National Climate Action on Adaptation:

Monitoring, Evaluation and Learning Framework for Agricultural Sector

INDIA PHASE II

Supported by: ICAT
Developed for: UNOPS

Initiative for Climate Action Transparency - ICAT

Capacity Assessment Report for India

AUTHORS

Name: TERI Project Team

Affiliation: The Energy and Resources Institute

28th February, 2023

DISCLAIMER

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted, in any form or by any means, electronic, photocopying, recording or otherwise, for commercial purposes without prior permission of UNOPS. Otherwise, material in this publication may be used, shared, copied, reproduced, printed and/or stored, provided that appropriate acknowledgement is given of UNOPS as the source. In all cases the material may not be altered or otherwise modified without the express permission of UNOPS.

PREPARED UNDER

The Initiative for Climate Action Transparency (ICAT), supported by Austria, Germany, Italy, the Children's Investment Fund Foundation and the ClimateWorks Foundation.

The ICAT project is managed by the United Nations Office for Project Services (UNOPS).

Table of Contents

1. Introduction 5
2. ICAT-A Capacity Needs Assessment 6
3. Subnational Case Studies and Capacity Needs 8
4. The Centre-led Initiative: NICRA 10
4.1 Capacity assessment domains of ATARIs 11
4.1.1 Goals and Strategy 11
4.1.2 Systems and Infrastructure 11
4.1.3 Human Resources 12
4..1.4 Organizational Assets 13
4.2 Capacity assessment domains of Krishi Vigyan Kendras (KVKs) 13
4.2.1 Goals and Strategy 13
4.2.2 Systems and Infrastructure 14
4.2.3 Human Resources 14
4.2.4 Organizational Assets 15
5. Conclusion 15

1. Introduction

The changing climate and the risks associated with it make adaptation imperative for all countries. India, being a large country in the tropics with diverse agro-climatic regions and a long coast line, is extremely vulnerable to the consequences of a changing climate. Extensive resources are being targeted at not only designing activities and projects specifically addressing adaptation but also at ensuring that adaptation is integrated into the development planning to help reduce risks associated with climate change.

In India adaptation action was initiated under the National Adaptation Fund for Climate Change (NAFCC) in 2015 to extend financial support to all states and Union Territories (UTs). The priority areas for climate resilience under the NAFCC have been outlined along the lines of the Nation Action Plan on Climate Change (NAPCC) and the State Action Plan on Climate Change (SAPCC). The National Bank for Agriculture and Rural Development (NABARD) is the implementing agency for NAFCC projects, which is tasked with identification of projects, appraisal, sanction, release of funds, monitoring and evaluation as well as capacity building of relevant stakeholders. Furthermore, there are various other central and state level initiatives which aim to enhance climate adaptation. Some prominent programs include the National Innovations on Climate Resilient Agriculture (NICRA), State Action Plans on Climate Change (SAPCCs) and Programme on Climate Resilient Agriculture (PoCRA).

While these projects have been established, monitoring and evaluation frameworks that indicate the progress in work related to these projects are needed. The ICAT-A project seeks to identify some of these projects that are being implemented in the country to monitor, evaluate and learn from the processes of implementation that are underway.

The Initiative on Climate Action Transparency (ICAT) aims to support countries with custom made tools and methodologies to create frameworks for effective reporting on climate action while adhering to the country's development priorities. Globally, monitoring and evaluation frameworks are being developed to track the progress of development programs. They are considered as standardized tools which assist in reporting outputs, outcomes and impacts of a project and help in establishing accountability. Monitoring and evaluation in adaptation projects not only help in tracking the progress of interventions but also point out needs for adjustments. They help countries arrive at understanding whether they are doing the right things, doing

them correctly and what could have been done differently. Effective frameworks can help governments understand[1]:

- Successful adaptation actions which reduce vulnerability
- Addressing urgent adaptation needs
- Results of climate policies
- Increase in resilience of communities

Under ICAT- A phase-I initiative, focus was laid on case studies from the state of Telangana. Interventions selected under the initiative included a combination of development projects offering adaptation co-benefits as well as adaptation only interventions in the state. Under the Phase-II initiative case studies in the priority sectors of water and agriculture have been shortlisted from Puducherry and Odisha. The present document entails details of the Puducherry adaptation initiative.

The Union Territory of Puducherry under the NAFCC project introduced the "Integrated Surface Water Management for Climate Change Adaptation in U.T. of Puducherry". Climatic changes in the state include sea level rise, coastal erosion, rise in temperature and precipitation during the summer months and increasing intensity of extreme events. These alterations in the environment have adversely impacted sectors based on natural resources such as agriculture and tourism.

The agriculture sector of the state is highly dependent on ground water sources leading to a depletion in ground water levels. Water availability is further aggravated by increasing pressure of population, intensification of agriculture and industrial activities. As a result of this, the region is reporting issues of salinization of groundwater, drying up of water bodies, declining soil fertility and reduced crop production. Through the NAFCC project, the aim is to embrace an integrated approach to revive surface water bodies and increasing ground water recharge, reducing ground water salinization and restricting the use of saline water.

2. ICAT-A Capacity Needs Assessment

The underlying philosophy behind the Initiative for Climate Action Transparency

[1] https://www.adaptationcommunity.net/wp-content/uploads/2020/05/Adaptation-Briefings-2-Monitoring-and-Evaluation-of-Adaptation-An-Introduction.pdf

for Adaptation (ICAT- A) is to put into practice the request stated in the Paris Agreement to strengthen national institutions and to create the foundation for the enhanced transparency requirements under the Agreement. The overarching goal of the project is to strengthen the capacity of countries to implement, monitor, and evaluate effective and efficient adaptation actions in a transparent manner.

In line with ICAT's mission, this project intends to establish transparent and flexible systems for monitoring and evaluation (M&E) of adaptation action. The project will develop and test tools through which to assess adaptation policies and actions in Bangladesh, Dominican Republic, India and South Africa and advance the implementation and adoption of these policies and actions via national dialogue and training. These activities respond directly to country demand for capacity building and methodology support to enhance transparency and learning of adaptation M&E at national and global levels.

A core component of the initiative would be to build capacity of partner country stakeholders for assessment and reporting on transparency of adaptation action across scales - local to global. Capacity building would entail a series of training workshops and meetings as well as the provision of knowledge products, communication materials and other forms of ongoing support to relevant stakeholders for implementing the tools developed by the project. This includes application of transparency tools and methodologies in country-level reporting at national and UNFCCC levels, training of trainers, and assistance for optimizing institutional and system structures to accommodate transparency for adaptation. It also includes training in management and planning, or social and methodological skills where these are required to achieve the outputs and outcomes of the project.

In order to design and undertake necessary capacity building measures, it is critical to assess and understand capacity needs of relevant national/in-country stakeholders. This diagnostic tool aims to assess existing assets, gaps as well as demands of targeted stakeholders, in terms of capacity for undertaking M&E of adaptation interventions and thereby improving reporting on transparency of adaptation actions in the country.

3. Subnational Case Studies and Capacity Needs

For all the states, the capacity assessment was carried out with local stakeholders, in the form of a questionnaire developed by the TERI team. The assessment exercise was undertaken by a small team within an organization comprised of personnel from senior management/leadership positions, staff from the M&E unit, staff from the climate change unit (if applicable) as well as finance and administrative staff. The ICAT team members were also present to provide necessary guidance and support for undertaking the assessment.

The assessment sought to ascertain the existing capacity in 20 sub-domains across 4 domains – i) Aspirations and Strategy, ii) Human Resources, iii) Systems and Infrastructure and iv) Organizational Assets – will be assessed to establish a baseline. A score of 1-4 for each sub-domain was to be provided. Description of scoring criteria is provided in the tables. The scores were collectively decided by the team. Where appropriate, supporting information against the provided score was presented as evidence. Also, the provision of ideas and possible action steps for improving the score was encouraged.

The exercise entails an additional section to scope preferred modalities for delivery of capacitybuilding intervention, and TERI also proposes that the exercise should be repeated on a periodic basis to measure change in capacity and the corresponding changes reflected by the capacity-building exercises.

1. Odisha

   The climate vulnerability of Odisha to disasters such as cyclone, drought, and floods has gravely affected the agriculture sector with increasing water stress in the region. The large dependence on agriculture for income generation in the state, as well as the presence of significant amount of poverty has created a poverty trap that significantly contributes to livelihood vulnerability. Water stress along with flooding due to heavy rainfall juxtapose the region to two different climate extreme events in addition to challenges of pressing social issues like loss of livelihoods. The adaptation intervention implemented by the state, therefore, possesses potential to address the prevailing climate-related issues in the state as well as provide social and economic security.

   Based on the discussions with the relevant stakeholders from different department officials, it was noted that the project despite having features for monthly reporting on financial aspects, it lacks a robust and transparent monitoring and evaluation framework for tracking climate change adaptation

which not only includes tracking financial progress but also covers physical progress in implementation, thereby indicating overall reduction to imposed climate risks and helps build resilience over time. There is a need for continuous stakeholder engagement for developing an effective MEL framework and conducting capacity building and training programmes for key stakeholders.

2. Telangana

   Heavy dependence on rain-fed agriculture is a major feature of agricultural systems in Telangana. Roughly 54% of the cultivated area in the state is classified as 'dry land', with high dependence on water-intensive crops. Prominent crops such as rice and cotton occupy roughly 60% of the cultivated area and are water-intensive crops. To address the complex challenges in the climate system and its impact on agriculture, there is a need to strengthen policy decisions and bring about behavioural changes at grassroots levels.

   The proposed M&E framework is grounded in the local context, it recognizes the heterogeneity of needs and maintains the local relevance. Furthermore, to ensure that the MEL is robust, it must be developed with active participation from stakeholders and followed by conducting capacity-building and training programmes for departments, communities, agricultural research institutions, and all prominent stakeholders involved in the agriculture sector of the state. By having a robust and inclusive MEL framework in place, that can be tailored to fit all requisite projects and activities, the state can ensure that the impacts of various interventions and policies are properly monitored; along with providing key learnings about any further requirements to ensure inclusive and complete development across the agriculture sector in Telangana.

3. Puducherry

   Heavy dependence on groundwater continues to be a major feature in UT of Puducherry. Factors such as intensive farming patterns and provision of free electricity that enable unregulated operation of motor pumps for extraction of water from the ground ensure the continued prevalence of groundwater dependence. This issue becomes even more problematic with increasing salinity ingression and groundwater contamination which in the light of a changing climate will only exaggerate the vulnerabilities in the region.

The TERI team carried out in-person consultations with officials and representatives from various departments in the U.T. of Puducherry namely Department of Science, Technology and Environment (DST&E), the Public Works Department (PWD), the Irrigation Department associated with PWD, Local Administration Department (LAD) and representatives from the Commune Panchayats. The tank, lake and pond sites under the project in Puducherry and Karaikal were visited by the team and consultations were also held with farmers who are the direct beneficiaries of the project.

4. The Centre-led Initiative: NICRA

The Capacity needs assessment is one of the overarching requirements under the ICAT-A to be able to formulate a framework through which one can trace the steps that are taken within an adaptation/ adaptation-related programme in such a way that M&E happens to an extent that it feeds back into the whole process. Since in India, most adaptation related programmes are either part of an on-going developmental initiative and very few have recently been introduced separately as standalone ones, no effective evaluation programme is in place to keep a check as to whether they are running as they should be according to the mandate. This tool is just a step towards assessing the capacity needs requirements of different stakeholders involved with the programmes at different levels to assess the gaps and the challenges that they face while executing a programme and how to effectively address the same.

NICRA is a structured project with well-planned and defined objectives at every level. The program itself runs on a 5-year plan basis with defined plans (including the organisations involved, the deliverable and monitoring and evaluations) for all the four components under which the program is structured, namely:

1) Strategic research on adaptation and mitigation
2) Technology demonstration on farmers' fields to cope with current climate variability
3) Sponsored and competitive research grants to fill critical research gaps
4) Capacity building of different stake holders

The budget is also allocated as per the targets and activities envisaged for organisational entities responsible for each of the above-mentioned components. The plan is revised every 5 years by a High-level Monitoring Committee (HMC). The

High-level Monitoring Committee (HMC) comprise the leadership of NICRA and are at the helm of decision making for each of the 4 components of the program.

4.1 Capacity assessment domains of ATARIs

4.1.1 Goals and Strategy

Agricultural Technology Application Research Institutes (ATARIs), as stakeholders within the NICRA, are responsible for implementation of the program. They act as the extension providers for the technologies, through participatory demonstrations of these practices/technologies on the field and generating learning in terms of what works and what does not. Since the program (NICRA) is a centrally sponsored program with 5-year planning frame, the activities at ATARI levels are well defined and clear and as part of government machineries, they are well versed with functioning within the mandate of a given program.

The leadership at ATARI level and above are part of the HMC and have representation and say in the proceedings of the HMC. The constitution of the HMC for NICRA itself necessitates adequate knowledge and expertise on the importance of climate change adaptation, climate resilient agriculture etc.

The disbursement of the financial allocation is top-down as the program has been designed at the centre level. The budget within the program is fixed and funds are released based on the demand and delivery of objectives. This means that the source of funding within the program is single with no scope for accessing alternate funding mechanisms.

4.1.2 Systems and Infrastructure

A broad organisational architecture is in place with well-defined roles and responsibilities and accountability. Formulation of action plans and the decisions that are taken therein happen in a structured manner. While HMC, which takes broader program level structural decisions, has a participatory and representative make, there are delays in relaying or dissemination of decisions taken at higher level. A need/ requirement for a systematic process with guidelines and flexibility for the aforementioned were expressed. This would lead to increased and faster responsiveness and more efficient systems.

Yearly action plans are developed at ATARI level that compile the consultations from Krishi Vigyan Kendras (KVKs), climate risk management committees at village level and the beneficiaries (i.e., farmer groups). These action plans, based on formats given

by NICRA, encapsulate milestones and deliverables. While the evaluation and monitoring of the interventions happen mainly at the village level, ATARIs also have a monitoring system in place and this ensures uniformity of monitoring at ATARI level across the program. Half yearly review meetings are conducted before season, mid-season and end of the season. Regular visits to the program sights are done by ATARI as well as NICRA and also by members from the HMC.

ATARIs have separate financial allocation for M&E. In case of external monitoring, a committee is formed where all representatives will be present. Villages are monitored once in 2 years. Regular visits for to the project sights are accounted for in regular ATARI budget.

ATARIs support NICRA at all levels and coordinate to ensure how best can KVKs implement according to the directions of NICRA. There is complete documentation of processes followed at each level. Apart from annual reports, manuals, mid-season reports from KVKs, ATARIs also maintain a copy of database of all communication from NICRA to KVK and vis-à-vis. However, there is no policy communication borne off this. The only mode of external communication from the ATARI level are the annual reports. This was identified as a limitation by them.

Adequate access to necessary software and hardware were identified as a shortcoming by the ATARI. It was felt that the NICRA website needs to be made more dynamic to be able to reflect all the developments happening at the implementation level. Digitization is required and is an integral part. It was felt that climate information and best farming practises should be disseminated to the field level for which climate services need to be an integral part through ICT. ATARIs expressed interest in being knowledge partner in climate resilience through accumulation and dissemination of ground level knowledge through their own digital initiatives. KVK service application should also be developed. There is a need to adopt various mechanisms for reaching out to people.

4.1.3 Human Resources

ATARIs are staffed by a nodal officer and a senior research fellow to drive the process of implementation of NICRA, along with other project staff. ATARIs have also been given additional support for M&E at KVK level. Independent assessments and internal assessments are in place for M&E. Third party assessments, through an open transparent bidding process, are done and these are more reliable. Thus, accounting for transparency and credibility.

There is no formal process in place for the continuous upgradation of skill and knowledge. NICRA has not been able to support exposure visits or conferences at ATARI or KVK level. Training and capacity building is non- existent at ATARI level and is limited to NICRA level. It does not filter down to all the lower stakeholder levels.

There is a need for capacity building to happen in a more structured manner especially for ATARIs and KVKs. It needs to be more structurally implemented and needs be made a part of the strategy. It was suggested that in the second phase of NICRA, trainings be conducted on climate adaptation and resilience in a more vibrant and inclusive manner.

4..1.4 Organizational Assets

The constant churn in the replacing of directors during the course of the program hampers the implementation and successful completion of the program, as there is no formal mechanism to re-orient the new directors to issues of climate adaptation and resilience. There is no formal training for getting acquainted with jargons, concepts and principles.

There is good representation and participation from the community level i.e., the beneficiaries of the program through village level management centres, user groups, commodity groups, common interest groups etc. ATARIs ensure that the needs of the community get channelized onto the overall objectives of NICRA. However, there is not much policy influence directly from the ATARI level. ATARIs deal more closely with the academia (universities) through KVKs that are based out of universities (some KVKs are cooperative initiatives).

4.2 Capacity assessment domains of Krishi Vigyan Kendras (KVKs)

4.2.1 Goals and Strategy

Krishi Vigyan Kendras (KVKs), are an integral part of the National Agricultural Research System (NARS), aimed at the assessment of location specific technology modules in agriculture and allied enterprises, through technology assessment, refinement and demonstrations. KVKs have been functioning as Knowledge and Resource Centre of agricultural technology supporting initiatives of public, private and voluntary sector for improving the agricultural economy of the district and are linking the NARS with extension system and farmers. The first KVK was established in 1974 at Puducherry. The number of KVKs has risen to 731. The KVK scheme is 100% financed by Govt. of India and the KVKs are sanctioned to Agricultural Universities,

ICAR institutes, related Government Departments and Non-Government Organizations (NGOs) working in Agriculture.

Every year annual plans are presented, where KVKs present their set vision, missions, targets and success stories. Strategies are already shared in the beginning of the project itself and are revised every year. The funding is generated from the centre-level, owing to how NICRA is formulated.

There is continuous monitoring and evaluation at regular intervals by the KVKs. Monitoring at the KVK level directly follows the monitoring frequency by the ATARIs and the high-level zonal monitoring committees. However, there are staff hired under NICRA, who are responsible for M&E and also handle all the other components under NICRA for KVK. The approach towards M&E is knowledge-based through on-site learning, with no separate specialized training formulated for M&E. There is also no separate budgetary allocation for M&E within NICRA.

4.2.2 Systems and Infrastructure

Decisions undertaken by KVKS entails broad participation, and the same is communicated effectively and regularly with stakeholders/agencies to whom the KVK reports. The KVKs also communicate their decisions to the last mile users, which largely involve the farmers. All the financial decisions are well documented, with UCs being largely generated and submitted before the end of the financial year.

Good coordination and communication are maintained between all the seven departments within KVKs, with regular weekly meetings. All learning and best practices from NICRA are well documented and is available through reports and these are shared with other stakeholders like ATARI, media, farmers etc. There are multiple platforms for external communications with relevant stakeholders and actors, through newspaper articles, farmer exhibitions, radio programmes etc.

While there are automated weather stations installed at village level, but the requisite software needed for weather-based communication to famers was absent. The requirement/ need for aforementioned software was expressed. This was introduced and implemented in NICRA last year. KVKs also design training programmes in a manner that maximises gender inclusion.

4.2.3 Human Resources

The senior management is very well versed with the necessary expertise and knowledge and their vision is aligned with the vision and mission of the project. One

Senior research fellow has been hired under the project for KVK, and looks after all the components including M&E. The approach towards M&E is more knowledge based through on-site learning. No separate training has been given for M&E.

While the staff in KVK goes for regular training and capacity building activities, these are mostly for other projects. NICRA does not budget for training and capacity building at KVK level.

4.2.4 Organizational Assets

At the KVK level, the roles and responsibilities of all the relevant stakeholders is known. The involvement of local communities is seen as a crucial element and very intrinsic to the success of NICRA. Learning and best practices documented by the KVKs make their way through peer reviewed journals, publications and brochures (channelled through NICRA).

The capacity needs of KVKs can be narrowed down to:

1. Monitoring: The approach towards M&E is more knowledge based through on-site learning. No separate training has been given for M&E.
2. Information and communication technology (ICT): There is interest and need for access to latest software and technologies.
3. Capacity building: requirement for a structured and consistent plan as part of the programme strategy for capacity building at the extension/implementation level on key areas such as climate adaptation and climate resilient practices. Annual training plan should be there for all stakeholders.
4. Decision making framework: While decision making is a participatory process with representation of stakeholders from all levels, it was felt that the dissemination of the decisions taken is not timely. Need for a systematic process, with a certain level of flexibility, for the same to be kept in place.

5. Conclusion

Given the localized nature of climate impacts and the adaptation needs in the agricultural sector, it is essential to downscale adaptation interventions to the district or village level, and ground them on scientific evidence generated through collaborative research. A proactive adaptation approach in agriculture is needed, streamlining efforts and resources on climate and disaster resilience to reduce risk exposure, limiting impacts, and preparedness in coping with disasters. Given the finite resources available and the need for effective adaptation strategies, it is

imperative to understand the importance of monitoring and evaluation processes and introduce MEL for specific regions in the country to ensure the efficacy and efficiency of adaptation interventions. There is also an urgent need to scale these measures up to the national level and include MEL components at the inception and planning stages of adaptation programmes.

There is a need for continuous stakeholder engagement for further enhancing the efficacy of the MEL framework and for conducting capacity-building and training programmes for stakeholders and implementing agencies for the large-scale adoption of the framework in adaptation projects in the country. In the future, the learnings from such stakeholder consultations and capacity-building workshops can be implemented at departmental levels to be incorporated at the inception stage of all adaptation projects and activities at the sub-national and national levels, ensuring the availability of base-line, interim and final data to monitor and assess the impacts of such projects. By having a robust and inclusive MEL framework in place, that can be tailored to fit all requisite projects and activities, we can ensure that the impacts of various interventions and policies are properly monitored; along with providing key learnings about any further requirements to ensure inclusive and complete development and building climate resilience across the agricultural sector.