



## 1. Project Data

### Project ID

P132623

### Project Name

IN: Climate Change &amp; Livelihoods

### Country

India

### Practice Area(Lead)

Agriculture and Food

### L/C/TF Number(s)

TF-18700

### Closing Date (Original)

30-Jun-2018

### Total Project Cost (USD)

7,181,721.71

### Bank Approval Date

09-Dec-2014

### Closing Date (Actual)

31-Dec-2019

### IBRD/IDA (USD)

### Grants (USD)

Original Commitment

8,000,000.00

8,000,000.00

Revised Commitment

7,181,721.71

7,181,721.71

Actual

7,181,721.71

7,181,721.71

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## 2. Project Objectives and Components

### a. Objectives

The Project Development Objective (PDO) as articulated in the Project Appraisal Document (PAD, paragraph 28) was identical to one stated in the Grant Agreement (GA, page 4) and aimed to:

***"improve adaptive capacity of the rural poor engaged in farm-based livelihoods to cope with climate variability and change."***



The project will be implemented in the states of Bihar and Madhya Pradesh.

**b. Were the project objectives/key associated outcome targets revised during implementation?**

Yes

**Did the Board approve the revised objectives/key associated outcome targets?**

No

**c. Will a split evaluation be undertaken?**

No

**d. Components**

The PDO was supported by the following three components:

**1. Planning, Service Provision and Implementation of Climate Change Adaptation (appraisal cost: US\$6.20 million, actual cost: US\$5.21 million).** This component aimed to support risk assessment, planning, service provision and implementation of climate adaptation interventions. The key activities included: (i) community-led risk assessment and participatory planning of climate adaptation interventions; (ii) provision of strategic climate change adaptation services through partnerships with resource institutions; and (iii) implementation of climate adaptation interventions in agriculture by community institutions (self-help groups/federations) utilizing the Community Climate Adaptation Grant Mechanism.

**2. Scaling and Mainstreaming Community Based Climate Adaptation (appraisal cost: US\$1.48 million, actual cost: US\$1.32 million).** This component aimed to enable support and build capacity for the implementation of climate adaptation interventions, and to develop the strategy for scaling up. Key activities include: (i) capacity building of the National Rural Livelihoods Mission (NRLM) national and state staff and creation of a cadre of community resource persons (CRPs); (ii) building knowledge support system for climate adaptation including policy inputs for scaling-up of the community-based climate adaptation approach within the NRLM. The key activities to be financed were: training of NRLM national and state staff in project and non-project areas, training of CRPs from non-project areas of NRLM; development and publication of knowledge products including adaptation planning tool and policy briefs; website and annual meetings of consortium of resource organizations; and policy seminar.

**3. Project Management and Impact Evaluation (appraisal cost: US\$0.32 million, actual cost: US\$0.25 million).** The project would support component 4 of the National Rural Livelihoods Project (NRLP) by augmenting the management units within the NRLM and State Rural Livelihoods Mission (SRLM) institutional structure to enable coordinated functioning and efficient implementation of the project. The activities included: (i) establishment of climate adaptation units staffed with full-time professionals within the NRLM and the SRLMs of the participating states; (ii) establishment of a monitoring system and evaluation arrangements (baseline, mid-term and end-of-term); (iii) fiduciary, environmental and social safeguards management.

**Revised components.** At the 2018 restructuring the project was scaled-up to cover "350 additional villages in the same geographies (same states and same districts, Restructuring Paper)." However, the ICR



(paragraph 17) stated that "a primary change, reflected in the amended legal agreement, was the scale-up of successful interventions to 487 additional "scale-up" villages." This number increased again to 593 scale-up villages according to the ICR (paragraph 27). There was no explanation provided in the ICR on the reason behind these differences. The project components remained the same with no changes in activities.

#### e. Comments on Project Cost, Financing, Borrower Contribution, and Dates

**Project Cost.** The total project cost was estimated at US\$10.17 million. The actual cost according to the ICR (page 2) was US\$11.37 million. The project had surplus funds due to increasing the state contribution from 25% to 40% combined with the US Dollar appreciating from an exchange rate of INR 60 to INR 62, this resulted in US\$2.5 million extra funds becoming available.

**Financing.** The project was financed through a US\$8.0 million Grant from the Global Environment Fund's (GEF) Special Climate Change Fund (SCCF). The actual amount disbursed was US\$7.18 million or about 90% of the appraisal amount.

**Borrower Contribution.** The Borrower was expected to contribute US\$2.17 million of counterpart funding. The actual amount contributed by the Borrower was US\$4.19 million (ICR, page 2). The increase of borrower contribution was a result of a change in policy by the Government of India which increased the mandatory state contribution to 40% rather than 25%.

**Dates.** The project was approved on December 9, 2014 and became effective two months later on February 15, 2015. The Mid-Term Review (MTR) was conducted on October 17, 2016. The PAD did not include a specific date for the MTR. The project closed on December 31, 2019 which was 18 months later compared to the original closing date on June 30, 2018. According to the ICR (paragraph 21) the 18 months extension was necessary to 18 months to "use the extra funds to strengthen the work in the original villages, to scale up to newer villages, allow for better convergence, prepare training materials for future scale-up, and to assess the results and learning for dissemination." The project was restructured once (Level 2) on June 14, 2018, when the amount disbursed was US\$4.75 million, in order to extend the loan closing date to December 31, 2019 and to reallocate funds between the disbursement categories.

### 3. Relevance of Objectives

#### Rationale

**Context at Appraisal.** India has seen a 0.4 C increase in mean surface air temperature over the past century (1901–2000) and climate change projections up to the year 2100 indicate an overall 2–4 C rise in temperature. Risk factors in addition to temperature increase include



changes in the monsoon pattern, increased intensity of extreme weather events including flooding and tropical cyclones, extremes of heat, and sea-level rise. The project was expected to bring a comprehensive risk management approach to livelihood planning and implementation in the National Rural Livelihoods Mission/National Rural Livelihoods Project, so that climate change impacts on livelihoods could be mitigated.

At appraisal, objectives were in line with the principles and adaptation priorities articulated in India's National Action Plan on Climate Change (NAPCC) and in the state action plans. These call for mainstreaming climate change considerations in a large national program and raising the policy dialogue on these issues, particularly in respect of the rural development and agriculture sectors. The implementation of the NAPCC is an integral part of India's Twelfth Five Year Plan (2012–17) which recognizes that there is an urgent need for developing agro-climatic zone-specific technologies to enable rural communities to withstand the effects of climate change. Objectives were also in line with the Bank's goal of reducing poverty and increasing shared prosperity, stated in the Country Partnership Strategy for India (2013–17). The Strategy states climate-resilient agriculture as an operational business line under Outcome 2.4 on increased agricultural productivity. Objectives were also in line with Goal 7 of the United Nations (UN) Millennium Development Goals, which aimed to ensure environmental sustainability.

At completion, objectives continued to be in line with India's NAPCC and its specific initiatives, namely, the National Initiative on Climate Resilient Agriculture (NICRA) and National Mission for Sustainable Agriculture (NMSA), with the objective to make agriculture productive and resilient, conserve national resources and adopt soil health management practices. Objectives were also in line with the Pradhan Mantri Krishi Sinchayee Yojana program which aimed to increase the farm area under irrigation and improve water use efficiency. Objectives were also in line with the state action plans of Bihar and Madhya Pradesh on climate change, which focused on agriculture, water resources and rural development. Objectives were also in line with the Bank's Country Partnership Framework (CPF, FY2018–FY22) which emphasized climate resilient farming. The CPF called for supporting the Government of India and the States in capacity building to promote climate smart agriculture.

The statement of objectives was clear regarding the target beneficiaries (rural poor engaged in farm-based livelihoods), but could have benefited from more clarification on the meaning of "*adaptive capacity*" and "*to cope with climate variability and change*". The absence of a clear definition for climate resilience made assessing the PDO challenging. Also, the statement of objectives lacked a connection to higher level objectives namely, reducing yield and income loss associated with adverse weather conditions and mainstreaming climate change considerations in a large national program. Overall, the project could have benefited from a simpler PDO statement that could be assessed without the need to redefine the PDO during implementation.

Based on the above-mentioned assessment, Relevance of Objectives is rated Substantial. This rating reflects the lack of connection to higher level objectives and some vagueness related to the statement of objectives.

## Rating



Substantial

## 4. Achievement of Objectives (Efficacy)

### OBJECTIVE 1

#### Objective

To improve adaptive capacity of the rural poor engaged in farm-based livelihoods to cope with climate variability and change.

#### Rationale

**Theory of Change (ToC).** To achieve the stated objective, the project would increase awareness and understanding among farmers of the impact of climate risks on their livelihoods through providing technical assistance for community sensitization, training and participatory planning. Also, the project would increase awareness about climate change adaptation investments through technical assistance for partnerships and facilitation of greater consistency across government programs. To increase adoption of climate change adaptation investments, the project would provide loans to self help groups and village organizations to finance climate change adaptation interventions at the household and community levels. To improve integration of climate change adaptation interventions at the national level, the project would provide technical assistance for knowledge products (community adaptation planning tool and manual, CRP training curriculum, web-based inventory of climate adaptation actions, audio visuals -PAD, paragraph 34) and capacity building of national and state programs. These activities were expected to improve the adaptive capacity of farmers and improve their ability to manage climate variability and on-going climate change. This would contribute to the higher level outcome of reducing yield and income loss associated with adverse weather conditions.

The achievement of the PDO was underpinned by eight key assumptions (ICR, page 7). These relate to farmers and communities adopting climate change adaptation investments and the Government mainstreaming successful interventions by project completion.

Overall, the ToC included activities that were directly linked to the PDO and the key assumptions were logical.

#### Outputs

The outputs below were reported by the ICR (Annex 1). Targets are provided where available.

#### 1. Improved adaptive capacity of the rural poor engaged in farm livelihoods to cope with climate variability and change.

- 32,642 self help group (SHG) members (Bihar 15,754, Madhya Pradesh 16,888) were trained in adaptation related technologies.



- 1,660 (Bihar 810, Madhya Pradesh 850) community cadre/Community Resource Persons trained in adaptation related technologies. The training was classified into inputs and production practices, knowledge and technology, ecological system support and financial services. Training was conducted by individual experts, resource institutions and agriculture universities.
- 974 (Bihar 360, Madhya Pradesh 614) staff members were trained in adaptation related technologies.
- 19,376 (Bihar 9,958, Madhya Pradesh 9,418) community members and community cadre were part of exposure visits.
- 298 (Bihar :148, Madhya Pradesh: 150) Community Resource Persons and project staff received certified training in Climate Change Adaptation.
- 3 (Bihar 1, Madhya Pradesh 1, and one seminar was organized in Hyderabad) seminars organized for sharing insights/lessons for policy making with government, donors, NGOs
- 16 knowledge products for dissemination of knowledge and experience were generated by the project.

## **2. Poor farmer households adopt climate resilience measures in their livelihoods to cope with climate variability and change.**

- 97% of the project farmers belonged to a poor or disadvantaged community, pointing to the success of the project's outreach.
- 793 (Bihar 383, Madhya Pradesh 410, target: 687) villages, 8 (Bihar 4, Madhya Pradesh 4) blocks, 4 (Bihar 2, Madhya Pradesh 2) districts were covered under the project.
- 8,706 (Bihar 4,861, Madhya Pradesh 3,845) Self-Help Groups (SHGs) and 32,120 (Bihar 15,320, Madhya Pradesh 16,800) farmers were covered by the project.
- 8,119 (Bihar 5,034, Madhya Pradesh 3,085) farmers were covered by soil testing services. However, it was not clear in the ICR whether all benefited from the service.
- 200 (Bihar 100, Madhya Pradesh 100) automated weather stations and automated rain gauges were established. But it was not clear if all stations were operational.
- 8,704 (Bihar 4,216, Madhya Pradesh 4,488) farmers were covered through weather based agro advisory services
- 605 (Bihar 361, Madhya Pradesh 244) Custom Hiring Centers (CHCs) were established. CHCs were aligned with the Ministry of Agriculture's sub-mission on agricultural mechanization and used for renting farm machinery and tools, plant protection tools.
- 13,884 (Bihar 5,884, Madhya Pradesh 8,000) farmers who accessed a Custom Hiring Center or Village Tool Bank.
- 113 (Bihar 73, Madhya Pradesh 40) solar irrigation systems installed. The ICR did not clarify how many were fully operational.
- 793 (Bihar 383, Madhya Pradesh 410) Village Organizations (VOs) developed Climate Change Adaptation Plans (CCAP) and were provided CCAP grants. The average amount of CCAP grant provided per VO was INR 410,652, and the average amount of loans provided (for agriculture activities) per VO was: INR 203,297.
- 175,776 (Bihar 163,883, Madhya Pradesh 11,893) households received technical or financial benefits through convergence from other government or non-government sources.
- INR 466,125,575 (Bihar INR 196,336,393, Madhya Pradesh INR 269,789,182) for which convergence funds were obtained. This amount benefited 75,776 (Bihar 163,883, Madhya Pradesh 11,893) beneficiaries.





- 30 (Bihar 18, Madhya Pradesh 12) schemes/agencies with which convergence with Government programs was undertaken.
- 647 (82%) (Bihar 317, Madhya Pradesh 330) (and %) of VOs benefited from convergence funding.
- INR 720,441 (Bihar INR 619,358, Madhya Pradesh INR 817,543) was the average amount of convergence funds received per VO.

## Outcome

Assessing the outcome of this project is challenging given the lack of a clear methodology to define resilience in terms of adoption of key practices or to measure the extent of resilience or recovery after an adverse weather event. Also, with M&E weaknesses and the lack of control groups, an accurate assessment is problematic. The project did train farmers and staff to adopt climate resilient practices. Also, Communities were partnered with technical support agencies to obtain climate adaptation solutions: Against a target of eight, 25 resource agencies were engaged by the Ministry of Rural Development and the two State Rural Livelihoods Missions in addition to individual experts. The project also provided financial support and facilitated convergence with government programs for farmers to have financial capacity to implement climate adaptation measures. Against a target of 30% of Village Organizations leveraging financial support from convergence, achievement was 76% among the 200 original villages (152 received financial support from at least one other government program through convergence). The project also supported the creation of infrastructure (e.g. micro-irrigation schemes, Custom Hiring Centers, and soil testing laboratories) run by community institutions to provide technological and ecological services to enable adoption by farmers.

The PDO was assessed through the following two elements:

**Improved adaptive capacity of the rural poor engaged in farm livelihoods to cope with climate variability and change.** According to the ICR (paragraph 20) the definition of improved adaptive capacity was that a farmer should "(i) have demonstrated knowledge of climatic risks, their impacts on livelihoods and the interventions that would help in adaptation (measured through a test in the end-term survey); (ii) be trained in adaptation interventions and/or participated in Climate Change Adaptation Plan (CCAP) meetings; and (iii) have adopted and/or be willing to adopt at least two interventions in the future." The project had an outreach of 32,12031 farmer households in 793 villages (compared to 687 villages planned). This included 8,650 from the 200 original villages and 23,470 farmer households in the 593 scale-up villages. Based on a survey (in late 2019) of 1,583 participating farmer households in the original villages and 120 households in the scale-up villages for a total of 1,703 farmer respondents, 50.7% of the target farmers demonstrated strengthened awareness and ownership of adaptation and climate change risk reduction processes/measures compared to a target of 50% (which translates to 16,282 of the total outreach to 32,120 farmers). However, the sample size of the survey respondents in the scale-up villages was only 120 and with a notably high margin of error at 13%.

**Poor rural farmers adopted measures to cope with climate variability and change.** Assessment of the achievement of this element of the PDO is challenging given the lack of a clear definition on farmer's climate resilience and concerns on the data used to reach the reported results in the ICR. Due to the lack of a standardized definition of farmer's climate resilience, a project definition was used which defined coping with climate variability and change as a farmer adopting any three of the following CCA practices: "(i) implemented



soil management improvements; (ii) used weather forecast-based advisories to improve scheduling of production practices; (iii) used climate resilient seeds; (iv) used improved water conservation, harvesting and allied practices; (v) undertook new livelihood or crop diversification; (vi) used tools from the project's CHCs, (vii) borrowed loans from the Climate Change Adaptation Fund; (viii) used better livestock management, inputs and market linkages (ICR, paragraph 38)." According to the ICR (paragraph 38) when the full project definition was applied 50.1% of the surveyed farmers demonstrated enhanced livelihood resilience against the target of 50%. 19,202 farmer households (target: 12,300) in 793 original and scale-up villages, adopted a core set of climate resilient agricultural practices out of the total project outreach of 32,120 farmer households. As mentioned above the sample size for the scale up villages was 120 sample size with a relatively high margin of error. Another concern was that the willingness of farmers to continue applying the selected interventions beyond the project was below 50% for all activities except water conservation activities in Bihar which reached about 55% (ICR, Figure 1). This raises concern on the sustainability of the project activities which are directly related to the ability of farmers to cope with climate variability and change.

Based on the above-mentioned assessment efficacy of achieving the PDO is rated Substantial despite concerns on the quality of the M&E data and the lack of a clear definition on farmer's climate resilience. In a further communication, the project team explained that efficacy of the PDO was assessed based "on the achievements of PDO outcomes measured by the endline survey which was done well by a competent team of academics from the Institute of Rural Management, Anand. The supporting data for these PDO achievements is from aggregated physical progress reported by the project which is expected to be rigorously monitored due to financial implications for the government. There is no evidence from the endline survey to suggest that these project data are incorrect."

**Rating**  
Substantial

## OVERALL EFFICACY

### Rationale

The project achieved the target values of its two PDO outcomes, and individually exceeded targets on several intermediate indicators. However, there are concerns regarding the quality of M&E data. Also, the absence of a standardized definition of climate resilience makes it difficult to assess the impact of the project on this aspect. That said, in further communication, the project team explained that efficacy of the PDO was assessed based "on the achievements of PDO outcomes measured by the endline survey which was done well by a competent team of academics from the Institute of Rural Management, Anand. The supporting data for these PDO achievements is from aggregated physical progress reported by the project which is expected to be rigorously monitored due to financial implications for the government. There is no evidence from the endline survey to suggest that these project data are incorrect."





## Overall Efficacy Rating

Substantial

## 5. Efficiency

### Economic and Financial Efficiency

#### *ex ante*

- There was no economic and financial analysis undertaken at appraisal for two main reasons: first, predictions of future climate scenarios is uncertain, especially at the local level, which made estimating the expected benefits and expected losses difficult and time consuming; Second, the project featured a demand driven adaptation plan which made it difficult to predict the exact adaptation activities that will be undertaken in each village. (PAD, paragraph 59).
- The PAD (paragraph 60) cited some available evidence on the economic impact of climate adaptation. This included an IEG study of 22 Bank projects, initiated between 1998 and 2011 on adaptation to climate variability and change. The study found that projects with a presumed positive impact on climate adaptation, such as those focusing on watershed management and sustainable land and water management had a high economic return, with a median economic rate of return of 20% and crop yield increments between 20% and 70%.

#### *ex post*

- There was no ex-post cost–benefit analysis conducted due to technical difficulties (ICR, paragraph 43).
- An ideal economic analysis of a CCA project would compare the productivity and incomes of farmers who adopt adaptation interventions with those who do not adopt adaptations despite normal weather and adverse weather events over the years, during and beyond the project. Such an analysis is technically difficult to undertake since it requires data on adverse weather events and farmer outcomes during the project and projections beyond the project period.
- Cost-effectiveness was quantified by computing the total project cost per beneficiary household (with and without convergence funds) and comparing it to the estimated value at appraisal and with past projects of similar budget and scale. The cost per beneficiary at completion was US\$354 without convergence funds. This compared favorably with the cost per beneficiary estimated at appraisal of US\$1,030. The lower costs were due to the higher outreach achieved (32,120 farmers) compared to planned (12,300 farmers). It was also lower than the average cost per beneficiary of comparison projects of US\$626.
- At project closure, the total amount spent by the project was US\$11.37 million, which was 111.8% of the appraisal estimates. This was partially offset by the exchange rate gains of 8.5% over the project's life. While the project spent more than the appraisal estimates, it was not able to utilize the grant fully due to lower expenditure at the center level through the Ministry of Rural Development. This reduced expenditure stemmed from initial implementation delays.

### Administrative and Institutional Efficiency



The project closed on December 31, 2019 which was 18 months later compared to the original closing date on June 30, 2018. The 1.5 year extension was needed to "use the extra funds to strengthen the work in the original villages, to scale up to newer villages, allow for better convergence, prepare training materials for future scale-up, and to assess the results and learning for dissemination (ICR, paragraph 21)." The project experienced an extended preparation period and experienced initial implementation delays during the first two years after effectiveness. . Delays stemmed from: a slow hiring process of the state project teams and the Lead Technical Support Agency, delays in fund releases to the states, and the need for more time to educate the community about climate risks and promote the project's objectives before entrusting them with the grants (ICR, paragraph 60). The final disbursement rate was 90% of the appraisal amount. This was in part due to delayed fund programming at the center and over-estimation of expenditures.

Overall, efficiency is rated Modest. This rating reflects the absence of an ex-post cost-benefit analysis and significant implementation delays.

## Efficiency Rating

Modest

a. If available, enter the Economic Rate of Return (ERR) and/or Financial Rate of Return (FRR) at appraisal and the re-estimated value at evaluation:

	Rate Available?	Point value (%)	*Coverage/Scope (%)
Appraisal		0	0 <input type="checkbox"/> Not Applicable
ICR Estimate		0	0 <input type="checkbox"/> Not Applicable

\* Refers to percent of total project cost for which ERR/FRR was calculated.

## 6. Outcome

Relevance of Objectives is rated Substantial. Overall Efficacy is rated Substantial despite concern on the quality of M&E. The project achieved the target values of its two PDO outcomes, and individually exceeded targets on several intermediate indicators. Efficiency was rated Modest due to the absence of an ex-post cost-benefit analysis and significant implementation delays.

Based on a Substantial rating for both Relevance of Objectives and Efficacy, and a Modest Rating for Efficiency, Outcome is rated Moderately Satisfactory.

### a. Outcome Rating

Moderately Satisfactory



## 7. Risk to Development Outcome

The ICR (paragraph 74) discussed the following five risks that could potentially impact the project's development outcome:

1. Farmers forget climate resilient production practices or need further support. While the occurrence of this risk is expected to be low, its impact on the development outcome is high if it materialized.
2. Farmers are unwilling to continue with the recommended production practices. About 26% to 55% of the adoptees of the various project interventions said they would continue that practice after the project ended. The impact on the development outcome is expected to be moderate.
3. Farmers are unable to continue the recommended practices. The occurrence of this risk was expected to be low, and if it materialized the impact on the development outcome would be moderate.
4. Weather forecasting services stop. The occurrence for weather service is high because it is a subscription-based service. If it materialized, the ICR rated the impact on the development outcome as moderate. However, this Review rates it as high because without weather forecast service the farmers would be subject to unanticipated weather events.
5. Overall lack of support and monitoring by staff and Community Resource Persons stop practices from continuing. The occurrence of this risk is medium and the impact on the development outcome is high.

## 8. Assessment of Bank Performance

### a. Quality-at-Entry

The National Rural Livelihoods Mission (NRLM) is a large-scale rural development program for poverty reduction and livelihoods enhancement implemented by the Ministry of Rural Development (MoRD). While NRLM sought to address adaptation deficit issues, it did not have a systematic approach to assess and address climate change risks or build long-term resilience. In this context, the Government of India sought the Special Climate Change Funds (SCCFs) through the Global Environment Facility (GEF) to implement this project to deal with adaptation gap and deficit issues. This was the first GEF project in India with the Ministry of Rural Development (as the implementing agency). The Bank took the lead in the preparation of the project since the Ministry of Rural Development was more focused on the Bank-funded National Rural Livelihoods project and had limited experience on climate resilience. The project had a relatively long preparation period from identification and clearance by the Bank and GEF in April 2012 to Board approval in December 2014, almost three years. Project design benefited from wide consultations and technical workshops with MoRD, State Rural Livelihoods Missions, technical experts, resource agencies and Non-Government Organizations. According to the ICR (paragraph 67), the project was strategically relevant and its design reflected adequate environmental and fiduciary safeguard arrangements. The project built on experiences from the Bank-supported livelihood projects in Andhra Pradesh, Bihar, Madhya Pradesh, Orissa, Rajasthan and Tamil Nadu. Notable lessons reflected in the project design included: attention to operation and maintenance of weather-based agro-advisory services



is needed to sustainably help farmers make climate smart decisions, adaptation interventions need to be targeted to particular groups and their characteristics, and adoption of technical solutions needs an enabling environment including incentives. Ten risks were identified at appraisal, all of which were rated moderate. Risk assessment was comprehensive and relevant mitigation measures were included. However, the ICR did not discuss the effectiveness of the mitigation measures. The ICR (paragraph 67) noted that despite three years of preparation, the readiness of the Government of India for implementation was low with delays in hiring the project staff. Finally, M&E had design weaknesses, notably the PDO1 and PDO2 indicators suffered from lack of clarity (see section 9 for more details).

Based on the above-mentioned assessment, Quality at Entry is rated Moderately Satisfactory. This rating reflects M&E design weaknesses and concerns on the readiness of the Government to implement the project.

### **Quality-at-Entry Rating**

Moderately Satisfactory

### **b. Quality of supervision**

The Bank supervised the project (including ICR preparation) with Bank-executed Special Climate Change Fund (SCCF) trust funds (50 weeks; US\$462,322) staying within the financial envelope provided by the GEF. The Bank supervision included 10 implementation support missions as well as a number of technical support missions (ICR, paragraph 70). The Bank support missions included a balanced skill-mix from procurement, financial management, environmental and social safeguards specialists, M&E, and technical experts. The project procurement benefited from the Bank-provided training and technical assistance. In the initial years of implementation, the Bank provided technical support, organized workshops, and trained district staff to guide the State Rural Livelihoods Missions (SRLMs) in designing interventions. The Bank team also worked with the Country on the timely restructuring of the project and addressed the slow disbursement of funds at the beginning of implementation. The ICR (paragraph 72) highlighted that the project received recognition in various local publications. Also, the Bank oversaw the transition arrangements to ensure sustainability of the project outcomes and facilitate potential scale-up in the future.

The Bank could have invested more time to improve readiness and avoid implementation delays during the first two years after effectiveness. The Bank also could have addressed the lack of clarity of the PDO indicators at an earlier stage during implementation. Also, scale-up plans could have benefited from more clarity.

Based on the above-mentioned assessment, the Quality of Supervision is rated Moderately Satisfactory. This rating reflecting reflects concerns on readiness for implementation and a delay in addressing M&E design weaknesses.

Overall, Bank Performance is rated Moderately Satisfactory.

### **Quality of Supervision Rating**



Moderately Satisfactory

### **Overall Bank Performance Rating**

Moderately Satisfactory

## **9. M&E Design, Implementation, & Utilization**

### **a. M&E Design**

The project appraisal document (PAD) did not include a Theory of Change (ToC) as it was not mandated at appraisal. Nonetheless, the ICR (page 7) included one which reflected the relation between the planned project activities, outputs, outcomes and long-term impacts. The achievement of the PDO was to be assessed through two PDO level indicators: 1. Poor farmer households have improved adaptive capacity to cope with climate variability and change which would be assessed through: at least 50% of the targeted households adopt livelihoods with enhanced climate resilience, and 2. Poor farmer households adopted adaptation measures to cope with climate variability and change, which would be assessed through: at least 50% of the targeted households demonstrate strengthened awareness and ownership of adaptation and climate risk reduction processes/measures. The baseline value of PDO indicators were set to zero. The ICR (paragraph 59) reported that there was a lack of clarity regarding the definitions of both PDO indicators because they were only defined in late August 2018. Also, the definition of climate resilience was not clear, and efforts to define a climate resilience index by engaging a mid-term evaluation agency in 2018 were not successful due to methodological complexity (ICR paragraph 59). The design lacked any methodologies to define resilience in terms of adoption of key practices or to measure the extent of resilience or recovery after an adverse weather event.

The Results Framework included seven intermediate outcome indicators to assess the different activities supported by the project. While these indicators were linked to the activities and had clear targets, baselines were all set to zero. Also, the definition of climate resilient agricultural practices was not clearly defined. Finally, it was not clear in the PAD who was in charge with the overall responsibility of M&E activities.

Overall, M&E design suffered from poorly defined PDO level indicators and included no clear methodology to assess climate resilience.

### **b. M&E Implementation**

The project lacked a digital Project Management Information System (PMIS), although it was mentioned in the PAD (paragraph 35). The two State Rural Livelihoods Missions (SRLMs) collected data aggregated at the village level. However, the ICR (paragraph 60) reported that "farmer level adoption data were difficult to collect" and "PDO indicator achievements reported in some ISRs (October 2018 and May 2019), were not accurate in comparison to the project end evaluation findings, since the project data were not accurate." Pre-project values were collected through the mid-term survey because a baseline survey was not conducted since the SRLM teams were not fully staffed. While a qualified agency was hired for the program-end evaluation as planned, spill-over effects from interventions from other projects compromised the control villages. This made a with–without comparison approach to be dropped from the evaluation, so that determining the levels of achievements in the absence of the project was not



possible. The end-line survey measured the absolute values of achievements related to the project recommended interventions. Also, the end-term evaluation relied on a relatively small sample of 120 farmers in the scale-up villages. According to the ICR (paragraph 59), the relatively smaller sample resulted in higher margins of error in measuring the two PDO-level indicator achievements. The ICR (paragraph 60) described the agency that carried out the Mid-term evaluation as having done a "mediocre job." At the 2018 restructuring the Bank brought in an expert to provide technical support and contracted an agency to design and implement the PMIS. However, the PMIS was never implemented. Attention to M&E improved in the last two years of implementation as the States became results oriented and focused on the key performance indicators (ICR, paragraph 62).

Overall, M&E implementation was weak and there are concerns on the quality of data collected.

### c. M&E Utilization

According to the ICR (paragraph 61) "the mediocre quality of the mid-term evaluation partly contributed to the results not being used for informing the implementation," and the "implemented Project Management Information System was used only for monitoring by the State Rural Livelihoods Missions, and not for learning and course correction."

Overall, M&E Quality is rated Modest. This rating reflects design weaknesses, implementation challenges and limited utilization.

### M&E Quality Rating

Modest

## 10. Other Issues

### a. Safeguards

The project was classified as environmental category B. The following safeguard policies were triggered at appraisal: Environmental Assessment (OP 4.01), Forests (OP 4.36), Natural Habitats (OP 4.04) and Pest Management (OP 4.09). The project activities were likely to contribute to environmental sustainability; individual activities might have had small-scale impacts or might be environmentally benign, without significant and/or irreversible impacts. Negative impacts due to poor management and improper planning could have included: soil erosion, poor water availability and quality, depletion of groundwater, decreasing fodder availability, among others. The project relied on the Environmental Management Framework (EMF) of the National Rural Livelihoods Project (NRLP) since it was anchored in its existing institutional set up. Overall, the project was environmentally benign and supported the improvement of the local environment through the reduction of chemical fertilizers and pesticides, organic farming, water harvesting and conservation, reduced air pollution through the use of solar pumps rather than diesel, and enhanced biodiversity and green cover (ICR, paragraph 63).





**Environmental safeguards compliance.** According to the ICR (paragraph 63) "the project complied satisfactorily with all the triggered safeguard policies." Specifically, chemical pesticides were excluded from crop advisories; no activities were implemented in forests or critical natural habitats; and drilling bore wells and tube wells for irrigation were subject to regulatory approval.

**Social Safeguards compliance.** During implementation, OP 4.10 on Indigenous Peoples was triggered. The project adopted and customized the National Rural Livelihoods project's Indigenous People's Framework that emphasized inclusion and alignment with the Bank's guidelines on assets creation and equity. Also, National Rural Livelihoods project's Grievance Redressal Mechanism (GRM) was used. Social measures taken included consultations, targeting, capacity building and inclusive Climate Change Adaptation committees. According to the ICR (paragraph 64) "the project complied satisfactorily with all the triggered safeguard policies."

## **b. Fiduciary Compliance**

**Financial Management (FM).** The project used the same FM Manual as used for the National Rural Livelihoods Project. The project accounts were maintained using an accounting software in the states and at the National Mission Management Unit. Setting up financial controls at the village organizations (VOs) was initially challenging, specifically setting up a uniform system for submission and monitoring of Utilization Certificates (UCs) for the VO funds. External audit at the National Mission Management Unit was done by the office of the Controller and Auditor General of India and at the State Rural Livelihoods Mission by private chartered accountants. While the audited reports were unqualified, they were often submitted with delay to the Bank. According to the ICR (paragraph 65) "financial management complied satisfactorily with Bank policies and guidelines."

**Procurement.** The project relied on the procurement staff and manuals of the National Rural Livelihoods project. There were delays in hiring state teams and the Lead Technical Support Agency. According to the ICR (paragraph 66) "all procurement complied satisfactorily with Bank policies and guidelines."

## **c. Unintended impacts (Positive or Negative)**

According to the ICR (paragraph 52): "The project's final achievement of 19,202 farmers who adopted a core set of climate resilience interventions was substantially more than the target of 12,300 set during restructuring. This was due to scaling up of selected interventions to more villages than planned in the post-restructuring phase."

## **d. Other**

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## 11. Ratings

Ratings	ICR	IEG	Reason for Disagreements/Comment
Outcome	Moderately Satisfactory	Moderately Satisfactory	
Bank Performance	Moderately Satisfactory	Moderately Satisfactory	
Quality of M&E	Modest	Modest	
Quality of ICR	---	Substantial	

## 12. Lessons

The ICR included six lessons. The following three lessons are emphasized with some adaptation of language:

- **M&E design for a climate-change related project needs to include a clear definition of resilience and a methodology to measure it in a standardized manner to adequately assess outcomes.** The project's experience demonstrated that despite the Bank's efforts, it was not easy to arrive at an appropriate methodology to define and measure a farmer's extent of climate resilience and the ideal target value for a project to aspire for. The methodologies to define resilience in terms of adoption of key practices or to measure the extent of resilience or recovery after an adverse weather event are not evident. Research efforts to define resilience and measure it in a standardized manner would help future projects in design, monitoring and project-end evaluation.
- **Post completion support is required for a climate-change related project to ensure sustainability of the project technologies with a focus on landless farmers.** Despite intensive and focused efforts in this pilot, farmers reported unwillingness to continue some practices beyond the project period. Further research is required to understand the reasons and to provide support in the future. Around a third of the farmers in this project were landless and able to practice only diversification as a resilience measure since they had not leased-in farm lands. Future climate resilience projects may consider including non-farm livelihoods, in particular to support landless farmers better and to provide more holistic resilience.
- **Weather forecasting through mobile technology combined with climate resilient practices are critical elements to improve the sustainability of livelihoods.** Weather forecasting through mobile phone applications enabled women farmers to adjust their farming schedule and better manage farming operations of their crops. This, combined with the application of climate resilient farming technologies improved the resilience of farming communities to sustain their livelihoods.

## 13. Assessment Recommended?



No

#### **14. Comments on Quality of ICR**

**Quality of Evidence.** The ICR acknowledged that M&E design had shortcomings and implementation was challenging. The survey sample for the scale-up villages was relatively small and had a high margin of error.

**Quality of Analysis.** The ICR provided clear linking between evidence and findings to the extent possible - given the M&E weaknesses. However, the lack of baseline data and control groups raises concern on the assessment of the project results.

**Lessons** were generally based on evidence and analysis, and reflected the project experience.

**Results Orientation.** The ICR included a good discussion on outcomes despite concerns on the accuracy of the M&E data.

**Internal Consistency.** Various parts of the ICR were internally consistent and logically linked and integrated.

**Consistency with guidelines.** The ICR used the available data to the extent possible to justify the assigned ratings. Discussion of outcomes was thorough, but the ex post efficiency analysis was deficient, for example it lacked a cost-benefit analysis.

**Conciseness.** The ICR was well written and provided thorough coverage of the implementation experience and candidly reported on shortcomings. There was enough clarity in the report's messaging. However, assessment of outcomes was difficult due to the absence of baseline data and control groups. The outputs in Annex 1 lacked targets, and there were different figures presented for the number of the scale-up villages. Gender could have benefited from more coverage given that the primary beneficiaries were women farmers.

Overall, the Quality of the ICR is rated Substantial despite some minor shortcomings.

##### **a. Quality of ICR Rating** Substantial