



**The World Bank**

Integrated Project for Source Sustainability and climate Resilient Rain-fed Agriculture in Himachal Pradesh  
(P165129)

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# Project Information Document (PID)

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Appraisal Stage | Date Prepared/Updated: 21-Dec-2019 | Report No: PIDA28014



## The World Bank

Integrated Project for Source Sustainability and climate Resilient Rain-fed Agriculture in Himachal Pradesh  
(P165129)

### BASIC INFORMATION

#### A. Basic Project Data

Country India	Project ID P165129	Project Name Integrated Project for Source Sustainability and climate Resilient Rain-fed Agriculture in Himachal Pradesh	Parent Project ID (if any)
Region SOUTH ASIA	Estimated Appraisal Date 06-Dec-2019	Estimated Board Date 30-Jan-2020	Practice Area (Lead) Agriculture and Food
Financing Instrument Investment Project Financing	Borrower(s) Republic of India	Implementing Agency Department of Forest, Government of Himachal Pradesh	

#### Proposed Development Objective(s)

To improve upstream watershed management and increase agricultural water productivity in selected Gram Panchayats in Himachal Pradesh.

#### Components

- Component 1. Sustainable Land and Water Resource Management
- Component 2. Improved Agricultural Productivity and Value Addition
- Component 3. Institutional Capacity Building for integrated Watershed Management
- Component 4. Project Management

### PROJECT FINANCING DATA (US\$, Millions)

#### SUMMARY

Total Project Cost	100.00
Total Financing	100.00
of which IBRD/IDA	80.00
Financing Gap	0.00

#### DETAILS

**World Bank Group Financing**

International Bank for Reconstruction and Development (IBRD)	80.00
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**Non-World Bank Group Financing**

Counterpart Funding	20.00
Borrower/Recipient	20.00

Environmental and Social Risk Classification

Moderate

Decision

The review did authorize the team to appraise and negotiate

Other Decision (as needed)

## B. Introduction and Context

## Country Context

1. **While still high by global standards, India's growth rate has decelerated in the past two years.** After peaking at 8.2 percent in FY16/17, economic growth has been lower in FY17/18 (at 7.2 percent) and FY18/19 (at 6.8 percent). The slowdown has deepened in the current fiscal year with growth expected to reach 6.0 percent for FY19/20, assuming that the external environment remains benign. In addition to relatively low levels of private investment over the past several years, the latest data shows a broadening of the slowdown across all categories of aggregate demand. Although the current account deficit widened to 2.1 percent of GDP in FY18/19, robust capital inflows during the second half of the year allowed for a build-up of international reserves to US\$ 411.9 billion at the end of the fiscal year (equivalent to 10 months of imports). Going forward, subdued import growth and benign oil prices are expected to contain the current account balance. On the fiscal side, the general government deficit is estimated to have widened to 5.9 percent of GDP in FY18/19. The deficit is expected to fall over time (to 5.6 percent by FY21/22), although it should rise to 6.0 percent in FY19/20 with significant downside risks (owing to tax cuts recently adopted and the impact of slower economic growth on tax proceeds).
2. **Since the 2000s, India has made remarkable progress in reducing absolute poverty.** Between FY11/12 and 2015, poverty declined from 21.6 to an estimated 13.4 percent at the international poverty line (2011 PPP US\$1.90 per person per day), continuing the earlier trend of fast poverty reduction. Thanks to robust economic growth, more than 90 million people escaped extreme poverty and improved their living standards during this period. Despite this success, poverty remains



widespread. In 2015, 176 million Indians were living in extreme poverty, while 659 million - half the population- were below the higher poverty line commonly used for lower middle-income countries (2011 PPP US\$3.20 per person per day). Implementation challenges of indirect tax reforms, stress in the rural economy and a high youth unemployment rate in urban areas, may have moderated the pace of poverty reduction since 2015.

#### Sectoral and Institutional Context

3. **Himachal Pradesh (HP) is a special category status state in the Himalayan mountains.** Special category status is afforded due to: (i) mountainous terrain; (ii) low population density (123 per km<sup>2</sup>); (iii) significant population of scheduled tribes; (iv) HP's strategic location bordering neighboring countries; (v) its 'backward' status in terms of economic development and infrastructure; and (v) non-viable nature of the state's financial situation (the fiscal deficit for FY2019/20 is projected to be 4.4 percent of the state's GDP). With an altitude ranging from 350 meters above mean sea level [msl] to 6,975 msl, much of the state's area is sloping, with inclines of between 0.5 – 70 percent. Land with a slope of up to 40 percent is already typically under agricultural production; in some areas farming is practiced on even steeper gradients of 60 – 70 percent. Of a total of 3,243 Gram Panchayats (GPs) in HP, 551 (17 percent) have been declared 'backward' status and therefore subject to special programs from the Government. Scheduled tribes are scattered throughout the state with concentrations in the districts of Kinnaur and Lahaul, Spiti and parts of Chamba amounting to 6 percent of the total population; one third of whom are located in Scheduled Areas. One-quarter of the population are scheduled castes. HP is among India's leading States on gender equality and social development. It has the highest female labor force participation rate in the country (although this has declined since 2005) primarily in agricultural self-employment which remains the mainstay of the state's largely rural economy. Women's higher participation in agriculture, horticulture, and livestock sectors is socially and culturally embedded in the state, largely due to traditional male out-migration. Nevertheless, their access to technology and climate resilient technologies, markets and finance, as well as to skills and entrepreneurship opportunities remains limited. Non-farm jobs for rural women remain limited. New opportunities in agribusiness are important to reverse the decline in women's participation in agriculture.
4. **HP has an important role to play in contributing to India's climate change commitments.** Its topography and available water resources are well-suited to hydro-power generation, with an installed capacity of 3,421 MW controlled jointly by the State Government (8 percent) and Government of India (GoI; 92 percent), against an estimated potential of over 27,000 MW. Only 14 percent of India's total power generation is from hydro, of which 8 percent is from HP. Meeting India's indicative national determined contributions (INDC) commitments on reducing the carbon intensity of India's energy generation will depend on further exploitation of hydro in states like HP. Similarly, HP enjoys over one million hectares (ha) of forest cover, representing 25 percent of the land area in the State and 1.5 percent of India's total forest cover of 71 million ha. Although currently a small share of the overall area, HP has substantial potential to further expand forest cover (including through increased density) and therefore will play a major role in contributing to the national commitments on carbon sequestration.



5. **The Government of Himachal Pradesh (GoHP) is already well experienced in exploiting its natural resources as a driver of its own development but faces challenges ahead.** Over two-thirds of the total land area in the state is formally categorized as forest land, of which 46 percent supports coniferous and broadleaved forests while the remaining 54 percent includes high altitude areas above the tree line, snow peaks, alpine pastures, and river beds. The state has zoned 23 percent of the legally classified forest area as protected areas (5 national parks, 26 wildlife sanctuaries and 3 conservation reserves), and Himachal Pradesh Forest Department (HPFD) manages these to protect biodiversity and promote ecotourism. These forests provide catchment areas for 5 major river basins (see Annex A). Despite considerable investments to date in catchment treatment and afforestation, forest quality (measured as canopy density) remains poor. The gross area of forests is increasing due to better law enforcement, afforestation to offset forests cleared for development, and the partial lifting of the felling ban in 2018, which allowed for selective felling of older trees and subsequent regeneration. However, the quality of forests has not improved over the past six decades due to several factors, including poor afforestation techniques, lack of maintenance, incorrect site/plant selection, and uncontrolled grazing and fires. The state has enjoyed significant success in agricultural development, in particular fruit production, and is a major source of off-season vegetables exported to other parts of India. Fruit production exceeds 600,000 mt (of which three-quarters is apples), while over 1.8 million mt of vegetables are produced annually. However, the majority of agricultural land (85 percent) remains under rain-fed agriculture, and the land under irrigation reports a low intensity of 137 percent (i.e. only one-third is used for more than one crops a year). Given changing weather patterns already observed (annual and monsoon rains declining by 2.26 mm and 2.85 mm per year, respectively; mean annual temperature increasing on 0.02 degrees Celsius per year), progress could be easily reversed unless the state invests in adaptation strategies to increase resilience.
6. **Natural resource management (NRM) therefore remains pivotal to the state's long-term economic and social development, especially in the context of climate change.** A profile of climate smart agriculture (CSA) in the state, commissioned as part of project preparatory tasks highlighted critical aspects of both the mitigation and adaptation agenda in the state:
  - **Mitigation:** Agriculture is a minor source of the state's GHG emissions, constituting only 1.8 percent (164,000 mt of CO<sub>2</sub> equivalent) of the total. Of these, 90 percent are attributable to rice cultivation over 43,450 ha of area; crop residue burning adds a further 8 percent, and enteric fermentation contributes less than 2 percent.
  - **Adaptation:** There are many examples of CSA technologies already being deployed in cereals, horticulture, vegetable, and livestock sectors. However, observed adoption rates are typically less than 30 percent, meaning there is considerable scope for scaling these up throughout the state. Adoption rates in the horticulture and higher-value vegetable sectors are typically higher. This is because the financial incentives are stronger but also because the farmer endowments that drove past diversification out of cereals are the same as those that make adoption easier. CSA technologies are not scale-neutral, they are risky, and there are significant up-front investment costs. Integrating CSA technologies more thoroughly into the existing Krishi Vigyan Kendra (KVK; i.e. research and extension) system is essential.



7. **HP has achieved notable success in devolving greater responsibility for community development to GPs.** There is considerable evidence from HP, elsewhere in India and globally that development interventions are better planned, more relevant, more efficiently delivered and more sustainable when the local beneficiary communities have a substantial stake in their delivery. This is particularly the case for local natural resource management when communities are often simultaneously both the direct cause and the victims of degradation. Supporting GPs to lead community-based development has and will continue to be a key tenet of the GoHP's approach moving forward.
8. **GoHP has a clear and relevant vision for its NRM sector.** First, it seeks to continue its impressive trajectory of rural transformation by raising agricultural productivity, strengthening market linkages and diversifying production patterns to increase agricultural value addition, while maintaining biodiversity and ensuring sustainable land and water use. Second, GoHP recognizes its role as custodian of a unique landscape with a special set of critical natural resource endowments that provide critical environmental services not only for its own population but for other states and indeed globally. Therefore, it recognizes the importance of reconciling the imperative of delivering results in terms of continued development for its population without undermining its natural resource base.

## C. Proposed Development Objective(s)

Development Objective(s) (From PAD)

To improve upstream watershed management and increase agricultural water productivity in selected Gram Panchayats in Himachal Pradesh.

Key Results

9. **The project will have the following PDO indicators:**

- Selected water sources (streams, springs, forests and pastures) managed in accordance with site-specific management plans supported by the project (Number)
- Share of participating farmers adopting climate smart agriculture practices (Percentage, gender disaggregated)
- Increase in area under higher efficiency irrigation in targeted GPs (Percentage, gender disaggregated)
- Share of target beneficiaries with rating "Satisfied" or above on process and impact of project interventions (Percentage, gender disaggregated) [Citizen Engagement Indicator]

## D. Project Description

### Component 1: Sustainable Land and Water Resource Management

10. **This component promotes participatory and sustainable land and water management through financing the planning and implementation of investments in selected micro-catchments.** Site-specific management plans (SSMPs) will be prepared for each micro-catchment to specify detailed activities by location and GP. SSMPs are essential to the implementation of the operation. In parallel



to the SSMPs, a network of hydrological monitoring stations will be established within the watershed to monitor the quality and quantity of water on a continuous basis, to assess the potential impact of project interventions, whilst laying the foundation for future hydrological modelling to identify the highest priority sites for future activities. Hydrological watershed modelling in conjunction with landscape analysis can help identify the most critical sites to prioritize investments to ensure the greatest impact for source sustainability and water quality. The main implementers and beneficiaries will be HPFD staff and relevant community organizations such as the user groups set up (or strengthened, where appropriate) under the project. The component will include a combination of technical assistance (TA), investments, and partnerships with other agencies and will lead to improved forest cover (and hence carbon capture), increased water and sediment regulation, reduced erosion, and improved community participation in and benefits from forest management.

**Subcomponent 1A: Improved planning for participatory and sustainable land and water management**

11. **Subcomponent 1A will strengthen landscape planning.** Specifically, it will: (a) design and implement a network of hydrological monitoring stations at key locations (to be determined by expert analysis), as a basis for future hydrological monitoring to facilitate monitoring of water quality and quantity and to identify and optimize future interventions by location (b) prepare site-specific management plans at the level of geographic clusters of GPs; (c) support additional diagnostic studies, designs, and assessments; and (d) develop SSMPs through a participatory process led jointly by the HPFD and community user groups. The future hydrological models will enable the preparation of more holistic catchment area treatment (CAT) plans to improve ecosystem management and water quality and quantity based on available hydrological and sediment load modeling. This sub-component will include the design and implementation of a catchment monitoring and evaluation (M&E) system that incorporates water flows and sediment loads to ensure that future investments maximize silt retention and surface water absorption.
12. **The development of the CAT plans** will include: (i) monitoring the status of the terrain in terms of vegetation cover, soil cover, erosion, land use and identifying any changes over time; (ii) undertaking an analysis of the treatments that have been undertaken to date, their cost and effectiveness; (iii) setting up automatic water quality and flow monitoring instruments in key locations to feed into hydrological models that can be used to predict the impact of the different interventions; (iv) preparing recommended treatments in light of the analysis; and v) revise and update the SSMPs where possible for selected micro-catchments.
13. **The preparation of the SSMPs will include:** (i) design of standard SSMP formats, mapping requirements and contents; (ii) design of a database to store, consolidate, retrieve and monitor SSMP preparation, approval and implementation; (iii) definition of the micro-catchment boundary, and delineation on maps that include current land use, vegetation, soils, slope, and aspect; (iv) identification of stakeholder groups and consultation/participation of local stakeholders in the SSMP preparation process to ensure buy in and ownership (this will include the necessary mobilization activities of the water user groups); (v) identification of critical areas for treatment (i.e. highly eroded/erodible areas, areas where remedial treatments are urgently required – e.g. check dams, etc.); and (vi) the definition of project interventions (in collaboration with the local stakeholders), mapping the



exact sites and locations (i.e. GPS surveyed, including photographs), and developing the technical specifications for all interventions.

**14. Approval of the SSMPs will necessitate spot checks and verification on site.** Once approved the interventions may proceed. On completion of the interventions subsequent surveys will be undertaken to ensure that the activities have been implemented, the required survival rates have been achieved and that the necessary maintenance activities are being undertaken. The preparation of the SSMPs will be achieved through: (i) technical consultant to design the SSMP structure and mapping requirements; (ii) IT consultant to design database and GIS system including data input technology i.e. tablet, phone, use and interpretation of satellite imagery, etc., to store, collate, monitor progress and report on SSMP preparation, approval and implementation; (iii) recruiting an NGO or consultant company to undertake the community mobilization and to facilitate the participation in plan preparation; (iv) technical consultants to prepare the SSMPs; and (v) review of the plan by the PMU and approval by the HPFD, following on site verification. Implementation of the SSMP will be monitored through: (i) updating the project level database to collate, report and monitor implementation progress; (ii) verification on site of activity completion reports once activities have been completed; and (iii) ongoing site inspections to ensure required survival rates have been attained and that maintenance activities are being properly implemented.

**Subcomponent 1B: Implementation of participatory and sustainable land and water management investments as identified by the SSMPs**

**15. This subcomponent will finance the implementation of activities identified in the SSMPs** and will contribute to improved forest cover and quality (including carbon emission reductions and sequestration), as well as improved water and sediment regulation. Activities supported by this subcomponent will be specified in the preparation of the SSMPs and will have the technical specifications for works and equipment supply and terms of reference for consultancy services developed at this time. These activities may include, but are not limited to, the following:

- *Soil and water conservation measures in accordance with SSMPs.* Vegetative measures, such as afforestation, grass seeding, grass turfs, brushwood, live hedges, and spurs, as well as mechanical measures, such as check dams, drop structures, wire-crate spur structures, bunds and water harvesting, and drainage line treatments, such as gully plugging.
- *Forest management.* Planting and management of trees in open and medium density forests and slopes vulnerable to soil erosion and protection of plantations.
- *Pasture management.* Introduction of rotational grazing, delineation of forest areas for the supply of fodder, and the introduction of voluntary systems to prevent livestock from grazing in young forest.

**16. Other activities at the project level rather than GP- or micro-catchment level would include:**

- Development of high-quality seed stands. Establishment of a geo-referenced seed production system to select the best phenotypic seeds for given environmental conditions which will allow adaptation to changing climatic and vegetative zones; construction of a centralized seed center to process, treat, store, and test seed; and construction of a climate-controlled seed bank.
- Nursery development. Provision of machinery and equipment to produce the additional seedlings of



the correct quality in the right location.

- Forest fire prevention and suppression. Organization of community fire protection groups; provision of locally-appropriate firefighting equipment to the HPFD offices and participating communities; and training of communities on controlled burning, and the collection and use of pine needles.
- Innovative approaches to silviculture will be trialed as simple replicated plots to determine the most appropriate and most cost-effective treatments. Potential topics for research will include size and types of seedlings, plantation spacings, and the treatment of invasive species.

## **Component 2: Improved Agricultural Productivity and Value Addition**

17. **This component would support interventions in downstream areas where the primary (existing or potential) water use is for irrigation in agriculture.** It would seek to augment the use of irrigation as a principle strategy for shifting from low-value cereal production to higher-value fruit and vegetable production but would do so with a focus on increasing water productivity to maximize the financial returns for water use. The project will not duplicate other areas of support but will seek to leverage additional support from other government programs and projects, particularly in the horticulture field. Key interventions include infrastructure to increase high-productivity water utilization (drip and sprinkler irrigation) plus the necessary primary and secondary distribution systems. The project will only work in downstream areas where upland/ proximate interventions are being implemented. This component will also support the development of a Value Chain Development Cell (VCDC) within the PMU that will: (i) coordinate and monitor the overall implementation of this component, and (ii) manage consultant contracts between the PMU and qualified support entities, such as NGOs, consulting firms, and research institutes that will implement many of the component activities. Alignment with the relevant line departments (e.g., agriculture, horticulture, and animal husbandry) will be ensured through the project steering committee. In addition to improving local livelihoods, the proposed activities will reduce pressure on forests and contribute to increased carbon sequestration and reduced erosion.

### **Subcomponent 2A: Improved water productivity**

18. **Subcomponent 2A will support investments in the provision of water by investing in primary and secondary distribution infrastructure.** It will finance decentralized water infrastructure development within GPs based on robust SSMPs (developed under Component 1) and subordinate village-level agriculture and water management plans. Eligible investments will include water harvesting, storage, and distribution infrastructure, such as (small) pond excavation, community tank renovation, roof rain-water tank installation, strengthening of traditional irrigation channels, and gravity and lift intake and distribution structures. To ensure these investments lead to increases in water productivity rather than only water availability, the project will only invest in increasing water utilization in GPs where: (i) upstream investments in source sustainability are being implemented under Component 1; and (ii) investments under the following Subcomponent 2B will support increased adoption of climate smart technologies and high value crop production to ensure the productivity of subsequent water use will be maximized, thereby achieving 'per drop, more crop.'

19. **The project will fully finance shared infrastructure while household-level equipment will be provided on a cost-sharing basis.** The ratio of grant element will reflect existing GoHP norms. Where



relevant the share of beneficiary contribution will increase with the increased number/ scale of project-supported assets. The project will apply the extensive experience of matching grants in World Bank projects. Most on-farm investments are expected to deliver both a private benefit to beneficiary farmers and an indirect benefit through technology demonstration. To maximize the latter, the project will promote formal agreements with beneficiaries setting out how their role as 'lead farmers' can best be leveraged into ongoing extension programs. Details will be set out in the PIP.

**Subcomponent 2B: Adoption of Climate Smart Technologies and Diversification into High-Value Crops**

20. **This component supports the adoption of CSA practices** in conjunction with increased access to irrigation, for existing cropping patterns and/ or diversification into high-value crops. The project will leverage HP's agricultural research and extension system and existing Government-backed interventions to expand the adoption of contemporary CSA practices among participating farmers. Where knowledge of appropriate CSA practices for these new crops is limited, the project will collaborate with the research institutions to strengthen the evidence base. This component will leverage and support the Government's own KVK farmer extension system and their *Rashtriya Krishi Vikas Yojana* (RKVY; now known as the Remunerative Approach for Agriculture and Allied Sector Rejuvenation) to encourage diversification. Interventions to support high value crops, including medicinal and aromatic plants will be based on the analysis of market potential, including with pharmaceutical companies. By focusing on the market and commodity aggregation, the approach will take a value chain perspective with competitiveness at the fore.
21. **Building on the maximizing finance for development (MFD) approach, this subcomponent will support:** (i) a value chain and marketing analysis; (ii) mobilization of farmers interested in producing high-value commodities into producer groups (PGs); and (iii) capacity building of PGs on climate-smart production, processing, marketing, and business development through trainings and technology demonstrations. The subcomponent will provide initial seed grant funding and TA to finance PG establishment, including the development of by-laws, the opening of a group bank account, and the development of business plans. This subcomponent will also finance competitive matching grants to finance eligible sustainable and climate-smart production, primary processing, and storage investments identified in the business plans. This component will also fund essential modest "last-mile" market access investments (e.g. footbridges, and ropeways but not roads or investments requiring land acquisition). The eligibility criteria and terms for the grants will reflect existing GoHP norms as set out in the PIP. There will be several rounds of applications for grant financing reflecting the roll-out of the GP-based interventions throughout the project period. The project will place a special emphasis on extending support to women-only groups to help them productively participate in the supported value chains. Female facilitators will also be hired and trained to provide additional training and support to women-only groups to ensure they benefit from the matching grants schemes. It will also ensure equal access for defined disadvantaged groups within the project areas.
22. **The project will adopt a cluster-based approach where relevant.** This is essential to avoid fragmentation and an unsustainable scattering of project investments and to generate the volume to benefit from economies of scale in production and marketing/ processing that is essential to competitive agriculture. HP benefits from extensive analytical work on potential clusters in a range of commodities and has considerable experience in such approaches (including through other World



Bank-financed operations). The project will include support for business incubation if an appropriate cluster emerges where this potential can be realized. Prospective clusters in specific value chains can only be determined once SSMPs have been concluded; requisite analysis will be undertaken alongside the SSMPs accordingly.

**23. The implementation of this sub-component will reflect two critical operational modalities.** Since both approaches reflect significant departure from business as usual, the PMU will include necessary TA to proactively seek such opportunities:

- The use of information and communication technology (ICT). The project will seek to deploy innovative ICT-based solutions as a means of demonstrating the potential benefits of ICT solutions. ICT solutions are expected to emerge primarily from subcomponent 2B but could be applicable to all project components.
- The use of multiple delivery agents to build a service-provider industry. Although the project retains a strong public sector justification, many front-line interventions could be delivered by non-government agencies including NGOs, consulting firms and/or research institutes. As a secondary objective the project will seek to augment the range of alternative delivery agencies, especially private sector. A particular emphasis is likely in the mobilization, organization and capacity building of the PGs, with field assistance from community facilitators. These agencies will prepare locally-appropriate training materials, develop manuals and other operational guidelines, and provide Training of Trainers to the facilitators, who will implement the field-level trainings and related technology demonstrations.

### **Component 3: Institutional capacity building for integrated watershed management**

**24. The objective of this component is two-fold:** firstly, to support a more comprehensive and holistic approach to managing the state's water resources while recognizing competing uses both within HP and downstream in other states, in particular Punjab; secondly to facilitate better alignment of institutional mandates for IWM and strengthen the HPFD's institutional structure and capacity for improved service delivery.

#### **Subcomponent 3A: Improving the governance structure for integrated watershed management**

**25. Through the convening power of the HPFD and its role in managing watersheds, this subcomponent will provide TA to support improving integrated management of water resources.** The subcomponent will support an IWM institutional assessment to: (a) identify the institutions that affect water supply, quality, use, and management and their roles, responsibilities, and mandates; (b) conduct a strengths, weaknesses, opportunities, and threats (SWOT) analysis of the current institutional framework and highlight any overlaps and/or gaps that undermine IWM; (c) identify opportunities for institutional coordination and synergy; and (d) build consensus on the need for reform and develop the goals and vision for institutional collaboration, a time-bound action plan, and an implementation road map. The results of this assessment are expected to inform the GoHP on the necessary longer-term reforms to the relevant state institutions that will result in effective interagency cooperation and, ultimately, IWM. Stronger institutions will lead to improved planning



and responsiveness to climate change impacts. This sub-component will be implemented by a consultancy company specializing in change management.

**Subcomponent 3B: Institutional reform and strengthening of the Himachal Pradesh Forest Department**

**26. This subcomponent building on subcomponent 3A will support the further institutional development of HPFD.** It will provide TA to conduct a functional review of forest institutions (FRFI) that will produce a vision, goal, and time-bound action plan for change. This subcomponent will also help develop an initial set of prioritized institutional governance reforms through TA. These reforms may include inter alia the (a) development and implementation of a comprehensive HPFD IT and knowledge strategy that integrates all relevant applications on a common geospatial platform and allows for watershed-level planning; (b) development and implementation of a comprehensive HPFD M&E system; (c) establishment of a centralized staff performance monitoring system; and (d) development of regulatory and management standards for pastures. Finally, this subcomponent will finance training and capacity-building activities based on a comprehensive training plan. The trainings will cover diverse subjects and will be designed with a climate change lens to build climate resilience. Training will include all project participants. The consultancy contracts required to implement this sub-component would include: (i) Functional Review of Forest Institutions (FRFI); (ii) Development and implementation of an IT Strategy including monitoring and evaluation; (iii) Development and delivery of new training modules required for the changing role of the department.

**Component 4: Project Management**

**27. This component will support the project management function, including key staff and operational costs.** The project management entity will be in the form of a PMU, although at least in the medium-term financing will be required for staff on secondment from other Departments and externally recruited staff in areas with skillsets outside the current bureaucratic capacity. A key example is agribusiness for which few existing staff of Departments have the required expertise. It would also support the project monitoring and evaluation functions as well as grievance redress apparatus, and project communications and outreach including the contribution to Lighthouse India by which project lessons can be shared with other States.

**Legal Operational Policies****Triggered?**

Projects on International Waterways OP 7.50	No
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Projects in Disputed Areas OP 7.60	No
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**Summary of Assessment of Environmental and Social Risks and Impacts**



- 28. The project will undertake measures to improve the state of water resources in Himachal Pradesh towards ensuring sustainability and climate resilience in the agriculture sector.** It will achieve this through interventions across the areas of natural resource management, forestry and agriculture. In particular the project will: i) promote participatory and sustainable land and water management through strengthened landscape planning and ii) implement NRM activities from the plans such as soil and water conservation measures like check dams, bio-engineering structures, etc, development of high quality seed stands, nursery development, forest and pasture management and forest fire prevention and suppression; iii) provide water through primary and secondary distribution infrastructure and matching grants for the purchase of on-farm equipment for drip and sprinkler irrigation technology; iv) support the adoption of Climate Smart Agriculture (CSA) practices for existing cropping patterns and facilitate diversification into high value crops; v) strengthen NTFP value chains; vi) promote agribusiness clusters including technical assistance to farmers groups and infrastructure provision to facilitate storage, packaging, waste management as well as last-mile linkages and vii) undertake institutional capacity building for integrated watershed management and making policy trade-offs focusing on the Himachal Pradesh Forest Department.
- 29. The environmental risk rating of the project is ‘Moderate’.** Overall, the impacts of the project financed activities on forest cover and quality, water and sediment regulation, water use efficiency and carbon sequestration are expected to be positive. No adverse impacts are envisaged to the rich forest and biological diversity in the state as activities will be outside critical natural habitats or any activities that could adversely impact biodiversity or critical habitats will not be financed. The anticipated risk is moderate because the investments are of small to medium scale and the nature of interventions are largely environmental. Minor, localized and mitigatable negative impacts may be caused during the project; The risks anticipated under the key implementation components are as follows: (i) Under land and water resource management risks may arise from pest control strategies in forest nurseries and construction and repair of erosion control and water storage and distribution structures; (ii) Under improved agricultural productivity and value addition there could be risks from construction of water distribution infrastructure, improper seed/ varietal selection; use of chemical fertilizers and pesticides; construction of buildings; drying, storage and processing of raw material; improper disposal of agricultural waste and construction waste and unscientific and unsustainable harvesting of NTFPs.
- 30. The social risk rating of the project is ‘Moderate’.** Potential for adverse social impacts come from i) infrastructure (aggregation, processing, soil and water conservation, water distribution, pasture and nursery development); and ii) access and use restrictions related to natural resource management, NTFP value chains and forest fire prevention interventions. Other potential social risks are exclusion of small and marginal farmers, nomadic tribes, scheduled castes and scheduled tribes from project institutions and benefits that relate to on farm irrigation inputs, seeds and other improved farming inputs and training. Community level conflicts could also arise from water sharing infrastructure and systems, any land use restrictions mentioned above. There may be risks related to health and safety for contract workers and community labor for small scale infrastructure works mentioned above. Agriculture and horticulture interventions in HP rely on labor influx from other states as well as Nepal, and this may involve risks related with labor influx, migrant labor as well as gender-based violence. While most interventions are likely to be small scale, and the impacts are not expected to be



significant, the capacity of the borrower to implement and manage the above social risks as well as those related to labor, community health and safety and sustained stakeholder engagement raises the risk profile to moderate. The risk rating is also moderate due to several other factors: i) the project interventions will deliver benefits for small and marginal rural producers of the state; ii) a participatory, community-based approach will be institutionalised and iii) these localised and manageable risks will need to be mitigated and managed by mainstreaming the screening and mitigation processes in core project design.

## E. Implementation

### Institutional and Implementation Arrangements

**31. The project will be implemented by an entity established specifically for the purpose.** This PIU will be established under the HPFD. The project will also maintain divisional offices to oversee project activities at the District level. The PIU and divisional project offices (DPOs) will include technical specialists from a range of other departments to ensure a full complement of technical competence across the range of sectors. Where this is not feasible from existing departments additional expertise will be recruited directly into the PMU. The project will seek to leverage existing programs (e.g. KVK) and public sector providers such as the extension and research systems and agreements will be reached between agencies to this effect. Activities at the village level will be implemented by the GPs to promote direct community/ beneficiary participation. A project steering committee will be established chaired by the Additional secretary to *inter alia* review annual workplans and facilitate coordination across Departments.

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## The World Bank

Integrated Project for Source Sustainability and climate Resilient Rain-fed Agriculture in Himachal Pradesh  
(P165129)

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### Implementing Agencies

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