ENVIRONMENT & SOCIAL MANAGEMENT FRAMEWORK (ESMF)

Uttar Pradesh Agriculture Growth and Rural Enterprise Ecosystem strengthening (UP-AGREES) Project headed by UP Diversified Agriculture Support Project (UPDASP)

UP Diversified Agriculture Support Project (UPDASP)

Lead Member	Consortium Member
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Abbreviations		
CERC	:	The Contingency Emergency Response Components (CERC)
CHC	:	Custom Hiring Centres
CHMP	:	Cultural Heritage Management Plan
CPCB	:	Central Pollution Control Board
CPIT	:	Cluster Project Implementation Team
CWUM	:	Conjunctive water use and Management
DPIU	:	District Project Implementation Unit
ESCP	:	Environment Social Commitment Plan
ESIA	:	Environment & Social Impact Assessment
ESMF	:	Environment and Social Management Framework
ESMP	:	Environment and Social Management Plan
ESRS	:	Environment & Social Risk Summary
ESS	:	Environment and Social Standards of World Bank
EWM	:	Electronic Waste Management Plan / Guideline
FMB	:	Farm Machinery Banks
FPG	:	Farmers Protection Group (Support farmers collectives)
GM	:	Grievance Management
GVA	:	Gross value Add
GWE	:	Ground Water Extraction Plan / Guideline
HW	:	Hazardous Waste
IPM	:	Integrated Pest Management Plan / Guideline
LMP	:	Labour Management Plan / Guideline
MOEF&CC	:	Ministry of Environment, Forests & Climate Change
MRL	:	Maximum Residue level
MSIHC	:	Manufacture, Storage & Import of Hazardous Chemicals
NABL	:	National Accreditation Board for Laboratories

NBWL	:	National board of Wildlife
OHS	:	Occupational Health & Safety Plan / Guideline
PMU	:	Project Management unit
POP	:	Package of Practices
PWM	:	Plastic Waste Management Plan / Guideline
RCP	:	Resource Conservation Plan / Guideline
SEIAA	:	State Environment Impact Assessment Authority
SEM	:	Sewage and Effluent Management Plan / Guideline
SEP	:	Stakeholder Engagement Plan
SH	:	Sexual Harassment Plan / Guideline
SPCB	:	State Pollution Control Board.
SWM	:	Solid Waste Management Plan / Guideline
TSA	:	Technical Support Agencies
ULB	:	Urban Local Bodies
UP	:	Uttar Pradesh
UPAGREES	:	Uttar Pradesh Agriculture Growth and Rural Enterprise Ecosystem Strengthening Project
UPDASP	:	UP Diversified agriculture support
WUE	:	Water Use Efficiency

EXECUTIVE SUMMARY

The World Bank will be supporting UP Diversified Agriculture Project UPDASP in implementing the Environment & Social Assessment (ESA) for Uttar Pradesh Agriculture Growth and Rural Enterprise Ecosystem Strengthening Project (UPAGREES). The objective of the project is to improve agriculture sector productivity and foster agri-entrepreneurship development in the state. The project proposes to address the existing challenges in Uttar Pradesh's agriculture and allied sector by adopting a prioritized and differentiated strategy for agricultural transformation in the Eastern and Bundelkhand regions of the State. The project will support the following activities:

Component 1: Productivity Enhancement: This component aims to realise Optimal agriculture productions in selected land parcel. Thus, propose to enhance Soil system productivity potential. To this end identify soil productivity constraints by analysing physical and chemical properties of soil and then use site specific interventions to enhance productive potential.

Sub-Component 1.1: Resource-use Efficiency

- Soil Productivity-Fertility System,
- Soil Input Efficient System,
- Farmer Practices – Technology Sub System

Sub-Component 1.2: Seed Systems

Sub-Component 1.3: Agri-Extension

Sub-Component 1.4: Leveraging Carbon Markets.

Component 2: Commodity Clusters: This component has two main sub-components i) **Crop Clusters** (ii) **Fisheries** to evolve best agricultural and fishing practices and evolve mechanisation, processing, and marketing infrastructure development.

Component 3: Digital and Financial Ecosystems

Sub-component 3.1: Digital Architecture and Technology Services: Aims to Support GOU to develop and maintain state of the art digital agriculture eco system and Agritech Stack to overcome information gaps across entire state. Targeted outcome is also to integrate Agristack applications as a shared public resource, providing tailored services for smallholder farmers, women, and youth.

Sub-component 3.2 & 3.3: Agri Finance Ecosystems: Aims to provide funding support for various application and Agri development including farmers facilitation centres:

Sub-Component 3.3: Promoting Innovations; Proposed to support innovations to promote with Water Based Green Credits (promote water conservation, water harvesting and water use efficiency/savings, including treatment and reuse of wastewater and Sustainable Agriculture based green credits (to promote natural and regenerative agricultural practices and land restoration to improve productivity, soil health and nutritional value of food produced).

The project activities will take place in 28 districts of Uttar Pradesh spread over two regions

(1) Bundelkhand Region – Dry Zone with water scarcity causing effect on cropping/productivity,

(2) Eastern Region – Flood Prone causing effect on cropping/productivity.

This Environmental and Social Management Framework (ESMF) has been prepared to identify the potential environmental and social risks and impacts of proposed Project activities and propose suitable mitigation measures to manage these risks and impacts. It maps out the ESS1 of The World Bank's Environment and Social Framework (ESF) laws and regulations and the World Bank policies appliable to the Project, and describes the principles, approaches, implementation arrangements, and environmental and social mitigation measures to be followed.

The potential environmental and social risks for project activities are identified as:

Component 1: Subcomponent 1.1: Resource-use efficiency activities under this subcomponent pose various environmental, health, and safety risks. For instance, soil testing generates plastic waste and involves disposal issues. Gypsum procurement and handling can lead to soil contamination and air pollution. Crop residue management, if improperly handled, can result in air pollution. Excessive zinc levels from micronutrient enhancement can impact soil and aquatic microbial diversity. Issues such as plastic waste generation from drip irrigation pipes also arise.

Component 1: Subcomponent 1.2: Seed Systems

Establishing seed hubs and distribution systems may generate plastic waste and pose environmental risks during processing. Thus, waste management practices need to be adopted, and compliance with pollution control norms is essential.

Component 1: Subcomponent 1.3: Agri-Extensions

Strengthening advisory platforms and partnerships with technical institutions are vital but must integrate climate considerations. Lack of environmental and health safety planning could lead to adverse effects, hence robust monitoring and evaluation frameworks are necessary.

Component 1: Subcomponent 1.4: Leveraging Carbon Markets

This sub-component will be informed and guided by the UP-Accelerator-led initiatives to leverage carbon and sustainability (green) credits from climate-smart agriculture leveraging economic dividends for project beneficiaries promoting sustainable, low-Carbon agricultural operations including direct seeding in rice wheat systems, minimal tillage, soil management, water conservation and increased Water Use Efficiency (WUEs) through micro irrigation.

Component 2: Subcomponent 2.1: Development of Agro-Clusters

Identifying commodities and regions for interventions should consider environmental issues related to transportation, storage, and handling. Proper waste management plans and compliance with pollution control regulations are imperative.

Component 2: Subcomponent 2.2: Fisheries Clusters Development

Efforts such as sustainable increase of production in ponds and establishment of fish landing stations entail risks such as water pollution and habitat alterations. Developing sustainable waste management plans and conducting environmental assessments are crucial.

Component 3: Digital and Financial Ecosystems

Activities under this component, such as digital infrastructure expansion and promoting innovations, might generate construction-related environmental impacts and electronic waste. Mitigation strategies should include adopting good construction practices and complying with e-waste regulations.

These risks will be managed and mitigated through the application of:

- Adoption of NABL accredited labs and proper waste management practices for soil testing.
- Procurement of gypsum from mines, with awareness campaigns on safe handling.
- Promotion of crop residue management practices and awareness among farmers.
- Development of zinc level monitoring programs and controlled application of zinc sulphate.
- Adoption of climate-resilient technology for seed production and distribution.
- Promotion of recyclable or biodegradable packaging materials for seed hubs.
- Integration of climate considerations into advisory platforms and technical partnerships.
- Implementation of waste management plans and compliance with pollution control regulations for agro-clusters and fisheries development.
- Adoption of good construction practices and compliance with e-waste regulations for digital infrastructure expansion and innovation promotion.

Implementation Arrangements. The project will be managed and implemented by the Uttar Pradesh Diversified Agricultural Support Project (UPDASP) Society. UPDASP is a semi-autonomous GoUP agency with flexibility in administrative and financial procedures. The overall responsibility will lie with the Project Coordinator (PC), UPDASP. At the State level, a Project Management Unit (SPMU), headed by the Project Director, a senior level officer from the All India Administrative Service (IAS), will be set-up. The SPMU will have technical and managerial staff, and be supported by line departments, universities / institutes and technical support agencies contracted for the project period.

Training and awareness programs are integral to each major component and sub-component, such as productivity enhancement, agri-cluster, and fisheries cluster. Hence, separate provisions and budgets are not planned under the Environmental and Social Management Framework (ESMF). However, it is proposed to organize at least two programs per year on ESMF/ESCP and ESMP implementation for all project stakeholders, including SPMU and other farmers' groups.

The estimated budget for environmental and social aspects will primarily cover the implementation of ESMP, with additional costs allocated for training, awareness, and limited monitoring. Due to the small scale of sub-projects, this budget will be determined accordingly.

Monitoring. Responsibility for monitoring rests with the State Project Management Unit (SPMU), led by the Project Coordinator. Monitoring methods include site visits, cell phone applications, and monthly written reports. Parameters monitored include soil quality, water quality, effluent discharge, air quality, noise levels, waste management, and occupational health & safety. Monitoring frequency varies from weekly to quarterly depending on the activity. Compliance reports are generated every six months or quarterly as needed.

A separate **Stakeholder Engagement Plan (SEP)** has been prepared for the Project, based the World Bank's Environmental and Social Standard 10 on Stakeholder Engagement. The SEP enclosed as **Chapter – 6** in this ESMF.

1. Introduction

1.1. Background :

The state of Uttar Pradesh (UP) , situated in the fertile Indo-Gangetic plains accounts for 21.6 percent of the Gross-Value Add (GVA) from agriculture and allied sector. The agriculture output of the sate is higher than the national average of about 15.5 %. However, state has much higher potential than its current level. The Bundelkhand and Eastern region of the state are agriculturally behind compared to other two region of the State and need to be uplifted to achieve growth targets of the state. The UPDASP strengthening project is planned to overcome the challenges faced such as majority of small and marginal farmers, low productivity, regional productivity disparities, deteriorating soil health, availability of high-quality seeds etc which need to address in a structured and planned manner.

The Key Project performance indicators are as follows:

a. Increased productivity of select commodities in the project area.
b. Increase in net price realization at producer level of select commodities.
c. GHG emissions reduction
d. Increased agricultural assess and services availability to farmers.

The following three interventions are planned to achieve development goals and achieve performance indicators:

a. To support productivity increase in major crops viz- rice, wheat, pulses and oilseeds (in Bundelkhand) through access to quality inputs and judicious use of natural resources with potentially reducing carbon emissions.
b. Demonstrate approaches to transform the sector by promoting the cultivation of higher value produce and development of their value chains through agro-clusters and market led approaches to become major drivers of growth in project districts.
c. To support statewide introduction of a digital architecture for efficient delivery of services including Agri-financing, improved e-commerce and standardization of data collection and its analysis.
d. To support improvement in access to finance in agriculture sector with focus on private sector lead financing

The Environmental and Social Management Framework (ESMF) aims to provide environmentally and socially sustainable tool for effective implementation of the proposed project to achieve performance indicator and development goal. .

1.2. The Environmental and social Management Farmwork

This Environmental and Social Management Framework (ESMF) is developed to support the environmental and social due diligence provisions for activities financed by the World Bank in the “Uttar Pradesh Agriculture Growth and Rural Enterprise Ecosystem Strengthening Project (UP AGREES) headed by UP Diversified Agriculture Support Project (UPDASP)”. The project will support promotion of climate resilient, inclusive and competitive value chains of prioritized

agriculture commodities in Uttar Pradesh" in 28 districts[1] of Uttar Pradesh spread over two regions (1) Bundelkhand Region – Dry Zone with water scarcity causing effect on cropping/productivity, (2) Eastern Region – Flood Prone causing effect on cropping/productivity. The Department of Agriculture, Government of Uttar Pradesh will be implementing the Project activities.

This ESMF follows the World Bank Environmental and Social Framework (ESF) as well as the laws and regulations of the country and UP state as applicable to different subproject. The objective of the ESMF is to assess and mitigate potential negative environmental and social risks and impacts of the Project consistent with the Environmental and Social Standards (ESSs) of the World Bank ESF and national requirements. More specifically, the ESMF aims to (a) assess the potential environmental and social risks and impacts of the proposed Project and propose mitigation measures; (b) establish procedures for the environmental and social screening, review, approval, and implementation of activities; (c) specify appropriate roles and responsibilities, and outline the necessary reporting procedures, for managing and monitoring environmental and social issues related to the activities; (d) identify the staffing requirements, as well as the training and capacity building needed to successfully implement the provisions of the ESMF; (e) address mechanisms for public consultation and disclosure of project documents as well as redress of possible grievances; and (f) establish the budget requirements for implementation of the ESMF.

This ESMF should be read together with other plans prepared for the project, including the Stakeholder Engagement Plan (SEP), the Environmental and Social Commitment Plan (ESCP), labour management plans and Standard Environment & social management plans.

[1] The identified Project Districts are : (a) Jhansi Division : Districts : Jhansi, Lalitpur , Jalaun (b) Varanasi Division : Districts : Varanasi, Ghazipur, Chanduali, Jaunpur (c) Chitrakoot Division : Districts : Banda, Chitrakoot, Hamirpur, Mahoba (d) Vindhayanchal Division:; Districts : Mirzapur, Sonbhadra, Bhadoi, (e) Gorakhpur Division : Gorakhpur, Deoria, Maharajganj, Kushinagar (f) Basti Division : Districts ; Basti, Siddhartha Nagar, Sant Kabir Nagar (g) Azamgarh Division : Districts : Azamgarh, Mau, Ballia (h) Devipatan Division: Districts: Gonda, Balrampur, Baharaich, Shrawasti.

2. Project Description:

2.1. Project Overview :

The “UP-AGREES” project following three major components with multiple sub-components under each component. ;

Component 1 : Productivity Enhancement

Sub-component 1.1 : Resource-use Efficiency

Sub- component 1.2 : Seed Systems

Sub- component 1.3 : Agri-Extension

Sub-component 1.4 : Leveraging Carbon Market

Component 2 : Commodity Clusters

Sub-component 2.1 : Crop Clusters

Sub- component 2.2 : Fisheries

Component 3 : Digital and Financial Ecosystems

Sub-component 3.1 : Digital Architecture and Technology Services

Sub- component 3.2 : Agri- Finance Ecosystems

Sub- component 3.3 : Promoting Innovations

Each of above components and subcomponents has many sub systems and activities which are briefly summarised in the following sections.

2.2. Component 1 : Productivity Enhancement :

This component aims to realise Optimal agriculture productions in selected land parcel . Thus propose to enhance Soil system productivity potential. To this end identify soil productivity constraints by analysing physical and chemical properties of soil and then use site specific interventions to enhance productive potential.

Sub-Component 1.1 : Resource-use Efficiency:

This Sub-component consists of Three key sub systems viz (I) Soil Productivity -Fertility System , (I) Soil Input Efficient System, (III) Farmer Practices – Technology Sub System. The activities proposed under each of these systems is given below respective section :

I. ***Soil Productivity Sub System related activities*** :

i. ***Soil Testing :*** Complete Soil Testing of every 5 hectares (total area covered 525000 ha, Soil Samples 105,000 spread over a period of 2 years).

ii. ***Green Manuring*** : Soil Nitrogen Enhancement Measures : Dhaincha (*Sesbania aculeata*) seeds will be planted for enhancing N2 in the plant @ 40 kgs/ hectare in the first year for covering an area of 5,75 lakh ha. Seeding prior to Rains in April in easter region and Kharif season in Bundelkhand region. Second year on ward seed production by farmers themselves.

iii. ***Soil Amendments (Gypsum)*** : Soil Sulphur Enhancement measure : application of gypsum as soil amendment @ 2 quintal (100 kg) /ha. Project area 525000 ha . Gypsum requirement 15000, 20000, 17500 MT in first, second and third year respectively. Procurement by state Govt. Distribution to farmers based on soil test results and packed in bags. (calcium sulphate dihydrate, with the chemical formula $CaSO_4 \cdot 2H_2O$ is widely mined.

iv. ***Crop Residue management*** (CRM) : increase of organic matter near soil surface and enhance nutrient cycling and retention. Application of waste decomposing slurry (Bio composer) made of 1-2 Kg of Bio Mineraliser (waste decomposer) mixed with 20 lit of water . Layering with cow dung over crop residue and bio mineralisation. Production of bio composter (bio mineraliser through crop residue composting).

v. ***Micronutrients Enhancement*** : Micronutrient enhancement will be made through application of Zinc Sulphate @15 kg/ha -about 2300 MT every year for three years.

II. Soil Input Efficient Sub System related activities :

i. ***Micro Watershed Approach in Bundelkhand:*** conservation of rainwater from draining out from field or water shed area. No direct activity under this project but convergence required for land and water shed development activities with ongoing Pd Deen Dayal Kisan Samridhi Yojna.

ii. ***Bunding and Laser Land Levelling :*** Moisture conservation management : Encouraging farmers to construct/strengthen field bunds (generally manual action) using their own resources. No direct activity under the project.

iii. ***Application of laser land levellers for precision land levelling and improving water use efficiency***: Laser Land levellers will be provided to farmers on custom hiring basis for 25% of targeted project area of 5.25 lakh ha. (procurement, storage, maintenance and supply related activities will be involved) (waste management, oil-soaked maintenance water) (no building construction otherwise).

iv. ***Enhancing Application of Bio Fertilisers****:* Encourage farmers to use Bio Fertilisers (Bacterial Bio Fertilisers, Fungal Bio Fertilisers, Algal bio-Fertilisers) by providing financial support @ Rs 1250/ha. No physical activities under this component otherwise.

v. ***Conjunctive water use and Management (CWUM) :*** *Single Beneficiary Targeted model aiming reduces water evaporation loses:* Promoting sprinkler and Drip irrigation and furrow irrigation (laying very small water channels in a way the water flows by gravity within Agri-fields). Activity involves laying of plastic pipes. (financial assistance to farmers- Implementation by farmers under Per drop more crop programme).

III. Farming Practices- Technology Sub System Related Activities :

i. ***Farm Machineries :*** Promotion of Custom hiring centres (CHCs) and Farm Machinery Banks (FMBs) at these centres who will maintain these machineries

and rent it to small and medium farmers. Main activities will involve demand and supply estimation at village levels, digitisation of inventories at CHCs/FMBs, development of credit facilities, establishment of CHCs in priority districts (only supply of farm equipment) and training(capacity Building). No physical activity except transportation of farm equipment, and its maintenance by CHCs.

ii. ***Plant Protection*** : Development of Integrated Pest Management Programme (IPM) . Use of IPM technology involves Use of Cultural/Mechanical Measures (e.g. crop barriers, screens, traps, mulching, weeding), Biological Measures (releasing beneficial insects in field, Using pheromones to lure pests into traps, such as Neem oil, Neem cake, bio-agents like Trichoderma.

Sub-Component 1.2: Seed Systems

This sub-component consists of following two subsystem/subcomponents:

I. **Seed Production and Distribution Systems** : Support farmers collectives (FPCs) to take up seed production as an economic activity. Develop lab to land mechanism in collaboration with leading research institution to meet the need of good quality certified seeds. More of plan orientated activity. No physical activity is involved in this subsystem otherwise.

II. ***Establishment of Seed Hubs*** : Development of Seed production system and five-year seed rolling plan. Will involve Seed Storages, processing units, packing threshing floors. Will involve labours. Budget Rs 1 Cr/seed hubs. Involvement of FPGs. It is proposed to develop 105 number of such seed hubs.

Sub-Component 1.3 : Agri-Extension

This sub-component consists of following two major activities:

I. ***Strengthening Advisory Platform at District and State Levels :*** development of state and district level platform for Knowledge sharing for relevant technical knowhow, adoption new technologies.

II. ***Partnership*** **with Technical Institutions**: Development of digital agriculture ecosystem driven by advances data analysis and decision support system. will involve development of Web-GIS Dashboard. Rice wheat crop manager (RWCM) web-based decision-making tool based on site specific nutrient management principle. Will also involve training programmes. Easy Harvest -a web-based tool for smart linkage among farmers. In this component as well no physical activity per say is involved but will lead to substantial environmental benefits in preventing farm fire with better crop management. This will also involve technology adoption and development of related infrastructure as well as Development of robust monitoring and evaluation framework enabling information collation and dissemination.

Sub-Component 1.4: Leveraging Carbon Markets

This sub-component will be informed and guided by the UP-Accelerator-led initiatives to leverage carbon and sustainability (green) credits from climate-smart agriculture leveraging economic dividends for project beneficiaries promoting sustainable, low-Carbon agricultural operations including direct seeding in rice wheat systems, minimal tillage, soil management, water conservation and increased WUEs through micro irrigation.

The focus of activities and initiatives under this component will be to enhance capacities of farmers and other stakeholders including research institutions and state agricultural universities to participate in the generation of high quality, verifiable, carbon credits to leverage the domestic or international carbon markets.

The sub-component will finance the following:

- Boosting the scientific capacities of the state to measure, monitor, and report sustainability/carbon credits from climate smart ag initiatives.
- Capacity and Partnership building covering multiple stakeholder categories for awareness building, validation and generating high-integrity/quality carbon offset-credits from the project with market demand.
- Establishing the digital, open-access aggregator platform linking different registries and standards for the farmers to leverage benefit of the global market.
- Building partnerships with global and domestic Centres of excellence in GHG monitoring and management to advice, guide and prioritise low-Carbon initiatives.

2.3. Component 2: Commodity Clusters

This component has two main sub-components (i) Development of Agro-Cluster and (ii) Development of fisheries cluster to evolve best agricultural and fishing practices and evolve mechanisation, processing, and marketing infrastructure development.

Sub-component 2.1: Crop Clusters

This cluster has elaborated plan for improving agricultural productivity/facilities :

I. ***Identification of commodities and regions for interventions***: Task involve identification of commodities and regions for existing market surplus, ready market, growing area and opportunities for value addition and thus project intervention. To start with four commodities are identified namely: Groundnut (Bundelkhand region), Black Gram (Bundelkhand region), Specialty Rice (Kalanamak) (Siddharth nagar and Gorakhpur districts), Vegetables (Varanasi division), Banana (Kushinagar).
II. **Conducting Commodity Wise Diagnostics** : Study and suggest private sector solutions promoting competitive and inclusive value chains.
III. ***Preparing Cluster Development Plans (CDP)*** : Active consultation with public and private stakeholders for inputs for plan development. This will be key component of the projects. These plans will provide requirements as per outcomes of various steps being taken under component 1. This will include :

    - Identification of beneficiaries (entrepreneurs, farmers and collectives) and area to be covered
    - Identification of customized package of practices with relevant technical institutions
    - Identification of quality package of inputs (seeds, fertilizers, pesticides etc) and sources
    - Identification of areas for in cluster requiring micro irrigation and facilitating convergence
    - Identification of mechanization solutions to meet specific needs

- Identification of processing technologies and infrastructure (sorting, grading, pack- houses, processing units etc.)
- Identification of storage requirements and possible locations for development of storage facilities (warehouses / cold storage, food safety practices etc.)
- Identification of market development requirements including export market (market research, buyer-seller meets, consultations, partnerships, logistics analysis etc.)
- Assessment of training needs for the various stakeholders
- Formulation of Environment and Social Safeguard Plans and phase wise workplan including activities, physical facilities to be created, estimated budgets, among others

No physical activity as such will be undertaken under this subcomponent. However, it will have all planning and regulatory interface and will have mitigation measures linkages as per planning components 1.

IV. Implementation of Cluster Development Plans:

i. ***Mobilisation of Beneficiaries*** : Awareness campaigns, Extension services to FPGs, Progressive lead farmer model approach – farmer to farmer approach for practical training. Env Measures : training pack to contain mitigation measures as developed under component 1 for various activities proposed to be demonstrated under demonstration field. In addition it will cover extension services of FPGs, and value chain support and other support services which will further include financing grant to Lead Farmers who in turn will procure mechanised equipment and rent it out to small farmers. Training of farmers aspects will also be covered under this subcomponent.

ii. ***Improving Quality and access to Seeds:*** Providing foundation seed as grant to lead farmers to produce certified seeds which will be provided to farmers. ***Production and distribution of Seeds by Private enterprises:*** Creation of Community Seed Producers group. It will also include ***Training for seed processing Testing and Storage*** .

iii. **Crop Management Practices:** Aim in improving crop management practices . This will have **Development of Customised Package of Practices (POP) (**Development of best agricultural practices for crop and region), **Assessment of Maximum Residue Level (MRL) (**assessment of maximum MRL level will be done with the help of accredited lab to enable farmers optimum level of residue), **Development of Demonstration Plot which** will involve crop management technology using earlier adopted measures and **Training and field Exposure**.

iv. ***Farm Mechanisation and IT enabled services*** : Activities involved developing appropriate mechanised farming solutions, Demonstration plots, training, and field exposure.

v. ***Storage :***Assessment and upgrading of storage facilities/infrastructure including cold storages. Support to new entrepreneur for setting up warehouse /cold storage: Cold storage use Ammonia for cold storage purposes.

vi. ***Processing Facilities:*** Primary Processing, secondary processing , building processing facilities, Including ground nut oil extraction, till oil extraction, dehumidification (micro units), cold transportation facilities, and other food processing industries.

vii. ***Market Development , Capacity Development and Food Safety :*** market assessment, branding, engagement of stakeholders, facilities linkages, capacity building and promotion of food safety ***:*** No physical Activity more of soft actions and beneficial actions/outputs.

Sub-component 2.2 : Fisheries: ***Identification of Clusters for Project Interventions*** : Aims to utilised large no of Reservoirs, village ponds, and tanks. Development of fisheries in these ponds and adequate supporting infrastructure, human resources and auxiliary industries. Three cluster development viz Gorakhpur fish Cluster, Varanasi fish cluster (including Sonbhadra and Chandoli districts), Bundelkhand Fish Cluster (including Mahoba, Jhansi and Lalitpur districts). Development primarily with the FPGs as primary entry point for implementation of project interventions. Activities Proposed under this cluster are as follows:

I. ***Sustainable Increase of Production in Ponds***: Aims to promote aquaculture performance in the project area. It will involve the following sub Tasks:
   i. ***Assured Supply of Improved Seeds***: to improve genetic potential of available fish seeds. These seed shall be produced or sourced from other places .
   ii. ***Establishment , Modernization and upgradation of hatcheries*** : modernisation and construction of new hatcheries : It will involve selection of ponds, supply of seeds and enable farmer with capabilities to adopt technologies and practices .
   iii. ***Cost Efficient Formulated Fish Feed suitable to Designed aquaculture*** : Establishment of fish feed mills using locally available ingredients.
   iv. ***Updated Technologies Diffusion on Innovative Technologies Through Demonstration and Extension Services :*** Demonstration of Semi intensive fish culture in selected ponds. Also, demonstration/development of pen culture and cage culture.
   v. ***Fish Pond Water and Soil Sample Testing:*** Collect soil and water samples from the fish pond to assess the quality and ensure a supportive environment for the fish.

II. **Sustainable Enhancement of Reservoir Fish Production** : Assessment of carrying capacity of fisheries ponds. Data collection, analysis and report preparation for development of pond as sustainable fish production reservoir.

III. ***Formation of Market Linkages and Strengthening The value Chain*** : This will involve the following tasks :
   i. ***Establishment of Fish Landing Stations:*** Establishing fish landing stations with facilities of storeroom and water supply.
   ii. ***Modern Fish Markets:*** Support for modernisation of fish market.
   iii. ***Introduction of Mini fish Processing Units :*** Supporting establishment of such units which will have equipped with chilling rooms, fish processing and washing tables, backup generator.
   iv. ***Establishment of retail Kiosk: and mobile Kisok and Support to mobile fish Small scale vending units :*** Support to provide iceboxes to members of FPG.
   v. ***Establishment of Ice Plants*** : Support for setting up ice plant
   vi. ***Online Fish Marketing*** :

IV. **Capacity Building** : This will involve awareness and related activities. No physical infrastructure development.

V. ***Quality Control and Food Safety*** : this will involve promotional and info supply aspects.

2.4. Component 3 : Digital and Financial Ecosystems

Sub-component 3.1 : Digital Architecture and Technology Services: Aims to Support GOU to develop and maintain state of the art digital agriculture eco system and Agritech Stack to overcome information gaps across entire state. Targeted outcome is also to integrate Agristack applications as a shared public resource, providing tailored services for smallholder farmers, women, and youth. The following sub tasks are involved under this sub component.

I. **Strengthening and Expanding the Digital and Connectivity Infrastructure**: Development of state of the art conferencing facilities at the State project Management Unit (SPMU) and district centres:
II. **Integrated Agritech Hub with AI integration and Core Building Blocks :** Development of State Agriculture Data Hub and Agristack as comprehensive data platform linking all related data sources and platform and following FAIR (Findable, Accessible, Interoperability and Reusable) principle while developing core building blocks.
III. **Other Sub components :** all are related to soft activities, capacity building, multichannel farmer connect systems, Management capabilities enhancement, User engagement and digital literacy, stockholders engagement related and as Key outcome of **"Agriculture Productivity through Climate Smart Agriculture System (CSA)"**

- Water Efficiency Management & Irrigation Scheduling Application: it will utilize weather forecasts, soil moisture data, and specific crop requirements to optimize irrigation schedules. Aims to enhance water efficiency and reduce wastage.
- Soil Health Analysis Tools: Integrating soil testing data, this tool will offer personalized fertilizer recommendations, promoting sustainable soil management..
- Carbon Footprint Calculator: Designed to monitor and analyze farming practices. Application will estimate and help reduce carbon emissions based on a standard MRV system. It will be interoperable with the Climate Warehouse platform of the World Bank, contributing to global climate goals.
- Pest Prediction and Control Application: Leveraging AI and GIS, this application will predict pest infestations and recommend appropriate control measures.
- e-Guides for Agronomic Practices: These digital guides will provide a crop-wise package of practices and guidelines, enhancing farming techniques and productivity.
- High-Value Crop Recommendation Tool: By analyzing market trends and soil conditions, this engine will suggest profitable crop diversification, supporting farmers in making informed decisions.
- Agriculture Extension Platform: This platform will strengthen advisory services at district and state levels through digital channels, enhancing outreach and support
- ONDC-based Market Linkage Application: Facilitating connections between farmers, FPOs/Clusters, and markets, this application will streamline selling processes, leveraging the Open Network for Digital Commerce (ONDC) standards.
- GIS-based Tool for Cluster Mapping and Identification
- Farmer Producer Organization (FPO) Empowerment Suite: Building on the existing FPO Shakti portal
- Innovation Fund Management Platform: This platform will manage the "Innovation Fund" designated for MSME and Agtech.
- Warehouse Receipt System: Enhancing the existing warehouse receipt system (manual), this application will ensure transparency and efficiency in storage and trading.

Sub-component 3.2 & 3.3: Agri Finance Ecosystems and Promoting Innovations: Aims to provide funding support for various application and Agri development including farmers facilitation centres:

Sub-Component 3.3: Promoting Innovations ; Proposed to support innovations to promote with Water Based Green Credits (promote water conservation, water harvesting and water use efficiency/savings, including treatment and reuse of wastewater) and Sustainable Agriculture based green credits (to promote natural and regenerative agricultural practices and land restoration to improve productivity, soil health and nutritional value of food produced) ;

3. Environmental and Social Policies, Regulations, and Laws

3.1. Legal Framework

India has an elaborate Environmental and Social legal framework. The environmental laws are largely framed at Ministry of Environment, Forests & climate Change, Government of India. There are environment laws dealing with different Aspects of environmental components viz, Air, Water, Soil, Noise, Ground Water, Hazardous waste, Solid Waste, E-Waste, Hazardous Chemicals/occupational health, and safety. Most of the legislation related to Air, water, noise, soil, waste management are administered by State Pollution Control Board. Similarly there are large number of legislations dealing with social aspects.

The UPDASP projects considering the proposed project components, and activities has low risk/environmental and social impacts and has limited applicability of various legislations/regulations. The applicable legislations are primarily related to Air Pollution, Water pollution, solid and hazardous waste management, solid and domestic waste disposal. An analysis of various legislation with applicability is given in the following section.

3.2. Environment and Social Legislative Applicability analysis.

The applicability analysis of National and state level environmental and social legislation are summarised at Table 3.1 below.

Table 3.1 : National and State Regulation Applicable for the Proposed Project

S. No	Act / Law	Description / Purpose	Regulatory authority	Implementing Authority	Applicability to Project/permission required
A. Applicable legislation (Environmental)					
	Environment Protection Act, 1986 and EPA rules and its subsequent amendments till date	It is an umbrella act for protection of the environment. It imposes restrictions and prohibitions on projects based on their potential environmental impacts on Air, Water, Noise, Soil, etc.	MoEF&CC	SPMU	Applicable only limited to applicable air, water, noise standards. No permission required as such except under waste specific permission as applicable.
	The Air (Prevention and Control of Pollution) Act, 1981 and its amendments	This act provides the prevention and control of air pollution and all other related matters.	SPCB	SPMU	Applicable. CTE/CTO needs to be obtained from SPCB for Processing/ and ice production units/cold storages.
	The Water (Prevention and Control of Pollution) Act, 1974 and its amendments	This act provides the prevention and control of water pollution and maintaining or restoring water quality for any project.	SPCB	SPMU	Applicable. CTE/CTO needs to be obtained from SPCB needs to be obtained from SPCB for Processing/ and ice production units/cold storages

S. No	Act / Law	Description / Purpose	Regulatory authority	Implementing Authority	Applicability to Project/permission required
	The Noise Pollution (Regulation and Control) Rules 2000 and its , amendment till date	As per the Noise Pollution (Regulation and Control) Amendment Rules, 2017, every facility is required to take all possible steps to meet the ambient noise level standards prescribed in the Rules.	SPCB	SPMU	Applicable only w.r.t to maintaining ambient noise levels at processing and other facilities.
	Solid Waste Management Rules, 2016	Deals with handling, storage and disposal of solid/domestic and non-hazardous waste. As per the rule, waste generator to segregate and store the waste generated by them in three separate streams namely bio-degradable, non-biodegradable and domestic hazardous wastes in suitable bins and handover segregated wastes to authorized waste pickers or waste collectors as per the direction or notification by the local authorities	SPCB	SPMU, DPIU	Applicable, Solid waste generation from the project attracts the provision of the rules with respect to segregation, intermittent storage, and safe disposal.
	Hazardous and Other Wastes (Management and Trans-	The rules define responsibility of hazardous wastes generators, require safe handling practices and maintenance of manifest system during transport of hazardous waste	SPCB/CPCB	SPMU	Applicable only w.r.t to waste oil.

S. No	Act / Law	Description / Purpose	Regulatory authority	Implementing Authority	Applicability to Project/permission required
	boundary Movement) Rules, 2023 and amendment thereof	and describe technological aspects to be followed up by re-refiners and recyclers of hazardous wastes.			
	The Manufacture, Storage and import of Hazardous Chemicals Rules, 1989 as amended till date	This rules will be applicable in a limited manner for handling of any hazardous chemicals listed dunder these rules at processing and other facilities.	SPCB/MOEF&CC	SPMU	Applicable. No permission required. Only follow precautions defined under with MSDS
	Batteries Waste Management Rules, 2022	It shall be the responsibility of the consumer to ensure that used batteries are not disposed of in any manner other than depositing with the dealer, manufacturer, importer, assembler, registered recycler and reconditioned or at the designated collection centres.	CPCB, SPCB, Urban Local bodies (ULBs).	SPU	Applicable, as few of such batteries may generate under the project. As such no other permission is required.

S. No	Act / Law	Description / Purpose	Regulatory authority	Implementing Authority	Applicability to Project/permission required
	Plastic Waste Management Rules, 2022 and its amendment till date	Deals with storage, recycle or safe disposal for plastic wastes.	CPCB, SPCB, Urban Local bodies (ULBs).	SPMU, DPIU	Applicable. No permission is required. However plastic has to be collected and safely disposed of as per law. UPDASP is likely to generate substantial plastic waste. Every waste generator shall take steps to minimize generation of plastic waste.
	Biomedical Waste Management Rules 2016 and amendments, 2016	Safe handling and disposal of First aid facilities to be set up during construction/operation stages	SPCB	SPMU	Applicable. No permission is required. Follow defined guidelines.
	Uttar Pradesh Ground Water (Management and Regulation) Act, 2019	The Uttar Pradesh Ground Water (Management and Regulation) Act, 2019 aims to protect, conserve, control, and regulate groundwater resources in the state of Uttar Pradesh. The act is designed to ensure the sustainable management of groundwater, both quantitatively and	UP Ground water resources department	SPMU, DPIU	Applicable for withdrawal of ground water for its various subcomponent such as Ice plant, Seed processing units, etc.

S. No	Act / Law	Description / Purpose	Regulatory authority	Implementing Authority	Applicability to Project/permission required
		qualitatively, particularly in stressed rural and urban areas. This legislation plays a crucial role in addressing contemporary challenges related to water management and conservation in the state.			
	Uttar Pradesh State Biological Diversity Rules, 2010	The rules aim to conserve and sustainably use biological resources and associated knowledge. They provide a framework for access and benefit-sharing related to biological resources. Key Provisions of the rule includes: ○ Biodiversity Management Committees (BMCs are established at the Gram Panchayat level and other local bodies to oversee biodiversity-related matters. ○ The rules outline procedures for obtaining access to biological resources for research, commercial use, or other purposes.	State Biodiversity Board	SPMU, DPIU	Applicable

S. No	Act / Law	Description / Purpose	Regulatory authority	Implementing Authority	Applicability to Project/permission required
		○ They emphasize equitable sharing of benefits arising from the utilization of biological resources and associated traditional knowledge. ○ The rules safeguard traditional knowledge associated with biodiversity. They promote conservation efforts, including the identification of species on the verge of extinction in Uttar Pradesh.			
	Motor Vehicle Act 1988 and amendment till date	To minimize the road accidents, penalizing the guilty, provision of compensation to victim and family and check vehicular air and noise pollution.	Transport Department	SPMU	Applicable to the extent that vehicles being used under the project has Pollution under control Certificate
	The Gas Cylinder Rules 2016	To regulate the storage of gas / possession of gas cylinder more than the exempted quantity.	Department of Factories	SPMU	May be applicable to Processing facilities/ice plant
	Manufacture Storage, & imports of Hazardous Chemicals (MSIHC)	Usage and storage of hazardous substances	Department of Factories/ MOEF&CC	SPMU	May be applicable in case of ICE plant/Cold Storages for use and handling of Ammonia

S. No	Act / Law	Description / Purpose	Regulatory authority	Implementing Authority	Applicability to Project/permission required
	Rules, 1989 as amended till date				
		B. Applicable Social Legislation			
	The SCs and the STs (Prevention of Atrocities) Act, 1989	The act was passed in 1989 to prevent Scheduled Castes and Scheduled Tribes from atrocities. The act suggests Precautionary and Preventive Measures. under which State Government shall identify the area where it has reason to believe that atrocity may take place or there is an apprehension of reoccurrence of an offence under the Act.	Uttar Pradesh Scheduled Castes and Scheduled Tribes Commission	SPMU, DPIU	This act is applicable as SCs and STs are also beneficiaries of this project.
	The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013	Deals with land acquisition and rehabilitation issue.	GoUP	SPMU, DPIU	**Applicable only if land is to be acquired on a later stage.**

S. No	Act / Law	Description / Purpose	Regulatory authority	Implementing Authority	Applicability to Project/permission required
	Contract Labour (Regulation and Abolition) Act, 1970	Deals with the right of contract labour if hired.	Labour dept, GoUP	SPMU, DPIU, CPIT, TSAs and Contractors	**Applicable**
	Workmen Compensation Act, 1923	This act provides for payment of compensation to workmen (or their dependents) in case of personal injury caused by accident or certain occupational diseases arising out of and in the course of employment and resulting in disablement or death.	Labour Department, GoUP	SPMU, DPIU, CPIT, TSAs and Contractors	**Applicable**
	Minimum Wages Act, 1948	The provision of the Minimum Wages to be paid to workers.	Labour Department, GoUP	SPMU, DPIU, CPIT, TSAs and Contractors	**Applicable –** Regular monitoring of contractors by the CPIT and TSAs to ensure that equal wages are paid to women and men for equal work.
	Equal wages Act, 1976	The Equal Remuneration Act, 1976 is a significant legislation in India that aims to prevent discrimination in terms of remuneration based on gender. The Equal Remuneration Act, 1976, universalizes the provisions of minimum wages and timely payment of wages to all employees, irrespective of the sector and wage	Labour Department & Women Welfare dept, GoUP	SPMU, DPIU, CPIT, TSAs and Contractors	**Applicable –** Regular monitoring of contractors by the CPIT and TSAs to ensure that equal wages are paid to women and men for equal work.

S. No	Act / Law	Description / Purpose	Regulatory authority	Implementing Authority	Applicability to Project/permission required
		ceiling, ensuring the "Right to Sustenance" for every worker.			
	Child Labour (Prohibition & Regulation) Act 1986	The Act prohibits employment of children below 14 years of age in certain occupations and processes and provides for regulation of employment of children in all other occupations and processes.	Child and Women Welfare dept, GoUP	SPMU, DPIU, CPIT, TSAs & Contractors	Applicable
	Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996	To regulate the employment and conditions of service of buildings and other construction workers and to provide for their safety, health and welfare measures and for other matters connected therewith or incidental thereto.	Labour department	SPMU, DPIU, CPIT, TSAs & Contractors	Applicable only for construction of Cold storages, ice plant and other construction activities involved under different components of the project.
		C. Other Related Legislation			
	Ancient Monuments and Archaeological Sites and	Conservation of cultural and historical remains found in India.	Department of Archaeology	SPMU, DPIU	Applicable if presence of Protected monument or any chance find from digging of field.

S. No	Act / Law	Description / Purpose	Regulatory authority	Implementing Authority	Applicability to Project/permission required
	Remains Act, 1958				
	The Insecticides Act, 1968	An Act to regulate the import, manufacture, sale, transport, distribution and use of insecticides with a view to prevent risk to human beings or animals, and for matters connected therewith.	The Central Insecticides Board	SPMU, DPIU	Applicable for handling of pesticide perspective only.
	Fertilisers Act 1985	An Act to regulate the sale of fertilisers, liming materials and trace element products; The object of this Act is to regulate the sale of soil improving agents like Gypsum and trace element products	Ministry of Agriculture and Rural Development	SPMU, DPIU	Applicable as the soil improving agents like Gypsum and trace element shall be used . Applicable only with respect handling provisions.
	Seed Act - 1966	An Act to provide for regulating the quality of certain seeds for sale, and for matters.	Central Seed Committee Govt. of India	SPMU, DPIU	Applicable
	National Seed Policy 2002	National Seed Policy has been launched to provide for intellectual protection of new varieties, creation of new infrastructure facilities along with strengthening of existing facilities, use of biotechnology, import policy to make best planting material available in the world to	-	SPMU, DPIU	Applicable since the Project intervention are intended to support enterprise growth and expanding market access.

S. No	Act / Law	Description / Purpose	Regulatory authority	Implementing Authority	Applicability to Project/permission required
		Indian farmers after meeting quality standard, long term policy for export of seeds, promotion of domestic seed variety			
	Food Safety and Standards (Food Products Standards and Food Additives) Act 2006 and Rules, 2011 and subsequent amendment	The FSSAI consolidates laws relating to food and lays down scientific standard for articles of food. It regulates their manufacturing storage, distribution, sale and import to ensure availability of safe and wholesome food for human consumption. It's a single reference point for all matters related to food safety and standard, regulation and enforcement.	FSSAI	SPMU, DPIU	This Act is applicable since the investment will facilitate enhancement in agriculture-based commodities, processing and grading facilities, infrastructures such as market, warehouse, retail etc which will develop agri business and agricultural productivity. FSSAi approval may be required depending on the processing products planned.
	The United Provinces Fisheries Act 1948 [U. P. Act No. XLV of 1948]	The Act provides for the prohibition and licensing of fishing in selected waters, outlines rules, and specifies offenses and penalties.	Fisheries department	SPMU, DPIU	Applicable
	B. Non-Applicable Key Environmental and Social Legislation				

S. No	Act / Law	Description / Purpose	Regulatory authority	Implementing Authority	Applicability to Project/permission required
	Environmental Impact Assessment (EIA) Notification, 2006 and its amendments till date .	Environmental Impact Assessment Notification made mandatory to obtain prior environmental clearance for projects defined under the notification.	MoEF&CC/ SEIAA	SPMU	Not Applicable. Since no projects are covered under this notification.
	Forests (Conservation) Act, 1980 and Rules 1981 as amended 2004	Prior permission is required under this act for diversion or forests for non forestry purposes, cutting of trees .	Forest Department	SPMU, DPIU	Not Applicable As no forest land involved in the project
	Wildlife (Protection) Amendment Act, 2022	The Act provides for the protection of wild animals, birds and plants; and for matters connected therewith or ancillary or incidental thereto. Prior permission is required if project component is located within eco sensitive zone of the protected areas.	Uttar Pradesh State Forest Department/ State Board of Wildlife/ National Board of Wildlife	SPMU, DPIU	Not Applicable, The project doesn't require Wildlife Clearance under Wildlife (Protection) Amendment Act, 2022 from NBWL, since no project component will be located in protected eco sensitivity zones.

S. No	Act / Law	Description / Purpose	Regulatory authority	Implementing Authority	Applicability to Project/permission required
	The Public Liability Insurance Act, 1997	This Act has been enacted for redressed of the person who have been affected by accident occurring while handling any hazardous substance. The owner is liable to compensate the person (other that the workman) who have suffered to death or injury due to any accident.	MOEF&CC/Insurance agency	SPMU, DPIU	Not Applicable as project is unlikely to store chemicals as defined under this Act.
	Construction and Demolition Waste Management Rules, 2016	The rules shall apply to every waste resulting from construction, re-modelling, repair and demolition of any civil structure of individual or organization or authority that generates construction and demolition waste such as building materials, debris, rubble.	CPCB, SPCB, Urban Local bodies (ULBs).	SPMU, DPIU	Not Applicable, as no such waste generation is anticipated.
	The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act	The act basically vests the forest rights and occupation in forest land in forest dwellers (ST and other traditional forest dwellers) who have been residing in forests for generations but whose rights could not be recorded. The act provides a framework for recognizing the forest rights and the nature of evidence	Ministry of Tribal Affairs. Tribal Welfare Department	**SPMU, DPIU**	Not Applicable

S. No	Act / Law	Description / Purpose	Regulatory authority	Implementing Authority	Applicability to Project/permission required
	2006 & Rules 2007	required for such recognition and vesting of forest land. Rights which are recognized under any State law or laws of any Autonomous District Council or Autonomous Regional Council, or which are accepted as rights of trials under any traditional or customary law of the concerned tribes of any State;			

3.3. National Environmental and Social Assessment and Permitting

State Pollution Control Board will be the main agency to grant Consent to Establish and Consent to Operate under Air and Water Acts and Authorisation for disposal of hazardous waste under hazardous Waste Rules. Project Subcomponent (ice plant, cold Storage, Processing facilities) will fall under green/orange category and will require to apply for consents before start of any construction. Similarly, Authorisation will be required by same facilities for handling / disposal of hazardous waste. State Ground Water Board grants permission for withdrawal of ground water for ice plant and other processing facilities.

3.4. World Bank Standards and Key Gaps with the National Framework

The project will follow the World Bank Environmental and Social Standards (ESSs), as well as the World Bank Group Environmental, Health and Safety Guidelines. Based on these policies, the environmental and social risk of the project is categorized as low/moderate risk category identified in the World Bank Environmental and Social Risk Summary (ESRS) since all sub projects components are unlikely to generate negligible or minimal impact on valued environmental components. There is minimal air pollution, noise pollution, water pollution of land contamination. No hazardous chemicals are used under any of sub-components except lubricating oil and engine fuels.

The World Bank's environmental and social standards applicable to project activities are summarized below.

Table 3.2 : Relevant World Bank ESS

E & S standard	Relevance /Requirements
ESS1: Assessment and Management of Environmental and Social Risks and Impacts	Its is relevant for the project because project activities are expected to pose low to moderate environmental and social risks such as generation of plastic waste, air pollution, discharge of wastewater from processing facilities, occupational ,health and safety to workers etc. ➢ Undertake an environmental and social impact assessment (ESIA) of the proposed project ➢ Undertake stakeholder engagement and disclose appropriate information in accordance with ESS10. ➢ Develop an ESCP, and implement all measures and actions set out in the legal agreement including the ESCP; and ➢ Conduct monitoring and reporting on the environmental and social performance of the project against the ESSs
ESS2: Labour and Working Conditions	Its relevant because of involvement of labour under various sub component of the project. ➢ Preparation of Labour Management Procedures applicable to the project including Code of Conduct for Contractor. ➢ Establishing Grievance Mechanism including and sharing with all the workers ➢ Design and Implement OHS measures

E & S standard	Relevance /Requirements
ESS3: Resource Efficiency, Pollution Prevention and Management	Relevant - various activities are likely to generate waste and create pollution such as plastic waste, waste oil, wastewater, air pollution. Project activities are also likely to use various natural resources as water, soil, and oils. ➢ Assess the resource requirement and implement technically and financially feasible measures for improving efficient consumption of energy, water and raw materials, as well as other resources. ➢ Water use and water conservation guideline and other resource source and use and conservation plan. ➢ Efficient disposal of other waste (biodegradable and non-biodegradable) hazardous waste (waste oil, empty paints containers etc.)
ESS 4: Community Health and Safety	Its relevant as project subcomponents may have risk to community health and safety due to implementation of its subcomponents such as Agri cluster and fisheries cluster. Adopt and implement community health and safety measures included in the ESMPs. Including creating awareness and commitment to develop program to reduce farm fire and health effect on community due to farm fire.
ESS 5: Land Acquisition, Restrictions on Land use and Involuntary Resettlement	Not relevant as No land is envisaged to be acquired. The government or public land Used, as advised by Gram Panchayat, will be free of encroachment and other encumbrances. However, these lands will be free from restrictions to access, traditional customary rights, legal disputes, etc.
ESS 6: Biodiversity Conservation and Sustainable Management of Living Natural resources	Limited relevance as project is unlikely to have any risk to biodiversity. No project activity will be located within and buffer areas of any ecologically protected areas Biodiversity measure as per ESMP for project specific activity/facility/plants for that activities which may have impact on biodiversity
ESS 7: Indigenous Peoples/Sub-Saharan African Historically Underserved Tradition Local Communities	Limited relevance as indigenous people are unikely to be affected.
ESS 8: Cultural Heritage	Limited relevance. However Develop and implement a Cultural Heritage Management Plan (CHMP)
ESS 9: Financial Intermediaries	Relevant since finance are likely to be given under some of sub component of the project.
ESS 10: Stakeholder	Its relevant for all projects given the need to engage with beneficiaries and stakeholders on development activities that affect their lives.

E & S standard	Relevance /Requirements
Engagement and Information Disclosure	Develop a Stakeholder engagement Plan

World Bank Standards and Gap with National Policies, Regulations and Redressal Measures: The Gap analysis with ESS and the national environmental policy and its applicability to the Project is presented in Table 3.3 with redressal.

Table 3.3 : Comparison of National Environmental Policy and Regulations and ESF

S. NO	ESS	Equivalent National Environmental Policy and Regulations	Policy Gaps and its redressal
1	ESS1: Assessment and Management of Environmental and Social Risks and Impacts	• Environment Protection Act/Rules-1986	Applicable for all projects, sub-projects and associated facilities • Undertake an environmental and social assessment of the proposed project, since this project does not qualify under EIA Notification 2006 • Undertake stakeholder engagement and disclose appropriate information in accordance with ESS10; • Develop an ESCP, and implement all measures and actions set out in the legal agreement • Periodically assess environmental and social performance of the project against the ESSs and report it periodically
2	ESS2: Labour and Working Conditions	• The Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act 1996 and the Building and Other Construction Workers Welfare Cess Act, 1996 (BOCWW Cess Act) • Contract Labour (Regulation & Abolition) Act 1970, • Minimum Wages Act 1948, Payment of Wages Act 1936, • Child Labour (Prohibition & Regulation) Act 1986, • Inter-State Migrant workmen's (Regulation of Employment & Conditions of Service) Act 1979 • Employees Compensation Act 1923 • Payment of Gratuity Act 1972 • Employees P.F. and Miscellaneous Provision Act 1952 (since amended) • Maternity Benefit Act 1961	The national legislation covers all requirements of ESS2 except relating to community workers and need of development of functional Grievance Redress Mechanisms Labour management procedure and Grievance Redress Mechanisms to be developed and implemented

S. NO	ESS	Equivalent National Environmental Policy and Regulations	Policy Gaps and its redressal
		• Sexual Harassment of Women at the Workplace (Prevention, Prohibition and Redressal) Act, 2013 • Payment of Wages Act 1936 • Equal Remuneration Act 1976 • Payment of Bonus Act 1965 • Industrial Disputes Act 1947 • Trade Unions Act 1926 • Inter-State Migrant workmen's (Regulation of Employment & Conditions of Service) Act 1979 • Factories Act 1948 • Bonded Labour System (Abolition) Act, 1976 • Employer's Liability Act, 1938 • Employees State Insurance Act 1948 • The Personal Injuries (Compensation Insurance) Act, 1963 • Industrial Employment (Standing Order) Act 1946	
3	ESS3: Resource Efficiency, Pollution Prevention and Management	• Environmental protection Act, 1986 and subsequent amendments • Environmental Impact Assessment Notification-2006, 14th Sep-2006, as amended in 2009 and 2013 • Air (Prevention and Control of Pollution) Act, 1981, 1987; • Water (Prevention and Control of Pollution) Act, 1974, 1988; • Noise Pollution (Regulation and Control Act) 2000 and amendment till date • Notification for use of fly ash, 2003 and MoEF&CC notification dated 25th March 2015 • Municipal Solid Waste (Management & Handling) Rules, 2000 (MSW Rules) • Hazardous & Other Waste (Management and Trans-boundary Movement) Rules, 2016	Existing regulations largely meets ESS3 requirements. Further Resource Efficiency and Pollution Prevention Plan to be prepared to assess and minimize/control the concentration of release of pollutants to air, water and other waste

S. NO	ESS	Equivalent National Environmental Policy and Regulations	Policy Gaps and its redressal
		• Manufacture Storage, & import of Hazardous Chemicals (MSIHC) Rules, 1989 as amended till date • Batteries (Management and Handling) Rules, 2001 • The E-Waste (Management) Rules, 2016, • Plastic waste Management Rules, 2016 • Construction & Demolition, Waste Management Rules, 2016 • Solid Waste Management Rules, 2016 • Motor Vehicle Act 1988 and amendment till date • The Gas Cylinder Rules 2016	
4	ESS 4: Community Health and Safety	• Air (Prevention and Control of Pollution) Act, 1981; • Water (Prevention and Control of Pollution) Act, 1974, for Pollution- Prevention-and-Management; • The Noise Pollution (Regulation And Control) Rules, 2000 • Guide Lines on Traffic Management in Work Zones IRC:SP:55 – 2014, • Municipal Solid Waste (Management & Handling) Rules, 2000 (MSW Rules) • Hazardous Wastes (Management, Handling and Trans-boundary Movement) Rules, 2008. • Construction & Demolition, Waste Management Rules, 2016	Legislation meets ESS 4 requirements. Gap exists for addressing community health and safety. Though project has very limited impacts on community health and safety, however these aspects needs to be covered under OHS guidelines and ESMPs.
5	ESS 5: Land Acquisition, Restrictions on Land use and Involuntary Resettlement	• The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013	Gap exists specifically related to aspects such as identification of non-titleholders as PAPs; cut off dates for non-titleholders and valuation of structures with depreciation. However, no land acquisition is involved under the project.
6	ESS 6: Biodiversity Conservation and Sustainable	• Biological Diversity Act, 2002, • Wildlife Protection Act 1972 (WLPA),	Provisions from the acts meet the ESS 6 requirements.

S. NO	ESS	Equivalent National Environmental Policy and Regulations	Policy Gaps and its redressal
	Management of Living Natural resources	• The Forest (Conservation) Act, 1980 and amendments and The Forest (conservation) Rules 1981 and amendments	Guidelines for biodiversity protection shall be prepared and covered under ESMP.
7	ESS 7: Indigenous Peoples/Sub-Saharan African Historically Underserved Tradition Local Communities	• Article 366 (25) of the Constitution • Article 244(1) of Constitution of India - The Fifth Schedule under Article 244(1) of a subsequent Act of Constitution "Scheduled Areas" as such areas as the President may by order declare to be Scheduled Areas after consultation with Governor of that State. • Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 • Panchayats (Extension to the Scheduled Areas) Act, 1996	While PESA Act requires clear community's acceptance vide a Gram Sabha resolution on the proposed activity with a pre-defined quorum of participation, ESS 7 requires ascertaining Free Prior and Informed Consent under three circumstances – impacts on land, cultural heritage and if requiring relocation. FPIC does not require unanimity and may be achieved even when individuals or groups within Indigenous Peoples/groups explicitly disagree. Hence, in such cases both Gram Sabha resolution and FPIC will be required. Limited Applicability in this project.
8	ESS 8: Cultural Heritage	• Ancient Monuments and Archaeological Sites and Remains Act, 1958	Provisions from the act meets the ESS 8 requirements. Not Applicable in present case; Project is not directly or indirectly impacting any cultural heritage.
9	ESS 9: Financial Intermediaries	• Various taxation and financing rules	Meets the requirements of ESS9. Though this project has limited applicability
10	ESS 10: Stakeholder Engagement and Information Disclosure	• Environmental Impact Assessment Notification-2006, 14th Sep-2006, as amended in 2009 and 2013 • Right to information Act 2005	There is a provision of public hearing in EIA notification and also RFCTLARR Act 2013 mandates consultations with affected persons. However such consultation will not be applicable in this project. SEP and GRM will be developed to meets ESS10 requirements.

4. Potential Environmental and Social Risk Impacts and Standard Mitigation Measures

The UPDASP project has most of components/subcomponents which have limited and low intensity impacts. Most of the impact are short termed and reversible. The project activities do not require large natural resources which can have direct and indirect impacts on environment. Only some of project activities like Agro Cluster-cloud storage/ice plant and processing facilities and fish processing facilities will require water . the necessary conservation measures are proposed to conserve water under respective Subcomponents related ESMP. The mitigative measures/ESMP has made provision of necessary approval where required.

No land acquisition is involved in the projects and social risk are also minimal or beneficial.

The components/subcomponent and related activity wise risk/impact analysis with suggested mitigation measures are given at Table 4.1 below.

Table 4.1 : Environmental and Social Risks and Mitigation Measures

Sl No.	Activity	ESHS Risk/Impacts	Mitigation Measures
Component 1 : Subcomponent 1.1: Resource Use Efficiency For Productivity Enhancement			
1	***Soil Productivity Sub System related activities***		
	Soil Testing	Generation of plastic waste and disposal of left over soil samples at Laboratory level	Ensuring that labs are NABL accredited having defined procedures for sample collection, testing and waste management. Explore possibility of developing recyclable bags for soil sample collection and transportation.
	Green Manuring	Beneficial Impacts	
	Soil Amendments (Gypsum)	Gypsum from industry sources may have contaminates and result in soil contamination. Gypsum handling may have air pollution issue	Gypsum to be procured from mines sources only. Handling of Gypsum in bags and not in loose conditions. Create awareness on safe handling and use of proper PPE.
	Crop Residue management (CRM)	Air pollution if farmer resorts to burning of crop residue instead of CRM practices	Create awareness with farmers and make agreement with FPG to ensure CRM through waste decomposing. Ensure proper collection, storage, and disposal/processing facilities of crop residue.
	Micronutrients Enhancement	Excessive level of Zn in soil can alter soil and aquatic microbial diversity and thus affect the bioavailability and absorption of other metals	Development of zinc level monitoring program and controlled application of zinc sulphate to avoid excessive Zn level related impact

2.	***Soil Input Efficient Sub System related activities***		
	Micro Watershed Approach in Bundelkhand: conservation of rainwater from draining out from field or water shed area	Nonspecific however has direct relevance for water conservation	Undertaking firm confirmation from concerned Govt authorities for the district to be covered under this conservation plan and planning the conservation measures as per district settings.
	Bunding and Laser Land Levelling	Laser Land levellers' maintenance may generate various liquids , solid and hazardous Waste (waste oil) which can pollute the recipient environment.	Development of waste management programme involving of *collection* of waste oil and its disposal through authorized recyclers, Wastewater to pass through a pit with oil removal baffle mechanism, mechanism , provision of concreted floor with spilled oil collection pit or storage of lubricant and other oils.
	Enhancing Application of Bio Fertilisers	Nonspecific as it relates to providing only financial support to farmers for buying and using Bacterial, fungal, or algal bio-fertilisers)	**--**
	Conjunctive water use and Management (CWUM)	Plastic waste disposal issue in the form of damaged pipes used for drip irrigation, disposal related	Development of mechanism for collection and disposal of damage pipe to plastic recyclers.
3	***Farming Practices-Technology Sub System Related Activities :***		
	Farm Machineries	Only related to maintenance of Farm machineries by CHC . Elite may	Same as proposed for land laser levellers above. Evolve robust selection criteria for providing farm machineries. Adequate

		capture the project benefit. Inadequate representation of the poorest and most vulnerable communities, especially women and tribal communities in decision making.	representation of the poorest and vulnerable communities, especially women and tribal communities in decision making.
	Plant Protection	Mulching may also involve use of plastics and its wastage at removal stage, leads to plastic wastage in the field. A big issue**.** Handling of pheromones again has handling and wastage issues. OHS issue with handling of need oil.	Development of standard procedures for safe storage of neem oil, removal of all plastic from field effectively or develop alternative to plastic sheet use, develop fire protection measures, Use of proper PPE protection. Select field away from ecologically protected areas. Avoid Reserve forests, National parks Biosphere reserve, critically degraded areas, and declared disturb areas.
Component 1: Sub-Component 1.2:Mechanism for Improved Seed System			
1.	**Seed Production and Distribution Systems**	Nonspecific as this activity is more of plans oriented.	Adoption of climate resilience technology for seed production covering short duration and stress tolerant
2.	***Establishment of Seed Hubs***	Generation of Seed handling waste (plastic waste) and other environmental issues (at processing units- Waste water generation, waste oil generation, solid waste generation, and OHS issue)	Promote use of Recyclable or bio-degradable packaging material. Adopt waste management practices as per norms specified by State Pollution control board for such a smaller unit and obtain connect to establish from board before setting up processing facilities.
Component 1 : Sub-Component 1.3 : Strengthening Extension Services for Tailored Climate Smart agronomic Practices			
1.	***Strengthening Advisory Platform at District and State Levels***	None-Specific	However, integration of climate consideration and its dissemination as part of technical know-how will be important.
2.	**Partnership with Technical Institutions**	None- specific	**-**

	Technology adoption and infrastructure	Lack of EHS considerations in planning	Create awareness and provide incentive for adoption of climate resilience technologies, Development of storage and transport support- integration with existing schemes and support from project. Development of robust monitoring and evaluation framework enabling information collation and dissemination with achievable targets.
Component 2 : Sub-component 2.1 : Development of Agro-Clusters			
1.	***Identification of commodities and regions for interventions.*** C**onducting Commodity Wise Diagnostics**	None as such being planning oriented	Environmental issues like transportation, storage, and handling losses to be part of mitigation measures for supply chain value considerations.
2.	***Preparing Cluster Development Plans (CDP)***	Regulatory noncompliance for processing units, and pest management and pesticide application, Plastic waste generation and disposal-soil fertility/productivity, hazardous waste – pesticide container and neem oil container disposal, zin contaminations, OHS issue in processing and application of neem oil and pesticides	Each unit will develop waste management and disposal plan including provision of capital costs for waste handling and management infrastructure at processing plants. Provision to be made for handling and disposal of hazardous waste. Mandatory to obtain consent to establish from State Pollution Control Board before start of construction of the unit. Adopting robust OHS programme including creating awareness among the farmers.
3	***Implementation of Cluster Development Plans***		
	Mobilisation of Beneficiaries	Maintenance of mechanised equipment by lead farmers and disposal of related waste including waste oil etc.	Farmer to ensure that it follow the waste management practices for handling machine maintenance waste. Provide equitable access to all communities especially women and tribals.

	Improving Quality and access to Seeds Production and distribution of Seeds by Private enterprises Training for seed processing Testing and Storage	Wastage of certified seeds due to improper handling/storage Same as associated with handling of seed as by lead farmers Beneficial only	Develop standard EHS practice /guidelines for handling certified seeds Same as above . Additionally, provision to be made for proper training of farmers
	Crop Management Practices- **Development of Customised package of Practices (POP**)	Effect of resource use efficiency if practices do not integrate the good environmental practices	Integrate Environment best practices as part of POP development
	Crop Management Practices- **Assessment of Maximum Residue Level (MRL)**	Outcome depends on Accuracy of results from lab as weak results may lead to wrong practices and soil fertility, means resource loss	Ensuring that NABL accredited labs are only used, and they follow standard protocol for ensuring accuracy of the test results
	Crop Management Practices- Demonstration Plot and Training and Field Exposure	No risk anticipated except for relevant activities already discussed in component 1.	As discussed under component 1
	Farm Mechanisation and IT enabled services	Mechanisation related aspects which are already covered under mechanisation subcomponent of component 1.	As discussed under component 1
	Storage	Potential of accidental release of Ammonia, waste generation from these facilities, wastage of food due to improper temperature management in cold storages, Regulatory	Environmental assessment shall be undertaken and mitigation plan to be developed based on the assessment. Comply with Food safety norms with registration under FSSAI. Develop

		noncompliance, occupational health and safety, GHG/Ozone Depleting substances Releases (HCFCs). Inadequate representation of the poorest and most vulnerable communities, especially women and tribal communities in decision making. SEA/SH risk during construction. Elite capture of project benefit	guidelines for ensuring all farmers ensuing is benefitted without partiality. Provisions for OHS to be included in the storage areas. Steps should be taken to avoid pest management with chemicals and adopt Integrated Pest Management (IPM) for safeguarding storage material.
	Processing Facilities	Potential occupational health and safety to workers and community, water wastages and liquid waste disposal -potential contamination of land and water resources, hazardous waste generation and disposal linked effect, air pollution, solid waste disposal linked regulatory noncompliance risk, elite capture of project benefit. Inadequate representation of the poorest and most vulnerable communities, especially women and tribal communities in decision making. SEA/SH risk during construction	Environmental assessment shall be undertaken and mitigation plan to be developed based on the assessment. Comply with Food safety norms with registration under FSSAI. Develop guidelines for ensuring all farmers ensuing is benefitted without partiality. Steps should be taken to avoid pest management with chemicals and adopt Integrated Pest Management (IPM) for safeguarding the raw material and products.
	Market Development , Capacity Development and Food Safety	No EHS risk as such	
Component 2: Sub-component 2.2: Fisheries Clusters Development : ***Identification of Clusters for Project Interventions***			
1.	**Sustainable Increase of Production in Ponds**		

	Assured Supply of Improved Seeds	Negligible except potential loss of fish seed and generation of waste bio-mass	Steps shall be developed for proper fish seed storage, transportation, and waste management.
	Establishment , Modernization and upgradation of hatcheries	Potential for genetic interactions between hatcheries-bred fish and wild populations, due to high density rearing conditions can serve as breeding ground for various diseases and parasites and this disease transmission from hatchery fish to wild fish and can led to change in aquatic environment due to ecological interaction between natural/wild species and hatcheries species and can also lead to habitat alterations. Hatcheries will generate uneaten feeds and fish waste which can contribute to nutrient loading in surrounding water bodies, SEA/SH risk during construction.	Identification of hatchers location away from other water bodies, assessment of species levels in the ponds/lakes and to ensure that hatcheries fish do not become a threat to natural species. Develop sustainable waste management plan for hatcheries
	Demonstration of Fish Nurseries and Establishment of Captive Nurseries	Quality of pond water and pollutant present may cause fish bioaccumulation which can further create health impact on fish consumers. SEA/SH risk during construction.	Develop programme for regular testing and pond water quality and ensuring that water is not polluted from external sources
	Cost Efficient Formulated Fish Feed suitable to Designed aquaculture	These small production units will have impact associated with generation waste, air pollution, effluent generation, OHS issue in operating mills, generation of packaging waste. SEA/SH risk during construction.	Regulatory permission from SPCB shall be taken, proper resource and waste management plan to be developed.

	Updated Technologies Diffusion on Innovative Technologies Through Demonstration and Extension Services	Broadly same as for nursery and mitigation measures will be similar in nature	Broadly same as for nursery and mitigation measures will be similar in nature
	Sustainable Enhancement of Reservoir Fish Production	Planning ignores EHS risk and management	Project report to mandatorily integrate environmental consideration in the project design (resource conservation, waste management and regulatory compliance)
2	**Formation of Market Linkages and Strengthening The value Chain** :		
	Establishment of Fish Landing Stations	Land classification, construction of storage building, clearing of vegetation for site development, water wastages, unhygienic conditions due to fish handling, ice management and dead fish waste handling. Restrictions on land use and SEA/SH risk during construction.	Development of environmental management plan, ensuring no R&R issue with the site, stakeholders' consultation with neighbourhood, regulatory consent from SPCB
	Modern Fish Markets	Substantial waste generation at such market with improper waste disposal causing environmental degradation Restrictions on land use and SEA/SH risk during construction	Integrate waste management measures, bio-composter for such market's upgradation
	Introduction of Mini fish Processing Units	Potential water /land pollution due to due to waste generation disposal, water loss due to excessive water uses	Disposal of waste and water use as per regulatory permission from SPCB and adoption of best EHS practices. Sop for water

		and wastages, air pollution due to DG set operations, OHS risk due to unhygienic conditions and mill operations, SEA/SH risk during construction.	and ice uses. Layout design consideration waste management practices
	Establishment of retail Kiosk: and mobile Kisok and Support to mobile fish Small scale vending units	Unhygienic conditions and improper dead fish waste disposal	Training of kiosk owners for maintaining hygienic conditions and SOP for waste management. .
	Establishment of Ice Plants	OHS risk related construction activities ad construction waste generation/disposal . Operational stage impact on water supply and effect on limited water resources, ammonia handling used in ice plant , and other waste disposal ,transportation of Ice related air pollution and noise pollution, Restrictions on land use and SEA/SH risk during construction	Developing right source of water supply, selection of site for setting up plants, developing complete environmental management plan for water resource conservation, gas handling, waste disposal, OHS aspects and labour management as well traffic management for transportation of ice
	Online Fish Marketing	None Specific	
	Capacity Building	None Specific	
	Quality Control and Food Safety	Beneficial	
Component 3 : Digital and Financial Ecosystems			
Component 3 : Sub-component 3.1: Digital Architecture and Technology Services			

1.	**Strengthening and Expanding the Digital and Connectivity Infrastructure**	EHS impacts are with construction activities (air pollution, construction waste generation, water uses, noise generation, Generation of E- Waste	Needs to be mitigated with adoption of good construction and waste management practices for eliminating/minimising risk), Comply with E waste Rules for e-waste management,
2	**Integrated Agritech Hub with AI integration and Core Building Blocks**	None specifically	
	Other Sub components-Soft Activities	As such no EHS risk per say. Outcome are beneficial and resource conservation oriented as detailed in main text above.	
Component 3 : Sub-component 3.2 & 3.3: Enabling Agri Finance Ecosystems and Promoting Innovations			
	Providing funding support for various application and Agri development including farmers facilitation centres	Exists only if funding is made without EHS safeguard compliance as narrated under component 1 and 2	This needs to be mitigated as integrated component of funding agreements**.**
	Promoting Innovations; Proposed to support innovations to promote with Water Based Green Credits	Beneficial -reduced GHG	May plan to earn carbon credit and provide carbon credit platform

4.2. Risks and Mitigation Measures Specific to Disadvantaged and Vulnerable Groups

There is unlikely to have disadvantaged and vulnerable group under the project. However it cannot be hundred percent rules out. Hence mitigation measures would be effectively implementing the labour management plan, GVB plan SHE/SH plan and creating awareness amongst the staff about vulnerable community and support that shall be extended to such community. Also create awareness amongst such vulnerable group about functioning of Grievance redress mechanism as well.

4.3. Planning and Design Considerations for Avoidance of Environmental and Social Risks and Impacts

The project components are simple with least environmental risk and as such does not need any specific design measures for avoidance of Environmental and Social risks/impacts except that all regulatory compliance requirements and suggested mitigative measures are considered at design/planning stage itself of each sub project.

5. Procedures and Implementation Arrangements

5.1. Environmental and Social Risk Management Procedures

The environmental and social risk management procedures will have four major steps as detailed at Table 5.1 below:

Table 5.1 : Project Cycle and E&S Management Procedures

Project Stage	E&S Stage	E&S Management Procedures
A. Assessment and Analysis: Subproject specific Assessment	Screening and categorisation	The screening stage will have three stages : assessment of subproject as eligible or not eligible for the inclusion in UPAGREE project based on defined detailed under screening section below. Followed by categorisation of sub project as category A or B. Only category B or low risk project only will be considered for further consideration under UPAGREE project. Followed by identification of Risk and impact interface and level of risk involved and identification of Environment and social management plan required It will also identify at this stage permits, and clearances required under applicable legislation. Ensure that screening analysis for first 10 sub projects is shared with World Bank. Remaining shall be reviewed and approved by SPMU with support from TSA.
B. Planning: Planning for subproject Environmental Social Management Plans, budgetary resources and monitoring measures	Planning-ESMP preparation	Based on the screening analysis prepare the Environment and social management plans with environmental budget requirement including for environmental social performance monitoring . These can be finalised following Standard ESMP prepared. Environmental and Social Management Plans (ESMPs), submit the first 10 ESMPs to world Bank for prior review and no objection by the World Bank prior to initiating bidding processes (for subprojects if bidding processes is involved) and/or launching activities (for subproject activities not subject to bidding). - Ensure that the contents of the ESMPs are shared with relevant stakeholders in an accessible manner

		and consultations are held with the affected communities in accordance with the SEP. - Complete all documentation, permits, and clearances required under the government's Environmental Regulation. - Train staff responsible for implementation and monitoring of plans. - Incorporate relevant environmental and social procedures and plans into contractor bidding documents if bidding is involved ; train contractors on relevant procedures and plans.
c. Implementation and Monitoring: Implementation support and continuous monitoring for projects	Implementation	- Ensure implementation of plans through site visits, regular reporting from the field, and other planned monitoring. - Track grievances/beneficiary feedback. - Continue awareness raising and/or training for relevant staff, volunteers, contractors, communities.
d. Review and Evaluation: Qualitative, quantitative, and/or participatory data collection on a sample basis	Completion	- Assess whether plans have been effectively implemented. - Ensure that physical sites are properly restored

More detail for each Step is provided below.

5.2. Screening and categorisation : E&S Screening

Screening is to be undertaken in three stages :

Stage 1 : Eligibility screening

Stage 2 : Categorisation screening

Stage 3 : Risk/impact identification and level analysis

This template is to be applied for each subproject to screen locational risk, extent of E&S risk with category of risk, WB Safeguard Standards applicability, regulatory applicability, Management Plans requirements

Name of The Sub Project	

Location of sub project with geographical spread (district, block, village etc)	
Implementing Agency/Owner of the subproject	
Components of the project viz Productivity Enhancement/ Commodity Clusters/ Digital and Financial Ecosystems	
Proposed Investment in the sub project	
Start and Completion Period	

5.3. Screening purpose and Stages :

Screening is planned to assess the project on following three levels :

Stage 1: To assess the project in terms of acceptability of the project keeping project design and world bank safeguard requirements. In case project meets the no Go criteria, sub project will be dropped.

Stage 2: Assess the severity and extent of Environmental and Social impacts of the sub projects for its categorisation. In case category of Sub projects falls in A category. The sub projects will be put on hold. However, category B project will be assessed further in stage III for environmental and social risks involved with identification of ESMP required to mitigate the identified risks.

Stage 3: This stage will apply for identification/evaluation of risks involved for the sub projects and identification of ESMP required.

Stage 1: Screening for Acceptance of the Project : Locational, social setting , chemicals Used based screening

Sl. No	**Description of Environmental and Social Issue**	**Likelihood** **(YES or NO)**	**Remarks** **(if yes under any of the item listed under column 2 attract NO-GO scenario and , Sub project must be dropped)**

1.	Located within a wildlife Sanctuary or a protected/core area as defined by the forest department		
2.	Involve use of pesticides banned by GOI		
3.	Involve use of uncertified seeds		
4.	Involve burning of crop residue		
5.	Proposal includes development/ upgradation of fish market without proper drainage & ETP facility		
6.	Involves diversion of Forest Land		
7.	Involve cutting of large tree (Deforestation)		
8.	Installation of tobacco processing machinery		
9.	Involve Fishpond (tank) filling through groundwater in over exploited area from ground water prospective		
10.	Leads to major loss of common property resources affecting the livelihood systems of local people		
11.	May leads to Violation of Indigenous Rights: Prohibition of activities that infringe upon the rights of indigenous communities to control their traditional lands and resources, including land expropriation, resource extraction, or infrastructure development without their consent.		
12.	Possibility of Social Discrimination and Inequity: Prohibition of discriminatory practices based on gender, ethnicity, religion, or other factors in access to land, resources, credit, markets, or decision-making processes related to agriculture.		
13.	Likely exploitation of vulnerable populations including smallholder farmers, women, or migrant workers.		

14.	Possibility of Discrimination based on race, ethnicity, gender, religion, or any other characteristic		
15.	Activities involving the Magur fish *Clarias gariepinus* / African magur fish (*Clarias gariepinus)*		

The sub project found acceptable will be assessed for Stage 2 for its categorisation.

Stage 2 : Categorisation screening of the Sub Project

The categorisation assessment is carried out based on expert's assessment. This assessment to be further revisited based on outcome of stage 3 for finalisation.

Table 5.2 : Environmental Screening Checklist

Environmental/ Social Issues	**Response**		**Sub Project Categorisation :** If any one answer is **Yes** then sub project will be categorised as **'A'** . If all answers are **No** then sub project will be categorised as **'B'**
	Yes	**No**	
Environmental: Will the subproject cause significant adverse environmental impacts which are sensitive, diverse or unprecedented and also extend beyond sub project areas in terms of any of the below areas:			
1. Effect on Ecology Leads to degradation of forests /cutting of large trees			
2. Effect on Ground Water Resources (excessive Depletion of Water Resources)			
3. Contamination of Water Resources			
4. Effect on Archeologically protected areas			
5. Generation of air pollutants leading to sever air pollution			
6. Leads to sever Land/Soil contamination			
7. Leads to change in drainage pattern or changes course of water channels			
8. Leads to sever accident endangering community			

Social: Will the subproject have serious negative social impact and are these impacts sensitive, diverse or unprecedented particularly in terms of the below:			
1. May endanger cultural resources that are meaningful to the local community or town (such as religious places of worship, scared groves, temple of the god of earth in the village etc.)			
2. Will it the subproject involve involuntary land acquisition, displacement of residential or commercial establishments, property loss or loss of sources of income and livelihood			

Criteria for severity of risk is given under stage 3.

Any subproject with low and moderate risk would be categorized as Category – B. Any subproject with any of the above risk under substantial and high Category will be treated as Category – A.

The **Category A sub project** shall be **put on hold**. However, **category B** project will be taken for **Stage III screening assessment**.

Stage 3 : Screening for Identification/Evaluation of Risk and Identification ESMP Requirements

The purpose of this stage screening will be two-fold :

1. Identify the activities involved and its interface with environment and social aspects
2. Assessment of extent of risk involved
3. Identification of environmental and social management plan required to mitigate and manage the risk Identified.

This Screening is undertaken under the following two tables. The output of Table 1 (Table 5.3 below) is carried to Table 2 (Table 5.4) . Table 1 screen out the nature of activities involved and nature of interface it will have with environment including social aspects. Table 2 will further assess & evaluate the identified issues interfacing with environment and social aspects from Table 1 for risk assessment and, evaluation and identification of required environment & social management plans.

Since most of the activities have predictable level of risk associated with activities involved, the screening table is already populated and filled table are enclosed as Annexure 1. The screening process will entail assessing the activities and considering variations in location/activities to determine the appropriate level of risk and the necessity for a

management plan. SPMU while undertaking screening process will have the option to adjust the pre-filled risk levels based on the specific location and activities of the sub-project.

Table 5.3 : Screening of Activities and Identification of its interface with environment and social aspects (for reference sample Table 1 has been filled in anticipation of expected outcome)

1	2	3	4	5	6
Project Component	**Project Subcomponent**	**Sub section of Subcomponent**	**Activity Involved**	**List identified Environmental Issues interfacing with environment *(refer filled example Annexure .. table 1 also Use abbreviation given under filled table 1)***	**List Identified social Issues interfacing with social aspects *(refer filled example Annexure .. table 1 also Use abbreviation given under filled table 1)***

Table 5.4 : Assessment & Evaluation of Risk/Impacts and Identification of ESMP required

1	2	3	4	5
Project Component	**Project Sub-component**	**Low Impact Identified – list identified impact areas in abbreviated form *(refer filled example Annexure .. table 2)***	**Moderate Impact Identified – list identified impact areas in abbreviated form *(refer filled example Annexure .. table 2)***	**List the Environmental and Social Management Plan / Guideline identified for respective sub-components in abbreviated form. *(refer filled example Annexure .. table 2)***

Criteria for Risk Evaluation (For Stage 2 & 3):

Low (L): *Localized, temporary, and Negligible*
Moderate (M): *temporary, or short term and reversible under control*
Substantial: *medium term, covering larger impact zone, partially reversible*
High (Severe): *significant, non- reversible, long term and can only be contained/compensated*
Occupational Health and Safety: *it will be treated as Low in minor activities & Moderate in major activities by default as OHS effect can be kept controlled and with negligible effect with adoption of defined guidelines.*

5.4. Planning- ESMP Preparation

Based on the output of screening and identification of required environmental and social management plan requirement and respective sub project activities ESMP is to be prepared. The management plant can be evolved based on the mitigation measures given under impact assessment table above and environmental and social guidelines included in this ESMF as Annexure 2. Since there are multiple sub systems/task under each of sub component and many of planned activities indicated respective sub component (pl refer project description chapter 2 for activities proposed under a sub component for better clarity) may or may not be covered under a proposed sub project, the sub project specific ESMP (total six in number pl refer Table 5.5 for list of standard ESMPs prepared)) is to be prepared by SPMU, with the help of TSA and DPIU. Standard ESMPs for each of subcomponent has already been prepared along with other plans such as Labour Management Plan, Integrated pest management plan, Stakeholders Engagement Plan and Gender Action plan. These Standard EMPs may be used to internalise and finalise ESMP for a sub project. The standard EMPs and other Plans are enclosed as Annexure 3 to annexure 7 to this ESMF.

The ESMP will be shared with relevant stakeholders in an accessible manner, and consultations will be held with the concerned communities on the environmental and social risks and mitigation measures. If certain subprojects or contracts are being initiated at the same time or within a certain location, an overall ESMP covering multiple subprojects or contracts can also be prepared.

The first ESMPs will also be submitted to the World Bank for prior review and no objection. After this first 5, the World Bank and the SPMU will reassess whether prior review is needed for further ESMPs.

The SPMU will also complete the documentation, permits and clearances required under the government's Environmental Regulation before any project activities begin.

At this stage, staff who will be working on the various subproject activities should be trained in the environmental and social management plans relevant to the activities they work on. The SPMU should provide such training to field staff.

The SPMU should also ensure that all concerned at DPIU and farmers group/persons /selected contractors (if contract is awarded for certain sub components) follow the environmental and social mitigation measures relevant to them as will be defined under ESMP. The SPMU should further ensure that the entities or communities responsible for ongoing operation and maintenance of the investment have received training on operations stage environmental and social management measures as applicable.

Table 5.1 : List of Standard ESMPs Prepared

S. No.	Component	Sub-Component	Standard ESMP
1.	**Component – 1:** Productivity Enhancement	Sub-component 1.1:	ESMP – 1: Resource Use Efficiency for Productivity Enhancement.
2.		Sub-component 1.2:	ESMP – 2: Mechanism for Improved Seed System.
3.		Sub-component 1.3:	ESMP – 3: Strengthening Extension Services for Tailored Climate Smart Agronomic Practices.
4.	**Component – 2:** Commodity Clusters	Sub-component 2.1:	ESMP – 4: Development of Agro-Clusters.
5.		Sub-component 2.2:	ESMP – 5: Fisheries Clusters Development.
6.	**Component – 3:** Digital and Financial Ecosystems	Sub-component 3.1: Sub-component 3.2: Sub-component 3.3:	ESMP – 6: Digital Architecture and Technology Services, Enabling Agri Finance Ecosystems and Promoting Innovations.

The ESMP will be prepared as per the following format :

ESMP will have following Structure of ESMP

- Key features of the ESMP
- ESMP measures for implementation
- Environmental Quality Monitoring
- Responsibility & Reporting
- Environmental Budget

The following three formats shall be sued for ESMP measures for implementation, Monitoring plan and environmental budget.

Table 5.2 : ESMP Measures for Implementation

Sl. No.	**Activity**	**ESHS Risk**	**Suggested Mitigation**	**Legislation Applicable (If any)**	**Implementation responsibilities**	**Supervision Responsibility**
1	***Components***					
a.	Subcomponent		**Guidelines refer:**			

Table 5.3 : Monitoring plan for Environmental Quality.

S. No.	Activity	Parameters	Frequency

Table 5.4 : Environmental Budget

S. No.	Component	Mitigation activity	Rate (in Rs.)/ unit	No of Units	Total Costs (in Rs.)

5.5. Implementation and Monitoring – E&S Implementation

During implementation, the SPMU will describe the mechanisms, responsible parties, and the frequency for project supervision. SPMU will conduct regular monitoring visits taking monitoring updates from DPIU. If there are contractors implementing subproject activities, the contractors will be responsible for implementing the mitigation measures in the E&S risk management documents, with DPIU oversight.

The SPMU/DPIU working to implement the project will ensure that monitoring practices include the environmental and social risks identified in the ESMF and will monitor the implementation of E&S risk management mitigation plans as part of regular project monitoring.

At a minimum, the reporting will include (i) the overall implementation of E&S risk management instruments and measures, (ii) any environmental or social issues arising as a result of project activities and how these issues will be remedied or mitigated, including timelines, (iii) Occupational Health and Safety performance (including incidents and accidents), (iv) community health and safety, (v) stakeholder engagement updates, in line with the SEP, (vi) public notification and communications, (vii) progress on the implementation and completion of project works, and (viii) summary of grievances/beneficiary feedback received, actions taken, and complaints closed out, in line with the SEP. Reports from the DPIU will be submitted to the SPMU , where they will be aggregated and submitted to the World Bank on a six monthly basis.

Throughout the Project implementation stage, the SPMU will continue to provide training and awareness raising to relevant stakeholders, such as staff, selected contractors if involved, and communities, to support the implementation of the environmental and social risk management mitigation measures.

The SPMU/DPIU will also track grievances/beneficiary feedback (in line with the SEP) during project implementation to use as a monitoring tool for implementation of project activities and environmental and social mitigation measures.

Last, if the SPMU becomes aware of a serious incident in connection with the project, which may have significant adverse effects on the environment, the affected communities, the public, or workers, it should notify the World Bank within 48 hours of becoming aware of such incident. A fatality is automatically classified as a serious incident, as are incidents of forced or child labour, abuses of community members by project workers (including gender-based violence incidents), violent community protests, or kidnappings.

5.6. Review and Evaluation – E&S Completion

Upon completion of Project activities, the SPMU will review and evaluate progress and completion of project activities, and all required environmental and social mitigation measures. Especially for civil works, the SPMU will monitor activities about various subprojects areas to ensure that the activities are done to an appropriate and acceptable standard before closing

the contracts, in accordance with measures identified in the ESMPs and other plans. Any pending issues must be resolved before a subproject is considered fully completed. The SPMU will prepare the completion report describing the final status of compliance with the E&S risk management measures and submit it to the World Bank.

5.7. Implementation Arrangements

A. Implementation Arrangement for ESMF

A "State Project Management Unit (SPMU)", of UP-AGREES headed by Project Coordinator, UP Diversified Agriculture Project UPDASP, a semi government agency, registered under Society Act shall be established for implementation of the project. SPMU will have key professional experts viz Agriculture Agribusiness, Fisheries, Digital Development, Procurement, Social Safeguards, Environment, Monitoring, Administration and Finance.

UPDASP already has an Executive Committee/ Governing Board under the Chairmanship of Agriculture Production Commissioner with concerned ACS/Principal Secretaries/Head of the departments and few special invitees. The same Executive Committee will function as Executive Committee for UP-AGREES Project also. It will have Principal Secretaries/ACS of departments / organizations, involved in UP-AGREES, along with their Heads of departments.

The Components/Interventions of the project shall be implemented by the SPMU at the state level. Since SPMU of UP-AGREES shall work under the umbrella of UPDASP, the same Executive Committee will be responsible for Supervision, and review of planning, implementation and monitoring of project activities on regular bases.

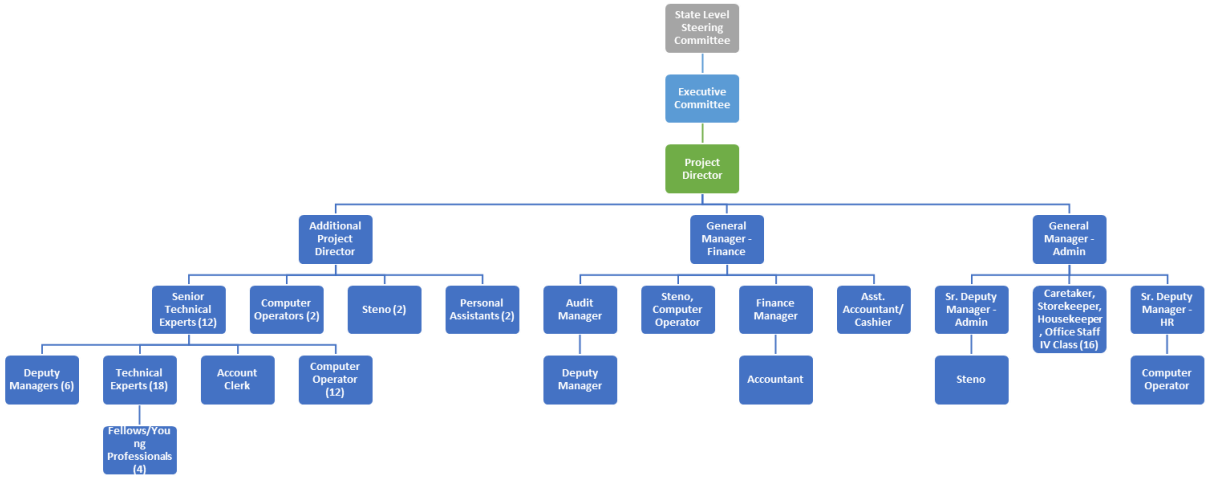

Figure 5.1 : Proposed Organisation Structure of State Project Management Unit (SPMU)

For implementation of project activities at district level, a District Project Implementation Unit (DPIU) will be constituted in each District. DPIUs will directly be responsible for implementation of project activities, facilitation, collaboration, supervision and convergence with ongoing schemes of the departments at District level. The DPIU will work with technical support

agencies (TSA) hired by the project on a time to time basis for specific tasks (Technical Support Agency).

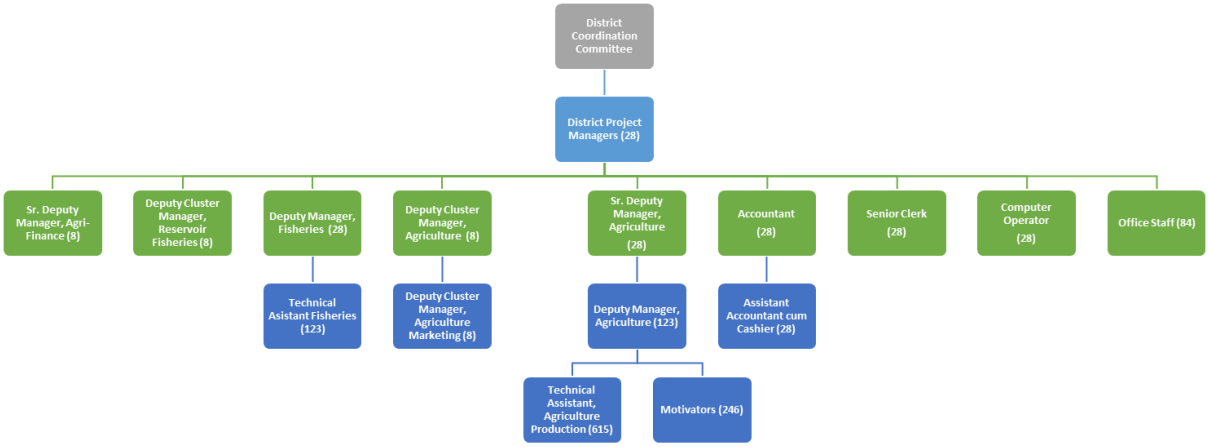

Figure 5.2 : Proposed Organisation Structure of DPIU

The planning and implementation of the social and environment safeguard measures under the ESMF will be the responsibility of Social Specialist and Environmental Specialist of SPMU, assisted by Social and Environment Safeguard Expert at the district level. The designated social specialists and environment specialists are already appointed at the SPMU. The social safeguards expert and the environment safeguards expert at the district level can be hired through the technical support agencies to be engaged in the project. Thus in 28 districts there will be 28 social safeguards and 28 environment safeguards Experts. The role and responsibilities of the SPMU and DPIU with respect to ESMF implementation is presented in the following Table 5.5.

Table 5.5 : Role and responsibilities of the SPMU and DPIU with respect to ESMF

Level	Role and Responsibilities	Reporting
State PMU	The **Social Development Specialist** at the SPMU level will guide the overall process related to social aspects. Specifically, the expert will • Work with the district / sub-district level implementing agencies to implement and monitor the social components. • Review the screening process of proposed sub projects to ensure that there is no adverse impact on the community and involvement of women and other vulnerable groups. • Monitor the social processes followed in execution of the planned activities and realisation of the social inclusion parameters. • Advice SPMU on social issues and guide DPIU and Cluster Project Implementation Team (CPIT) on policy issues	Executive Committee/ Governing Board, UPDASP

	• Shall provide necessary inputs towards formulating communication strategies/ material and training modules and its implementation at the state and district level trainings. Shall be responsible for coordinating training sessions and awareness programs. • Shall provide necessary inputs towards implementation of Stakeholder Engagement Plan and other relevant management plans. • Coordination with the external monitoring agency for monitoring the compliance of the social safeguards • Review, compilation and summarization of safeguard reports and prepare quarterly monitoring reports The **Environment Specialist** at the SPMU level will guide the overall process related to environmental aspects and implementation of the ESMF. • Work with the district / sub-district level implementing agencies to implement and monitor the environmental components. • Review the screening process of proposed sub projects to ensure that there are no adverse environmental impacts. • Monitor the environmental processes followed in implementation of the planned activities and environmental safeguard measures as per ESMPs • Advice SPMU on environmental issues and guide DPIU and CPIT on policy issues. • Shall provide necessary inputs towards formulating communication strategies/ material and training modules and its implementation at the state and district level training. Shall be responsible for coordinating training sessions and awareness programs. • Shall support in conducting the environmental audit. • Coordination with the external monitoring agency for monitoring the compliance of the social safeguards • Review, compilation and summarization of safeguard reports and prepare quarterly monitoring reports.	
District DPIU	**Roles and responsibilities of the Social Safeguard Expert at the DPIU Level:** • Co-ordinate with district administration and IAs responsible for implementation of ESMF; • Translation of ESMF in local language and ensure dissemination at state; district level - prepare pamphlets	State PMU

	on policy for information dissemination • Coordinate with the district level officials for identification of government / public land and implementation of ESMF; Liaison with district administration for dovetailing of government schemes • Monitor progress of implementation of ESMF highlighting social issues not addressed, to provide for mid-course correction, • Participate in the project level meetings • Coordinate training of project level staff with agencies involved. • Prepare monthly safeguard progress report and quarterly monitoring report **Roles and responsibilities of the Environment Safeguard Expert at the DPIU Level:** • To coordinate with Environment Specialists at SPMU and provide technical support to the Cluster Project Implementation Team at the Cluster/Village level for effective implementation of the provisions of ESMF • Co-ordinate with district administration and IAs responsible for implementation of ESMF; • Coordinate with other staff at DPIU (agriculture, fisheries, value chain, construction, micro-irrigation) to ensure the environmental mitigation measures are implemented as per the ESMF and ESMPs • Monitor progress of implementation of ESMF highlighting environmental issues not addressed, to provide for mid-course correction • Shall be responsible for filling/reviewing the screening checklists and categorizing the risk of sub-projects and activities • Participate in the project level meetings • Shall assist/ involve in developing modules and training material for District Level Training • Coordinate training of project level staff with agencies involved. • Prepare monthly safeguard progress report and quarterly monitoring report	
Cluster CPIT	**Roles and responsibilities of the Cluster Project Implementation Team (CPIT)** • Disclosure of ESMF; • Dissemination of Project Information at various stages of project as envisaged in the ESMF • Ensure community involvement in every stage of the	District DPIU

	subproject • Ensure transparency in beneficiary selection • Documentation and disclosure of consultations • Shall be first level of grievance redressal and will guide beneficiaries further to redress their grievances • Responsible for addressable of additional unforeseen impacts during implementation • Ensuring incorporation of social issues in project design • Supervising the ESMF tasks during implementation • Collect data pertaining to the evaluation and monitoring indicators • Support social and environment safeguard experts to: o undertake site visits to different cluster, common facility, FPOs etc. o carry out supervision and monitoring of the implementation of the ESMFs with the help of identified project functionaries o prepare monthly safeguard progress report and quarterly monitoring report	

B. Environment and Social Monitoring

Monitoring of the implementation of the ESCP, the ESMF and identified environmental and social mitigation measures shall be carried out by Environmental Specialist and Social Development Specialist of SPMU with the help of regular reporting from DPIU and CPIT. The aim is to verify the main points of compliance with the ESMF and sub-project/activity specific mitigation measures, the progress of implementation, scope of consultations and participation of local communities. An agreed environment and social monitoring and reporting format will be developed based on parameters identified for monitoring and reporting on a quarterly basis. Quarterly monitoring reports on the implementation of the ESCP and the ESMF will be submitted by the SPMU to The World Bank. In addition to it, Environmental and Social Audit will be conducted at the end of third year for mid-term audit and end of fifth year for end term audit.

The outlined framework for monitoring and reporting social and environmental risks and safeguards reflects a systematic and organized approach to ensure compliance and accountability during project implementation. The social and environmental risks and safeguards identified during the ESA will be monitored on an ongoing basis under the UPDASP project. Monitoring social and environmental risks and safeguards on a continuous basis is a crucial aspect of responsible project management. This practice helps ensure that potential issues will be identified promptly, and mitigation measures will be implemented in a timely manner.

For monitoring of ESMF at the field level, there will be one Social Safeguards and one Environment Safeguards Expert at the district level which can be hired through Support Organization to be engaged in the project. Thus in 28 districts there will be 28 Social

Safeguards and 28 Environment Experts. These experts will report to SPMU staff for review of their safeguard's reports. After review and revision, this report will be sent to SPMU (State Project Management Unit). The compilation and summarization of these 28 districts' reports will then be done by SPMU. Apart from the above, a provision will also be made for monitoring the compliance of environmental and social safeguards that under the project, the external monitoring agency will also monitor the compliance of the safeguards on a sample basis.

The entire process will be operated and monitored under the Safeguard module of MIS which will be interlinked with all the components of the project. Safeguard monitoring will be done through various tools under the Safeguard modules (given in Table 1). This tool will provide guidance for screening and management of environmental and social issues at the sub-project level through appropriate actions during the planning and implementation phases of project activities. This decentralized structure will ensure that monitoring efforts are closely linked to the local regional and context of specific sites of project activities.

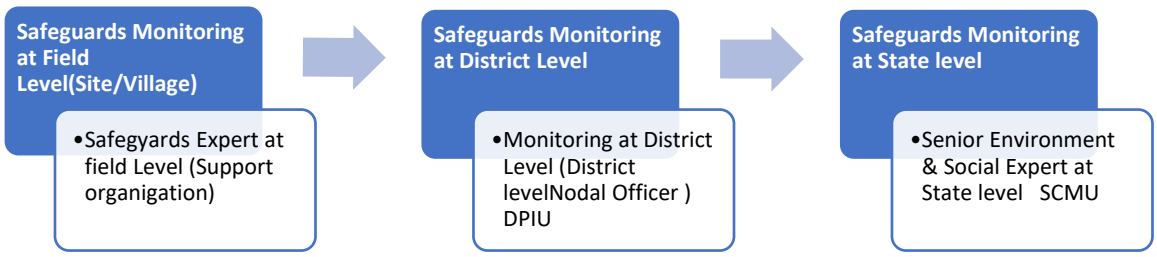

Table 5.6 : Safeguards Monitoring Tools

Tool	Tool	When
ESS	Environmental and Social Safeguards Screening Tool	Before start the project activities (For the screening of excluded activities)
SMT	Safeguards Monitoring Tool	During the Implementation of the project activities
ESMMT	Environmental & Social issues Mitigation Measures Tool	During the Implementation of the project activities (This tool will likely outline actions and measures to be taken and avoided to minimize negative environmental and social impacts)
IAT	Impact Assessment Tool	Comparative assessment (Pre& Post) of safeguards issues.

The compilation and summarization of these 28 districts' reports will then be done by SPMU. Quarterly Environment and Social Safeguards report as prepared by SPMU will be sent to the World Bank in the first 15 days of each quarter.

For the capacity building of district /block level staff as well as of the other Stakeholders on Environment and Social Safeguards, regular orientation will be conducted by the SPMU/DPIU.

Periodic Audit

An external audit of the ESMF compliance for sub projects will also be undertaken twice during the implementation of the project – midterm and at the end of the implementation. During implementation, meetings will be organized by SPMU inviting all DPIUs and CPIT for providing information on the progress of the project work. The information provided through meeting, regular monthly reporting, quarterly monitoring and MIS will form the basis for periodic audit.

- **Mid-term Assessment Study** – this would be undertaken mid-way through the project to ascertain the progress achieved and any mid-course corrections which need to be introduced. It would include indicators to measure progress towards log frame goals and objectives.
- **End-Term Assessment Study** – this will be undertaken at the end of the project period (around the time of project completion) and will assess the achievement of the project during the tenure.

C. Grievance Redress Mechanism

The main objective of a GRM is to assist to resolve complaints and grievances in a timely, effective, and efficient manner that satisfies all parties involved. The project places special emphasis on transparency, accountability, openness and disclosure of information to the community. In keeping with above principles, widespread disclosure of information through wall writings, paintings, awareness generation campaigns, radio programmes, publications, village level workshops, block and district workshops will be carried out. Besides above, through Agriculture and Fisheries Department websites for information dissemination regarding the project. A dedicated project website will be developed and updated regularly with the latest weekly/ monthly status of activities of the project. The existing GRM available in the state can be accessed by the project stakeholders. The details of these are given below:

- **Jan Sunwai**

Jan Sunwai' (जनसुनवाई -समाधान |उत्तर प्रदेश सरकार (up.nic.in)) is an integrated grievance redressal system developed by the Uttar Pradesh government to achieve the objectives of good governance through the use of information technology. This system facilitates easy and transparent communication between citizens and government departments/offices. Citizens can register and track complaints online (website and Samadhan android app) at any time. Complaints received through various channels can be made available on a single portal/platform, making it convenient for departmental officials to efficiently resolve and monitor grievances. This system aims to provide a smooth and accessible mechanism for the resolution and monitoring of complaints for both citizens and government authorities.

- **GRM at Agriculture Department**

Complaints can be registered with department of Agriculture on the department website (https://upagripardarshi.gov.in/DynamicPages/Grievances.aspx). Status of these complaints can be tracked against the complaint number received (https://upagripardarshi.gov.in/DynamicPages/GrievancesDetails.aspx).

Stakeholders are welcome to use this facility. They can also write through postal correspondence at the following address; Agriculture Directorate Uttar Pradesh, Krishi Bhawan, Madan Mohan Malviya Marg Lucknow – 226001.

At district level written complaints can be made to the DD Agriculture and Zila Krishi Adhikari by visiting their office during working hours. Similarly, at the block level complaints can be made to Assistant Director Agriculture and Beej Bhandaran Prabhari in writing.

All complaints are usually resolved within one week of reporting, in exceptional circumstances depending on the nature of complaint additional time may be required.

- **GRM at Fisheries Department**

Complaints relating to fisheries department stakeholders can write through the e-mail ID: dir.fisheries@up.gov.in. Similar to the system at agriculture department, in Fisheries department complaints can be made to the Assistant Director Fisheries or senior fisheries inspector at district/ level.

To strengthen the existing GRM, the project would take up the following actions:

- Provisions of Uttar Pradesh Panchayat Raj Act: The Provisions available for grievance redressal as per the Uttar Pradesh Panchayat Raj Act can be invoked. All Gram Pradhans have been designated as Public Information Officers under RTI act at Panchayat level in the project area. All complaints regarding project should be acknowledged by the Gram Panchayat and final reply is expected to be delivered within 30 days, under RTI (Constitutional mandate).
- Information Education Communication: Wide publicity would be given regarding the grievance redressal mechanism available within UPDASP.
- In addition to the above, a template to share grievances will be provided on the UPDASP website and website of the Agriculture and Fisheries Department, in both English and local language. At project level, District Managers will be the focal point to manage/ redress the grievances and escalate to the state as per need. At state level, a Senior Expert - Communications will be focal point.

5.8. Description of GM Process

Step	Description of Process	Time Frame	Responsibility
GM implementation structure	As described above		

Step	Description of Process	Time Frame	Responsibility
Grievance uptake	Grievances can be submitted via the following channels: • E-mail • Letter to Grievance focal points at local facilities • Complaint form to be lodged via any of the above channels • Walk-ins may register a complaint in a grievance logbook at a facility or suggestion box	30 days	CPIT/GP
Sorting, processing	Any complaint received is forwarded to GP/CPIT, Logged in Grievance Register, and categorized according to the complaint types	Upon receipt of complaint	Local grievance focal points
Acknowledgment and follow-up	Receipt of the grievance is acknowledged to the complainant by GP/CPIT	Within 2 days of receipt	Local grievance focal points
Verification, investigation, action	Investigation of the complaint is led by GP/CPIT. A proposed resolution is formulated by GP and communicated to the complainant by GP	Within 10 working days	Complaint Committee composed of GP/CPIT
Monitoring and evaluation	Data on complaints are collected in Grievance Registers and reported to SPMU every month		
Provision of feedback	Feedback from complainants regarding their satisfaction with complaint resolution is collected by GP/CPIT	Within 10 working days of providing resolution.	Focal point at CPIT/DPMU
Training	Training needs for staff/consultants in the DPMU, private partners, and support agencies/Consultants are, a) awareness on GRM, b) procedures for GRM and c) Recording and reporting on Grievances		
If relevant, payment of reparations following complaint resolution	Payment of reparations following complaint resolution will be documented and signed by both parties on receipt of the amount. Payment of reparation related to employee accidents and fatalities will be undertaken as per the requirements of the Employee/ Worker Compensation Act, 1923.		

The GM will provide an appeals process if the complainant is not satisfied with the proposed resolution timeframe of the complaint. Once all possible means to resolve the complaint have been proposed and if the complainant is still not satisfied, then they should be advised of their right to legal recourse.

When relevant, the project will have other measures in place to handle sensitive and confidential complaints, including those related to Sexual Exploitation and Abuse/Harassment (SEA/SH) in line with the World Bank ESF Good Practice Note on SEA/SH.

The Labor Grievance Redressal Mechanism will be constituted for each of the contract packages and the workers can use it. The Labor GRM is described in detail in the Labor Management Procedures.

At block level/ district level, the DPIUs will be sensitized to take up any workers related Grievances and support the project in monitoring the vendors/ contractors' performance on OHS and labour and working conditions. At DPIU Level, the Social or Environment Safeguard Expert will be the designated Grievance Officers for workers, who will report on the status of workers grievances in their respective DPIUs. At SPMU Level, a Social Development Specialist will be the grievance officer for workers, who will report on the status of workers grievances.

The World Bank and the Borrower do not tolerate reprisals and retaliation against project stakeholders who share their views about Bank-financed projects.

5.9. Proposed Training and Capacity Building

The each of major component and sub component viz productivity enhancement, agri-cluster and fisheries cluster have provision of requisite training and awareness. Therefore, separate training provision and budget not planed under ESMF. However, it is proposed that at least two programme per year shall be organised on ESMF/ESCP and ESMP implementation for all those involved in project activities, viz SPMU/PIU/and other farmers groups.

5.10. Estimated Budget

The environment and social budget will involve only costs to towards implementation of ESMP which does not require large EMSP budget except for training, awareness, and limited monitoring. Since sub projects are small, this budget will be workout.

6. Stakeholder Engagement, Disclosure, and Consultations

A separate Stakeholder Engagement Plan (SEP) has been prepared for the Project, based on the World Bank's Environmental and Social Standard 10 on Stakeholder Engagement. The SEP is enclosed to this ESMF as Annexure 6. SEP is prepared based on consultation undertaken in the sub project areas will be disclosed on UPDASP website.

This ESMF, as well as the SEP and the Environmental and Social Commitment Plan (ESCP) that have been prepared for this project, will be disclosed in draft to stakeholder consultations on the UPDASP. Key feedback, as may be received will be used to update SEP and ESMPs.

Annexures

Annexure 1 : Screening Filled Form

TEMPLATE FOR E & S SCREENING

This template is to be applied for each subproject to screen locational risk, extent of E&S risk with category of risk, WB Safeguard Standards applicability, regulatory applicability, Management Plans requirements

Name of The Sub Project	
Location of sub project with geographical spread (district, block, village etc)	
Implementing Agency/Owner of the subproject	
Components of the project viz **Productivity Enhancement/Commodity Clusters/Digital and Financial Ecosystems**	
Proposed Investment in the sub project	
Start and Completion Period	

Screening purpose and Stages :

Screening is planned to assess the project on following three levels :

Stage 1: To assess the project in terms of acceptability of the project keeping project design and world bank safeguard requirements. In case project meets the no Go criteria, sub project will be dropped.

Stage 2: Assess the severity and extent of Environmental and Social impacts of the sub projects for its categorisation. In case category of Sub projects falls in A category. The sub projects will be put on hold. However category B project will be assessed further in stage III for environmental and social risks involved with identification of ESMP required to mitigate the identified risks.

Stage 3: This stage will apply for identification/evaluation of risks involved for the sub projects and identification of ESMP required.

Stage 1: Screening for Acceptance of the Project : Locational, social setting , chemicals Used based screening

Sl. No	Description of Environmental and Social Issue	Likelihood (YES or NO)	Remarks (if yes under any of the item listed under column 2 attract NO-GO scenario and , Sub project have to be dropped)
16.	Located within a wildlife Sanctuary or a protected/core area as defined by the forest department		
17.	Involve use of pesticides banned by GOI		
18.	Involve use of uncertified seeds		
19.	Involve burning of crop residue		
20.	Proposal includes development/ upgradation of fish market without proper drainage & ETP facility		
21.	Involves diversion of Forest Land		
22.	Involve cutting of large tree (Deforestation)		
23.	Installation of tobacco processing machinery		
24.	Involve Fishpond (tank) filling through groundwater in over exploited area from ground water prospective		
25.	Leads to major loss of common property resources affecting the livelihood systems of local people		
26.	May leads to Violation of Indigenous Rights: Prohibition of activities that infringe upon the rights of indigenous communities to control their traditional lands and resources, including land expropriation, resource extraction, or infrastructure development without their consent.		
27.	Possibility of Social Discrimination and Inequity: Prohibition of discriminatory practices based on gender, ethnicity, religion, or other factors in access to land, resources,		

	credit, markets, or decision-making processes related to agriculture.		
28.	Likely exploitation of vulnerable populations including smallholder farmers, women, or migrant workers.		
29.	Possibility of Discrimination based on race, ethnicity, gender, religion, or any other characteristic		

The sub Project found acceptable will be assessed for Stage 2 for its categorisation.

Stage 2 : Categorisation screening of the Sub Project

The categorisation assessment is carried out based on expert's assessment. This assessment to be further revisited based on outcome of stage 3 for finalisation.

Table 1 Environmental Screening Checklist

Environmental/ Social Issues	**Response**		**Sub Project Categorisation :** If any one answer is **Yes** then sub project will be categorised as **'A'** . If all answers are **No** then sub project will be categorised as **'B'**
	Yes	**No**	
Environmental: Will the subproject cause significant adverse environmental impacts which are sensitive, diverse or unprecedented and also extend beyond sub project areas in terms of any of the below areas:			
9. Effect on Ecology Leads to degradation of forests /cutting of large trees			
10. Effect on Ground Water Resources (excessive Depletion of Water Resources)			
11. Contamination of Water Resources			
12. Effect on Archeologically protected areas			
13. Generation of air pollutants leading to sever air pollution			
14. Leads to sever Land/Soil contamination			
15. Leads to change in drainage pattern or changes course of water channels			
16. Leads to sever accident endangering community			

Social: Will the subproject have serious negative social impact and are these impacts sensitive, diverse or unprecedented particularly in terms of the below:			
3. May endanger cultural resources that are meaningful to the local community or town (such as religious places of worship, scared groves, temple of the god of earth in the village etc.)			
4. Will it the subproject involve involuntary land acquisition, displacement of residential or commercial establishments, property loss or loss of sources of income and livelihood			

Criteria for severity of risk is given under stage 3.

Any subproject with low and moderate risk would be categorized as Category – B. Any subproject with any of the above risk under substantial and high Category will be treated as Category – A.

The **Category A sub project** shall be **put on hold**. However, **category B** project will be taken for **Stage III screening assessment**.

Stage 3 : Screening for Identification/evaluation of Risk and Identification ESMP Requirements

The purpose of this stage screening will be two-fold :

4. Identify the activities involved and its interface with environment and social aspects
5. Assessment of extent of risk involved
6. Identification of environmental and social management plan required to mitigate and manage the risk Identified.

Screening is undertaken under the following two tables. The output of Table 1 is carried to Table 2 . Table 1 screen out the nature of activities involved and nature of interface it will have with environment including social aspects. Table 2 will further assess & evaluate the identified issues interfacing with environment and social aspects from Table 1 for risk assessment and, evaluation and identification of required environment & social management plans.

Since most of the activities have predictable level of risk associated with activities involved, the screening table is already populated. When we screen, we'll look at the activities and how different locations might change the level of risk and the need for a management plan. Users can adjust the risks in the table based on where they are and what they're doing for the sub-project.

Given that most activities carry a foreseeable level of risk, the screening table has been pre-filled. The screening process will entail assessing the activities and considering variations in

location to determine the appropriate level of risk and the necessity for a management plan. Users have the option to adjust the pre-filled risk levels based on the specific location and activities of the sub-project.

Table 1: **Screening of Activities and Identification of its interface with environment and social aspects (for reference sample Table 1 has been filled in anticipation of expected outcome)**

1	2	3	4	5	6
Project Component	**Project Subcomponent**	**Sub section of Subcomponent**	**Activity Involved**	**List identified Environmental Issues interfacing with environment.** ***(refer filled example at Table 1 below) (Use abbreviation given under filled table 1)***	**List Identified social Issues interfacing with social aspects.** ***(refer filled example at Table 1 below)*** ***(Use abbreviation given under filled table 1)***

Table 2: Assessment & Evaluation of Risk/Impacts and Identification of ESMP required (for reference sample Table 1 has been filled in anticipation of expected outcome)

1	2	3	4	5

Project Component	**Project Sub-component**	**Low Impact Identified – list identified impact areas in abbreviated form** ***(Refer sample filled Table 2, for abbreviation)***	**Moderate Impact Identified – list identified impact areas in abbreviated form** ***(Refer sample filled Table 2, for abbreviation)***	**List the Environmental and Social Management Plan / Guideline identified for respective sub-components in abbreviated form.** ***(Refer sample filled Table 2, for abbreviation)***

Criteria for Risk Evaluation (For Stage 2 & 3):

Low (L): Localized, temporary and Negligible
Moderate (M): temporary, or short term and reversible under control
Substantial: medium term, covering larger impact zone, partially reversible
High (Severe): significant, non- reversible, long term and can only be contained/compensated
Occupational Health and Safety: it will be treated as Low in minor activities & Moderate in major activities by default as OHS effect can be kept controlled and with negligible effect with adoption of defined guidelines.

Table 1 : Filled table for Screening of Activities and Identification of Its interface with Environment and social aspects

Sl No.	Activity	Environmental Issues Interfacing with Environment										Social Issues				
		Application of Gypsum, Zinc, or other material leading to Environmental impacts (AG)	Plastic waste Generation and disposal (PW)	Solid waste Generation and disposal (SW)	Liquid Waste Generation (maintenance Effluent /domestic sewage) (LW)	Dust Generation/ Air Emission (DG)	Noise Generation (NG)	Pest infestation/ Pesticide application (PI)	Hazardous Waste Generation and disposal (HW)	Electronic Waste Generation/disposal (EW)	Large quantity of Ground Water Extraction (GWE)	Large labour involvement /setting of construction camps (LC)	OHS Issue: risk to workers health (OHS)	Interface with community involved (CI)	Possibility of Sexual harassment issue (SH)	Likely effect on cultural heritage (CH)
I	**Component: Productivity Enhancement**															
I.A	**Subcomponent: Resource Use Efficiency for productivity enhancement**															
I.A.A	**Soil Productivity Sub System**															
I.A.A.1	Soil testing		√	√	√	×	×	×	√	×	×	×	√	×	×	×
I.A.A.2	Green manuring		×	×	×	×	×	×	×	×	×	×	×	×	×	×
I.A.A.3	Soil Amendment	√	√	×	×	√	×	×	×	×	×	×	√	×	×	×
I.A.A.4	Crop Residue Management		×	×	×	√	×	×	×	×	×	×	√	×	×	×
I.A.A.5	Micronutrients Enhancement	√	√	×	×	√	×	×	×	×	×	×	√	×	×	×

Sl No.	Activity	Environmental Issues Interfacing with Environment										Social Issues				
		Application of Gypsum, Zinc, or other material leading to Environmental impacts (AG)	Plastic waste Generation and disposal (PW)	Solid waste Generation and disposal (SW)	Liquid Waste Generation (maintenance Effluent /domestic sewage) (LW)	Dust Generation/ Air Emission (DG)	Noise Generation (NG)	Pest infestation/ Pesticide application (PI)	Hazardous Waste Generation and disposal (HW)	Electronic Waste Generation/disposal (EW)	Large quantity of Ground Water Extraction (GWE)	Large labour involvement /setting of construction camps (LC)	OHS Issue: risk to workers health (OHS)	Interface with community involved (CI)	Possibility of Sexual harassment issue (SH)	Likely effect on cultural heritage (CH)
I.A.B	**Soil Input Efficient Sub System**															
I.A.B.1	Micro Water Shed - Conservation of Rainwater	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
I.A.B.2	Bunding and Laser land Levelling	×	×	√	√	×	×	×	×	×	×	×	√	×	×	×
I.A.B.3	Enhancing use of bio fertiliser	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
I.A.B.4	Conjunctive Water Use: Laying of water channels, laying of plastic pipes	×	√	×	×	×	×	×	×	×	√	×	√	√	√	×
I.A.C	**Farming Practices- Technology Sub System**															
I.A.C.	**Farming Machineries**															
I.A.C.1	Promotion of CHC and FMBs	×	×	√	√	√	×	×	√	×	×	×	√	√	×	×

Sl No.	Activity	Environmental Issues Interfacing with Environment										Social Issues				
		Application of Gypsum, Zinc, or other material leading to Environmental impacts (AG)	Plastic waste Generation and disposal (PW)	Solid waste Generation and disposal (SW)	Liquid Waste Generation (maintenance Effluent /domestic sewage) (LW)	Dust Generation/ Air Emission (DG)	Noise Generation (NG)	Pest infestation/ Pesticide application (PI)	Hazardous Waste Generation and disposal (HW)	Electronic Waste Generation/disposal (EW)	Large quantity of Ground Water Extraction (GWE)	Large labour involvement /setting of construction camps (LC)	OHS Issue: risk to workers health (OHS)	Interface with community involved (CI)	Possibility of Sexual harassment issue (SH)	Likely effect on cultural heritage (CH)
I.A.C.2	Use of IPM technology -use of mechanical/biological/use of Pheromones	×	√	×	√	×	×	√	×	×	×	×	√	×	×	×
I.B.	**Sub Component: Mechanism for Improved Seed System**															
I.B.A	**Seed Production and Distribution system**															
I.B.A.1	Development of lab to land mechanism	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
I.B.B	**Establishment of seed hubs**															
I.B.B.1	Setting up seed storage facility	×	√	√	√	√×	×	√	√	×	×	√	√	√	√	×
I.B.B.2	Setting Up Seed processing Facility	×	√	√	√	√	√	√	√	×	×	√	√	√	√	×

Sl No.	Activity	Environmental Issues Interfacing with Environment										Social Issues				
		Application of Gypsum, Zinc, or other material leading to Environmental impacts (AG)	Plastic waste Generation and disposal (PW)	Solid waste Generation and disposal (SW)	Liquid Waste Generation (maintenance Effluent /domestic sewage) (LW)	Dust Generation/ Air Emission (DG)	Noise Generation (NG)	Pest infestation/ Pesticide application (PI)	Hazardous Waste Generation and disposal (HW)	Electronic Waste Generation/disposal (EW)	Large quantity of Ground Water Extraction (GWE)	Large labour involvement /setting of construction camps (LC)	OHS Issue: risk to workers health (OHS)	Interface with community involved (CI)	Possibility of Sexual harassment issue (SH)	Likely effect on cultural heritage (CH)
I.B.B.3	Setting up seed packing facility	×	√	×	×	×	×	×	×	×	×	√	√	√	√	×
I.B.B.4	Setting up integrated Seed storage, processing and packing facility	×	√	√	√	√	√	√	√	×	√	√	√	√	√	×
I.C.	**Sub-Component: Strengthening Extension Services for tailored Smart Agronomic Practices**															
I.C.A	**Strengthening Advisory Platform: Knowledge Sharing**															
I.C.A.1	Development State and District level platforms	×	×	×	×	×	×	×	×	×	×	×	×	√	×	×
I.C.B	**Partnership with Technical institution:**															
I.C.B.1	Development of digital ecosystem-Web GIs based	×	×	×	×	×	×	×	×	×	×	×	×	√	×	×

Sl No.	Activity	Environmental Issues Interfacing with Environment										Social Issues				
		Application of Gypsum, Zinc, or other material leading to Environmental impacts (AG)	Plastic waste Generation and disposal (PW)	Solid waste Generation and disposal (SW)	Liquid Waste Generation (maintenance Effluent /domestic sewage) (LW)	Dust Generation/ Air Emission (DG)	Noise Generation (NG)	Pest infestation/ Pesticide application (PI)	Hazardous Waste Generation and disposal (HW)	Electronic Waste Generation/disposal (EW)	Large quantity of Ground Water Extraction (GWE)	Large labour involvement /setting of construction camps (LC)	OHS Issue: risk to workers health (OHS)	Interface with community involved (CI)	Possibility of Sexual harassment issue (SH)	Likely effect on cultural heritage (CH)
II	**Commodity Clusters**															
II.A	**Sub Component: Development of Agro Clusters**															
II.A.A	**Identification of Commodities and region for interventions and conducting Commodity Wise Diagnostics**															
II.A.A.1	Identification of commodities and regions for existing market surplus and study and suggesting private sector solutions	×	×	×	×	×	×	×	×	×	×	×	×	√	×	×
II.A.B	**Preparing Cluster Development Plan**															
II.A.B.1	Active consultation and inputs for Cluster Development plans	×	×	×	×	×	×	×	×	×	×	×	×	√	×	×
II.A.C	**Implementation of Cluster Development Plan**															

Sl No.	Activity	Environmental Issues Interfacing with Environment										Social Issues				
		Application of Gypsum, Zinc, or other material leading to Environmental impacts (AG)	Plastic waste Generation and disposal (PW)	Solid waste Generation and disposal (SW)	Liquid Waste Generation (maintenance Effluent /domestic sewage) (LW)	Dust Generation/ Air Emission (DG)	Noise Generation (NG)	Pest infestation/ Pesticide application (PI)	Hazardous Waste Generation and disposal (HW)	Electronic Waste Generation/disposal (EW)	Large quantity of Ground Water Extraction (GWE)	Large labour involvement /setting of construction camps (LC)	OHS Issue: risk to workers health (OHS)	Interface with community involved (CI)	Possibility of Sexual harassment issue (SH)	Likely effect on cultural heritage (CH)
II.A.C.1	Awareness campaign	×	√	√	×	×	×	×	×	×	×	×	×	√	×	×
II.A.C.2	Procurement, maintenance and renting of mechanised equipment by lead farmers to small farmers	×	√	√	√	√	×	×	√	×	×	×	√	√	×	×
II.A.C.3	Improving Quality and Access to seeds: Production, storage and handling of quality seeds	×	×	√	×	×	×	√	×	×	×	×	√	√	×	×
II.A.C.4	Crop Management Practices: Development of Customised package of practices, Assessment of MRL, Demonstration of Crop Management Technology	√	×	×	×	×	×	√	×	×	√	×	×	√	×	×

Sl No.	Activity	Environmental Issues Interfacing with Environment										Social Issues				
		Application of Gypsum, Zinc, or other material leading to Environmental impacts (AG)	Plastic waste Generation and disposal (PW)	Solid waste Generation and disposal (SW)	Liquid Waste Generation (maintenance Effluent /domestic sewage) (LW)	Dust Generation/ Air Emission (DG)	Noise Generation (NG)	Pest infestation/ Pesticide application (PI)	Hazardous Waste Generation and disposal (HW)	Electronic Waste Generation/disposal (EW)	Large quantity of Ground Water Extraction (GWE)	Large labour involvement /setting of construction camps (LC)	OHS Issue: risk to workers health (OHS)	Interface with community involved (CI)	Possibility of Sexual harassment issue (SH)	Likely effect on cultural heritage (CH)
II.A.C.5	Farm Mechanisation and It enables support: Development of appropriate mechanised farming Solutions, demonstration plot development, training and field exposure	√	×	×	×	×	×	√	×	×	√	×	×	√	×	×
II.A.C.6	**Development of Storage facilities/ setting up cold storages**	×	√	√	√	√	√	×	√	×	×	√	√	×	√	×
II.A.C.7	**Setting up Processing facilities**	×	√	√	√	√	√	×	√	×	×	√	√	√	√	×
II.A.C.8	Market Development, capacity Development, Food Safety	×	×	×	×	×	×	×	×	×	×	×	×	√	×	×

Sl No.	Activity	Environmental Issues Interfacing with Environment										Social Issues				
		Application of Gypsum, Zinc, or other material leading to Environmental impacts (AG)	Plastic waste Generation and disposal (PW)	Solid waste Generation and disposal (SW)	Liquid Waste Generation (maintenance Effluent /domestic sewage) (LW)	Dust Generation/ Air Emission (DG)	Noise Generation (NG)	Pest infestation/ Pesticide application (PI)	Hazardous Waste Generation and disposal (HW)	Electronic Waste Generation/disposal (EW)	Large quantity of Ground Water Extraction (GWE)	Large labour involvement /setting of construction camps (LC)	OHS Issue: risk to workers health (OHS)	Interface with community involved (CI)	Possibility of Sexual harassment issue (SH)	Likely effect on cultural heritage (CH)
II.B	**Sub-component: Development of Fishery Cluster**															
II.B.A	**Sustainable Increase of fish Production in ponds**															
II.B.A.1	Assured Supply of Improved Seeds, Establishment, modernisation and upgradation of hatcheries	×	√	√	√	×	×	×	×	×	√	√	√	√	√	×
II.B.A.2	**Formulated Fish Feed; Establishment of fish feed mills**	×	√	√	√	√	√	×	√	×	×	√	√	×	√	×
II.B.A.3	Demonstration of Semi intensive fish culture in selected ponds	×	×	√	√	×	×	×	×	×	√	×	√	√	×	×
II.B.B	**Sustainable Enhancement of Reservoir Fish Production**															

Sl No.	Activity	Environmental Issues Interfacing with Environment										Social Issues				
		Application of Gypsum, Zinc, or other material leading to Environmental impacts (AG)	Plastic waste Generation and disposal (PW)	Solid waste Generation and disposal (SW)	Liquid Waste Generation (maintenance Effluent /domestic sewage) (LW)	Dust Generation/ Air Emission (DG)	Noise Generation (NG)	Pest infestation/ Pesticide application (PI)	Hazardous Waste Generation and disposal (HW)	Electronic Waste Generation/disposal (EW)	Large quantity of Ground Water Extraction (GWE)	Large labour involvement /setting of construction camps (LC)	OHS Issue: risk to workers health (OHS)	Interface with community involved (CI)	Possibility of Sexual harassment issue (SH)	Likely effect on cultural heritage (CH)
II.B.B.1	Assessment of Carrying capacity of fisheries ponds	×	×	×	×	×	×	×	×	×	×	×	×	√	×	×
II.B.C	**Formation of Market Linkages and Strengthening of the Value chain**															
II.B.C.1	Establishment of Fish Landing Stations	×	×	√	√	×	×	×	×	×	×	√	√	√	√	×
II.B.C.2	Support for Modernization of fish Market	×	×	√	√	×	×	×	×	×	×	√	√	√	√	×
II.B.C.3	**Support for establishment of mini fish processing Units**	×	√	√	√	×	×	×	×	×	√	×	√	×	√	×
II.B.C.4	Establishment of retail Kiosk	×	×	√	√	×	×	×	×	×	×	×	√	×	√	×
II.B.C.5	**Establishment of Ice Plant**	×	√	√	√	√	√	×	√	×	√	√	√	×	√	×

Sl No.	Activity	Environmental Issues Interfacing with Environment										Social Issues				
		Application of Gypsum, Zinc, or other material leading to Environmental impacts (AG)	Plastic waste Generation and disposal (PW)	Solid waste Generation and disposal (SW)	Liquid Waste Generation (maintenance Effluent /domestic sewage) (LW)	Dust Generation/ Air Emission (DG)	Noise Generation (NG)	Pest infestation/ Pesticide application (PI)	Hazardous Waste Generation and disposal (HW)	Electronic Waste Generation/disposal (EW)	Large quantity of Ground Water Extraction (GWE)	Large labour involvement /setting of construction camps (LC)	OHS Issue: risk to workers health (OHS)	Interface with community involved (CI)	Possibility of Sexual harassment issue (SH)	Likely effect on cultural heritage (CH)
II.B.C.6	Online fish Marketing	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
II.B.C.7	Capacity Building	×	×	×	×	×	×	×	×	×	×	×	×	√	×	×
II.B.C.8	Quality control and food safety	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
III	**Strengthening Ecosystem Architecture and Technology Services**															
III.A	**Sub-Component: Digital Architecture and Technology Services**															
III.A.A	**Strengthening and Expanding Digital Connectivity**															
III.A.A.1	Development of State of Art Conferencing facilities	×	×	×	×	×	×	×	×	√	×	×	×	×	×	×
III.A.B	**Integrated Agritech Hub with Ai integration**															
III.A.B.1	Development of State Agriculture Data hub	×	×	×	×	×	×	×	×	√	×	×	×	√	×	×

Sl No.	Activity	Environmental Issues Interfacing with Environment										Social Issues				
		Application of Gypsum, Zinc, or other material leading to Environmental impacts (AG)	Plastic waste Generation and disposal (PW)	Solid waste Generation and disposal (SW)	Liquid Waste Generation (maintenance Effluent /domestic sewage) (LW)	Dust Generation/ Air Emission (DG)	Noise Generation (NG)	Pest infestation/ Pesticide application (PI)	Hazardous Waste Generation and disposal (HW)	Electronic Waste Generation/disposal (EW)	Large quantity of Ground Water Extraction (GWE)	Large labour involvement /setting of construction camps (LC)	OHS Issue: risk to workers health (OHS)	Interface with community involved (CI)	Possibility of Sexual harassment issue (SH)	Likely effect on cultural heritage (CH)
III.A.C	**Other components; Software Platforms and Applications**															
III.A.C.1	Development of applications for Water Efficiency Management & irrigation Scheduling, Carbon footprint Calculator, ONDC Based market Linkage, Ware house receipt system, GOS tool for cluster Mapping, Farmer Producers Organisation Empowerment Suits etc.	×	×	×	×	×	×	×	×	√	×	×	×	√	×	×
III.A.C.2	Development of software Platform for Agriculture Extension, Innovation Fund Management etc.	×	×	×	×	×	×	×	×	√	×	×	×	√	×	×

Sl No.	Activity	Environmental Issues Interfacing with Environment										Social Issues				
		Application of Gypsum, Zinc, or other material leading to Environmental impacts (AG)	Plastic waste Generation and disposal (PW)	Solid waste Generation and disposal (SW)	Liquid Waste Generation (maintenance Effluent /domestic sewage) (LW)	Dust Generation/ Air Emission (DG)	Noise Generation (NG)	Pest infestation/ Pesticide application (PI)	Hazardous Waste Generation and disposal (HW)	Electronic Waste Generation/disposal (EW)	Large quantity of Ground Water Extraction (GWE)	Large labour involvement /setting of construction camps (LC)	OHS Issue: risk to workers health (OHS)	Interface with community involved (CI)	Possibility of Sexual harassment issue (SH)	Likely effect on cultural heritage (CH)
III.B.	Enabling Agri finance Eco System															
III.B.A	Providing Funding Support	×	×	×	×	×	×	×	×	√	×	×	×	√	×	×
III.B.B	Promoting Innovation	×	×	×	×	×	×	×	×	√	×	×	×	√	×	×

Table 2 : Screening of Activities and Identification of Its interface with Environment and social aspects

Sl No	Activities	Environmental Risk with Evaluation								Social Risk with Evaluation				Nature of waste generation and Application of Gypsum/micronutrient requiring management (Refers Table 2 for abbreviation)	Identification of EMP / Guidelines required
		Air Pollution (AP)	Land Pollution (LP)	Soil contamination (SC)	Water Pollution (WP)	Noise Pollution (NP)	Ground Water Exploitation (GWE)	Resource Depletion (RD)	Effect on Ecology (EE)	Land & Culture (LC)	OHS Risk (OHS)	GVB	SEA/SH		
I.A.A.1	Soil testing	×	L	L	L	×	×	×	×	×	L	×	×	PW, SW	PWG, SWG, APG, OHSG,
I.A.A.2	Green manuring	×	×	×	×	×	×	×	×	×	×	×	×	×	
I.A.A.3	Soil Amendment	L	L	L	×	×	×	×	×	×	L	×	×	PW, AGN	PWG, APG, OHSG, RCP
I.A.A.4	Crop Residue Management	L	×	×	×	×	×	×	×	×	L	×	×	×	APG, OHSG,
I.A.A.5	Micronutrients Enhancement	L	L	×	×	×	×	×	×	×	L	×	×	AGN, PW	PWG, OHSG, RCP
I.A.B.1	Micro Water Shed -Conservation of Rainwater	×	×	×	×	×	×	×	×	×	×	×	×	×	
I.A.B.2	Bunding and Laser land Levelling	×	L	L	L	×	×	×	×	×	L	×	×	SW, LW,	SH, OHS, CI, HW, LW, SW, RCP

Sl No	Activities	Environmental Risk with Evaluation								Social Risk with Evaluation				Nature of waste generation and Application of Gypsum/micronutrient requiring management (Refers Table 2 for abbreviation)	Identification of EMP / Guidelines required
		Air Pollution (AP)	Land Pollution (LP)	Soil contamination (SC)	Water Pollution (WP)	Noise Pollution (NP)	Ground Water Exploitation (GWE)	Resource Depletion (RD)	Effect on Ecology (EE)	Land & Culture (LC)	OHS Risk (OHS)	GVB	SEA/SH		
I.A.B.3	Enhancing use of bio fertiliser	×	×	×	L	×	×	×	×	×	×	×	×	×	
I.A.B.4	Conjunctive Water Use: Laying of water channels, laying of plastic pipes	×	L	×	×	×	L	×	×	×	L	×	L	×	SH, OHS, GWE, PW, CI
I.A.C.1	Promotion of CHC and FMBs	L	×	L	L	×	×	×	×	×	L	×	×	×	SW, SEW, AP, HW, OHS, CI
I.A.C.2	Use of IPM technology -use of mechanical/biological/use of Pheromones	×	L	L	L	×	×	×	×	×	L	×	×	×	PW, SEW, IPM, OHS
I.B.A.1	Development of lab to land mechanism	×	×	×	×	×	×	×	×	×	×	×	×	×	
I.B.B.1	Setting up seed storage facility	×	L	L	L	L	L	L	×	×	L	L	L	×	PW, IPM, HW, LM, OHS, SH, SEP, CI

Sl No	Activities	Environmental Risk with Evaluation								Social Risk with Evaluation				Nature of waste generation and Application of Gypsum/micronutrient requiring management (Refers Table 2 for abbreviation)	Identification of EMP / Guidelines required
		Air Pollution (AP)	Land Pollution (LP)	Soil contamination (SC)	Water Pollution (WP)	Noise Pollution (NP)	Ground Water Exploitation (GWE)	Resource Depletion (RD)	Effect on Ecology (EE)	Land & Culture (LC)	OHS Risk (OHS)	GVB	SEA/SH		
I.B.B.2	Setting Up Seed processing Facility	**L**	**L**	**L**	**L**	**L**	**L**	**L**	**×**	**×**	**L**	**L**	**L**	**L**	**PW, SW, HW, SEW, AP, NP, IPM, LM, OHS, SH, CI**
I.B.B.3	Setting up seed packing facility	**L**	**L**	**L**	**L**	**L**	**L**	**L**	**×**	**×**	**L**	**L**	**L**	**PW,**	**PW, LM, OHS, SH, CI**
I.B.B.4	Setting up integrated Seed storage, processing and packing facility	**L**	**L**	**L**	**L**	**L**	**L**	**L**	**L**	**×**	**L**	**L**	**L**	**PW, SW, LW, HW,**	**PW, SW, SEW, AP, NP, IPM, HW, GWE, LM, OHS, SH, SEP, RCP**
I.C.A.1	Development State and District level platforms	**×**	**×**	**×**	**×**	**×**	**×**	**×**	**×**	**×**	**×**	**×**	**×**	**×**	**SEP**
I.C.B.1	Development of digital ecosystem-Web GIs based	**×**	**×**	**×**	**×**	**×**	**×**	**×**	**×**	**×**	**×**	**×**	**×**	**×**	**SEP**

Sl No	Activities	Environmental Risk with Evaluation								Social Risk with Evaluation				Nature of waste generation and Application of Gypsum/micronutrient requiring management (Refers Table 2 for abbreviation)	Identification of EMP / Guidelines required
		Air Pollution (AP)	Land Pollution (LP)	Soil contamination (SC)	Water Pollution (WP)	Noise Pollution (NP)	Ground Water Exploitation (GWE)	Resource Depletion (RD)	Effect on Ecology (EE)	Land & Culture (LC)	OHS Risk (OHS)	GVB	SEA/SH		
II.A.A.1	Identification of commodities and regions for existing market surplus and study and suggesting private sector solutions	×	×	×	×	×	×	×	×	×	×	×	×	×	**CI, SEP**
II.A.B.1	Active consultation and inputs for Cluster Development plans	×	×	×	×	×	×	×	×	×	×	×	×	×	**CI, SEP**
II.A.C.1	Awareness campaign	×	**L**	**L**	×	×	×	×	×	×	×	×	×	×	**PW, SW, CI, SEP**
II.A.C.2	Procurement, maintenance and renting of mechanised equipment by lead farmers to small farmers	×	**L**	**L**	**L**	×	×	×	×	×	**L**	×	×	**SW, LW, HW**	**SW, SEW, HW, OHS, SEP, CI**
II.A.C.3	Improving Quality and Access to seeds: Production, storage and handling of quality seeds	×	**L**	**L**	×	×	×	×	×	×	**L**	×	×	**SW**	**SW, IPM, OHS, SEP, CI**

Sl No	Activities	Environmental Risk with Evaluation								Social Risk with Evaluation				Nature of waste generation and Application of Gypsum/micronutrient requiring management (Refers Table 2 for abbreviation)	Identification of EMP / Guidelines required
		Air Pollution (AP)	Land Pollution (LP)	Soil contamination (SC)	Water Pollution (WP)	Noise Pollution (NP)	Ground Water Exploitation (GWE)	Resource Depletion (RD)	Effect on Ecology (EE)	Land & Culture (LC)	OHS Risk (OHS)	GVB	SEA/SH		
II.A.C.4	Crop Management Practices : Development of Customised package of practices, assessment of MRL, Demonstration of Crop Management Technology	×	×	×	×	×	×	L	L	×	×	×	×	×	PI, GWE, SEP
II.A.C.5	Farm Mechanisation and it enables support: Development of appropriate mechanised farming solutions, demonstration plot development, training and field exposure	×	L	L	L	×	×	×	×	×	L	×	×	SW, LW, HW	SW, SEW, HW, OHS, SEP,
II.A.C.6	Development of Storage facilities/ setting up cold storages	L	L	L	L	×	×	×	×	×	L	L	L	PW, SW, LW, HW	PW, SW, SEW, AP, NP, HW, LMP, OHS, SH, CI

Sl No	Activities	Environmental Risk with Evaluation								Social Risk with Evaluation				Nature of waste generation and Application of Gypsum/micronutrient requiring management (Refers Table 2 for abbreviation)	Identification of EMP / Guidelines required
		Air Pollution (AP)	Land Pollution (LP)	Soil contamination (SC)	Water Pollution (WP)	Noise Pollution (NP)	Ground Water Exploitation (GWE)	Resource Depletion (RD)	Effect on Ecology (EE)	Land & Culture (LC)	OHS Risk (OHS)	GVB	SEA/SH		
II.A.C.7	Setting up Processing facilities	**L**	**L**	**L**	**L**	**×**	**×**	**×**	**×**	**×**	**L**	**L**	**L**	**PW, SW, LW, HW**	**PW, SW, SEW, AP, NP, HW, LMP, OHS, SH, CI**
II.A.C.8	Market Development, capacity Development, Food Safety	**×**	**×**	**×**	**×**	**×**	**×**	**×**	**×**	**×**	**×**	**×**	**×**	**×**	**SEP**
II.B.A.1	Assured Supply of Improved Seeds, Establishment, modernisation and upgradation of hatcheries	**L**	**L**	**L**	**L**	**L**	**×**	**×**	**×**	**×**	**L**	**L**	**L**	**SW, LW,**	**SW, SEW, GWE, LMP, OHS, SEP**
II.B.A.2	Formulated Fish Fees; Establishment of fish feed mills	**L**	**L**	**L**	**L**	**L**	**×**	**×**	**×**	**×**	**L**	**L**	**L**	**PW, SW, LW, HW**	**PW, HW, SW, SEW, AP, NP, LMP, OHS, SH,**

Sl No	Activities	Environmental Risk with Evaluation								Social Risk with Evaluation				Nature of waste generation and Application of Gypsum/micronutrient requiring management (Refers Table 2 for abbreviation)	Identification of EMP / Guidelines required
		Air Pollution (AP)	Land Pollution (LP)	Soil contamination (SC)	Water Pollution (WP)	Noise Pollution (NP)	Ground Water Exploitation (GWE)	Resource Depletion (RD)	Effect on Ecology (EE)	Land & Culture (LC)	OHS Risk (OHS)	GVB	SEA/SH		
II.B.A.3	Demonstration of Semi intensive fish culture in selected ponds	×	L	L	L	×	×	×	×	×	L	×	×	SW, LW,	SW, LW, OHS, SEP
II.B.B.1	Assessment of Carrying capacity of fisheries ponds	×	×	×	×	×	×	×	×	×	×	×	×	×	SEP
II.B.C.1	Establishment of Fish Landing Stations	×	L	L	L	×	×	×	×	×	L	L	L	SW, LW,	SW, SEW, LMP, OHS, SEP, SH
II.B.C.2	Support for Modernization of fish Market	×	L	L	L	×	×	×	×	×	L	L	L	SW, LW,	SW, SEW, LMP, OHS, SEP, SH
II.B.C.3	**Support for establishment of mini fish processing unit**	L	L	L	×	L	L	×	×	×	L	L	L	PW, SH, LW	PW, SW, SEW, AP, NP, HW, LMP, OHS, SH, GWE

Sl No	Activities	Environmental Risk with Evaluation								Social Risk with Evaluation				Nature of waste generation and Application of Gypsum/micronutrient requiring management (Refers Table 2 for abbreviation)	Identification of EMP / Guidelines required
		Air Pollution (AP)	Land Pollution (LP)	Soil contamination (SC)	Water Pollution (WP)	Noise Pollution (NP)	Ground Water Exploitation (GWE)	Resource Depletion (RD)	Effect on Ecology (EE)	Land & Culture (LC)	OHS Risk (OHS)	GVB	SEA/SH		
II.B.C.4	Establishment of retail Kiosk	×	L	L	L	×	×	×	×	×	L	×	×	SW, LW,	SW, SEW, OHS, SH
II.B.C.5	**Establishment of Ice Plant**	L	L	L	L	L	L	L	×	×	L	L	L	PW, SW, LW, HW	PW, SW, SEW, AP NP, HW, LMP, OHS, SEP, SH
II.B.C.6	Online fish Marketing	×	×	×	×	×	×	×	×	×	×	×	×	×	
II.B.C.7	Capacity Building	×	×	×	×	×	×	×	×	×	×	×	×	×	SEP
II.B.C.8	Quality control and food safety	×	×	×	×	×	×	×	×	×	×	×	×	×	SEP
III.A.A.1	Development of State of Art Conferencing facilities	×	×	×	×	×	×	×	×	×	×	×	×	EW	EW, SEP
III.A.B.1	Development of State Agriculture Data hub	×	×	×	×	×	×	×	×	×	×	×	×	EW	EW, SEP

Sl No	Activities	Environmental Risk with Evaluation								Social Risk with Evaluation				Nature of waste generation and Application of Gypsum/micronutrient requiring management (Refers Table 2 for abbreviation)	Identification of EMP / Guidelines required
		Air Pollution (AP)	Land Pollution (LP)	Soil contamination (SC)	Water Pollution (WP)	Noise Pollution (NP)	Ground Water Exploitation (GWE)	Resource Depletion (RD)	Effect on Ecology (EE)	Land & Culture (LC)	OHS Risk (OHS)	GVB	SEA/SH		
III.A.C.1	Development of applications for Water Efficiency Management & irrigation Scheduling, Carbon foot print Calculator, ONDC Based market Linkage, Ware house receipt system, GOS tool for cluster Mapping, Farmer Producers Organisation Empowerment Suits etc.	×	×	×	×	×	×	×	×	×	×	×	×	**EW**	**EW, SEP**
III.A.C.2	Development of software Platform for Agriculture Extension, Innovation Fund Management etc.	×	×	×	×	×	×	×	×	×	×	×	×	**EW**	**EW, SEP**
III.B.A	**Providing Funding Support**	×	×	×	×	×	×	×	×	×	×	×	×	**EW**	**EW, SEP**
III.B.B	**Promoting Innovation**	×	×	×	×	×	×	×	×	×	×	×	×	**EW**	**EW, SEP**

Sl No	Activities	Environmental Risk with Evaluation								Social Risk with Evaluation				Nature of waste generation and Application of Gypsum/micronutrient requiring management (Refers Table 2 for abbreviation)	Identification of EMP / Guidelines required
		Air Pollution (AP)	Land Pollution (LP)	Soil contamination (SC)	Water Pollution (WP)	Noise Pollution (NP)	Ground Water Exploitation (GWE)	Resource Depletion (RD)	Effect on Ecology (EE)	Land & Culture (LC)	OHS Risk (OHS)	GVB	SEA/SH		

LMP: Labour Management Plan / Guideline

SH : Sexual Harassment Plan / Guideline

RCP : Resource Conservation Plan / Guideline

PWM : Plastic Waste Management Plan / Guideline

SWM : Solid Waste Management Plan / Guideline

SEM : Sewage and Effluent Management Plan / Guideline

IPM : Integrated Pest Management Plan / Guideline

OHS : Occupational Health & Safety Plan / Guideline

SEP : Stakeholder Engagement Plan

HW : Hazardous Waste Management Plan / Guideline

GWE : Ground Water Extraction Plan / Guideline

EWM : Electronic Waste Management Plan / Guideline

Environmental/ Social Issues	**Response**			**Sub Project Categorisation:** If any one answer is **Yes** then project will be categorised as **'A'** . If all answers are **No** than project will be categorised as **'B'**
	Yes	**No**	L/M/S/H	
Environmental :				
1. Will the subproject cause significant adverse environmental impacts which are sensitive, diverse or unprecedented and also extend beyond sub project areas the below areas:				
17. Effect on Air Quality due to application of Gypsum or handling of other materials leading to air emission / dust				
18. Effect on water quality (discharge possibility of machinery/processing facilities maintenance effluent, run-off of pesticides ingress water to water streams)				
19. Effect on noise levels due to project activities				
20. Effect on landuse and soil quality due to project activities like application of pheromones in excessive quality etc.				
21. Effect on resource used				
22. Effect on Ecology Leads to degradation of forests /cutting of large trees				
23. Effect on Ground Water Resources (excessive extraction of ground water, Depletion of Water Resources)				

24. Effect on Archeologically protected Areas				
25. Leads to change in drainage pattern or changes course of water channels				
26. Leads to sever accident endangering community				
Social: Will the subproject have serious negative social impact and are these impacts sensitive, diverse or unprecedented particularly in terms of the below:				
5. May endanger cultural heritage / resources that are meaningful to the local community or town (such as the temple of the god of earth in the village				
6. Will it the subproject involve involuntary land acquisition, property loss or loss of sources of income and livelihood				
7. Presence and effect on tribal population				
8. Large labour involved with OHS risk				
9. OHS / Safety of community				
10. Possibility of sexual harassment				

GUIDELINES

GUIDELINES FOR ECOLOGICAL CONSERVATION

GUIDELINES FOR LABOUR CAMPS (SANITATION AND HUMAN HEALTH)

GUIDELINE FOR CONSTRUCTION AND SOLID WASTE MANAGEMENT

GUIDELINES FOR HAZARDOUS WASTE

GUIDELINES FOR E-WASTE MANAGEMENT

GUIDELINES FOR SEWAGE AND EFFLUENT MANAGEMENT

GUIDELINE FOR RESOURCE CONSERVATION PLAN

GUIDELINE FOR AIR POLLUTION

GUIDELINE FOR NOISE POLLUTION

GUIDELINES FOR ORGANIZATIONAL HEALTH & SAFETY

GUIDELINE FOR GROUND WATER EXTRACTION

GUIDELINES FOR CULTURAL HERITAGE

Annexure 2.1 : Guidelines For Ecological Conservation

Objective of the Guidelines:

To promote sustainable farming practices that minimize environmental impact and conserve natural resources.

Scope and Coverage:

These guidelines apply to farmers involved in crop development projects in Uttar Pradesh, focusing on reducing environmental harm and promoting ecological balance.

Interface with the Following Components:

These guidelines interface with activities like soil testing, green manuring, soil amendment, crop residue management, micronutrient enhancement, and water conservation practices.

Regulatory Applicability:

Farmers must adhere to local environmental regulations related to soil conservation, water management, and biodiversity protection.

Nature and Magnitude of Impact Possibility:

Potential impacts include minimal air and soil pollution, slight changes to local ecosystems, and minor disturbance to natural habitats. Magnitude of impacts is generally low (L).

Guidelines for Protection/Control:

- Minimize tree cutting and ensure it is limited to necessary activities only.
- Use sustainable practices for hunting and ensure compliance with wildlife protection laws.
- Implement soil conservation techniques like green manuring and crop residue management.
- Use organic farming methods to reduce chemical pollution.
- Maintain biodiversity by preserving natural habitats and planting native species.
- Use water resources efficiently to prevent depletion and contamination.

Reporting/Record Keeping:

Keep records of tree cutting, wildlife activities, and farming practices to monitor environmental impact and compliance with guidelines.

If any tree cutting required.

Checklist/Format for Tree Cutting Assessment:

Tree Identification:

Species of the tree

Size (diameter at breast height)

Location within the project area

Assessment Criteria:

Is tree cutting essential for project activities? (Yes/No)

Have alternatives to cutting been explored? (Yes/No)

If cutting is unavoidable, what mitigation measures are proposed? (e.g., replanting, compensation)

Documentation:

Record the rationale for tree cutting decisions.

Obtain necessary approvals or permits from relevant authorities (if applicable).

Regulatory Applicability: Take permission from Forest department if applicable.

Annexure 2.2 : Guidelines For Labour Camps (Sanitation And Human Health)

INTRODUCTION

The Accommodation Camp Management Plan (ACMP) is the siting, development, management and restoration of accommodation camps to avoid or mitigate impacts on the environment. The area requirement for the accommodation camp shall depend upon the size of work, number of labourers Employed. The plan describes the siting, construction, maintenance, provision of facilities in the accommodation camps and finally their rehabilitation.

The purpose of the plan to develop by contractor is to set out the objectives and measures to maintain and enhance environmental performance of the quarries and borrow areas while avoiding to the extent practical, remedying, and mitigating any potential adverse environmental effects associated with quarrying and borrow area operations.

OBJECTIVE & SCOPE

The ACMP developed for management of Accommodation camp is applicable for effective management of workmen accommodation camp at construction site only.

The purpose of this Standard is to ensure that the workforce across the project is provided with an adequate standard of accommodation which meets specification establishes the construction & welfare requirements for the Workmen Habitat. It covers, area requirements for the various facilities of the habitat, i.e, Contractor shall always undertake best management practices (BMPs) to ensure that the construction and development activities do not cause any adverse impact on the environment and population in nearby area. The objective of the plan is:

- To adopt mitigation measures to prevent any adverse impact on Environmental attributes (air, water, soil, noise etc.)
- Ensure that the implementation measures area adopted
- Establish systems and procedures for this purpose
- Monitor the effectiveness of mitigation measures and
- Take any necessary action when unforeseen impact occurs.

LEGISLATIVE AND REGULATORY REQURICONTRACTORENT

Contractor shall comply with all applicable regulations required for establishment and compliance of Plans. Contractor shall take all necessary applicable clearances from concerned authorities required under regulatory provisions.

- IS Code IS 10500:2012 – Drinking water specification
- ILO recommendations R 115 Workers Housing recommendation 1961
- Building and Other Construction Work act 1996 and rules 2006
- Indian Electricity rules 1956

Contractor shall comply with legislative and regulatory requirement as applicable.

SITE SLECTION CRITERIA

Identification of site for construction and labour camps is the first task. Contractor shall identify the site for accommodation camp in within ROW and if outside ROW, consultation with individual owners (in case of private lands) and the concerned department in case of Government lands. The suitable sites shall be selected and finalized in consultation with the Engineer in-charge. Table below gives site selection criteria for setting-up accommodation camps.

Table-1 Selection Criteria for Establishment of accommodation camps

Avoid the Following……..	**Prefer the Following…….**
X Lands within 500 m from nearby inhabitations ***X*** Irrigated agricultural land ***X*** Land under village forest ***X*** Land within 100 m of community water bodies and water resources ***X*** Land within 100 m of water courses ***X*** Low lying land ***X*** Land supporting dense vegetation ***X*** Grazing land and land with tenure rights	**Land available within ROW with** ✓ minimum distance of 500 m from inhabitation ✓ land with no or less vegetation ✓ land away from water courses and if outside ROW, ✓ minimum distance of 500 m from inhabitation ✓ Waste land belonging to owners willing to give their land ✓ Community land or Govt. land which is not being used for beneficial purposes ✓ Private Land where owner is willing to give their land ✓ Land with no/less vegetation cover and with existing access roads

Contractor shall work out arrangements for setting up construction and labour camps. These shall include and clearly specifying the:

- Photograph of the proposed Camp site in original condition
- Activities to be carried out at site
- Detailed layout plan for development of the labour camp that shall indicate the various structures to be constructed in the camp including temporary, drainage and other facilities.

Besides this, Contractor shall submit the list of all existing labor camp to the Engineer and list will be updated periodically as per the construction progress and update the list.

FACILITIES TO BE PROVIDED

Contractor shall provide free of cost at the camp site, temporary living accommodation to all the workers Employed during construction work period. The rooms of labour shall be well lighted and ventilated. Following facilities shall be provided at the labour camp:

A. <u>Drinking Water</u>

Towards the provision and storage of drinking water at the accommodation camp, Contractor shall ensure the following provisions :

- Sufficient supply of potable water in the camps, in overhead tanks or any other suitable containers.
- The drinking water to be supplied shall meet the requirement as per IS 10500. Regular testing of water quality shall be done as per IS 10500:2012.
- Drinking water points/tanks/containers/etc. in the camp are legibly marked "Drinking Water;
- Every water supply or storage shall be at a distance of not less than 15m from any wastewater / sewage drain or other source of pollution.
- Criteria for location of drinking water storage tanks in the camps as well as other provisions to secure them from getting polluted;
- Provision of regular cleaning of water tanks in the camps;
- Provision of arrangement in the labour camp for providing cold drinking water in hot summer
- Water sources within 15m proximity of toilet, drain or any source of pollution will not be used as a source of drinking water in the project.
- All tanks used for the storage of drinking water shall be covered as to prevent water stored therein from becoming polluted or contaminated. Provisions on practices to be observed in the camps on "Water Conservation".

B. Washing and bathing facilities

At every construction site, Contractor shall provide adequate and suitable facilities for washing clothes and utensils and maintained for use of contract labour Employed therein. Separate and adequate bathing shall be provided for the use of male and female workers. Such facilities shall be conveniently accessible and shall be kept in clean and hygienic conditions.

- Provision on arrangement of drainage for draining away wastewater from key locations such as washing clothes area, hand washbasins, utensils washing in kitchen, bathing area, etc.;
- Provisions of wastewater handling system to be provided on each camp site;
- Provision of storage facility for general water supply in the camp for washing clothes, bathrooms, kitchen, etc.;
- Criteria to be followed on the provision of sufficient bathroom facilities in accordance with the number of workers accommodated in the camp; and
- Provisions on practices to be observed in the camps on "Water Conservation".

C. Toilet facilities

Contractor shall provide Sanitary arrangements, latrines and urinals at every accommodation camp separately for male and female workers, as required. The arrangements shall include:

- Provision of sufficient toilet and urinal facilities in accordance with the number of workers accommodated in the camp shall be provided.
- Separate latrines for male and female
- Every latrine shall be under cover and so partitioned as to secure privacy, and shall have a proper door and fastenings.
- Where workers of both sexes are Employed, there shall be displayed outside each block of latrine and urinal, a notice in the language understood by the majority of the workers “For Men Only” or “For Women Only” as the case may be
- Provision of cleaning and re-equipping of these facilities on daily basis;
- Soak pits of adequate sizes shall be provided in the camp. Regular cleaning shall be done and sewerage disposal shall be done through vendors, if available.
- The latrines and urinals shall be adequately lighted and shall be maintained in a clean sanitary condition at all times and should have a proper drainage system.
- Water shall be provided in or near the latrines and urinals by storage in suitable containers.
- Hand washing facility should be installed outside toilets.

D. Waste Disposal

Contractor shall be completely responsible for collection of waste generated from labour camps, its temporarily storage and disposal through approved vendors. It shall be ensured that:

- Two different bins shall be provided in kitchen for collection of biodegradable and non-biodegradable waste temporarily and shall be disposed-off through approved vendors or to a municipal waste collection bin, if available nearby
- Necessary awareness on the same shall be provided to inmates of the camp.
- Temporarily Collection of sanitary waste and excreta shall be done in septic tanks of adequate capacity
- Later, they will be disposed-off through govt. approved vendors or in municipal sewers, if found nearby.
- Health & Environment training and awareness programs on waste management in the labour camp shall be conducted.
- Septic tanks shall be located at-least 15m from away from water body.
- The bottom of the pit shall be filled with coarse gravel and the sides shored up with board, etc. to prevent erosion and collapse of the pit.
- The collection tank or septic tank once filled shall be Emptied or if not possible immediately, new collection tank shall be formed.
- Temporarily Collection of sanitary waste and excreta shall be done in septic tanks of adequate capacity
- Later, they will be disposed-off through approved vendors or in municipal sewers, if found nearby
- Soak pits shall be provided for collection of wastewater from kitchen.
- The collection bins shall be Emptied on regular basis.
- Plastic waste/Paper waste and other waste shall not be allowed to burn in open.

E. Cooking Area:

Adequate Cooking area shall be provided at labor camps, depending upon the number of workmen.

- Cooking area shall be kept clean and at regular intervals.
- Hand washing facility and utensil washing facilities shall be provided.
- It shall be ensured that the cooking area has adequate illumination and lighting to make it easier for cooking at nighttime. Waste collection bins shall be provided to collect food waste and other waste, being generated from cooking area.
- Proper ventilation shall be provided at cooking area.
- Regular monitoring shall be done to ensure that cooking area is kept clean and proper hygiene is maintained.
- Wood burning shall be avoided.

F. Medical and First aid facilities:

Contractor shall provide medical facilities to labors at site. Visit of doctor shall be arranged at regular intervals and routine check-ups shall be conducted for labors. A separate room for medical checkups and keeping of first aid facilities shall be built. A first aid box shall be provided at construction site and under the charge of SHE Engineer who shall always be readily available at site during working hours. He shall be adequately trained in administering first aid- treatment. Formal arrangement shall be prescribed to carry injured person or person suddenly taken ill to the nearest hospital. An ambulance shall always be made available at construction site for the same.

- Emergency Communication & Emergency Response Plan as mentioned in Project SHE Plan shall be followed for labour Camp.
- Awareness, training & information related to HIV/AIDS (through leaflets, booklets, posters, training, etc.) shall be provided to labors / inmates of the camp from time to time.

G. Fire-fighting arrangements

Contractor shall make all necessary fire-fighting arrangements at labour camps to avoid any major accidents due to fire. Following precaution shall be taken by contractor for ensuring fire safety at labor camp:

- Identification of area susceptible to fires with cautionary signage
- Portable fire extinguishers and/or sand baskets shall be provided at easily accessible locations in the event of fire
- Education and training shall be provided to labors and other workers for using fire-fighting equipment.

- Since labour camp is situated in close proximity to office establishment at different location of the project, Emergency Communication & Emergency Response Plan as mentioned in Project SHE Plan shall be followed for labour Camp.
- One assembly area shall be provided at each construction site.

H. Safety & Security

Contractor shall ensure the security of all workers staying in labor camps, both during day and night time. A security guard shall be placed at site to ensure proper security at construction site and labor camp. Provision of fencing around campsite shall also be provided to ensure safety and security of workmen.

I. Insect and rodent control

- All areas should be kept free from insects, pests, and rodents. A pest control should be performed by an approved pest control operator at a regular basis and maintain the records for the same.
- Insect killers and/or suitable means of pest control should be installed
- Effective measures must be taken to prevent infestation by and harborage of animal or insect vectors or pests.
- The management should have contract with a Pest Control Company to carry out pest control program for the facility.

J. Illumination

- Lighting must be provided to all internal areas at a Minimum level of 150 Lux.
- All fixed lighting must be ceiling mounted.
- Suspended lighting is prohibited.
- Common outdoor recreational areas at a Minimum level of 50 Lux.
- Lighting of 300 Lux shall be maintained in the first aid centre.

K. Correct Storage

The correct storage of goods is essential to reduce pest incidence. The following principles must be adhered to by occupiers and users of premises:

- All areas must remain accessible for cleaning and inspection, which should be carried out at frequent and regular intervals.
- Damage to storage containers must be minimized to reduce spillage.
- All goods must be kept clear of the walls, windows, and ventilators.
- All goods must be kept off the floor, taking care enough room is left to clear spillages.
- All areas must be well ventilated and lighted.
- Storage areas must be in good repair and effectively proofed against pest entry
- Storage space should be cleaned and inspected before new stock arrives.

OPERATION & MAINTENANCE

Accommodation camps shall be maintained free from litter and in hygienic condition. It should be kept free from spillage of oil, grease or bitumen. Any spillage shall be cleaned immediately to avoid pollution of soil, water stored or adjacent water bodies. The following precautions shall be taken in accommodation camps:

- Measures to ensure that no leaching of oil and grease into water bodies or underground water takes place.
- Waste water shall not be disposed into water bodies
- Regular collection of solid wastes shall be undertaken and should be disposed-off safely
- All consumables as the first aid equipment, cleaning equipment for maintaining hygiene and sanitation should be recouped immediately
- No water stagnation shall be allowed in the camp such as in ditches or ponds where mosquitoes can breed due to water accumulation;
- No waste shall be allowed to burn on camp sites;
- No general garbage shall be allowed to overflow from the bins and spreading around;
- No workers shall be allowed to cut surrounding vegetation for fuel purpose; and
- SHE Policy shall be displayed in local language in the labour campsite.

GOOD HOUSEKEEPING

- Despite all proofing precautions pests will inevitably get into a building at some time. However, there is a large difference between an occasional invader and the establishment of a stable population of certain pests.
- To reduce the risk of an infestation it is important to deny the lone invader the conditions it likes, and all occupiers and users must ensure that.
- Their rooms are clean and tidy to reduce sources of food and harbourage. Attention must be paid to locker rooms, changing, dining, stores, record stores, and waste compounds.
- Cooperation between occupiers, users and cleaners of premises and pest-control contractors is essential, to ensure baits are not moved, re-positioned, or washed away.
- Spillages are cleared away promptly.
- Food is kept in rodent proof containers; lids are always replaced.
- Food waste and other refuse shall be adequately deposited in sealable containers and removed from the kitchen frequently to avoid accumulation.
- Unused equipment, packaging, materials, leaflets, stores, and similar articles must be rotated and checked frequently as rodents prefer living in undisturbed areas.
- Special attention must be paid to waste disposal. Receptacles should be of adequate capacity to avoid overflowing and should be provided with tight fitting lids or covers.
- Waste must be removed promptly and efficiently, and refuse areas kept clean. Receptacles themselves must be cleaned after emptying to prevent deposits providing breeding sites for flies.
- The internal walkways are documented with hard standing material, kept free of any storage material/ obstructions, and maintained in a clean and tidy manner.
- A supervisor shall be appointed to supervise hygiene in the Habitat facilities.

SITE CLOSURE

At the completion of construction, all accommodation camp facilities shall be dismantled and removed from the site. The site shall be restored to a condition in no way inferior to the condition prior to commencement of the works. Contractor shall carry out required activities for site rehabilitation which include:

- Oil and fuel contaminated soil shall be removed and transported to govt. approved vendors and recyclers for final treatment/disposal.
- Soak Pits & Septic tanks shall be covered and effectively sealed off.
- Debris (rejected material) shall be disposed off suitably.
- Ramps created, if any should be levelled.
- Underground water tank in a barren/non-agricultural land can be covered. However, in an agricultural land, the tank shall be removed.
- If the accommodation camp site is on an agricultural land, topsoil can be spread so as to aid faster rejuvenation.
- Proper documentation of rehabilitation site is necessary. This shall include the following:
  - Photograph of rehabilitated site;
  - If camp site is outside ROW, Land owner consent letter for satisfaction in measures taken for rehabilitation of site;
  - Certification from Engineer in-charge.

INSPECTION AND MONIOTRING

Regular inspection of Workers accommodation shall be conducted by Contractor for effective implementation of management plan and mitigation measures to minimize the impact on environmental conditions.

Following practices shall be adopted to monitor the Environmental condition at ACMP:

- Visual Inspection of hygienic and aesthetic of camps
- Impact on air, water, noise, waste etc.
- Waste Management
- Monitoring records of env monitoring
- Monthly inspection by the contractor and submission it to PMC along with site photographs for review and necessary action
- Monitoring the environmental parameters (air, water, soil, noise) and quality as per the Environmental monitoring plan for the project.

PLAN IMPLEMENTATION

Contractor shall implement the ACPM to ensure that no adverse environmental impacts are envisaged. It shall be the responsibility of the SHE team to conduct site inspection as per the checklist developed for each management plan. It will be ensured that:

- All management plans and pollution prevention and control measures are successfully implemented at site
- Waste management of ACPM to be effective implemented.
- Any observations made at site shall be recorded and reported to Chief SHE Officer
- All necessary actions have been taken at site to minimize any impact
- Any observations made by the engineer shall be reviewed and shall be compiled, if required

RECORDS KEEPING AND REPORTING

Contractor shall conduct monthly inspection of all identified accommodation camp in order to:

- Monitor the implementation of the control measures and to ensure the environmental impacts are being minimized.
- Ensure the requirements and inspection frequencies are being met.

Contractor shall monitor the management activity and keep the records of monitoring and routine inspection. It shall be ensured that:

- A register or similar records/routine checklist documents and records of all types and quantities of material excavated as well as where re-use or recycled material is being used and
- Inspections records are kept

Routine monthly inspection shall be done by contractor as per the checklist and any environmental issues associated with it shall be addressed as following:

- Any issues that are observed during inspection shall be conveyed to Chief SHE Officer and corrective measures shall be taken.
- Contractor at site shall send the monthly report to contractor, who will review the inspection report and forward the same to Chief SHE Officer.
- Contractor shall submit the inspection report as a part of the monthly report to the Engineer.
- Any suggestions, observations made by the engineer shall be addressed, if found necessary and shall submit the updated report.

Contractor shall ensure that following database must be documented for each identified accommodation camp that provides the basis of the redevelopment plan:

- Location of camps
- Distance from nearest habitation
- Map showing location and transportation/access routes
- Present usage of land
- Area (sq.m)
- Approximate quantity of material available
- Number of trees removed or to be removed
- Whether purchased or leased

- Photographs from all 4 sides
- Type and details of access routes
- Slope/drainage characteristics
- Existing land-use
- Any environmental or eco-sensitive issues, if any

TRAINING

Training shall be provided to site Engineers, supervisors and workmen at labor camp at site for effective management of Environment and to prevent/minimize environmental pollution at site. Training module shall be developed by Contractor in coordination from Contractor, Planning engineer and SHE staff. Contractor at site shall deliver the training to the Engineer and workmen at site. The topics to be covered in training shall include:

- Objective of training
- Site selection criteria
- Rules and Regulations/guidelines
- Basic requirement of accommodation camp
- Waste management, Housekeeping
- Preventive and mitigation measures adopted at site
- Do's & Don'ts
- Rehabilitation of camps
- Role & Responsibility of Individual
- Inspection & Monitoring
- Reporting

REVIEW

Contractor shall review the Plan if and when required. All regulatory and applicable guidelines shall be followed and required clearances shall be obtained.

He shall ensure that:

- If any non-compliance to the management plan is observed, Contractor shall review the same and shall take corrective measures to comply the same.
- Any observations made by the engineers shall be reviewed and shall be complied, if required.

GRIEVANCE REDRESSAL MECHANISM

Complaint associated with compulsory acquisition of land and property will be brought to notice to KRAIL and with mutual consultation with all parties involved, the issue will be amicably resolved through KRAIL Grievances/complaints on environmental matters are expected to be relatively few and straight forward so a simplified procedure will be followed. Local concerns which may arise as a result of inappropriate implementation of pollution prevention and control plan, the main aim of which is the reduction of adverse impacts to acceptable levels. These issues will be best addressed through open dialogue and a

responsive approach, with acknowledgement of errors wherever appropriate, followed by rapid remedial action.

Any public complain and grievance with respect to generation of pollutants, inappropriate and inadequate pollution control measures, use of public resources such as water resource will be seriously dealt with. Once such notice and verbal/written complain notice, it will be brought to Project EHS committee and based on the severity of the complaint, it will be dealt with appropriate resolution and action plan. All such complains/grievances will be recorded along with the close out reports.

Table-2 Site selection criteria checklist for accommodation camp

	Name of Site with address		
	Chainage		
	Site In charge/Project Manager		
	Community Liaison Officer (CLO)		
	Environmental Manager (contractor)		
	Date of inspection		
	Photographs		
S. No	**POINTS**	**OBSERVATION**	**Remarks**
1.	Is the land falls within 500 m of nearby inhabitations? If Yes, than: - Give reason for selection - The community consultation	Yes/No	
2	Is it nearby water courses, canals etc where there is a probability of these resources getting polluted due to Proposed development? If Yes, then : - Give reason for selection - Pollution Prevention and Control measures proposed	Yes/No	
3	Is there potable water available? If No, then: - Provide details of source of potable water supply proposed for accommodation camps	Yes/No	
4	Are the entry roads / walkways / passages to camp kept clear? - If Not, then what provisions are made to address the requirement?	Yes/No	
5	Is it located within ROW or not? If outside ROW: is the land owner consulted and prior consent taken from him/her prior to establishment? Provide documentary proof, if any.	Yes/No	

6	Is the site subject to landslide or heavy erosion? If Yes, then: - Reason for selection of site - Safety and Mitigation measures proposed?	Yes/No	
7	Is there any critically polluted area or industry which may affect the health? If yes, then - Reason for selection of site - Safety and Mitigation measures proposed?		
8	Is there any Environmentally Sensitive area nearby Accommodation Camp? If Yes, then: - Type of Area (Wildlife/National Park/ any other ecologically sensitive area) - Approx. Distance from Site - Mitigative and preventive measures proposed - Any other information		
9	**Decision with observation, if any:**		
Inspected By		Signature	
Site In charge/Project Manager			
Community Liaison Officer (CLO)			
Environmental Manager(contractor)			

Table-3 Checklist for routine weekly inspection of accommodation camp

S. No	POINTS	OBSERVATION	MEASURES
	General		
1.	Are adequate no. of rooms provided?		
2.	Are labor camps located to avoid flooding and water logging?		
3.	Are the camps situated within a reasonable distance from worksite?		
4.	Transport from the living facilities to worksite is safe and free.		
5.	The living facilities are built with adequate materials, kept in good repair and kept clean and free from rubbish and other refuse.		
6.	Proper ventilation Provided?		
	Proper illumination provided?		

	The living rooms are kept cleaned at regular intervals?		
	Water		
7.	Is sufficient quantity of water being supplied for daily needs?		
8.	Is the water supplied for drinking meets the requirements of Drinking water standards.		
9.	All tanks used for storage of water are covered?		
10.	The water tanks are cleaned at regular intervals?		
	Washing & bathing facility		
11.	Is bathing & cloth washing facility Provided?		
12.	is there any water logging or stagnation of water near washing and bathing area.		
	Toilet Facilities		
13.	Is adequate numbers of toilets provided?		
14.	Is privacy maintained between two latrines?		
15.	Adequate quantity of water being supplied for toilet facilities?		
16.	Hand washing facility available outside toilets?		
17.	The toilets are regularly cleaned and maintained?		
	Waste Disposal		
18.	Adequate number of septic tanks provided to collect waste from toilets?		
19.	Soak pits provided at kitchen area?		
20.	Are the septic tanks & soak pits, Emptied on regular intervals?		
21.	are waste collection bins provided at site offices, canteen and labor colonies?		
22.	Are waste collection bins Emptied on regular intervals?		
23.	Are bins kept clean and maintained in good condition?		
	Cooking Area		
	Is cooking area provided and is separate from living room?		
24.	Is washing facility provided for cleaning of utensils?		
25.	Are cooking area kept clean and good hygiene is maintained?		
26.	Proper ventilation provided at cooking area?		

27.	Food waste and other waste properly collected and disposed off at regular intervals?		
28.	Hand washing facility provided outside cooking area?		
	Health, Medical & First Aid Facility		
29.	Is doctor visiting the site at regular intervals?		
30.	First Aid kit provided at site?		
31.	Adequate number of staff trained for first aider?		
32.	Is ambulance available at site?		
33.	Is guidance on alcohol, HIV-AIDS and other health risk related activities provided to workers?		
	Safety & Security		
34.	Is firefighting extinguishers provided at labor camp?		
35.	Is Emergency assembling points provided?		
36.	Is security guard provided at site?		
37.	Proper training provided to staff/worker to use fire extinguishers?		
	Any other Observation/Issue		

Date of Inspection:

Next Due Date:

Name & Signature:

Annexure 2.3 : Guideline For Construction And Solid Waste Management

Objective of the Guidelines:

The objective of these guidelines is to ensure responsible and effective management of construction waste generated during agricultural projects. Proper waste handling and disposal practices are essential to minimize environmental impact and promote sustainable farming practices.

Scope and Coverage:

These guidelines apply to all construction activities carried out as part of agricultural projects, including but not limited to building infrastructure, setting up irrigation systems, and land development.

- Interface with the Following Components:
- These guidelines interface with:
- Productivity Enhancement
- Strengthening Ecosystems
- Promoting Innovations

Regulatory Applicability:

Applicable regulations include:

- **Solid Waste Management Rules, 2016:** Regulations governing the management, handling, and disposal of solid waste generated from construction activities.
- **Local Environmental Regulations:** Any additional regulations specific to the project location.

Identification of Waste Generation:

Identify the types of waste generated by project activities and estimate quantities based on usage rates and project phases.

Categorize waste sources within the project area, including construction sites, agricultural fields, processing units, and Fish Landing Stations.

Possibility to Impact:

The potential impacts of improper waste management include:

- **Plastic Waste from Soil Sample Collection:**

  Visual pollution, littering of agricultural areas, accumulation of non-biodegradable waste in soil and water bodies.

- **Gypsum Waste from Soil Amendments:**

  Accumulation of solid debris, potential human health impacts, disposal challenges.

- **Crop Residue Mismanagement:**

Unsightly accumulation in fields, hindrance to subsequent agricultural activities, environmental cleanliness.

- **Waste from Damaged Pipes in Conjunctive Water Use:**

  Solid waste buildup, need for additional resources for collection and disposal, potential trip or injury hazards in agricultural settings.

- **Waste from seed transportation:**

  To improve genetic potential of available fish seeds. These seed shall be produced other state or sources which may cause the waste generation of Bio mass.

Protection Measures:

- **Plastic Waste from Soil Sample Collection:**

  Use biodegradable or recyclable bags for soil samples.

  Train workers on proper disposal methods and recycling practices.

- **Gypsum Waste from Soil Amendments:**

  Store and handle gypsum in contained areas to prevent exposure.

  Use bags or containers for gypsum transport and application.

- **Crop Residue Mismanagement:**

  Promote composting or mulching of crop residues.

  Establish collection and disposal systems for crop residues.

- **Waste from Damaged Pipes in Conjunctive Water Use:**

  Conduct regular inspections to identify and repair damaged pipes.

  Implement a recycling system for damaged irrigation materials.

- **Waste from seed transportation:**

  Establish composting pits for organic waste. Composting can convert organic waste into nutrient-rich compost for agricultural use.

  Guidelines for Waste Segregation and Disposal:

Waste Segregation Checklist Form:

Date: _____	**Location/Project Area:** _____

Waste Type	Segregated Bin/Container	Quantity (if applicable)	Remarks/Notes

Concrete rubble	[ ] Recyclable	_____	
	[ ] Non-recyclable	_____	
Bricks	[ ] Recyclable	_____	
	[ ] Non-recyclable	_____	
Packaging materials (e.g., plastic, cardboard)	[ ] Recyclable	_____	
	[ ] Non-recyclable	_____	
Wood scraps	[ ] Recyclable	_____	
	[ ] Non-recyclable	_____	
Other (specify)	[ ] Recyclable	_____	
	[ ] Non-recyclable	_____	

Waste Disposal Record

Date: _____	Type of Waste: _____	Disposal Method: _____	Disposal Site: _____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

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Annexure 2.4 : Guidelines For Hazardous Waste

Objective of the Guidelines:

The objective of these guidelines is to ensure safe and environmentally responsible management of hazardous waste generated during agricultural projects, focusing on spent/waste oil, empty paint boxes, waste oil from bunding and laser land levelling, and waste oil from farm machinery maintenance in processing facilities. Proper handling and disposal practices are essential to prevent environmental contamination and ensure compliance with regulatory requirements.

Scope and Coverage:

These guidelines apply to the management of hazardous waste generated during agricultural activities, specifically targeting spent/waste oil, empty paint boxes, and related waste oils from bunding, laser land levelling, and farm machinery maintenance in processing facilities.

Interface with the Following Components: These guidelines interface with:

- Productivity Enhancement
- Strengthening Ecosystems
- Promoting Innovations

Regulatory Applicability:

Applicable regulations include:

- Hazardous Waste Management Rules, [Year]: Regulations governing the generation, handling, and disposal of hazardous waste.
- Local Environmental Regulations: Any additional regulations specific to the project location.

Identification of Hazardous Waste Generation:

Types of Hazardous Waste:

- Spent/waste oil from machinery and equipment.
- Empty paint boxes and containers.
- Waste oil from bunding and laser land levelling.
- Waste oil from farm machinery maintenance in processing facilities.

Possibility to Impact:

Improper management of hazardous waste can lead to:

- Soil contamination from spilled or leaked oil.
- Groundwater contamination from improper disposal of hazardous materials.

- Environmental pollution and health risks due to toxic substances.

Protection Measures:

1. **Hazardous Waste Segregation and Handling:**
- Segregate hazardous waste from other waste streams to prevent contamination.
- Use designated containers labelled with the type of hazardous waste.
- Store hazardous waste in a secure, designated area away from water sources.

2. **Labelling and Storage**:
- Clearly label containers with the type of hazardous waste.
- Store hazardous waste in a well-ventilated area with secondary containment to prevent spills.

3. **Disposal Guidelines:**
- Dispose of hazardous waste through authorized vendors or agencies.
- Ensure compliance with local regulations for the transport and disposal of hazardous materials.

Guidelines for Hazardous Waste Disposal:

Authorized Vendor Checklist Form:

Date: _____

Type of Hazardous Waste: _____

Handling and Disposal Checklist

Activity	**Description**	**Completed (Yes/No)**
Hazardous waste collection	Ensure proper containment and labelling	
	Transport to authorized disposal facility	
Disposal process	Confirm disposal method (e.g., recycling, disposal)	
	Obtain disposal receipt/documentation	

Authorized Vendor Details:

Name of Vendor: _____

Address: _____

Contact Person: _____

Contact Number: _____

Waste Oil from Bunding and Laser Land Levelling:

- Collect waste oil in designated containers.
- Ensure proper disposal through authorized recyclers to prevent environmental contamination.

Waste Oil from Farm Machinery Maintenance in Processing Facilities:

- Implement proper collection and containment measures for waste oil.
- Dispose of waste oil through authorized recycling facilities to prevent environmental pollution.

Annexure 2.5 : Guidelines For E-Waste Management

Objective of the Guidelines:

The objective of these guidelines is to ensure safe and environmentally responsible management of electronic waste (e-waste) generated during agricultural projects. Proper handling, disposal, and recycling practices are essential to prevent environmental contamination and ensure compliance with regulatory requirements.

Scope and Coverage:

These guidelines apply to the management of e-waste generated as part of agricultural project activities, including the disposal of electronic equipment such as computers, printers, monitors, and other electronic devices.

Interface with the Following Components:

These guidelines interface with:

- Productivity Enhancement
- Strengthening Ecosystems
- Promoting Innovations

Regulatory Applicability:

Applicable regulations include:

- E-Waste (Management and Handling) Rules, 2024: Regulations governing the collection, segregation, and disposal of electronic waste.
- Local Environmental Regulations: Any additional regulations specific to the project location.

Identification of E-Waste Generation:

Types of E-Waste:

- Computers from Productivity Enhancement activities.
- Printers from Strengthening Ecosystems initiatives.
- Monitors from Promoting Innovations projects.
- Laptops from various activities across project components.
- Mobile phones from field operations and data collection
- Other electronic devices and peripherals used in agricultural tasks.

Possibility to Impact:

Visual Pollution: Leaving old electronics around can make the project look messy and unmanaged.

Minor Environmental Disturbance: Even a small amount of e-waste, if not handled properly, can slightly mess up the soil and local environment.

Protection Measures:

1. **Collection and Segregation:**

- **Separate Collection:** Collect e-waste separately from other waste to avoid contamination.
- **Segregation by Type:** Segregate different types of electronic equipment (e.g., computers, printers, monitors) for proper disposal.

2. **Labelling, Storage, and Protection Measures:**

- **Clear Labelling**: Label containers with the type of e-waste and its source (e.g., farm office, machinery).
- **Secure Storage**: Store e-waste in a designated area that is secure and protected from weather conditions and water sources.
- **Protection Measures**: Handle e-waste with care to avoid breakage or leakage of hazardous components.

3. **Disposal Guidelines:**

- **Authorized Recyclers**: Dispose of e-waste only through authorized e-waste recyclers or disposal facilities.
- **Compliance with Regulations**: Ensure compliance with local regulations governing the transport and disposal of e-waste.

Guidelines for E-Waste Disposal:

Authorized Recycler Checklist Form:

Date: _____

Type of E-Waste: _____

Handling and Disposal Checklist

Activity	Description	Completed (Yes/No)
E-waste collection	Segregate e-waste types	
	Transport to authorized recycling facility	
Disposal process	Confirm recycling method (e.g., dismantling, shredding)	
	Obtain disposal receipt/documentation	

Authorized Recycler Details:

- Name of Recycler: _____
- Address: _____
- Contact Person: _____
- Contact Number: _____

Additional E-Waste Handling Guidelines:

- Avoid dismantling e-waste on-site; transport intact equipment to recycling facilities.
- Ensure secure data erasure or destruction before disposal of computers and storage devices.

Annexure 2.6 : Guidelines For Sewage And Effluent Management

Objective of the Guidelines:

The objective of these guidelines is to ensure the proper management and disposal of effluents generated from specific agricultural and industrial activities, aiming to prevent water pollution and protect aquatic ecosystems.

Scope and Coverage:

These guidelines apply to effluent management practices associated with seed processing plants, fish processing plants, and construction activities, focusing on waste oil, liquid effluent, sewage, and other pollutants.

Interface with the Following Components & Possibility to impact:

Effluent management interfaces with the following activities and waste types:

1. **Seed Processing Plant (Liquid Effluent):**
   - **Activity:** Seed processing operations involving washing and processing seeds.
   - **Effluent Type**: Liquid effluent containing organic matter and agricultural chemicals.

2. **Fish Processing Plant (Waste Oil, Liquid Effluent, and Sewage):**
   - **Activity:** Fish processing activities including cleaning, gutting, and processing.
   - **Effluent Types:**
   - Waste oil from machinery maintenance.
   - Liquid effluent containing organic compounds.
   - Untreated sewage from processing activities.

3. **Construction Activities (Wastewater):**
   - **Activity:** Construction operations involving earthworks, concrete mixing, and equipment maintenance.
   - **Effluent Type:** Wastewater containing suspended solids, sediment, and construction-related pollutants.

Impact due to wastewater generation is identified **Low** in screening.

Regulatory Applicability:

Applicable regulations include local environmental laws and water pollution control regulations governing effluent management and disposal practices.

Protection Measures:

1. **Seed Processing Plant (Liquid Effluent):**
   - Contractor will Install onsite wastewater treatment systems.
   - Use sedimentation basins or settling tanks to remove solids.
   - Implement biological treatment methods (e.g., activated sludge) to degrade organic matter.
   - Regularly monitor effluent quality to meet regulatory standards.

2. **Fish Processing Plant (Waste Oil, Liquid Effluent, and Sewage):**
   - Contractor will Install grease traps or oil-water separators to capture waste oil.
   - Treat liquid effluent with biological systems to break down organic compounds.
   - Use filtration systems to remove suspended solids.
   - Disinfect sewage to eliminate pathogens before discharge.

3. **Construction Activities (Wastewater):**
   - Implement erosion control measures (e.g., silt fences) to minimize sediment runoff.
   - Manage stormwater with retention ponds or vegetative buffers.
   - Use biodegradable materials to reduce pollution risks.
   - Follow best practices for handling and disposing of construction waste.
   - Conduct regular inspections to ensure compliance with environmental regulations.

Form/Checklist for Effluent Management:

Date: _____

Activity: _____

Handling and Disposal Checklist:

Activity	**Description**	**Completed (Yes/No)**
Effluent collection and segregation	Channelize the wastewater stream in treatment facility	
Treatment facility	Availability of treatment facility/ Soak pot or Septic tank	
Disposal facility	Dispose of effluent through authorized facilities.	
Compliance with local regulations	Ensure adherence to local regulations for effluent disposal.	

To be complied by Contractor

Annexure 2.7 : Guideline For Resource Conservation Plan

Objective:

To conserve and manage key resources like soil, water, and crop residues effectively to protect the environment and support sustainable farming practices.

Scope:

These guidelines cover practical steps for conserving resources such as soil productivity, soil amendments, crop residue management, micro-watershed conservation, and water usage.

Interface with Activities:

1. **Soil Productivity (Plastic Waste):**
   - **Activity**: Collecting soil samples.
   - **Conservation**: Use reusable bags for soil samples to reduce plastic waste.

2. **Soil Amendments (Gypsum):**
   - **Activity:** Applying gypsum to soil.
   - **Conservation:** Get gypsum directly from mines to avoid contaminants.

3. **Crop Residue Management (CRM):**
   - **Activity:** Dealing with crop leftovers.
   - **Conservation:** Avoid burning residues; instead, use them to enrich soil.

4. **Micro Watershed Approach:**
   - **Activity:** Protecting local water sources.
   - **Conservation:** Capture rainwater and plant trees to conserve water.

5. **Utilization of Water:**
   - **Activity**: Using water for processing.
   - **Conservation:** Contractor will install systems to recycle water and reduce waste.

Regulatory Guidance:

Follow local laws for responsible resource management and environmental protection.

Potential Impacts:

- Plastic Waste: Can harm soil and wildlife.
- Gypsum Contaminants: May pollute soil and water.
- Crop Residue Burning: Harms air quality and soil health.
- Water Misuse: Depletes local resources and disrupts ecosystems.

Practical Protection Measures:

- **Soil Productivity (Plastic Waste):**
  Use reusable bags for soil samples.

- **Soil Amendments (Gypsum):**
  Source gypsum directly from mines.

- **Crop Residue Management (CRM):**
  Avoid burning crop residues; use them to enrich soil.

- **Micro Watershed Approach**:
  Capture rainwater and plant trees to conserve water.

- **Utilization of Water:**
  Install water recycling systems and reduce water waste.

Resource Conservation Checklist:

Date: _____

Resource Type: _____

Action Checklist:

☐ Use reusable bags for soil samples.

☐ Source gypsum directly from mines.

☐ Avoid burning crop residues; use for soil enrichment.

☐ Capture rainwater and plant trees to conserve water.

☐ Install water recycling systems and reduce water waste.

Annexure 2.8 : Guideline For Air Pollution

Objective of the Guidelines:

The objective of these guidelines is to mitigate air pollution risks associated with agricultural activities and facilities by identifying sources of air emissions, assessing potential impacts, and implementing effective protection measures.

Scope and Coverage:

These guidelines encompass various agricultural activities and facilities that may contribute to air pollution, including soil testing, soil amendments, crop residue management, machinery operations, and processing facilities.

Interface with Activities and Sources of Air Pollution:

1. **Dust Emission from Soil Testing:**
   - **Air Pollutant**: Particulate Matter (PM10 and PM2.5)
   - **Impact:** Inhalation of particulate matter can cause respiratory issues and long-term health problems.

2. **Use of Gypsum for Soil Amendment:**
   - **Air Pollutant:** Particulate Matter (PM10)
   - **Impact:** Exposure to gypsum dust can lead to respiratory irritation.

3. **Development of Custom Hiring Centres (CHCs) and Farm Machinery Banks (FMBs):**
   - **Air Pollutants:** Nitrogen Oxides (NOx), Carbon Monoxide (CO), Particulate Matter (PM)
   - **Impact:** Emissions from machinery can contribute to localized air pollution.

4. **Setting Up Seed Storage, Processing & Packing Facility:**
   - **Air Pollutants:** Particulate Matter (PM10), Volatile Organic Compounds (VOCs)
   - **Impact:** Dust emissions and VOCs can affect indoor and outdoor air quality.

5. **Setting Up Cold Storages:**
   - **Air Pollutants**: Hydrochlorofluorocarbons (HCFCs), Refrigerant Gases
   - **Impact:** Refrigerant leaks can deplete the ozone layer and contribute to global warming.

6. **Establishment of Fish Feed Mills:**
   - **Air Pollutants:** Particulate Matter (PM10), Odorous Compounds, VOCs
   - **Impact:** Dust emissions and Odors from feed milling can impact air quality.

7. **Mini Fish Processing Unit:**
   - **Air Pollutants:** Particulate Matter (PM2.5 and PM10), Odorous Compounds, VOCs
   - **Impact:** Emissions can lead to respiratory issues and unpleasant Odors.

8. **Establishment of Ice Plant:**
   - **Air Pollutants:** Ammonia (NH3), Refrigerant Gases
   - **Impact:** Ammonia emissions can cause irritation upon exposure, and refrigerant leaks pose environmental risks.

Protection Measures:

1. **Dust Emission from Soil Testing:**
   - Use sealed containers and indoor testing with proper ventilation.

2. **Use of Gypsum for Soil Amendment:**
   - Handle gypsum in sealed bags and provide protective gear for workers.

3. **Crop Residue Management (Non-Burning):**
   - Promote mulching or composting instead of burning.

4. **Development of Custom Hiring Centres (CHCs) and Farm Machinery Banks (FMBs):**
   - Maintain machinery for reduced emissions and promote fuel-efficient equipment usage.

5. **Setting Up Seed Storage, Processing & Packing Facility:**
   - Install dust collection systems and use low-VOC materials.

6. **Setting Up Cold Storages:**
   - Implement leak detection systems and transition to eco-friendly refrigerants.

7. **Establishment of Fish Feed Mills:**
   - Install dust control systems and adopt low-emission processing methods.

8. **Mini Fish Processing Unit:**
   - Use enclosed processing systems with effective exhaust.

9. **Establishment of Ice Plant:**
   - Prevent ammonia leaks through proper handling and maintenance.

Reporting / Record Keeping:

Maintain detailed records of air pollution sources, pollutants, and implemented protection measures.

Monitor air quality parameters regularly and conduct audits to ensure compliance with regulations.

Annexure 2.9 : Guideline For Noise Pollution

Objective of the Guidelines:

These guidelines aim to mitigate noise pollution generated by specific project activities to ensure a healthy and conducive environment for workers and surrounding communities.

Scope and Coverage:

These guidelines cover measures to control noise emissions from project-related activities, focusing on practical steps to reduce noise impacts.

Activities and Sources of Noise Pollution:

1. **Farm Machinery Operations (Custom Hiring Centres and Machinery Banks):**
   - **Source:** Operation of agricultural machinery
   - **Impact:** Noise from machinery can affect nearby communities.

2. **Seed Processing, Packing & Storage Facility**:
   - **Source:** Equipment operation and handling
   - **Impact:** Noise from processing equipment and packing activities.

3. **Fish Processing Units and Ice Plants:**
   - **Source:** Processing machinery and plant operations
   - **Impact:** Noise from fish processing and ice plant activities.

Noise Impact and Management Measures:

1. **Farm Machinery Operations:**
   - Maintain machinery to reduce noise levels.
   - Implement noise-reducing measures such as soundproofing or enclosure.

2. **Seed Processing Facility:**
   - Install noise barriers or use quieter equipment.
   - Conduct activities during off-peak hours to minimize community disturbance.

3. **Fish Processing Units and Ice Plants:**
   - Use noise control measures like soundproofing or baffles.
   - Schedule noisy activities to minimize impact on nearby areas.

Protection Measures:

1. **Personal Protective Equipment (PPE):**
   - Provide workers with ear plugs or ear muffs to reduce exposure to loud noise.
   - Train workers on how to properly use and maintain ear protection.

2. **Operational Controls:**
   - Schedule noisy activities during specific hours to reduce community exposure.

- Conduct regular inspections to identify and address noise sources.

Reporting / Record Keeping:

Maintain records of noise assessments and mitigation measures implemented.

Monitor noise levels periodically to ensure compliance with noise regulations and standards.

Noise Pollution Mitigation Confirmation Form

Activity/Source	**Mitigation Measures Implemented**	**Yes / No**
Machinery Operation	Use of maintained machinery	
Construction Activities	Use of noise barriers	
Scheduled Activities	Time restrictions for noisy activities	
Personal Protective Equipment	Provision of earplugs or earmuffs	

Annexure 2.10 : Guidelines For Organizational Health & Safety

Objective of the Guidelines:

The objective of these guidelines is to ensure a safe and healthy working environment for all individuals involved in organizational activities, including employees, contractors, and visitors. These guidelines aim to mitigate risks, prevent accidents, and promote well-being through proactive health and safety measures.

Scope and Coverage:

These guidelines apply to all organizational activities, including agricultural operations, construction activities, and processing facilities. They encompass the management of health and safety risks associated with work environments and operational processes.

Interface with the Following Components:

These guidelines interface with various components of the organization, including:

- Employee Training and Education
- Workplace Design and Ergonomics
- Hazard Identification and Risk Assessment
- Emergency Preparedness and Response
- Regulatory Compliance and Reporting

Regulatory Applicability:

Applicable regulations include:

- Occupational Safety and Health Administration (OSHA) standards
- Local health and safety regulations
- Industry-specific guidelines for agricultural, construction, and processing sectors

Health & Safety Risks and Impact:

Identify potential health and safety risks associated with organizational activities, such as:

- Machinery operation hazards
- Chemical exposure risks
- Slips, trips, and falls
- Ergonomic strain from repetitive tasks
- Electrical hazards
- Fire and explosion risks
- Heat stress or cold exposure
- Biological hazards (e.g., pathogens)

Protection Measures:

1. **Employee Training:**

- Provide training on machinery operation, chemical handling, and emergency procedures.
- Focus on practical safety measures for daily tasks on the farm.

2. **Workplace Design:**
   - Arrange work areas to minimize hazards and optimize comfort.
   - Ensure proper lighting, ventilation, and ergonomic setups.

3. **Hazard Identification:**
   - Regularly assess and address farm-specific risks like machinery-related injuries and chemical exposures.
   - Encourage reporting of safety concerns.

4. **Emergency Readiness:**
   - Develop and practice emergency response plans, including fire drills and first aid training.
   - Maintain contact lists and clear evacuation routes.

5. **Personal Protective Equipment (PPE):**
   - Provide essential PPE tailored to farm activities (e.g., helmets, gloves, eye protection).
   - Ensure all workers understand how to use and maintain their PPE.

6. **Health Monitoring:**
   - Implement health checks for chemical exposures or noise impacts.
   - Offer wellness resources to support physical and mental health.

Farmer's Health & Safety Equipment Guide

Activity	Potential Risks	Recommended PPE	Safety Measures
Machinery Operation	Injuries from equipment	- Safety helmet - Safety goggles - Ear protection - Gloves - Steel-toed boots	Conduct regular equipment checks and maintenance. Provide training on safe operation and emergency procedures. Implement rollover protection structures (ROPS) on tractors.

Chemical Handling	Exposure to pesticides/fertilizers	- Chemical -resistant gloves - Safety goggles - Respirator mask (if applicable)	Follow label instructions for chemical use and storage. Store chemicals in locked, ventilated areas away from living spaces. Provide training on safe handling and disposal.
Slips, Trips, Falls	Injuries from uneven terrain, wet surfaces	-Non-slip boots/shoes - Reflective vest (if working near traffic)	Keep pathways clear of obstacles. Use signage for hazards (wet floors, uneven ground). Provide appropriate footwear and visibility gear.
Heat Stress/Cold Exposure	Heat exhaustion, dehydration, frostbite	- Wide-brimmed hat (for sun protection) - Light, breathable clothing -Hydration pack/bottle - Sunscreen -Insulated clothing (for cold weather)	Monitor weather conditions and provide shaded rest areas. Educate on heat stress signs and prevention. Ensure appropriate clothing for weather conditions.
First Aid & Emergency Response	Accidents, injuries, chemical spills	-First aid kit (bandages, antiseptic, CPR mask) -Emergency contact list - Fire extinguisher (if applicable)	Establish an emergency response plan. Train staff on first aid procedures. Keep emergency contact information accessible. Conduct regular drills.

First Aid & Emergency Procedures:

1. **First Aid Kit Maintenance:**
   - Check and replenish first aid kits regularly.
   - Ensure kits are easily accessible and known to all workers.

2. **Emergency Contact Information:**
   - Post emergency numbers in visible areas.
   - Provide training on emergency response procedures.

3. **Incident Reporting:**
   - Encourage reporting of all incidents, near-misses, and safety concerns.
   - Conduct investigations to prevent future occurrences.

4. **Medical Safety Training:**
   - Offer basic first aid training to all farm workers.
   - Ensure designated individuals are trained in more advanced medical procedures.

Hygiene and Sanitation:

Adequate attention has to be given for workplace and Labour camp Hygiene. Provision shall be made under OHSMP for availability of clean and hygiene eating place with availability of safe drinking water at workplace and labour camp. Similarly, adequate provision shall be made for clean toilets with sewage treatment (provision of septic tanks), and segregated collection and safe disposal of domestic wastes.

Incident Management and preparedness:

OHSMP shall define procedure for incident management including investigation of any accident. Preferably provision shall be made for Safety and Environment Committee which can undertake investigation and incident analysis and suggest appropriate corrective action.

Adequate provision shall be made for the availability of First Aid, Ambulance, Doctors, Safety and Health representative

Occupational Health and Safety Monitoring:

OHSMP shall also defines frequency of periodic monitoring for assessing its implementation effectiveness. Monitoring analysis shall also include calculating accident and fatality rate as well. Parameters of monitoring including health surveillance shall form part of monitoring program.

Communication and Consultation (Workers & community):

Awareness, consultation and communication is very effective tool for incident prevention and panic avoidance in emergency situation. OHSMP shall define programme for community consultation and communication and worker's training/awareness programme. It shall also list safety and health communication with key stakeholders. OHSMP shall also define extent of safety signage that shall be displayed at work place and project areas.

Training and Records:

Training is integrated and essential component of effective OHSMP implementation . OHSMP shall define the programme of overall OHS and safety induction including site specific induction, driving safety and refreshing training.

All training records shall also be maintained. Records shall also be maintained for incident analysis, OHS monitoring, emergency preparedness plan with emergency contact numbers, Mock drill/emergency preparedness exercise and Corrective preventive actions undertaken

Emergency Management

OHSMP shall have provision for preparation of emergency preparedness plan as well. It should have two major component "on site Emergency plan" and "emergency Control Centre'. The generic coverage under these two components are as follows:

Coverage 'On-Site Emergency Plan': The On-site emergency plan shall include the following:

- Name, Designation & Contact Numbers of the organization, nearby hospitals, fire agencies etc. and key personnel including their assigned responsibilities in case of an emergency.
- The roles and responsibilities of executing personnel
- Listing of Potential Emergencies Situations/ preventive measures / control & response measures
- Location of Emergency Control Centre (or designated area for emergency control / coordination) with requisite facilities.
- Medical services / first aid
- List of emergency equipment including fire extinguishers, fire suits etc.

Emergency Control Centre: The emergency control centre shall be equipped with following facilities

- Copy of current on-site emergency plan
- Display of the name of site emergency controller
- Two numbers of Stretchers
- Vehicle for 24 hours (for large construction sites)
- Inter personnel/section telephone (2 numbers)
- Directory of internal / external emergency phone Numbers
- A set of fire extinguishers (DCP type / Foam Type / CO2)
- List of fire extinguishers installed in the construction site including maintenance record
- A set of personal protective equipment (PPE)
- Two numbers of first-aid boxes with prescribed first-aid medicines
- List of competent first-aiders
- List of fire trained personnel
- Two numbers of blankets
- Drinking water
- Two numbers of rescue ropes

Safety Manual & Procedures:

- Distribute a comprehensive safety manual outlining equipment use, emergency response, and reporting procedures.
- Conduct regular safety meetings and trainings to reinforce protocols.
- Review and update safety measures based on feedback and evolving risks.

Safety Manual & Procedures:

- Distribute a comprehensive safety manual outlining equipment use, emergency response, and reporting procedures.
- Conduct regular safety meetings and trainings to reinforce protocols.
- Review and update safety measures based on feedback and evolving risks.

Reporting and Record Keeping:
Use the following table format to record safety checks and incidents:

Date	Activity/Task	Hazards Identified	Action Taken	Comments
YYYY-MM-DD	Machinery Operation	Overturning risk	Implemented ROPS on tractors	Regular inspection
YYYY-MM-DD	Chemical Handling	Spill risk	Spill kit used	Proper disposal
YYYY-MM-DD	Weather Conditions	Heat stress	Scheduled breaks	Monitoring workers
YYYY-MM-DD	Emergency Procedures	First aid training	Emergency contacts posted	Incident reported

Safety Manual Review and Updates:

- Conduct regular reviews of safety procedures.
- Update the safety manual based on feedback and incident reports.
- Communicate changes to all workers and provide necessary training.

Annexure 2.11 : Guideline For Ground Water Extraction

Objective of the Guidelines:
The objective of these guidelines is to promote sustainable groundwater use and minimize environmental impacts associated with project activities.

Scope and Coverage:
These guidelines apply to all project activities involving groundwater extraction, including but not limited to mini fish processing units, hatcheries, seed storage facilities, irrigation systems, and micro watershed management approaches.

Interface with Project Components:
The following activities involve groundwater extraction and are subject to mitigation measures:

- Establishment of Mini Fish Processing Unit
- Establishment, Modernization, and Upgradation of Hatcheries
- Setting Up Integrated Seed Storage, Processing, and Packing Facilities
- Laying of Water Channels and Plastic Pipes for Irrigation
- Water Extraction for Irrigation in Conjunctive Water Use and Management (CWUM)
- Utilization of Water in Micro Watershed Management Approaches

Regulatory Applicability:
Comply with local regulations and permits related to groundwater extraction, water use, and environmental conservation.

Activities and Corresponding Mitigation Measures:

Activity	Mitigation Measures
Establishment of Mini Fish Processing Unit	- Implement water recycling systems to reduce freshwater usage.
	- Monitor water quality to prevent contamination.
Establishment, Modernization, and Upgradation of Hatcheries	- Use efficient water recirculation systems to minimize consumption.
	- Treat and reuse hatchery effluents to reduce freshwater demand.
Setting Up Integrated Seed Storage, Processing, and Packing Facilities	- Adopt water-efficient processing technologies.
	- Implement rainwater harvesting for non-potable water needs.
Laying of Water Channels and Plastic Pipes for Irrigation	- Implement leak detection and repair programs.
	- Promote drip irrigation for precise water application.
Water Extraction for Irrigation in CWUM	- Monitor groundwater levels and adhere to extraction limits.
	- Use crop rotation and soil moisture conservation techniques.
Utilization of Water in Micro Watershed Management Approaches	- Implement water recharge strategies (e.g., check dams, percolation tanks).

	- Encourage community-based water conservation initiatives.

Implementation Tips:

- **Training:** Conduct regular training on water conservation practices.
- **Monitoring:** Monitor water usage and quality to ensure compliance.
- **Adaptation:** Adjust strategies based on local conditions and feedback.
- **Collaboration:** Engage with stakeholders for effective water management.

Reporting and Record Keeping:
Maintain records using the following format for groundwater extraction activities:

Groundwater Extraction Monitoring and Mitigation Record:

Date	Activity	Mitigation Implemented	Compliance Status
[Date]	Establishment of Mini Fish Processing Unit	Water recycling systems	[Compliant/Non-compliant]
[Date]	Laying of Water Channels for Irrigation	Leak detection and repair	[Compliant/Non-compliant]
[Date]	Utilization of Water in Micro Watershed	Water recharge strategies	[Compliant/Non-compliant]

Document implementation of mitigation measures, compliance status, and any corrective actions taken.

Annexure 2.12 : Guidelines For Cultural Heritage

The Ancient Monuments and Archaeological. Sites and Remains Act, 1958 and The Ancient Monuments and Archaeological Sites and Remains (Amendment and Validation) Act, 2010

The Ancient Monuments and Archaeological Sites and Remains Rules define the power of central government as follows "Categorisation and classification in respect of ancient monuments or archaeological sites and remains declared as of national importance. The Central Government shall, on the recommendation of the Authority, prescribe categories in respect of ancient monuments or archaeological sites and remains declared as of national importance under sections 3 and 4, and while prescribing such categories it shall have regard to the historical, archaeological and architectural value and such other factors as may be relevant for the purpose of such categorisation."

"The Central Government shall, on the recommendation of the Authority, classify all the ancient monuments or archaeological sites and remains declared as of national importance under sections 3 and 4, in accordance with the categories prescribed under sub-section (1) and thereafter make the same available to the public and exhibit the same on its website and also in such other manner as it may deem fit."

This Act provides for the preservation of ancient and historical monuments and archaeological sites and remains of national importance and for the regulation of archaeological excavations and for the protection of sculptures, carvings and other like objects. According to this Act, areas within the radii of 100m from the "Protected Monument" are designated as "Prohibited Areas" and from and from 200m are designated as "Controlled / Regulated Areas".

No development activity (including building, mining, excavating, blasting) is permitted in the "prohibited areas". Development activities likely to damage the protected monument are not permitted in the "controlled/regulated areas" without prior permission from the Archaeological Survey of India (ASI) if the site/remains/ monuments are protected by ASI or the State Directorate of Archaeology. No archaeological monument/site found along the proposed alignment except Rock Cut Caves. Hence the provisions of this Act will be applicable for this Project.

Guidelines for the chance findings of Cultural, Heritage and Archaeological Monument

- This act may also be applicable due to any chance finding of artefact during the construction. In such a case following guidelines are to be followed;
- All the staff and labours must be aware by the contractor and SPMU regarding the importance of Cultural, Heritage and Archaeological Monuments.
- The person or group of persons who first time find or see such an entity much inform the senior staff on the site.
- The senior staff must stop the work immediately and protect the site/structure/entity by barricading etc.
- The senior staff must inform immediately to the nearest office of the ASI for investigating the further.
- The ASI officials will examine and determine the importance of such a finding and will take the further necessary action accordingly.

Annexure 3 : Environmental and Social Management Plan (ESMP) Template & detailed framework

STANDARD ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP)

A. About:

An Environmental and Social Management Plan (ESMP) is a document that identifies potential environmental and social risks and impacts of a project, and outlines strategies to manage those risks and minimize undesirable impacts. The ESMP is an integral part of the project proposal and integrates the findings of all impact studies carried out during the design phase, as well as other provisions for complying with standards and country- and site-specific information relevant for the project's risk management strategy.

B. Background:

The Environment and Social Management Plan (ESMP) is designed to seamlessly integrate with the project's objectives and strategies, aligning with the findings and recommendations outlined in the comprehensive project documentation. It serves as a blueprint for implementing sustainable environmental practices at all stages of the project lifecycle, ensuring regulatory compliance, and promoting environmental stewardship.

C. Scope of ESMP:

The ESMP developed for the project will address key areas identified in the project documentation, including:

- Develop strategies for implementing environmental and social measures.
- Design a flexible framework to address project-specific needs.
- Ensure compliance with applicable environmental and social regulations.
- Define clear roles and responsibilities for project stakeholders.
- Establish effective monitoring, reporting, and evaluation procedures.
- Identify and address training needs for stakeholders.
- Enhance awareness and capacity for environmental and social management.

D. Updating of ESMF

- Step – 1: Identify the specific activity covered by the sub-project that requires updating of the standard Environmental and Social Management Plan (ESMP).
- Step – 2: Exclude any other activities that are not applicable to the identified sub-project.
- Step – 3: Review the activities listed in the screening/mitigation sheet compared to the activities proposed in the sub-ESMP.
- Step – 4: Determine if there are any additions or removals needed in the ESMP based on the identified activity.

E. Identification of ESMP:

The UPDASP project has following three major Components. Each of the component has various subcomponents. For the identification of the subcomponent wise ESMP a Unique ID has been provided to each ESMP in table below:

Unique Identification for component wise ESMP

S. No.	Component	Sub-Component	ESMP
1.	**Component – 1:** Productivity Enhancement	Sub-Component 1.1: Resource Use Efficiency for Productivity Enhancement.	ESMP – 1
2.		Sub-Component 1.2: Mechanism for Improved Seed System.	ESMP – 2
3.		Sub-Component 1.3: Strengthening Extension Services for Tailored Climate Smart Agronomic Practices.	ESMP – 3
4.	**Component – 2:** Commodity Clusters	Sub-component 2.1: Development of Agro-Clusters.	ESMP – 4
5.		Sub-component 2.2: Fisheries Clusters Development.	ESMP – 5
6.	**Component – 3:** Digital and Financial Ecosystems	Sub-component 3.1: Digital Architecture and Technology Services. Sub-component 3.2: Enabling Agri Finance Ecosystems and Promoting Innovations. Sub-Component 3.3: Promoting Innovations.	ESMP – 6

F. Structure of ESMP

- Key features of the ESMP
- Environmental Quality Monitoring
- Responsibility & Reporting
- Environmental Budget

Annexure 3.1 : Standard ESMP – 1: Resource Use Efficiency for Productivity Enhancement

Key features of the Standard ESMP – 1

- Standard ESMP – 1 deal with the activity of Productivity Enhancement and focuses on resource use efficiency for productivity enhancement. This ESMP is based on risk and impact analysis and a screening exercise.
- Based on the ESMP plan, DPIU and the implementation group/people can identify the risks and related mitigation activities to be carried out during the project implementation activity.
- Standard ESMP – 1 indicates the environmental quality monitoring and environmental budget allocation for mitigation activity.
- These ESMPs also define the responsibility and reporting for implementation and supervision of mitigation activities.
- A detailed description of the mitigation activities incurred with the ESHS risk is given in the table below.

Table 1-1: Standard ESMP for Resource Use Efficiency for Productivity Enhancement

Sl. No.	Activity	ESHS Risk	Suggested Mitigation (It will be further updated as per the plan and guideline identified in the screening template)	Legislation Applicable (If any)	Implementation responsibilities	Supervision Responsibility
1	***Soil Productivity Sub System related activities***					
a.	Soil Testing	Generation of plastic waste and disposal of left over soil samples at Laboratory level	**Guideline Refer:** **PWG, SWG, APG, OHSG** • Ensuring that labs used are NABL accredited having defined procedures for sample collection, testing and waste management. Explore possibility of developing recyclable bags for soil sample collection and transportation. • Use biodegradable bags or containers for collecting soil samples.	NABL accredited laboratory	District Project Implementation Unit (DPIU)/Group/Person/Contractor	State Project Management Unit (SPMU)

			• Encourage reuse of containers for storing soil samples. • Implement a recycling program for plastic waste generated during testing. • Compost organic waste like plant materials from soil testing. • Segregate and recycle paper, cardboard, and packaging materials. • Conduct soil testing indoors with proper ventilation to minimize airborne dust. • Use dust extraction systems to control airborne particles. • Provide personal protective equipment (PPE) such as gloves and masks for lab personnel. • Conduct regular training on waste management and safety protocols for soil testing activities.			
b.	Green Manuring	Beneficial Aspects	---	**---**	District Project Implementation Unit (DPIU)/Group/Person/Contractor	State Project Management Unit (SPMU)

c.	Soil Amendments (Gypsum)	Gypsum from industry sources may have contaminates and result in soil contamination. Gypsum handling may have air pollution issue	**Refer Guideline:** **PWG, APG, OHSG, RCP** • Gypsum to be procured from mines sources only. Handling of Gypsum in bags and not in loose conditions. Create awareness on safe handling and use of proper PPE. (gloves, goggles, masks, overcoats etc) and application of gypsum in the fields. • Use biodegradable bags or containers for storing and transporting gypsum. • Keep gypsum handling areas enclosed to minimize dust and airborne particles. • Provide masks or respiratory protection for workers handling gypsum. • Source gypsum from trusted suppliers to ensure quality and	---	District Project Implementation Unit (DPIU)/Group/Person/Contractor	State Project Management Unit (SPMU)

			reduce contamination risks.			
d.	Crop Residue management (CRM)	Air pollution if farmer resorts to burning of crop residue instead of CRM practices	**Refer Guideline:** **APG, OHSG, GAP** • Create awareness with farmers and make agreement with FPG to ensure CRM through waste decomposing. Ensure proper collection, storage, and disposal/processing facilities of crop residue. • Avoid burning crop residue; instead, use mulching or composting methods. • Implement crop residue management (CRM) techniques such as plowing under residue or using it as mulch. • Provide training to farmers on alternative	---	District Project Implementation Unit (DPIU)/Group/Person/Contractor	State Project Management Unit (SPMU)

			methods of crop residue disposal to reduce air pollution. • Use machinery that can effectively manage crop residue without burning, such as mulchers or choppers. • Provide machinery to eligible women farmers and entrepreneurs without gender bias and discrimination • Ensure proper ventilation and respiratory protection for farmers during crop residue management activities to protect against air pollution and health risks. • Provide safe drinking water and toilet facilities with running water facility for the workers at the processing site. • Ensure to provide separate toilets for women employees. • Ensure that the CRM is located away from			

			the residential area at least 500m • Ensure that the CRM is at least 100 m away from irrigation canals • If the CRM facility is built on common area in a village, ensure to avail Gram Panchayat permission and resolution from the grama sabha.			
e.	Micronutrients Enhancement	Excessive level of Zn in soil can alter soil and aquatic microbial diversity and thus affect the bioavailability and absorption of other metals	**Refer Guideline:** **PWG, OHSG, RCP** • Development of zinc level monitoring program and controlled application of zinc sulphate to avoid excessive Zn level related impact. • Use soil testing to monitor zinc levels regularly. • Apply zinc-containing fertilizers or soil amendments only based on soil test results. • Avoid excessive use of zinc-based products	---	District Project Implementation Unit (DPIU)/Group/Person/Contractor	State Project Management Unit (SPMU)

			to prevent soil contamination. • Implement crop rotation and cover cropping to naturally balance soil nutrients. • Provide workers with training on safe handling of zinc-containing materials. • Use personal protective equipment (PPE) such as gloves and masks during fertilizer application. • Store zinc-containing materials securely and away from water sources to prevent environmental contamination.			
2.	***Soil Input Efficient Sub System related activities***					
a.	Micro Watershed Approach in Bundelkhand	Nonspecific however has direct relevance for water conservation	• Undertaking firm confirmation from concerned Govt authorities for the district to be covered under this conservation plan and planning the conservation measures as per district settings.	---	District Project Implementation Unit (DPIU)/Group/Person/Contractor	State Project Management Unit (SPMU)

			• Conservation of rainwater from draining out from the field or watershed area.			
b.	Bunding and Laser Land Levelling	Laser Land levellers' maintenance may generate various liquids , solid and hazardous Waste (waste oil) which can pollute the recipient environment.	**Refer Guideline:** **SH, OHS, CI, HW, LW, SW, RCP** • Development of waste management programme involving of *collection* of waste oil and its disposal through authorized recyclers, Wastewater to pass through a pit with oil removal baffle mechanism, mechanism , provision of concreted floor with spilled oil collection pit or storage of lubricant and other oils. • Use drip pans or containment systems to capture and collect waste oil during maintenance. • Implement regular inspections and maintenance to	• Hazardous waste authorization from PCB under spent oil category.	District Project Implementation Unit (DPIU)/Group/Person/Contractor	State Project Management Unit (SPMU)

			minimize oil leaks and spills. • Provide training to workers on proper waste handling and disposal procedures. • Use environmentally friendly alternatives for lubricants and maintenance products. • Ensure proper labelling and storage of waste oil to prevent contamination. • Dispose of waste oil through authorized recycling or disposal facilities. • Equip workers with appropriate personal protective equipment (PPE) during maintenance activities. • Implement spill prevention and response protocols to minimize environmental impact. • Ensure that the land levellers have hand held fire extinguishers in place.			

			• It is advised to avail permission from gram sabha and gram panchayat before taking up this activity.			
c.	Enhancing Application of Bio Fertilisers	Nonspecific as it relates to providing only financial support to farmers for buying and using Bacterial, fungal or algal bio-fertilisers)	**--**	**---**	District Project Implementation Unit (DPIU)/Group/Person/Contractor	State Project Management Unit (SPMU)
d.	Conjunctive water use and Management (CWUM)	Plastic waste disposal issue in the form of damaged pipes used for drip irrigation, disposal related	**Refer Guideline:** **SH, OHS, GWE, PW, CI** • Train workers on safe handling practices for plastic pipes. • Provide and enforce the use of personal protective equipment (PPE) during pipe handling. • Regularly inspect pipes for damage and replace them promptly.	• In case of ground water extraction for commercial purpose, permission for ground water extraction to be obtained.	District Project Implementation Unit (DPIU)/Group/Person/Contractor	State Project Management Unit (SPMU)

			• Monitor groundwater levels to prevent over-extraction. • Implement water conservation practices like drip irrigation. • Promote recycling of damaged plastic pipes. • Educate farmers and workers on responsible plastic waste disposal practices.			
3	***Farming Practices- Technology Sub System Related Activities:***					
a.	*Farm Machineries* *(Promotion of CHC and FMBs)*	Only related to maintenance of Farm machineries ay CHC. Elite capture of project benefit. Inadequate representation of the poorest and most vulnerable communities, especially women and tribal communities in decision making.	**Reference Guideline:** **SW, SEW, AP, HW, OHS, CI, GAP** • Same as proposed for land laser levellers above. Evolve robust selection criteria for providing farm machineries. • Ensure regular maintenance and servicing of farm machinery at CHCs to prolong their lifespan and prevent breakdowns.	---	District Project Implementation Unit (DPIU)/Group/Person/Contractor	State Project Management Unit (SPMU)

			• Train farmers on proper handling and maintenance of farm machinery to reduce repair costs and downtime. • Use biodegradable or recyclable materials for storing and disposing of solid waste generated from farm machinery. • Properly segregate and dispose of hazardous waste (e.g., used oil, chemicals) through authorized vendors or recycling facilities to minimize environmental impact. • Provide adequate ventilation and use protective equipment (e.g., masks, goggles) to reduce exposure to air pollutants generated by farm machinery. • Conduct regular safety inspections and training sessions to mitigate risks associated with farm			

			machinery operation and maintenance. • Ensure adequate representation of women in availing the equipment, training and availing financial assistance. • Ensure that members of SC and ST communities are adequately represented in availing the equipment, training and financial assistance.			
b.	*Plant Protection* (Use of IPM technology – use of mechanical/ biological/ use of pheromones)	Mulching may also involve use of plastics and its wastage at removal stage, leads to plastic wastage in the field. A big issue**.** Handling of pheromones again has handling and wastage issues. OHS issue of handling need oil. Selection of field away from	**Reference Guideline:** **PW, SEW, IPM, OHS,** • Development of standard procedures for safe storage of neem oil, removal of all plastic from field effectively or develop alternative to plastic sheet use, develop fire protection measures, Use of proper PPE protection. Select field away from ecologically	**---**	District Project Implementation Unit (DPIU)/Group/Person/Contractor	State Project Management Unit (SPMU)

		ecologically protected areas.	protected areas. Avoid Reserve forests, National parks Biosphere reserve, critically degraded areas, and declared disturb areas. • Use biodegradable mulching materials instead of plastics to reduce plastic waste in the field. • Provide proper training on the safe handling and disposal of pheromones to minimize environmental impact. • Implement oil spill prevention measures and use eco-friendly alternatives for pest control to address health and safety concerns. • Select fields for IPM practices away from ecologically sensitive areas to avoid negative impacts on biodiversity and natural habitats**.**			

6.1. Environment Quality Monitoring

The environment monitoring Programme shall include all aspects of monitoring viz air, water, noise, soil, biodiversity, tree survivability, Accident, incident, waste disposal, etc. as detailed under different plans. Suggested Table and monitoring parameters are given below.

Table 1-2: Monitoring plan for Environmental Quality.

S. No.	Activity	Parameters	Frequency

1.	Soil Testing	• pH (Soil Acidity or Alkalinity)
		• Nutrient Levels:
		  • Nitrogen (N)
		  • Phosphorus (P)
		  • Potassium (K)
		• Micronutrients (e.g., **zinc**, iron, manganese, copper)
		• Organic Matter
		• Cation Exchange Capacity (CEC)
		• Soil Texture (proportions of sand, silt, and clay)
		• Soil Moisture
		• Electrical Conductivity (EC)
		• Bulk Density
		• And As required
			After every crop harvesting.

2.	Compliance report	Regulatory compliance of respective authorities	Six Monthly/ Quarterly as need base

6.2. Responsibility & Reporting

DPIU (District Project Implementation Unit)/Implementation Group/Persons/ Contractor will work in co-ordination with district line departments under the leadership of District Magistrate & technical support agencies (TSA).

DPIU will submit the compliance report on quarterly basis and progress report on half yearly basis to the SPMU (State Project Management Unit) of UPDASP. SPMU will be Supervision, and review of planning, implementation, and monitoring of project activities on regular bases. The Components/Interventions of the project shall be implemented by the SPMU at the state level.

6.3. Environmental Budget

The environment budget must consist of resource allocation for implementation of different mitigation measures, legislative permits approvals and compliances, Training Awareness and Monitoring and reporting. The following table shall be used for Environmental Budget.

Table 1-3 Environmental Budget

S. No.	Component	Mitigation activity	Rate (in Rs.)/ unit	No of Units	Total Costs (in Rs.)
1.	Infrastructure development for mitigation				
2.	Monitoring	• Sampling & testing of Soil samples • Regulatory Compliance report			

Annexure 3.2 : Standard ESMP – 2: Mechanism for Improved Seed System

Key features of the ESMP

- Standard ESMP – 2 deal with the activity of Productivity Enhancement and focuses on Mechanism for Improved Seed System. This ESMP is based on risk and impact analysis and a screening exercise.
- Based on the ESMP plan, DPIU and the implementation group/people can identify the risks and related mitigation activities to be carried out during the project implementation activity.
- Standard ESMP – 2 indicates the environmental quality monitoring and environmental budget allocation for mitigation activity.
- These ESMPs also define the responsibility and reporting for implementation and supervision of mitigation activities.
- A detailed description of the mitigation activities incurred with the ESHS risk is given in the table below.

Table 2-4: Standard ESMP for Mechanism for Improved Seed System

Sl No.	Activity	ESHS Risk	Suggested Mitigation (It will be further updated as per the plan and guideline identified in the screening template)	Legislation Applicable (If any)	Implementation responsibilities	Supervision Responsibility
2.	**Seed Production and Distribution Systems**	Adoption of climate resilience technology for seed production covering short duration and stress tolerant. Awareness generation for having seed license for sale, storage, distribution and usage of seeds. Nonspecific as this activity is more of plans oriented.	**Refer Guideline:** **PW, HW, SW, SEW, AP, NP, IPM, LM, OHS, SH, CI** • Adoption of climate resilience technology for seed production covering short duration and stress tolerant. • Use biodegradable materials for seed packaging to reduce waste. • Implement a recycling program for seed containers and packaging materials. • Encourage farmers to compost organic	---	District Project Implementation Unit (DPIU)/Group/Person/Contractor	State Project Management Unit (SPMU)

			waste from seed processing. • Provide training to laborers on proper waste disposal techniques. • Ensure laborers have access to adequate rest and sanitation facilities. • Store and handle seed treatment chemicals safely in designated areas. • Use spill containment measures and provide protective equipment for workers. • Enclose noisy equipment during seed processing to reduce noise levels. • Schedule noisy activities during non-peak hours to minimize community disturbance. • Regularly maintain equipment to reduce emissions during seed processing. • Adopt low-emission technologies for seed			

			treatment and processing operations. • Ensure adequate representation of women, SCs and STs in availing the benefits of this sub component. • Provide training to women on seed production and allied activities.			
2.	***Establishment of Seed Hubs***	Generation of Seed handling waste (plastic waste) and other environmental issues (at processing units- Waste water generation, waste oil generation, solid waste generation, and OHS issue	**Refer Guideline:** **PW, SW, SEW, AP, NP, IPM, HW, GWE, LM, OHS, SH, SEP, RCP** • Promote use of Recyclable or bio-degradable packaging material. Adopt waste management practices as per norms specified by State Pollution control board for such a smaller unit and obtain connect to establish from board before setting up processing facilities	Consent to Establish and Consent to Operate to be obtained from concerned Pollution Control Board (PCB) before establishment and operation respectively.	District Project Implementation Unit (DPIU)/Group/Person/Contractor	State Project Management Unit (SPMU)

			• Segregate plastic waste for recycling and proper disposal. • Train labour on waste segregation and disposal practices. • Store and handle seed treatment chemicals securely. • Enclose noisy equipment to reduce noise pollution. • Use low-emission technologies for seed processing. • Promote good hygiene practices among workers. • Compost organic waste from processing units. • Provide ear protection for workers in noisy areas. • Dispose of hazardous waste through authorized vendors. • Maintain machinery to minimize emissions. • Adequate representation of women, members of SCs and STs should be maintained.			

			• Gram Sabha resolution and Gram Panchayat permission should be availed prior to establishing the seed hub.			

Environment Quality Monitoring

The environment monitoring Programme shall include all aspects of monitoring viz air, water, noise, soil, biodiversity, tree survivability, Accident, incident, waste disposal, etc. as detailed under different plans. Suggested Table and monitoring parameters are given below.

Table 2-5: Monitoring plan for Environmental Quality

S. No.	Component	Activity	Monitoring Requirement	Frequency
1.	Compliance report	Validating the activities suggested are implemented.	As required	Six Monthly/ Quarterly as need base

6.4. Responsibility & Reporting

DPIU (District Project Implementation Unit)/Implementation Group/Persons/ Contractor will work in co-ordination with district line departments under the leadership of District Magistrate & technical support agencies (TSA).

DPIU will submit the compliance report on quarterly basis and progress report on half yearly basis to the SPMU (State Project Management Unit) of UP-Agrees. SPMU will be Supervision, and review of planning, implementation, and monitoring of project activities on regular bases. The Components/Interventions of the project shall be implemented by the SPMU at the state level.

Environmental Budget

The environment budget must consist of resource allocation for implementation of different mitigation measures, legislative permits approvals and compliances, Training Awareness and Monitoring and reporting. The following table shall be used for Environmental Budget

Table 2-6 En Environmental Budget

S. No.	Component	Activity	Rate (in Rs.) per Unit	No. of Quantity	Total Costs (in Rs.)
1.	Infrastructure				
2.	Monitoring	Regulatory Compliance report			

Annexure 3.3 : Standard ESMP – 3: Strengthening Extension Services for Tailored Climate Smart Agronomic Practices.

Key features of the ESMP

- Standard ESMP – 3 deal with the activity of Productivity Enhancement and focuses on Strengthening Extension Services for Tailored Climate Smart Agronomic Practices. This ESMP is based on risk and impact analysis and a screening exercise.
- Based on the ESMP plan, DPIU and the implementation group/people can identify the risks and related mitigation activities to be carried out during the project implementation activity.
- Standard ESMP – 3 indicates the environmental quality monitoring and environmental budget allocation for mitigation activity.
- These ESMPs also define the responsibility and reporting for implementation and supervision of mitigation activities.
- A detailed description of the mitigation activities incurred with the ESHS risk is given in the table below.

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Table 3-7: Standard ESMP for Strengthening Extension Services for Tailored Climate Smart Agronomic Practices

Sl No.	Activity	ESHS Risk	Suggested Mitigation (It will be further updated as per the plan and guideline identified in the screening template)	Legislation Applicable (If any)	Implementation responsibilities	Supervision Responsibility
1.	***Strengthening Advisory Platform at District and State Levels***	Non-Specific	**Refer Guideline:** **SEP** • However, integration of climate consideration and its dissemination as part of technical know-how will be important. • Participate in stakeholder meetings to voice concerns and suggestions. • Engage with district and state-level advisors for	**---**	District Project Implementation Unit (DPIU)/Group/Person/Contractor	State Project Management Unit (SPMU)

			agricultural guidance. • Provide feedback to district and state authorities on farming challenges. • Collaborate with advisory platforms for knowledge sharing and skill development.			
2.	**Partnership with Technical Institutions**	None-Specific	**Refer Guideline:** **SEP** • UPDASP to explore options to reduce farm fire in these districts to prevent air pollution and generation GHGs. Regular follow up, monitoring	**---**	District Project Implementation Unit (DPIU)/Group/Person/Contractor	State Project Management Unit (SPMU)
3.	**Technology adoption and infrastructure**	Lack of EHS considerations in planning	• Create awareness and provide incentive for adoption of climate resilience technologies, Development of storage and	---	District Project Implementation Unit (DPIU)/Group/Person/Contractor	State Project Management Unit (SPMU)

			transport support-integration with existing schemes and support from project. Development of robust monitoring and evaluation framework enabling information collation and dissemination with achievable targets • Increase awareness about the importance of environmental, health, and safety (EHS) considerations in adopting climate resilience technologies. • Provide incentives for farmers to adopt EHS-friendly technologies during planning stages. • Develop storage and transport support systems that integrate with			

			existing schemes and project initiatives. • Women and representatives of SC and ST communities should have adequate representation in the technology adoption and infrastructure.			

Environment Quality Monitoring

The environment monitoring programme shall include all aspects of monitoring viz air, water, noise, soil, biodiversity, tree survivability, Accident, incident, waste disposal, etc as detailed under different plans. Suggested Table and monitoring parameters are given below

Table 3-8: Monitoring plan for Environmental Quality.

S. No.	Activity	Component	Monitoring Requirement	Frequency
1.	Compliance report	Validating the activities suggested are implemented.	As required	Six Monthly/ Quarterly as need base

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Responsibility and reporting

DPIU (District Project Implementation Unit)/Implementation Group/Persons/ Contractor will work in co-ordination with district line departments under the leadership of District Magistrate & technical support agencies (TSA).

DPIU will submit the compliance report on quarterly basis and progress report on half yearly basis to the SPMU (State Project Management Unit) of UP-Agrees. SPMU will be Supervision, and review of planning, implementation, and monitoring of project activities on regular bases. The Components/Interventions of the project shall be implemented by the SPMU at the state level.

Environmental Budget

The environment budget must consist of resource allocation for implementation of different mitigation measures, legislative permits approvals and compliances, Training Awareness and Monitoring and reporting. The following table shall be used for Environmental Budget

Table 3-9 En Environmental Budget

S. No.	Component	Rate (in Rs.)/ Unit	No. of Units	Total Costs (in Rs.)
1	Infrastructure			
2.	Monitoring	Regulatory Compliance Report		

Annexure 3.4 : Standard ESMP – 4: Development of Agro-Clusters

Key features of the ESMP

- Standard ESMP – 4 deal with the activity of Commodity Clusters and focuses on Development of Agro-Clusters. This ESMP is based on risk and impact analysis and a screening exercise.
- Based on the ESMP plan, DPIU and the implementation group/people can identify the risks and related mitigation activities to be carried out during the project implementation activity.
- Standard ESMP – 4 indicates the environmental quality monitoring and environmental budget allocation for mitigation activity.
- These ESMPs also define the responsibility and reporting for implementation and supervision of mitigation activities.
- A detailed description of the mitigation activities incurred with the ESHS risk is given in the table below.

Table 4-10: Standard ESMP for Development of Agro-Clusters

Sl No.	Activity	ESHS Risk	Suggested Mitigation (It will be further updated as per the plan and guideline identified in the screening template)	Legislation Applicable (If any)	Implementation responsibilities	Supervision Responsibility
1.	***Identification of commodities and regions for interventions*** **Conducting Commodity Wise Diagnostics**	None as such being planning oriented	**Refer Guideline:** **CI, SEP** • Environmental issues like transportation, storage, and handling losses to be part of mitigation measures for supply chain value considerations	**---**	District Project Implementation Unit (DPIU)/Group/Person/Contractor	State Project Management Unit (SPMU)
2.	***Preparing Cluster Development Plans (CDP)***	Regulatory noncompliance for processing units, and pest management and pesticide application, Plastic	**Refer Guideline:** **CI, SEP**	**---**	District Project Implementation Unit (DPIU)/Group/Person/Contractor	State Project Management Unit (SPMU)

		waste generation and disposal-soil fertility/productivity, hazardous waste – pesticide container and neem oil container disposal, zin contaminations, OHS issue in processing and application of neem oil and pesticides	• Each unit will develop waste management and disposal plan including provision of capital costs for waste handling and management infrastructure at processing plants. Provision to be made for handling and disposal of hazardous waste. Mandatory to obtain consent to establish from State Pollution Control Board before start of construction of the unit. Adopting robust OHS programme including creating awareness among the farmers. • Develop a waste management and disposal plan for processing units to handle plastic waste, hazardous			

			waste (like pesticide containers and neem oil containers), and zinc contaminations. • Allocate funds for establishing waste handling and management infrastructure at processing plants. • Obtain consent to establish from the Pollution Control Board before beginning construction of processing units. • Ensure fire safety measures and first aid provisions are in place at processing units. • Provide appropriate personal protective equipment (PPE) to safeguard human health during processing and pesticide application.			

			• Provide safe drinking water and clean toilets, with running water facilities for the workers. • Provide separate toilets for women with adequate running water facility.			
3	***Implementation of Cluster Development Plans***					
	Mobilisation of Beneficiaries	Maintenance of mechanised equipment by lead farmers and disposal of related waste including waste oil etc.	**Refer Guidelines** **SW, SEW, HW, OHS, SEP, CI** • Farmer to ensure that it follow the waste management practices for handling machine maintenance waste. Provide equitable access to all communities especially women and tribals. • Use designated containers or	**---**	District Project Implementation Unit (DPIU)/Group/Person/Contractor	State Project Management Unit (SPMU)

			collection points for waste oil and related machine maintenance waste. • Store waste oil in sealed containers and dispose of it at authorized collection centres. • Educate farmers on the importance of proper waste disposal and its impact on the environment. • Implement regular cleaning and maintenance schedules for equipment to minimize waste generation.			
	Improving Quality and access to Seeds Production and distribution of Seeds by Private enterprises	Wastage of certified seeds due to improper handling/storage. Same as associated with handling of seed as by lead farmers. Beneficial only	**Refer Guideline** **SW, IPM, OHS, SEP, CI** • Implement proper storage practices for seeds to prevent	**---**	District Project Implementation Unit (DPIU)/Group/Person/Contractor	State Project Management Unit (SPMU)

	Training for seed processing Testing and Storage		wastage due to spoilage. • Ensure that seeds are stored in dry and cool conditions to maintain viability. • Regularly inspect stored seeds for signs of pests or disease. • Use appropriate containers and packaging materials to protect seeds during storage and transport. • Train staff on safe handling procedures to avoid damage to seeds. • Provide adequate ventilation in seed storage areas to prevent Mold growth. • Use personal protective equipment (PPE) such as			

			gloves and masks when handling seeds and chemicals. • Provide safe drinking water and clean toilets, with running water facilities for the workers. • Provide separate toilets for women with adequate running water facility.			
	Crop Management Practices- **Development of Customised package of Practices** **(POP**)	Integrate Environment best practices as part of POP development	**Refer Guideline:** **PI, GWE, SEP** • Include crop rotation to enhance soil fertility and reduce pest pressure. • Encourage intercropping to optimize land use and promote biodiversity. • Use organic fertilizers and compost to	**---**	District Project Implementation Unit (DPIU)/Group/Person/Contractor	State Project Management Unit (SPMU)

			minimize chemical inputs. • Implement integrated pest management (IPM) techniques using beneficial insects and pheromone traps. • Adopt water-saving practices like drip irrigation and rainwater harvesting. • Practice proper waste management by composting crop residues. • Promote soil conservation methods such as mulching and cover cropping. • Ensure safety practices during pesticide application, including wearing protective gear. • Monitor soil health and water quality regularly for sustainable management.			

	Crop Management Practices- **Assessment of Maximum Residue Level** **(MRL)**	Outcome depends on Accuracy of results from lab as weak results may lead to wrong practices and soil fertility, means resource loss**.**	**Refer Guideline:** **PI, GWE, SEP** • Ensuring that NABL accredited labs are only used, and they follow standard protocol for ensuring accuracy of the test results. • Ensure that the labs follow standard protocols to ensure accurate test results. • Verify the accuracy of lab results before making decisions on crop management practices. • Avoid using weak or unreliable lab results to prevent incorrect practices that could impact soil			

			fertility and resource loss.			
	Crop Management Practices- Demonstration Plot and Training and Field Exposure	No risk anticipated except for relevant activities already discussed in component 1.	As discussed under component 1			
	Farm Mechanisation and IT enabled services	Mechanisation related aspects which are already covered under mechanisation subcomponent of component 1.	As discussed under component 1			
	Storage	Potential of accidental release of Ammonia, waste generation from these facilities, wastage of food due to improper temperature management in cold storages, Regulatory noncompliance, occupational health and safety, GHG/Ozone Depleting substances Releases (HCFCs)**.**	**Refer Guideline:** **PW, SW, SEW, AP, NP, HW, LMP, OHS, SH, CI** Environmental assessment shall be undertaken and mitigation plan to be developed based on the assessment. Comply with Food safety norms with	FSSAI Approval Consent to Establish & Consent to Operate from UPPCB before installation and operation respectively.	District Project Implementation Unit (DPIU)/Group/Person/Contractor	State Project Management Unit (SPMU)

		Inadequate representation of the poorest and most vulnerable communities, especially women and tribal communities in decision making. SEA/SH risk during construction. Elite capture of project benefit	registration under FSSAI. Develop guidelines for ensuring all farmers ensuing is benefitted without partiality. Provisions for OHS to be included in the storage areas. Steps should be taken to avoid pest management with chemicals and adopt Integrated Pest Management (IPM) for safeguarding storage material. • District Project Implementation Unit (DPIU)will Install onsite wastewater treatment systems. • Use sedimentation basins or settling tanks to remove solids. • Implement biological treatment			

			methods (e.g., activated sludge) to degrade organic matter. • Regularly monitor effluent quality to meet regulatory standards. • Install dust control systems and adopt low-emission processing methods. • Provide workers with ear plugs or earmuffs to reduce exposure to loud noise. • Provide training on machinery operation, chemical handling, and emergency procedures. • Provide essential PPE tailored to farm activities (e.g., helmets, gloves, eye protection). • Ensure all workers understand how			

			to use and maintain their PPE. • Check and replenish first aid kits regularly. • Ensure kits are easily accessible and known to all workers. • Sufficient supply of potable water in the camps, in overhead tanks or any other suitable containers. • Every water supply or storage shall be at a distance of not less than 15m from any wastewater / sewage drain or other source of pollution. • Provision of regular cleaning of water tanks in the camps. • Provision on arrangement of drainage for draining away wastewater from			

			key locations such as washing clothes area, hand washbasins, utensils washing in kitchen, bathing area, etc. • Provisions of wastewater handling system to be provided on each camp site. • Criteria to be followed on the provision of sufficient bathroom facilities in accordance with the number of workers accommodated in the camp. • Separate latrines for male and female. • Every latrine shall be under cover and so partitioned as to secure privacy, and shall have a proper door and fastenings. • Soak pits of adequate sizes			

			shall be provided in the camp. Regular cleaning shall be done and sewerage disposal shall be done through vendors, if available. • Two different bins shall be provided in kitchen for collection of biodegradable and non-biodegradable waste temporarily and shall be disposed-off through approved vendors or to a municipal waste collection bin, if available nearby. • Dispose of waste through authorized vendors or agencies.			
	Processing Facilities	Potential occupational health and safety to workers and community,	**Refer Guidelines:**	FSSAI Approval	District Project Implementation Unit (DPIU)/Group/Person/Contractor	State Project Management Unit (SPMU)

		water wastages and liquid waste disposal - potential contamination of land and water resources, hazardous waste generation and disposal linked effect, air pollution, solid waste disposal linked regulatory noncompliance risk, elite capture of project benefit. Inadequate representation of the poorest and most vulnerable communities, especially women and tribal communities in decision making. SEA/SH risk during construction	**PW, SW, SEW, AP, NP, HW, LMP, OHS, SH, CI** • Environmental assessment shall be undertaken and mitigation plan to be developed based on the assessment. Comply with Food safety norms with registration under FSSAI. Develop guidelines for ensuring all farmers ensuing is benefitted without partiality. Steps should be taken to avoid pest management with chemicals and adopt Integrated Pest Management (IPM) for safeguarding the raw material and products.	Consent to Establish & Consent to Operate from UPPCB before installation and operation respectively.		

			• District Project Implementation Unit (DPIU)will Install onsite wastewater treatment systems. • Use sedimentation basins or settling tanks to remove solids. • Implement biological treatment methods (e.g., activated sludge) to degrade organic matter. • Regularly monitor effluent quality to meet regulatory standards. • Install dust control systems and adopt low-emission processing methods. • Provide workers with ear plugs or earmuffs to reduce exposure to loud noise.			

			• Provide training on machinery operation, chemical handling, and emergency procedures. • Provide essential PPE tailored to farm activities (e.g., helmets, gloves, eye protection). • Ensure all workers understand how to use and maintain their PPE. • Check and replenish first aid kits regularly. • Ensure kits are easily accessible and known to all workers. • Sufficient supply of potable water in the camps, in overhead tanks or any other suitable containers. • Every water supply or storage			

			shall be at a distance of not less than 15m from any wastewater / sewage drain or other source of pollution. • Provision of regular cleaning of water tanks in the camps. • Provision on arrangement of drainage for draining away wastewater from key locations such as washing clothes area, hand washbasins, utensils washing in kitchen, bathing area, etc. • Provisions of wastewater handling system to be provided on each camp site. • Criteria to be followed on the provision of sufficient bathroom facilities in accordance			

			with the number of workers accommodated in the camp. • Separate latrines for male and female. • Every latrine shall be under cover and so partitioned as to secure privacy, and shall have a proper door and fastenings. • Soak pits of adequate sizes shall be provided in the camp. Regular cleaning shall be done and sewerage disposal shall be done through vendors, if available. • Two different bins shall be provided in kitchen for collection of biodegradable and non-biodegradable waste temporarily and shall be			

			disposed-off through approved vendors or to a municipal waste collection bin, if available nearby. • Dispose of waste through authorized vendors or agencies.			
	Market Development , Capacity Development and Food Safety	No EHS risk as such	**---**	**---**	District Project Implementation Unit (DPIU)/Group/Person/Contractor	State Project Management Unit (SPMU)

6.5. Environment Quality Monitoring

The environment monitoring programme shall include all aspects of monitoring viz air, water, noise, soil, biodiversity, tree survivability, Accident, incident, waste disposal, etc as detailed under different plans. Suggested Table and monitoring parameters are given below.

Table 4-11: Monitoring plan for Environmental Quality.

S. No.	Activity	Component	Monitoring Requirement	Frequency
1.	Setting up Processing facilities	Setting up Processing facilities	Water Quality (pH, turbidity, DO, COD)	Weekly during operational phase
			Effluent Discharge (BOD, TSS)	Weekly during operational phase
			Air Quality (Particulate matter, VOCs)	Monthly during operational phase
			Noise Levels	Monthly during operational phase
			Equipment Maintenance	Quarterly
			Occupational Health & Safety	Monthly
2.	Assessment of Maximum Residue Level (MRL)	Use only NABL accredited labs for testing maximum residue levels (MRL).	MRL Level	Quarterly
3.	Compliance report	Validating the activities suggested are implemented.	As required	Six Monthly/ Quarterly as need base

6.6. Responsibility & Reporting

DPIU (District Project Implementation Unit)/Implementation Group/Persons/ Contractor will work in co-ordination with district line departments under the leadership of District Magistrate & technical support agencies (TSA).

DPIU will submit the compliance report on quarterly basis and progress report on half yearly basis to the SPMU (State Project Management Unit) of UP-Agrees. SPMU will be Supervision, and review of planning, implementation, and monitoring of project activities on regular bases. The Components/Interventions of the project shall be implemented by the SPMU at the state level.

6.7. Environmental Budget

The environment budget must consist of resource allocation for implementation of different mitigation measures, legislative permits approvals and compliances, Training Awareness and Monitoring and reporting. The following table shall be used for Environmental Budget

Table 4-12 Environmental Budget

S. No.	Component	Activity	Rate (in Rs.)/Unit	No. of Units	Total Costs (in Rs.)
1.	Infrastructure				
2.	Monitoring	• Processing Facilities • MRL Level • Regulatory Compliance Report			

Annexure 3.5 : Standard ESMP – 5: Fisheries Clusters Development

A. Key features of the ESMP

- Standard ESMP – 5 deal with the activity of Commodity Clusters and focuses on Fisheries Clusters Development. This ESMP is based on risk and impact analysis and a screening exercise.
- Based on the ESMP plan, DPIU and the implementation group/people can identify the risks and related mitigation activities to be carried out during the project implementation activity.
- Standard ESMP – 5 indicates the environmental quality monitoring and environmental budget allocation for mitigation activity.
- These ESMPs also define the responsibility and reporting for implementation and supervision of mitigation activities.
- A detailed description of the mitigation activities incurred with the ESHS risk is given in the table below.

Table 5-13: Standard ESMP for Fisheries Clusters Development

Sl No.	Activity	ESHS Risk	Suggested Mitigation (It will be further updated as per the plan and guideline identified in the screening template)	Legislation Applicable (If any)	Implementation responsibilities	Supervision Responsibility
1.	**Sustainable Increase of Production in Ponds**					
a.	Assured Supply of Improved Seeds	Negligible except potential loss of fish seed and generation of waste bio mass	**Refer Guidelines:** **SW, SEW, GWE, LMP, OHS, SEP** • Implement efficient seed management practices to minimize losses. • Use insulated containers or ice packs to maintain seed quality during transportation. • Handle seeds gently to prevent physical damage. • Ensure fish seeds are packed in oxygenated bags or	---	District Project Implementation Unit (DPIU)/Group/Person/Contractor	State Project Management Unit (SPMU)

			containers with sufficient water to maintain their health during transportation. • Establish composting pits for organic waste. Composting can convert organic waste into nutrient-rich compost for agricultural use.			
b.	Establishment, Modernization and upgradation of hatcheries	Potential for genetic interactions between hatcheries-bred fish and wild populations, due to high density rearing conditions can serve as breeding ground for various diseases and parasites and this disease transmission from hatchery fish to wild fish and can led to change in aquatic environment due to ecological interaction between natural/wild species and hatcheries species and can also lead to habitat alterations. Hatcheries will	**Refer Guidelines:** **PW, HW, SW, SEW, AP, NP, LMP, OHS, SH,** • Identification of hatchers location away from other water bodies, assessment of species levels in the ponds/lakes and to ensure that hatcheries fish do not become a threat to natural species. Develop sustainable waste	Permission for Ground Water Extraction to be obtained if water withdrawal for commercial activity.	District Project Implementation Unit (DPIU)/Group/Person/Contractor	State Project Management Unit (SPMU)

		generate uneaten feeds and fish waste which can contribute to nutrient loading in surrounding water bodies, SEA/SH risk during construction.	management plan for hatcheries. • Choose a hatchery site that is isolated from natural water bodies to avoid mixing hatchery-bred fish with wild populations. • Regularly check nearby ponds or lakes to ensure that hatchery fish do not pose a threat to native fish species. • Implement a system to collect and dispose of uneaten feed and fish waste properly to prevent water pollution. • **Permission from Gram Panchayat and Gram Sabha resolution to be availed**			
c.	Demonstration of Fish Nurseries and Establishment of Captive Nurseries	Quality of pond water and pollutant present may cause fish bioaccumulation which can further create health impact on fish consumers.	**Refer Guidelines** **SW, LW, OHS, SEP** • Develop programme for regular testing and	**---**	District Project Implementation Unit (DPIU)/Group/Person/Contractor	State Project Management Unit (SPMU)

		SEA/SH risk during construction.	pond water quality and ensuring that water is not polluted from external sources. • Develop a program for regular testing of pond water quality. • Ensure that pond water is not contaminated by external sources. • Conduct routine monitoring to detect any pollutants present in the pond water. • Implement measures to prevent bioaccumulation of pollutants that can impact fish health. • Take actions to address any identified risks to fish and consumers related to water quality and pollutants.			
d.	Cost Efficient Formulated Fish Feed suitable to	These small production units will have impact associated with generation waste, air	• Regulatory permission from SPCB shall be taken, proper resource and waste	• Obtain regulatory permission from State Pollution	District Project Implementation Unit (DPIU)/Group/Person/Contractor	State Project Management Unit (SPMU)

	Designed aquaculture	pollution, effluent generation, OHS issue in operating mills, generation of packaging waste. SEA/SH risk during construction.	management plan to be developed. • Develop a proper resource and waste management plan for the production units. • Implement measures to manage and minimize waste generation during feed production. • Ensure safe handling practices in operating mills to address Occupational Health and Safety (OHS) issues. • Implement pollution control measures to mitigate air pollution and effluent generation.	Control Board (SPCB) before setting up the production units.		
e.	Updated Technologies Diffusion on Innovative Technologies Through Demonstration and Extension Services	Broadly same as for nursery and mitigation measures will be similar in nature	• Broadly same as for nursery and mitigation measures will be similar in nature. • Implement regular testing and monitoring of the technologies demonstrated to	**---**	District Project Implementation Unit (DPIU)/Group/Person/Contractor	State Project Management Unit (SPMU)

			ensure effectiveness.			
f.	Sustainable Enhancement of Reservoir Fish Production	Planning ignores EHS risk and management	• Project report to mandatorily integrate environmental consideration in the project design (resource conservation, waste management and regulatory compliance) • Ensure that the project design includes environmental considerations such as resource conservation, waste management, and regulatory compliance. • Regularly monitor and assess the environmental performance of the project	**---**	District Project Implementation Unit (DPIU)/Group/Person/Contractor	State Project Management Unit (SPMU)

			to identify and mitigate risks. • ***Fishpond Water and Soil Sample Testing:*** Collect soil and water samples from the fish pond to assess the quality and ensure a supportive environment for the fish. •			
2	**Formation of Market Linkages and Strengthening The value Chain**:					
a.	Establishment of Fish Landing Stations	Land classification, construction of storage building, clearing of vegetation for site development, water wastages, unhygienic conditions due to fish handling, ice management and dead fish waste handling. Restrictions on land	**Refer Guideline:** **SW, SEW, LMP, OHS, SEP, SH** • Development of environmental management plan, ensuring no R&R issue with the site, stakeholders' consultation with neighbourhood,	Consent from SPCB.	Contractor	State Project Management Unit (SPMU)

		use and SEA/SH risk during construction.	regulatory consent from SPCB. • Talk to local community members about concerns and gather feedback. • Gram sabha resolution and gram panchayat permission may be availed • Get necessary approvals and consent from regulatory authorities. • Ensure the site is developed without causing disruption to local ecosystems.			
b.	Modern Fish Markets	Substantial waste generation at such market with improper waste disposal causing environmental degradation Restrictions on land use and SEA/SH risk during construction	**Refer Guideline:** **SW, SEW, LMP, OHS, SEP, SH** • Integrate waste management measures, bio-composter for such market's upgradation.			

			• Implement waste management measures to properly handle waste generated at the fish market. • Use bio-composters for managing organic waste and upgrading the market's waste management system. • Ensure proper disposal of waste to prevent environmental degradation and health risks. • Address restrictions on land use during construction to minimize negative impacts on the			

			surrounding environment. • Provide safe drinking water and clean toilets, with running water facilities for the workers. • Provide separate toilets for women with adequate running water facility.			
c.	Introduction of Mini fish Processing Units	Potential water /land pollution due to due to waste generation disposal, water loss due to excessive water uses and wastages, air pollution due to DG set operations, OHS risk due to unhygienic conditions and mill operations, SEA/SH risk during construction.	**Refer Guidelines:** **PW, SW, SEW, AP, NP, HW, LMP, OHS, SH, GWE** • Disposal of waste and water use as per regulatory permission from SPCB and adoption of best EHS practices. Sop for water and ice uses. Layout design consideration waste			

			management practices. • Obtain regulatory permission from the State Pollution Control Board (SPCB) for waste disposal and water use before establishing the fish processing unit. • Implement proper waste management practices to dispose of waste generated during processing, ensuring compliance with environmental regulations. • Use water and ice efficiently to minimize wastage and conserve resources. • Design the layout of the processing unit to facilitate effective waste segregation and disposal. • Regularly maintain and service diesel generator (DG) sets to minimize air			

			pollution from operations. • Ensure a clean and hygienic working environment to mitigate occupational health and safety (OHS) risks associated with processing activities. • Consider potential social, environmental, and safety risks during the construction phase to minimize negative impacts on the surrounding area.			
d.	Establishment of retail Kiosk: and mobile Kisok and Support to mobile fish Small scale vending units	Unhygienic conditions and improper dead fish waste disposal	**Refer Guidelines:** **SW, SEW, OHS, SH** • Training of kiosk owners for maintaining hygienic conditions and SOP for waste management. • Train kiosk owners on maintaining cleanliness and	**---**	District Project Implementation Unit (DPIU)/Group/Person/Contractor	State Project Management Unit (SPMU)

			hygiene in their retail and mobile kiosks. • Provide guidance on proper disposal of dead fish waste to prevent unhygienic conditions and environmental contamination. • Implement waste management practices to ensure the proper collection and disposal of waste generated at the kiosks. • Regularly clean and sanitize the retail and mobile kiosks to maintain hygienic conditions and prevent health risks. • Educate kiosk owners on occupational health and safety practices to minimize risks associated with their operations. •			

e.	Establishment of Ice Plants	OHS risk related construction activities ad construction waste generation/disposal. Operational stage impact on water supply and effect on limited water resources, ammonia handling used in ice plant, and other waste disposal, transportation of Ice related air pollution and noise pollution, Restrictions on land use and SEA/SH risk during construction	**Refer Guidelines:** **PW, SW, SEW, APNP, HW, LMP, OHS, SEP, SH** • Developing right source of water supply, selection of site for setting up plants, developing complete environmental management plan for water resource conservation, gas handling, waste disposal, OHS aspects and labour management as well traffic management for transportation of ice. • Choose a suitable location for the ice plant to avoid restrictions on land use and minimize construction-related risks. • Implement water conservation	Consent to be obtained from SPCB	District Project Implementation Unit (DPIU)/Group/Person/Contractor	State Project Management Unit (SPMU)

			measures to ensure sustainable water use during plant operation. • Handle ammonia and other chemicals used in the ice plant with proper safety protocols to minimize risks. • Dispose of waste generated during construction and operation responsibly to prevent environmental contamination. • Train workers on occupational health and safety practices to ensure safe working conditions. • Manage transportation of ice to reduce air and noise pollution in surrounding areas.			
f.	Online Fish Marketing	Non-Specific	**---**	**---**	District Project Implementation Unit (DPIU)/Group/Person/Contractor	State Project Management Unit (SPMU)

g.	Capacity Building	Non-Specific	**---**	**---**	District Project Implementation Unit (DPIU)/Group/Person/Contractor	State Project Management Unit (SPMU)
h.	Quality Control and Food Safety	Beneficial	**---**	**---**	District Project Implementation Unit (DPIU)/Group/Person/Contractor	State Project Management Unit (SPMU)

Environment Quality Monitoring

The environment monitoring programme shall include all aspects of monitoring viz air, water, noise, soil, biodiversity, tree survivability, Accident, incident, waste disposal, etc as detailed under different plans. Suggested Table and monitoring parameters are given below.

Table 5-14: Monitoring plan for Environmental Quality.

S. No.	Activity	Component	Monitoring Requirement	Frequency
1.	Establishment of mini fish processing unit	Establishment of mini fish processing unit	Water Quality (pH, turbidity, DO, COD)	Weekly during operational phase
			Effluent Discharge (BOD, TSS)	Weekly during operational phase
			Noise Levels	Monthly during operational phase
			Waste Generation and Management	Weekly during operational phase
			Hazardous Waste Disposal	Weekly during operational phase
			Occupational Health & Safety	Monthly
2.	Establishment of Ice Plants	Establishment of Ice Plant	Water Quality (pH, turbidity, DO, COD)	Weekly during operational phase
			Effluent Discharge (BOD, TSS)	Weekly during operational phase
			Noise Levels	Monthly during operational phase
			Waste Generation and Management	Weekly during operational phase
			Hazardous Waste Disposal	Weekly during operational phase
			Occupational Health & Safety	Monthly
3.	Compliance report	Validating the activities suggested are implemented.	As required	Six Monthly/ Quarterly as need base

Responsibility & Reporting

DPIU (District Project Implementation Unit)/Implementation Group/Persons/ Contractor will work in co-ordination with district line departments under the leadership of District Magistrate & technical support agencies (TSA).
DPIU will submit the compliance report on quarterly basis and progress report on half yearly basis to the SPMU (State Project Management Unit) of UP-Agrees. SPMU will be Supervision, and review of planning, implementation, and monitoring of project activities on regular bases. The Components/Interventions of the project shall be implemented by the SPMU at the state level.

Environmental Budget

The environment budget must consist of resource allocation for implementation of different mitigation measures, legislative permits approvals and compliances, Training Awareness and Monitoring and reporting. The following table shall be used for Environmental Budget

Table 5-15 En Environmental Budget

S. No.	Component	Activity	Rate (in Rs.)/Unit	No. of Units	Total Costs (in Rs.)
1	Infrastructure				
2	Monitoring	• Establishment of mini fish processing unit. • Establishment of Ice Plants. • Compliance Report			

Annexure 3.6 : Standard ESMP – 6: Digital and Financial Ecosystems

Key features of the ESMP

- Standard ESMP – 6 deal with the activity of Digital and Financial Ecosystems and focuses on Digital Architecture and Technology Services, Enabling Agri Finance Ecosystems and Promoting Innovations & Promoting Innovations. This ESMP is based on risk and impact analysis and a screening exercise.
- Based on the ESMP plan, DPIU and the implementation group/people can identify the risks and related mitigation activities to be carried out during the project implementation activity.
- Standard ESMP – 6 indicates the environmental quality monitoring and environmental budget allocation for mitigation activity.
- These ESMPs also define the responsibility and reporting for implementation and supervision of mitigation activities.
- A detailed description of the mitigation activities incurred with the ESHS risk is given in the table below.

Table 6-16: Standard ESMP for Digital and Financial Ecosystems

S. No.	Activity	ESHS Risk	Suggested Mitigation (It will be further updated as per the plan and guideline identified in the screening template)	Legislation Applicable (If any)	Implementation responsibilities	Supervision Responsibility
	Sub-component 3.1: Digital Architecture and Technology Services					
1.	Strengthening and Expanding the Digital and Connectivity Infrastructure	EHS impacts are with construction activities (air pollution, construction waste generation, water uses, noise generation, Generation of E-Waste	Refer Guidelines: **EW, SEP** • Needs to be mitigated with adoption of good construction and waste management practices for eliminating/ minimising risk), Comply with E-waste Rules for e-waste management. • Implement good construction practices to reduce	**---**	District Project Implementation Unit (DPIU)/Group/Person/Contractor	State Project Management Unit (SPMU)

			air pollution, minimize noise generation, and manage water use efficiently. • Properly dispose of construction waste to prevent environmental impact and ensure site cleanliness. • Comply with e-waste rules and regulations for managing electronic waste generated during infrastructure development. • Prioritize sustainable waste management practices to eliminate or minimize risks associated with construction activities. • Use technology and methods that reduce environmental impact and promote resource conservation			

			during infrastructure expansion.			
2	Integrated Agritech Hub with AI integration and Core Building Blocks	None specifically	Refer Guidelines: **EW, SEP**	**---**	District Project Implementation Unit (DPIU)	State Project Management Unit (SPMU)
a.	Other Subcomponents- Soft Activities	As such no EHS risk per say. Outcome are beneficial and resource conservation oriented as detailed in main text above.	Refer Guidelines: **EW, SEP**	**---**	District Project Implementation Unit (DPIU)/Group/Person/Contractor	State Project Management Unit (SPMU)
Sub-component 3.2 & 3.3: Enabling Agri Finance Ecosystems and Promoting Innovations						
3.	Providing funding support for various application and Agri development including farmers facilitation centres	Exists only if funding is made without EHS safeguard compliance as narrated under component 1 and 2	Refer Guidelines: **EW, SEP** • This needs to be mitigated as integrated component of funding agreements. • Ensure that funding	**---**	District Project Implementation Unit (DPIU)/Group/Person/Contractor	State Project Management Unit (SPMU)

			agreements include explicit environmental, health, and safety (EHS) safeguard compliance requirements. • Prioritize funding support that aligns with EHS guidelines to minimize negative impacts on the environment and health. • Integrate EHS considerations as a core component of all funding agreements related to agriculture development and farmers' facilitation centres. • Monitor and enforce adherence to EHS standards throughout the implementation of funded projects to ensure compliance and mitigate potential risks.			

4.	Promoting Innovations; Proposed to support innovations to promote with Water Based Green Credits	Beneficial - reduced GHG	Earn carbon credit and provide carbon credit platform.	**---**	District Project Implementation Unit (DPIU)/Group/Person/Contractor	State Project Management Unit (SPMU)

6.8. Environment Quality Monitoring

The environment monitoring programme shall include all aspects of monitoring viz air, water, noise, soil, biodiversity, tree survivability, Accident, incident, waste disposal, etc as detailed under different plans. Suggested Table and monitoring parameters are given below.

Table 6-17: Monitoring plan for Environmental Quality

S. No.	Activity	Component	Monitoring Requirement	Frequency
1.	Compliance report	Validating the activities suggested are implemented.	As required	Six Monthly/ Quarterly as need base

6.9. Responsibility & Reporting

DPIU (District Project Implementation Unit)/Implementation Group/Persons/ Contractor will work in co-ordination with district line departments under the leadership of District Magistrate & technical support agencies (TSA).

DPIU will submit the compliance report on quarterly basis and progress report on half yearly basis to the SPMU (State Project Management Unit) of UP-Agrees. SPMU will be Supervision, and review of planning, implementation, and monitoring of project activities on regular bases. The Components/Interventions of the project shall be implemented by the SPMU at the state level.

6.10. Environmental Budget

The environment budget must consist of resource allocation for implementation of different mitigation measures, legislative permits approvals and compliances, Training Awareness and Monitoring and reporting. The following table shall be used for Environmental Budget

Table 6-18 En Environmental Budget

S. No.	Component	Activity	Rate (in Rs.)/ Unit	No. of Units	Total Costs (in Rs.)
1	Infrastructure				
2	Monitoring	• Compliance Report			

Annexure 4 : Simplified Labor Management Procedures

Labour Management Procedures for UPDASP

1. Introduction:

Labourers and workers play a crucial role in ensuring the success and productivity of agricultural operations. Their contributions directly impact crop yields, livestock health, and overall farm profitability. They often work in physically demanding conditions and are essential for meeting the world's needs.

The labour and working conditions are addressed through Environmental and Social Standard 2(ESS 2) of the World Bank standards. This aims to promote environmentally and socially sustainable agriculture practices by integrating environmental and social considerations into project planning, implementation, and monitoring. By adhering to the ESS 2 requirements, UPDASP supported by the World Bank can minimize adverse environmental and social impacts, enhance project outcomes, and contribute to sustainable development goals.

In the context of UPDASP, integration of robust Labour Management Procedures (LMP) within the Environmental and Social Management Framework (ESMF) is of utmost importance. Effective labour management becomes essential to ensure:

1. Protection of workers' rights,
2. Mitigate potential social risks,
3. Enhance project sustainability.

2. Overview of labour use in the project:

Labourers and workers in agriculture typically refer to individuals who are directly involved in various farming activities, including cultivation, harvesting, planting, irrigation, livestock management, and other agricultural tasks. Their roles and responsibilities can vary depending on the specific type of farming operation and the stage of the agricultural production cycle.

ESS2 categorizes the workers into direct workers, contracted workers, community workers. This Labor Management Procedure (LMP) applies to all project workers as defined in ESS2:

Direct Workers: The project will be managed and supervised by UPDASP. The project management unit and the staff are considered also as direct workers. In addition, the personnel contracted directly by the SPMU such as consultants or experts are also be considered as direct workers.

Contracted Workers: Contracted workers include the contractors who in turn employs workers/ labor based on daily wages to perform various tasks and activities. The different types of contracted workers under ESS 2 may include:

a) **Farm Labourers:** Individuals involved in agricultural activities on the farm, including planting, harvesting, weeding, irrigation, and crop maintenance. They may be hired on a seasonal or temporary basis to meet the demands of agricultural production cycles.

b) **Livestock Handlers:** Livestock handlers are responsible for the care, feeding, and management of livestock animals such as cattle, poultry, sheep, and goats. They may be involved in tasks such as feeding, watering, milking, and herding animals on farms or in livestock production facilities.

c) **Agro-Processing Workers:** Agro-processing workers are involved in processing, packaging, and storing agricultural products such as grains, fruits, vegetables, and livestock products. They may work in food processing facilities, warehouses, or packaging units associated with the agriculture project.

d) **Field Technicians:** Field technicians are skilled workers responsible for implementing agricultural practices, conducting soil tests, applying fertilizers and pesticides, and monitoring crop health and productivity. They may work closely with agronomists, extension agents, and researchers to optimize crop yields and ensure environmental sustainability.

e) **Contract Farmers:** Contract farmers are individuals or groups who enter into agreements with agricultural companies, cooperatives, or agribusinesses to cultivate specific crops or livestock according to predetermined terms and conditions. They may receive support, training, and inputs from the contracting entity in exchange for delivering produce or meeting quality standards.

f) **Migrant Workers:** Migrant workers are individuals who move from one region or country to another to seek employment opportunities in agriculture projects. They may be employed on a temporary or seasonal basis and may face challenges such as housing, access to healthcare, and social integration.

g) Construction workers: Project activities include construction of processing units and storage units which require construction workers and contractors for supplying the human resources.

h) Consultants and specialists: Right from planning to implementation and beyond the consultants and specialists guide and assist the project by providing advisory support in terms of labour management, training and capacity building, gender equality, grievance redressal etc and they will also support the project in monitoring and conducting audits for labour management procedures.

Characteristics of Project Workers:

- All workers for UPDASP will be recruited locally. Contractors will be encouraged to recruit local workers including female workers to the most extent possible.
- Female workers will be assigned to tasks appropriate with their capabilities.
- Contractors will ensure that labor meet the minimum approved age i.e. not less than 18 years for light work not involving any potential risks or hazards and above 18 years for others.
- Workers of primary suppliers involved in various activities like farming, cultivation and agro-processing, and individuals involved in repair technicians and transportation services, will be employed for efficient production and processing of agricultural products.

- Government staff including agronomists, veterinarians, and technicians, will be responsible for overseeing the implementation of safeguards and protecting the rights and well being of the workers, ensuring fair and humane working conditions.

2.1. Timing of Labor Requirements:

Planning and Design Phase: a comprehensive recruitment process will be undertaken to engage consultants during the design stage. These consultants will provide valuable expertise and input to ensure the optimal planning and execution of the project. Additionally, contractors, supervisors, and workers will be recruited at the inception of the subproject to facilitate smooth implementation.

Execution phase: Skilled workers will be enlisted as needed, depending on the specific requirements of the tasks at hand. Prior to commencement, a thorough assessment will be conducted to determine the precise number of workers required for each activity, thereby ensuring adequate manpower allocation and efficient workflow throughout the project lifecycle. This approach will enable us to effectively utilize resources and optimize project outcomes.

3. Assessment of Potential Labour risks:

Project components:

The UPDASP project has following three major Components. Each of the component has various subcomponents. UPDASP project also aims for gaining carbon credits by better crop residue management and prevention of its disposal through burning, using Bio Decomposer, use of Zero Tillage techniques for seeding.

Component 1: Productivity Enhancement

- Sub-Component 1.1: Resource-Use Efficiency: consist of Three key sub systems viz (I) Soil Productivity -Fertility System, (I) Soil Input Efficient System, (III) Farmer Practices – Technology Sub System,
- Sub-Component 1.2: Seed System
- Sub-Component 1.3: Agri-Extension
- Sub-Component 1.4: Leveraging Carbon Markets

Component 2: Commodity Clusters

- Sub-component 2.1: Crop-Clusters
- Sub-component 2.2: Fisheries

Component 3: Digital and Financial Ecosystems

- Sub-component 3.1 : Digital Architecture and Technology Services

- Sub-component 3.2 & 3.3: Enabling Agri Finance Ecosystems and Promoting Innovations

Labour-related risks in agriculture projects can encompass various challenges and hazards faced by workers, including physical, social, and economic risks. Some of the key labour risks associated with the project includes:

I. Potential Risks cover:

(a) Gender disparity in hiring and engagement, gender-based violence, sexual exploitation and harassment and economic exploitation of workers;
(b) Use of child labour and bonded labour.
(c) Impacts related to conflict and social disputes of workers with the local community.
(d) Occupational Health and Safety related risks for workers engaged in construction activity;
(e) Non or weak compliance with legal requirements related to labour management including national and state labour laws
(f) Lack of formal and effective mechanisms to redress workers grievances.
(g) Impacts related to non-usage of personnel protective equipment (PPE) while handling hazardous material.
(h) Impacts on community due to influx of migrant workers.
(i) Impacts related to occupational health and safety for workers due to long working hours, drudgery, etc.

4. Brief Overview of Labour Legislation in ESMF:

Objective of Labour Legislation –

The Environmental and Social Standards (ESS) 2 of the World Bank focuses on labour and working conditions, of the farmers and works involved in project implementation.

While the Indian labour laws provide a framework for ensuring the rights and working conditions of agricultural workers, there may be some gaps or areas where alignment with ESS 2 could be strengthened. Protecting labour rights involves adherence to various laws and regulations aimed at ensuring fair and safe working conditions for agricultural workers.

Some key measures and applicable laws include:

Act, Policy or Government Order	**Key Provisions**
Minimum Wages Act, 1948[2]	The law mandates payment of minimum wages based on the type of work and skill level.
Payment of Wages Act, 1936	Ensure timely payment of wages to agricultural workers and maintain accurate records of wages paid.

[2] MinimumWagesact.pdf (clc.gov.in)

Contract Labour (Regulation and Abolition) Act, 1970[3]	If engaging contract labourers for agricultural work, comply with the provisions of this act regarding their recruitment, working conditions, and welfare measures.
Equal Remuneration Act, 1976[4]	Prohibit discrimination in wages based on gender and ensure equal pay for equal work, regardless of gender.
Bonded Labour System (Abolition) Act, 1976[5]	Prohibit bonded labour practices and ensure freedom and dignity for agricultural workers. Any form of bonded labour is illegal and punishable under this act.
Child Labour (Prohibition and Regulation) Act, 1986[6]	Prohibit the employment of children below the age of 14 years in any hazardous occupations, including agriculture. Ensure compliance with regulations regarding the working hours and conditions of adolescent workers.
Factories Act, 1948 (for processing units)[7]	Factories Act, 1948 (for processing units): Ensure compliance with health, safety, and welfare provisions under this act for workers employed in agricultural processing units, such as food processing facilities.
Workmen's Compensation Act, 1923[8]	Provide compensation to agricultural workers in case of work-related injuries or accidents.

4.1. Terms and conditions:

Employment Agreement:

national and state laws pertaining to labour employment will be followed and people will be hired based on skills required during different phases of the project.

- No child worker or those below the age of 18 will be employed. The project team shall monitor on monthly basis to ensure that there is no bonded labour.

Minors:

- Minors under the age of 18 are prohibited from engaging in any kind of employment. Hence documentary evidence (passport, Aadhar card or birth certificate) of all workers prior to involving them on activities of the project, shall be verified.

[3] Contract Labour Act | Chief Labour Commissioner (clc.gov.in)
[4] Equal Remuneration Act | Chief Labour Commissioner (clc.gov.in)
[5] thebondedlaboursystemabolitionact1976.pdf
[6] Child Labour Act-1986 | Chief Labour Commissioner (clc.gov.in)
[7] factories_act_1948.pdf (labour.gov.in)
[8] theworkmenact19231.pdf (labour.gov.in)

- The contractor shall maintain a register of the workers with necessary details like age, gender, contact details etc.
- The project district and block teams shall monitor the child labour in the project activities on a monthly basis.

Women's employment:

- Women shall be equal with men in relation to all conditions of employment and employment rights, duties and relationships, without any discrimination.
- Women shall also be equal with men in employment, promotion, wages, training and rehabilitation and social insurance. The requirements of job or occupational specifications shall not be considered as discrimination.
- The project shall establish POSH (Prevention of Sexual Harassment) compliant Internal Complaints Committees (ICCs) at appropriate levels for sensitization and prevention of Gender Based Violence (GBV)/Sexual Exploitation and Abuse (SEA)-Sexual Harassment (SH).
- Referral systems for Gender Based Violence (GBV)/Sexual Exploitation and Abuse (SEA)-Sexual Harassment (SH) will be created.
- A woman should not be assigned to do overtime work from the sixth month of her pregnancy and during the first six months following her return to work after maternity leave.
- Contractor shall ensure to provide separate toilet facility for the women workers with water facility to safeguard their dignity and prevent sexual abuse at work.
- Contractor shall provide creche facility if there are more than 20 women workers with children.
- The contractor should ensure to deposit the wages directly into the bank account of the workers/farmers for timely disbursal of wages.

Working Hours:

- Official working hours shall not exceed eight hours per day or 48 hours per week.
- Weekly hours of work shall be distributed over six working days followed by one day of rest with full pay.
- No employee shall be required to work more than 6 (six) consecutive days a week (on a day that is normally a day off or has been agreed as a day off), without being provided with twenty-four consecutive hours of leave.

Overtime Work:

Employees shall not be required to work overtime except unless this has been agreed in the employment agreement. Working hours, whether normal or overtime shall not exceed 12 hours per day.

Wages for overtime work shall be calculated according to the following rates:

- One-and-a-half hours' basic wages per hour of overtime on normal working days.
- Two hours' basic wages per hour of overtime at night, on the day of weekly rest, and on official holidays and leave, in addition to entitlement to standard wages for such holidays.
- Direct workers overtime rates must be stipulated in the implementing partners internal policy which goes in line with national law regulations.

Contracted workers and other workers will be paid based on delivery of specific assignments within a defined time, hence overtime is not relevant.

Wages and deductions:

- The minimum wage payable to a worker shall not be less than the minimum wage paid by the state administration.
- The daily wages of workers not paid on a monthly, weekly or daily basis shall be calculated on the basis of the average wages earned by their counterparts for days effectively worked for the same employer over the past year or during their period of service if less than one year.
- Wages to the contracted workers based on daily wages paid by the contractor to be in line with the current market rates paid for skilled, semi-skilled or unskilled labor.
- Employees may be fined for absenteeism from work during official working hours, such fine to be deducted from his/her wages and to be commensurate to the time absent from work.
- No other fines shall be imposed by the employer on account of absenteeism.
- Ensure compliance with minimum wage rates set by the Uttar Pradesh government for agricultural workers.
- Register should be maintained by the contractor for the wages given to the workers and farmers.
- The District and Block teams must monitor the register on a regular basis.

Dismissal of the workers: Employees have a right not to be dismissed unfairly, without cause. The Act provides a list of disciplinary measures that can be taken reasonably against an employee due to misconduct and which must ordinarily be exhausted before any dismissal.

An employer should not terminate a contract of employment in the following cases:

- During any of the worker's leave.
- During the investigation of a dispute between the employer and the worker, provided that such investigation shall not exceed four months, unless the worker commits another violation which requires his dismissal.

Insurances:

Social Security Schemes: Enroll agricultural workers in social security schemes such as the Employees' State Insurance Scheme (ESIS) and the National Pension System (NPS) to provide them with financial protection and retirement benefits.

Awareness and Training:

Project will ensure to conduct awareness programs and training sessions for agricultural workers to educate them about their rights, safety measures, and available support mechanisms like the grievance redressal mechanism (GRM) etc.

The project will have provision for developing IEC (information, education and communication) materials, for creating awareness on labour issues, grievance redressal, gender violence and sexual harassment etc. The IEC will be created in English and Hindi (Local Language).

Occupational Health and Safety

Employers shall observe the following rules:

- Workplace health and safety conditions shall be maintained in conformity with occupational safety and health requirements.
- Workplaces shall be properly ventilated and adequately lighted during working hours in accordance with the standards established by the authorities responsible for occupational safety and health.
- The necessary precautions shall be taken to protect workers from such damage to their health as may be caused by pesticides, dust, waste etc.
- Necessary precautions shall be taken to protect workers against the hazards of equipment and machinery and the hazards of conveyors and handling, including any risks of collapse.
- Necessary precautions shall be taken against natural hazards and damage, including health, humidity and cold.
- Precautions shall be taken against the hazards of excessive light, noise, and any risk of explosion.
- Easily accessible lavatories and washrooms shall be provided, and separate lavatories and washrooms shall be provided for women workers with adequate running water facility.
- An adequate and easily accessible supply of clean drinking water shall be provided for the worker's use.
- Necessary precautions shall be taken to deal with fires and provide fire-fighting equipment, including emergency exits, which shall be maintained in working order at all times.

Employers shall take the necessary precautions to protect workers and ensure their safety against such hazards that may arise from their work and the machinery in use.

- Provision of first aid equipment at the workplace.
- Contractors should ensure that the workers avail medical insurance and accident relief.
- Ensure to provide regular health check-ups and medical aid for the employees.

Implementation Arrangements:

Implementation arrangements for labor management procedures in an agriculture project typically involve several key stakeholders, each with specific roles and responsibilities:

Project Management Team: The UPDASP which is responsible for implementing the project activities, will be responsible for overall project planning, implementation, and monitoring the labour management procedures. They are responsible for ensuring compliance with relevant laws and regulations.

- On a regular basis the UPDASP conduct inspections and provide guidance on labour management practices to the stakeholders and contractors.
- Provide support services such as vocational training or employment assistance programs.
- Ensure that the labour management procedures are implemented in the contract agreement of the contractors employing workers or labourers.

District teams and Block teams:

Responsible for ensuring that the contractors implement the labour management procedures in the district and block levels.

- Ensure that the stipulated contract agreement procedures like payment of minimum wages, gender equality, occupational health and safety standards, preventing child labour and bonded labour etc are followed during the project implementation.
- Conduct regular monitoring visits on a regular basis and submit a monthly report to the state team about the status of implementation of labour management procedures

External Consultants or Experts: Provide specialized expertise and guidance on labor management best practices, compliance issues, and strategies for improving worker productivity and well-being.

Conduct monitoring visits on regular basis and submit report to the district or block team about the status of implementation of LMP.

Contractors: Ensure that they implement the labour management procedures during the project implementation such as

1. Payment of minimum wages as per the legislation and maintain a record of the wages given.
2. Design and implement work schedule for the workers with due consideration for breaks and working hours.
3. Provide necessary PPEs to the workers and ensure that they are being used by the workers. Contractors should create awareness on using the PPEs regularly through awareness workshops and tool box talks etc.
4. Contractor should make provision for availing insurance fo the workers and labourers, compliant to legislations in vogue.
5. They should be responsible for ensuring that women workers are paid equal wages, and prevent sexual discrimination at work place.

6. Contractor should ensure to provide a grievance redressal register at the workplace to sort out the labour related grievances and issues.

6. Grievance redressal Mechanism:

The project should ensure to have grievance redressal mechanism in place to address the grievances of the workers and farmers working in the project.

- The contractor and the project staff should maintain grievance registers.
- The workers should be aware of the complaining and or registering their grievances with the project staff.
- Grievances regarding wages, bonded labour, sexual harassment, gender discrimination, discrimination based on caste, race, language, disabilities should be addressed by the grievance redressal committee at the block level.
- If the grievance is not redressed at this level within the stipulated time, then the grievance will be augmented to the next level for redressal.
- The GRM shall maintain register for complains and the project shall monitor every 20 days for implementation of the GRM.

To further mitigate social risks associated with the project, other important measures to be taken include:

i. Capacity Building: Conduct training and capacity-building programs for agricultural labourers to enhance their skills, knowledge, and awareness about their rights, safety measures, and available support services.
ii. Monitoring and Evaluation: Establish robust monitoring and evaluation mechanisms to track the implementation of mitigation measures, assess their effectiveness, and identify areas for improvement. Regularly engage with stakeholders to solicit feedback and adjust strategies as needed.
iii. Collaboration and Partnership: Collaborate with local authorities, civil society organizations, and other stakeholders to leverage resources, expertise, and support for the implementation of social risk mitigation measures.
iv. Continuous Improvement: Continuously review and refine social risk mitigation strategies based on feedback, monitoring data, and changing socio-economic conditions to ensure their relevance and effectiveness over time.

Annexure 5 : Fertilizer and Pest Management Plan

Fertilizer and Pesticide Management Plan - an environmental perspective

Introduction

Fertilizer and Pesticide management is paramount in safeguarding the environment from the detrimental impacts of these chemical substances. Through effective regulation and implementation of practices such as integrated nutrient management (INM) and integrated pest management (IPM), we can mitigate the risks posed by overuse of fertilizers and pesticides to biodiversity, water quality, soil health, and human well-being. By minimizing non-target effects on beneficial organisms, reducing fertilizer/pesticide runoff into water bodies, preserving soil fertility, and addressing the development of pesticide resistance, proper management ensures the sustainability of agricultural systems while maintaining the balance of ecosystems. Moreover, fertilizer and pesticide management promote the use of safer alternatives and encourages practices that prioritize long-term environmental health, thus playing a critical role in protecting the delicate balance of our natural world.

Objective:

The overall objectives of the fertilizer and pesticide management plan aim to promote safe, effective, and sustainable fertilizer/pesticide use while minimizing adverse impacts on human health and the environment.

The UPDASP project triggers the following safeguard policy of the World Bank with respect to use of pesticides and Pest Management:

- Pest Management (OP 4.09)[9]

The operational policy (4.09) statement was revised in August 2004 and replaces the version dated July 1996. The bank assesses the capacity of the country's regulatory framework and institutions to promote and support safe, effective and environmentally sound pest management. It is necessary for borrowers to manage pests that affect agriculture, through the safe use of pesticides and support integrated pest management (IPM) mentioned in Annexure 3.

Scope and applicability

The fertilizer and pesticide management plan typically encompasses various aspects related to the handling, usage, and disposal of fertilizers/pesticides. Within the context of agriculture, the plan focuses on stakeholders who will be involved in implementing and adhering to the environmental guidelines (refer Annexure 4) outlined in the plan. This may include farmers, fertilizer/pesticide vendors & applicators, farm labourers, government agencies, and the public.

Fertilizers are the chemical substance that is used to increase the production and yielding capacity of crops. There are two types of fertilizers used by farmers that are available in the

[9] OP 4.09 – Pest Management, Operational Manual, The World Bank. (www.thedocs.worldbank.org)

market. They are inorganic and organic fertilizers. Inorganic fertilizers are mostly Nitrogen (N), Potassium (K_2O), Phosphorous (P_2O_5), Sulphur (S), Magnesium (Mg) and Calcium (C) based chemical compositions and micronutrients (Boron, Chlorine, Copper, Iron, Manganese, Zinc) that are crucial elements that helps in growth, cell proliferation, crop quality and plant's disease resistance.

In India, fertilizer production is about 20.75 million MT (N+P2O5) during 2022-23 recorded an increase of 11.6% over 2021-22. Production of nitrogen (N) increased by 13.5% to 15.74 million MT and phosphate (P2O5) increased by 6.3% to 5.01 million MT in 2022-23.

The total fertilizer nutrient consumption ($N+P_2O_5+K_2O$) registered a marginal growth of 0.2% at 29.84 million MT (metric tonnes) in 2022-23. The consumption of Nitrogen and Phosphorous accounts to 20.21 million MT and 7.92 million MT with a registered 4% and 1.2 % increase during 2022-23 over 2021-22, respectively[10]. The consumption of potassium declined by 32.2% to 1.72 million in 2022-23. All-India NPK use ratio widened from 7.7: 3.1:1 during 2021-22 to 11.8:4.6:1 during 2022-23. Around 92% fertilizer consumption by 13 states in that Uttar Pradesh had the largest share (17.6%) followed by Maharashtra (9.5%) and Madhya Pradesh (9.4%).

Per hectare use of total nutrients (N+P2O5+K2O) improved marginally from 141.0 kg in 2021-22 to 141.2 kg in 2022-23.

As the sown area under all kharif crops has marginally up by 0.3% to 105.4 million hectares during 2023 from 105 million hectares during the corresponding period in the previous year. As the consumption of fertilizers would increase with sown area in coming years, it is vital to integrate organic fertilizers as they are safer alternatives to chemical fertilizers and adopt integrated nutrient management (INM) practices in the agriculture.

Organic fertilizers are naturally derived substances and microbial cultures that helps in plant growth and yielding capacity. e.g., manure, biofertilizers, compost etc.

Integrated Nutrient Management is knowing the nutrient status of soil through soil testing and reduce the use of chemical fertilizers. It reduces cost of cultivation and prevents leach out/seepage of residues from overuse of chemical fertilizers. Integrated Nutrient management practices are to be followed for supplying nutrients are listed below,

Mineral Fertilizer: Super granules, coated urea, direct use of locally available rock PO4 in acid soils, Single Super Phosphate (SSP), MOP and micronutrient fertilizers.

Organic Sources: By products of farming and allied industries. FYM, droppings, crop waste, residues, sewage, sludge, industrial waste.

Biological Sources: Microbial inoculants substitute 15 - 40 Kg N/ha

[10] Annual Review of Fertilizer Production and Consumption 2022-23, Fertilizer Association of India (www.faidelhi.org/general/AR-EX-Sum.pdf)

Pesticides are chemical substances that are used to control pests. In the agriculture context, there are different types of pesticides covered under the plan which could include insecticides, herbicides, fungicides, rodenticides, and other chemical agents designed to control pests or diseases.

Insecticides, fungicides and herbicides are commonly used in Indian agriculture. However, Insecticides occupies the largest share in total pesticides use in India. The total pesticide consumption has declined 17.09% to 52466 metric tonnes (technical grade) during 2022-23 from 63284 metric tonnes during the previous year, according to Directorate of Plant Quarantine and Storage, Government of India. Among the states, Uttar Pradesh (22.54%,11824 MT) is the largest consumer of technical grade pesticides followed by Maharashtra (12.9%, 6814 MT) and Punjab (9.78%, 5130 MT)[11].

Year	Total Pesticide Consumption (metric tonnes)	YoY Consumption Difference (%)
2019-20	61702	3.41%
2020-21	62193	0.80%
2021-22	63284	1.75%
2022-23	52466	-17.09%

Source: ww.ppqs.gov.in

Due to hazardous nature of pesticides, the focus from chemical pesticides has to shift to reliable, sustainable and environment friendly options, such as biopesticides. In India, there is a significant increase in the consumption of biopesticides to 7 tonnes during 2022-23 from 3 tonnes in 2016-17, the state of Uttar Pradesh consumes 53 tonnes (0.7%) among the other states. Studies indicate that Biopesticides use in IPM can significantly reduce pesticides use in cotton and vegetable crops. (refer Annexure 5 for detailed crop-specific biological, cultural and physical pest control practices)

Geographical Context: The plan delineates a holistic approach to fertilizers and pesticides management to address the agricultural and environmental considerations of India, such as fertilizer/pesticide use regulations and common crop-specific guidelines (Annexure 4 & 5) may apply. Recognizing the diversity of crops cultivated across different regions of India, the plan provides crop-specific guidelines for pesticide usage, dosage, and application methods. It prioritizes strategies to promote sustainable agricultural practices that minimizes reliance on chemical fertilizers and pesticides.

Regulatory Compliance:

The objective of the Project is to increase access to value- added activities and job opportunities in the targeted households that would help the producer groups and entrepreneurs to increase their household incomes and attain quality life.

[11] Statistical Database | Directorate of Plant Protection, Quarantine & Storage | GOI (ppqs.gov.in)

It is important that the Enterprises (Individual and Group), Value chains and Producer Collectives are in tune with the laws and regulations of the country and the state. Compliance rather than being restrictive provides an opportunity to align the investments with sound and sustainable management of resources. This section presents a brief listing of the various Acts, Rules and Regulations of the Government of India, the state Government as well as the safe guard policies of the World Bank.

On the basis of the alignment of the proposed UPDASP interventions with respect to these laws and regulations, a Regulatory Requirements List has been developed and enclosed as an Annexure 1 & 2.

The plan ensures compliance with relevant laws, regulations, and guidelines governing pesticide use, storage, transportation, and disposal according to below act,

S. No	**Act, Policy or Government Order**	**Key Provisions**	**Relevance to UPDASP**
1	Insecticides Act, 1968 Amendment: Insecticides (Amendment) Act, 1977 (24 of 1977)	To regulate the import, manufacture, sale, transport, distribution, and use of insecticides with a view to prevent risk to human beings or animals, and for matters connected therewith. A license is required for the sale, stock or exhibition of sale or distribution of any insecticide. The use of certain insecticides is prohibited or restricted under this Act.	Applicable. All Producer Groups involve in activities like procurement, stocking and sale of insecticides as all the crop productivity enhancement is planned through nonchemical methods.

The plan ensures compliance with relevant laws, regulations, and guidelines governing fertilizer use, storage, transportation, and disposal according to below act,

S. No	**Act, Policy or Government Order**	**Key Provisions**	**Relevance to UPDASP**
1	The Fertilizer (Control) Order, 1985	Registration is required for selling fertilizer at any place as wholesale dealer or retail dealer.	Applicable where collective procurement and distribution happens through Producer Groups.

Regulatory requirements list

There are certain kinds of activities which, if taken up, would contravene the laws and regulations of the State Government, Government of India as well as Safeguards Policies of the World Bank. Such activities will not be supported by the UPDASP project. Given below is a list of attributes that would disqualify an activity from being supported under UPDASP. This list shall be treated as the screening tool for the activities planned to be taken by project beneficiaries.

- Purchase, stock, sale, distribution or exhibition of the following pesticides will not be supported:
  - pesticides classified in Class Ia, Ib and II of World Health Organisation classification of Pesticides by Hazard and Guidelines to classification (refer Annexure 2)
  - pesticides banned by the Government of India (refer Annexure 1)
  - pesticides banned by the State Government.
- Purchase, stock, sale, distribution or exhibition of pesticides and chemical fertilizers will not be supported without the requisite licenses.

As well as the following criteria apply to the selection and use of pesticides in the World Bank-financed projects:

- They must have negligible adverse human health effects
- They must be shown to be effective against the target species
- They must have minimal effect on nontarget species and the natural environment. The methods, timing, and frequency of pesticide application are aimed to minimize damage to natural enemies. Pesticides used in public health programs must be demonstrated to be safe for inhabitants and domestic animals in the treated areas, as well as for personnel applying them.
- Their use must take into account the need to prevent the development of resistance in pests

List of pesticides and regulations pertaining to banned, refused registration and restricted to use has been published by Directorate of Plant Protection, Quarantine and Storage under the Department of Agriculture and Farmers Welfare as on 01.06.2023. (Refer Annexure 1) for complete list of pesticides banned, refused registration and restricted to use.

The regulatory guidelines are given for potential activities by the Environment Specialist. Pest Management Plan (PMP) is given in Annexure 3 since it is mandate according to OP 4.09. Different methods in PMP and different crops which have potential to be supported by UPDASP were covered.

Training and Education:

The PMP will be implemented in all agriculture and irrigation system development activities. The implementation will be supported by capacity building of project teams including Community Professionals and monitoring.

Capacity Building:

1. As part of PMP, the Agriculture Enterprises beneficiaries of the project will be trained on PMP in the first year and refresher trainings will be conducted once every year. The training will be organized by Community Farm Schools and facilitated by the Enterprises and sourced by the State Environment Resource Agency (SERA).
2.

- Training the Enterprises beneficiaries on

3.

    - Importance and need for pest management
    - Pest Management Plan for the project
    - Technical aspects in Pest management:
        - Identification of pests and beneficial insects in the field
        - Determining the economic threshold levels (the density at which they begin to cause economically significant losses) of different pests in different crops
        - Designing and supporting the implementation of a pest management strategy giving preference to alternative pest management strategies, with the use of synthetic chemical pesticides as the last option. The indicative list of pest management practices for different crops in provided in the appendix 1.
        - Precautions to be taken during the purchase, store and use of pesticides and disposal of the wastes and containers.

- Information Education and Communication (IEC) materials will be developed targeting the Enterprise and Producer Collectives which will include – posters, films, handbooks etc.

Monitoring:

During every crop cycle the monitoring will be done the Community Professionals end of every crop they will give will capture the progress on PMP (number of PMPs adopted). Review of PMP will be done as part of regular review meetings on agriculture. The SERA will provide yearly update on the PMP status based on the field visits and progress reports on PMP. The external audit will also capture the impact of PMP.

Record Keeping and Documentation: It is crucial to maintain accurate records of fertilizer stock register, pesticide usage, application rates, dates, locations, and other relevant information to track compliance and facilitate monitoring and reporting.

Annexure 1

PESTICIDES / FORMULATIONS BANNED IN INDIA

A.	**Pesticides Banned for manufacture, import and use .**	
	1.	Alachlor (Vide S.O. 3951 (E), dated 08.08.2018)
	2.	Aldicarb (vide S.O. 682 (E) dated 17th July 2001)
	3.	Aldrin
	4.	Benzene Hexachloride
	5.	Benomyl (vide S.O 3951(E) dated 8th August, 2018)
	6.	Calcium Cyanide
	7.	Carbaryl (vide S.O 3951(E) dated 8th August, 2018)
	8.	Chlorbenzilate (vide S.O. 682 (E) dated 17th July 2001)
	9.	Chlordane
	10.	Chlorofenvinphos
	11.	Copper Acetoarsenite
	12.	Diazinon (vide S.O 3951(E) dated 8th August, 2018)
	13.	Dibromochloropropane (DBCP) (vide S.O. 569 (E) dated 25th July 1989)
	14.	Dichlorovos (Vide S.O. 3951 (E), dated 08.08.2018)
	15.	Dieldrin (vide S.O. 682 (E) dated 17th July 2001)
	16.	Endosulfron (vide ad-Interim order of the Supreme Court of India in the Writ Petition (Civil) No. 213 of 2011 dated 13th May, 2011 and finally disposed of dated 10th January, 2017)
	17.	Endrin
	18.	Ethyl Mercury Chloride
	19.	Ethyl Parathion
	20.	Ethylene Dibromide (EDB) (vide S.O. 682 (E) dated 17th July 2001)
	21.	Fenarimol (vide S.O 3951(E) dated 8th August, 2018)
	22.	Fenthion (vide S.O 3951(E) dated 8th August, 2018)
	23.	Heptachlor
	24.	Lindane (Gamma-HCH)
	25.	Linuron (vide S.O 3951(E) dated 8th August, 2018)
	26.	Maleic Hydrazide (vide S.O. 682 (E) dated 17th July 2001)
	27.	Menazon
	28.	Methoxy Ethyl Mercury Chloride (vide S.O 3951(E) dated 8th August, 2018)

	29.	Methyl Parathion (vide S.O 3951(E) dated 8th August, 2018)
	30.	Metoxuron
	31.	Nitrofen

	32.	Paraquat Dimethyl Sulphate
	33.	Pentachloro Nitrobenzene (PCNB) (vide S.O. 569 (E) dated 25th July 1989)
	34.	Pentachlorophenol
	35.	Phenyl Mercury Acetate
	36.	Phorate (Vide S.O. 3951 (E), dated 08.08.2018)
	37	Phosphamidon (Vide S.O. 3951 (E), dated 08.08.2018)
	38.	Sodium Cyanide (banned for Insecticidal purpose only vide S.O 3951(E) dated 8th August, 2018)*
	39.	Sodium Methane Arsonate
	40.	Tetradifon
	41.	Thiometon (vide S.O 3951(E) dated 8th August, 2018)
	42.	Toxaphene(Camphechlor) (vide S.O. 569 (E) dated 25th July 1989)
	43.	Triazophos (Vide S.O. 3951 (E), dated 08.08.2018)
	44.	Tridemorph (vide S.O 3951(E) dated 8th August, 2018)
	45.	Trichloro acetic acid (TCA) (vide S.O. 682 (E) dated 17th July 2001)
	46.	Trichlorfon (Vide S.O. 3951 (E), dated 08.08.2018)
B.	**Pesticide formulations banned for import, manufacture and use**	
	1.	Carbofuron 50% SP (vide S.O. 678 (E) dated 17th July 2001)
	2.	Methomyl 12.5% L
	3.	Methomyl 24% formulation
	4.	Phosphamidon 85% SL
C.	**Pesticide / Pesticide formulations banned for use but continued to manufacture for export**	
	1.	Captafol 80% Powder (vide S.O. 679 (E) dated 17th July 2001)
	2.	Dichlorvos (vide S.O. 1196 (E) dated 20th March 2020)
	3.	Nicotin Sulfate (vide S.O. 325 (E) dated 11th May 1992)
	4.	Phorate (vide S.O. 1196 (E) dated 20th March 2020)
	5.	Triazophos (vide S.O. 1196 (E) dated 20th March 2020)

D.	**Pesticides Withdrawn (Withdrawal may become inoperative as soon as required complete data as per the guidelines is generated and submitted by the Pesticides Industry to the Government and accepted by the Registration Committee. (S.O 915(E) dated 15th Jun,2006)**	
	1.	Dalapon
	2.	Ferbam
	3.	Formothion
	4.	Nickel Chloride
	5.	Paradichlorobenzene (PDCB)
	6.	Simazine
	7.	Sirmate (S.O. 2485 (E) dated 24th September 2014)
	8.	Warfarin (vide S.O. 915 (E) dated 15th June 2006)

* Regulation to be continued in the extant manner for non-insecticidal uses.

I. PESTICIDES REFUSED REGISTRATION

S. No.	Name of Pesticides
1.	2,4, 5-T
2.	Ammonium Sulphamate
3.	Azinphos Ethyl
4.	Azinphos Methyl
5.	Binapacryl
6.	Calcium Arsenate
7.	Carbophenothion
8.	Chinomethionate (Morestan)
9.	Dicrotophos
10.	EPN
11.	Fentin Acetate
12.	Fentin Hydroxide
13.	Lead Arsenate
14.	Leptophos (Phosvel)
15.	Mephosfolan
16.	Mevinphos (Phosdrin)
17.	Thiodemeton / Disulfoton
18.	Vamidothion

II. PESTICIDES RESTRICTED FOR USE IN THE COUNTRY

S. No.	Name of Pesticides	Details of Restrictions
1.	Aluminium Phosphide	The Pest Control Operations with Aluminium Phosphide may be undertaken only by Govt./Govt. undertakings / Govt. Organizations / pest control operators under the strict supervision of Govt. Experts or experts whose expertise is approved by the Plant Protection Advisor to Govt. of India except [1]Aluminium Phosphide 15 % 12 g tablet and [2]Aluminum Phosphide 6 % tablet. [RC decision circular F No. 14-11(2)-CIR-II (Vol. II) dated 21-09-1984 and G.S.R. 371(E) dated 20th may 1999]. [1]Decision of 282nd RC held on 02-11-2007 and, [2]Decision of 326th RC held on 15-02-2012. The production, marketing and use of Aluminium Phosphide tube packs with a capacity of 10 and 20 tablets of 3 g each of Aluminium Phosphide are banned completely. (S.O.677 (E) dated 17thJuly, 2001)
2.	Captafol	The use of Captafol as foliar spray is banned. Captafol shall be used only as seed dresser. (S.O.569 (E) dated 25thJuly, 1989) The manufacture of Captafol 80 % powder for dry seed treatment (DS) is banned for use in the country except manufacture for export. (S.O.679 (E) dated 17thJuly, 2001)
3.	Cypermethrin	Cypermethrin 3 % Smoke Generator is to be used only through Pest Control Operators and not allowed to be used by the General Public. [Order of Hon,ble High Court of Delhi in WP(C) 10052 of 2009 dated 1407- 2009 and LPA-429/2009 dated 08-09-2009]
4.	Dazomet	The use of Dazomet is not permitted on Tea. (S.O.3006 (E) dated 31st Dec, 2008)

5.	Dichloro Diphenyl Trichloroethane (DDT)	The use of DDT for the domestic Public Health Programme is restricted up to 10,000 Metric Tonnes per annum, except in case of any major outbreak of epidemic. M/s Hindustan Insecticides Ltd., the sole manufacturer of DDT in the country may manufacture DDT for export to other countries for use in vector control for public health purpose. The export of DDT to Parties and State non- Parties shall be strictly in accordance with the paragraph 2(b) article 3 of the Stockholm Convention on Persistent Organic Pollutants (POPs). (S.O.295 (E) dated 8th March, 2006)

		Use of DDT in Agriculture is withdrawn. In very special circumstances warranting the use of DDT for plant protection work, the state or central Govt. may purchase it directly from M/s Hindustan Insecticides Ltd. to be used under expert Governmental supervision. (S.O.378 (E) dated 26thMay, 1989)
6.	Fenitrothion	The use of Fenitrothion is banned in Agriculture except for locust control in scheduled desert area and public health. (S.O.706 (E) dated 03rdMay, 2007)
7.	Methyl Bromide	Methyl Bromide may be used only by Govt./Govt. undertakings/Govt. Organizations / Pest control operators under the strict supervision of Govt. Experts or Experts whose expertise is approved by the Plant Protection Advisor. [G.S.R.371 (E) dated 20thMay, 1999 and earlier RC decision]
8.	Monocrotophos	Monocrotophos is banned for use on vegetables. (S.O.1482 (E) dated 10thOct, 2005)

9.	Trifluralin	(i) The Registration, import, manufacture, formulation, transport, sell and its all uses except use in wheat shall be prohibited and completely banned from 8th August, 2018. (ii) (ii) A cautionary statement has to be incorporated in the label and leaflet that it is toxic to aquatic organism, hence should not be used near water bodies, aquaculture or pisciculture area. (vide S.O 3951(E) dated 8th August, 2018)

Annexure 2

The WHO classification of pesticides by hazard:

1. Extremely hazardous (Class Ia) technical grade active ingredients of pesticides (common name) – Not permissible in the project

Common name		
Aldicarb	Difenacoum	Mevinphos
Brodifacoum	Difethialone	Parathion
Bromadiolone	Diphacinone	Parathion-methyl
Bromethalin	Disulfoton	Phenylmercury acetate
Calcium cyanide	EPN	Phorate
Captafol	Ethoprophos	Phosphamidon
Chlorethoxyfos	Flocoumafen	Sodium fluoroacetate
Chlormephos	Hexachlorobenzene	Sulfotep
Chlorophacinone	Mercuric chloride	Tebupirimfos
		Terbufos

2. Highly hazardous (Class Ib) technical grade active ingredients of pesticides (common name) – Not permissible in the project

Table 2.1 Common name		
Acrolein	Dinoterb	Methomyl
Allyl alcohol	DNOC	Monocrotophos
Azinphos-ethyl	Edifenphos	Nicotine
Azinphos-methyl	Ethiofencarb	Omethoate
Blasticidin-S	Famphur	Oxamyl
Butocarboxim	Fenamiphos	Oxydemeton-methyl
Butoxycarboxim	Flucythrinate	Paris green
Cadusafos	Fluoroacetamide	Pentachlorophenol
Calcium arsenate	Formetanate	Propetamphos
Carbofuran	Furathiocarb	Sodium arsenite
Chlorfenvinphos	Heptenophos	Sodium cyanide
3-Chloro-1, 2-propanediol	Isoxathion	Strychnine
Coumaphos	Lead arsenate	Tefluthrin
Coumatetralyl	Mecarbam	Thallium sulfate
Zeta-cypermethrin	Mercuric oxide	Thiofanox
Demeton-S-methyl	Methamidophos	Thiometon
Dichlorvos	Methidathion	Triazophos
Dicrotophos	Methiocarb	Vamidothion
	Zinc phosphide	Warfarin

3. Moderately hazardous (Class II) technical grade active ingredients of pesticides (common name) – Not permissible in the project

Common name		
Alanycarb	Dimethoate	Molinate
Anilofos	Dinobuton	Nabam
Azaconazole	Diquat	Naled
Azocyclotin	Endosulfan	Paraquat
Bendiocarb	Endothal-sodium	Pebulate
Benfuracarb	EPTC	Permethrin
Bensulide	Esfenvalerate	Phenthoate
Bifenthrin	Ethion	Phosalone
Bilanafos	Fenazaquin	Phosmet
Bioallethrin	Fenitrothion	Phoxim
Bromoxynil	Fenobucarb	Piperophos
Bromuconazole	Fenpropidin	Pirimicarb
Bronopol	Fenpropathrin	Prallethrin
Butamifos	Fenthion	Profenofos
Butylamine	Fentin acetate	Propiconazole
Carbaryl	Fentin hydroxide	Propoxur
Carbosulfan	Fenvalerate [ISO]	Prosulfocarb
Cartap	Fipronil	Prothiofos
Chloralose	Fluxofenim	Pyraclofos
Chlorfenapyr	Fuberidazole	Pyrazophos
Chlordane	Gamma-HCH, Lindane	Pyrethrins
Chlorphonium chloride	Guazatine	Pyroquilon
Chlorpyrifos	Haloxyfop	Quinalphos
Clomazone	HCH	Quizalofop-p-tefuryl
Copper sulfate	Imazalil	Rotenone
Cuprous oxide	Imidacloprid	Spiroxamine
Cyanazine	Iminoctadine	TCA (acid)
Cyanophos	Ioxynil	Terbumeton
Cyfluthrin	Ioxyniloctanoate	Tetraconazole
Beta-cyfluthrin	Isoprocarb	Thiacloprid
Cyhalothrin	Lambda-cyhalothrin	Thiobencarb
Cypermethrin	Mercurous chloride	Thiocyclam
Alpha-cypermethrin	Metaldehyde	Thiodicarb
Cyphenothrin [(1R)-isomers]	Metam-sodium	Tralomethrin
2,4-D	Methacrifos	Triazamate
DDT	Methasulfocarb	Trichlorfon
Deltamethrin	Methyl isothiocyanate	Tricyclazole
Diazinon	Metolcarb	Tridemorph
Difenzoquat	Metribuzin	Xylylcarb

4. Slightly hazardous (Class III) technical grade active ingredients of pesticides (common name) – Permissible under IPM

Common name		
Acephate	Dinocap	Nitrapyrin
Acetochlor	Diphenamid	Nuarimol
Acifluorfen	Dithianon	Octhilinone
Alachlor	Dodine	N-octyl bicyclo heptene dicarboximide
Allethrin	Empenthrin	Oxadixyl
Ametryn	Esprocarb	Paclobutrazol
Amitraz	Etridiazole	Pendimethalin
Azamethiphos	Fenothiocarb	Pimaricin
Bensultap	Ferimzone	Pirimiphos-methyl
Bentazone	Fluazifop-p-butyl	Prochloraz
Butralin	Fluchloralin	Propachlor
Butroxydim	Flufenacet	Propanil
Chinomethionat	Fluoroglycofen	Propargite
Chlormequat (chloride)	Flurprimidol	Pyrazoxyfen
Chloroacetic acid	Flusilazole	Pyridaben
Copper hydroxide	Flutriafol	Pyridaphenthion
Copper oxychloride	Fomesafen	Pyridate
4-CPA	Furalaxyl	Pyrifenox
Cycloate	Glufosinate	Quinoclamine
Cyhexatin	Hexazinone	Quizalofop
Cymoxanil	Hydramethylnon	Resmethrin
Cyproconazole	Iprobenfos	Sethoxydim
Dazomet	Isoprothiolane	Simetryn
2,4-DB	Isoproturon	Sodium chlorate
Dicamba	Isouron	Sulfluramid
Dichlormid	Malathion	2,3,6-TBA
Dichlorobenzene	MCPA	Tebuconazole
Dichlorophen	MCPA-thioethyl	Tebufenpyrad
Dichlorprop	MCPB	Tebuthiuron
Diclofop	Mecoprop	Thiram
Dicofol	Mecoprop	Tralkoxydim
Diethyltoluamide	Mefluidide	Triadimefon
Difenoconazole	Mepiquat	Triadimenol
Dimepiperate	Metalaxyl	Tri-allate
Dimethachlor	Metamitron	Triclopyr
Dimethametryn	Metconazole	Triflumizole
Dimethipin	Methylarsonic acid	Undecan-2-one
Dimethylarsinic acid	Metolachlor	Uniconazole

Diniconazole	Myclobutanil	XMC
	2-Napthyloxyacetic acid	Ziram

Annexure 3

4. Pest Management Plan

5. The primary aim of Pest Management Plan (PMP) is to manage pests and diseases that may negatively affect production of crops so that they remain at a level that is under an economically damaging threshold. Pesticides should be managed to reduce human exposure and health hazards, to avoid their migration into off-site land or water environments and to avoid ecological impacts such as destruction of beneficial species and the development of pesticide resistance. PMP consists of the judicious use of both chemical and nonchemical control techniques to achieve effective and economically efficient pest management with minimal environmental contamination. PMP therefore may include the use of:

- Mechanical and Physical Control
- Cultural Control
- Biological Control, and
- Rational Chemical Control

6.

7. Non Chemical Pest Management:

8. The pest management will be restricted the methods of mechanical, physical, biological methods unless chemical methods are highly desired. The key methods to be followed are:

- Selection of pest resistant varieties recommended for the state
- Crop rotation to reduce the presence of insects, disease, or weeds in the soil or crop ecosystems
- Support beneficial bio-control organisms such as insects, birds, mites, and microbial agents to perform biological control of pests (e.g., by providing a favorable habitat, such as bushes for nesting sites and other original vegetation that can house pest predators and parasites)
- Favor manual, mechanical weed control and/or selective weeding
- Using mechanical controls such as traps, barriers, light, and sound to kill, relocate, or repel pests.

The non chemical methods will also include the promotion of the following plant and animal based preparations as pesticides and growth promoters which are proven to be effective.

1. Seed treatment with *Beejamrutha* to offer protection from pathogens, pests and promote good germination (a mixture of cow dung, cow urine, water, lime and handful of soil)
2. Application of *GhanJeevamrutha* – culture of micro organisms to improve nutrient availability to the crop (a mixture of cow dung, cow urine, jiggery, gram flour and soil - preferably from forest)
3. Plant protection by natural pesticides like *Agni Astra, Brahma Astra, Neem Astra*
    a. *Agni Astra:* prepared by boiling and fermenting chillies, garlic, tobacco and neem leaves in cow urine.
    b. *Brahma Astra:* prepared by boiling and fermenting leaves of neem, milk weed, datura, arjun, gilory, karanj and guava in cow urine.
    c. *Neem Astra:* prepared by adding neem leaf extract in cow dung and urine.

9. Pest Management Plan:

IPM is the combined use of multiple methods mentioned above to prevent or suppress pests in a given situation. Although IPM emphasizes the use of nonchemical strategies, chemical control may be an option used in conjunction with other methods. In cases where chemical methods are adopted, it will be in compliance with the OP 4.09, i.e. the pesticides falling under classes 1a, 1b and II will be excluded (Annexure 11 of Volume 1). Integrated pest management strategies will depend on surveillance to establish the need for control and to monitor the effectiveness of management efforts. Pest surveillance is an effective tool as an information system, which renders pest control methods more effective. It aims at monitoring and forewarning of likely buildup of pests in order to facilitate planning and adoption of suitable control strategy based on ETL. The project will make the necessary arrangements and will provide the trainings for the ECPs on the same.

10. The following precautions will be ensured under IPM practices:

Pesticide Application

11. In cases where the pesticide application is justified, then the beneficiaries will be oriented on the following actions:

- The personnel will be trained to apply pesticides with all necessary precautions during mixing, applications, washing of the sprayers, disposal of spray equipment etc.
- Review and follow the manufacturer's directions on maximum recommended dosage or treatment as well as published reports on using the reduced rate of pesticide application without loss of effect, and apply the minimum effective dose
- Avoid routine "calendar-based" application, and apply pesticides only when needed and useful based on criteria such as field observations, weather data (e.g. appropriate temperature, low wind, etc.),
- Avoid the use of highly hazardous pesticides, particularly by uncertified, untrained or inadequately equipped users. This includes:
    - Pesticides that fall under the World Health Organization Recommended Classification of Pesticides by Hazard Classes 1a, 1b and II should be avoided in all cases and class III to be used only when no practical alternatives are available and where the handling and use of the products will be done in careful manner to avoid affects on health and environment
    - Use only pesticides that are approved by the WHO, that are slightly hazardous (Class III) and are unlikely to present acute hazards (Class IV) Annexure 11 of Volume 1. Use only pesticides that are manufactured under license and registered and approved by the appropriate authority and in accordance with the Food and Agriculture Organization's (FAO's) International Code of Conduct on the Distribution and Use of Pesticides;
    - Use only pesticides that are labelled in accordance with the national and international standards and norms
    - Avoid use of pesticides that have been linked to localized environmental problems and threats
- Maintain and calibrate pesticide application equipment in accordance with manufacturer's recommendations. Use application equipment that is registered in the country of use

- Establish untreated buffer zones or strips along water sources, rivers, streams, ponds, lakes, and ditches to help protect water resources

Pesticide Handling and Storage

12. Improper pesticides handling and storage may lead to contamination of soils, groundwater, or surface water resources, due to accidental spills during transfer, mixing etc. The following measures will be taken to avoid the issues. The Enterprises will be trained in handling and storage of pesticides especially on the following:

- Storage of pesticides in their original packaging, in a dedicated, dry, cool and well aerated location that can be locked and properly identified with signs, with access limited to authorized people. No human or animal food may be stored in this location. The store room should also be designed with spill containment measures and sited in consideration of potential for contamination of soil and water resources
- Purchase and store, no more pesticide than needed and rotate stock using a “first-in, first-out” principle so that pesticides do not become obsolete. Additionally, the use of obsolete pesticides should be avoided under all circumstances; a management plan that includes measures for the containment, storage and ultimate destruction of all obsolete stocks to be prepared by the enterprises (in accordance to guidelines by FAO and consistent with country commitments under the Stockholm, Rotterdam and Basel Conventions).
- Operators must read, understand, and follow product label directions for safe mixing, application, and disposal; farmers/labours applying pesticides to be trained on critical operations (e.g., mixing, transfers, filling tanks, and application).
- Mixing and transfer of pesticides should be undertaken in ventilated and well-lit areas, using containers designed and dedicated for this purpose
- Use of Personal Protective Equipment (PPE) such as gloves, overalls, eye protection worn at all times when handling and applying pesticides.
- Mixing and filling the pesticides should be done away from watercourses and drains.
- Spray operation should be done in early mornings and evenings, avoid spraying on cloudy day or a windy day/direction of wind.
- Rinsed water should be collected in a separate tank and disposed of as a hazardous waste, spills should be cleared. The spray equipment and containers should not be washed in water courses and drains
- Collect rinse water from equipment cleaning for reuse (such as for the dilution of identical pesticides to concentrations used for application);
- Empty pesticide containers should not be used for any other purpose (e.g. storing food, water containers). Contaminated containers should be handled as hazardous waste, and should be disposed safely
- Expired chemicals should be disposed off immediately
- Maintain records of pesticide use and effectiveness
- Shower or bath at the end of every day’s work and wear new clean clothes.
- Wash overalls and other protective clothing at the end of every working day in soap and water and keep them separate from the rest of the family’s clothes. If the insecticide touches the skin, wash off immediately with soap and water.
- Change clothes immediately if they become contaminated with pesticides. Inform the supervisor immediately if one feels unwell.

- In case of accidental swallow or exposure to the spray or pesticides the first aid should be administered immediately and medical help should be sought immediately

Annexure 4:

BE SAFE !

Proper Handling of Pesticides

Preliminary Field Assessment

- Identify the pest and ascertain the damage done
- Use pesticide only if it has exceeded the ergonomic injury level
- Use only the recommended pesticides, which is the least toxic

Use of Proper Equipment and Quality Check

- Read instructions manual of the pesticide and equipment
- Check the spraying equipment and accessories, which are to be used
- Ascertain that all components of equipment are clean, especially filling and suction, strainer, sprayer tank, cut off device and nozzle
- Replace worn out parts such as 'O' ring, seal, gasket, worn out nozzle tip, hose clamps and valves
- Test the sprayer and ascertain whether it pumps the required output at rated pressure

Equipment Calibration

- Calibrate the sprayer
- Set sprayer speed and nozzle swath by adjusting spray height and nozzle spacing

Use of Protective Gear & Personal Hygiene

- Make sure that appropriate protection clothing is available and is used
- Train all concerned with the application, and understand the recommendations
- Ensure that soap, towel, and plenty of water is available

Proper Storage

- Pesticide should be kept in dry place and in locked storage

First aid measures for pesticide poisoning

- In case of skin contact, remove contaminant contacts and wash with clean water
- In case of inhalation, remove from site and provide good clean air site, keep the head and shoulder upright
- In case of becoming unconsciousness and breathing stops, provide artificial respiration.
- If pesticide is swallowed, induce vomiting by giving 2-3 litres salt water. Give milk after this
- Take the patient to doctor at the earliest, and take the container along with patient

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Annexure 6 : Stakeholder Engagement Plan

GOVERNMENT OF UTTAR PRADESH

UP Diversified Agriculture Support Project (UPDASP)

Stakeholder Engagement Plan

5th February 2024

Table of Contents

1. Introduction

The Uttar Pradesh Government has an aim to make its GSDP $1 trillion in the next five years. With 60 percent of the population engaged in agriculture and allied sector activities, agriculture is the primary occupation in the state. This makes UP's growth plans irretrievably intertwined with the growth of the agriculture sector in the State. The agriculture and allied sectors in UP accounted for 21.6% of the Gross-Value Add (GSVA) output of the State in 2021-22, 5% less than 2011-12, but still higher than the national figure of 15.5% in 2021-22. Today, Uttar Pradesh is the largest producer of wheat and the second largest producer of rice in India. If they reach their potential, the Uttar Pradesh agriculture and allied sectors have the capacity to not only feed the entire country, but also produce sufficient surplus for exports. However, to reach this potential will require focused efforts. A closer look reveals that the productivity of agricultural crops in Uttar Pradesh has much scope for improvement when compared to that of other states, national and other countries. Further, Bundelkhand and Eastern UP are agriculturally backward and economically poorer than Western and Central regions of the State, and need to be uplifted if UP wants to achieve its growth targets.

1.1 Project Development Statement

The UPDASP project aims to promote climate resilient, inclusive, and competitive value-chains of prioritized agriculture commodities in Uttar Pradesh.

PDO Level Indicators

- Increase in productivity of select commodities (Tones / year)
- Project beneficiaries adopting climate smart practices (Number)
- Increase in profitability at the producer level (Percentage)

The proposed project will focus on addressing the existing challenges in UP agriculture and allied sectors. The conceptual approach to achieve the PDO is anchored on four interrelated goals:

(i) to support productivity increases in staple crops (including rice and wheat) grown by the majority of farmers, through improved access to inputs and the efficient use of natural resources potentially reducing emissions. This would be conducted with the project districts (which have relatively low productivity);

(ii) demonstrate approaches to transform the sector into higher-value produce and value chains through the concept of agro-clusters, which will take a market-led approach to developing the ecosystem to support selected crops to become major drivers of economic growth in the project districts;

(iii) to support, state-wide, the introduction of a digital architecture to support the efficient delivery of services, improved e-commerce, and standardization of data collection and analysis; and,

(iv) to support the ecosystem for increased access to financial services to enable and leverage investments for project beneficiaries and MSMEs.

1.2 Project Component

Component 1: Productivity Enhancement: This component focuses on strengthening the agricultural productivity against the backdrop of high levels of climate risks and variability in productivity across the project areas. It focuses on strengthening Uttar Pradesh's formidable position as the leading producer of multiple agricultural crops while enhancing the resilience of the dominant production systems. The objective of this component is to address the existing productivity challenges through improved access to climate-smart inputs and efficient use of natural and fostering innovations that promote sustainability.

Sub-Component 1.1 : Resource Use Efficiency For Productivity Enhancement: The Activities Proposed are *Soil Productivity Sub System related activities* (*Soil testing, Green manuring, Soil amendments (Gypsum), Crop Residue Management* (CRM), *Micronutrients Enhancement), etc.), Soil Input Efficient Sub System related activities (Micro Watershed Approach in Bundelkhand, Bunding and Laser Land Levelling, Enhancing Application of Bio Fertilisers, Conjunctive Water Use and Management (CWUM), etc.), Farming Practices-Technology Sub System Related Activities (Farm Machineries, Plant Protection, etc.), etc.*

Sub-Component 1.2: Seed Systems: The Activities Proposed are Seed Production and Distribution Systems and *Establishment of Seed Hubs.* The project will provide matching grants to individual farmers and collectives engaged in the production and processing of climate-resilient seeds.

Sub-Component 1.3: Extension Ecosystem: Strengthening Extension Services for Tailored Climate Smart agronomic Practices: Activities Proposed are *Strengthening Advisory Platform at District and State Levels,* Partnership with Technical Institutions, Climate Risks mitigation study, Promotion of stress tolerant and climate resilience verities, Water Efficient system (in particular Bundelkhand), Technology adoption and infrastructure, Awareness and incentive for adoption of climate resilience technologies, Development of storage and transport support, Development of robust monitoring and evaluation framework, etc.

Sub-Component 1.4: Leveraging Carbon Markets: This sub-component will integrate and align the project activities with the UP-Carbon Platform enabled by the World Bank's Climate Warehouse to leverage carbon and sustainability (green) credits. It will align the climate smart agriculture initiatives with the UP-Accelerator and leverage economic dividends for project beneficiaries promoting sustainable, low-Carbon agricultural operations including direct seeding in rice wheat systems, minimal tillage, soil management, water conservation and increased WUEs.

Component 2: Commodity Clusters: The objective of this component is to support the integration of smallholder farmers into value chains for select high value commodities, thereby increasing productivity, value addition and farmers' incomes. The component will aim to address the current fragmentation of production and market activities in the sector, and to take advantage of the state's potential to increase the commercialization of select high value crops, both in domestic and export markets.

Sub-component 2.1 : Development of Agro-Clusters: The activities Proposed are *Identification of commodities and regions for interventions,* Conducting Commodity Wise Diagnostics, *Preparation and implementation of Cluster Development Plans (CDP), Mobilisation of Beneficiaries, Improving access to Quality Seeds, Production and distribution of Seeds by*

Private enterprises, Training for seed processing Testing and Storage, Crop Management Practices, Development of customised Package of Practices (POP), Assessment of Maximum Residue Level (MRL), Demonstration Plots, Training and filed Exposures, *Farm Mechanisation and IT enabled services, Storage, Processing Facilities, Market Development, Capacity Development and Food Safety, etc.*

Sub-component 2.2 : Fisheries Clusters Development: The activities Proposed are *Sustainable increase of production ponds, Assured supply of improved seeds*, *Establishment, modernization and upgradation of hatcheries, Demonstration of fish nurseries and establishment of captive nurseries, Cost efficient formulated fish feed suitable to designed aquaculture, Updated technologies, Diffusion on innovative technologies through demonstration and extension services,* Sustainable enhancement of reservoir fish production, *Formation of market linkages and strengthening the value chain, Establishment of fish landing stations, Modern fish markets, Introduction of mini fish processing units, Establishment of retail Kiosks, Establishment of ice plants, Online fish marketing,* Capacity building, *Quality control and food safety, etc.*

Component 3: Digital and Financial Ecosystems

Sub-Component 3.1: Digital Architecture and Technology Services: Activities proposed are Strengthening and Expanding the Digital and Connectivity Infrastructure, Integrated Agritech Hub with AI, IoT, GIS, Drone Technology, Big Data Analysis, etc. integration and Core Building Blocks and other Sub components, to achieve key outcome of "Agriculture Productivity through Climate Smart Agriculture System (CSA)"

Sub-Component 3.2: Agri Finance Ecosystem and Promoting innovations: This component will strive to improve per capita agri-credit from the formal financial institutions to improve productive investments and competitiveness in the agri-allied areas. The activities proposed are funding support to small and marginal farmers to agriprenuers, farmer collectives, and agri MSEs (micro and small enterprises), various application and Agri development including farmers facilitation centers, innovations to promote with Water Based Green Credits.

Component 4: Project Management, Learning, and Partnerships: The objectives of this component are to develop management and monitoring systems, enhance staff capacity for effective and efficient implementation of project activities, and develop partnerships with key national and global public and private sector organizations.

Component 5: Contingent Emergency Response Component (*CERC*): The project will include CERC with a zero allocation at project approval. This arrangement shall permit a rapid project restructuring should a disaster strike and allows the Bank to support recovery efforts quickly, if required.

1.3 Project Beneficiaries

The project is proposed to be implemented 105 – 125 blocks across 28 districts[12] of Eastern UP and Bundelkhand. The direct beneficiaries are (i) 750,000 small and marginal farmers; (ii)

[12] The districts are Jhansi, Lalitpur, and Jalaun (Jhansi Division); Banda, Chitrakoot, Hamirpur, and Mahoba (Chitrakoot Division); Mirzapur, Sonbhadra, and Sant Ravidas Nagar (Vidhyachal Division); Varanasi, Ghazipur, Jaunpur, and Chandauli (Varanasi Division); Gorakhpur, Deoria, Khushinagar and Maharajganj (Gorakhpur Division); Basti,

100,000 fishers; and (iii) MSE entrepreneurs. In addition, the project will support farmers through farmer collectives and through the innovative production system approach.

2. Objective/Description of Stakeholder Engagement Plan (SEP)

The overall objective of this SEP is to define a program for stakeholder engagement, including public information disclosure and consultation throughout the entire project cycle. The SEP outlines the ways in which the project team will communicate with stakeholders and includes a mechanism by which people can raise concerns, provide feedback, or make complaints about project activities or any activities related to the project.

3. Stakeholder identification and analysis

3.1 Methodology

In order to meet best practice approaches, the project will apply the following principles for stakeholder engagement:

- *Openness and life-cycle approach:* Public consultations for the project(s) will be arranged during the whole life cycle, carried out in an open manner, free of external manipulation, interference, coercion, or intimidation.
- *Informed participation and feedback:* Information will be provided to and widely distributed among all stakeholders in an appropriate format; opportunities are provided for communicating stakeholder feedback, and for analysing and addressing comments and concerns.
- *Inclusiveness and sensitivity:* Stakeholder identification is undertaken to support better communications and build effective relationships. The participation process for the projects is inclusive. All stakeholders at all times are encouraged to be involved in the consultation process. Equal access to information is provided to all stakeholders. Sensitivity to stakeholders' needs is the key principle underlying the selection of engagement methods. Special attention is given to vulnerable groups that may be at risk of being left out of project benefits, particularly women, the elderly, persons with disabilities, displaced persons, and migrant workers and communities, and the cultural sensitivities of diverse ethnic groups.
- *Flexibility:* If social distancing, cultural context (for example, particular gender dynamics), or governance factors (for example, high risk of retaliation) inhibits traditional forms of face-to-face engagement, the methodology should adapt to other forms of engagement, including various forms of internet- or phone-based communication.

3.2. Affected parties and other interested parties[13]

Affected parties include local communities, community members, and other parties that may be subject to direct impacts from the Project. Specifically, the following individuals and groups fall within this category:

Siddharthnagar, and Sant Kabir Nagar (Basti Division); Azamgarh, Mau, and Ballia (Azamgarh Division); and Bahraich, Balrampur, Gonda, Shravasti (Devipatan Division).

13 For the purposes of effective and tailored engagement, stakeholders of the proposed project(s) can be divided into the following core categories:

- Farmers involved in agriculture, agribusiness and agri-processing
    - Marginal Farmers
    - Small Farmers
    - Medium Farmers
    - Large Farmers
- Fish farmers
- Agricultural Labourers
- Fisheries Labourers
- Women farmers and fishers
- Schedule Caste and Schedule Tribe Farmers and Fishers
- Women SHGs and their federations
- Farmer Producer Organisation (FPO), Farmer Producer Companies (FPC), Fish Farmer Producer Companies (FFPC), etc.

3.2.1 Other Interested Parties

The projects' stakeholders also include parties other than the directly affected communities, including NGOs, SHG.

- Departments of Agriculture, Fisheries, Horticulture, Planning, Finance, MSME.
- Community Based Organisations such as Farmers associations, Agribusiness and Agri-processing federations/associations
- Gram Panchayats, Gram Pradhans, Nyaya Panchayats, Block Development Officers, and other Elected Representatives.
- Krishi Vigyan Kendra (KVK)
- Soil Testing Laboratories
- Farm Equipment and Agri-processing Equipment Manufacturers and Retailers
- Diversified Agricultural Support Project (DASP) Society
- Custom Hiring Centers (CHC)/ Farm Machinery Banks (FMB)
- National and State Level Research institutions
- NGOs with interest in agricultural/fisheries related activities.
- Financial institutions including MFIs
- Contractors engaged by project
- Print and Electronic Media
- Social Media
- Academia from Academic Institutes
- Public at large

- **Affected Parties:** Persons, groups, and other entities within the Project Area of Influence (PAI) that are directly influenced (actually or potentially) by the project and/or have been identified as most susceptible to change associated with the project, and who need to be closely engaged in identifying impacts and their significance, as well as in decision-making on mitigation and management measures.
- **Other Interested Parties:** Individuals/groups/entities that may not experience direct impacts from the Project but who consider or perceive their interests as being affected by the project and/or who could affect the project and the process of its implementation in some way.
- **Vulnerable Groups:** Persons who may be disproportionately impacted or further disadvantaged by the project(s) compared with any other groups due to their vulnerable status, and that may require special engagement efforts to ensure their equal representation in the consultation and decision-making process associated with the project.

3.3. Disadvantaged/vulnerable individuals or groups[14]

Within the Project, vulnerable or disadvantaged groups may include but are not limited to the following:

S. No.	Possible vulnerable groups	Barriers to accessing information and/or project benefits
1.	Women Farmers and Fishers	Poor representation and lack of participation in decision making and restrictions in accessing project benefits due to social, economic and cultural condition
2.	Small and marginal Farmers and Fishers Farmers and Fishers belonging to BPL Category	Elite capturing of project benefits, poor representation and lack of participation in decision making and restrictions in accessing project benefits due to social, economic and cultural condition
3.	Landless Agricultural and Fisheries Labourers	Migrate often to other places in different seasons in search of work; lack of participation in decision making, may not be able to avail project benefits
4	Scheduled Castes farmers and fishers	Possible exclusion of the groups in participation in planning and accessing project benefits due to social and cultural condition
5	Scheduled Tribes farmers and fishers	Possible exclusion of the groups in participation in planning and accessing project benefits due to social and cultural condition
6	Person with Disabilities among farmers and fishers	Possible exclusion during project planning and in accessing benefits, may not participate in decision making

As the project progresses, vulnerable groups within the communities affected by the Project may be added to the above list, further confirmed, and consulted through dedicated means, as

[14] It is particularly important to understand whether project impacts may disproportionately fall on disadvantaged or vulnerable individuals or groups, who often do not have a voice to express their concerns or understand the impacts of a project, and to ensure that awareness raising and stakeholder engagement be adapted to take into account such groups' or individuals' particular sensitivities, concerns, and cultural sensitivities and to ensure a full understanding of project activities and benefits. Engagement with vulnerable groups and individuals often requires the application of specific measures and assistance aimed at the facilitation of their participation in the project-related decision making so that their awareness of and input into the overall process are commensurate with those of other stakeholders.

appropriate. Description of the methods of engagement that will be undertaken by the project is provided in the following sections.

4. Stakeholder Engagement Program

4.1. Summary of stakeholder engagement done during project preparation

During project preparation, 12 stakeholder consultation meetings were conducted during the month of January 2024 with the participation of the stakeholders mentioned above at selected locations in Banda, Jalaun, Chitrakoot, Hamirpur, Varanasi, and Chandauli districts. A total of 159 persons (107 male and 52 female), participated in these consultations. The details of these consultations are given below:

S. No.	Stakeholder groups Consulted	District	Date	Participants	
				Male	Female
1.	Farmers, Farmer collectives like FPOs/FPCs and its members involved in agriculture and allied activities	Hamirpur, Banda, Jalaun, Chitrakoot	24/Jan/24 to 30/Jan/ 24	20	9
		Chandauli, Varanasi	30/Jan/24	24	4
2.	Member of Women SHG, women FPOs, CLF office bearers, women farmers, and tenant farmers	Hamirpur, Jalaun and Banda	24/Jan/24 and 24/Jan/24	0	16
3.	Representatives of soil testing labs of Agriculture Department and KVKs	Hamirpur and Jalaun	24/Jan/24	4	1
4.	Members of farmer collectives like FFPOs/FFPCs, fish farmers, private sector players involved in input supply and marketing in the fisheries sector	Jalaun, Banda, and Jhansi	25/Jan/24 to 30/Jan/24	8	2
		Chandauli and Varanasi	31/Jan/24	24	3
5.	Custom Hiring Centers (CHC) and its users	Jalaun, Banda	25/Jan/24 and 28/Jan/24	9	6

6.	Government officials in concerned departments, National and State level Universities & Research institutions and KVKs	Jhansi, Ayodhya and Hamirpur	17/Jan/24	13	2
7.	Men and women from tribal communities	Chitrakoot	31/Jan/24	5	9

The project information, potential impacts of the project (agriculture related, fisheries, value chain, etc.), benefits of the project, role of the stakeholders, and opportunities and challenges related to agriculture, fisheries, livelihoods, etc. were explained to the participants. After the presentations about the project, the participants gave their feedback. The feedback including any concerns, suggestions, etc. received from the stakeholders during consultations was taken into account by the project to be incorporated into the design. The feedback including any concerns, suggestions, etc. received from the stakeholders during the consultation meetings and the responses provided by the project team are given by each consultation under Annex 1.

4.2. Summary of project stakeholder needs and methods, tools, and techniques for stakeholder engagement

Different engagement methods are proposed and cover different stakeholder needs as stated below:

4.3. Stakeholder engagement plan

Project Stage	Estimated Date/ Time Period	Topic of Consultation/ Message	Method Used	Target Stakeholders	Responsibilities
Preparatory Phase	During planning phase, prior to implementation	• Project design, scope, approach, benefits, timelines, progress • Any prior permission required for initiating the activities	• Face-to-face meetings • Focus group discussions • Official letter or notification • Workshops and trainings • Wall writing and paintings	• Project primary stakeholders (affected parties) • Disadvantaged/ vulnerable individuals and groups • Departments of Agriculture, Horticulture,	• SPMU • DPMUs

Project Stage	Estimated Date/ Time Period	Topic of Consultation/ Message	Method Used	Target Stakeholders	Responsibilities
		• Grievance management process		Fisheries, Irrigation, Planning, Finance, MSME • Cluster Planning and Implementation Team • Gram Panchayat • National and State Level Research Institutions	
Implementation Phase	During Implementation, prior to withdrawal	• Information on project activities and timelines • Grievance redressal management - tools and its usage • Provisions in place for vulnerable groups, WHHs, PwDs, Landless, SCs/ STs, BPL, etc. • Specific design interventions for vulnerable and disadvantaged including • GBV/ SEA/SH and mitigation measures	• Project website • Phone calls • Letters to stakeholder groups • Focus Group Discussion • Gram Sabha meetings • Women SHG meetings & CLF meetings • Wall writing and paintings • Signboards • Common places and community centre notice boards • Meetings with local NGO & MFI representatives • Meeting with financial institutions &	• Project primary stakeholders (affected parties) • Disadvantaged/ vulnerable individuals and groups • Krishi Vigyan Kendra (KVK) • Soil Testing Laboratories • Farm Equipment and Agri-processing Equipment Manufacturers and Retailers • FPO, FPC, FFPC, etc. • Women SHGs & CLFs • CHC & FMB • Gram Panchayat	• SPMU • DPMUs • CPIT • GPs

Project Stage	Estimated Date/ Time Period	Topic of Consultation/ Message	Method Used	Target Stakeholders	Responsibilities
			lead bank at district level • Quarterly/ Half-Yearly Meetings with farm equipment and agri-processing equipment manufacturers at Block/ District level	• Farm equipment manufacturers and retailers • Financial institutions	
Withdrawal Phase	Post Implementation	• Project Monitoring • Project outcomes and results • GRM monitoring	• Project website • Focus Group Discussion • Gram Sabha meetings • SHG & CLF Meetings • Meetings with local NGO and MFI representatives	• Project primary stakeholders (affected parties) • Disadvantaged/ vulnerable individuals and groups • FPO, FPC, FFPO, etc. • Women SHGs & CLFs • CHC & FMB Gram Panchayat • Departments of Agriculture, Horticulture, Fisheries, Irrigation, Planning, Finance, MSME	• SPMU • DPMUs • CPIT • GP

Information will be disclosed though Grievance Mechanism (GM) procedures; project orientation meetings; regular updates on project developments, public notices, press releases, project website, consultation meetings, information leaflets and brochures, separate focus group meetings with vulnerable groups, Op-Eds, newsletters, site visit meetings, etc. The information

will be disclosed in the local language. One state level Stakeholder Consultation Workshop and 4 Regional Level Stakeholder Consultation Workshops will be held to disclose and seek feedback on the draft Environmental and Social Management Framework (ESMF), Stakeholder Engagement Plan (SEP), and Labor Management Procedures (LMP) etc., following which the ESMF documents will be finalized and re-disclosed on agriculture and fisheries department website (including the World Bank external website). The information will be disclosed through all possible means, ranging from face-to-face meetings with the project stakeholders, distribution of hard copies, posters, leaflets, and brochures, and departments' websites and local media in local language, so that the documents are accessible to all project beneficiaries of the project, including those residing in the remote areas.

4.4. Reporting back to stakeholders

Stakeholders will be kept informed as the project develops, including reporting on project environmental and social performance and implementation of the stakeholder engagement plan and Grievance Mechanism, and on the project's overall implementation progress.

5. Resources and Responsibilities for implementing stakeholder engagement activities

5.1. Resources

The SPMU will be in charge of stakeholder engagement activities with the support of DPMUs and Field Offices. The budget for the SEP is Indian Rupees 49.12 crores.

Budget Category	Quantity	Unit Costs INR	Times/ Months	Total Costs INR, Crores
1. Estimated staff salaries* and related expenses				
1a. Co-ordinators/Facilitator/Associates	28	50000	72	10.08
1b. Travel Costs for staff	28	5000	72	1.008
1c. Provision for Community Level Workers	250	5000	72	9
2. Events				
2a. Block/ District Level Workshops/ Events (2 per district per year)	56	50000	6	1.68
2.b. State Level Workshops/ Events (4 per year)	4	400000	6	0.96
2.c. Farm/ Agri processing equipment manufacturers/ retailers meets at Block/ District level (2 per district per year)	56	50000	6	1.68
2.d. FPO/FPC/ FFPC, CLF meets at Block/ District level (2 per district per year)	56	50000	6	1.68
3. Communication campaigns				

Budget Category	Quantity	Unit Costs INR	Times/ Months	Total Costs INR, Crores
3a. Posters, Flyers, News Letters, etc. (lumpsum per district per year)	28	400000	6	6.72
3b. Social media campaign	28	100000	6	1.68
4. Trainings				
4a. Training on social/environmental issues for staff and Communities (2 per district per year)	56	200000	6	6.72
5. Beneficiary surveys				
5a. Mid-project perception survey (lumpsum)	1	10000000	1	1
5b. End-of-project perception survey	1	15000000	1	1.5
6. Grievance Mechanism				
6a.Training of Staff and Committees (1 per district per year)	28	200000	6	3.36
6b. Suggestion boxes in villages (10 per district)	24	2000	10	0.048
6c. GRM Website (Lumpsum)	1	10000000	1	1
7. Other expenses				
7a. Miscellaneous	1	10000000	1	1
TOTAL STAKEHOLDER ENGAGEMENT BUDGET:				**49.12**
Note: *Salary costs can be adjusted if the project will take care of these cost as part of the overall HR cost				

5.2. Management functions and responsibilities

The entities responsible for carrying out stakeholder engagement activities are with SPMU and DPMU. The stakeholder engagement activities will be documented through a Stakeholder Engagement Management System, which involves community engagement operations, collecting and processing of grievances, and maintaining database developed and maintained by the SPMUs and DPMUs.

Agency / Individual	Roles and Responsibilities

State Project Management Unit – SPMU	• Approve the content of the draft SEP (any revisions) • Approve prior to release, all IEC materials used to provide information associated with the project (communication material, PowerPoint, posters, leaflets, brochures, press release, website content etc) • Approve and authorize all stakeholder engagement events and disclosure of material to support stakeholder engagement events • Periodic update of SEP during the course of project implementation based on the emerging needs
District Project Management Unit – DPMU/DPIU	• Provide overall guidance and monitoring supervision to the SEP process • Prepare and provide appropriate IEC and communication material, information required to be disclosed to different stakeholder categories • Finalize the timing and duration of SEP related information disclosure and stakeholder engagement • Orient the Field level staff on SEP and requirements for its operationalization
Cluster Project Implementation Team (CPIT)	• Prepare and customize to block level requirements the IEC and communication material provided by the district Office, and the information required to be disclosed to different stakeholder categories. • Ensure that all material/ strategies developed are culturally appropriate and available in easily comprehendible form to stakeholders (based on their profile and their information needs). • Finalize the timing and duration of SEP related information disclosure and stakeholder engagement • Participate either themselves, or identify suitable representative, during all face-to face stakeholder meetings • Review and sign-off minutes of all engagement events; Maintain the stakeholder database. • Assure participation/ inclusion of stakeholders from vulnerable groups

6. Grievance Redress Mechanism

The main objective of a GRM is to assist to resolve complaints and grievances in a timely, effective, and efficient manner that satisfies all parties involved. The project places special emphasis on transparency, accountability, openness and disclosure of information to the community. In keeping with above principles, wide spread disclosure of information through wall writings, paintings, awareness generation campaigns, radio programmes, publications, village level workshops, block and district workshops will be carried out. Besides above, through agriculture and Fisheries Department websites for information dissemination regarding the project. A dedicated project website will be developed and updated regularly with the latest weekly/ monthly status of activities of the project. The existing GRM available in the state can be accessed by the project stakeholders. The details of these are given below:

6.1 Jan Sunwai

Jan Sunwai' (जनसुनवाई -समाधान |उत्तर प्रदेश सरकार (up.nic.in)) is an integrated grievance redressal system developed by the Uttar Pradesh government to achieve the objectives of good governance through the use of information technology. This system facilitates easy and transparent communication between citizens and government departments/offices. Citizens can register and track complaints online (website and Samadhan android app) at any time. Complaints received through various channels can be made available on a single portal/platform, making it convenient for departmental officials to efficiently resolve and monitor grievances. This system aims to provide a smooth and accessible mechanism for the resolution and monitoring of complaints for both citizens and government authorities.

6.2 GRM at Agriculture Department

Complaints can be registered with department of Agriculture on the department website (https://upagripardarshi.gov.in/DynamicPages/Grievances.aspx). Status of these complaints can be tracked against the complaint number received (https://upagripardarshi.gov.in/DynamicPages/GrievancesDetails.aspx). Stakeholders are welcome to use this facility. They can also write through postal correspondence at the following address; Agriculture Directorate Uttar Pradesh, Krishi Bhawan, Madan Mohan Malviya Marg Lucknow – 226001. At district level written complaints can be made to the DD Agriculture and Zila Krishi Adhikari by visiting their office during working hours. Similarly, at the block level complaints can be made to Assistant Director Agriculture and Beej Bhandaran Prabhari in writing. All complaints are usually resolved within one week of reporting, in exceptional circumstances depending on the nature of complaint additional time may be required.

6.3 GRM at Fisheries Department

Complaints relating to fisheries department stakeholders can write through the e-mail ID: dir.fisheries@up.gov.in. Similar to the system at agriculture department, in Fisheries department complaints can be made to the Assistant Director Fisheries or senior fisheries inspector at district/ level.

To strengthen the existing GRM, the project would take up the following actions:

- Provisions of Uttar Pradesh Panchayat Raj Act: The Provisions available for grievance redressal as per the Uttar Pradesh Panchayat Raj Act can be invoked. All Gram Pradhans have been designated as Public Information Officers under RTI act at Panchayat level in

the project area. All complaints regarding project should be acknowledged by the Gram Panchayat and final reply is expected to be delivered within 30 days, under RTI (Constitutional mandate).

- Information Education Communication: Wide publicity would be given regarding the grievance redressal mechanism available within UPDASP.
- In addition to the above, a template to share grievances will be provided on the UPDASP website and website of the Agriculture and Fisheries Department, in both English and local language. At project level, District Managers will be the focal point to manage/ redress the grievances and escalate to the state as per need. At state level, a Senior Expert - Communications will be focal point.

6.1. Description of GM

Step	Description of Process	Time Frame	Responsibility
GM implementation structure	As described above		
Grievance uptake	Grievances can be submitted via the following channels: • E-mail • Letter to Grievance focal points at local facilities • Complaint form to be lodged via any of the above channels • Walk-ins may register a complaint in a grievance logbook at a facility or suggestion box	30 days	CPIT/GP
Sorting, processing	Any complaint received is forwarded to GP/CPIT, Logged in Grievance Register, and categorized according to the complaint types	Upon receipt of complaint	Local grievance focal points
Acknowledgment and follow-up	Receipt of the grievance is acknowledged to the complainant by GP/CPIT	Within 2 days of receipt	Local grievance focal points
Verification, investigation, action	Investigation of the complaint is led by GP/CPIT. A proposed resolution is formulated by GP and communicated to the complainant by GP	Within 10 working days	Complaint Committee composed of GP/CPIT
Monitoring and evaluation	Data on complaints are collected in Grievance Registers and reported to SPMU every month		

Step	Description of Process	Time Frame	Responsibility
Provision of feedback	Feedback from complainants regarding their satisfaction with complaint resolution is collected by GP/CPIT	Within 10 working days of providing resolution.	Focal point at CPIT/DPMU
Training	Training needs for staff/consultants in the DPMU, private partners, and support agencies/Consultants are, a) awareness on GRM, b) procedures for GRM and c) Recording and reporting on Grievances		
If relevant, payment of reparations following complaint resolution	Payment of reparations following complaint resolution will be documented and signed by both parties on receipt of the amount. Payment of reparation related to employee accidents and fatalities will be undertaken as per the requirements of the Employee/ Worker Compensation Act, 1923.		

The GM will provide an appeals process if the complainant is not satisfied with the proposed resolution timeframe of the complaint. Once all possible means to resolve the complaint have been proposed and if the complainant is still not satisfied, then they should be advised of their right to legal recourse.

When relevant, the project will have other measures in place to handle sensitive and confidential complaints, including those related to Sexual Exploitation and Abuse/Harassment (SEA/SH) in line with the World Bank ESF Good Practice Note on SEA/SH.

The Labor Grievance Redressal Mechanism, will be constituted for each of the contract packages and the workers can use it. The Labor GRM is described in detail in the Labor Management Procedures.

At block level/ district level, the DPMUs will be sensitized to take up any workers related Grievances and support the project in monitoring the vendors/ contractors' performance on OHS and labour and working conditions. At DPMU Level, the District Managers will be the Grievance Officers for workers, who will report on the status of workers grievances in their respective

DPMUs. At SPMU Level, a Social Specialist will be the grievance officer for workers, who will report on the status of workers grievances.

The World Bank and the Borrower do not tolerate reprisals and retaliation against project stakeholders who share their views about Bank-financed projects.

7. SEP Implementation Monitoring and Reporting

7.1. SEP Implementation Monitoring

The UPDASP will adopt the following mechanisms to manage stakeholder feedback and comments, and to report back to the stakeholders:

- UP DASP and Fisheries Department (FD) will ensure that feedback and comments received through emails, web portal and telephone numbers are acknowledged by registering them in a logbook and will be addressed in an appropriate and timely manner.
- A periodic review of the implementation of the SEP will be undertaken at the DPMU and reflected in periodic progress reports submitted to the SPMU at the state level. The information collated will be published and disclosed by the AD and FD. The report will contain, among others, summary information on Program achievements against targets, condition/ status of works, cursory future plans, and grievances received versus resolved.
- SPMU will monitor the following indicators:
    - Number of consultation meetings and other public discussions/ forums conducted within a reporting period (monthly/quarterly/annually)
    - Number and types of IEC materials developed and disseminated
    - Number of training events conducted on SEP implementation, GRM, worker and community health and safety, etc. and number of participants (male/female/vulnerable and disadvantaged)
    - Number and type of grievances received within a reporting (monthly/quarterly/annually) and number of those resolved within the prescribed timeline
    - Types and number of awareness creation/ information dissemination activities held on GRM, GBV, etc.
    - Number of community consultations for citizen feedback conducted during project implementation. Number of participants in each consultation (gender disaggregated data).
    - Number of project information boards with GRM details displayed at the project sites.

- Further, the SEP will continue to incorporate new issues that have come to light, and concerns and queries raised by the stakeholders during the project implementation. It will also provide information on how the feedback has been considered and addressed by SPMU.

- Prior to sub-project preparation/ environmental and social impact assessments for the sub-projects, if any, participatory tools such as transect walks may be adopted to identify issues and its impact will be discussed with members of the local communities.
- Public engagement events will also be conducted at the cluster/ block/ district/ state level during the sub-project preparation phase. Events' attendees will include affected communities, local government representatives (respective block, district and state officials, Panchayat leaders, and women), farmers, fishers, agribusinesses, agripreneurs, collectives, Federations, State and national research institutions, local civil society organizations, farm/ agriculture/ agri-processing equipment and machinery manufacturers and retailers, financial institutions, press and media, local businesses, and AD and FD office representatives etc.. The events will explain the scope of the contracts, estimated costs and land requirement (if any), requirements on the part of the contractor regarding gender-based violence, occupational health and safety (OHS), and environmental and social risk mitigation measures.
- In addition, a beneficiary satisfaction survey will be carried out by independent consultants to be onboarded by SPMU. The first survey will be conducted after two years of implementation, and the second survey in the last year of implementation.

7.2. Reporting back to stakeholder groups

The SEP will be periodically revised and updated as necessary in the course of project implementation. Quarterly reports and internal reports on public grievances, enquiries, and related incidents, together with the status of implementation of associated corrective/ preventive actions, will be collated by responsible staff and referred to the senior management of the project. The quarterly reports will provide a mechanism for assessing both the number and nature of complaints and requests for information, along with the Project's ability to address those in a timely and effective manner. Information on public engagement activities undertaken by the Project during the year may be conveyed to the stakeholders in various ways such as letters, meetings, media briefings, etc.

Annexes

Annexure 1: Stakeholders Consultations Summary by Each Stakeholder Consultation

S. No.	Date	District	Participants		Stakeholder groups Consulted	Feedback from Stakeholders	Response from Project
			Male	Female			
1.	24/Jan/24 to 30/Jan/24 30/Jan/24	Hamirpur, Banda, Jalaun, Chitrakoot Chandauli, Varanasi	20	9	Farmers, Farmer collectives like FPOs/FPCs and its members involved in agriculture and allied activities	- Discussed project objectives with the FPO/FPC members. - Discussed the primary activities of FPO/FPC - FPOs/FPCs face several challenges to stay relevant and sustainable primarily because FPO/FPC promotion is not demand driven, lack of knowledge among members & Board of Directors, lack of trust among farmers, limited market linkages & support for sale of commodities. - There is huge potential for seed production, agro processing and storage infrastructure development, however it needs to be developed. - Our endeavor is to ensure equitable distribution of benefits among our members. However, active participation and engagement of all members and board of directors in the FPO/FPC activities is difficult due to various reasons. - Women and vulnerable groups have representation in the FPO/FPC, however their participation is also limited. - Landless people are not members of the FPO/FPC. However, those who have leased	- Better planning and technical assistance is expected to promote climate resilient, inclusive and sustainable agriculture development in the region. - Technical assistance and capacity building activities are expected to bridge the knowledge gap of FPO/FPCs and their members. - Storage, primary processing and seed production to contribute to strengthening of FPO/FPCs and farmers income. - Project will promote inclusion and participation of women and vulnerable groups in collectives. - Project will promote dovetailing with central and state government schemes and programs to enable better coverage and reach to intended beneficiaries. - Project activities are expected to create a favourable environment for accessing formal credit by farmers and its collectives. - Project intends to promote custom hiring centres (CHC) to increase availability of farm machinery at the local level. - Project will facilitate frequent meetings with farm/ agri-processing equipment and

S. No.	Date	District	Participants		Stakeholder groups Consulted	Feedback from Stakeholders	Response from Project
			Male	Female			
			24	4		agriculture land can become a member and benefit from FPO/FPC operations. - Limited avenues for training and capacity building/skill enhancement of FPO/FPC members and management. - Central and state government is providing support to FPO/FPC, but due to limited knowledge it is difficult to access the support. - Accessing formal finance is not difficult for well-established FPO/FPCs, however smaller FPOs/FPCs with no asset base face financial constraints that may impact their operations. - Availability of farm machinery on rent is limited, specialized equipment like laser levers is negligible. - Crop residue management is not a priority for the farmers and FPO/FPCs. - Stray cattle are a big threat to agriculture in UP. Strengthening, gaushalas can help in mitigating this issue. The project can possibly intervene in this aspect. - Availability of good quality seed is another factor impacting agriculture productivity in the area. - Land required for infrastructure development such as storage, seed bank, processing facility etc. is contributed by FPO/FPC members or is negotiated and purchased by the FPO/FPC at market rate under a willing seller - willing buyer arrangement. Grievances if any are handled by the board of directors	machinery manufacturers and retailers on regular basis at block and district level - Project to focus on crop residue management which is expected to bring water use efficiency and reduce carbon footprint of agriculture. - Project grievances will be handled through customary practices with the option of accessing the project GRM directly or through escalation available to the aggrieved. - Project will not infringe with the customary land take practices recognized by the Indian Constitution and followed in the state.

S. No.	Date	District	Participants		Stakeholder groups Consulted	Feedback from Stakeholders	Response from Project
			Male	Female			
2.	24/Jan/24 and 24/Jan/24	Hamirpur,Jalaun and Banda	0	16	Member of Women SHG, women FPOs, CLF office bearers, women farmers, and tenant farmers	- Discussed project objectives with the participants. - Women SHGs are formed under multiple programs in UP, NRLM being the frontrunner. - SHGs are federated at cluster level into CLFs. - Only few SHGs are active and engaged in income generation activities, remaining are either dormant or limited to saving and inter-loaning. - Only a subset of active SHGs are involved in agriculture or allied activities. - Some SHGs are involved in organic farming, however they are not able to fetch a premium for their produce in the local market. - Limited knowledge about certification and market linkages lead to sub-optimum value realization for agriculture products. - Some active SHGs are supplying vegetables to schools and local shops. However, there is no value chain to sell bulk production. - SHGs are also involved in primary and secondary processing of agriculture produce like – processing of wheat, millet, pulses, producing flour, *dalia, laddo, sweets* etc. However, due limited market linkages sale of produce is difficult. - Limited transportation facility, timely availability of farm machinery/tools, distance to market, unavailability of micro cold storages are problems associated with agriculture commodities.	- Technical assistance and capacity building activities are expected to bridge the knowledge gap of FPO/FPCs, SHG and their federations. - Women's collectives supported by the value chain improvement activities are likely to raise incomes of women in the project area. - Storage, processing, and value chain support for select commodities is likely to create a more favourable eco-system and bring markets closer to communities. - Project activities are expected to create a favourable environment for accessing formal credit by women farmers and its collectives. - Project intends to promote custom hiring centres (CHC) to increase availability of farm machinery at the local level which is likely to benefit women farmers as well. - Project will provide information to women farmers and their collectives to access available grievance redressal mechanism. - Project grievances will be handled through customary practices with the option of accessing the project GRM directly or through escalation available to the aggrieved. - Project will not infringe with the customary land take practices recognized by the Indian Constitution and followed in the state.

S. No.	Date	District	Participants		Stakeholder groups Consulted	Feedback from Stakeholders	Response from Project
			Male	Female			
						- Vegetable cultivation is majorly taking place in riverbeds which are prone to flood losses. - Stray cattle are a big threat to agriculture in UP. - Finance to SHGs is available, however formal finance to all women FPO may be difficult. - Women SHGs are also involved in various other non-farm activities. However, market linkage is a common challenge. - SHGs and Women FPOs can get involved in processing of oilseeds (cold press oil production), vegetable processing - grading, drying, grinding etc. - No instance of gender-based violence (GBV) at workplace. - Limited awareness and exposure to available grievance redressal mechanism	
3.	24/Jan/24	Hamirpur and Jalaun	04	01	Representatives of soil testing labs of Agriculture Department and KVKs	- Discussed project objectives with the participants including the importance of soil testing in the project's scheme of activities. - 3,500 sample per year are tested in agriculture department lab. The installed capacity is much higher, but due to unavailability of technician, breakdown of equipment and supply disruption of reagents/ chemicals optimum capacity utilization is not possible. - Micronutrient testing is offered by select labs. - Soil samples are either collected by agriculture department staff, KVKs or the farmer themselves. - No guidelines or protocols available for safe disposal of solid and liquid waste generated at the lab. Presently liquid waste is disposed in	- Project intends to utilize existing soil testing labs at the district level. - The budget provision for soil testing under the project may be used for increasing the testing capacity at select labs. - Project will develop guidelines for waste disposal and handling at the labs. - Project may aid the lab technicians through training and capacity building on waste disposal and OHS aspects. - Project grievances will be handled through customary practices with the option of accessing the project GRM directly or through escalation available to the aggrieved. -

S. No.	Date	District	Participants		Stakeholder groups Consulted	Feedback from Stakeholders	Response from Project
			Male	Female			
						municipal sewer line leading to soil and water pollution. - Soil is disposed after one year of testing in nearby dumpsites. - No PPE kits for lab technicians. No fire extinguisher and other safety equipment in the lab. - Adequate and timely supply of chemicals and reagents from the department for carrying out soil testing is a challenge. - Provide standard recommendations generated through the national portal for soil amendments and PAP for selected crops. However, adherence to the recommendation by farmers is dependent on various external factors influencing the farmers choice. - The current staff strength is limited, not in a position to take up additional tasks/ samples. - Usually labs do not receive complaints, however complaints can be made through the DDA office.	
4.	25/Jan /24 to 30/Jan /24 and	Jalaun, Banda, and Jhansi	08	02	Members of farmer collectives like FFPOs/FFPCs, fish farmers, private sector players involved in input supply	- Discussed project objectives with the FFPOs/FFPCs members. - Fisheries has a huge potential in Uttar Pradesh. If it is done appropriately with required technical knowledge and resources, farmers can easily make up to 20-30% net profit. - Pangasius and Indian major carps (IMC) form the mainstay of freshwater aquaculture in UP and contribute over 90 percent of the total freshwater aquaculture production in the state.	- Better planning and technical assistance is expected to promote climate resilient, inclusive and sustainable fisheries development in the region. - Technical assistance and capacity building activities are expected to bridge the knowledge gap of fish farmers and their collectives.

S. No.	Date	District	Participants		Stakeholder groups Consulted	Feedback from Stakeholders	Response from Project
			Male	Female			
	31/Jan/24	Chandauli and Varanasi	24	03	and marketing in the fisheries sector	- Government schemes/ programmes such as PM Matsya Sampada Yojana and CM Matsya Sampada Yojana are being implemented in the state which provides assistance to the farmers. - However, the sector faces the following key challenges, such as a) Lack of technical knowledge and support among fish farmers, b) Inadequate infrastructure for capacity building of fish farmers, c) Lack of Infrastructure for storage and transportation, d) Poor market intelligence and inadequate market linkages, e) Limited knowledge about diseases in fish, which also results in huge financial losses to farmers, f) Kisan Credit Card (KCC) limit set by government is not adequate for fish farming; thus, the KCC limits for fisheries should be rationalized to meet the credit requirement of fish farmers, g) Good quality Pangasius Fish Seed availability is a challenge in many districts of UP, h) The private sector does not pay adequate attention to quality of seed, etc. - Farm pond-based fish farming has additional benefits such as - Increased ground water recharge capacity, increased irrigation potential, increased agriculture productivity and crop diversification. - UPDASP project should focus on promoting integrated framing practices in UP through agriculture, horticulture and fisheries. - Per capita consumption of fish is less in UP, especially in Bundelkhand region as compared to other states. Further, there are no well-	- Streamlining input supply, storage, transportation, and market development/ linkages is expected to contribute to farmers income. - Project will develop guidelines for proper waste disposal and handling at fish farming sites especially in places with tank lining and biofloc. - Project will promote inclusion and participation of women and vulnerable groups in the fisheries sector. - Project will promote dovetailing with central and state government schemes and programs to enable better coverage and reach to intended beneficiaries. - Project activities are expected to create a favourable environment for accessing formal credit by fish farmers and collectives. - Project grievances will be handled through customary practices with the option of accessing the project GRM directly or through escalation available to the aggrieved. - Project will not infringe with the customary land take practices recognized by the Indian Constitution and followed in the state.

S. No.	Date	District	Participants		Stakeholder groups Consulted	Feedback from Stakeholders	Response from Project
			Male	Female			
						established market linkages for exporting fish to other states. Therefore, promotion of fisheries without proper market linkages will lead in over production at local level resulting in lower market price and losses to fish farmers.	
5.	25/Jan /24 and 28/Jan /24	Jalaun, Banda	09	06	Custom Hiring Centres (CHC) and its users	- Discussed project objectives with the participants. - Availability of farm machinery on rent is limited in the area. They are easily available and accessible to large farmers. - Accessibility to small and marginal farmers is limited, as servicing small land holding is not economically viable for private service providers. - Financial assistance for setting up the CHC is available through government schemes. However, it is not adequate to purchase all the machinery including tractor. - In some cases, farm machineries have been purchased through government scheme but are not being used due to unavailability of tractor – which was not financed through the scheme. - No provision for technical assistance and training, CHCs manage themselves using their own resources. - About 50-60 members are benefiting from FPO operated CHS in a cropping season, which is about 10-20% of the membership.	- Project intends to promote custom hiring centres (CHC) to increase availability of farm machinery at the local level. - Project may develop guidelines to ensure priority to small holders and women farmers through CHCs. - Increased capacity or promotion of new CHC is expected to increase the availability of farm machinery to smallholder and women farmers. - Project may recommend SOPs for O&M of farm machineries in CHCs. - Project will develop guidelines for waste disposal and handling at CHCs. Project will aid farmers through capacity and advisory support along with farm machinery.

S. No.	Date	District	Participants		Stakeholder groups Consulted	Feedback from Stakeholders	Response from Project
			Male	Female			
						- The rental charges are fixed based on the market rate, usually 20% less than the market rate. - We provide flexibility to our customer for making rental payments by collecting rent at the time of harvest. This facility is not provided by the private sector operators to small holders. - CHC committee prepares a schedule/ roster for renting out farm machinery among target farmers, preference is given to small holders as they are not serviced by private operators. - Women farmers also get equal opportunity in renting machinery. - Basic maintenance and washing are carried out by the CHC, no facility for advance maintenance and repair. - No protocols for waste disposal. - No protocols/guidelines for occupational health and safety of users and operators. - Cold storage is required at the village level, CHC can provide this facility as well. - At present harvesters/ combined harvest are not available with CHC. There is huge demand for harvesters, which is currently being met by service providers form Punjab and Haryana. - Micro irrigation equipment not available through CHCs. - No formal mechanism for handling grievances, usually managed by the CHC management/ FPO BoD.	

S. No.	Date	District	Participants		Stakeholder groups Consulted	Feedback from Stakeholders	Response from Project
			Male	Female			
6.	17/Jan /24	Jhansi, Ayodhya and Hamirpur	13	02	Government officials in concerned departments, National and State level Universities & Research institutions and KVKs	- Discussed project objectives with the participants. **<u>Fisheries:</u>** - At present Fish culture pressure is not there in Bundelkhand region as compared to Eastern UP. However, while promoting fish culture under the U.P AGREES project adequate measures should be taken to address the possible adverse impact of fish culture on the environment, especially on water and soil. - The project should focus on training farmers on sustainable development and environmental aspects of fisheries. - Disease surveillance and advisory is missing in the fisheries sector, both public and private sector can play an important role on this aspect. - The project may also consider promoting treatment mechanism for large scale production through bioremediation and chlorination. - Comprehensive and easy to understand guidelines should be developed to address the concerns highlighted by the stakeholders including the farmers. - The guidelines should specifically cover issues related to usage of medicines, water and disposal of wastewater etc. by fish farmers.	- Better planning and technical assistance is expected to promote climate resilient, inclusive and sustainable fisheries development in the region. - Technical assistance and capacity building activities are expected to bridge the knowledge gap of fish farmers and their collectives on various aspects related to fish culture including the environmental concerns around pollution. - Project will develop guidelines for proper waste disposal and handling at fish farming sites especially in places with tank lining and biofloc. All the guidelines would be prepared in local language and properly disseminated to the target fish farmers. - Similarly, guidelines would be made for proper waste disposal and handling at collection, fish processing and sale sites. - The UPDASP project would work toward strengthening the market infrastructure/ facilities and market linkages. - Project activities are expected to create a favourable environment for accessing formal credit by agriculture and fish farmers and their collectives. - Storage, primary processing and seed production to contribute to strengthening of FPO/FPCs and farmers income.

S. No.	Date	District	Participants		Stakeholder groups Consulted	Feedback from Stakeholders	Response from Project
			Male	Female			
						- Develop guidelines for supply and usage of quality fish seeds and inputs. - All the guidelines should be prepared in local language as per the standard norms applicable in the local context. - Pangasius and IMC has high potential to be promoted at intensive or semi-intensive scale. - The project should work toward strengthening the transport infrastructure/ facilities and market linkages to cater to the export market. - Most farmers practicing biofloc production have very limited understanding of the requirement and input ratio. Thus, special attention should be provided to such farmers under the project, to ensure adherence to sustainable practices. **<u>Agriculture:</u>** - Seed production has a good potential in the state especially through FPOs. - Jhansi/Lalitpur has good potential for ground nut, pulses and oil seed production and its primary and secondary processing which can be explored through the project. - Seed hubs and processing unit are available at KVKs.	- The project will explore possibility of involving women collectives in agro processing activities. - The project has provision of developing seed hubs, appropriate consultations would be done with KVKs at the time of selecting locations for creation of seed hubs. - The project will have provisions for setting up custom hiring centres. The locations, machinery mix, training and other aspects would be discussed with the concerned stakeholders at the time of implementation. - Best practices around crop residue management would be studied/ explore for replication in the project area. - Project grievances will be handled through customary practices with the option of accessing the project GRM directly or through escalation available to the aggrieved. - Project will not infringe with the customary land take practices recognized by the Indian Constitution and followed in the state.

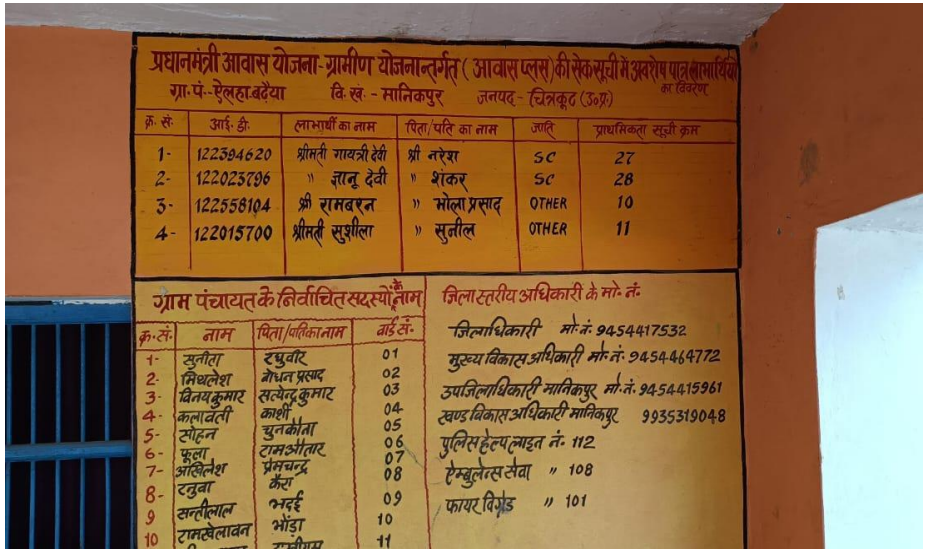
S. No.	Date	District	Participants		Stakeholder groups Consulted	Feedback from Stakeholders	Response from Project
			Male	Female			
						- KVKs can support in training and knowledge transfer, demonstrations etc. - The UPDASP project can leverage from these existing infrastructure and facilities at KVKs, however human resource availability is a constraint at KVKs. - Some FPOs have demonstrated good models for crop residue management, the project can leverage from the learnings of such FPOs. - Stray cattle are a threat to agriculture in UP. Strengthening, gaushalas can help in mitigating this issue. The project can possibly intervene in this aspect. - Promotion of micro irrigation has good potential in the Bundelkhand region. - Better communication, training, knowledge transfer, provision of farm machinery at local level can support crop residue management. - Farming is increasingly becoming unviable for small holders due to various factors including the cost of cultivation. Thus, increasing their vulnerability.	
7.	31/Jan/24	Chitrakoot	05	09	Men and women from tribal communities	- Discussed project objectives with the participants. - The area is dominated by Kol tribal group - This area faces the major problems of water scarcity both for drinking and irrigation. As a	- Better planning and technical assistance is expected to promote climate resilient, inclusive and sustainable agriculture development in the region with focus on crop selection and POPs suitable for the area.

S. No.	Date	District	Participants		Stakeholder groups Consulted	Feedback from Stakeholders	Response from Project
			Male	Female			
						result, it is a rainfed mono cropping area with low agriculture productivity. - Low crop production is also leading to food scarcity in the area. - Irrigation infrastructure created under various government program and schemes like farm ponds, check dams dry up during summer months. Maintenance of these irrigation infrastructures is also poor. - Dug well-constructed in the villages are not deep enough to provide clean and adequate water. - Manual labour and selling firewood from nearby forest are major contributors to livelihood of people. - People generally participate in village level/ panchayat meetings and raise their concerns However, project/ scheme benefits do not reach the target beneficiaries always. - Low level of education and awareness are also reason for poor socio-economic condition in tribal dominated villages. - Availability of good quality seed is another factor impacting agriculture productivity in the area. - The project should focus on introducing drought resilient crops/ verities, cash crops or other activities suitable for our area so that maximum people can benefit from them.	- Seed production activities under the project to contribute to strengthening of agriculture and farmers income in target villages. - Project will promote inclusion and participation of women and vulnerable groups in project activities. - Project will promote dovetailing with central and state government schemes for irrigation infrastructure development. Project to provide financial assistance for micro irrigation equipment deployment which can irrigate more area in less water. - Project activities are expected to create a favourable environment for accessing formal credit by farmers, its collectives and SHGs. - Project intends to promote custom hiring centres (CHC) to increase availability of farm machinery at the local level. - Women's collectives will be supported by the value chain improvement activities which are likely to raise incomes of women in the area. - Project grievances will be handled through customary practices with the option of accessing the project GRM directly or through escalation available to the aggrieved. - Project will implement extensive stakeholder engagement activities to seek your regular feedback for effective project implementation.

S. No.	Date	District	Participants		Stakeholder groups Consulted	Feedback from Stakeholders	Response from Project
			Male	Female			
						- Access and availability of farm machinery on rent is limited in the area. - Fish farming would be difficult in the area due to water scarcity and unavailability of market linkages. - Women SHGs have been formed in the village, however they are inactive due to inadequate support /cooperation from concerned agencies and regional banks. - Women and SHGs have bank account however they remain inaccessible or very few people can access them.	-

Annexure – 2: Photographs of Site Visits

1. PRI office Alahaya badhya Chitrakoot



2. FPO and PRI members meeting regarding UPDASP project

3. Meeting with farmers in Turra village dist. Banda, Uttar Pradesh

4. Visit to a fish farm in Turra village dist. Banda, Uttar Pradesh

5. Discussion with women Self Help Group

	
6. Consultation with Parmarth Samaj Sevi Sansthan, Orai	

7. Visit to a fish farm, Jalaun, UP

8. Visit and consultation with soil testing lab, Hamirpur, UP

9. Group discussion with Tribal farmers in Chitrakoot, UP


ग्राम सचिवालय ग्राम पं.ऐलहा बदैया
खण्ड विकास-मानिकपुर
जनपद-चित्रकूट (उ.प्र.)

Annexure 7 : Gender Action Plan

In Uttar Pradesh (UP), traditional gender roles in agriculture are deeply entrenched, with men typically assuming leadership positions and making most decisions regarding both on and off-farm activities. Women, on the other hand, are primarily relegated to low-paying, labour-intensive roles, with little to no say in investment decisions. Surprisingly, only a small fraction of landowners in UP are female (8 percent compared to the national average of 14 percent), while a staggering 90 percent of women are engaged in agricultural labour. Furthermore, a significant portion of self-employed women (64 percent) work as unpaid helpers within household enterprises.

India's farmers are predominantly women. 78[15] percent working aged women in UP are employed in agriculture, yet their participation in high-value agriculture remains low. In terms of female labor force participation (FLFP), UP has one of the lowest rates in the country, at 19.5%, compared to the national average of 27.2%. While there is no state specific data, national data shows that 66 percent women are farm helpers[16], therefore unlike men who, in addition to production are present in high value agriculture including as aggregators, agri-processors, exporters, and retailers, women remain concentrated at lower levels in the value chain.

Key challenges women farmers face in moving into high value agriculture include

(i) lack of access to formal finance, currently only 14 percent women's enterprises avail formal loans[17] in India and this number is likely to be lower in UP;
(ii) low access to technical know-how on high-value agriculture practices/technology;
(iii) lack of assess to productive assets;
(iv) lack of gender-sensitive extension services; and
(v) lack of access and exposure to markets.

The project aims to improve women's participation in agriculture value chains by enhancing women's access to capital and technical know-how to enable them to participate in high-value agricultural enterprises. While the project will target the participation of women across all project interventions, but some specific interventions and targets are as following:

(i) at least 30% of farmers supported by the project will be women
(ii) incentivizing and financing women's agri-enterprises;
(iii) incentivizing and providing handholding support for women to apply for the Agriculture Infrastructure Fund[18] (AIF);
(iv) providing women farmers with agricultural assets; and
(v) building the competitiveness of women entrepreneurs through skills training, technical support, and enterprise development services.
(vi) forming exclusive women-led and women-owned FPGs to support women farmers to

[15] Periodic Labour Force Survey Data, Government of India 2022/23. Women involved in agriculture as their primary or subsidiary occupation.

[16] Periodic Labour Force Survey Data, Government of India 2022/23

[17] Department of Micro, Small and Medium Enterprises, GoI https://www.cgtmse.in/DocumentRepository/ckfinder/files/Annual_Report_2021-22_English.pdf

[18] The AIF, launched by the Indian government, aims to enhance agricultural infrastructure by providing medium to long-term debt financing for viable projects related to post-harvest management and community farming assets. Key features include interest subvention, credit guarantee, and collaboration with lending institutions. The AIF seeks to improve efficiency in handling, storage, and marketing of agricultural produce. Ref: https://agriinfra.dac.gov.in/Home/MainFeatures

gain access to finance and technical support. (Target 10,000 FPGs)

According to the result framework of the project, the actions will be measured by the following indicators:

(i) Number of women project beneficiaries adopting climate- resilient practices
(ii) Number of women farmers reached with agricultural assets or services
(iii) Number of exclusive women FPGs formed and strengthened/supported by the project
(iv) Number of women beneficiaries supported through fisheries intervention
(v) Percentage of women-owned MSMEs accessing credit from formal financial institutions

Considering the impacts of the social risks on the marginalized communities, especially women, the project wants to focus on mainstreaming gender equity and empowerment in the project. In the sub projects, activities related to livelihood restoration will address women's needs. A Gender Action Plan is being designed under the project as part of ESMF which will help in analysing gender issues during the preparation stage of sub project and design interventions.

Focussing to reach relevance to higher level objectives through alignment with country partnership framework (CPF) - The project's design is well aligned with the India CPF for FY18-22. The project will support smallholder farmers to improve productivity and diversify into higher value products, while conserving resources, including water, and achieving low emissions, which contributes to CPF Focus Area 1: Promoting Resource-Efficient Growth, and specifically Objective 1.1: Promote more resource-efficient, inclusive, and diversified growth in the rural sector. The project would focus on supporting increased competitiveness of the sector by supporting improved market linkages and promoting agri-business innovation and investment in value chains, creating jobs, including for women.
This approach directly contributes to CPF Focus Area 2: Enhancing competitiveness and Enabling Job Creation, and specifically to Objective 2.1: Improve the business environment and select firm capabilities, and to Objective 2.5: Enabling more quality jobs for women.

The project will target the participation of women across all project interventions. At least 30 percent of farmers supported by the project will be women, and 10,000 exclusive women FPGs will be supported. In addition, the project will make concerted efforts to include marginalized communities, such as farmers belonging to Scheduled Castes and Scheduled Tribes.

Gender oriented approach of the project is candid in the focussed systems approach of the sub-component activities:
Component 1: Productivity Enhancement - This component focuses on strengthening the agricultural productivity against the backdrop of high levels of climate risks and variability in productivity across the project areas. It focuses on strengthening Uttar Pradesh's formidable position as the leading producer of multiple agricultural crops while enhancing the resilience of the dominant production systems.

Sub-Component 1 A: Resource Use Efficiency – Focuses on to bring about a substantial and sustained increase in agricultural production. Guided by diagnostics that identify scale inhibitors and replication barriers impacting agricultural productivity, this sub-component will benchmark and achieve 'optimum' levels of agricultural productivity in distinct smallholder cropping systems.

Gender oriented objective of this sub-component is to support development exclusive women-led and women-owned FPGs for uptake of climate-smart technologies.

i. **Sub-Component 1 B -** ***Seed Systems*** **-** This sub-component will promote, develop, and establish an inclusive and climate-resilient seed system to enhance crop yields in the project areas. It strives to strengthen institutions and governance in the seed supply chain by building seed hubs. The project will support individual farmers and collectives engaged in the production and processing of climate-resilient and quality seeds. *This sub-component will work towards promoting women/ women collectives to take up seed production, distribution, sale etc.*

ii. ***Sub-Component 1C – Agri-Extension*** **-** This sub-component aims to promote tailored agronomic and extension services for climate-resilient practices to reduce risk thresholds and improve productivity of crop systems, diversification, and value-addition. One of the objective of this subcomponent is to establish Krishi Raftar Kendras (KRK) to deliver last-mile services and develop support networks. *The KRK will proactively assist women and youth within and outside the project areas to set-up new or expand existing agri MSEs.*

Component 2: Commodity Clusters - The objective of this component is to support the integration of smallholder farmers into value chains for select high value commodities, thereby increasing yield, value addition, and farmers' incomes. The component will aim to address the current fragmentation of production and market activities in the sector, and to take advantage of the state's potential to increase the commercialization of select high value crops, both in domestic and export markets. The component will support (a) crop clusters, and (b) fisheries to enable public sector investments to address existing market failures and ensure business viability and sustainability.

This component focuses on establishing and supporting women-owned/ managed businesses. The formation of 'commodity clusters' will be leveraged to link women's agri-enterprises to existing markets.

i. **Sub Component 2A: Crop Clusters** – Aim of this sub-component is implementation of activities under Cluster Development Plans including enhancing producer technology, strengthening agribusiness facilities, promoting private enterprise, enhancing institutional capacity of Farmer Producer Groups (FPGs), and providing technical advisory for market intelligence and quality control. Through this sub-component, the project aims to support 30% women beneficiaries

ii. **Sub component 2 B: Fisheries** - The project will work with reservoir fishers, fish farmers, fish processors, and fish traders. Through the activities planned under this sub-component, the project aims to support at least 30% women to improve their access to fisheries value chains and provide financial assistance to them.

Component 3: Digital and Financial Ecosystems

i. **Sub-Component 3A: Digital Architecture and Technology services -** The objective of the sub-component is to establish a state-wide digital agriculture ecosystem, support the Department of Agriculture with digital technologies, and develop data-sharing protocols for real-time decision making for all stakeholders. The project will provide technical assistance to the GoUP for developing a comprehensive digital agriculture policy and contribute to the global repository of Digital Public

Infrastructure (DPI).

ii. ***Sub-Component 3B: Agri Finance Ecosystem*** **-** This component will strive to improve per capita agri-credit from the formal financial institutions to improve productive investments and competitiveness in the agri-allied areas. The proposed interventions will cater to the diverse needs of agri-producers and market players including women farmers , small and marginal farmers, farmer collectives, and agri MSEs.

The proposed project women-oriented interventions include:

1. *Blended Financing Facility* which involve blending of project's conditional grants with the loan component of the financial institutions to avoid direct subsidies, incentivize repayments by the borrowers, and attract private sector lenders. Blended finance instruments will be used to mitigate risks for women-owned agribusinesses and incentivize them to take higher ticket loans leading to higher impact for their enterprise.
2. *Alternative Investment Fund (AIF)* to complement the project's investments in developing select value chains. The AIF will be used to crowd-in long-term private sector investments in addition to providing customized solutions (equity-debt and hybrid) for agri-financing of MSEs in the state. Women-owned agribusinesses will be incentivized and given handholding support to apply for AIF funding.

The project also focuses on the linkage between gender and poverty, for example, identifying households headed by women while selecting beneficiaries. The project emphasizes inclusive community development through several integrated interventions, especially taking into consideration the vulnerable communities – sustained by traditional means of utilizing natural resources. In order to make the project more inclusive and participatory, it is required that women associate themselves in different activities which they find feasible. This approach of inclusion and equity, specifically involvement and engagement of women will be helpful to attain social justice and reduce marginalization of women and empower them to avail maximum benefit from the project.

Thus, incorporating gender and other social issues in the development projects helps to improve project performance. A gender approach in the overall project framework takes care of key gender issues and brings in parity in association and participation of women and minimises the gap between males and females at the project level. A gender approach is also a way to comprehend the impacts on the women beneficiaries and ensures equality in project induced wellbeing.

Specific legal framework available for women:

Specific Laws for Women, which were enacted by the Parliament in order to fulfil the Constitutional obligation of women empowerment and inclusion are;

1. The Equal Remuneration Act, 1976.
2. The Dowry Prohibition Act, 1961.
3. The Immoral Traffic (Prevention) Act, 1956.
4. The Maternity Benefit Act, 1961.
5. The Medical Termination of Pregnancy Act, 1971.
6. The Commission of Sati (Prevention) Act, 1987.
7. The Protection of Women from Domestic Violence Act, 2005.

8. The Prohibition of Child Marriage Act, 2006.
9. The Pre-Conception & Pre-Natal Diagnostic Techniques (Regulation and Prevention of Misuse) Act, 1994.
10. The Sexual Harassment of Women at Work Place (Prevention, Protection and) Act, 2013.
11. National policy on Farmerss. 2007
12.

Above mentioned and several other laws are there which not only provide specific legal rights to women but also give them a sense of security and empowerment.

National Policy for Women:

In the year 2001, the Government of India launched a National Policy for Empowerment of Women which was revised in the year 2016. The National Policy for Women, 2016 (draft) having the vision of "A society in which, women attain their full potential and are able to participate as equal partners in all spheres of life and influence the process of social change". The objectives of the policy are

1. Creating a conducive socio-cultural, economic and political environment to enable women enjoy de jure and de facto fundamental rights and realize their full potential;
2. Mainstreaming gender in all-round development processes/ programmes/ projects/ actions.
3. A holistic and life-cycle approach to women's health for appropriate, affordable and quality health care;
4. Improving and incentivizing access of women/ girls to universal and quality education;
5. Increasing and incentivizing work force participation of women in the economy;
6. Equal participation in the social, political and economic spheres including the institutions of governance and decision making;
7. Transforming discriminatory societal attitudes, mindsets with community involvement and engagement of men and boys;
8. Developing a gender sensitive legal-judicial system;
9. Elimination of all forms of violence against women through strengthening of policies, legislations, programmes, institutions and community engagement;
10. Development and empowerment of women belonging to the vulnerable and marginalized groups;
11. Building and strengthening stakeholder participation and partnerships for women empowerment;
12. Strengthen monitoring, evaluation, audit and data systems to bridge gender gaps.

World Bank's Approach:

The World Bank's approach to promoting gender equality makes all staff responsible for ensuring that the Bank's work is responsive to the differing needs, constraints, and interests of males and females in client countries. Gender equality is now a core element of the Bank's strategy to reduce poverty. There is clear understandings that until women and men have equal capacities, opportunities and voice, the ambitious poverty-reduction agenda set out in the Sustainable Development Goals will be difficult to achieve.

Three major tools are used to identify and deal with gender issues in the project cycle: gender analysis, project design, and policy dialogue.

1. Gender analysis should be an integral part of the initial social assessment at the screening stage itself. The issues identified can be scaled up during the feasibility and detailed analysis can be carried out during the project preparation stage.
2. The project designs should be gender responsive based on gender analysis and should be included in the ESIA document. The findings and recommendations from the gender analysis during project planning and feedback from beneficiaries during implementation must be discussed thoroughly to determine the need for further action.
3. Consultations will be organized with different stakeholders to understand gender issues and possible measures that can help women in ensuring their participation in the overall process. The consultations helped to identify certain key issues pertaining to women and their involvement in the proposed interventions.

Gender Action Plan through the Project Cycle:

Gender Action Plan (GAP) is designed to address gender inequalities and promote gender mainstreaming within the project. It outlines specific goals, actions, and policies aimed at advancing gender equality, empowering women and girls, and promoting inclusive development. By integrating gender perspectives into all aspects of planning, implementation, monitoring, and evaluation, Gender Action Plan seeks to create more equitable and sustainable outcomes for individuals of all genders. . The findings and recommendations from the gender analysis during project planning and feedback from beneficiaries during implementation must be discussed thoroughly to determine the need for further action.

Listed below are the key action points:

a) General Check list:

1. Identify key gender and women's participation issues.
2. Identify the role of gender in the project objectives.
3. Draw up a socioeconomic profile of key stakeholder groups in the target population and disaggregate data by gender at project's baseline survey stage
4. Examine gender differences in knowledge, attitudes, practices, roles, status, wellbeing, constraints, needs, and priorities, and the factors that affect those differences at project's baseline survey stage
5. Assess men's and women's capacity to participate and the factors affecting that capacity before at sub-project implementation
6. Assess the potential gender-differentiated impact of the project and options to maximize benefits and minimize adverse effects before at sub-project implementation.
7. Identify government agencies and nongovernmental organizations (NGOs), community-based organizations (CBOs), and women's groups that can be used during project implementation and assess their capacity.
8. Review the gender related policies and laws, as necessary.
9. Identify information gaps related to the above issues as part of the project's baseline survey
10. Involve men and women in project design through focused stakeholder engagement activities

11. Incorporate gender findings into the project design through a regular feedback mechanism established under the project.
12. Ensure that gender concerns are addressed in the relevant sections (including project objectives, scope, intervention design,, cost estimates, institutional arrangements, and consultant's TOR for implementation and M & E support).
13. List out major gender actions.
14. Develop gender-disaggregated indicators and monitoring plan wherever necessary as 30% project beneficiaries are expected to be women.

b) Core Requirement for Mainstreaming Gender

1. All data should be disaggregated by gender, caste, ethnicity, location, and age.
2. Issues of division of labour, access to resources and decision-making power (who is doing what, who has access to what, who makes the ultimate decision) must be assessed for their gender differential impact on women and men of different social identity groups before at sub-project implementation
3. Assessment of policies, programs, institutional arrangements, human resources issues, and M&E system has to be done from a gender perspective of the project, project authorities and community groups.

c) Steps of Gender Mainstreaming

Gender mainstreaming in a Gender Action Plan involves several key steps.

- Gender perspectives are integrated into all project components and activities, ensuring inclusivity.
- Staff capacity is built through training initiatives, and resources must be allocated specifically for gender equality efforts.
- Gender-sensitive monitoring and evaluation frameworks must be established to track progress.
- Partnerships with relevant stakeholders must be fostered to leverage expertise, and feedback mechanisms are implemented for continuous adaptation and refinement.

These steps collectively ensure that gender considerations are embedded throughout the initiative, leading to more inclusive and equitable outcomes.

Key Activities in Project Cycle

The involvement of women groups in the identification of impacts and opportunities through project activities shall form the basis for the preparation of gender sensitive project activities. The procedure to be followed and process and outcome are presented in the following matrix.

Opportunities for Involvement of Women during Project stages

Components	**Key Activities**	**Responsibility**
Component 1 - Productivity enhancement	**Women farmers training and capacity building for adopting climate- resilient practices** Focus activities could include:	PMU, DPIU & TSA

Components	Key Activities	Responsibility
	(i) Conduct awareness and training programs focused on increasing women participation and adoption of climate-resilient practices (ii) set up separate demonstration plots (on women owned/ managed land) and farmer field schools for women farmers. (iii) conduct separate exposure visits for women farmers etc.	
	Farmers reached with agricultural assets or services **Ensure that at least 30% of female farmers are provided with** agricultural[19] assets[20] or services[21] as a result of World Bank project support. Focus activities could include: (i) conduct awareness and training programs focused on promoting uptake of agriculture assets and services (ii) implement farm machinery bank (FMB) through women FPGs/FPOs/ businesses (iii) set a specific target for lending farm machinery to women through FMB and Custom Hiring Centers (CHC), (iv) encourage women representation in management committees of CHCs, (v) support formal financial linkages to women for procuring farm machinery etc.	
	Women's representation in executive committees of Farmer Producer Groups (FPGs) At least 10000 exclusive women-farmer collectives supported through the project. *Farmer collectives include Farmer Producer Groups (FPGs) and Farmer Producer Organizations (FPOs). Focus activities could include:	PMU, DPIU & TSA

[19] "Agriculture" or "Agricultural" includes: crops, livestock, capture fisheries, aquaculture, agroforestry, timber, and non-timber forest products.

[20] Assets include property, biological assets, and farm and processing equipment. Biological assets may include animal agriculture breeds (e.g., livestock, fisheries) and genetic material of livestock, crops, trees, and shrubs (including fiber and fuel crops).

[21] Services include research, extension, training, education, ICTs, inputs (e.g., fertilizers, pesticides, labor), production-related services (e.g., soil testing, animal health/veterinary services), phyto-sanitary and food safety services, agricultural marketing support services (e.g., price monitoring, export promotion), access to farm and post-harvest machinery and storage facilities, employment, irrigation and drainage, and finance.

Components	**Key Activities**	**Responsibility**
	(i) conduct awareness and training programs focused on increasing women participation in collectives, (ii) conduct exposure visits to well established women FPGs/FPOs/FPCs across the country, (iii) conduct special training for executive committee members to educate and empower them (iv) make provisions for providing managerial, financial and regulatory compliance support to women FPGs/FPOs/FPCs to ensure their smooth functioning and sustainability (v) provide necessary financial linkages to FPGs/FPOs/FPCs etc.	
Component 2 – Commodity cluster	**At least 30% female farmers are supported through agri-cluster intervention** Identify clusters and value chains development opportunities under the project where individual women, women collectives or women owned/managed business can play a major role. Focus activities could include: (i) conduct a study to identify/map clusters and value chain development opportunities in the state, including a gap assessment, (ii) conduct awareness and training programs focused on promoting women participation, (iii) promote financial linkages, asset support, regulatory compliance support etc. for setting up post-harvest processing facilities. Explore possibility of working in close collaboration with other central/state government programs/schemes with similar objectives, especially State Rural Livelihood Project.	PMU, DPIU & TSA
	Atleast 30% female beneficiaries supported through fisheries intervention Identify fisheries sector activities under the project with a potential to provide self-employment or wage employment to individual women, women collectives or women owned/managed business. Focus activities could include: (i) women involvement in inland fish farming (ii) preferential allotment of tenders to women collectives/ business for reservoir fishing (iii) preferential allotment of shops to women collectives/ business in fish markets (iv) women involvement in fish processing,	PMU, DPIU & TSA

Components	**Key Activities**	**Responsibility**
	sale (through kiosk), online sale etc. (v) women involvement in Fish Feed Production, (vi) conduct awareness and training programs focused on promoting women participation, etc. Explore possibility of working in close collaboration with other central/state government programs/schemes with similar objectives, especially Pradhmantri Matsya Sampada Yojna.	
Component 3 – Agri-Finance Ecosystem	**Atleast 30% women-led MSMEs access credit from formal financial institutions** Focus activities could include: (i) conduct a study to identify challenges faced by women MSME's in accessing formal finance (ii) work with financial institutions to identify specific financing products available with them which meets the requirement of women MSMEs (iii) conduct awareness generation and training programs focused on promoting formal financing (iv) conduct regular stakeholder engagement sessions with formal financial institutions and lead bank in each project district.	PMU, DPIU & TSA
Project Management, Learning and Partnership	**Female Beneficiaries satisfied with project interventions** Focus activities could include: (i) conduct awareness generation and training programs focused on various topics related to environmental and social awareness (ii)Provide training to SPMU, DPIU and other staff on creating avenues for women in accessing the financial benefits from the project. (iii) Training and awareness programmes for women beneficiaries about convergence shcemes with other departments. (iv) Creating partnerships among women's organizations and other relevant stakeholders to promote gender equality, and continuously learning (v) ensuring equal participation and representation of women and men in decision-making processes, incorporating gender-responsive budgeting and resource allocation.	PMU, DPIU & TSA
	Registered grievances addressed Ensure Greivance Registration and Redressal through CPITs and DPIUs to address women related queries and grievances.	PMU, DPIU & TSA

Components	**Key Activities**	**Responsibility**
	Conduct regular GRM awareness programmes with a focus on preventing workplace sexual exploitation and abuse (SEA) and Sexual Harassment (SH) Create IEC on GRM and SEA/SH	

Monitoring Gender Action Plan

The indicators, frequency, and agency recommended for monitoring are presented in table below.

Monitoring indicators for gender action plan

Components	**Monitoring Indicators** **(Process and Outcome)**	**Frequency**	**Monitoring Responsibility**
Component 1 - Productivity enhancement	**Farmers reached with agricultural assets or services – Female (Number)** Number of women having access to agricultural assets Number of services availed by women like training, awareness programmes, inputs, access to farm and post harvesting machinery etc.	Quarterly	PMU & DPIU
	Women's representation in executive committees of Farmer Producer Groups (FPGs) (Number) Number of women representatives in the FPGs Number of women exclusive Farmer Producer Collectives and Farmer Producer Groups. Number of exposure visits undertaken for women FPCs/FPGs/FPOs	Quarterly	PMU & DPIU
Component 2 – Commodity cluster	**Farmers supported through agri-cluster intervention (Number)** **Number of women trained in entreprenuership.** Number of women entrepreneurs who have started their own businesses	Quarterly	PMU & DPIU

Components	**Monitoring Indicators** **(Process and Outcome)**	**Frequency**	**Monitoring Responsibility**
	Number of women trained in agro processing. **Number of women involved in agro processing.**		
	Beneficiaries supported through fisheries intervention (Number) This indicator measures the number of female beneficiaries supported through the structured fishery interventions. **Number of women trained in fish farming.** Number of women involved in fish farming **Number of women involved in processing, sales (including online) and packaging of fishes.** **Number of women collectives/ businesses involved in reservoir fishing**		PMU & DPIU
Component 3 – Agri-Finance Ecosystem	**Women-led MSMEs access credit from formal financial institutions (Percentage)** **Number of women who have availed loans or financial support from formal financial institutions** **Number of stakeholder awareness meetings conducted during the project implementation.**	Quarterly	PMU & DPIU
Project Management, Learning and Partnership	**Beneficiaries satisfied with project interventions (Percentage)** Number of women beneficiaries trained in executive leadership of the FPCs/FPGs Number of women in the executive committes of the the FPCs/FPGs/FPOs Number of IEC material distributed towards creating awareness on availing	Annual	TSA

Components	**Monitoring Indicators** **(Process and Outcome)**	**Frequency**	**Monitoring Responsibility**
	convergence schemes.		

Implementation Arrangements

The finalisation, implementation, and monitoring of the Gender Action Plan (GAP) is the responsibility of the State Project Management Unit (SPMU).

The Social Development specialist, at the State Project Management Unit (SPMU) level, will facilitate and supervise this process of preparation and implementation of the Gender Action Plan. A Technical Support Unit (TSU), which will provide timely and market-based inputs to the SPMU and field functionaries for backstopping all intervention areas. All efforts will be made to coordinate and work with associated line departments and other department, more specifically the agriculture department to help dovetailing with their development programs for the socio-economic development of women.

At the District level, The District Project Implementation Unit, (DPIU) will facilitate linkages and convergence with other government schemes. A Support Agency will be hired to assist with implementation of the Gender Action plan at the block level