Appraisal Environmental and Social Review Summary

Appraisal Stage

(ESRS Appraisal Stage)

Date Prepared/Updated: 02/02/2024 | Report No: ESRSA03261

I. BASIC INFORMATION

A. Basic Operation Data

Operation ID	Product	Operation Acronym	Approval Fiscal Year
P179357	Investment Project Financing (IPF)	UCRRFP	2024
Operation Name	Uttarakhand Climate Responsive Rainfed Farming Project		
Country/Region Code	Beneficiary country/countries (borrower, recipient)	Region	Practice Area (Lead)
India	India	SOUTH ASIA	Agriculture and Food
Borrower(s)	Implementing Agency(ies)	Estimated Appraisal Date	Estimated Board Date
India	Watershed Management Directorate, Government of Uttarakhand	11-Dec-2023	14-Mar-2024
Estimated Decision Review Date	Total Project Cost		
20-Nov-2023	138,051,000.00		

Proposed Development Objective

Improve production system resilience to make mountain farming emission competitive and profitable in selected micro-watersheds of Uttarakhand

B. Is the operation being prepared in a Situation of Urgent Need of Assistance or Capacity Constraints, as per Bank IPF Policy, para. 12?

No

C. Summary Description of Proposed Project Activities

[Description imported from the PAD Data Sheet in the Portal providing information about the key aspects and components/sub-components of the project]

The project will work towards (i) reduction of net GHG emission relative to control villages with similar cropping pattern; (ii) achievement of resilience of production systems by adopting precision-farming techniques; and (iii) increased profitability through enhanced productivity, reduced cost of cultivation, and additional income through carbon credits. An integrated digital platform for evidence-based decision-making will support the project activities. The project will focus on small and marginal farmers, including women farmers, and landless households. The project will be

implemented in 1,226 villages covering a catchment area of 243,418 hectares (ha), which includes arable and non-arable land.

D. Environmental and Social Overview

D.1 Overview of Environmental and Social Project Settings

[Description of key features relevant to the operation's environmental and social risks and opportunities (e.g., whether the project is nationwide or regional in scope, urban/rural, in an FCV context, presence of Indigenous Peoples or other minorities, involves associated facilities, high-biodiversity settings, etc.) – Max. character limit 10,000]

The UCRRF project will be implemented in the state of Uttarakhand, situated in the northern part of India. The state is divided into two administrative divisions - Garhwal and Kumaon. Of the 13 districts in the state, the project will be implemented in 8 districts (58 Micro-Watersheds [MWS] in 993 villages). The northern part of the state is covered with high Himalayan peaks and glaciers. The terrain and topography is largely hilly (covering 46,035 sq.km out of the total geographical area of 53,483 sq.km) with snow covers and steep slopes. The state has 3.4 million hectares area under forests, which constitutes 61.45% of the total area with unique ecological diversity. The state has diverse floral (18,440 species) and faunal (4,907 species) wealth, including rare and threatened species. The state has two distinct climatic regions: the predominant hilly terrain with temperate climate and the small plain region with tropical climate. The average annual rainfall is above 1,500 mm. The Land Survey Directorate (LSD) has divided Uttarakhand into eight catchments, which are divided into 26 watersheds (400-1000ha). These are divided into 110 small watersheds (10-40 ha) and finally there are 1,110 micro watersheds (0-10 ha). The project locations include existing cultivated land in rural areas, and springshed areas, most of these located in hilly, undulating terrains. The state is vulnerable to natural disasters like earth quakes (seismic zones IV and V), floods and climate change (especially the regions under rainfed farming), hence will require suitable disaster management and climate change adaptation strategies.

Uttarakhand is home to 0.83% of India's total population. Of the state's total population, around 70% lives in the rural areas and around 51% are males, as per the latest census (Census 2011). Sex ratio (females per 1,000 males) at birth for children born in the state in last five years was 984, better than the ratio of 929 at the national level. (NFHS-5) Literacy rate in the state has improved significantly to around 79%. Of that, male literacy stands at 87.4% while female literacy is at around 70%. (Census 2011) Although agriculture is a significant contributor to Uttarakhand's Gross State Domestic Product (11% in 2011-12), the share of female workers engaged in agriculture in the state has declined. The percentage of female workers engaged in agriculture in urban areas declined from 33.4% in 2004-05 to 0.26% in 2019-20, while in the rural areas, it declided from 96% in 2004-05 to 84% in 2019-20.

The state has 18.8% Scheduled Caste (SC) population and 2.9% Scheduled Tribe (ST) population. The five STs of Uttarakhand are Bhotia, Buksa, Jannsari, Raji, and Tharu. Of these, Tharu tribe comprises the largest share of STs in the state whereas Raji comprises the smallest. Of the 65 SCs in the state, Shilpkar is the largest group and Hela is the smallest. (Census 2011) Almora (24.3%) and Uttarkashi (24.4%) districts have the highest percentage of SC population, whereas, Udham Singh Nagar (7.5%) and Uttarkashi (1.1%) have the highest percentage of the ST population in the state. Udham Singh Nagar (Kumaon region) and Haridwar (Garhwal region) are also included in the Government of India's Aspirational Districts Programme, which is operational in the 112 most under-developed districts across the country. For the project area selection, predominance of SC/ST and Other Backward Classes (OBCs) was used as one of the inclusion criteria. Further, transhumant groups, including Bhotiya/ Anwal/ Van Gujjars/ Nomadic groups, are expected to traverse through four project districts. Popular routes for Bhotiya/Anwal are in the Almora, Pauri,

Uttarkashi, Pithoragarh and Gujjars follow the routes through district Dehradun, Tehri, Rudraprayag, Uttarkashi. (Source: Transhumant Action Plan, Uttarakhand Decentralized Watershed Development II Project - GRAMYA II)

D.2 Overview of Borrower's Institutional Capacity for Managing Environmental and Social Risks and Impacts

[Description of Borrower's capacity (i.e., prior performance under the Safeguard Policies or ESF, experience applying E&S policies of IFIs, Environmental and social unit/staff already in place) and willingness to manage risks and impacts and of provisions planned or required to have capabilities in place, along with the needs for enhanced support to the Borrower – Max. character limit 10,000]

The UCRRF project will be implemented by Watershed Management Directorate (WMD) of Uttarakhand, which provides leadership and oversight to the project. The WMD had already implemented two consecutive watershed management projects following the World Bank's erstwhile Safeguard Policies. Adequate capacity for managing environment and social (E&S) issues was built up through the state institutional structures and was maintained throughout the lifetime of these projects. The E&S risks and impacts in the previous projects were mitigated through preparation and implementation of an Environmental and Social Management Framework (ESMF) and Environmental and Social Management Plans. As for the proposed project, the institutional capacities to implement the Environmental and Social Framework (ESF) were assessed, and the understanding and capacities to manage E&S risks and impacts were found to be adequate. The WMD has designated an E&S nodal officer (who has been trained on the ESF by the World Bank previously) and appointed a Social and Institutional development Expert to the Project Management Unit (PMU). Additionally, WMD will appoint an Environment Expert, 6 social coordinators (one at each district-level PMU), and 60 social facilitators (3 at each Field Unit Office). For environment, designated staff at district and block levels will handle the responsibilities. The project will prepare an Environmental and Social Management Framework (ESMF) and other relevant instruments and will position Environment and social management team for the implementation.

II. SUMMARY OF ENVIRONMENTAL AND SOCIAL (ES) RISKS AND IMPACTS

A. Environmental and Social Risk Classification (ESRC) Moderate

A.1 Environmental Risk Rating Moderate

[Summary of key factors contributing to risk rating, in accordance with the ES Directive and the Technical Note on Screening and Risk Classification under the ESF – Max. character limit 4,000]

All project interventions will take place on existing cultivated and non-cultivated land (springsheds, catchment areas for treatment, land identified for processing/value addition facilities). The environmental risks and impacts could arise from project financed activities like (i) spring shed treatment, (ii) crop productivity enhancement (iii) development/refurbishment of processing infrastructure to support post harvest management. The potential adverse impacts from springshed treatment are mostly related to disturbance to soil and vegetation in undulating terrains, soil and water pollution from disposal of excavated soil etc. The crop productivity enhancement activities and irrigation are likely to trigger excess use of water and agrochemicals by the beneficiary farmers, especially pesticides and fertilizers that may result in contamination of soil and water, pose occupational health and safety risks during to storage; handling and disposal and can also result in food safety concerns due to excess residues. There are chances of replacement of traditional crops varieties with hybrids. The livestock activity may exert pressure on common lands and contribute to methane emissions. The processing activities too may increase the water and energy foot print and may release wastes. The minor civil works that may be undertaken for value chain infrastructure could lead to air and

noise pollution during construction phase and generation of wastes during the operations/processing phase. Most of these environmental risks and impacts are temporary, site specific and largely reversible in nature and can be managed and mitigated through appropriate mitigation measures. However, the pesticide related risks could be non-site specific and long term, depending on the hazard levels. The project will also contribute to resource efficiency (water), reduction of GHG emissions and will promote climate smart agricultural practices, use of renewable energy etc.

A.2 Social Risk Rating Moderate

[Summary of key factors contributing to risk rating, in accordance with the ES Directive and the Technical Note on Screening and Risk Classification under the ESF – Max. character limit 4,000]

The project is expected to have positive social impacts and benefits in Uttarakhand for farmers and agricultural workers. The project will not involve any land acquisition/ use of forest lands/ disputed lands and/or lands with any encumbrances. Out of the eight projects districts, transhumant communities (Bhotiya/ Anwal/ Van Gujjars/ Nomadic groups) are likely to be traversing through four districts. The minor earthworks for MWS/ spring shed development will involve local community labor and, therefore, no migrant labor influx is expected. The potential social risks and impacts include: (i) potential impacts on transhumant populations, such as temporarily limited access to grazing lands due to MWS/springshed development activities, (ii) risk of exclusion of vulnerable groups such as tribal communities, landless groups and women farmers from project benefits, (iii) worker and public safety risks in case of non-compliance during proposed minor civil works, particularly given the hilly areas/terrain; and (iv) lack of a functional Grievance Redressal Mechanism (GRM) at the community level.

[Summary of key factors contributing to risk rating. This attribute is only for the internal version of the download document and not a part of the disclosable version – Max. character limit 8,000]

B. Environment and Social Standards (ESS) that Apply to the Activities Being Considered

B.1 Relevance of Environmental and Social Standards

ESS1 - Assessment and Management of Environmental and Social Risks and Impacts Relevant

[Explanation - Max. character limit 10,000]

ESS 1 is relevant for assessing, managing, and monitoring environmental and social risks and impacts associated with the project towards ensuring that the operation is environmentally and socially sustainable. The adverse environmental risks and impacts relate to i) minor earth works for springshed development and irrigation, ii) crop productivity enhancement activities, iii) and infrastructure creation/refurbishment to support post-harvest processing. The potential adverse impacts from springshed development include disturbance to soil and vegetation in undulating terrains and; soil and water pollution from earth works. The crop production activities may lead to adverse impacts like soil and water contamination, health risks due to possible increase in use of agrochemicals (by farmers) and their residues in food, occupational and community health and safety issues related to application of chemical pesticides etc. The livestock activity is likely to increase the emissions if mitigation measures (feed efficiency, waste management) are not followed. The processing may result in increased use of water and energy and, generation of wastes. The social risks identified are temporary, site specific and largely reversible in nature and can be managed and mitigated through appropriate mitigation/ management measures. To mitigate these risks and to ensure strong

engagement with the project beneficiaries and other stakeholders, an Environmental and Social Commitment Plan (ESCP) and a Stakeholder Engagement Plan (SEP) have been prepared. Further, an Environmental and Social Management Framework (ESMF) will be prepared which will include an Indigenous Peoples Policy Framework (IPPF) and Labor Management Procedures (LMP). The ESCP includes details for the preparation of the ESMF and other follow-on mitigation plans agreed. Further, the project will have a community operations manual, which will include a code of conduct for workers. The community operations manual will entail measures to engage communities in preparation and implementation of a comprehensive communication strategy to disseminate information in a format accessible to relevant stakeholders, particularly to the farming community and vulnerable groups. The ESMF includes strategies and measures in line with the WBG EHS Guidelines for (i) General EHS; and (ii) Annual Crop Production and Perennial Crop Production, which are relevant given the guidance provided on the environmental issues involved in the project, e.g., soil and water conservation and management; nutrient and pest management; use and management of pesticides; management of crop residues, prevention of soil and water contamination; managing the dust and noise pollution, waste management; biodiversity and ecosystems, etc. The ESMF includes sub-project(s) environmental and social screening procedure, guidance for preparation of site-specific Environmental and Social Management Plans (ESMPs), including a generic ESMP, and subsequent implementation plan during sub-projects' execution. The ESMF also includes measures for resource efficiency and emission reduction, occupational and community health and safety. The E&S risks of the project are Moderate, although this will be assessed continuously throughout the life of the project and adjusted as needed.

ESS10 - Stakeholder Engagement and Information Disclosure Relevant

[Explanation - Max. character limit 10,000]

This standard is relevant for ensuring that a consistent, comprehensive, coordinated and culturally appropriate approach is taken for stakeholder engagement and disclosure of project related information. For this, a Stakeholder Engagement Plan (SEP) has been prepared and will be disclosed before project appraisal. The SEP provides guidance on specific steps and actions to be taken during preparation and implementation stages of the project. It also defines the mode and frequency of engagement with stakeholders at various stages of the project cycle. Furthermore, the SEP elaborates various means and methods which can be used to ensure that information reaches or can be accessed by project beneficiaries, including vulnerable and disadvantaged groups.. Given the nature of project activities proposed, a diverse group of stakeholders will be involved in the project's decision-making, design and implementation. During initial Social Assessment, stakeholder mapping and analysis was undertaken wherein the following project beneficiaries and a number of interested parties were identified: a) marginal and small farmers; b) landless labourers, c) agriculture workers; d) agriculture and post-harvest equipment suppliers, e) gram panchayat members, f) women farmers, g) Transhumants, h) Watershed Management Directorate, i) Agriculture Department, j) Animal Husbandry Department, k) Forest Department, l) Science and Technology Department, m) NGOs, n) service providers such as skills development centers, o) consultants to be engaged by project, and q) other project beneficiaries. Disadvantaged and vulnerable groups among the project beneficiaries include those belonging to the following categories: SC/ ST/ Below Poverty Line (BPL), women farmers , marginal and small farmers, landless labourers, etc. To further manage social and environmental risks, existing Grievance Redress Mechanism (GRM) will be strengthened to make it more responsive and accessible. Project beneficiaries and other interested parties (OIPs) will have access to an easy-to-follow GRM to raise concerns and grievances. The project will update existing GRM (toll-free, online, posts, etc.) to include features such as online and offline option to file complaint, user-centric categorization, alert generation, response, and escalation flow. The GRM will also ensure sensitive-handling of GBV/SEA/SH related grievances. The

implementation agencies will continue to engage with project beneficiaries and OIPs during project implementation in a manner appropriate to the nature of their interests and potential E&S risks and impacts of the project. The WMD will be responsible for overall implementation of the SEP including community mobilization; information, education and communication (IEC); capacity building; etc. Appropriate arrangements for SEP implementation, including reporting and its updating, as necessary, have been enumerated in the ESCP. Additionally, the community operations manual will entail measures to engage communities in preparation and implementation of a comprehensive communication strategy to disseminate information in a format accessible to relevant stakeholders, particularly to the farming community and vulnerable groups.

ESS2 - Labor and Working Conditions Relevant

[Explanation - Max. character limit 10,000]

This standard is considered relevant to the Project. The project will involve: a) direct workers employed specifically by the implementation agency and other line departments for the project; b) community workers engaged in minor earthworks; and c) workers engaged by consultancy services firms for specific deliverables and technical support to WMD. Labor Management Procedures (LMP), including OHS risks and mitigation measures, will be included in the ESMF, including adequate measures for ensuring terms and conditions of employment, non-discrimination and equal opportunity, workers' organization, the prohibition of child and forced labor, and provision for a worker's grievance mechanism in accordance with the national laws and ESS 2 requirements. The grievance mechanism will contain stipulations for sensitive handling of grievances, including those related to SEA/SH. The GRM for workers will be in place prior to project effectiveness. The relevant staff of the Implementation Agency, line departments and direct workers, including contract workers will also be subject to and trained on codes of conduct, including during their interaction with local communities. The provisions for this will be included in the LMP.

ESS3 - Resource Efficiency and Pollution Prevention and Management Relevant

[Explanation - Max. character limit 10,000]

Resource Efficiency and Pollution Prevention and Management is relevant as the project activities will consume and impact resources including energy, water, flora and fauna as part of i) earthworks and minor civil works related to spring shed treatment and value addition infrastructure, ii) irrigation and crop productivity improvement. The construction activities can cause pollution of air, water and soil including noise pollution, which will have health impacts on the humans and animals. The dust and wastes generated from construction activities and earthworks affects surrounding crops, human and animal health. The use of non-permissible, hazardous pesticides and fertilizers in excess doses without precautions can have adverse impacts on human, animal health and the environment, these will be excluded from the project. The use of permitted pesticides and fertilizers can also have adverse environmental and health impacts, depending on the materials used and application techniques, the ESMF and IPM will have guidance and criteria for selection, handling, storage and application of pesticides and fertilizers. The ESMF will focus on assessment of resource consumption and pollution from the project activities. The ESMF will identify the risks and include measures to be taken at planning, execution and operation and management stages of project activities for resource efficiency and pollution prevention. The design/plan of the works will emphasize on minimal disturbance, disaster proof designs given the sensitivity of the locations that are undulating and use of sustainable materials. Measures for dust and noise control, waste management, etc. during construction/execution phase will be duly covered. Measures to be taken at the operation stage will also include appropriate waste disposal methods. Use of

sustainable technologies, and renewable energy will be considered feasible. The project will have an IPMP to mitigate and manage the adverse impacts. An overall strategy for resource efficiency will be included for better utilization of resources.

ESS4 - Community Health and Safety Relevant

[Explanation - Max. character limit 10,000]

Community Health and Safety is considered relevant to the project. There are three types of risks: (a) risks for the local communities due to movement of vehicles and exposure to sites associated with construction/ renovation works, (b) potential community exposure to agrochemicals and pesticides as the result of project activities, and (c) SEA/SH related risks for local community workers. The ESMF will address the risks relating to mitigation measures for construction site safety management and appropriate barricading, and workers will be trained on these aspects of site safety management. The IPMP will provide mitigation measures, community awareness and training on safe storage, labelling, transport and application of agrochemicals and pesticides (where needed) to reduce any risk of exposure, or residual risks to human health and the environment. The mitigation measures for addressing SEA/SH related risks will be included in the community operations manual.

ESS5 - Land Acquisition, Restrictions on Land Use and Involuntary Resettlement Not Currently Relevant

[Explanation - Max. character limit 10,000]

This standard is currently not considered relevant to the project. No land acquisition and associated risks are expected at this stage as the project activities are likely to take place on existing cultivated land and/or government land. A screening tool will be developed to ensure the land used for project activities is free from any encumberances. This screening tool will be included in the ESMF and the community operations manual.

ESS6 - Biodiversity Conservation and Sustainable Management of Living Natural Resources Not Currently Relevant

[Explanation - Max. character limit 10,000]

Biodiversity Conservation and Sustainable Management of Living Natural Resources is considered not relevant to the project. At this stage of the project concept note, project activities will take place in existing cultivated land. The project's ESMF will carry out an assessment and include a screening checklist to ensure project activities do not pose any risk/ impact / alter any critical habitat and natural habitat. ESMF will include guidance to exclude activities in or near protected areas and/or sensitive habitats.

ESS7 - Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities Relevant

[Explanation - Max. character limit 10,000]

This standard is considered relevant to the project. The comprehensive National and state laws and policies safeguarding the rights and interests of the Indigenous people, recognized as STs in India provide adequate provisions to meet the requirements of ESS 7. As per 2011 Census, around 2.9% of Uttarakhand’s total population comprised of

STs. Tribes of Uttarakhand mainly comprise five major groups namely Jaunsari tribe, Tharu tribe, Raji tribe, Buksa tribe and Bhotiyas. In terms of population Jaunsari tribe is the largest tribal group of the state. In the state of Uttarakhand, the main concentration of tribal population is in the rural areas. The state also has Transhumant population which include the Bhotiya/ Anwal/ Van Gujjars/ Nomadic groups. Considering this, an Indigenous People Policy Framework (IPPF), integrated into the ESMF, will be prepared to ensure that the project enhances opportunities for vulnerable beneficiaries to participate in, and benefit from the development process. WMD will adopt and implement this IPPF for all project activities. Activities requiring free, prior and informed consent (FPIC) are not anticipated at this stage. The IPPF will include requirements for the Borrower to engage independent specialists, in case any activities requiring FPIC are planned at a later stage.

ESS8 - Cultural Heritage Not Currently Relevant

[Explanation - Max. character limit 10,000]

This standard is considered not relevant to the project. At this stage of the project, project activities will take place on existing cultivated land and/or government lands. The project's ESMF will carry out an assessment and include a screening checklist to ensure project activities do not post any risk/ impact / alter any cultural or natural heritage sites.

ESS9 - Financial Intermediaries Not Currently Relevant

[Explanation - Max. character limit 10,000]

This standard is considered not relevant.

B.2 Legal Operational Policies that Apply

OP 7.50 Operations on International Waterways No

OP 7.60 Operations in Disputed Areas No

B.3 Other Salient Features

Use of Borrower Framework No

[Explanation including areas where "Use of Borrower Framework" is being considered - Max. character limit 10,000]

The use of the Borrower Framework will not be considered for this project. The project activities will follow Bank's Environmental and Social Framework and its Environmental and Social Standards for managing the environmental and social risks and impacts.

Use of Common Approach No

[Explanation including list of possible financing partners – Max. character limit 4,000]

Common Approach is not applicable to the project

B.4 Summary of Assessment of Environmental and Social Risks and Impacts

[Description provided will not be disclosed but will flow as a one time flow to the Appraisal Stage PID and PAD – Max. character limit 10,000]

The adverse social risks are primarily related to (i) potential adverse impacts/exclusion on Transhumant populations (Bhotiya/ Anwal/ Van Gujjars/ Nomadic groups); (ii) risk of exclusion of tribal communities, landless and women farmers; and other vulnerable groups from project benefits; (iii) weak grievance redressal mechanisms at the village level; (iv) potential health and safety risks to communities during proposed earthworks; and (v) SEA/SH related risks. The identified social risks and impacts are anticipated to be temporary, site specific and largely reversible and can be managed through appropriate risk management mechanisms.

The adverse environmental risks and impacts related to minor earth and civil works for spring-shed treatment and infrastructure to support post harvest processing. These adverse effects are mostly related to disturbance to soil, soil and water pollution, occupational and health risks, and collection, generation of wastes. The productivity enhancement related activities may also trigger excess use of water, agro chemicals, use of hybrid crop varieties etc. leading to soil, water and food contamination, occupational health risks, loss of traditional varieties etc. Most of these environmental risks and impacts are however temporary, site specific and largely reversible in nature and can be managed and mitigated through appropriate mitigation measures.

C. Overview of Required Environmental and Social Risk Management Activities

C.1 What Borrower environmental and social analyses, instruments, plans and/or frameworks are planned or required by implementation?

[Description of expectations in terms of documents to be prepared to assess and manage the project's environmental and social risks and by when (i.e., prior to Effectiveness, or during implementation), highlighted features of ESA documents, other project documents where environmental and social measures are to be included, and the related due diligence process planned to be carried out by the World Bank, including sources of information for the due diligence - Max. character limit 10,000]

The project will prepare an Environmental and Social Management Framework (ESMF), including LMP, IPPF, IPM/INM/ICM, strategies and measures for resource efficiency, waste management and guidance for site specific Environmental and Social Management Plans (ESMPs) etc. The preliminary drafts are expected to be ready by project appraisal. These documents will be treated as living documents that can be updated prior to and during project implementation as per the need. An Environmental and Social Commitment Plan (ESCP) and a Stakeholder Engagement Plan (SEP) has been prepared by the client that captures the key tasks related to implementation, monitoring etc. with timelines.

III. CONTACT POINT

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