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1. Background

Climate change has been recognized as one amongst the various challenges faced by the nation, along with increasing population, poverty and environmental degradation. India's economy, especially rural livelihood is dependent heavily on climate-sensitive sectors such as agriculture, forest, water, tourism, animal husbandry. To address climate change related challenges, Government of India has made significant progress with respect to formulation and preparation of multi-pronged, long term and integrated strategy for climate change, achieving the key goals in the context of mitigation and adaptation aspects to climate change. Government of India released the National Action Plan on Climate Change (NAPCC) in 2008 with eight missions in specific areas of energy, habitat, water, sustaining Himalayan ecosystem, forestry, agriculture and strengthening the scientific knowledge on climate change. Subsequently, all States/Union Territories have also prepared the State Action Plan on Climate Change (SAPCC), to address state specific issues on climate change

2. Project Objective and Description

The project titled 'Climate Change Adaptation in Rural Areas of India Phase –II (CCA RAI-II)' is being implemented under the bilateral cooperation of MoEFCC and GIZ, which aims to integrate climate adaptation and mitigation measures into the national and state development planning. It also enivesages concrete pilot experiences on approaches to integrate adaptation measures in the planning process together with partner States and supports scaling up of successful experiences. In order to achieve this, the project has the following components:

- Capacity building at national level
- Climate change relevant model projects
- Technical support in accessing National and International climate finance
- Capacity development at the state level and Knowledge Management

3. Scope of the Assignment

The phase-II of the project (Jan, 2015-June, 2019) is being implemented in 4 partner states of Himachal Pradesh, Punjab, Telangana and Tamil Nadu with focus on capacity development at the national and state levels; demonstration of climate change adaptation strategies; technical support in accessing climate finance and knowledge management.

According to SAPCCs of respective partner States, climate change is likely to impact different sectors and access to crucial natural resources. Further, due to increased frequency and intensity of extreme events like floods, cyclones etc. there is likely to be higher instances of loss of life and property. In addition risk of diseases is increasing due to extreme temperatures, flooding and higher vector population in warmer climate. Although regional variations exist, the impact of climate change on water availability and quality is emerging to be a major concern across States in India. Often, effective projects to improve water management in the light of climate change are difficult to develop because of the complex interrelations between direct and indirect climate impacts and local perceptions of vulnerabilities and needs. CCA-RAI with partner States intends to prioritize high impact climate change adaptation issues and implement measures to address the challenges arising due to climate change. However implementation of the demonstration project needs to follow a process considering state and local levels (district, block and

village) priorities. One of the approaches for including the local level concerns is integrating climate change concerns into district level plans. GIZ has undertaken a feasibility study to assess the local needs and climate vulnerabilities in Bilaspur district. A detailed project with prioritized adaptation options has been prepared for implementation.

4. Objective of the Assignment

Implementation action Plan demonstrate identified approach for integration of climate change in district level plans related to water sector in Bilaspur district in Himachal Pradesh. The planning and designing of the action plan has been completed through a feasibility assessment.

5. Tasks for the assignment

In this context, the selected agency/consortium of agencies is expected to carry out following tasks:

Task I: Implementation as per plan of action

- Orientation workshop with identified government departments and other relevant institutions before initiating the implementation and creating awareness about the project activities in the region
- Coordination and Implementation: Coordinating and implementing activities over a period of 18 months as per the plan of action. The detailed project information with activities that need to be implemented by mobilizing funds from existing government schemes is given in the annexure 1.
- Monitoring: Develop a detailed M&E plan for project duration as per the framework given by GIZ. Regular data collection and monitoring of the activities and submission of bi-annual reports to state government and GIZ. Assess qualitative and quantitative impacts of interventions (economic, environment and social), positive – negative, expected, unexpected.

Task II: Establish Convergence

- Coordination and liaising with state line departments and local government institutions to identify and provide continued support to successful interventions of the project with existing and new beneficiaries.
- Establish entry points or convergence with existing projects/ programmes under district level plans or state schemes to implement and up-scale the demonstration activities
- Advocacy on the necessity and impacts of project activities in the region with different government official including panchayat members, officers from village, block and district level and officials from other government bodies working at local level. This can be done through meetings, joint field visits or workshop.

Task II: Capacity building and knowledge management

- Training workshops for district, block and Panchayat level officials on integrating CCA and implementing CCA measures
- Identification and documentation of successful strategies for experience sharing through different forums
- Assess impacts in both qualitative and quantitative terms of interventions that have been implemented for 18 months and draw recommendations on good practices of adaptation with resources required for each intervention

- Identify successful adaptation options and additionally requirements for which additional funds would be required targeting the national and international finance for adaptation

6.0 Deliverables

The consultant will undertake activities with the following deliverable/output:

No.	Deliverables	Time Line
1	Inception report, detailed work plan along with M&E plan	In 15 days from the date of signing the contract (Nov 2017)
2	Regular technical and financial reports as per an agreed template during the implementation phase	Quarterly
3	Report on the training programme(s)	Half yearly
4	Documentation of overall approach for implementation of CCA measures through village level plans and integrating into district planning process	Jan 2018
5	Report on the potential for scaling up through government planning process by leveraging on ongoing government schemes as well as national and international funds	March 2019

7.0 Duration of the Contract

Up to 270-person days over a period of 18 months.

Travel: travel budget to be determined as per the project information sheet given in annex

8.0 Place of assignment

Himachal Pradesh

9.0 Coordination and Supervision

The identified organization/ agency will work in coordination with GIZ; Department of Environment Science & Technology, Govt. of Himachal Pradesh, Bilaspur District Administration and under overall direction of the CCA-RAI Project Steering Committee.

10.0 Submission Requirements and qualification of the Experts

The organization/ agency is required to submit detailed technical and financial proposal comprising a profile that contains the current CVs and summary of relevant professional experiences of both—organizational as well as individual experts for:

- 2 water conservation/NRM Experts
- 1 climate change adaptation and rural development expert
- 1 Documentation and M&E expert
- 5 local and field level experts

The agency must have the following qualifications and experience:

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- **2 Lead experts (NRM/water conservation)**
  - Minimum 10 years of experience and technical expertise in the field of water conservation, agriculture, watershed management, climate change and socio-economic impact assessment of rural development projects. CV of at least two lead experts with Masters/Phd, detailing expertise in related areas should be included in the proposal.
- **1 Associate Experts (Climate Change Adaptation)**
  - Preferably 5 years of experience of working on climate change especially on climate adaptation issues with experience of climate proofing and CCA project development like proposal writing for National Adaptation Fund for Climate Change (NAFCC). CV of atleast one expert with Masters/Phd detailing expertise in related areas should be included.
  - Familiarity of State level plans and policies related to NRM including SAPCC especially in Himachal Pradesh is highly desirable

- **1 Associate Experts (rural development)**
  - At least 5 years of Experience and knowledge of Experience in working with local government bodies and district administration on rural development, agriculture and water sectors, mobilizing finance from government schemes. CV of one rural development expert with Masters in related subject to be included.

- **1 Associate Expert (impact evaluation and documentation**)
  - Atleast 5 years of experience in ground work including primary data collection, supporting implementation and M&E of projects, in natural resources management in the region (preferably Himachal Pradesh) and in providing consultancy services in rural development. CV of atleast one documentation experts with Masters to be included.

- The agency should have proven ability to mobilize resources and support from various like Departments both at the State level and at the district level as well as mobilizing community support.
- Excellent reporting, writing and presentation skills
- Highly qualified professional staff with proven track of timely submission of the deliverables and reports

Annexure 1: Project Information Note

A. General information

General information on the project	
Project Title	Watershed Programme in rain-fed agriculture dependent communities in drought prone area to reduce vulnerability and enhance resilience in District Bilaspur
Sector	Water
Location	Kandrour village in District Bilaspur, Himachal Pradesh
Adaptation strategy	• Kandrour is a drought prone area which is mainly dependent on rainfed agriculture. Lack of water resources for irrigation and agriculture purposes make small and marginal farmers vulnerable to dry spell (due to climate change). Hence, there is a need of climate change adaptation measures in water sector to reduce farmers' climate related sensitivity and increase adaptive capacity. This will reduce environmental dependence, increase productivity and income of the farmers. • In order to recharge groundwater and increase water availability in the area, watershed activities including soil and water conservation, irrigation efficiency, agricultural & horticultural activities, soil nutrient management and capacity building have been proposed.
Modes of delivery	Demonstration Project

B. Technical details of the project

Technical details of the project	
Details about the technology used	• Water harvesting structures like rooftop rainwater harvesting structures, baoli, check dams, farm ponds, bunds etc. have been proposed. These structures utilize the existing strengths of the village i.e. land availability, manpower, resources etc. to improve and innovate technologies in Drip irrigation System, check dams, Retaining walls, Baolis with field channels, HYVs etc. • Drip Irrigation System involved with the technique of fertigation provides great scope for water conservation along with minimal fertilizer utilization, no surface water runoff, minimal evaporation and increased agricultural productivity (due to direct application of water and nutrients to the roots). • Baolis or Stepwells located in the Gram Panchayat Kandrour will channelize the harvested rainwater through kuhls to the farm fields for irrigation purposes apart from its domestic utilization.
Project / scheme background,	• District Bilapsur of Himachal Pradesh is an agriculture dependent district which is also a drought prone area. Lack of irrigation facilities in the area increases the

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Technical details of the project	
specifically identifying the gaps the project is intending to fill	vulnerability of people of Gram Panchayat Kandrour (Identified GP) and makes them susceptible to climate change and its extremities. • Various governmental schemes like PMKSY, RKVY, HTM, IHDM etc. have been functioning in the area to reduce the vulnerability and increase adaptive capacity of the farmers. In order to do so, irrigation infrastructure is strengthened to maximize the agricultural productivity. • The Project intends to fill in the gaps of water scarcity and adverse effects of climate change. It also aims at filling up any gaps in the existing schemes related to climate change.
Implementation methodology	• Allocated fund along with the convergent schemes' fund will be utilized to purchase technical equipment which will help in arranging land and manpower for the construction of water harvesting structures and other activities will be carried out simultaneously.
Legal framework for implementation	• The Project is in compliance with major domestic environmental law/policies/rules like (1) National Forest Policy, 1988 (2) The Environment Protection Act & Rules, 1986 (3) Forest (Conservation) Act 1980 & Rules, 1981. Further project activities are in compliance with State specific Panchayat Raj and Gram Swaraj Act (Local Governance), Land Tenancy Laws and Other Administrative orders of Sub-National Government. • Since the project interventions are localized and applicability of compliance requirement is minimal. However, the Watershed Community would be sensitized about legal provision under these laws/policies applicable at National/Sub-National level. • The Project does not affect the life and liberty of any individual or group neither does the project discriminate against any particular community or group or persons on grounds of Gender, Caste, Ethnicity, Ability or Birth. The Project upholds the fulfillment of the human rights of the villages and the target group that it seeks to work with. However, due care will be taken not to violate human rights during implementation stage. • The Project will also ensure that core labour rights are respected and labour laws that are applicable to any site that employs casual labour are followed. • The interventions are not expected to affect any species and habitats negatively but would result in positive impact on ecosystem. • The Project intervention will promote and enhance biodiversity. The Project will not be introducing any exotic or invasive species of crops/animals in the project area. • The Project activities are specially related to micro-irrigation installation, procurement of saplings of trees in plastic bag may generate may generate some amount of plastic waste. Although, quantities of such wastes are minimal, proper disposal mechanisms of these non-degradable wastes will be incorporated as part of project strategy. • Groundwater will be positively impacted due to better recharge catchment area of the watershed due to catchment area treatment. No adverse impact on groundwater will be visualized. • Project is not having any negative impact on public health.

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Technical details of the project	
	• Most of the project interventions such as soil and water conservation measures, planting of trees etc. are aimed at improving crop coverage area will in turn is expected to protect the land from further soil erosion. • Any permission related to the execution of project such as construction or plantation site will be obtained from the authorized authority legally.
Management capacity to undertake the project	• Block level officials under Block Development Office will be the key management personnel. They have appropriate expertise in the field as they are well acquainted with officials of different departments like Agriculture, Watershed, Horticulture etc. which exist in the same office area (leading to better coordination) and they have been dealing with similar kind of projects for a long period of time. Key personnel are also well accepted by the local people and acquainted with local language and culture. They also bridge the gap between District and Panchayat.
Project beneficiaries	• Inhabitants of Kandrour village mainly poor, small and marginal farmers affected by drought in District Bilaspur, Himachal Pradesh.

- **C. Transformational potential of the project**

Transformational potential	
Project leading to regional / sectoral transformation	Watershed Development Project involving construction of water harvesting structures, capacity building, awareness generation, agricultural activities promotion etc. will sustainably develop water resources and agriculture sector in Kandrour of Bilaspur District. The blend of all the activities listed under the project with minimal environmental repercussions will innovatively increase climate resilience in the Project area.
Potential for scaling up	The Project can be implemented at a higher level i.e. block level and district level by its integration in District Plan. The Project can also be replicated in areas with similar climate related issues.
Expected results in terms of scope of impacts and potential for transformative changes	The biggest up scaling platform at the level of Government of India is the Pradhan Mantri Krishi Sinchayi Yojna (PMKSY). This programme works under similar guidelines and thus will be the most plausible next step for up scaling as may be seen from there the community based institutions will be empowered taking forward the benefits achieved during the project period in a sustainable manner.
Knowledge sharing with key stakeholders	Capacity building at ground level through training, exposure visits and formation of committees and groups which will share knowledge throughout throughout the project.
Identification of partners for capacity building	• Lack of agricultural skills and knowledge which will be addressed through involvement of institutions and experts. • Improved collaboration and connection between citizens and decision-makers at watershed scale. • Capacity building and awareness is generated currently through various governmental schemes and programmes like PMKSY, IHDP, HTM, RKVY etc.

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- **D. Timelines and activity wise work plan**

Timelines of the project	
Project start date	October 2017
Tentative project end date	March 2019

- **F. Sustainable development potential**

Following aspects will be considered for rating the performance of a scheme / programme: Economic well-being, social well-being, environmental well-being and technological well-being.

Co-benefits Matrix		
This section describes how the actions contribute to social, economic, technological, environmental sustainability and other co-benefits benefits.		
Economic sustainability	Direct/ indirect financial benefit for the local and/or regional economy	Risk of failure of some of the crops will reduce and productivity will be enhanced thus increased income. More income will result in more savings.
		Economic improvement through income generation for local communities with involvement of SHGs, CIGs and other committees
		Overall income will increase thus reducing poverty
	Local/ regional jobs generated directly/ indirectly	Economic improvements through direct job creation of daily wage laborers(MGNREGA) in the conceptualization phase
		Economic improvements through job creation in local vendor markets
	Investment in local/ regional infrastructure	Local market linkage will improve and more services will be readily available
Economic KPIs	**Baseline Scenario KPIs**	**After Project Implementation Scenario KPIs**
	MGNREGA village vise Employment, ward wise economic status and Existing Irrigation Infrastructure	Employment status (mainly MGNREGA), ward wise economic status and irrigation infrastructure will be monitored during and post the project implementation.
Environmental	Improvement or	Improvement of soil fertility and water retention ,capacity, Decrease in Soil Erosion and Water conservation through Integrated Nutrient

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Co-benefits Matrix		
sustainability	protection of natural resources	Management Programme, Vermicomposting and water harvesting measures
	Reduction in noise, odors, dust or pollutants	Efficient and Sustainable use of water resources and soil including Plantation will reduce gaseous emissions, effluents and waste production in the area.
	Promotion of climate change adaptation strategies	Climate related adaptation strategies adopted in water sector in identified district in Himachal Pradesh will be promoted.
Environmental KPIs	**Baseline Scenario KPIs**	**After Project Implementation Scenario KPIs**
	Agriculture (Area, Production & Yield), Irrigation infrastructure, forest produce.	Agricultural production, Irrigation infrastructure and forest produce will be monitored during & post implementation.
Social Sustainability	Labour conditions and / or human rights	Improvement in the working and/or living conditions of skilled/ unskilled labor in Kandrour through capacity building program and job creation.
	Health and safety	Improvements to health, safety and welfare of local people indirectly through awareness and reduction in exposure to factors impacting health and safety for example water borne diseases.
	Poverty alleviation	Training to unskilled laborers will increase skill power and improve their income alleviating them from poverty.
	Promotion of Education	Technology, knowledge and skill for management of project would be transferred to community groups.
	Empowerment	Involvement of women in committees, groups and planning of project will empower women of the area.
Social KPIs	**Baseline Scenario KPIs**	**After Project Implementation Scenario KPIs**
	Worker population, women cultivators and agricultural laborers	Worker population and involvement of women cultivators and agricultural laborers will be monitored during & post implementation.
Technological sustainability	Development/ diffusion of technology	Technologies like drip irrigation system along with fertigation and water harvesting structures would require technology diffusion that would increase financial output. The net value of agricultural production will increase which will generate sufficient income to meet operating payments, debt commitments and, where applicable, to allow for growth, while maintaining service levels.

Co-benefits Matrix		
Technological KPIs	**Baseline Scenario KPIs**	**After Project Implementation Scenario KPIs**
	Existing technology involved in the water harvesting structures	Technology intervention during and post implementation.

- **G. Risks identified**

Describe relevant operational, financial and socio-economic risks of implementing the schemes and rate them as per severity. For each of the risks identified, provide a description of the risk mitigation plan

Risk	High	Medium	Low
Unforeseen events that affect the crops like extreme weather (Drought) which could not be forecasted	√		
Adequacy of funding support to the suggested additional measures		√	
Lack of coordination and consultation among project partners			√
Implementation delays			√
Lack of adequate human capital and skills at implementers level			√

Mitigation Measure(s)
1. Risk mapping within the project boundaries using various Climate scenarios to cover all contingencies. 2. Expected funding from Adaptation Fund Board and other convergence schemes would meet the requirement. 3. Information and Knowledge Management and periodic stakeholder interaction and feedback mechanism. The proposed PMU will act as connecting hub to coordinate with the partners. 4. Intensive monitoring mechanism and midterm evaluation missions. 5. Sensitization and Capacity Building at various levels of implementation.

- **H. Monitoring & Evaluation of project**

Key performance indicators

Appropriate performance indicators for the review of the selected project. These indicators should be reviewed periodically in order to support the continuous improvement of the project's impact, effectiveness, and operational performance.

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Indicator	Frequency of monitoring	Type of monitoring
Irrigation Infrastructure	Quarterly	Field Survey and Site Inspection
Agricultural Production	After 12th and 18th month	Impact Evaluation
Farmers' income	After 18th Month	Public expenditure Tracking Surveys
Awareness Index	After 18th Month	Participatory method
Cost Effectiveness	After 18th Month	Cost Benefit Analysis

Monitoring & Evaluation

Watershed Programme in rainfed agriculture dependent communities in drought prone area to reduce vulnerability and enhance resilience in District Bilaspur		
Project Objective	• To improve climate resilience and build adaptive capacities in water sector due to climate change in a Gram Panchayat of Bilaspur district. • Socially agri-horticulture provides off season employment and income to the farm and family and reduces the vulnerability of poor and enhances their nutritional security. The necessary labour for Farm Ponds, Baoli, Check Dams and other structures will be from location itself which will provide employment to people in the village and nearby areas. • Economically, Drip Irrigation will reduce the cost of production as labour for weed control and reduce water consumption. Cropping Practices like Mixed Cropping will produce a greater yield by enhancing the soil health. Through Fertigation, nutrient use efficiency is increased, cost on fertilizer is reduced and yield of most of the crops is increased. • Environmentally, Plantation of trees and plants in slope areas will create favorable micro climate for the crops in addition to minimizing soil erosion and runoff. Production and use of Organic manures like vermin-compost reduces high cost chemical fertilizer. • By creation of community based organizations such as village, watershed committee (VWC), SHG, User groups oriented towards climate change adaptation scenario.	
Expected outcomes from the project	Improvement of soil and water regime,Improved capacity of small and marginal farmers (including women) and local governments to respond to drought and soil degradation, enhanced crop productivity, increased irrigation efficiency, improvement in climate resilient system especially in water sector, increased livelihood security, reduced climate change vulnerability and awareness.	
Implementation schedule	**Activity**	**Start & end time/ Schedule**
	Baseline (ex-ante)	October 2017-February 2018
	FPO planning and monitoring	October 2017-February 2018
	Concurrent Monitoring	Quarter Year

	Mid Term Assessment	9th Month (June 2018)
	Ex post assessment	After Final month
Monitoring methodology	Performance Indicators will be used to measure inputs, outputs, outcomes and impacts of development interventions, They will be used for setting targets and measuring progress towards them. Rapid Appraisal Method Participatory Methods will be used to involve stake-holders views to understand the progress of project over time.	