Environmental Monitoring Report

PUBLIC

Project Number: 48218-006
Loan and/or Grant Number(s): 4211-NEP(COL), 0845-NEP (SF), 0846-NEP (EF)
#5 Semiannual Report (January 2025 to June 2025)
August 2025

Nepal: Nuts and Fruits in Hilly Areas Project

Prepared by Ministry of Agriculture and Livestock Development for the Asian Development Bank (ADB).

PUBLIC. This information is being disclosed to the public in accordance with ADB's Access to Information Policy.

CURRENCY EXCHANGE

(As of August 4, 2025)

Currency unit	-	Nepalese Rupees (NRs)
NRs1.00	-	$ 0.00715
$1.00	-	NRs 139.77

ABBREVIATIONS

ADB	:	Asian Development Bank
CGFMC	:	Credit Guarantee Fund Management Committee
CGMC	:	Competitive Grant Management Committee
CPMU	:	Central Project Management Unit
DCGF	:	Deposit Credit Guarantee Fund
DG	:	Director General
DMF	:	Design and Monitoring Framework
DoA	:	Department of Agriculture
DoAD	:	Directorate of Agriculture Development
EA	:	Executing Agency
ED	:	Executive Director
EMP	:	Environmental Management Plan
EMoP	:	Environmental Monitoring Plan
EMR	:	Environmental Monitoring Report
GAFSP	:	Global Agriculture and Food Security Program
GESI	:	Gender Equality and Social Inclusion
GESI-AP	:	Gender and Social Inclusion Action Plan
IA	:	Implementing Agency
LLCC	:	Local Level Coordination Committee
MoLMAC	:	Ministry of Land Management, Agriculture and Cooperatives (Provincial)
MoALD	:	Ministry of Agriculture and Livestock Development (Federal)
MoALD	:	Ministry of Agriculture and Livestock Development (Provincial)
MoALM	:	Ministry of Agriculture and Land Management
MoIACS	:	Ministry of Industry, Agriculture and Cooperatives
NAFHA	:	Nuts and Fruit in Hilly Areas Project
NARC	:	Nepal Agricultural Research Council
NCFD	:	National Center for Fruit Development
PFI	:	Partner Financial Institutions
PIU	:	Project Implementation Unit
PoP	:	Package of Practices
PPSC	:	Provincial Project Steering Committee
PSC	:	Project Steering Committee
SMC	:	Subsidy Management Committee
SME	:	Small and Micro Enterprise
SMR	:	Social Monitoring Report
SPS	:	ADB Safeguard Policy Statement (2009)
TA	:	Technical Assistance
TASF	:	Technical Assistance Special Fund
ToR	:	Terms of References

{WEIGHTS AND MEASURES}

ha (Hectare) – 1 hectare is equivalent to 10000 m^2 area
One hectare = 19.65 ropani

NOTES

1. The fiscal year (FY) of the Government of Nepal and its agencies ends on 15 July. FY before a calendar year denotes the year in which the fiscal year ends, e.g., FY 2081/82 ends on 17 July 2025.
2. In this report, "$" refers to US dollars.

This environmental monitoring report is a document of the borrower. The views expressed herein do not necessarily represent those of ADB's Board of Directors, Management, or Staff, and may be preliminary in nature. Your attention is directed to the "terms of use" section of ADB's website.

In preparing any country program or strategy, financing any project, or by making any designation of or reference to a particular territory or geographic area in this document, ADB does not intend to make any judgments as to the legal or other status of any territory or area.

Executive summary

1. **Environmental Safeguard in NAFHA**. The project is classified as Category B for environment under the Asian Development Bank's (ADB) Safeguard Policy Statement (SPS, 2009), which is expected to cause limited, site-specific environmental impacts that can be effectively mitigated. This classification guided the preparation of an Initial Environmental Examination (IEE), which covers all project-financed components, including orchards and vegetable areas development, drip irrigation systems, upgrading horticulture centers, and enhancing private nurseries through matching grants.The project integrates the environmental considerations to mitigate potential risks and promote sustainability complying with legal and international standards. Environmental Management Plans are being developed for each component which will be embedded in bidding documents and contractor agreements. Orchard farm developments are restricted to existing private farmlands, ensuring no conversion of forests or natural habitats, thus minimizing ecological disruption.

2. **Environmental Safeguard Arrangements in the Project**. The CPMU leads overall project implementation and takes overall responsibility for environment safeguards by monitoring and ensuring compliance with ADB's SPS 2009 and government safeguard requirements, and other safeguard related requirements in project documents. The CPMU consolidates safeguard monitoring results from all PIUs and submits semiannual environmental and social monitoring reports to ADB. The CPMU has assigned the Safeguards Focal (SF) Persons. CPMU and PIUs are responsible for implementing the EMP provisionsioned in IEE and compliance during the project implementation.

3. The NAFHA has the well-designed safeguards mechanism in the project with presence of safeguards focal (at CPMU and provincial PIUs) and environment consultants supporting the federal to provincial level offices. Under the CS06 the Project Implementation Support Consultant (PISC) with environmental experts are at the central CPMU and in the PIU's of all five provinces are providing support on the environmental safeguard compliance of the project. Similalry, under the CS05 the social mobilizers and farmer's group facilitators (FGF) are appointed in all the project local levels and are supporting the field level environmental safeguard compliance activities.

4. **Due Diligence Preparation and Safeguard Provision in the Bidding Documents.** The project has initiated the preparation of the Due Diligence Report for the subproject components in this reporting period, two civil works packages *i.e.* CW07-A and CW08-A has already been contracted with approval of due diligence report (DDR) prepared by the project. Besides that, CW01-AA is also at the stage of contract awarding and for which DDR preparation is ongoing. The project has assured the inclusion of EMP in all the civil works package ensuring the effectiveness of the safeguard compliance mechanism in the project. The bidding documents prepared have guaranteed that the environmental, health, and safety code of conduct will be the basis for the performance of good working activities. The Environment, Health and Safety (EHS) Code of Conduct is part of our measures to deal with environment, health and safety risks related to the Works. It applies to all our staff, laborers and other employees at the Works Site or other places where the Works are being carried out.

5. **Environmental Compliance Status.** The project demonstrates significant progress and a robust commitment to environmental safeguards across Gandaki, Koshi, Bagmati, and Sudurpaschim provinces. The project has shown substantial but not full compliance with the Environmental Monitoring Plan and Environment, Health and Safety Management Plan. The civil construction works in the Horticulture center has not been initiated yet. Once the civil works will be initiated Key measures such as dust suppression, noise control, waste collection and safe storage of fuels are to be considered by the contractors. Whereas in

the orchard farms there is no any issues of air, noise pollution is not so concerned where as the farmers group are using the registered agro-chemicals and the organic manures are given priority. Community consultations, local employment, safety orientations, and distribution of protective equipment were carried out, though consistent use of PPE, proper maintenance of sanitation facilities, complete record-keeping, and systematic monitoring of water, and waste management needs to be improved. The orchard farm developments are restricted to existing private farmlands, ensuring no conversion of forests or natural habitats, thus minimizing ecological disruption. Overall, compliance is broadly achieved, but gaps in monitoring, enforcement, and follow-through highlight the need for stronger and sustained efforts.

Table of Contents

1. Introduction 1
   1.1 Project Description 1
   1.2 Project Components 2
   1.3 Sub-Project/Package Descriptions 5
   1.4 Environmental Category and Considerations 6
   1.5 Progress of Project Activities till the Reporting Period 8
2. Institutional Arrangement 10
3. Statutory Environmental Requirements 12
4. Environmental Management Plan 12
5. Safeguard Compliance 13
6. Safeguard Planning and Anticipated Environmental Risk Mitigation Measures 15
7. Consultation, Participation and Disclosure 16
8. grievance redress mechanism (GRM) 16
9. Compliance with Covenants 17
10. Key Issues and recommended actions 21
11. Best practices, key challenges, and recommendation 22
12. Focus on Next reporting period 22
13. Appendixes 24

List of Tables

Table 1: Sailent features of the project 3
Table 2: Province-wise Fruit Crops, Area & Centers 5
Table 3: NAFHA Project implementation areas 6
Table 4: Summary Table of Environmental Considerations for the NAFHA Project 8
Table 5: Environmental Safeguard Team in the CPMU and PIU 11
Table 6: Status of compliance with loan and grant covenants. 18
Table 7: Issues Related to Environment Monitoring and Implementation of the Project 21

List of Figures

Figure 1: Map showing horticulture centers/stations planned to be upgraded under NAFHA Project 4
Figure 2: Map showing the target locations of orchards establishment 4
Figure 3: Institutional Arrangement of Project focusing on Safeguard 11
Figure 4: Grievance redress mechanism (GRM) Framework of NAFHA Project 17

1. INTRODUCTION

1.1 Project Description

1. The Government of Nepal is implementing the Nuts and Fruits in Hilly Areas (NAFHA) Project, supported by a US$60 million loan and a US$10 million grant from the Asian Development Bank (ADB), along with a US$9 million grant from the Global Agriculture and Food Security Program (GAFSP). The project aims to enhance the agricultural income of approximately 40,000 farm households across 100 municipalities in the hilly regions of Koshi, Bagmati, Gandaki, Karnali, and Sudurpashchim provinces. This will be achieved through the development of 10,000 hectares of fruit and nut orchards, value-addition for products from 30,000 households, and institutional capacity building for nursery and horticulture management, alongside vegetable and nutritious crop production on 1,000 hectares with marketing support for 10,000 smallholder households unable to invest in orchards.

2. The project is designed to enhance the livelihoods of rural households and bolster the resilience of farmers to climate change by increasing beneficiary farmers' agricultural income through climate-resilient horticulture farming. This outcome will be achieved by improving nursery management, enhancing production and productivity in orchards, and promoting value addition and commercialization of fruits and nuts. Additionally, the project supports smallholder farmers in the same project areas, who lack the resources to invest in commercial fruit and nut farming, by enabling them to generate income through vegetable and other crop farming. These interventions aim to foster sustainable agricultural practices and economic empowerment in the targeted rural communities. The project is structured to produce the following results

3. Output 1: Institutional capacity for nursery and horticulture sector management improved. This output will ensure a sufficient supply of quality planting materials of fruit and nut crops in Nepal. At the national level, the project will (i) prepare nursery standards, 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/center staff, and organize knowledge exchange programs and workshops to meet internationally accepted sanitary and phyto sanitary standards; (iv) upgrade private nurseries to ensure healthy and quality material production, and transfer genetic technologies to private nurseries (scheme 6); (v) commission research on more climate resilient and adaptable varieties of fruits and nuts; (vi) develop a nursery certification scheme and roll it out with volunteer private nurseries; and (vii) train and certify cooperatives and private input suppliers which will serve project clusters. At the provincial level, the project will support: (i) development of interactive crop suitability maps at crop variety level through 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) under each of five provincial agricultural ministries.

4. Output 2: Production and productivity of project farmers increased. This output will be gained through planting of new orchards and fruits e.g, almond, apple, avocado, citrus (lime, mandarin and sweet orange), kiwi, macadamia, pecan and walnut production on approximately 10,000 ha of land and productivity of fruits and orchards will enhance through (i) development of the packages of practice (PoP) incorporating climate analysis, soil management, variety recommendation and crop husbandry, drip irrigation and management, and overall orchard management including Good Agricultural Practices (GAP), integrated pest management, harvest techniques and storage; (ii) trained the beneficiary farmers in the packages of practice through (a) implementing agencies and farmer group facilitators, (b) private technical service and input providers, (c) farmer-to-farmer extension program,

identifying lead farmers and training them to demonstrate climate change adaptation and best practices, and (d) digital technology based farm advisory system development and promotion.

5. The project will also provide financial support through (i) partial grants for the development of approximately 10,000 ha of horticultural orchards development and drip irrigation system (scheme 2); (ii) providing grant incentives to farmers based on plant survival rate; (iii) assessing and verifying carbon sequestration benefits from orchards, and exploring carbon financing options; and (iv) supporting beneficiary farmers' loan access by establishment and operation of a Guarantee Fund Scheme (GFS) (scheme 1) for smallholder horticulture farmers and rural agribusinesses, leveraging: (a) the full up-front investment loans, including working capital, from participating banks and financial institutions to farmers, farmer groups, cooperatives and agro-enterprises up to 1 year; and (b) the remaining loan of farmers, farmer groups and cooperatives up to 5 years.

6. Smallholders farmers with less than 4 ropani (0.2 ha) who are unable to invest in commercial fruit and nut orchard development under the project will be supported for irrigated off-season vegetables and wet season nutritious food crop production. Approximately 10,000 farm households will be eligible for this category. The GAFSP 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 in 1,000 ha (part of scheme 2); and (iii) partial grants for the establishment of vegetable value-addition equipment and infrastructure at three different levels, namely: cooperative (scheme 3), agribusiness through public-private partnership (scheme 4) and local levels (scheme 5). The World Food Programme (WFP) will provide parallel financing of grants from GAFSP for establishing and operating farmer nutrition schools to access and utilize food for improved dietary diversity. Output 2 will be implemented by NCFD and provincial DOAD under each of five provincial agricultural ministries.

7. Output 3. Value addition to hilly area horticulture product enhanced. The output will (i) promote agriculture/horticulture cooperatives to aggregate fruits, nuts and other crop produce, better manage quality of horticultural products and improve profits of smallholder farmers; (ii) strengthen those associations and cooperatives that are willing to invest in value addition activities through developing training programs and conducting training of cooperatives in post-harvest management, food safety control system such as Hazard Analysis Critical Control Point, financial management, business, marketing and entrepreneurship, while promoting female leadership; (iii) provide matching grants to support cooperatives' investment in value addition equipment for crop washing, sorting, grading, cooling, processing, packaging, and quality control (scheme 3); (iv) Promote agribusinesses and service providers that collaborate with project beneficiaries by qualify matching grants for improving, inter alia, traceability systems, certification systems, internet-based marketing, organic production and cold chain linkage (scheme 4); and (v) develop value-addition infrastructure such as commodity storage, collection center and orchard fencing that provide public good benefits by co-financing investments from provincial governments and local-level (scheme 5). Output 3 will be implemented by NCFD and provincial DOAD under each five provincial agricultural ministries.

1.2 Project Components

8. The NAFHA project will finance the upgrading of 12 public horticulture stations/centers under NARC, Provincial governments as well as NCFD as shown in Figure 1. The main objective of this activity is to ensure that verified quality planting materials are provided to project farmers. The project is expected to contribute in long-term capacity building of these horticulture stations/centers that can serve broader areas beyond the project's targeted crops. sailent features of the project is presented in **Error! Reference source not found.** below and Targets locations of orchards establishments is shown in Figure 2.

Table 1: Sailent features of the project

KEY FEATURE	DETAILS
Full name	Nuts and Fruits in Hilly Areas Project (NAFHA)
Duration	Approximately 7 years (2022–2029)
Budget / funding sources	- Total budget: ≈ USD 58.6 million - Co-financing details (ADB loan & grant, GAFSP grant, GoN): ≈ USD 93.45 million
Implementing & executing agencies	- Executing: Ministry of Agriculture and Livestock Development (MoALD) - Implementation: Central Project Management Unit (CPMU) under NCFD, working through Project Implementation Units (PIUs) in five provinces
Geographical scope	- Covers 100 municipalities across five provinces: Koshi, Bagmati, Gandaki, Karnali, Sudurpaschim (34 districts total)
Target beneficiaries	- ~40,000 smallholder farmers and households
Orchard development	- Establishment of ~10,000 hectares of orchards for fruit and nut crops (e.g., apple, avocado, citrus, kiwi, macadamia, pecan, walnut, almond)
Vegetable production support	- Support for sustainable and climate-smart vegetable production including off-season irrigated crops for smallholders
Institutional capacity building	- Strengthen nursery and horticulture management through: • Partnerships with ≥ 40 nursery managers and ≥ 10 private nurseries • Developing nursery standards, certification systems, inspection, and infrastructure upgrades • Training staff and transferring genetic technologies
Training & outreach	- Training ~30,000 farmer households on best practices: • climate-smart packages, GAP, orchard management, drip irrigation, IPM, harvest & storage, beekeeping
Value chain enhancement	- Promote value addition and commercialization via: • Capacity building in cooperatives/local bodies • Good agri practices and food safety certification • Pre- and post-harvest infrastructure support, marketing facilitation, and credit access via grants and a credit guarantee fund (~USD 60 million)
Financial instruments	- Partial subsidies to farmers, clusters, cooperatives, entrepreneurs - Credit Guarantee Fund (~USD 60 million equivalent) to improve financial access (ncfd.gov.np)
Alignment & goals	- Supports Nepal's Agriculture Development Strategy (ADS), SDGs, food & nutrition security, inclusive growth, rural livelihoods, poverty reduction, climate resilience
Technical support & management	- Services provided by Project Implementation Support Consultant (PISC): • Planning, M&E, financial & procurement management, safeguards compliance, stakeholder engagement, training, technical assistance

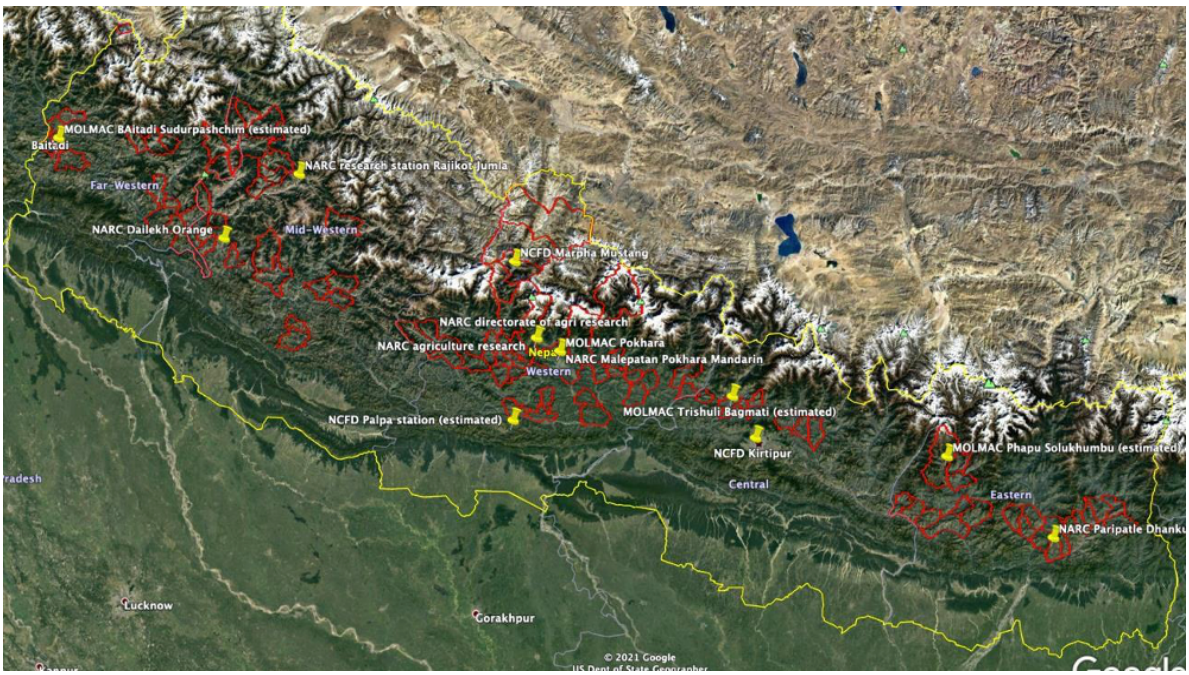

Figure 1: Map showing horticulture centers/stations planned to be upgraded under NAFHA Project

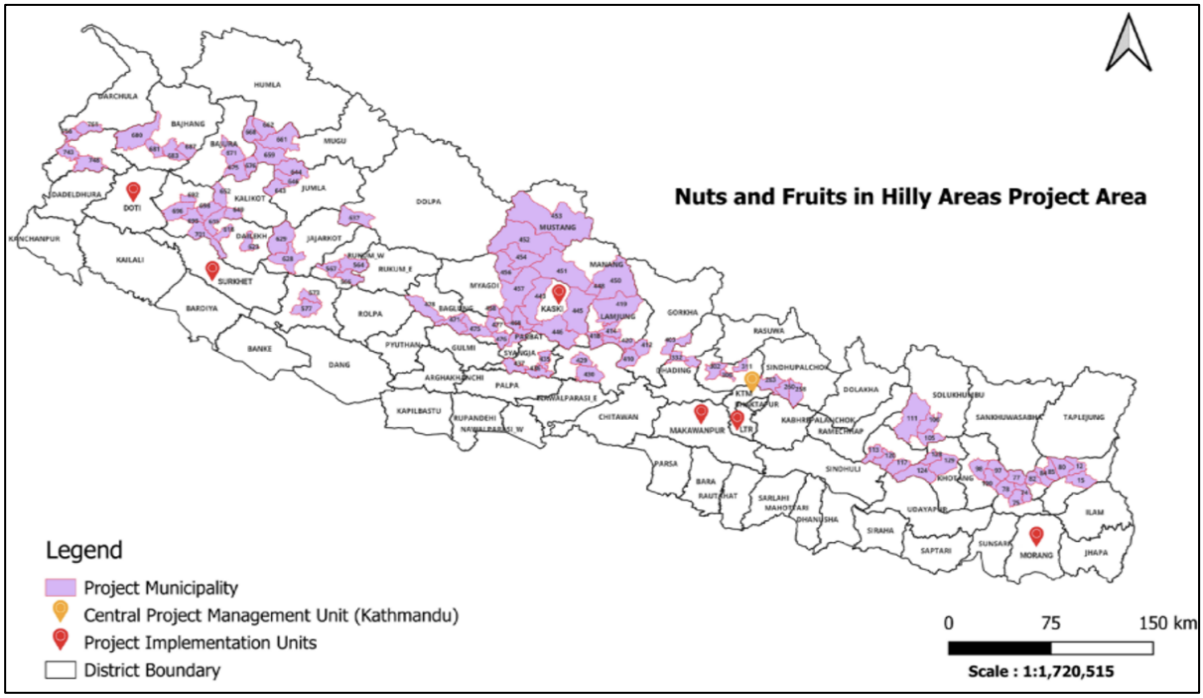

Figure 2: Map showing the target locations of orchards establishment

9. The project supports production of the following key crops and upgradation of horticulture station/center located in each target province as specified in Table 2 below:

Table 2: Province-wise Fruit Crops, Area & Centers

Name of Province	Estimated project-supported orchards and its area	Horticulture station/center to be upgraded by the project 1
Koshi	Apple- 50ha, Orange- 900 ha, Lime- 500 ha, Avocado- 300ha , Kiwifruit- 400ha and Walnut- 50ha	• Horticulture Center, Phaplu, Solukhumbu, • National Citrus Research Program, Paripatle, Dhankuta(NARC)
Bagmati	Orange- 300ha, Lime- 300ha, Avocado -150ha, Macadamia- 300ha and Walnut - 100ha	• Sub-tropical horticulture Development Center, Trishuli, Nuwakot • Warm Temperate Horticulture Center, Kirtipur, Kathmandu
Gandaki	Apple- 100ha, Orange- 800ha, Lime- 750ha, Avocado- 150ha, Kiwifruit- 150ha, Walnut- 250ha and Macadamia- 250ha	• Temperate Horticulture Center, Marpha, Mustang (NCFD) • Citrus Fruit Development Center, Tansen, Palpa • Regional agricultural Research Station, Lumle, Kaski (NARC) • Horticulture Research Station, Malepatan, Kaski (NARC) • Horticulture Development Resource Center, Pokhara
Karnali	Apple- 1,450ha, Orange- 350ha, Walnut- 600ha, Pecan 100ha and Almond- 100ha	• Horticulture Research Station, Rajikot, Jumla (NARC) • Horticulture Research Station, Kimugaun, Dailekh (NARC)
Sudurpashchim	Apple- 400ha, Orange- 250ha, Lime- 100ha, Walnut- 600ha, Pecan- 100ha and Almond- 100ha	• Dry Fruit Development Center, Satbanjh, Baitadi

10. The project will support the development of orchards, across 5 provinces (Koshi, Bagmati, Gandaki, Karnali and Sudurpashchim), on 10,000 ha of land located in 100 municipalities. . Orchard crops that will be eligible for support includes almond, apple, avocado, citrus (lime, mandarin and sweet orange), kiwifruit, macadamia, pecan and walnut. Farmers of project municipality will be allow to choose the four most suitable crops for their municipality among the other orchard crops. The list of participating municipalities with their eligible crops will be publicly disclosed on the project website and project communication materials.

1.3 Sub-Project/Package Descriptions

11. The project is aligned with the following impacts: (i) livelihoods of rural households improved; and (ii) resilience of farmers to climate change improved1. The project will have the following outcome: beneficiary farmers' agricultural income from climate resilience farming of fruits and nuts increased. This will be achieved through improved nursery management, enhanced production and productivity in orchards, and enhanced value addition in fruits and

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

nuts. The NAFHA project implementation areas are stated in Table 3. The project implementation started in Batch-1 and Batch 2 of 54 local level of project provinces.

Table 3: NAFHA Project implementation areas

Districts	1. Koshi: Panchthar, Terhathum, Dhankuta, Bhojpur, Khotang, Okhaldhunga and Solukhumbu 2. Bagmati : Sindhupalchok, Nuwakot and Dhading 3. Gandaki: Gorkha, Lamjung, Syangja, Tanahu, Kaski, Syangja, Parbat, Mustang, Myagdi and Baglung 4. Karnali: Rukum West, Salyan, Jajarkot, Dailekh, Kalikot, Jumla, Mugu, Humla and Dolpa 5. Sudurpaschim: Accham, Bajura, Baitadi, Bajhang and Darchula		
Targeted Numbers of Municipalities per Provinces	Koshi	7 districts	22 municipalities
	Bagmati	3 districts	8 municipalities
	Gandaki	10 districts	34 municipalities
	Karnali	9 districts	20 municipalities
	Sudurpaschim	5 districts	16 municipalities
Targeted Area	Total target area (ha)	10,000 (for fruit orchard) and 1,000 (for vegetables and other crops)	
	Average area per municipality (ha)	100	
	Average area per municipality (ropani, 1 ha=20 ropani)	2,000	
	Average households per municipality	300	
	Average area per household (ropani, 1 ha=20 ropani)	6.7	
Species wise proposed area in (Ha)	Apple	2,050	
	Orange	2,600	
	Lime	1,650	
	Avocado	600	
	Kiwi	550	
	Walnut	1,600	
	Macadamia	550	
	Pecan	200	
	Almond	200	
	Vegetables and crops	1,000	
	Total	11,000	
No of Research Centers to be Upgraded	12		
Total Orchard Development Area	10,000 ha		
Total beneficial Households	30,000		

12. The project will establish four competitive matching grant programs: (i) private nursery upgrading; (ii) improved cooperative value addition grant; (iii) public-private infrastructure grant; and (iv) strengthened local level infrastructure grant.

1.4 Environmental Category and Considerations

13. Environmental category and the comprehensive considerations of this project is to minimize environmental impacts, complying with regulations, and promote sustainable practices.

1.4.1 Environmental Category

14. The project is classified as Category B for environment under the Asian Development Bank's (ADB) Safeguard Policy Statement (SPS, 2009), which is expected to cause limited,

site-specific environmental impacts that can be effectively mitigated. This classification guided the preparation of an Initial Environmental Examination (IEE), which covers all project-financed components, including orchards and vegetable areas development, drip irrigation systems, upgrading horticulture centers, and enhancing private nurseries through matching grants. To ensure compliance with this categorization, the project explicitly avoids financing any subprojects that fall under Category A, which would involve significant adverse environmental impacts and require a full Environmental Impact Assessment (EIA).

15. 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 occupational health and safety risks due to the activities under Output 1. Bid document will include clasuses to meet ADB and government safeguard requirement, recommendations of the IEE and EMP cleared by ADB. 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.

1.4.2 Environmental Considerations

16. The NAFHA project integrates the environmental considerations to mitigate potential risks and promote sustainability complying with legal and international standards. Environmental Management Plans are being developed for each component which will be embedded in bidding documents and contractor agreements.These considerations are detailed below.

a) Minimal Environmental Impacts

17. Limited Scope of Impact: The project anticipates minimal environmental impacts, primarily temporary air quality decline and health and safety risks for workers during nursery and orchard preparation. Given that 80% of farmers in the hilly areas own less than 0.5 hectares of land, the scale of disturbance is inherently small. Confinement to Private Farmlands: Orchard developments are restricted to existing private farmlands, ensuring no conversion of forests or natural habitats, thus minimizing ecological disruption.

b) Compliance with Environmental Laws

18. The project requires environmental clearance prior to orchard development, in compliance with Nepal's new Environmental Protection Act (EPA) 2019 and Environmental Protection Regulations (EPR) 2020 of Government of Nepal (GoN), IEE is required where there is introduction of exotic plants[2] more than a hectare area in any of the locality within hilly territory. Since this project proposed to introduce the high yielding fruits and nuts plants within 1 to 25 ha area of hilly regions of Nepal, IEE will be required by the GON's policies. The CPMU has initiated the preparation of the IEE ensuring compliance with the national laws and other statutory requirements.

c) Environmental Monitoring and Reporting

19. The project's environmental management is supported by a structured monitoring and reporting framework.The CPMU and Provincial Implementation Units (PIUs) are responsible for monitoring EMP implementation, supported by environmental experts. PIUs also facilitate public consultations and address grievances at the provincial level. The semi-annual EMRs

[2] According to Convention on Biological Diversity: "An organism that exists in the free state in an area but is not native to that area. Also refers to animals from outside the country in which they are held in captive or freeranging populations." Introduction of high yielding crop species are taken as exotic species.

documents the environmental compliance, with results consolidated by the CPMU for submission to ADB. Monitoring reports are publicly disclosed, ensuring accountability and stakeholder awareness. The following table summarizes the key environmental considerations and their implementation strategies.

Table 4: Summary Table of Environmental Considerations for the NAFHA Project

Consideration	Description	Implementation Strategy	Project Status
Minimal Impacts	Temporary air quality decline and worker safety risks	Confine activities to small-scale private farmlands	No risk
Regulatory Compliance	Adherence to Nepal's environmental laws	Obtain clearances per Environmental Protection Act 2019 and Regulations 2020	The CPMU has initiated on the preparation of the IEE for the Nepal Government requirements
EMP Implementation	Mitigation of environmental impacts	Develop and implement EMP with photographic documentation	DDR preparation of the sub components is ongoing
Biodiversity Protection	No impact on natural habitats	Restrict activities to existing farmlands	Project confined to existing farmland
Climate Change Adaptation	Climate-smart agricultural practices	Develop climate-resilient crop varieties and POPs	
Water Management	Efficient water use through drip irrigation	Install systems and improve water sources	6 drip irrigation facility
Carbon Sequestration	Explore carbon credit opportunities	Conduct MRV studies for orchard production	Orchard development of land-cover area of 10,000 ha. with climate-resilient planting materials, will increase the carbon sinks.
Stakeholder Engagement	Inclusive consultation processes	Conduct periodic and continous consultations and establish GRM	Conducted consultation and had established GRM mechanism with 24 GRC
Health and Safety	Mitigate health risks, including COVID-19	Follow national and international health protocols	
Prohibited Activities	Avoid environmentally sensitive projects	Adhere to ADB's Prohibited Investment Activities List	Project is not implemented in environmentally sensitive area

1.5 Progress of Project Activities till the Reporting Period

20. Project has achieved significant momentum across its primary objectives, demonstrating substantial progress in institutional capacity building, farmer productivity enhancement, and the establishment of frameworks for value chain improvements. While foundational activities are well-established and yielding results, the project is now entering a critical phase of scaling up and operationalizing key infrastructure and financial mechanisms.

Output 1: Institutional Strengthening for nursery and horticulture sector management

21. Crop and Land Suitability & Database Development: CPMU coordinated a one-day training for 15 participants, including Batch 1 farmer group facilitators and PIU staff, to input

data and operate the system. Additionally, 1 TB of cloud space has been allocated from NITC (letter received on 7 May 2024), with provision for expansion based on VM usage.

22. Nursery Standards & Inspection: 65 nurseries have registered for volunteer certification following technical audits. Currently, 13 nurseries across five provinces (Koshi-1, Bagmati-5, Gandaki-1, Karnali-3, Sudurpashchim-3) have been selected for contract awarding, with 15.4% women-owned and 7.7% from disadvantaged groups (DAG), while Due Diligence Reports and negotiations are ongoing for contract completion by September 2025.

23. Station/Center Upgrades: Out of the twelve contract packages, two (CW07-A and CW08-A) have been awarded and work is ongoing.

24. Capacity Building: Over 30 diverse trainings and study visits have been conducted. Furthermore, 49 staff members benefited from an international training and exposure visit on nursery and horticulture sector management, contributing to enhanced technical expertise and institutional capacity.

25. Research on Varieties: The project has successfully contributed to the release and registration of 17 new fruit varieties, including seven for apple, four for walnut, three for avocado, two for mandarin, and one for macadamia nut.

Output 2: Increased in Production and Productivity of Project farmer

26. A total of 163 new farmer groups have been formed, and CS05 A–E consultants have been procured and mobilized in the field. Out of 500 targeted lead farmers, 274 have been contracted across 62 local levels. Among the contracted lead farmers, 20.1% are women and 33.3% are DAGs. A cornerstone of this output out of targeted 10,00 hactares, 259.05 hectares of fruit orchards have been established, and contracts have been awarded to cover an additional 979.65 hectares. The development of technical knowledge has also been a key achievement. The comprehensive Package of Practices (POPs) for all ten target commodities has been completed. Similarly, The Credit Guarantee Fund (CGF) has not yet been implemented.

27. Developing Drip Irrigation Systems: The project has successfully established six micro-irrigation facilities, three in Sudurpaschim Province and three in Gandaki Province for walnut and apple orchards respectively. In addition, a dedicated demonstration plot featuring drip irrigation has been established at Satbanjh Farm in Baitadi.

28. Preparation of Operational Guidelines: During the reporting period, The final draft of the consolidated operational guidelines for Schemes 3, 4, and 5, covering Improved Cooperative Value Addition, Public-Private Infrastructure, and Strengthened Local-Level Infrastructure has been completed.

2. INSTITUTIONAL ARRANGEMENT

29. MOALD is the executing agency (EA) of this project. As EA, MOALD provides overall strategic direction and ensures project financing and staffing. Importantly, MOALD shall ensure compliance of loan and grant covenants, environmental and social safeguards, and facilitate corrective actions, as required. It also ensures the compliance with ADB Safeguard Policy Statement (SPS, 2009) and national safeguards requirements. The central implementing agency (IA-1) is the National Center for Fruit Development (NCFD) with its Central Project Management Unit (CPMU). IA-1/CPMU leads overall project implementation and takes overall responsibility for environment and social safeguards by monitoring and ensuring compliance with ADB's SPS 2009 and government safeguard requirements, and other safeguard related requirements in project documents. The CPMU consolidates safeguard monitoring results from all PIUs and submits semiannual environmental and social monitoring reports to ADB.

30. Provincial implementing agencies (IAs 2–6) are the Department of Agriculture (DOAD) of each province (Figure 3). Each provincial DOAD, led by its Chief who monitors and ensures compliance with environmental and social safeguards related to the work at the provincial and local levels and facilitate the implementation of safeguard plans. They also ensure PIUs are fully staffed and outputs are delivered on time. The NARC (IA 7) likewise monitors and ensure compliance with loan and grant agreements, and environmental and social safeguards for project-supported research stations.

31. Within each implementing agency, Project Implementation Units (PIUs) handle day-to-day safeguard monitoring. PIUs are established under the DOAD in each province, headed by the Chief of DOAD as Provincial Project Manager. Under the direct supervision of a provincial environment safeguards consultant, each PIU will (i) ensure all contractors and beneficiaries obtain required environmental permits; (ii) carry out regular field verification of environmental compliance by contractors and beneficiaries; (iii) document observations during site visits and through monitoring reports; (iv) guide beneficiaries (farmers/cooperatives) on safeguard plans and monitoring; (v) conduct training/workshops on environmental management and provide project-site induction for all staff and workers; (vi) participate in public consultations and grievance processes; and (vii) if unanticipated impacts occur, update the IEE/EMP or prepare an environmental due diligence report. Contractors, for their part, must appoint an EHS focal person, obtain all permits, implement and report all EMP mitigation measures, and ensure their workers attend the PMU/PIU safety trainings

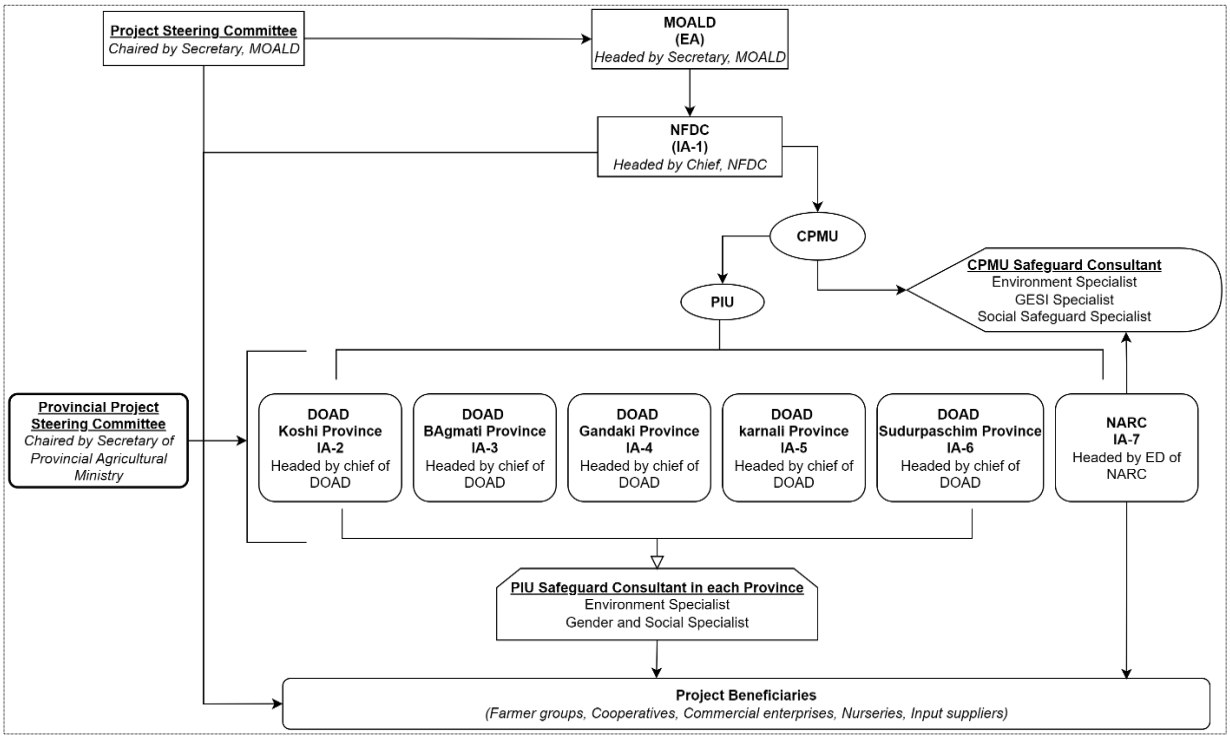

Figure 3: Institutional Arrangement of Project focusing on Safeguard

32. The NAFHA has the well-designed safeguards mechanism in the project with presence of safeguards focal (at CPMU and provincial PIUs) and environment consultants supporting the federal to provincial level offices. Project is supported by the environment safeguard specialist procured under the Project Implementation Support Consultant (PISC) through CS06 package at the central level. The environmental specialists in the PIU's of all five provinces need to implement the IEE/EMP, data collection/ reporting, Implementation of impacts mitigation measures, environmental screening of sub project, preparing due diligence report as required. Similalry, under the CS05 the social mobilizers and farmer's group facilitators (FGF) are appointed in all the project local levels and are supporting the field level environmental safeguard compliance activities.

Table 5: Environmental Safeguard Team in the CPMU and PIU

Position, Office	Name	Contact No./email	Inputs (PM)
CPMU	Santosh Poudel Environment Safeguard Focal Person Senior Agri-economist	9855053218 Paudelsraj2021@gmail.com	Full Time
CPMU, PISC	-	-	Intermittent Total – 11 Consumed -1.44
Koshi Province - PIU	Krishna Prasad Timsina Environment Specialist	9849563844 p1envir.piscc@gmail.com	Intermittent Total – 23 Consumed -2.08
Bagmati Province-PIU	Dinesh Ghimire Environment Specialist	9841904091 P3envir.piscc@gmail.com	Intermittent Total – 23 Consumed -2.84
Gandaki Province-PIU	Resham Baniya Environment Specialist	9851216650 p4envir.piscc@gmail.com	Intermittent Total – 23 Consumed -1.52
Karnali Province- PIU	Umesh Pratap Singh Environment Specialist	9843581535 p6envir.piscc@gmail.com	Intermittent Total – 23 Consumed -0.16

Position, Office	Name	Contact No./email	Inputs (PM)
Sudurpaschim Province- PIU	Subigya Prabhat Wagle Environment Specialist	9856063912 p7envir.piscc@gmail.com	Intermittent Total – 23 Consumed - 0

3. STATUTORY ENVIRONMENTAL REQUIREMENTS

33. The project is set to implement six different schemes (Scheme 1, 2, 3, 4, 5 and, 6) which has some uniqueness in its nature which requires import of germplasms from outside the country, registration of fruit varieties in national seed system, and quarantine regulations for distribution of imported saplings to beneficiary farmers. Besides that the project has to approve the operational guidelines to implement the project schemes compliance to the project objectives and requirements. Project has already approved the Scheme 2 and Scheme 6 operational guidelines with concurrence from MoF.

34. Environmental screening checklist for subproject under scheme 2 and 6 (developed in consultation with the ADB team) prepared for the screening of the applicants (Farmers, Farmers' group, Cooperatives, Private Nurseries) under approved guidelines is stated in Appendix 1 . LLCC, SMC and CGMC will be responsible for the screening of the checklist as per the provision of Operational Guidelines of Scheme 2 and 6.

35. The NAFHA Project must comply with a range of statutory environmental and regulatory requirements to ensure environmentally responsible implementation in line with Nepalese laws and ADB's Safeguard Policy Statement (SPS 2009). A key requirement is obtaining environmental clearance, guided by the Environmental Protection Act, 2019 and Environmental Protection Rules, 2020. Based on the nature and scale of subprojects, such as orchard establishment, irrigation development, or infrastructure upgrades, which may involve conducting an Initial Environmental Examination (IEE) or a Brief Environmental Study (BES). These assessments must be approved by the relevant environmental authority at the federal or provincial level. Subprojects that may impact forested areas or lie within proximity to protected zones also require Forest Clearance or a No-Objection Certificate (NOC), as per the Forest Act (2019) and the National Parks and Wildlife Conservation Act (1973).

36. In addition, specific permits are needed for the establishment and operation of private nurseries and upgraded horticulture centers, including consent to establish from local or provincial industry departments under the Industrial Enterprises Act, 2019. Labor and occupational safety compliance is essential under the Labor Act, 2017, requiring documentation of labor use, safety provisions, and insurance. Where water sources are developed or diverted for drip irrigation systems, a water use permit must be secured from the local authority or user committee in accordance with the Water Resources Act, 1992. Other relevant approvals may include waste management permits for managing organic and construction waste and construction permits from municipal offices for any permanent infrastructure. All such permits and clearances must be secured before implementation and monitored through the project's safeguard system, including periodic Environmental Monitoring Reports (EMRs) submitted to ADB.

4. ENVIRONMENTAL MANAGEMENT PLAN

37. The Project has adopted approved Initial environmental examination(IEE)/ environmental management plan (EMP) of NAFHA Project. So far till the reporting period (Jan 2025 to June 2025), The CPMU has issued the bidding documents for the civil works packages, which include the Environmental Management Plan (EMP) and Environmental Monitoring Plan (EMoP). These plans will be integrated into the draft bidding documents

during the preparation stage. CPMU will ensure to use applicable EMP and EMoP based on the packages as categorized in the IEE document of the project.

5. SAFEGUARD COMPLIANCE

38. The project demonstrates significant progress and a robust commitment to environmental across Gandaki, Koshi, Bagmati, and Sudurpaschim provinces. A strong culture of compliance is evident, rooted in the effective implementation of the Initial Environmental Examination (IEE). The project has shown substantial but not full compliance with the Environmental Monitoring Plan and Environment, Health and Safety Management Plan (Appendix 2 and 3) . The civil construction works in the Horticulture center has not been initiated yet. Once the civil works will be initiated Key measures such as dust suppression, noise control, waste collection and safe storage of fuels are to be considered by the contractors. Whereas in the orchard farms there is no any issues of air, noise pollution is not so concerned where as the farmers group are using the registered agro-chemicals and the organic manures are given priority. And also farmers have been implemented, while disease-free seedlings and integrated pest management were promoted in orchards. Community consultations, local employment, safety orientations, and distribution of protective equipment were carried out, though consistent use of PPE, proper maintenance of sanitation facilities, complete record-keeping, and systematic monitoring of water, and waste management needs to be improved. Overall, compliance is broadly achieved, but gaps in monitoring, enforcement, and follow-through highlight the need for stronger and sustained efforts.

Physical Environmental

39. Across the operational areas, compliance with physical safeguard measures remains consistently strong. Provinces such as Gandaki, Koshi, and Bagmati have demonstrated exemplary adherence to key physical safeguard practices, including topsoil conservation and reclamation, effective drainage management, integration of Initial Environmental Examination (IEE) recommendations into field-level planning, and sound solid waste management. Sudurpaschim and Karnali provinces also reflect a high level of implementation, particularly in solid waste management and the application of IEE guidance, signifying a robust commitment to environmental protection.

40. Farmers had ensured proper terracing, mulching to prevent erosion, ensuring that the valuable topsoil removed during digging is preserved and reused. Since soil work is a visible and mandatory preparatory activity, it is easier to achieve and monitor.

41. 90% compliance was achieved in solid waste management, cleanup, and reinstatement of the project area through practices such as collecting and segregating waste generated during plantation activities, composting biodegradable residues, reusing or safely disposing of nursery plastics, and clearing leftover materials from orchard establishment works. Farmer groups were oriented on proper waste handling, and monitoring visits ensured that most sites complied with environmental standards. However, full compliance has not been reached due to inconsistent practices among some groups, limited municipal waste collection support in rural areas, and occasional gaps in managing non-biodegradable plastics, which prevent the indicator from reaching 100%.

Biological Environment

42. Biological safeguard measures are being effectively implemented across the project areas, though there are slight variations in performance among provinces. Gandaki and Koshi provinces have demonstrated strong adherence to biosafety and quarantine protocols, setting a benchmark in this domain. In comparison, Bagmati, Karnali, and Sudurpaschim provinces exhibit moderate compliance, indicating the need for additional support and capacity-building efforts.

43. Similarly, in the adoption of Integrated Pest Management (IPM) practices and the use of low-toxicity agrochemicals, Gandaki continues to show encouraging progress. Other provinces, namely Koshi, Bagmati, Karnali, and Sudurpaschim are steadily implementing these practices but would benefit from enhanced reinforcement. These findings highlight a clear opportunity to strengthen environmentally sustainable farm management through targeted farmer training programs, expanded farmer field schools, and ongoing technical support tailored to local needs.

44. 95% for biosafety and quarantine procedures and 90% for the promotion of IPM and low-harm agro-chemicals were achieved through measures like ensuring seedlings were disease-free before distribution, monitoring for pests and diseases, and encouraging farmers to adopt integrated pest management practices that reduce reliance on hazardous chemicals. These efforts reflect strong adherence to biological safeguards during orchard development. However, full compliance has not been reached because some farmer groups still face challenges in fully adopting IPM methods, limited access to low-harm alternatives, and occasional lapses in monitoring and record-keeping, which collectively hinder achieving 100% compliance.

Socio-economic and cultural Environment

45. The project has made encouraging progress in upholding socio-economic safeguards. Local labor mobilization has been highly successful, with full compliance in the utilization of local community members. This includes specific deployments with standardized wage payments was reported. Community consultations and prior informed consent processes were effectively conducted, ensuring project activities align with local needs.

Occupational Health & Safety (OHS)

46. Basic occupational health and safety measures were initiated, including the use of protective gear and provision of sanitary facilities in some areas, while compliance reporting was maintained. However, gaps remain in achieving full compliance because protective equipment and safety measures were not uniformly sufficient, laborers were not fully insured in all sites. These shortcomings reflect challenges in sustaining consistent occupational safety standards and formal labor protections across all farmer groups.

Training & Capacity Building

47. Capacity-building efforts have begun, especially on environmental safeguards. Gandaki Province conducted 3-day training (June 2025) to 30 participants (7 men, 23 women) on safeguard compliance and reporting for Farmer Group Facilitators and social mobilizers, of whom 27 were from disadvantaged groups. This 77% female participation reflects strong inclusion in Gandaki's training. Koshi and Bagmati each note similar orientations: Koshi organized compliance monitoring training for FGFs/SMs plus 13 orchard-farmer orientation sessions. Bagmati, Karnali and Sudurpaschim had planned safeguard trainings.

48. Stakeholder orientation workshops were conducted in all provinces except Bagmati, totaling 73 sessions, with Gandaki (34) and Karnali (18) taking the lead. These sessions played a vital role in raising awareness of environmental, social, and project-specific safeguards. Additionally, 12 mappings of group and cooperative stakeholders were carried out, primarily in Koshi (7) and Karnali (5). To ensure adequate understanding of project processes, 23 orientation programs for selected farmers were implemented, with Koshi (13), Karnali (10), contributing to these numbers.

Environmental Safeguard Reports

49. As part of the project's commitment to environmental compliance and risk management, environmental screening has been systematically conducted for every sub-project prior to the commencement of any physical activities. This screening process ensures that potential environmental impacts are identified at an early stage and that appropriate

mitigation measures are integrated into sub-project design and planning. The environmental screening is carried out in accordance with the approved working procedures and environmental safeguard guidelines, aligning with both national environmental regulations and the Asian Development Bank's (ADB) Safeguard Policy Statement (2009).

50. In addition to screening, environmental due diligence has been undertaken as a critical step to assess environmental risks and safeguard readiness. A total of three Due Diligence Reports (DDRs) have been prepared for construction works,one each for Koshi, Gandaki, and Bagmati provinces. These reports provide a comprehensive review of sub-project compliance with environmental safeguard requirements, including site conditions, potential risks, existing mitigation measures, and recommendations for further actions. The DDRs serve as an important tool for verifying that environmental safeguards are adequately addressed before the initiation of infrastructure works, particularly in orchard development, pit formation, irrigation system installation, and related civil construction. This rigorous process of environmental screening and due diligence underlines the project's proactive approach to environmental management. It ensures that sub-projects are not only technically and financially viable but are also environmentally sound and socially responsible.

6. SAFEGUARD PLANNING AND ANTICIPATED ENVIRONMENTAL RISK MITIGATION MEASURES

51. In line with national environmental regulations and project-specific safeguard requirements, environmental screening and risk assessments have been systematically carried out for orchard development activities, which include farm operations, pit formation, irrigation infrastructure, and civil works. These assessments were conducted as per the approved working procedures to ensure that potential environmental risks are identified early and managed effectively. As part of safeguard planning, municipality-level Environmental Risk Assessment Plans have been prepared and endorsed, serving as key reference documents for implementing units to guide mitigation measures and monitoring.

52. The anticipated environmental impacts associated with project implementation include biosafety and phytosanitary risks to local plant varieties and biodiversity, chemical hazards related to the use of agrochemicals, improper irrigation and water use management, soil erosion, occupational health and safety (OHS) concerns, fire hazards, and the need for clear information disclosure. These risks are being addressed through a series of proactive interventions. Nursery screening processes are currently underway to reduce biosafety risks. Skill development training in environmentally friendly farm management practices has been integrated into the annual activity plans of the respective Project Implementation Units (PIUs), with the aim of reducing agrochemical dependency and promoting safer farming alternatives.

53. Budget allocation for environmental safeguard activities is ongoing. While resources for training and sustainable farm practices have been secured, provisions for OHS and fire safety measures are still under review, as the current working procedures do not explicitly define cost allocation mechanisms for these aspects. Further clarification and budget planning are required to ensure comprehensive coverage of all safeguard components. Continued refinement of safeguard procedures and alignment with implementation guidelines will be essential to ensure that environmental risks are managed responsibly and in compliance with ADB and national safeguard standards.

7. CONSULTATION, PARTICIPATION AND DISCLOSURE

54. As part of its inclusive and capacity-building approach, the project has actively facilitated consultation, training, and participatory activities targeting a broad range of stakeholders including farmers, municipal representatives, government officials, and project personnel. More than 30 different types of training programs embedded with consulation were conducted during the reporting period, ensuring wide outreach and knowledge dissemination across provinces. Notably, 22.64% of participants were women and 30.45% were from disadvantaged groups (DAGs), reflecting the project's commitment to gender equality and social inclusion (GESI).

55. The project has prioritized meaningful stakeholder consultation as a central pillar of its implementation strategy, ensuring that project planning, design, and delivery are informed by local needs and community engagement. Consultations were carried out at various levels, including with farmers' groups, municipal authorities, provincial government agencies, and project-affected communities. These sessions served as platforms for two-way dialogue, where project teams could share key information while also listening to the feedback, concerns, and recommendations of stakeholders.

56. Consultations at the community level primarily focused on raising awareness about project objectives, grant procedures, orchard establishment processes, and environmental and social safeguards. Discussions included land preparation and pit works, beneficiary selection criteria, irrigation practices, nursery establishment standards, and the timeline and responsibilities for orchard development. Moreover, stakeholders discussed how project activities could cause adverse environmental impacts, including pollution of air, water, and soil. The consultation highlighted the critical importance of implementing and monitoring the mitigation measures proposed in the Initial Environmental Examination (IEE) and its Environmental Management Plan (EMP) to manage these risks effectively. Special sessions were conducted to inform communities about gender equality and social inclusion (GESI), as well as safeguard measures related to environmental protection, occupational health and safety, and grievance redress mechanisms.

57. At the institutional level, consultations were held with municipal agriculture sections, provincial agriculture ministries, and district agriculture offices. These meetings focused on coordination mechanisms, roles and responsibilities of implementing partners, fund flow procedures, procurement and financial reporting, and monitoring requirements. Stakeholders also discussed technical standards for nursery inspections, orchard layout design, and strategies for farmer nutrition improvement through the Farmer Nutrition School (FNS) model. The inclusive and iterative nature of these consultations has helped ensure that project interventions are locally relevant, socially inclusive, and aligned with both community expectations and institutional mandates.

58. Project-related information has been publicly disclosed through the official project website, www.nafha.gov.np, which hosts key documents such as brochures, information leaflets, the Project Administration Manual (PAM), Initial Environmental Examination (IEE) reports, and other relevant resources. Although a comprehensive Project Management Information System (MIS) has not yet been established, a structured project database is being maintained to record and manage essential project data. The execution of the NCS01 package is currently in the development phase.

8. GRIEVANCE REDRESS MECHANISM (GRM)

59. Project implementation started with execution of Scheme 2 at field level from Q2 2024 and Scheme 6 from Q4 2024. Project is giving due consideration to follow the provisions made in project documents. GRM guideline has been approved on 6 March 2024. A project specific GRM has been established to receive, evaluate, and facilitate resolution of affected

person's/communities concerns, complaints, and grievances related to environmental impacts, and other concerns related with the project. GRM framework is portrayed in Figure 4, below.

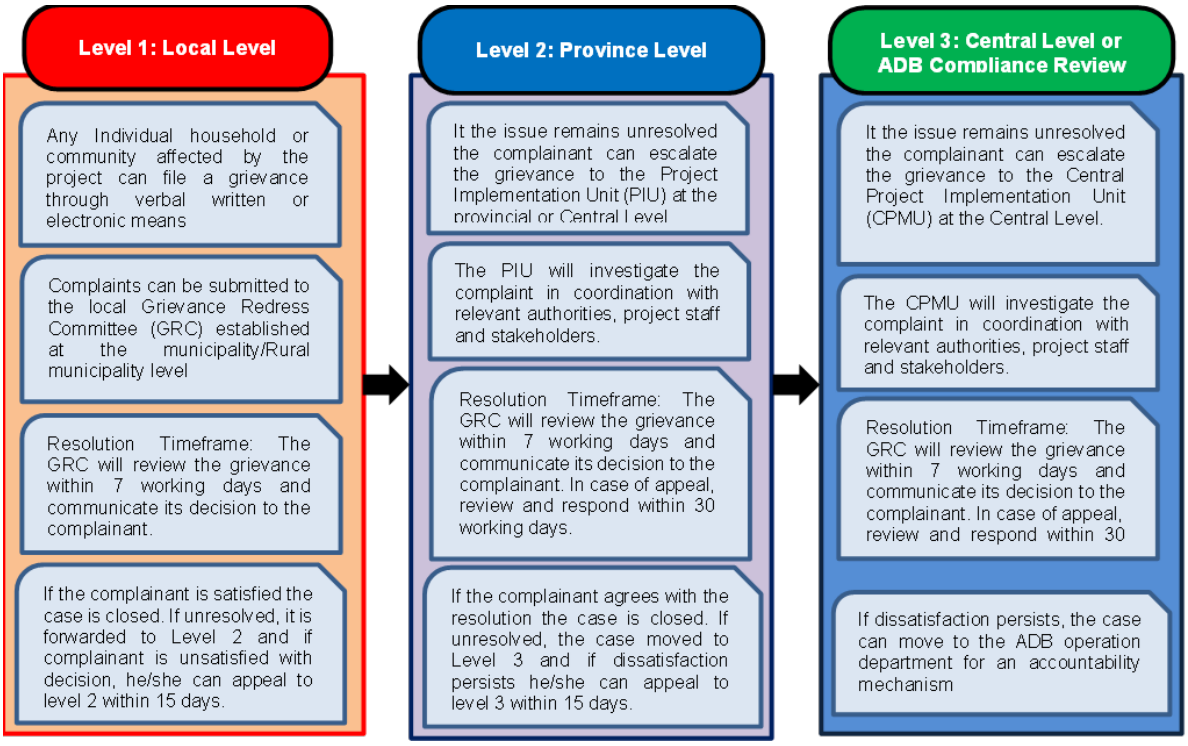

Figure 4: Grievance redress mechanism (GRM) Framework of NAFHA Project

60. During the reporting period, no grievances have been documented in the project area. Project will ensure the representation of women and disadvantaged groups along with representative from the affected community (if applicable) in GRC. All provinces have initiated project GRM structures, but at different stages. Efforts toward grievance redressal and cooperative governance were also evident. A total of 24 Grievance Redress Committees (GRCs) and 65 Local Level Coordination Committees (LLCCs) were established. Notably, Sudurpaschim reported the highest number of GRC formations (14), followed by Koshi (8), aligning with the higher number of farmer groups formed in these provinces

9. COMPLIANCE WITH COVENANTS

61. The project has been making concerted efforts to comply with and fulfill all environmental covenants stipulated in the Project Documents. Table 6 provides a summary of the project's compliance status with the loan and grant covenants.

Table 6: Status of compliance with loan and grant covenants.

S.N.	Covenant	Key Requirements	Status of Compliance	Remarks
1	Conditions of Award of Contract	The Borrower shall not award any Works or Non-Consulting Services contract which involves environmental impacts until: a) MoALD has granted the final approval of the IEE, and the Borrower has obtained ADB's clearance of the relevant IEE based on the final design; and b) The Borrower has incorporated the relevant provisions from the approved IEE/EMP into the respective Works or Non consulting Service contract.	Being Complied	Project will ensure the requirements set forth in the covenants as required.
2	Environment	The Borrower shall ensure that the preparation, design, construction, implementation, operation of the Project and all Project Facilities shall comply with (a) all applicable laws and regulations of the Borrower relating to environment, health and safety; (b) the Environmental Safeguards; and (c) all measures and requirements set forth in each IEE and EMP, and any corrective or preventative actions set forth in a Safeguards Monitoring Report.	Being Complied	Provisions are included in Bid document of CW03, CW04, CW05-A, CW06, CW07-B, CW05-B, and CW08-B
3	Human and Financial Resources to Implement Safeguards Requirements	The Borrower shall make available necessary budgetary and human resources to implement the approved IEE/ EMP	Being Complied	The borrower had already assigned project personnel and additional consultant for impact assessment and field monitoring through CS 06 and CS 05 package.
4	Safeguards — Related Provisions in Bidding Documents and Works Contracts	The Borrower shall ensure that all bidding documents and contracts for Works contain provisions that require contractors to: (a) comply with the measures relevant to the contractor set forth in the IEE, the EMP, (to the extent they concern impacts on affected people during construction), and any corrective or preventative actions set forth in a Safeguards Monitoring Report; (b) make available a budget for all such environmental and social measures as described in subparagraph (a) above;	Being Complied	Two contracts (CW07A and CW08A) under works and one contract (NCS01) under non-consulting services have been awarded, while a Letter of Intent has been issued for CW01AA. The Final Bidding Evaluation Report (FBER)s of CW02, CW03, and CW04 have been submitted to ADB for review and NoL, and NoLs on the Due

S.N.	Covenant	Key Requirements	Status of Compliance	Remarks
		(c) provide the Borrower with a written notice of any unanticipated environmental impacts that arise during construction, or operation of the Project that were not considered in the IEE/ EMP (d) adequately record the condition of roads, agricultural land and other infrastructure prior to starting to transport materials and construction; and (e) reinstate pathways, other local infrastructure, and agricultural land to at least their pre-project condition upon the completion of construction.		Diligence Reports of CW07A and CW08A were received prior to contract award, a process to be followed for remaining packages as well. All bid documents incorporated ADB-cleared provisions, and due consideration will be ensured during evaluation and implementation, with an IPP prepared and cleared by ADB if required Project will ensures the inclusion of provisions in others bid documents and work contracts too. Provisions will contains key requirements for bid documents and contracts stated in loan and grant covenants
5	Safeguards Monitoring and Reporting	The Borrower shall do the following: (a) submit semi-annual Safeguards Monitoring Reports to ADB and disclose relevant information from such reports to affected persons promptly upon submission; (b) if any unanticipated environmental and/or social risks and impacts arise during construction, or operation of the Project that were not considered in the IEE/EMP, promptly inform ADB of the occurrence of such risks or impacts, with detailed description of the event and proposed corrective action plan;	Being Complied	Submitted 1st ,2nd , 3rd and 4th EMR
6	Labor Standards, Health and Safety	The Borrower shall ensure that the core labor standards and the Borrower's applicable laws and regulations are complied during Project implementation. The Borrower shall include specific provisions in the	Being Complied	Provisions are included in Bid document of CW08-A and CW02, CW03, CW04, CW05-A, CW05-B, CW06, CW07-B

S.N.	Covenant	Key Requirements	Status of Compliance	Remarks
		bidding documents and contracts financed by ADB under the Project requiring that the contractors, among other things: (a) comply with the Borrower's applicable labor law and regulations and incorporate applicable workplace occupational safety norms; (b) do not use child labor; (c) do not discriminate workers in respect of employment and occupation; (d) do not use forced labor; (e) allow freedom of association and effectively recognize the right to collective bargaining; and (f} disseminate, or engage appropriate service providers to disseminate, information on the risks of sexually transmitted diseases, including HIV/AIDS, to the employees of contractors engaged under the Project and to members of the local communities surrounding the Project area, particularly women.		CW08-B package packages.
7	Grievance Redress Mechanism (GRM)	Borrower shall prepare a grievance redress mechanism, acceptable to ADB, and establish a grievance redress mechanism committee to receive and resolve complaints/grievances or act upon reports from stakeholders on misuse of funds and other irregularities, including environmental impact due to project construction (if any). The grievance redress mechanism committee shall (a) make public the existence of the grievance redress mechanism; (b) review and address grievances of stakeholders of the Project, any of the service providers, or any person responsible for carrying out any aspect of the Project; and (c) proactively and constructively respond to such grievances.	Being Complied	GRM guideline approved by MoALD on 6 March, 2024. Grievance handling focal point were appointed in CPMU and PIUs. GRC formed in CPMU, PIUs and project local level as provisioned in approved GRM guideline.

10. KEY ISSUES AND RECOMMENDED ACTIONS

62. Key issues related to environmental safeguard monitoring and implementation as stated in Table 7. Capacity building/training programs will be develop, organize and deliver to environmental specialist of each province, contractor, relevant staffs and other staffs involved in project implementation. Training program covers the area of project's safeguard requirements and compliance such as legal framework for environment protection of GoN , Project's applicant selection criteria as per ADB SPS-2009, environmental screening checklist for identification of environmental impact for project's applicants under Scheme-2, environmental due diligence of Project's applicants, Environmental Monitoring Plan (EMoP) and Environment,Health and Safety Management Plan (EHSM), safeguard monitoring and reporting.

63. As documented in the fourth Environmental Monitoring Report (EMR), capacity-building initiatives included comprehensive training for key project personnel. Specifically, social mobilizers and farmer group facilitators received orientation on critical topics such as environmental safeguards, Occupational Health and Safety (OHS), and the preparation of environmental monitoring reports.

Table 7: Issues Related to Environment Monitoring and Implementation of the Project

S.N.	Key Issues	Recommended action	Timeline	Location	Responsibility
1	The project's working procedures lack clear provisions for Occupational Health and Safety (OHS) and fire-hazard mitigation costs for orchard development work. Furthermore, these essential safety expenditures remain constrained by the predetermined upper cost-ceiling, potentially compromising compliance with safety standards and adequate risk management.	Established procedural framework to address this issue in the subprojects and orchard farms	November 2025	Project	PIU/CPMU/ Beneficeries
2	No any compliant were received to date from the orchard establishment sites	Strengthen grievance redress strategy by enhancing communication, simplifying reporting channels, and conducting targeted awareness campaigns at the community level.		Every project site	PIU/ CPMU
3	It is becoming difficult to collect the GPS Coordinates if every individual site of the applications since the SM and FGF are not properly equipped with the GPS tracking equipment or unaware about the GPS App in the mobile.	Orientatation and training to SM and FGF realated to mapping using had on mobile phone	November 2025	Project site	PIU

11. BEST PRACTICES, KEY CHALLENGES, AND RECOMMENDATION

Best Practices:

64. All provinces achieved alomost full compliance except few safeguards indicators. Local labor usage is universally complied. Formation of GRCs at provincial and local level shows strong stakeholder engagement with significant female training participation demonstrate thorough monitoring and inclusion.

Key Challenges:

65. A consistent gap is inadequate provisioning for Occupational Health & Safety (OHS). Each province notes OHS/fire-hazard costs are not clearly spelled-out under current procedures. This could undermine worker safety if unaddressed. Another common issue is data collection capacity: Bagmati highlights difficulties obtaining GPS coordinates for sites, suggesting field teams need equipment/training. Waste and biosafety compliance were lower in project sites, indicating need for stronger biosecurity measures.

Recommendations for Safeguard Improvement

66. Clarify OHS Budgeting: Update the working procedures to explicitly include budget and activities for OHS and fire-hazard mitigation in all orchard/civil works contracts.

67. Standardize Monitoring Tools: Provide all field staff (FGFs/SMs) with GPS-enabled devices and training to ensure consistent location tracking (as recommended from Bagmati province) and develop unified checklists and require quarterly updating of all tables (e.g., training, compliance) to allow cross-province synthesis.

68. Enhance Waste & Biosecurity Measures: Implement stricter waste management protocols (clean-up of soil pits, planting debris) and biosafety screening, sourcing certified and disease-free seedlings from accredited nurseries, enforcing quarantine checks and isolating new planting materials before distribution, and maintaining strict sanitation of tools, vehicles, and equipment. Regular pest and disease surveillance should be carried out at orchard sites, supported by farmer training to identify and report early signs of infection. In addition, awareness programs and farmer field schools can strengthen local capacity to follow biosecurity protocols, while clear guidelines and monitoring by agricultural and quarantine authorities ensure consistency. Strengthening coordination between farmer groups, cooperatives, and government institutions, along with proper record-keeping of inspections and corrective measures, will further help close existing gaps.

69. Strengthen GRM: Expedite formation and capacity-building of local GRCs and continue awareness campaigns so that farmers know how to report issues. Monitor grievance logs regularly (even if zero cases) to preempt potential disputes.

70. Expand Capacity Building: Continue environment-focused training, with an emphasis on inclusive participation. Track gender-disaggregated attendance in trainings to ensure gender balance. Consider joint inter-provincial workshops to share best practices in safeguards.

12. FOCUS ON NEXT REPORTING PERIOD

71. As the project moves into the next reporting period, the following key areas will be prioritized to strengthen environmental monitoring, safeguard compliance, and field-level implementation.

1. Enhancing Grievance Redress Accessibility and Responsiveness

72. While no formal grievances have been recorded to date, there are indications that beneficiaries may lack awareness or access to the grievance redress mechanism (GRM). The next period will focus on intensifying community-level outreach, including awareness campaigns, simplified grievance submission procedures, and setting up local feedback channels to ensure that all concerns, especially from women and marginalized groups are heard and addressed.

2. Improving GPS Data Collection for Site Verification

73. Given the difficulties faced by Social Mobiliser (SM) staff and Farmer Group Facilitators (FGFs) in collecting GPS coordinates due to lack of equipment or technical know-how, targeted training sessions on mobile-based GPS applications will be conducted. The project will also explore cost-effective options for equipping field teams with GPS-enabled devices and developing simplified GPS data collection protocols.

3. Strengthening Occupational Health and Safety (OHS) Measures

74. Observations indicate limited compliance with OHS provisions, particularly regarding the use of personal protective equipment (PPE). The upcoming reporting cycle will focus on reinforcing safety standards through field inspections, safety training, and provision of basic PPE kits in collaboration with local governments and implementing units.

4. Follow-up on Environmental Due Diligence and Mitigation Measures

75. Building on the completed Due Diligence Reports in Koshi, Gandaki, and Bagmati, a follow-up assessment will be undertaken to ensure the implementation of recommended environmental mitigation actions. Emphasis will be placed on sustainable land management, biosafety protocols, and proper agrochemical handling practices in orchard development sites.

5. Data Quality Assurance and Digital Monitoring Tools

76. The project will begin piloting digital templates for environmental monitoring checklists to standardize data collection across provinces. Data validation mechanisms and capacity-building of PIUs will be included to ensure completeness, consistency, and traceability in future reports.

6. Preparation and Finalization of Due Diligence Reports (DDRs)

77. In continuation of the environmental safeguard planning process, additional Due Diligence Reports will be prepared for new sub-projects of Palika level and Civil Works related activities. These reports will assess site-specific environmental and social risks, verify compliance with safeguard requirements, and outline necessary mitigation measures. Coordination with PIUs, municipal stakeholders, and field verification teams will be intensified to support timely and accurate DDR preparation and submission.

.

13. APPENDIXES

Appendix 1. Environmental Impact checklists

S.N.	Environmental aspect	Environmental impact	Remarks
		Yes/No/Don't Know	
1	Is there any soil erosion due to the program?	No	
2	Is there will be a situation of decline in arable land due to the program?	No	
3	Is the site selected for the proposed program on very steep terrain or does it requires heavy soil excavation work?	No	
4	Is there any risk that the implementation of the proposed program will directly affect nearby forest and wildlife areas?	No	
5	From the implementation of the proposed program, are there any risks for the areas where wild animals enter other than the mentioned areas, such as national parks, wildlife reserves, etc.?	No	
6	Is there any possibility to impact the quality of the surface/ground water due to the program?	No	
7	Is there a possibility that water sources used by the community will dry up or downstream areas will be affected or endangered due to the proposed programs?	No	
8	Does the proposed program activities are detrimental to human health?	No	
9	Does the proposed program activities supports adaptation to climate-related risks?	No	
10	Does the proposed program activities creates any biological hazards?	No	
11	Does the proposed program endangered the ecologically important local plant species?	No	
12	Exotic species will be brought during establishment of the proposed fruit orchard?	No	
13	Pesticides will be used in the establishment of the proposed fruit orchard?	No	
14	If there is a possibility of any negative impact on the environment other than the above-mentioned objects/topics from the activities of the proposed program, mention it clearly.	No	

Appendix 2. Environmental Monitoring Plan (EMoP) for the horticulture center upgrading (For CW03, CW04, CW05-A, CW06, CW07-B, CW05-B, and CW08-B Packages)

S.N	Field	Stage	Parameters	Location	Frequency	Standards	Responsibility
1	Air quality	Prior to construction to establish baseline Construction phase	$PM_{2.5}$ PM_{10} SO_2 NO_x	Work sites	Once in pre-construction Once in a season (except monsoons) for the construction period	National Ambient Air Quality Standards, 2003 and WHO standards	Contractor
2	Noise levels	Prior to construction to establish baseline Construction phase	Equivalent day and night time noise levels	Work sites	Once in pre-construction Once in a season (except monsoons) for the construction period	National Noise Standard Guidelines, 2012 and WHO standards	Contractor
3	Water quality	Prior to construction to establish baseline Construction phase	TDS,TSS, pH, Hardness, BOD, total coliform, E-coli, total nitrogen, total phosphorus, heavy metals, temperature, DO, hydrocarbons, mineral oils, phenols cyanide, temperature,	Only applicable for construction sites that are nearby water body	Twice a year (pre monsoon and post-monsoon) for the entire construction period	National Drinking Water Quality Standards, 2005	Contractor
4	Community and occupational health and safety	Construction phase	Incidence and types of health and safety issues	Work sites	Monthly	Injuries, loss time incidence and fatalities	Contractor

Appendix 3. Environment, Health and Safety Management Plan (EHSMP) (For CW03, CW04, CW05-A, CW06, CW07-B, CW05-B, and CW08-B Packages)

Environmental Components	Potential Impacts	Mitigation measures	Implementation Responsibility	Monitoring Responsibility
Physical Environment				
Decline of Ambient Air Quality	Decline of Ambient Air Quality	- Vehicles delivering loose and fine materials like sand and aggregates shall be covered. - Dust suppression measures like water sprinkling, will be applied in all dust prone locations such as unpaved haulage roads, earthworks and stockpiles. - Material storage areas shall also be located downwind of the habitation area. - Construction vehicles and machinery will be periodically maintained. - Require construction equipment and vehicles to meet national emissions standards. - Regular checks, and maintenance of construction equipment and vehicles to keep them in good working order to meet emission standards. - Cover stockpiles with tarpaulin. - Locate stockpiles at least 500m from residential property to avoid inconvenience from fugitive dust and ensure they are enclosed by a fence or similar to minimize windblown dust. - Position any stationary emission sources (e.g. diesel generators, compressors, etc.) as far as practical from sensitive receptors (houses, schools, clinics, temples, etc.). - Impose speed limits on construction vehicles to minimize exhaust and dust emissions along areas where sensitive receptors are located (houses, schools, clinics, temples, etc.). - Trucks importing fill material must be covered.	Contractor (through environment, health and safety officer)	CPMU

Environmental Components	Potential Impacts	Mitigation measures	Implementation Responsibility	Monitoring Responsibility
		- Strictly prohibit the burning of wastes generated by project-related activities. - Ensure workers working in close proximity to or having long exposure to vehicle exhausts and earthworks are provided with clean N95 dust masks to minimize inhalation of particulate matter and other pollutants. - Construction air quality monitoring will be carried out per the EMoP		
Ambient noise and vibration	Increase of ambient noise and vibration levels	- Limit the duration of noisy construction activities to daylight hours, whenever possible, in the vicinity of sensitive receptors. - Workers exposed to high noise levels will be provided with ear plugs. - The contractors will provide prior notification to the community on the schedule of construction activities. - Whenever possible, noisy equipment will be completely enclosed which can significantly reduce noise levels. - Any stationary equipment that produce high noise levels (e.g., portable diesel generators, compressors, etc.) will be positioned as far as is practical from sensitive receptors. - Construction traffic routes will be defined in cooperation with local communities and traffic police to minimize noise and nuisance. - Vehicle speeds will be reduced around sensitive receptors. - Temporary noise barriers will be installed along the edge of the road, as necessary, in front of sensitive receptors facing heavy construction activities.	Contractor (through environment, health and safety officer)	CPMU
Water resources: quantity of	Decline on the available local water resources	- Acquire or ensure validity of permit for the use of water for their operations and comply with the conditions of the government.	Contractor	CPMU

Environmental Components	Potential Impacts	Mitigation measures	Implementation Responsibility	Monitoring Responsibility
surface and groundwater		- Display information on water management highlighting the practices in use at the facility at places in a highly visible area.		
Water resources: quality of surface and groundwater	Decline in quality of water or proximate waterbodies	- As far as practical, earthworks during the dry season to minimize exposed areas subject to erosion by surface water runoff. - If any surface waterbodies or groundwater sources within 100m, undertake a baseline water quality to confirm the current water quality status at least one week prior to the commencement of any actively on-site. - Establish dedicated fuel, oil, and chemicals stores on impermeable bunded area to avoid spills and leaks contaminating soil and affecting water quality. - Avoid storage of fuel, oil, and chemicals in areas ideally within 500m to water sources (surface water and groundwater wells, springs etc.) to avoid direct contamination or contamination through run off, if this is not possible minimum distance is to be 100m. - Undertake refueling only on areas of hard protected soil, preferably bunded, ideally 500m from water sources (surface water and groundwater wells, springs etc.) but if this is not possible minimum distance to be 100m, with all drainage directed through oil interceptors. - Undertake construction during the dry season as much as possible to minimize exposed areas subject to erosion by surface water runoff. - Works over or near watercourses will adopt protection measures to guard against loss of soil that would result in the turbidity of water. - Minimize soil erosion and surface water runoff by reducing the extent	Contractor	CPMU

Environmental Components	Potential Impacts	Mitigation measures	Implementation Responsibility	Monitoring Responsibility
		of earthworks, and covering storages of sand and spoil with tarpaulin. - Do not allow washing of equipment or vehicles near surface water and ensure all washing water is discharged to sedimentation basin and oil interceptor instead of directly to surface water. - Cement will be stored in rented private storage facilities; enclosed and not exposed to the elements. - Do not undertake any concrete mixing ideally within 500m of surface water, if this is not possible minimum distance is to be 100m. - Provide portable sanitary facilities/toilets and washing facilities for construction workers, so as to avoid surface and ground water pollution. Locate these at least 500m away from surface waterbodies including rivers/ponds and groundwater sources including springs/wells/pumps, away from waterlogged land and shallow groundwater. - Strict prohibition on open defecation and urination by construction workers; use of pit latrines or toilets for worker camps. - Toilets and washing facilities to be connected to existing sewerage system, septic tank (with soak pit) or as portable self-contained units for disposal of wastewater off site to sewage treatment works. - No untreated wastewater is to be discharged direct to surface water or onto the ground. Water will be treated through available facility such as soak pits or municipal sewage system.		
Water resources: quality of	Pollution due to use of chemicals for fertilizer	- Effluents containing chemicals are not directly discharged into lands and water bodies.	Contractor	CPMU

Environmental Components	Potential Impacts	Mitigation measures	Implementation Responsibility	Monitoring Responsibility
surface and groundwater	and insecticides	- Use only registered fertilizers and chemicals from government approved sources. - Laboratory generated hazardous wastes shall be properly treated before its disposal.		
Waste management	Generation and inappropriate disposal of inert spoil, solid and hazardous wastes from construction sites and domestic sources	- Reuse spoil and other materials for construction purposes. - Maintain proper material storage system and ensure to control littering of construction materials outside the designated places. - Stockpiling site of construction materials will be designated at demarcated place. - *Provide solid waste container inside the construction site. - Ensure that the labour camps have proper facilities for waste segregation and even for composting of the biodegradable waste. - Give health, hygiene and sanitation training to workers. - Provide temporary prefabricated mobile toilets in the construction sites. - Separate provision for collection and disposal of hazardous waste, if any, as prescribed by government rule and regulations.	Contractor	CPMU
Social Environment				
Workers	Health and safety risks	- Undertake a health and safety risk assessment through a facilitated workshop during the pre-construction survey. The health and safety risk assessment to consider both occupational and community health safety. - Through the health and safety risk assessment, prepare a Construction Health and Safety Management Plan (CHSMP) including site-specific measures as needed for each construction site addressing both occupational and community health and safety.	Contractor	CPMU

Environmental Components	Potential Impacts	Mitigation measures	Implementation Responsibility	Monitoring Responsibility
		- Keep CHSMP as a living document, to be updated as required and re-approved by PIU if any changes in construction methods, site conditions, in response to accident, near miss etc. - Provide worker training on health and safety and daily/weekly briefings led by site-appointed Health and Safety Officer. - PPE to be provided for all workers. - Ensure all workers have received appropriate occupational health and safety trainings. - Ensure good housekeeping in the premises at all times, including on construction site, workers camps, storage areas, etc. - Project area is to be kept neat and tidy, with no trip hazards on the ground e.g. open channels, materials, equipment, trash laying around. - Provide clear and visible warning and danger signs at and around the construction and/or planting site. - Information board displaying the activities proposed, duration of construction, name and contact number of environmental safety officer of contractor. - On completion of works restore all temporarily used sites to at least their pre-project condition following works. This will involve cleaning site of any debris or wastes, left over material and soil/rocks/sand.		

Appendix 4. Photographs

Consulation meeting at Koshi Province, March 2025

Field verification in Gajuri May 2025

Trisuli farm visit by Env and GESI Specialist for preparing DDR report for construction of wall. June 2025

Orchard Plantation Activities in Gandaki Province, Annapurna-7 (May 2025)

Orchard Plantation Activities in Gandaki Province, Annapurna-7 and Jaljala-5 (May 2025)

Mandarin grafted young plants under screen house belonging to Sandip DC at Bagchaura 09 (Khorbare).KC Nursery Farm, Salyan. (May 2025)

Demand Driven Based Training to Farmers on New Nitrus Orchard Establishment at Chhedagad, MP, Jajarkot. (June 2025)

training on the nutrition and safeguard for the JTA and social mobilizers (May 2025)