected person, however, is free to access the country's legal system at any time and stage although the project GRM is the preferred route. The GRC will continue to function, for the benefit of the stakeholders, during the entire life of the project.⁴¹ The affected people can also register their grievances on the Government website (province and municipality) under the social

accountability section that enables a citizen to lodge a complaint. The project GRM would be supported through this existing government feedback mechanism. However, since these are general feedback sites, the feedback received for this project should be extracted and forwarded to the province GESI specialist for its update into the GRM MIS.

42. People who are, or may in the future be, adversely affected by the project may submit complaints to ADB's Accountability Mechanism. The Accountability Mechanism provides an independent forum and process whereby people adversely affected by ADB-assisted projects can voice, and seek a resolution of their problems, as well as report alleged violations of ADB's operational policies and procedures. Before submitting a complaint to the Accountability Mechanism, affected people should make a good faith effort to solve their problems by working with the concerned ADB operations department. Only after doing that, and if they are still dissatisfied, should they approach the Accountability Mechanism.⁷⁴

⁷⁴ For further information see: <http://www.adb.org/Accountability-Mechanism/default.asp>.

Attachment H: Quarterly Progress Report Template

H.1 GESI Quarterly reporting Template

Activities, targets/performance indicators, timeframe, responsibility	Quarterly progress during the quarter	Cumulative progress	Issues, challenges, remarks
Output 1:.....			
Activity 1:..... 1. Target/performance indicator 2. Target/performance indicator			
Activity 2:..... 3. Target/performance indicator 4. Target/performance indicator			
Activity 3:..... 5. Target/performance indicator 6. Target/performance indicator			
Activity 4:..... 7. Target/performance indicator 8. Target/performance indicator			

Attachment H.2. Environmental Safeguards Discussions

1. **Implementation of Environmental Management Plan (EMP).** Indicate the status of EMP inclusion on work packages. Discuss the implementation of mitigation measures to reduce impacts of project activities, and attach sample photographs of these measures and discuss them briefly.
2. **Statutory Environmental Requirements.** Discuss the status of any applicable government clearance/s, permit/s, etc., and compliances on these by the project.
3. **Grievance Redress Mechanism Information.** Indicate the any grievance/s received at the period of the QPR and status of ongoing grievance.

Attachment H3. Financial Information to be Included in the Quarterly Progress Report

General Instructions

The financial information in the format outlined below are to be included in the quarterly progress reports (QPRs) to be submitted to ADB within 60 days after each quarter. In case of delays or incomplete information, ADB will submit a reminder to the EA/IA. Repeated delays or incomplete information may have a negative impact on the project performance ratings and may be discussed during review missions.

Section A. Utilization of Funds (ADB Loan, and Counterpart Funds)

In this section include the following information:

- i. Overall status of project financing including the adequacy and timeliness of counterpart funds;
- i. cumulative contract awards financed by the ADB loan, ADB grant and counterpart funds (commitment of funds to date), and comparison with time-bound projections (targets – for ADB financing compare the actual contract awards with the contract award curve included in the PAM). Include an analysis of significant variances between planned and actual contract awards; Provide contract-wise details as per annex 2
- ii. cumulative disbursements from the ADB loan, ADB grant and counterpart funds (expenditure to date), and comparison with time-bound projections (targets – for the ADB financing compare the actual disbursement with the disbursement projections as per the S curve included in the PAM), Include an analysis of significant variances between planned and actual disbursements;
- iii. Reconciliation of project records and ADB disbursement records (LFIS/GFIS) for the reporting period and cumulative from project inception to end of the reporting period. Explain reasons for discrepancies and outline follow-up actions required (if any). Attach a detailed reconciliation by WA as per Annex 1; and.
- iv. re-estimated costs to completion (if required), need for reallocation within ADB loan categories, and whether an overall project cost overrun is likely.
- v. Performance of PFIs including amounts disbursed to each PFI as part of the Credit Guarantee fund and forecast for the next six months; and,
- vi. analysis of the matching grants and subsidies schemes including the number of subsidies. Matching grants and related amounts approved, disbursed, etc.. Non performing recipients including non submission or audited utilization certificates (if any) are also to be discussed;

Section B. Financial Management

In this section, include the following information:

- i. Summary of the Financial management arrangements in the project including: a) any problems in the existing FM arrangements and/or flow of funds and b) any significant changes occurred during the reporting period (e.g. FM staff turnover, implementation of new financial systems, emerging FM related risks etc.);
- ii. Summary of the status of each agreed action in the FM action plan outlined in the PAM. Attach a detailed log as per Annex 4;

- iii. Outline the status of recommendations and immediate actions provided by ADB as part of the consolidated APFS review (if any) and FM related recommendations agreed during ADB review missions (if any). Attach a detailed log as per Annex 5; and,
- iv. Summarize the status of Status of past audit observations (if any). Attach a detailed log as per Annex 3.

Annexes:

Attach also the following annexes to the QPR when submitting it to ADB:

- **Annex 1:** ADB loan/grant disbursement report including a detailed reconciliation (by Withdrawal application) of project records and ADB disbursement records (LFIS/GILFIS) for the fiscal year to date and cumulative;
- **Annex 2:** Contract register/List of signed contracts
- **Annex 3:** Detailed subsidy register (by recipient organization)
- **Annex 4:** Detailed matching grant register (by grantee)
- **Annex 5:** Status of past audit observations (resolved/ pending);
- **Annex 6:** Status of FM action plan (complied/ongoing)
- **Annex 7:** Status of FM related actions agreed during ADB review missions (if any).

**Annex 1. Disbursement report for the Fiscal Year to Date and Cumulative
including Detailed Reconciliation (by Withdrawal Application) of Project Records and ADB Disbursement Records (LFIS)
(Separate Statement of Disbursement to be included for the ADB loan and ADB grant)**

Statement of Disbursement by ADB Financing Source for the year ended DD/MM/YYYY				
Statement of Disbursement	Notes	Reporting period	Fiscal year to date	Cumulative Project to Date
ADB loan/grant- Funds claimed during the year	A			
Reimbursement				
Advance Fund				
Subtotal				
Expenditure incurred not yet claimed	B			
Subtotal				

Note A: Detailed Reconciliation (by Withdrawal Application) of Project Records and ADB Disbursement Records (LFIS) for the Fiscal Year to Date and Cumulative (separate WA register to be maintained for the ADB loan and ADB grant)

Project: XXX ADB Loan/grant; XXX											
WA Details				Per project records/APFS (Amount recorded in the project Financial statements as reimbursement, direct payment, etc..)				Per ABD disbursement records LFIS/GFIS (actual Paid)			Remarks
Withdrawal application No (WA)	Disbursement method (reimbursement, direct payment, etc..)	Status (pending, disbursed)	Time period covered in the WA	Date	In local currency (as recorded in project records/ financial statements)	exchange rate	USD equivalent (A)	Value date	In USD (B)	Difference (A-B)	Reason for difference (i.e. timing forex. Pending rejected)
1	e.g. Reimbursement		1-31.3.2020	DD/MM/YYYY	XXXXX	XX	XXXXXXX	DD/MM/YYYY	XXX X	XXX	
2	e.g. Reimbursement		1.2.2021-30.2.2012	DD/MM/YYYY	XXXXX	XX	XXXXXX	DD/MM/YYYY	XXX X	XXXX	
3			---	DD/MM/YYYY	XXXXX	XX	XXXXXX	DD/MM/YYYY	XXX X	XXXX	
etc..											
Total - Fiscal year to Date							XXXXX		XXXXXXX	XXX	
Total cumulative to date							XXXXX		XXXXXXX	XXXX	

Note B: Provide a breakdown of expenditures incurred but not yet claimed from ADB including the eligible portion for ADB financing.

Annex 2: Status of Signed Contracts/register of contracts Cumulative to date

Contract Information										
Description*	Contract Description	Contract Start	Contract End	Supplier/Contractor Name	Contract No.	Total Contract Value	Total Contract Amount Invoiced to date	Total Disbursed on Contract	Total Undisbursed Amount	Responsible entity (e.g NCFD, NARC, DOAD etc.)
1. Civil works										
2: Equipment/ supplies										
3. Consulting services										
Total										

*Classified a per expenditure categories outlined in the PAM.

Annex 5: Status of Internal/External Audit Observations – Cumulative from Inception to End of Reporting Period

Responsible Entity: NCFD, NARC, DOAD	Internal/External Audit Recommendation	Date of the Recommendation	Planned Actions to Address the Recommendation	Responsibility	Current Status of the Planned Action (pending /resolved)	Remarks

Annex 6: Status of Financial Management Action Plan

Key Risk	Risk Mitigating Activity	Timeline	Responsible Entity	Current status (implemented/Pending)	Remarks (including an action plan in case of noncompliance)

Annex 6: Status of FM related actions agreed during ADB review missions or TPRMs

Date of the review mission	Agreed actions	Timeline	Responsible Entity	Current status (implemented/Pending)	Remarks

Attachment I: Procurement Plan

(Separate Document)

APPENDIX I: PROCUREMENT PLAN

Basic Data		
Project Name: Nuts and Fruits in Hilly Areas Project		
Project Number: 48218-006	Approval Number: {to follow}	
Country: Nepal	Executing Agency: Ministry of Agriculture and Livestock Development	
Procurement Risk: Moderate	Implementing Agencies (7): National Center for Fruit Development, Nepal Agricultural Research Council, Directorate of Agriculture Development (DOAD) Province 1, DOAD Bagmati, DOAD Gandaki, DOAD Karnali, and DOAD Sudurpashchim	
Project Financing Amount: \$93.45 million ADB Financing: \$ 60 million (COL) and \$10 million (ADF-13 grant) Cofinancing (ADB Administered) - GAFSP grant: \$ 9 million Non-ADB Financing (Government Financing): \$14.45 million	Project Closing Date: September 2029	
Date of First Procurement Plan: 12 July 2022	Date of this Procurement Plan: 12 July 2022	
Procurement Plan Duration: 18 months	Advance contracting: Yes	eGP: Yes

A. Methods, Review and Procurement Plan

Except as the Asian Development Bank (ADB) may otherwise agree, the following methods shall apply to procurement of goods, works, nonconsulting services, and consulting services.

Procurement of Goods, Works and Nonconsulting Services	
Method	Comments
Open Competitive Bidding (OCB) with national advertisement for works	IAs to procure OCB works using Nepal Electronic Government Procurement System (Ne-GPS).
Open Competitive Bidding (OCB) with national advertisement for goods	For procurement of machinery and equipment – NCFD through Ne-GPS.
Request for quotations (RFQ) for goods and non-consulting services	RFQ to be considered for readily available goods (e.g. computer hardware/software), standard-specification commodities of small value (e.g. planting materials, PCR machine), standard or routine services, or simple civil works of small value.

Consulting Services	
Method	Comments
Quality- and Cost-Based Selection (QCBS) for Consulting Firm	Evaluation methodology – Quality: Cost Ratio 90:10
Consultants' Qualifications Selection (CQS)	To be done by requesting amplified and detailed EOIs in a standard template and inviting the best-qualified consultant based on the EOIs to submit a combined technical and financial proposal. CQS will be considered for the packages of practice preparation and training of these packages to farmers, government staff and the private sector.
Competitive for Individual Consultant Selection (ICS)	For guarantee fund operation support and other technical experts that are not sourced through a firm selection.

B. List of Active Procurement Packages (Contracts)

The following table lists goods, works, nonconsulting, and consulting services contracts for which the procurement activity is either ongoing or expected to commence within the procurement plan's duration.

Goods, Works, and Nonconsulting Services							
Package Number	General Description	Estimated Value (\$)	Procurement Method	Review	Bidding Procedure	Advertisement Date	Comments
CW01-A	Horticulture center/station and NCFD office upgrade	500,000	OCB-National	Prior	1S2E	Q3 2022	<p>Non-Consulting Services: No</p> <p>Advertising: National</p> <p>No. Of Contracts: 1</p> <p>Prequalification of Bidders: No</p> <p>Domestic Preference Applicable: No</p> <p>Advance Contracting: Yes</p> <p>Bidding Document: Small Works</p> <p>High Risk Contract: No</p> <p>e-GP: Yes e-GP Type: e-Bidding</p> <p>Covid-19 Response? No</p> <p>Comments: NCFD Warm Temperate Horticulture Center, Kirtipur; Temperate Horticulture Farm, Marpha; Citrus Fruit Development Center, Palpa and NCFD building upgrade/enhancement.</p> <p>NCFD procurement</p>
CW01-B	NCFD high-tech nurseries	270,000	OCB-National	Prior	1S2E	Q3 2022	<p>Non-Consulting Services: No</p> <p>Advertising: National</p> <p>No. Of Contracts: 1</p> <p>Prequalification of Bidders: No</p> <p>Domestic Preference Applicable: No</p> <p>Advance Contracting: Yes</p>

Goods, Works, and Nonconsulting Services							
Package Number	General Description	Estimated Value (\$)	Procurement Method	Review	Bidding Procedure	Advertisement Date	Comments
							Bidding Document: Small Works High Risk Contract: No e-GP: Yes e-GP Type: e-Bidding Covid-19 Response? No Comments: NCFD Warm Temperate Horticulture Center, Kirtipur; Temperate Horticulture Farm, Marpha; Citrus Fruit Development Center, Palpa and NCFD building upgrade/enhancement. NCFD procurement
CW02	Horticulture center/station upgrade– NARC Horticulture Research Station, Malepatan; and Directorate of Agriculture Research, Lumle, Gandaki	240,000	OCB-National	Prior	1S2E	Q1 2023	Non-Consulting Services: No Advertising: National No. Of Contracts: 1 Prequalification of Bidders: No Domestic Preference Applicable: No Advance Contracting: Yes Bidding Document: Small Works High Risk Contract: No e-GP: Yes e-GP Type: e-Bidding Covid-19 Response? No Comments: Demonstration plot, high-tech nurseries, laboratories, security guard, office for two NARC stations. NARC procurement

Goods, Works, and Nonconsulting Services							
Package Number	General Description	Estimated Value (\$)	Procurement Method	Review	Bidding Procedure	Advertisement Date	Comments
CW03	Horticulture center/station upgrade - NARC Horticulture Research Station, Dailekh; and Horticulture Research Station, Rajikot, Karnali	240,000	OCB-National	Prior	1S2E	Q1 2023	<p>Non-Consulting Services: No</p> <p>Advertising: National</p> <p>No. Of Contracts: 1</p> <p>Prequalification of Bidders: No</p> <p>Domestic Preference Applicable: No</p> <p>Advance Contracting: Yes</p> <p>Bidding Document: Small Works</p> <p>High Risk Contract: No</p> <p>e-GP: Yes e-GP Type: e-Bidding</p> <p>Covid-19 Response? No</p> <p>Comments: Demonstration plot, high-tech nurseries, laboratories, security guard, office for 2 NARC stations.</p> <p>NARC procurement.</p>
CW04	Horticulture center/station upgrade–NARC National Citrus Research Program, Paripatle, Dhankuta (Province 1)	80,000	OCB-National	Prior	1S1E	Q1 2023	<p>Non-Consulting Services: No</p> <p>Advertising: National</p> <p>No. Of Contracts: 1</p> <p>Prequalification of Bidders: No</p> <p>Domestic Preference Applicable: No</p> <p>Advance Contracting: Yes</p> <p>Bidding Document: Small Works</p> <p>High Risk Contract: No</p> <p>e-GP: Yes e-GP Type: e-Bidding</p>

Goods, Works, and Nonconsulting Services							
Package Number	General Description	Estimated Value (\$)	Procurement Method	Review	Bidding Procedure	Advertisement Date	Comments
							<p>Covid-19 Response? No</p> <p>Comments: For demonstration plot, high-tech nurseries, laboratories, security guard, office for 1 NARC station.</p> <p>NARC procurement.</p>
CW05	Horticulture center/station upgrade –Dry Fruit Development Center, Baitadi, Sudurpashchim	280,000	OCB-National	Prior	1S2E	Q2 2023	<p>Non-Consulting Services: No</p> <p>Advertising: National</p> <p>No. Of Contracts: 1</p> <p>Prequalification of Bidders: No</p> <p>Domestic Preference Applicable: No</p> <p>Advance Contracting: No</p> <p>Bidding Document: Small Works</p> <p>High Risk Contract: No</p> <p>e-GP: Yes e-GP Type: e-Bidding</p> <p>Covid-19 Response? No</p> <p>Comments: demonstration plot, high-tech nurseries, laboratories, security guard, office.</p> <p>DOAD Sudurpashchim procurement.</p>
CW06	Horticulture center/station upgrade– Horticulture Center, Phaplu, Solukhumbu, Province 1	100,000	OCB-National	Prior	1S1E	Q2 2023	<p>Non-Consulting Services: No</p> <p>Advertising: National</p> <p>No. Of Contracts: 1</p> <p>Prequalification of Bidders: No</p> <p>Domestic Preference</p>

Goods, Works, and Nonconsulting Services							
Package Number	General Description	Estimated Value (\$)	Procurement Method	Review	Bidding Procedure	Advertisement Date	Comments
							Applicable: No Advance Contracting: No Bidding Document: Small Works High Risk Contract: No e-GP: Yes e-GP Type: e-Bidding Covid-19 Response? No Comments: Demonstration plot, high-tech nurseries, laboratories, security guard, office DOAD Province 1 Procurement
CW07	Horticulture center/station upgrade– Subtropical Horticulture Development Center, Trisuli, Nuwakok, Bagmati	260,000	OCB-National	Prior	1S2E	Q3 2023	Non-Consulting Services: No Advertising: National No. Of Contracts: 1 Prequalification of Bidders: No Domestic Preference Applicable: No Advance Contracting: No Bidding Document: Small Works High Risk Contract: No e-GP: Yes e-GP Type: e-Bidding Covid-19 Response? No Comments: Demonstration plot, high-tech nurseries, laboratories, security guard, office DOAD Bagmati procurement

Goods, Works, and Nonconsulting Services

Package Number	General Description	Estimated Value (\$)	Procurement Method	Review	Bidding Procedure	Advertisement Date	Comments
CW08	Horticulture center/station upgrade – Horticulture Development Resource Center, Pokhara, Gandaki	300,000	OCB-National	Prior	1S2E	Q3 2023	<p>Non-Consulting Services: No</p> <p>Advertising: National</p> <p>No. Of Contracts: 1</p> <p>Prequalification of Bidders: No</p> <p>Domestic Preference Applicable: No</p> <p>Advance Contracting: No</p> <p>Bidding Document: Small Works</p> <p>High Risk Contract: No</p> <p>e-GP: Yes e-GP Type: e-Bidding</p> <p>Covid-19 Response? No</p> <p>Comments: demonstration plot, high-tech nurseries, laboratories, security guard, office.</p> <p>DOAD Gandaki procurement.</p>
G01	Office and food processing equipment, and IT equipment-NCFD	240,000	RFQ	Prior	RFQ	Q3 2022	<p>Non-Consulting Services: No</p> <p>No. Of Contracts: 1</p> <p>Advance Contracting: Yes</p> <p>High Risk Contract: No</p> <p>e-GP: Yes e-GP Type: e-Bidding</p> <p>Covid-19 Response? No</p> <p>Comments: Including computer hardware and software + M&E system GIS based sapling tracking + Food processing/ testing equipment</p>

Goods, Works, and Nonconsulting Services							
Package Number	General Description	Estimated Value (\$)	Procurement Method	Review	Bidding Procedure	Advertisement Date	Comments
G04-A	PCR machinery and lab equipment – 3 NARC stations	65,000	RFQ	Prior	RFQ	Q4 2022	<p>Non-Consulting Services: No</p> <p>No. Of Contracts: 1</p> <p>Advance Contracting: No</p> <p>High Risk Contract: No</p> <p>e-GP: Yes e-GP Type: e-Bidding</p> <p>Covid-19 Response? No</p> <p>Comments: Horticulture Research Station, Malepatan; National Citrus Research Station, Paripatle; and Horticulture Research Station, Rajikot</p>
G04-B	PCR machinery and lab equipment - Horticulture Development Resource Center, Pokhara	15,000	RFQ	Prior	RFQ	Q1 2023	<p>Non-Consulting Services: No</p> <p>No. Of Contracts: 1</p> <p>Advance Contracting: No</p> <p>High Risk Contract: No</p> <p>e-GP: Yes e-GP Type: e-Bidding</p> <p>Covid-19 Response? No</p> <p>Comments: DOAD Gandaki Procurement</p>
G05-A	Genetic materials (mother plantations, rootstocks, scion varieties, etc.) for 2023 implementation	50,000	RFQ	Prior	RFQ	Q2 2022	<p>Non-Consulting Services: No</p> <p>No. Of Contracts: 3</p> <p>Advance Contracting: Yes</p> <p>High Risk Contract: No</p> <p>e-GP: Yes</p> <p>Covid-19 Response? No</p> <p>Comments: NCFD contracts</p>
G06	Vehicle	560,000	RFQ	Prior	RFQ	Q2 2022	<p>Non-Consulting Services: No</p>

Goods, Works, and Nonconsulting Services							
Package Number	General Description	Estimated Value (\$)	Procurement Method	Review	Bidding Procedure	Advertisement Date	Comments
							No. Of Contracts: 11 Advance Contracting: Yes High Risk Contract: No e-GP: Yes e-GP Type: e-Bidding Covid-19 Response? No Comments: 11 contracts (6 contracts for NARC stations and NCFD; and 5 contracts for each DOAD) Each contract will not exceed \$100K.

ADB = Asian Development Bank, NCFD = National Center for fruit development, DOAD = Directorate of Agriculture Development

Consulting Services							
Package Number	General Description	Estimated Value (\$)	Selection Method	Review	Type of Proposal	Advertisement Date	Comments
CS02-A	POP development and training of trainers	250,000	CQS	Prior	STP	Q3 2022	Non-Consulting Services: No Type: Firm Assignment: International Advance Contracting: Yes e-GP: No Covid-19 Response? No Comments:
CS03	Crop and land database establishment, agtech advisory platform and staff training	610,000	QCBS	Prior	FTP	Q3 2023	Non-Consulting Services: No Type: Firm Assignment: National Advance Contracting: No e-GP: No

Consulting Services							
Package Number	General Description	Estimated Value (\$)	Selection Method	Review	Type of Proposal	Advertisement Date	Comments
							Covid-19 Response? No Comments: Will build on work done under TA9902
CS04	Project monitoring and evaluation survey	250,000	CQS	Prior	STP	Q3 2022	Non-Consulting Services: No Type: Firm Assignment: National Expertise: Impact evaluation Advance Contracting: Yes e-GP: No Covid-19 Response? No
CS05-A	Farmer group & cooperative facilitation (Province 1)	1,770,000	QCBS	Prior	FTP	Q3 2022	Non-Consulting Services: No Type: Firm Assignment: National Advance Contracting: Yes e-GP: No Covid-19 Response? No Procurement by Province 1
CS05-B	Farmer group & cooperative facilitation (Bagmati Province)	787,000	QCBS	Prior	FTP	Q3 2022	Non-Consulting Services: No Type: Firm Assignment: National Advance Contracting: Yes

Consulting Services							
Package Number	General Description	Estimated Value (\$)	Selection Method	Review	Type of Proposal	Advertisement Date	Comments
							e-GP: No Covid-19 Response? No Bagmati PIU procurement
CS05-C	Farmer group & cooperative facilitation (Gandaki Province)	2,620,000	QCBS	Prior	FTP	Q3 2022	Non-Consulting Services: No Type: Firm Assignment: National Advance Contracting: Yes e-GP: No Covid-19 Response? No Gandaki PIU procurement
CS05-D	Farmer group & cooperative facilitation (Karnali Province)	1,629,000	QCBS	Prior	FTP	Q3 2022	Non-Consulting Services: No Type: Firm Assignment: National Advance Contracting: Yes e-GP: No Covid-19 Response? No Karnali PIU procurement
CS05-E	Farmer group & cooperative facilitation (Sudurpashchim Province)	1,345,000	QCBS	Prior	FTP	Q3 2022	Non-Consulting Services: No Type: Firm Assignment: National Advance

Consulting Services							
Package Number	General Description	Estimated Value (\$)	Selection Method	Review	Type of Proposal	Advertisement Date	Comments
							Contracting: Yes e-GP: No Covid-19 Response? No Sudurpashchim PIU procurement
CS06	CPMU and PIU project implementation support consultants	3,900,000	QCBS 90:10	Prior	FTP	Q2 2022	Non-Consulting Services: No Type: Firm Assignment: International Quality-Cost Ratio: 90:10 Advance Contracting: Yes e-GP: No Covid-19 Response? No
CS07	Local infrastructure design & supervision firm	200,000	QCBS 90:10	Prior	FTP	Q4 2022	Non-Consulting Services: No Type: Firm Assignment: International Quality-Cost Ratio: 90:10 Advance Contracting: No e-GP: No Covid-19 Response? No Comments: Engineering design of value chain facilities

C. List of Indicative Packages (Contracts) Required under the Project

The following table lists goods, works, nonconsulting, and consulting services contracts for which the procurement activity is expected to commence beyond the procurement plan duration and over the life of the project (i.e. those expected beyond the current procurement plan's duration).

Goods, Works and Nonconsulting Services						
Package Number	General Description	Estimated Value (\$)	Procurement Method	Review	Bidding Procedure	Comments
CW01-C	Nurseries Upgrade	870,000	OCB National	Prior	1S2E	Non-Consulting Services: No Advertising: No. Of Contracts: 1 e-GP: Yes e-GP Type: e-Bidding Covid-19 Response? No Comments: Q4 2024
CW09	Local-level value chain infrastructure	5,500,000	OCB National	Prior	1S2E	Non-Consulting Services: No Advertising: No. Of Contracts: 1 e-GP: Yes e-GP Type: e-Bidding Covid-19 Response? No Comments: Q4 2023
G02	MOLMAC/Horticulture center equipment – Bagmati	70,000	RFQ	Prior	NA	Non-Consulting Services: No No. Of Contracts: 1 e-GP: Yes e-GP Type: e-Bidding Covid-19 Response? No Comments: Q4 2023
G03	MOLMAC/Horticulture	10,000	RFQ	Prior	NA	Non-Consulting

	center equipment – Province 1					Services: No No. Of Contracts: 1 e-GP: Yes e-GP Type: e- Bidding Covid-19 Response? No Comments: Q4 2023
G04-C	PCR machinery and lab equipment – NCFD (for clean plant certification process)	547,000	OCB national	Prior	1S2E	Non-Consulting Services: No Advertising Type: National No. Of Contracts: 1 Prequalification of Bidders: No Domestic Preference Applicable: No Bidding Document: Goods e-GP: Yes e-GP Type: e- Bidding Covid-19 Response? No Comments: Q4 2023
G05-B	Genetic materials (mother plantations, rootstocks, scion varieties, etc.)	80,000	RFQ	Prior	NA	Non-Consulting Services: No No. Of Contracts: 1 e-GP: No Covid-19 Response? No Comments: Q3 2023
G05-C	Genetic materials (mother plantations, rootstocks, scion	70,000	RFQ	Prior	NA	Non-Consulting Services: No

	varieties, etc.)					No. Of Contracts: 1 e-GP: No Covid-19 Response? No Comments: Q3 2024
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Consulting Services						
Package Number	General Description	Estimated Value (\$)	Selection Method	Review	Type of Proposal	Comments
CS01	Tissue culture development, specialized grafting technique, and nursery quality control	200,000	QCBS 90:10	Prior	STP	Non-Consulting Services: No Type: Firm Assignment: International Quality-Cost Ratio: 90:10 e-GP: No Covid-19 Response? No Comments: Q2 2024
CS02-B	Multimedia material development	125,000	CQS	Prior	STP	Non-Consulting Services: No Type: Firm Assignment: national Advance Contracting: No e-GP: No Covid-19 Response? No Comments: NCFD

D. List of Awarded and Completed Contracts

The following table lists the awarded contracts and completed contracts for goods, works, nonconsulting, and consulting services.

Goods, Works and Nonconsulting Services					
Package Number	General Description	Contract Value	Date of ADB Approval of Contract Award	Date of Completion	Comments

Consulting Services					
Package Number	General Description	Contract Value	Date of ADB Approval of Contract Award	Date of Completion	Comments
		N/A			

E. Non-ADB Financing

The following table lists goods, works, nonconsulting, and consulting services contracts over the life of the project, financed by non-ADB sources.

Goods, Works and Nonconsulting Services				
General Description	Estimated Value (cumulative, \$)	Estimated Number of Contracts	Procurement Method	Comments
	N/A			

Consulting Services				
General Description	Estimated Value (cumulative, \$)	Estimated Number of Contracts	Recruitment Method	Comments
	N/A			

Attachment J: Detailed Terms of Reference

Consultancy Services under the NAFHA Project

To implement NAFHA project activities, there will be seven consultancy service packages open. These packages are:

Package Description	PP	Contracting Period	Service Period (implementation)
Development, specialized grafting technique, and quality control (output 1)	CS01	April–September 2024	October 2024 – September 2028 (The first phase of preparatory work (2022–2024) will be financed by the ADB TASF-7. The scaling up of this preparatory work will be financed by the loan under this CS01.)
POP development and training of trainers (output 2)	CS02-A	August–December 2022 (Advance contracting)	January–April 2023 Consortium of university networks will be invited.
Multimedia material development (output 2)	CS02-B	January–June 2024	July–December 2024 Audio visual production firm will be invited.
Crop and land database establishment, agtech advisory platform and staff training (output 1)	CS03	July–December 2022	January 2023 – December 2025 (Batch 1, 2 and 3 area remote sensing-based DB in the system with farmer crop areas delineation and crop description including plant survival monitoring in the system. This should also merge IT based advisories which is piloted under ADB's high-level technology funds.)
Project monitoring and evaluation survey (DMF)	CS04	August 2022 – January 2023 (Advance contracting)	February – June 2023
Farmer group facilitation and cooperative capacity building (output 2 and 3)	CS05-A CS05-B CS05-C CS05-D CS05-E	August 2022 – February 2023 (Advance contracting)	February 2023 – August 2029 (contract variations later to extend the contract until the end of project year based on satisfactory performance for the first 3 years)
Project Implementation Support Consultants – CPMU and PIUs (project management)	CS06	August 2022 – February 2023 (Advance contracting)	February 2023 – January 2026 (contract variations later to extend the contract until the end of project year based on satisfactory performance for the first 3 years)

Infrastructure design and supervision firm (output 3)	CS07	October 2022 – March 2023	April – September 2023 (Based on the detailed design (output of this CS07), public civil work packages will be prepared as additional CW)
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1. Tissue culture development, quality control and staff training, nursery quality control (CS01) – to be reviewed in 2024 based on the TRTA supported consultants' deliverables between 2022-2024

(1) Objectives of assignment: To support production, maintenance and distribution of healthy planting materials of fruit and nut crops in Nepal. CS01 is primarily for conducting the following tasks: (i) prepare national guidelines for importation, testing, and introduction of climate resilient plants and plant parts for planting; (ii) develop a standard operating procedure for clean plant center establishment and operations; (iii) prepare certification programs and nursery stock production techniques including development of ranking metrics and other requirements for production of quality or clean planting materials; (iv) prepare protocols to support the nursery audit, monitoring, and verification of planting sites and planting materials; (v) prepare crop specific manuals for field production of clean nursery stocks in field; and (vi) develop training programs for clean plant center operations, certification program, nursery stock production, and conduct training of trainers training for field inspectors, lab operators, government agency staff.

(2) Detailed tasks

- **Deliverable 1. Review and update national guidelines for importation, testing, and introduction of climate resilient plants and plant parts for planting**
 - Organize a series of consultation workshops and summarize findings and recommendations into workshop minutes
 - Review and update national guidelines in partnership with the Ministry of Agriculture and relevant authorities in Nepal based on project year 1-3
- **Deliverable 2. Enhance certification programs and nursery stock production techniques including development of ranking metrics and other requirements for production of quality or clean planting materials**
 - Revision of national standards for nursery stocks classification, grading and quality control, defining the main requirement for nurseries based on the pilot phase
 - Identify best/potential nurseries that meet the classification rules to prepare for rolling out a voluntary certification scheme and scale up
 - Discuss legal basis for certification and enhance legal framework
 - Review and improve certification procedures and protocols
- **Deliverable 3. Development of training programs for clean plant center operations, and training of trainers**
 - Review Y1-Y3 project experience and enhance protocols to support the nursery audit, monitoring, and verification of planting sites and planting materials
 - Review and enhance crop specific manuals for field production of clean nursery stocks in field

- Finalize training programs for clean plant center operations, certification program, nursery stock production
- Conduct training of trainers training for field inspectors, lab operators, government agency staff for implementation at the country level

(3) Deliverable and timeline

Deliverables	Key activities/tasks	Timeline
Deliverable 1	Review and update national guidelines	January–March 2025
	Consultation workshops organized	April–May 2025
	Finalize guidelines based on Y1-3 experience	June–September 2025
Deliverable 2	Review and enhance nursery management standards and certification program	February–April 2025
	Identify potential quality nurseries that are willing to participate in the voluntary certification scheme	May–June 2025
	Scale up certification schemes with private nurseries	July 2025–June 2026
Deliverable 3	Review and update protocols, procedures, manuals for horticulture centers (that will function as clean plant centers)	May–Aug 2025
	Review and update training materials prepared for field inspection, lab operators, government agency staff	September–December 2025
	Conducting coaching and training scaling up Y1-Y3 activities	January 2026–June 2027

(4) Qualifications: The firm is expected to have broad knowledge, extensive experience, and research skills on the following areas or related fields. Emphasis is given to the firm that has first-hand experience and consists of experts such as plant pathologists, horticulturists, agricultural scientists and or professionals on the related fields. More specifically, it should possess experience in the below areas:

- International phytosanitary requirements and issues for movement and use of planting materials and plants parts of fruit tree, and nut crops;
- Use of conventional and modern diagnostic methods for systemic plant pathogens and their elimination from infected host, and production and maintenance of pathogen-free mother source plants;
- Development of certification standards and execution of pilot studies to establish certification programs to produce certified nursery stocks;
- Best management practices for production, classification, and grading of nursery stocks;
- Improved orchard management practices for fruit tree and nut crops production;
- Extensive network and working experiences with NPPOs and resources centers (such as Universities, Research Centers, other Clean Plant Centers, Certification Programs) for capacity building related to diagnostics, pathogen elimination, nursery certification, and horticultural practices for the stakeholders.

(5) Key Personnel Summary: A team consisting of six experts on (i) Plant Virologist; (ii) Nursery Certification; (iii) Tissue Culture; (iv) Nursery Stock Production; and (v) Horticulturist, and Plant Protection

(6) TORs per position

- **Plant virologist/Team Leader**

- This expert will lead the setting up of enabling environment to establish an operational state-of the art Clean Plant Center/horticulture center, develop manuals, and provide training to lab technicians, scientists, regulators, and other stakeholders. These expert coordinates tasks and responsibilities assigned to other experts to achieve the project goal. Major tasks for this experts are to: (i) review and compare current international standards of importation, production, maintenance, and distribution of clean planting materials; (ii) prepare a draft of national guidelines to import and distribution of fruit tree planting materials; (iii) prepare standard operating guidelines and procedures for a Clean Plant Center (including site selection, facility requirements and other resources requirements for testing, increase, planting, and maintenance) in support of an ensuing project preparation; (iv) develop quality control guidelines and protocols for a Clean Plant Center; (v) recommend laboratory information management system and quality control system for a Clean Plant Center; (vi) identify graft-transmissible biological risk factors for nursery stocks; (vi) provide training and other capacity building activities related to a Clean Plant Center; and (vii) organize and attend relevant meetings and undertake other project related activities.
- Min. advanced degree in horticulture, plant science or related field.
- At least 15 years of general experience in the horticulture development sector
- At least 10 years of specific experience with significant research on characterization and detection of viruses of horticultural crops using conventional and molecular tools (indexing, ELISA, PCR, RT-PCR, qPCR, other PCR based techniques, High Throughput Sequencing, and so on); virus elimination to produce clean planting materials of horticultural crops; production and maintenance of such pathogen-free clean nursery stocks; collaboration with diverse stakeholders (nurseries, growers, and, regulators) to educate the importance of clean planting materials; and to support nursery stock certification programs focused to produce pathogen-tested nursery stocks of horticultural crops.
- Experience of leading a Clean Plant Center focused to produce pathogen-free nursery materials of horticultural crops is a must for this position.
- **Nursery Certification Expert/Deputy Team Leader:**
 - This expert will lead the development of certification standards and programs; and prepare manual and other documents related to certification programs including guidelines for importation of fruit tree planting materials. This expert will work closely with a Plant Virologist to (i) review and compare current international standards of importation, production, maintenance, and distribution of clean planting materials; (ii) prepare a draft of national guidelines to import and distribution of fruit tree planting materials. In addition, this expert will be assigned to: (i) prepare general national model certification standards for pathogen-tested system based nursery stock production; (ii) prepare fruit crop specific nursery stock certification standards; (iii) design and perform pilot studies to implement and finalize crop specific certification standards; (iv) development crop specific certification procedures and protocols; (v) provide training and other capacity building activities related to nursery certification standards and programs; and (vi) organize, and participate relevant meetings and perform other project related activities.
 - Min. advanced degree in plant pathology
 - At least 15 years of general experience in the horticulture sector

- At least 10 years of specific experience administration, development, and implementation of pathogen-tested certification programs. These programs shall be focused to produce nursery stocks of fruit crops.
- Must demonstrate experience in having planned, led, and implemented pilot studies to identify high risk pathogens, develop certification standards, and certification programs. Such programs must be based on a system-based approach following international standards by satisfying all the elements required to develop certification programs.
- The rest team members' TORs will be defined based on project Y1-3 activities that will be implemented with the support from TASF-7 grants.

2. Packages of Practice (POP) development, training media production, POP training (CS02)

(1) **Objectives of assignment:** To support the farmers in undertaking fruit and nut farming with adequate scientific and technical know-how. The assignment will deliver: (i) package of practices document for the project's 10 priority nut and fruit crops (almond, apple, avocado, kiwi, lime, macadamia, mandarin, pecan, sweet orange and walnut); (ii) POP knowledge modules for the online-based tools; (iii) farmer training manual and modules, taking a participatory approach and inviting farmers to get involved in the knowledge materials; and (iv) a farmer query redressal system.

(2) Detailed tasks

- Baseline assessment of the selected fruits and nuts, varieties, and land and soil profile of the project areas
- Assess the training needs of targeted farmers
- Organize and conduct technical workshops inviting international and national horticulture experts and develop a network of experts based on these workshops. A web-based platform/portal will be established to facilitate the interaction of the expert network. Once POPs are finalized, this portal/website will host the POPs and related knowledge material for public access and query redressal.
- Prepare technical workshop proceedings to be reviewed by NCFD, NARC and provincial horticulture research centers/stations
- Develop draft POPs based on the technical workshops and further analysis and finalize them after MOALD's review. POPs should cover climate analysis (rainfall, altitude, temperature requirements, etc.), soil (type, organic matter, mineral, and micro-elements), varieties (characterizing disease resistance), orchard development, crop husbandry, integrated pest management, post-harvest crop management and cool storage technologies. See below for more details.
- Create necessary audio-visual materials for easy communication of POPs for dissemination with the farmers – This will identify lead farmers and engage them as demonstrators in the audio and visual materials. Farmers will be encouraged to produce materials themselves
- Prepare training material and manual for Training of Trainers in POPs implementation
- Organize training of trainers in POPs-based technology and its application and assist NCFD and DOADs in organizing training of farmers through selected trained trainers

POPs development

- Prior to its finalization, each draft PoP will be presented to a review workshop including representatives of IAAS, NCFD, NARC, MOALD-DOA and the private sector including representatives of fruit tree nurseries, commercial farmers, input suppliers, traders and (where applicable) persons from processing industries.
- Each PoP will include the following information:
 - Climate: An analysis of the rainfall, altitude, and temperature requirements for successful production of the crop
 - Soils: A detailed description of the soil type, structure, depth, organic matter, and mineral and micro-element requirements for successful crop production.
 - Varieties: A list of recommended varieties of the crop that are registered in India's Plant Varietal List, have proven productive and disease resistance characteristics and strong market demand.
 - Nursery management: Good practice nursery management will be described through step-by step descriptions of growing medium preparation, disease free root stock selection, plant propagation (seed propagation, grafting, air layering, clonal, etc.), and sapling management to point of sale.
 - Orchard development:
 - Site selection, including slope and drainage considerations;
 - spacing and plant density (plants/ hectare) specific to recommended varieties/ cultivars);
 - Land preparation, layout (including pit size L x B x H), planting system, planting time, manuring and fertilization etc.
 - Transplanting technique including sapling treatment, mulching and establishment fertilization.
 - Crop husbandry:
 - Training of plants;
 - fertigation schedule;
 - Drip irrigation management by crop stage and season/ Irrigation schedule;
 - Flowering management, including fertilizer management and use of hormones to stimulate flowering/ micronutrient recommendation schedule.
 - Pruning management;
 - Weed management and other intercultural operations;
 - Intercropping options (where possible)
 - Harvesting;
 - Pest and disease control: a detailed description on integrated pest and disease management practices (in tabular format detailing the name, symptoms, causal agent(s) and management of all key pests and diseases).
 - Post-harvest crop management: a detailed description of post-harvest crop management including recommended sorting, grading, and packaging practices.
 - Storage: recommended cool storage technology for the harvested fruit crops.
- Technical descriptions in the PoPs will, wherever practicable, be accompanied by photographs (with print PoPs) and videos (with PoP file copies) clearly demonstrating the recommended techniques and identifying the described pests and diseases.

(3) Deliverables and timeline

Deliverable	Timeline
1. Baseline assessment of fruit and nut production status in project municipalities, varieties, and land and soil data – link with CS03 outputs and MOALD database	Within 2 months of engagement
2. Farmer training needs assessment report	Within 3 months of engagement
3. Technical workshop proceedings	Within 4 months of engagement
4. Knowledge portal with modules	Within 5 months of engagement
5. Draft POPs	Within 6 months of engagement
6. Training materials	Within 6 months of engagement
7. Training of trainers conducted	Within 8 months of engagement

(4) Qualifications

- At a minimum, the team should have a team leader with at least 15 years of experience in horticulture research and eight sub-tropical horticulture technology specialists

(5) Key Personnel Summary: The team will comprise of 9 experts including one team leader/value chain experts and 8 horticulture technology specialists/researchers.

(6) TORs per position

- **Team Leader.** The team leader should have a bachelor of horticulture/ agriculture and postgraduate degree (M.Sc.) in horticulture/ agriculture or allied sciences. A Ph.D. Horticulture (Fruit Science) will be preferred. He/she should have least 15 years of experience in agriculture/horticulture research/extension services.
- The team leader will lead the POPs technical team and provide support to the DOH in coordinating the development of the POPs for the selected fruits and in developing the necessary knowledge material, training manuals, training programs and extension support network using latest digital technologies relevant to the sector. The team leader, based on the POPs recommendations and associated GIS mapping, shall also support the DOH in the selection of areas for sub-tropical horticulture production under the HP-SHIVA project. The team will be supported by GIS and database management specialist for GIS mapping.
- **Horticulture technical specialists** (nuts and fruits). The Team Leader, in collaboration with the DOH PMU, will identify technical specialists at universities and research institutes with the appropriate scientific and practical experience required to prepare crop-specific POPs. Selected specialists shall preferably have a post-graduate degree in horticulture or agriculture science and at least five years in the research and/or production of specific horticulture crops. Specialists shall be engaged for up to one month per POP if the work involves the preparation of a new POP and for lesser periods, but not more than two weeks where existing POPs require updating.
- The specialists shall (i) develop draft POPs and finalize after a workshop; (ii) support development of necessary audio-visual materials for easy communication of POPs for dissemination among the farmers, (iii) support preparation of training material and manual for farmer training (iv) support training of trainers and demonstrations and training of farmers through selected trained trainers, (v) participate in the farmer query responses on, and (vi) any other related tasks requested by the team leader or EA/IAs.

3. Crop and land database establishment, agtech advisory platform and staff training (CS03)

(1) Objectives of assignment: The assignment will (i) build crop inventory database through identifying polygon layers, conducting field surveys and utilizing mobile-based data collection app; (ii) collect baseline information and update database three times a year (i.e. season-based) through training lead farmers or staff of cooperatives or farmer groups in priority areas (estimated to be 30% of target areas of 10,000 ha – this is to be confirmed during the contract negotiation); (iii) establish agtech-based farmer advisory platform; and (iv) train field staff to collect data and regularly update the database as the knowledge depository.

(2) Detailed tasks

Crop and land database establishment and staff training

- **Development of mobile app for data collection and field data collection as per the survey format.** The inventory will assign ID per each land segment and identify ownership, crop types, growing conditions, crop management practices, irrigation methods and crop production and sales information. The app should have an auto-sync feature incorporated to avoid data loss while performing field surveys, and the areal map should be accessible through app offline.
- **Field survey on beneficiary farmers:**
 - **Crop inventory database of beneficiary farmers:** Crop inventory database will be established for the priority area's beneficiary farmers in 2022. The consulting firm will draw polygons (plot measurement) using GPS and GIS devices aligning with a cadastral map, assign ID, and collect information of land segments focusing on farmers' field information (ownership and associated-farmer group or cooperative) and land-use information (crop planted, irrigation method, tillage). Crop condition will also be recorded via geo-tagged photographs and videos. Food storage and processing assets will be geotagged. This database will be updated three seasons per year over the project implementation period. Note that the alignment of this database with the production and marketing advisory platform to be developed under the loan project is critical, and the consulting firm should be ready to collaborate with the advisory platform developer.
 - **Comprehensive survey for sample farmers and their field plots:** In collaboration with monitoring and evaluation specialist who is appointed by ADB and will guide sampling, collect survey data at the baseline, over project implementation (3 times a year). Survey questionnaire will be provided by ADB. Key aspects of the survey include: (i) farm household demographics and assets; (ii) farmers' field information; (iii) land-use information including crop production; (iv) irrigation; and later (v) crop sales. This survey will tell the project about timing of planting, type of land preparation, type of seeds planted, whether or not and how much fertilizers are used, how much labor is used, and the estimated cost of production. Interview with lead farmers will be recorded as video files.
- **Training for data collection, and validation of data inserted from the field.** The consulting firm will train field staff of the DOAD and local governments, cooperative representatives and/or lead farmers/youth from the same village to collect data with minimum personal influence and bias on the information. The list of trainees will be

agreed between ADB and the consulting firm in advance. The training will comprise of four sessions: (i) purpose of the survey and which work to be carried out in the field; (ii) clear understanding of data selection criteria and scopes defined; (iii) interviewing techniques, highlighting the importance of confidence-based and trust-based two-way communication during the survey; and (iv) handling of GPS devices and a GIS-based mobile app. The training materials and approach paper will require ADB's no-objection, and ADB's monitoring, and evaluation consultant will provide feedbacks and guidance, if necessary, during the preparation of training materials and approach paper.

- **Collection of farm households and land-use data three seasons per year in 2022.** Data entered into the database should be first verified and any errors corrected. Once the advisor platform is developed under the loan project, the satellite images will be used to check the validity of randomly selected sample plots. The consulting firm will be responsible to maintain the accuracy of samples of data at the satisfactory level. Succinct standard operating procedure will be prepared and shared with the National Center for Fruit Development, DOADs and ADB.
- **Data analysis and report.** Prepare a project completion report, stocktaking lessons, and improvement areas.

Ag-tech based farmer advisory system and farmer training (TBD)

(3) Deliverables and timeline

Deliverable	Timeline
1. Crop and land DB establishment	First 6 months of engagement
2. Training of government staff in DB management	Every 6 months in the first three years
3. Agtech based farm advisory platform establishment	Within 1 year
4. Upgraded Agtech platform based on the first 1.5-year operation	Within 3 years
4. Promotion/raise awareness of the advisory platform and training of farmers on the use	Every 6 months until the 3rd year of engagement

(4) Qualifications

- The firm should have proven expertise in handling digitization, mapping of natural resources, developing comprehensive spatial geo data bases and farmers' data at village level, integrated farming advisory platform establishment (with soil, weather, water, cropping pattern among others). Brief information on minimum 2 such projects should be provided.
- Should have expertise in integrating different data sets into a digital platform, preparation of survey data collection formats. Brief information on minimum 2 such projects demonstrating the expertise should be provided.
- The firm should have experience of handling large data sets over last five years and should have large computation facilities/workstations. Audited financial statements and other relevant supported documents for preceding 3 years should be submitted in support of historical financial performance and size of operations eligibility.

- The firm should have proven ability to work harmoniously in collaboration with other partners synergistically by sharing data. Please cite projects with brief description of collaboration arrangement, brief of collaborators and their roles in the project.
- The firm should agree to the condition that the IPR for the data collection Apps will be with MOALD, DOADs and ADB project and all details of the Apps including source codes will need to be submitted to the project for business continuity purposes.
- Experience of work in Nepal will be an advantage.
- Training experts of at least 20 professionals on its roll to handle data/analysis /preparation of maps and prior experience of similar work will earn additional points. Information is requested with staff strength and technical capabilities matrix.

(5) Key Personnel Summary

- The firm should provide qualified consultants whose experience and expertise are relevant to the proposed positions and one of them shall be appointed as Team Leader in charge of overall coordination and implementation. The tentative positions and inputs of key and non-key experts expected are Geospatial information expert/team leader, IT and GIS specialists, data analysis expert, application developers, field survey conductors.

(6) TORs per position

- **Team Leader – Geospatial information expert**
 - Required qualifications: A university degree in information technologies, science, engineering, environmental management, agronomics with over 10 years of experience in geospatial information management and team management. At least 3 years of proven work experience in similar tasks.
 - Key tasks: (a) supervise and coordinate the work of consultants and ensure that the consultants' outputs are in accordance with the agreed Terms of Reference and project requirements; (b) be responsible for data collection, validation and report preparation/generation, maintaining the requested data accuracy; (c) submit the data analysis report to MOALD, DOADs and ADB in a timely manner; (d) coordinate the harmonization of the database with the advisory platform to be developed under the loan project, and improve the database as requested by the platform developer; (e) participate in meetings of partners engaged in the platform development to fully understand the platform architecture and agreed format of data collection and storage; (f) provide any input to the project management unit for their generation of annual reports; and (g) undertake other technical input management where required.
- **IT and GIS specialist – mobile app management**
 - Required qualifications: A university degree in information technologies, science, engineering, environmental management, agronomics with over 7 years of experience in geospatial information management. At least 3 years of proven work experience in similar tasks.
 - Key tasks: (a) understand the demand and develop an GIS-based mobile application to collect field survey data; (b) test the app and fix any errors; (c) in collaboration with mobile app trainer, contribute to the training materials and program development; (d) improve the app based on experience and feedbacks from the project beneficiary farmers, and to meet the project requirements; and (e) recommend measures to improve efficiency in field survey data collection for scaling up of the project in the future.
- **IT and GIS specialist – database management**

- Required qualifications: A university degree in information technologies, science, engineering, environmental management, agronomics with over 7 years of experience in geospatial information management. At least 3 years of proven work experience in similar tasks.
- Key tasks: (a) design and develop the crop inventory database with the scopes requested by the project; (b) test the database and fix any errors; (c) ensure that data is not lost in any situations and back up data on regular basis; (d) identify any issues related to database performance and improve the database and its management system; (e) prepare standard procedures to operate data collection and database management; (f) be responsible for the quality of polygons identified through a mobile app and manage field surveyors' performance; (g) assign IDs on each segment of land identified and accurately match the descriptions and characteristics of land and farm households; (h) identify and resolve database issues in a timely and efficient manner; and (i) recommend measures to improve performance and efficiency of the database structure and operation for scaling up of the project in the future.
- **Mobile app trainer**
 - Required qualifications: A university degree in information technologies, science, engineering, environmental management, agronomics with over 5 years of experience in geospatial information management. At least 2 years of proven work experience in similar tasks.
 - Key tasks: (a) prepare the training materials in local language and program in collaboration with the mobile app management specialist and ADB's monitoring and evaluation consultant; (b) select the list of trainees jointly with the local and provincial governments and ADB, and ensure invitations are sent out in advance; (c) conduct training and record the training sessions through photographs; (c) develop trainee performance assessment system, evaluate their knowledge at the end of a training program and prepare/award certifications; (d) develop trainee evaluation sheet/questionnaire, ensure to collect and record the feedbacks; and (f) prepare the training report including analysis of feedbacks of trainees.
- **Data analysis expert**
 - Required qualifications: A university degree in information technologies, science, economics, statistics, or any related field. At least 2 years of proven work experience in similar tasks. Prefer over 5 years of experience in geospatial data analysis.
 - Key tasks: (a) lead the discussion with the team leader, DOADs and local governments, and ADB about information and analysis needs; (b) design and develop data reporting system; (c) provide processed data to team members and perform statistical data analysis in suitable reporting formats; (d) recommend any measures to improve functionality of analysis and required data accuracy, frequency and manner of repository to team leader and database management specialist; and (e) perform any other tasks requested by team leader.
- **Non-key experts – field survey conductors**
 - Required qualifications: Either a university degree in agriculture, agronomics, science, and environment, or experience in farming over 10 years. Experience or familiarity with the use of GIS or GPS tools preferred.
 - Key tasks: (a) attend the data collection training and earn the certification for the crop inventory database development; (b) attend the training with ADB's monitoring and evaluation consultant about household survey related to the

baseline survey data collection, and understand the parameters, definition, coding guidelines and/or ratings of farmers' response to know how to record the qualitative and quantitative information in a structured manner; (c) collect the baseline data with samples of farmers identified by the project and as per instructions of ADB's monitoring and evaluation consultant; (d) support the identification of polygons of land areas by beneficiary farmers and cropping pattern information, and record the data in an accurate manner in the mobile applications; (e) survey the assigned farmers three times a year (after each cropping season); (f) proactively share feedbacks and errors experienced in using the mobile applications with Mobile App Management Specialist; and (g) conduct on-the-spot analysis and report on the findings to Team Leader and Data Analysis Expert and ensure that such findings are included in the seasonal report.

5. Farmer group and loan application facilitation (CS05-A)

(1) Objectives:

- Conduct project orientation in the villages on farm income increase through horticulture production (fruits and nuts, and other vegetable and nutritious crops)
- Encourage project beneficiaries to collectively participate in the farmer groups and cooperatives, and facilitate organization of farmer groups from among the project beneficiaries development process, with special attention to the participation of the most marginalized-vulnerable groups
- Identify potential leaders from among the beneficiaries and assess their readiness & capabilities
- Train and coach CHPMAs members in undertaking their roles in high quality horticulture production and community-based market development/access;
- Build the capacity of farmer groups to identify, implement, and monitor environmental and social safeguards in subproject planning and implementation
- Organize and coordinate farmer groups and cooperatives related meetings, assemblies, and workshops
- Facilitate resolution of conflicts and grievances to ensure smooth implementation, buy-in and support of all stakeholders
- Assist the farmer group and cooperative leaders in identifying and testing market opportunities and building linkages to value chains;
- Support rural finance consultants of CPMU and PIU to conduct training on digital payment system and online lending applications as well as the credit guarantee fund scheme
- Operationalizing a municipality-level horticulture marketing monitoring and evaluation system

(2) Scope of assignment

- The farmer group consultant team will coordinate the mobilization of at least 500 farmer groups, each having 10-15 members. Once mobilized and trained in group development and effective communication by the successful consulting firm, the group facilitators will implement group capacity building programs to enable farmer groups, over time, to both: (i) function effectively without external props and financial support; and (ii) to attain larger business goals for their members. This pertains to functions such as record keeping including meeting minutes that promote transparency and trust; group dynamics, such as setting group norms, articulating values, defining a

shared purpose, conflict resolution and rules of governance that stimulate solidarity and cohesion; strategic capacities, such as building a shared vision for the future, and networking and business development and advocacy to create value for their members.

- Group development training materials developed by the consultants will include: (i) membership training to stimulate behaviors among group members that enhance group cohesiveness, solidarity and efficiency; (ii) leadership training to develop strategic capabilities of groups; develop resource persons in groups; introduce ideas of participatory planning, vision building and decision making; build capacity for conflict resolution, negotiation, networking and advocacy; knowledge of relevant government/regulatory policies; leadership rotation and good governance practices; and (iii) marketing and entrepreneurship training for groups to identify and capture market and value addition opportunities, either individually or as a collection of groups or in partnership with local level cooperatives or enterprises.

(3) Detailed tasks. Specifically, the firm will:

- Working with the CPMU, prepare a manual incorporating best Nepal and international practice to establish stable, cohesive smallholder farmer groups and once established, to enable them to identify value addition and market entry positions and to prepare financially viable business plans.⁷⁵ The manual will be updated at project mid-term based on lessons learned in farmer group establishment and business development.
- Coordinate with the CPMU and PPIUs to build understanding and capacity in farmer group development within the project management teams and at provincial DOADs and AKC levels.
- Prepare a smallholder farmer group development plan that schedules the institutional development and training of the targeted groups in accordance with the project's orchard development program.
- Recruit and train local level group facilitators to support the farmer group development program.
- Establish systems and procedures to: (i) support the progression of farmer group establishment and training, ensuring that group committee positions are democratically elected, that the chairperson and deputy chairperson are a man and a woman or vice-versa; (ii) ensuring all participating groups are legally constituted and registered; (iii) enable groups to have bank accounts; (iv) ensuring groups are fully trained to implement effective group management and cohesiveness practices; and , over time, (v) have the necessary skills to add value to their products and access markets.
- Advise and prepare recommendations on the integration of project-supported farmer groups into existing or new cooperatives at the local level.
- Prepare quarterly and final reports on farmer group development progress and ensure that information on the smallholder farmer group development and management program are incorporated into the Project MIS and GIS systems.

(4) Deliverables and timeline

- Establish and build capacity of at least 500 farmer groups across 5 provinces and 100 municipalities in accordance with the project orchard establishment schedule

⁷⁵ A wide range of good practice farmer group training manuals exist, both in Nepal and globally. The consultant is expected to draw on these existing products, as well as its own experience in preparing the project's farmer group training manuals.

(5) Qualifications

- Minimum five years of experience of supporting the formation and capacity building of cooperative and farmer producer groups/organizations in Nepal.
- Minimum five years of experience in agribusiness investment planning and implementation;
- Familiarity with Asian Development Bank or World Bank processes and procedures will be an advantage.

(6) TORs per position

- **Team Leader**
 - Provide technical support and oversight in the planning, execution, and operation of the cooperative and farmer group development program;
 - Lead the process of cooperative assessment in project districts and the identification of cooperatives interested and able to participate in the project horticulture development program;
 - Lead the development of capacity building courses and field manuals for cooperative and farmer group facilitators and farmer-to-farmer extension workers and the implementation of their capacity building programs;
 - Supervise the work and performance of the provincial cooperative and farmer group coordinators to ensure that the cooperative and farmer group development programs remain on track and within desired standards;
 - Provide technical support to CPMU and PIU staff and consultants on their approaches, strategies, and operating procedures in relation to cooperative and farmer group development;
 - Ensure the development and continuous improvement of the project's cooperative and farmer group development program based on implementation experience and lessons learned and those of other relevant projects and activities;
 - Provide capacity building and technical support to NCFD, NARC and DOAD horticulture center staff on their engagement with cooperatives and farmer groups;
 - Build sound linkages with horticulture agribusinesses and project-engaged rural financial services providers and facilitate their linkages with project supported cooperatives and farmer groups; and
 - Ensure that disputes amongst members of the firm's technical team, if any, are dealt with efficiently and swiftly, in a transparent manner, and in line with practices acceptable to ADB and the Government of Nepal.

- **Provincial coordinator (each of the five provinces)**
 - Provide technical support and oversight in the planning, execution, and operation of the provincial cooperative and farmer group development program;
 - Implement the process of cooperative assessment in project districts in the province;
 - Coordinate the provincial capacity building programs for cooperative and farmer group facilitators and VF2F advisers;
 - Manage the work of the provincial cooperative and farmer group facilitation teams to ensure that the provincial cooperative and farmer group development program remains on track and within desired standards;
 - Manage the work of the local level VF2F advisers;

- Provide technical support to PIU, AKC and municipal agriculture division staff on their approaches, strategies, and operating procedures in relation to cooperative and farmer group development;
- Ensure the development and continuous improvement of the project's cooperative and farmer group development program based on provincial implementation experience and lessons learned and those of other relevant projects and activities;
- Build sound linkages with horticulture agribusinesses and project-engaged rural financial services providers in the province and facilitate their linkages with project supported cooperatives and farmer groups; and
- Ensure that disputes amongst members of the firms technical team or between team members and cooperatives, farmer groups or individual farmers, if any, are dealt with efficiently and swiftly, in a transparent manner, and in line with practices acceptable to ADB and the Government of Nepal.
- **Farmer group development facilitators (each of the 100 municipalities)**
 - With the support of provincial agriculture divisions, identify farmers having land suitable for orchard development and interested to form farmer groups;
 - Assist those farmers to register their specific groups;
 - With the support of provincial agriculture division and AKC staff and farmer group members, identify potential VF2F advisers;
 - Implement capacity building programs for farmer groups;
 - Facilitate VF2F adviser linkages with project-supported farmer groups and coordinate their technical support to those groups;
 - Assist farmer group members to register for project support for orchard development;
 - Assist farmer group members, where required, to negotiate loans with project-supported rural financial service providers;
 - Build linkages between the farmers groups and district AKC staff and project-trained farmer-to-farmer technical advisers;
 - Build linkages between project supported farmer groups and local project supported cooperatives with a view to farmer group members joining those cooperatives
 - Ensure that disputes amongst farmer group members and project service providers, if any, are dealt with efficiently and swiftly, in a transparent manner, and in line with practices acceptable to ADB and the Government of Nepal.
- **Volunteer farmer-to-farmer (VF2F) advisers (up to 3 per municipality)**
 - Establish a program of monthly discussions with the assigned farmer groups;
 - Provide technical advice to the farmer group members based on a seasonal horticulture operations calendar developed by the CPMU senior horticulturalist and consultant team leader;
 - Run demonstrations at the VF2F advisers own orchard and on group members fields;
 - Enable farmer group members to download and use phone based apps both for information gathering and sharing;
 - Participate in periodic skills training for VF2F advisers at the district AKC

7. Project Implementation Support Consultants – CPMU and PIUs (CS06)

- (1) **Objectives of assignment:** The consulting firm will provide services to the Central Project Management Unit (CPMU) and Provincial Implementation Units (PIUs) to ensure that CPMU and PIUs perform their roles and responsibilities under the project. Particularly, the

firm will recruit and engage consultants and the CPMU and PIUs, strengthening project management capacities of CPMU and PIUs, and ensuring project management reports that meet ADB requirements are prepared and submitted in a timely manner.

- (2) Detailed tasks:** Project-financed consultants at the CPMU and PIUs are mainly responsible for the following key tasks: (i) to manage overall day-to-day project implementation; (ii) to oversee compliance of loan and grant covenants, and environmental and social safeguards, and facilitate corrective actions as required; (iii) to ensure timely delivery of project outputs with close collaboration among IAs; (iv) to ensure compliance with ADB Safeguard Policy Statement (SPS, 2009), national requirements and project audit observation and recommendations; (v) to ensure implementation of the gender and social inclusion (GESI)/ action plan (AP); and (vi) to prepare and review withdrawal applications, obtain project account statements, and submit them to ADB.

More specifically, CPMU and PIU will be responsible for the following set of activities:

CPMU

General Project Administration

- Manage overall day-to-day project implementation
- In coordination with PIUs (NARC and five DOADs), be responsible for (i) preparing annual contract awards and disbursement projections; (ii) requesting budgetary allocations for counterpart funds; (iii) collecting and retaining supporting documents; and (iv) preparing and sending withdrawal applications to ADB
- Maintain separate advance accounts for each ADB financing source.
- Maintain separate book of accounts for the project, prepare consolidated project financial statements and cause them to be audited separately on an annual basis
- submit the audited project financial statements (a consolidated one for the entire NAFHA project) to ADB within 9 months from the end of the fiscal year.
- Ensure implementation of the GESI/AP
- Conduct and coordinate project review missions
- Prepare quarterly progress reports for submission to ADB by consolidating implementation progress reports from the implementing agencies
- Establish project performance monitoring system, including monitoring of the GESI/AP and a website for disclosure of project information
- Ensure performance monitoring and supervision of consultants engaged
- Monitor and ensure compliance with loan and grant covenants
- Carry out baseline, midterm, and project completion surveys
- Prepare project completion report at the end of the project and submit it to ADB

Technical Oversight and Support

- Prepare annual work plan and budget for the activities to be implemented by the IA-1
- Commission research on more adaptable and resilient varieties of fruits and nuts
- Manage partial subsidies for farmers and cooperatives for orchard, vegetable farms and drip irrigation scheme development (payments greater than NRs 5 million)
- Recruit and supervise contractors under output 1 and output 3
- Prepare nursery standards, regulation, and inspection system (implementation of output 1 activities)

- Develop and roll out a pilot nursery certification scheme with participating private nurseries (implementation of output 1 activities)

Safeguards Compliance

- Take overall responsibility for environment and social safeguards by monitoring and ensuring compliance with ADB's SPS 2009, government requirements, and other related requirements in project documents particularly safeguards monitoring reports and tender documents.
- Address safeguards issues from affected people following the grievance redress mechanisms established in the project
- Consolidate project's safeguard monitoring results updated by PIUs, and provide consolidated input to the project progress and safeguard monitoring reports
- Submit semi-annual environmental and social monitoring reports to ADB.

Each PIU

General Project Administration

- Manage overall day-to-day project implementation at the province level
- Lead annual province level project planning and budgeting.
- Maintain separate book of accounts for the project, maintain separate control registers in an agreed format and prepare project financial reports and statements as required.
- Support the project audit and address audit observations in a timely manner.
- Submit claims and supporting documentation or copies of such documentation to the CPMU, retain supporting documents, submit all reporting requirements, including financial statements
- Manage project management support consultant deputed to the province
- Coordinate project review missions and prepare progress reports with the CPMU
- Support the CPMU to carry out baseline, midterm, and outcome surveys
- Establish province-level project performance monitoring system, including monitoring of the GESI/AP and for disclosure

Technical oversight and support

- Support NCFD to supervise contractors that are implementing outputs 1, 2 and 3 at provincial level
- Manage subsidy for orchard development (payments up to NRs5 million)
- Implement nursery standards, regulations, and inspection system at provincial level
- Support NCFD to roll out pilot nursery certification scheme with participating private nurseries
- Manage cooperative development and capacity building (output 3)
- Upgrade horticulture station/center facilities for germplasm maintenance, testing production technologies, sapling quality check, and transfer of genetic technologies to private nurseries

Safeguards compliance

- Monitor and ensure safeguards compliance with ADB's SPS 2009, government requirements, and other related requirements particularly safeguards monitoring reports and tender documents at provincial level
- Address grievances related to the project following the grievance redress mechanisms established in the project and provide safeguards monitoring inputs to the CPMU

- Facilitate public consultations with project beneficiaries and other stakeholders at the provincial level

(3) Deliverable and timeline

- Semiannual project progress report
- Annual project progress report
- Consolidated audited project financial statements
- GESI AP progress report
- Project management database updated real-time

(4) Indicative consulting package description

Package Description	PP	Major task to be done
Tissue culture development, specialized grafting technique, and quality control (output 1) Composition (1 grafting expert and 1 biotechnology expert)	CS01	<ul style="list-style-type: none"> • Provide special training and develop expertise to staffs of IAs, and some private nurseries on tissue culture and grafting. • Provide technical knowledge quality control of tissue culture and grafted seedlings of fruits
POP development and training of trainers (output 2)	CS02-A	<ul style="list-style-type: none"> • Preparation of detail PoP of project targeted fruits according to the agroclimatic conditions of project areas. • Provide the Training of Trainers on prepared PoPs for governments technicians
Multimedia material development (output 2)	CS02_B	<ul style="list-style-type: none"> • Preparation of audio vidual multimedia of prepared which will be used as a tool of capacity building farmers.
Crop and land database establishment, agtech advisory platform and staff training (output 1)	CS03	<ul style="list-style-type: none"> • Development and operationalize the database platform including PMIS, sapling tracking system and agro_advisory platform • Monitor and give feedback to farmer facilitator and social mobilizer during data collection • Data management, analysis and reporting.
Baseline survey (DMF)	CS04_A	<ul style="list-style-type: none"> • Conduct baseline survey of the project
Midline survey (DMF)	CS04_B	<ul style="list-style-type: none"> • Conduct midline survey of the project
Endline Survey (DMF)	CS04_C	<ul style="list-style-type: none"> • Conduct endline survey of the project
Farmer group facilitation and cooperative capacity building (output 2 and 3)	CS05-A CS05-B CS05-C	<ul style="list-style-type: none"> • Facilitation, mobilization and capacity building of farmers farmers group

Package Description	PP	Major task to be done
	CS05-D CS05-E	<ul style="list-style-type: none"> • Facilitation, mobilization and capacity building of cooperatives • Data collection for land data base management • Regular monitoring of project activities in field level • Regular reporting of project activities to PMUs • Project orientation activities • Other assigned task
Project Implementation Support Consultants – CPMU and PIUs (project management)	CS06	<p>Support CPMU and PIUs to</p> <ul style="list-style-type: none"> (i) manage overall day-to-day project implementation; (ii) to oversee compliance of loan and grant covenants, and environmental and social safeguards, and facilitate corrective actions as required; (iii) to ensure timely delivery of project outputs with close collaboration among IAs; (iv) to ensure compliance with ADB Safeguard Policy Statement (SPS, 2009), national requirements and project audit observation and recommendations; (v) to ensure implementation of the gender and social inclusion (GESI)/ action plan (AP); and (vi) to prepare and review withdrawal applications, obtain project account statements, and submit them to ADB.
Infrastructure design and supervision firm (output 3)	CS07	<ul style="list-style-type: none"> • Design and supervision of specialized infrastructures related to value addition of nuts and fruits.