CASE STUDY

Systematisation: learning from experiences of community-based adaptation projects in India

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India is one the many countries globally that is highly vulnerable to the impacts of climate change. The country's diverse agro-climatic zones and a large number of rural populations dependent on climate sensitive sectors like agriculture, forests and natural resources make it even more vulnerable to risks imposed by a changing climate. The Indo-German development project Climate Change Adaptation in Rural Areas of India (CCA-RAI) aims to enhance the adaptive capacities of vulnerable rural communities in India so that they are better equipped to cope with climate variability and change. Under this project, German Development Cooperation (GIZ) partnered local implementation organizations in partner states to test adaptation measures on ground and use lessons to inform climate change adaptation policy. A total of nine projects were implemented between 2011 and 2014 with the common objective to demonstrating improved resilience of rural communities to climate change. Since 2012, CCA-RAI used a process called **systematisation** for six of these demonstration projects to extract lessons and create knowledge on what climate change adaptation means on the ground. Systematisation is a self-evaluative and participatory process that was originally designed to capture learnings from complex development projects in Latin-America in the 1960s. In India, GIZ applied it for the first time to community based adaptation projects. This participatory approach helped the local implementation partners to reflect on their project activities and progress systematically. The method was successful in creating evidence about changing adaptive capacities of the communities and the overall impact of the projects in the intervention areas which in turn helped in increasing the visibility of the projects with local government partners; in supporting mid-course corrections; and finally in informing policy and governance for climate change adaptation.

Key words: climate change; community-based adaptation; mainstreaming adaptation; participatory processes; research, project assessment; field documentation; India

Climate change adaptation in rural India

India is one of the many countries which are highly vulnerable to climate change impacts and as a consequence this has led to high level risk exposure to its population in terms of health, food security and sustainable livelihoods. It is ranked no 20 out of 67 countries as per the Maplecroft Global Vulnerability Index.[1]

The Indo-German development project Climate Change Adaptation in Rural Areas of India (CCA-RAI) aims to enhance the adaptive capacities of vulnerable rural communities in India so that they are better equipped to cope with climate variability and change. The project partners are the Indian Ministry of Environment, Forests and Climate Change (MEFCC), the four Indian states of Madhya Pradesh, Rajasthan, Tamil Nadu and West Bengal and German Development Cooperation/Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH (GIZ).

As part of this project, GIZ worked with local implementation partners[2] to test adaptation measures in varied agro-climatic zones in the selected Indian states. The project supported a total of nine such projects covering the most vulnerable eco-regions of the country to demonstrate innovations in adaptation to climate change. These demonstration projects covered diverse agro-ecological regions, ranging from coastal zones in West Bengal and Tamil Nadu, over rain-fed crop production regions in central West Bengal and Madhya Pradesh, to pasture lands in semi-arid Rajasthan. Most of these projects did not implement completely new interventions: in most cases existing measures were tested, slightly modified, set up in a different context and designed in a perspective of adaptation to climate change. The aim of these projects was to showcase what adaptation to climate change means on the ground. The overall objective of supporting the demonstration projects was to identify and mainstream successful adaptation models**.**

Systematisation: supporting innovations in climate change adaptation and extracting critical lessons

Systematisation

What is it?
Systematisation is a self-evaluative and participatory process that intends to produce new knowledge about a development intervention through analytic reflection and interpretation about what happened in a past time period in the field. It is a method 'that facilitates the description, reflection, analysis and documentation, in a continuous and participative manner, of the processes and results of a development project' (Selener et al. 1996) and can greatly assist in the documentation of field based information. Systematisation had it earliest references in Latin American social work form the 1960s and through the next 4 decades it was continuously used and developed in Latin America in a variety of streams including development facilitation. From 2000 onwards, it started being applied and customised in Asia and Africa though the

outreach is still very limited. It has proven to be very useful for projects/ interventions in fields that are very complex, that can be slow and usually involve different actors and processes, e.g. in the field of natural resource management, adaptation to climate change, since results are often less direct and more uncertain. This is because they require more constant re-evaluation of what is being done and sometimes change of activities in order to achieve the intended objects.

The main objective of systematisation is to create knowledge from a field experience, while the steps through which it is done, e.g. participatory reflection and validation, are objectives in their own right. The approach contributes to capacity building of stakeholders and organisations by involving all relevant implementers from different levels throughout the process, e.g. from field staff to project managers. In the end, systematisation helps to generate lessons learned which will improve the project itself or related interventions. Communication and dissemination of the knowledge produced are crucial parts of systematisation. A systematisation exercise seeks to answer three questions: 1) What was the situation before the project intervention? 2) What is the current situation? 3) What led to change? The stepwise process that is followed is given in the flowchart below:

Stage I: What are we trying to learn & how?
Step 1: Identifying facilitators
Step 2: Team Formation
Step 3: Selecting key questions
Step 4: Training of team
Step 5: Village selection
Step 6: Secondary data collection

Stage II: Strategy, Field visit & Evaluative Documentation
Step 7: Team briefing
Step 8: Team Meetings & strategy evolution
Step 9: Field Visits
Step 10: Documentation
Step 11: Team Presentation & finalizing findings

Stage III: Sharing & Dissemination
Step 12: Sharing of findings
Step 13: Developing communication products for different audiences

Source: based on Phartiyal 2006

Why was it considered?

The aim of using systematisation as an evaluative and documenting tool in CCA-RAI demonstration projects was to extract critical lessons from these demonstration projects with information on additionality, target group, impacts, including economic impacts, costs of the measure and potential areas of replication both to inform policy as well as up-scaling efforts.   The idea was also to explore, the use of systematisation as a learning tool for the projects to make mid-course corrections and to document findings for further analysis and reflection on climate-adaptive policies.

Adaptation to climate change is still in its nascent phase in India and there are not many practical examples of tested adaptation measures on ground available. The concept of additionality is also an important aspect of adaptation projects. This concerns the desire that the project is investing in activities that would not have been carried out, were it not for the need to adapt to climate change. There are almost no standards for determining additionality in adaptation, yet it is likely to be a key concept in the on-going development of international financing for adaptation in developing countries. Thus firstly it was important for all CCA-RAI demonstration projects to have information on additionality of successful project interventions. Moreover in order to support up-scaling of tested adaptation measures and inform policy it was imperative to have information on factors like costs of interventions, economic, environmental & social impacts of the interventions and also the social and other factors determining the success or failure of a measure on ground. Therefore systematisation was considered for documenting and authenticating the experiences from CCA-RAI demonstration projects. It was selected as a method for evaluation and documentation in consultation with the project implementers and government partners and was applied for the first time in the field of community based adaptation in India. Systematisation was used in addition to the conventional M&E framework for selected projects. The added advantage of using systematisation in addition to conventional M&E frameworks lies in its participatory nature. M&E frameworks are developed with a perspective on external accountability and provide only a limited scope for stakeholder involvement. Systematisation, on the other hand, provides an opportunity for internal reflection and allows adaptation practitioners to document failures and successes alike.

How was it implemented?

After systematisation was identified as a potential process for learning from and documenting the experiences from CCA-RAI adaptation projects, an experienced systematisation facilitator, Shalini Kala, was approached. Use of Systematisation for this purpose meant introduction of the methodology to all partners and CCA-RAI staff; and designing a mechanism to facilitate learning of, planning for and application of the methodology. The first set of projects spread over West Bengal, Rajasthan, Tamil Nadu and Madhya Pradesh (listed in Table 1). All these were to participate in systematisation. Following were the main planks of the activity plan designed to introduce and apply systematisation, (also summarised in Figure 1).

Introduction and guidance: In November 2011, Shalini introduced the methodology to implementing organisations, government partners, CCA-RAI expert consultants and

staff - the key actors involved in testing of adaptation interventions. This was followed by **training** of GIZ expert consultants to act as **systematisation facilitators** in planning, onsite and post systematisation support for the projects. A few months prior to the actual systematisation exercise, facilitators held an **orientation workshop** to introduce the concept to the implementing organisations for their respective projects.

Facilitation: After an initial specialised training, facilitators were the key focal points on application of systematisation for implementing organisations with advice and mentoring from Shalini throughout the period. Implementing organisations were to be supported by facilitators and GIZ. Each systematisation exercise was carried out by members of the implementation team. The teams included administrative, technical, field and GIZ staff. The **planning** of systematisation exercises started with the definition of a research question for the exercise, the so-called **systematisation question**. Under the supervision of the facilitator, the team spent **seven to ten** days in the project sites to find answers to the systematisation question through various field research tools including primary data collection and secondary data review. Due to the participatory nature of systematisation, Participatory Rural Appraisal (PRA) was most commonly used to gather the relevant data.

Experience sharing: Sharing of lessons on planning and use of systematisation to assess project activities was encouraged on an on-going basis with specific workshop sessions planned – one, a few months before the start of first round of systematisation and another one, after all pilot organisations had applied systematisation once. In April 2013 a workshop on sharing learning from systematisation was held in Kolkata. Implementing partners that have already applied systematisation in their projects presented their results in the form of different **knowledge products** like short **documentary films** on successful interventions, **testimonials** from project beneficiaries on the impact the project has had on their lives, detailed **case studies** of beneficiaries, **posters** and **presentations.** Others that had not yet gone through the process got a chance to talk about the challenges and opportunities of systematisation.
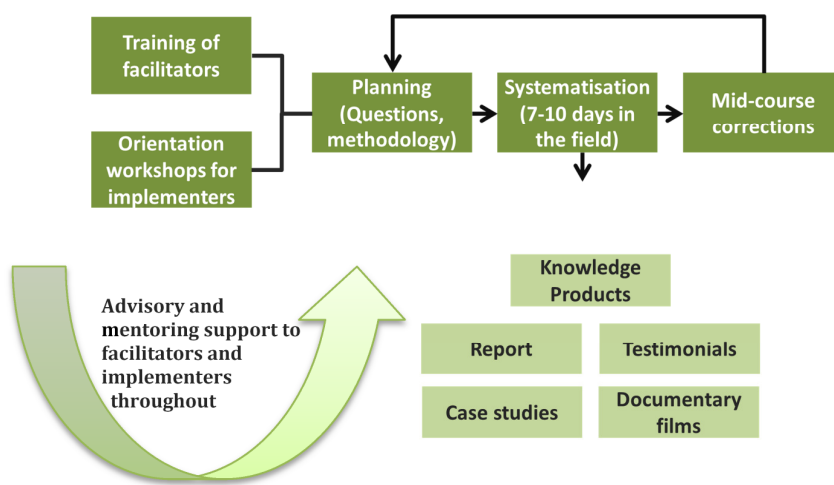

Figure 1: Process to enable implementation of systematisation

Table 1: Demonstration projects that carried out systematisation

S.no	Title of the project and duration	Local Implementation partner and state	Systematisation question
1	Eco-restoration and institution strengthening	Foundation for ecological society (FES), Mandla Madhya Pradesh	Do the socio- technical interventions for agriculture and eco-restoration help enhancing the adaptive capacities of the tribal communities? To what extent strengthening of the village institutions contributes to the same?
2	Integrated mangrove fishery farming systems	M.S.Swaminathan Research Foundation Chennai, Tamil Nadu	- To what extent IMFFS strengthens adaptive capacities of the vulnerable coastal communities? - What are the enabling factors that foster active participation of women in different stages of IMFFS and how have the women benefitted? - How earlier experience can be used to evolve guiding principles for other models?
3	Rain Water harvesting and agro- forestry	Dhan Foundation, Madurai, Tamil Nadu	How does creation and strengthening of farm resource base build adaptive capacities of small and marginal rain-fed farmers to cope up with climate change induced risks? Documentary film[3]
4	Livelihood diversification through integrated production systems	Development Research Communication and Services Centre (DRCSC), Kolkata, West Bengal	Does integrated farming system help to increase the adaptive capacity of community? If yes, then how? Documentary film[4]
5	Building livelihood resilience and disaster preparedness	West Bengal University of Animal & Fishery Sciences & WWF, Kolkata, West Bengal	Whether the interventions are able to enhance the adaptive capacity of the people & reduce the sensitivity in the project area? If yes, to what extent and how to scale up?
6	Livestock Adaptation under climate change scenario in Semi-Arid region of Rajasthan	Action For Food Production (AFPRO), Udaipur, Rajasthan	Do identified technical interventions for pasture management increase adaptive capacities of marginalized farmers in semi-arid conditions and if so, in what way(s)?

Results

Learning at project level

Systematisation was used for a total of six demonstration projects under CCA-RAI (Table 1). The overall of consensus of the implementing NGOs, systematisation facilitators and GIZ staff was that systematisation has contributed to **capacity development** of NGOs carrying out local adaptation projects. Systematisation has also

helped to create a **common understanding** of the projects' activities and their link to adaptation among stakeholders and project implementers. Furthermore, the process provided useful lessons for **mid-term corrections** of project activities. Finally, a wealth of knowledge on best practices of adaptation was documented through systematisation. An example of one of the projects that applied systematisation is given below:

The districts of Maldah and Murshidabad in West Bengal belong to the most severely flood affected areas in India. Rainfed agriculture remains the people's primary occupation in these districts. Due to changes in precipitation patterns and temperature increases, agricultural yields are going down. An earlier onset of the summer monsoon results in water logged conditions that hamper especially the growth of Jute in July and complicate its harvest in August. Climate data analysis shows that the duration of high temperature periods in summer is increasing which leads to lower yields of late-sown paddy. Wheat and potatoes, the most important winter crops (*Rabi* season), mainly suffer from increasing temperatures and decreasing rainfall in the winter months.

The project implemented by GIZ and NGO (Development Research Communication and Service Centre) DRCSC responds to these problems by diversifying and thereby ensuring the livelihoods of rural communities. The overall objective of the climate change adaptation project is to diversify livelihoods through the introduction of a number of new practices. This will eventually help in reducing the communities' vulnerability to climatic variability and making them more resilient in the event of climatic extremes.

A systematisation exercise carried out by DRCSC staff along with an experienced facilitator was carried out in three DRCSC project villages in September 2012. The question under investigation was 'Whether the interventions are able to enhance the adaptive capacity of the people & reduce the sensitivity in the project area? If yes, to what extent and how to scale up?' the tools used to investigate this question were PRA tools, Questionnaire, checklist, case study, interviews and focus group discussions and individual discussions with beneficiaries.

The systematisation team not only collected quantitative information on the extent of the uptake of new agricultural practices and livelihood opportunities but also found that beneficiary farmers perceived that their climate-related risks had reduced due to livelihood diversification measures. Some project participants have already started earning an extra income by selling excess vegetables that they started producing using new crop varieties and recently introduced production methods. Moreover, farmers believe that the introduction of new crop varieties will help them to decrease their dependency on seed dealers in the long run. New livelihood opportunities such as the construction of nutrition gardens has led to a reduced dependency of women, a higher self-esteem of women as well as an increase in their social recognition.

Apart from assessing the magnitude of change and its reasons, the systematisation exercise also allowed DRCSC field staff to increase their communication with stakeholders and decision makers. This provided an opportunity to all participants to

reflect on their work and come up with key suggestions with respect to future successes of the project.

The main knowledge products that were produced from this project were a film[5] illustrating successful adaptation measure and showcasing the systematisation exercise for the project, poster showcasing successful measures in local language, report in English and local language and flyers with information on details of costs and impacts of successful interventions.

Learnings at GIZ/programme level
The method was successful in creating evidence about how different activities under the projects contributed in building adaptive capacities of the communities and the overall impact of the projects in the intervention areas. In some cases the method also helped in increasing the visibility of the project with local government administrators.

Furthermore, the method proved to be beneficial for making mid-course corrections. The NGOs found the method very useful and showed interest in taking it up in other development projects as well. It also helped the team to acquire a common understanding of the project's objectives and its contribution to climate change adaptation. The process also helped in building the writing and research capacities of the systematisation team. The detailed learning is given below

What worked
- **Introducing systematisation early in project life**: It was interesting how learning about systematisation at a time when teams were finalizing their project proposal impacted the project and its strategy; and, in retrospect, had important implications for project management. Systematisation forced teams to clarify the project intent and come to a common understanding about it. This was most evident when teams were trying to come up with the question that they would most like to study at mid-term. Several exchanges within the implementation team, with or without the facilitator, and with CCA-RAI were time consuming but in the end acknowledged as helpful in bringing everyone on the same page and working out the project strategy. This in turn helped teams ability to manage and speed-up pilot activities individually as well collectively. Comparing M&E and systematisation supported teams in focusing on monitoring and assessment to benefit the project.

- **Interest in the methodology**: Given that none of those involved with the pilots knew much about systematisation, the tremendous interest among implementing teams and at the organizational level was crucial to the support needed in applying something new. For instance apart from the orientation in Chidambaram, which several MSSRF staff unrelated to the pilot attended, they organized an additional one-day session for its entire program staff.

- **Investments in improving partner understanding of the methodology**: CCA-RAI supported an intensive process for partners to fully grasp the concept and process of systematisation. Apart from the introductory workshop in Nov 2011, field –level orientation was organized at each partner location - in case of DHAN

and FES this was done twice. Numerous exchanges over email and face-to-face with facilitators added to this effort.

- **Selecting experienced development professionals to be facilitators**: Since, systematisation is limited in its application in India, there are not a lot of experienced facilitators. CCA-RAI chose to work with some of its regular consultants with good understanding of climate change adaptation issues and realities of working with communities. They were also experienced at facilitation and capacity building. The value of seasoned facilitators became even more obvious when one such (Pushkin Phartiyal) came on board in Feb 2012 bringing with him his intellectual and practical knowledge of systematisation. This benefited both the pilot projects he supported as well as the other facilitators. Facilitators connected with implementation teams, senior management in pilot organisations and communities, supporting the process of planning and applying systematisation.

- **Facilitator trips to pilot locations**: These were greatly beneficial for facilitator's understanding of the ground reality; relationship building with pilot teams; assessing team capacity and needs; preparing the implementation team for systematisation; getting higher authorities to see how could the organization benefit from the exercise; and for the facilitator to start her/his own journey to steer the process of systematisation.

- **Experience sharing through all partner workshops, email, others**: At the level of pilot organisations and amongst facilitators on issue that they were facing, sharing helped learn from each other and built confidence in resolving common problems. And this went beyond systematisation specific issues to those related to adaptation innovations creating a lively learning/knowledge network. Pilot partners met each other along with facilitators and CCA-RAI on various occasions sometimes specifically for systematisation and sometimes otherwise. Each such opportunity helped learning, led to problem solving and nurtured the environment to apply systematisation and to improve adaptation innovations. Facilitators regularly shared amongst themselves and with their respective pilot project teams.

- For the key players, **systematisation helped** learning, ability to make mid-course corrections, documentation, capacity building, team bonding, better connect with community and other stakeholders, and highlighting partner efforts at connecting with government initiatives. See section on 'Feedback from stakeholders' for more on this.

What was challenging
- **Introducing systematisation early in project life**: This was quite a challenge in the beginning as pilot partners were still finalizing concept notes and implementation team members hadn't fully internalized pilot intent, conceptually and operationally. In the struggle to identify and formulate the question for systematisation exercise planned for an year later, this became critical. And pushed teams to clarify and come to a common understanding about the pilot.

- Systematisation was new to the **CCA-RAI, GIZ team** too that was managing the climate change adaptation interventions. The team had to become familiar with the methodology, relate it to adaptation, and then support implementation partners in preparing and implementing systematisation. However, the benefits reflected in both project design-implementation-delivery of the selected interventions and in informing governance for climate change adaptation in the country.

- **Building confidence to apply systematisation without prior experience**: There was a lot of apprehension among teams but the facilitators played a key role in supporting them with mentoring and advice in planning, implementation and at times even logistics.

- **Identifying the key question**: Teams struggled with this, but this it is not unexpected. Most teams when they first systematize face this issue; it was heightened in this case as pilot partners started to grapple with this right at the start of pilots. Continuous consultation among team leads, facilitators and CCA-RAI helped formulate suitable questions.

- **Fixing a time for the exercise**: In general, this has not been easy. And facilitators worked hard with pilot organizations to freeze dates, which kept changing for various reasons. This resulted in delay in almost all exercises.

- **No common language between facilitator and systematisation team**: This was most apparent in case of DHAN project where field team was most comfortable in Tamil. The facilitator's ability to support them was restricted to some extent. This reflected in all activities related to systematisation - orientation, capacity building, planning and implementation. Facilitators worked with team lead to provide extra inputs.

- **Staff turnover and ensuring availability of all team members during the on-site exercise**: While staff turnover is not unusual, because systematisation was a new methodology for most and the pilots are short-duration, this became particularly detrimental for planning and implementation of systematisation. In cases where implementing staff was not available fully during systematisation, this problem worsened.

Unexpected outcomes
Outcomes such as capacity building and improved connections amongst stakeholders is not unexpected but was a little surprising for systematisation teams as this was their first exposure to the methodology and its outcome beyond documentation. The most pleasant surprise was an effortless network building of all pilot organisations, partners and facilitators around the issue of climate change adaptation. Some such unexpected outcomes are highlighted below.

- **Learning/knowledge network on climate change adaptation**: The common task of systematizing experience brought together institutions working across various

parts of India on climate change adaptation. Meeting collectively to work on systematizing experiences offered the chance to discuss this common area of interest and share learning.

- **Clarifying project intent and strategy**: This was probably not something that anybody had particularly thought about at the start of this journey in 2011. However, over time it became increasingly evident to the teams, facilitators and other involved that systematisation, because it was introduced at the start of the pilots had helped this process.

- **Capacity building**: Teams felt improvement in analytical, field research, writing and management skills.

- **Bonding within the implementation team and with key stakeholders**: As a result of planning and implementation of systematisation, teams shared how connections amongst team members and with community and government partners had improved.

Use of knowledge products

The systematisation exercises resulted in production of a range of knowledge products from all projects. Some of the examples of knowledge products that were produced are short documentary films capturing the systematisation process as well as the adaptation learning from the project, policy briefs on certain interventions, posters, flyers and leaflets in local language for illustrating the measures. The knowledge products helped the implementers and GIZ alike in showcasing the learnings around adaptation to different stakeholders including policy makers, local administrators, national and international agencies, as well as donors. The implementers were also able to showcase their successful measures to local level government bodies in their areas and advocate for possible sources of funding from government schemes to replicate and continue with the measures in their area. CCA-RAI will also further use the knowledge products for further informing the state departments, National ministries, and other national and International adaptation practitioners about the successful adaptation interventions.

Conclusion

The foremost benefit of applying systematisation for GIZ and CCA-RAI team was that framing the systematisation question with a direct linkage to adaptation at the beginning of project implementation helped in establishing the adaptation linkage of all project activities. The fact that all team members came together to brainstorm and plan the exercise also helped in designing the right question. Further, learning from the first round of systematisation helped in mid-course correction and redesign of few activities, which proved to very helpful in the overall project performance and efficiency. Finally, documentation done in the form of systematisation reports and case studies assisted in monitoring of the project activities and identifying the gaps at field level for the CCA-RAI team, which would otherwise have been challenging. This also

helped in re-establishing the linkage of all field level activities to the overall CCA-RAI-project objective and at the same time helped in gathering evidence for change. Climate change adaptation (CCA) is a new policy issue and hence the governance mechanisms and policy instrument around CCA in India are still in the process of developing. National Action Plan on Climate Change (NAPCC) and State Action Plans on Climate Change (SAPCCs) are currently the main policy instruments together with climate- relevant provisions in sector policies and development planning. CCA-RAI is supporting action at the policy level and implementing adaptation measures on ground to inform governance in India. Systematisation supported this process by helping to document the evidence of change and in turn informing policy and governance. In most of the projects involvement of local level government officials and department at the time of the systematisation exercise helped in apprising them about the successful interventions and thus increase awareness for decision-making at the local government level (e.g. the case of Dhan[6]). The evidence created also helped in advocacy work at both local and state level and will continue to do so. Establishing clear linkages with CCA and gathering evidence also supported local implementation partners in preparing proposals for external adaptation finance like the Adaptation Fund Board.[7]

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[1] Climate Change and Environmental Risk Atlas 2014

[2] Madhya Pradesh: Foundation for Ecological Security (FE) and Towards Action and Learning (TAAL); West Bengal: Development Research Communication Centre (DRCSC) and West Bengal University of Animal and Fishery Sciences and WWF India; Rajasthan: Action for food Production and Rajasthan Forest Department; Tamil Nadu: DHAN Foundation, M.S. Swaminathan Research Foundation, Suganthi Devadason Marine Research Institute (SDMRI). More information on projects available here: http://www.ccarai.org/fields-of-work.html

[3] https://www.youtube.com/watch?v=ZWlwn1bz088

[4] https://www.youtube.com/watch?v=7pTeTWk9Igg

[5] https://www.youtube.com/watch?v=Wm9vm6djKuI

[6] An order passed by the Supreme Court to restrict predatory mining has restricted de-siltation of tanks in the pilot area where DHAN operates. Tank silt is an excellent source of soil moisture and nutrient used traditionally in this region. And lack of it is adversely affecting the ability of local farmers to grow. To enforce the mining ban a district-level approving agency is in place. DHAN shared the evidence collected on tank siltation, as part of the systematisation exercise, with local government agencies and were able to convince a member of the district-level approving agency to remove this ban in their area of operation.

[7] https://www.adaptation-fund.org/