

ADVANCED CENTRE FOR ENABLING DISASTER RISK REDUCTION

Research Brief 3

Rainfed Farming and Disaster Risk Reduction

Rainfed farmers in the south of India are suffering because long-steady rainfall patterns are changing rapidly. The Advanced Centre for Enabling Disaster Risk Reduction (ACEDRR) sponsored research that predicts the future trends of rainfall patterns, and offers alternative cropping patterns.

> In the month of July, if the wind blows vibrantly, there will be good rainfall. If softly, no. --Padmanaban, farmer of Sengapadai, Tamil Nadu

Rainfed farming makes up more than half of all sown land in India, provides almost all the country's pulses and minor millets, many of its oil seeds, much of its cotton and half of its cereals, and employs many poor Indians and ethnic minorities.

However, rainfed farming is on the decline in most of south India. As a result of climate change, monsoon seasons are becoming vague and unpredictable, and the threat of drought or flooding rains make rainfed farming less viable as an occupation for many farmers.

When their ability to make a living is destroyed in a disaster, some farmers borrow from money-lenders, migrate to find work, or resort to illicit trades, all of which increase their vulnerability to future hazards.

But these coping mechanisms are usually a last resort.

In the meantime, farmers protect their livelihoods by evaluating their greatest risks and arming themselves with specific, relevant, and easy-to-use techniques to minimize these risks in advance of a hazard. Many rely on traditional methods; others have developed innovative ways to reduce threats to their ability to make their living. The Advanced Centre for Enabling Disaster Risk Reduction (ACEDRR) of Tata-Dhan Academy supported the DHAN Foundation's Rainfed Farming Development Program to compile longitudinal data on rainfall patterns, analyze them and use them to come up with alternative cropping suggestions.

They also undertook three pilot studies in three agro-ecological zones where rainfed farming still thrives. In these pilots, the DHAN Foundation team documented how rainfed farmers in these areas adapt to broad and sweeping changes in rainfall patterns in the south of India.

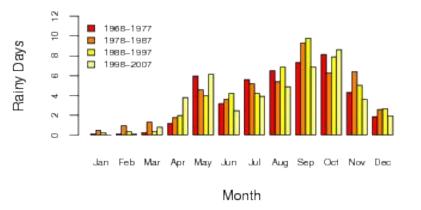
Longitudinal Research Study on Rainfall in Tamil Nadu

The research study focused on three areas of Tamil Nadu: Nattarampalli in the Vellore district, Vedaranyam in the Nagapattinam district and Tirumangalam in the Madurai district.

As part of the study, researchers compiled and analyzed 40 years of secondary data and cross checked it with the communities' own experiences. They conducted a statistical analysis of rainfall, determining how much it varied from year to year, how likely it was to fall in a given month, what the trend was, and ultimately a new length for the growing period.

The following graph shows the fluctuations in the number of rainy days, every month over the last 40 years in Nattarampalli. This data is indicative of the types of rainfall data the researchers collected in each of the study areas.

Using this data, researchers came up with alternative cropping suggestions, which they then presented for farmers in a workshop. What they learned from the workshop was surprising. Instead of accepting the researchers' suggestions for alternative cropping patterns, farmers expressed concerns about factors



Number of Rainy Days Per Month

They conducted a statistical analysis of rainfall, determining how much it varied from year to year, how likely it was to fall in a given month, what the trend was, and ultimately a new length for the growing period. besides rainfall: What about the need for dry spells in the crop period for optimum growth? What about the ability of the crop to withstand excess moisture? What about the timing of pests? Is the seed price of the crop affordable? Is the market price of the crop worthwhile?

For example, from the rainfall data, researchers determined that the length of growing period in Nattarampalli for the study area was from 29th to 47th week of the year, spanning four to five months.

But upon consulting with the farmers, researchers learned that by intercropping groundnut, redgram, ragi, sagai, gingelly, cumbi and cotton, farmers in Nattarampalli were ultimately producing crops for nine to eleven months out of the year.

The cropping pattern that farmers had come up with on their own is much more productive, and uses resources more efficiently than the cropping pattern that researchers had suggested, based only on their analysis of rainfall data.

"It indicates the ingenuity of traditional cropping patterns evolved by the local farmers over years," the research report says. "They had the ability to design cropping patterns that utilise available rainfall with intermittent dry spells, sunshine, stored soil moisture and dew for crop growth."

"It is less useful to do rainfall analysis as an isolated academic exercise," the report concludes. "It can become meaningful only if the analysis is grounded in the vast reserve of real life experiences of farmers."

Researchers also learned that though climate change is happening everywhere, it affects each village differently. "The rainfall data we have taken varies drastically from place to place," said Palanisamy, lead researcher on this study. Researchers, he said, should collect specific rainfall data from sites very close to target communities. Rainfall patterns in one village cannot be extrapolated from district level data collection sites.

Finally this research highlights that, though climate change seems like a new issue in the public sphere, farmers are well aware of climate change and have already developed coping mechanisms to reduce their disaster risk.

While some farmers have shifted their crops to more resilient varieties, many are practicing mixed cropping and intercropping. Still others are leaving their plants in the ground much longer than the regular cropping period, in case late rains might bring more bounty. The cropping pattern that farmers have come up with on their own is much more productive, and uses resources more efficiently than the cropping pattern that researchers would have suggested, based only on their analysis of rainfall data. However, the report says, "these measures are not sufficient to manage the various consequences of weather risk, and they are not available to all."

After the research was completed, researchers undertook three pilot projects, in different agro-ecological zones in south India. Their goal was to experience local knowledge and local coping mechanisms to see how they worked.

Where the researchers identified gaps in disaster risk reduction activities, they worked with communities to implement new interventions that might be more effective.

Pilot Project: Climate Change Adaptation of Rainfed Farmers in Malaipatti in Tuticorin District of Tamil Nadu

Farmers in Malaipatti work on very rich soil which holds moisture very well. Their crops are threatened by drought and desiccating winds. At the same time, despite a history of insufficient rainfall, the last two years have brought excess rain.

Farmers in Malaipatti have successfully adopted various traditional agricultural practices that have enabled rainfed farming here to continue to be profitable. The traditional agricultural practices include line-sowing by seed drill, weeding by an animal-drawn weeder called Gundu and intercropping. These are all the unique practices in Malaipatti village that have allowed farmers here to be more successful than rainfed farmers in other places.

After a major drought in 1974, farming families coped by changing their staple crop to one that better suited the dry conditions. They shifted from pearl millet to rice.

Researchers came to Malaipatti to examine the climate change adaptations and innovations that farmers in Malaipatti developed, and see whether these could be applied in other rainfed farming areas in similar agro-ecological zones.

The rainfall data that researchers had collected for Malaipatti showed a shift in rainfall patterns, with less rain during the southwest monsoon season in June, and a "significant" increase in rainfall in northeast monsoon season in November. Additionally, there was an overall increase in rainfall and in rainy days over the last five years. Finally, researchers measured the reliability of rainfall in each month. From this, they determined that September, at the beginning of the northeast monsoon season, was the most reliable month for rain.

Researchers presented their rainfall data to farmers, and asked them what kinds of projects could help farmers to make their

Where the researchers identified gaps in disaster risk reduction activities, they worked with communities to implement new interventions that might be more effective.



livings. Rather than changing their crops again, farmers said that if they had a check dam to harvest rainwater, and keep excess rain from flooding their fields, it would reduce their vulnerability to drought as well as to excess rain. It would also help reduce vulnerability to pests, since it would allow farmers to collect the excess water required to spray pesticides.

Researchers supported the farmers to form the Malaipatti Rainfed Farmer's Association. The researchers donated Rs. 61,000 to the association in order to fund this project. With this money and in this association, farmers oversaw the construction of the check dam in Malapatti.

The dam has been very useful for the 60 to 70 farming families that use it. It is also providing drinking water for livestock who can drink from it for four months out of the year.

Since this project, farmers here have expressed the need for three more check dams like this one, and for farm ponds on their own land, to collect rainwater for pesticide spraying.

Pilot Project: Climate Change Adaptation of Rainfed Farmers in the Koraput District of Orissa

Researchers found that during the last several years, Koraput—with sloping land and soil that does not hold water—has been plagued by long dry periods during the southwest monsoon and, at the same time, severe flooding during the year.

Overall, researchers determined that Koraput faced a wide variability of rainfall. Once every three years, there is a chance that it will not rain enough or that it will rain too much. Both outcomes could lead to crop loss.

After visiting the Koraput district of Orissa and speaking with farmers themselves, researchers learned that farmers have employed a number of coping mechanisms to protect their crops.

For one, they construct erosion checks gates, or longer lasting stone bunds, to protect low land farms from erosion and runoff.

By using various plant materials, farmers make small temporary erosion check gates which help to reduce the speed of the rainwater. A few farmers practice land levelling stone bunding which is a more long-term solution; however, during heavy rainfall year, damage is likely.

RESEARCH IS NOT A ONE WAY PROCESS

From a story by Elizabeth Stevens, Oxfam America

The farmers of the village of Sengapadai, in Tamil Nadu are using methods that have evolved over thousands of years to try to find the answer to this annual question: When will the rains come?

If they miscalculate, families postpone weddings, or schooling or medical care. Says 51-year-old Jakkammal, "In a bad year, there's only one meal a day."

And with climate change, predictions are getting harder. "There's been a vast difference in rainfall patterns in the last 10 years," says Jeeva Rathinam, another farmer of his own experiences. "Before that, we used to plan properly and plant one kind of seed in the fields. Now we have to mix them together and see what comes up."

The DHAN Foundation's researcher B. Arthirani, herself the daughter of farmers, gathered and analyzed 40 years' worth of local rainfall data and brought the farmers of Sengapadai together to share the results.

Rains that once fell here predictably in July, she told them, can now be expected to arrive in late August. Then she made a proposal: delay sowing peanuts until between August 10 and 16.

The farmers disagreed. Shifting to accommodate the rains could make some crops more vulnerable to

infestations of weeds and pests, and the farmers argued pros and cons of various plans. But an hour later, everyone had come to agreement: the best way to balance all the factors would probably be to repeat what they had done last year. They had planted corn in September and it had been very successful.

This is not an image of scientific research, where academics work at a comfortable distance from actual farmers, and where recommendations are conveyed to the villagers in top-down fashion. That day's discussion, which began with Arthirani's educated guess about what to sow when, ended with a practical plan that drew on knowledge from both inside and outside the community. The ACEDRR study, says Arthirani, "is not a one-way process."

Community members are not simply considered beneficiaries of the study, explained Hari Krishna. "Here, they are partners in the research. They know best about their soil, their sky, their water, and what crops suit their needs."

It is an approach that is working. By November it was clear that the shift from peanuts to corn was a big success. But there are signs everywhere of the growing security of this community—most convincingly in the confident smile of Jakkammal. The days of one bad harvest plunging the community into debt and hunger, it seems, are over. "After joining DHAN," she says, "we are able to have three meals."

Others have implemented some simple irrigation techniques including tenda, a local lift-irrigation system, and gravity-fed irrigation from nearby runoff streams. Other farmers are coping with changes in the climate by shifting to other livelihood options like wage labor.

For the pilot phase of this project, researchers used their energy and funds to help low land farmers level their land and create more stone bunds to prevent erosion, and to renovate an old well—disaster risk reduction activities that the farmers would not do without intervention. The bunds successfully controlled runoff from hard rains and protected the paddy crops grown in lowlying areas.

And while farmers use diesel operated lift irrigation system to pump water from nearby streams, the use of this pump is very costly and "in most of the places it failed," said research leader Muthusamy Palanisamy. Researchers purchased a KB-lift irrigation pump so that farmers could pump water more easily and quickly.

Researchers also showed farmers how to do "zero budget natural

farming" and to grow rice under the system of rice intensification (SRI). These methods use no chemical inputs, like pesticides or inorganic fertilizers. They rejuvenate soil and allow farmers to pocket more of their earnings.

Pilot Project: Climate Change Adaptation of Rainfed Farmers in Pudunardu of Jawadhu Hills, Vellore District of Tamil Nadu

When compared to other rainfed farmers, the tribal rainfed farmers of the Eastern and Western Ghats face additional vulnerabilities due to lack of basic infrastructure. Inadequate access to transport, communication, state services, financial markets, any markets, and inadequate opportunities of diversification into non-farm economy push residents into poverty.

Farmers here also suffer from the late onset and early withdrawal of the monsoon season, occasional dry spells or flooding during the monsoon.

In Pudurnadu, in one of the four tribal pockets of Tamil Nadu, farmers shifted their staple crop from samai to paddy cultivation because the latter allowed them to tap into subsurface water seepage.

Farmers here have also implemented some irrigation with dieselpowered engines and are producing more commercial crops, which allow them to have more cash flow in all seasons. However this in turn makes them vulnerable to complications. First commercial crops require a higher input, a higher initial investment and so are a higher financial risk for the farmers. Additionally, over many seasons, chemical fertilizers can negatively affect soil fertility.

Other farmers, with less land available, have shifted to banana cultivation, which has recently become particularly lucrative. Still others take on sheep rearing, or migrate following construction work in the lean season, as a second source of income.

Researchers in this pilot tried to implement the coping mechanisms already used by farmers, in order to "understand the nitty-gritty of their implementation," and to determine if the practices were sufficient. This group used their funds to help farmers level land, clean out their wells and rear sheep.

While the researchers appreciated the disaster risk reduction strategies of farmers, they were able to identify areas where interventions might help. They suggested that the creation of a seed bank, the establishment of community-based financial services to help farmers save and reinvest, and the availability of Inadequate access to transport, communication, state services, financial markets, any markets, and inadequate opportunities of diversification into non-farm economy push residents into poverty. insurance might go further to help farmers build resilience.

The researchers also offer that it might be useful for farmers to have a rope pump for irrigation, to diversify into higher value horticultural crops, to market their crops as organic to the budding market of consumers interested in organic food, and to improve transportation facilities.

The lessons learned in each of these rainfed farming pilot projects will inform the ongoing work of the DHAN Foundation's Rainfed Farming Development Programme. Each project helped researchers identify new activities, interventions and methods for DHAN's Rainfed Farming Team.

Conclusion

This research project and the supporting pilot projects demonstrate that research for disaster risk reduction cannot be conducted in universities alone. It must be checked against rural people's own perceptions of reality.

This will be done more often when researchers change the paradigms by which they work; when they understand that rural people, who may not have university degrees, do have a kind of expertise. They are the experts in their own strengths and vulnerabilities, in their needs, and in their shifting climates.

Only when research is done in partnership with the research subjects, in this case rural rainfed farmers, will the research do more than sit on a shelf or inform other research. Only then will it actually reduce the risks that these people face everyday, and help them to build resilience in the face of future hazards.

Recommendations for the Government

Because rainfall varies so drastically from place to place, researchers suggest that the government should establish reliable rainfall recording stations very close to target areas. Tamil Nadu's rainfall recording stations at the Thaluk level are not widespread enough to be useful. Researchers recommend that the government create a network of rain gauges, as is being implemented in Karnataka.

Recommendations for Universities

Universities collect scientific data that could help rural people cope with climate change more effectively. But to be successful, they need to apply micro-level research methods to understand village experiences and coping mechanisms. Researchers can act as facilitators between rural villages and the scientific world, by validating and disseminating good local practices, and by making scientific knowledge applicable and relevant at the local level.

This research project and the supporting pilot projects demonstrate that research for disaster risk reduction cannot be conducted in universities alone. It must be checked against rural people's own perceptions of reality.

Project Summaries

Coping with Disasters: Participatory Designing of Efficient Cropping Patterns for Rainfed Locations

Objectives

- To evaluate the existing cropping pattern for its strengths and weaknesses with regard to available rain.
- To identify the potential component crops and a new cropping pattern given the realities of rainfall trends.
- To develop a new cropping pattern that is socially and economically viable and environmentally adaptable.

Methods

- Researchers ensured effective participation of community at different stages of the research process like data collection, checking the inferences from secondary data analysis, identification of alternate crops and validation of recommendations.
- Researchers collected primary and secondary data, including rainfall data from the nearby India Meteorology Department (IMD) station and rainfall and Evapo-transpiration (ET) data from nearby research station.
- Researchers also collected information regarding existing cropping patterns, rainfall requirement of particular crops, strengths and weaknesses of existing cropping patterns, and change in cropping patterns over the years. Suitable alternative crops were collected from the farming community through workshops and focus group discussions.
- Researchers used the following methods for analyzing the data: coefficient of variation; initial and conditional probability levels; trends of the rainfall; length of growing period.

Outcomes

 In-depth understanding of rainfall pattern like distribution, dependability and changes over the years by the team members of RFDP and community. Identification of best practices and gaps related to the existing cropping patterns with respect to utilisation of rainfall.

- Suggestions for changing cropping patterns to optimally utilise the current rainfall pattern.
- Enhanced skills and knowledge on rainfall analysis by a few team members.

Lesson Learned

- Because farmers design cropping patterns by taking into account factors beside rainfall (the need for dry spell in the crop period for optimum growth, the ability of the crop/variety to withstand moisture stress/excess moisture, the ability of the crop to use dew, the soil moisture availability), rainfall analysis should be grounded in the vast reserve of real life experience of farmers, through repeated structured interactions with them, both for data inputs and for reality checking of the inferences.
- Though climate change is happening everywhere, it affects each village differently. "The research we have taken varies drastically from place to place," said Palanisamy, lead researcher on this study. Researchers should collect specific rainfall data from sites very close to target communities. It cannot be extrapolated from district level data collection sites.
- Though climate change seems like a new issue in the public sphere, farmers are well aware of climate change and have already developed coping mechanisms to help themselves reduce their disaster risk.

What is next?

After the project was completed, researchers completed pilot projects with three disparate regions to look examine at micro level coping mechanisms in order to determine more useful recommendations than those in this report. These pilot projects are profiled in the pages to come.

Disaster Mitigation Measures among Tribal Rainfed Farmers of Pudurnadu of Jawadhu Hills, Vellore District

Objectives

- To identify and understand various disasters faced by the tribal rainfed farmers in Pudurnadu.
- To identify and understand various measures adopted by the farmers to manage the negative impact of various disasters and the gaps in the same.
- To pilot a set of intervention measures, to evolve an effective model of disaster preparedness relevant to the agroecological and socio economic setting.
- To experiment with new sets of disaster mitigation measures among the farmers.

Methods

- Project holders conducted focus-group discussion and key informant interviews as the main participatory rural appraisal techniques. Researchers supplemented these with observation of farming and with interactions between project staff and the tribal community for the past one and half years.
- Project holders piloted selected activities already used by the tribal farmers for coping with the risks faced by them for validating their relevance as disaster preparedness measures.
- After finalizing the results of the study and conclusions, project holders will conduct workshops for various stakeholders in order to validate what was learned from the pilot project.

Outcomes

- Identifying climate-related issues faced by the tribal rainfed farmers.
- Understanding the rainfall changes over the last 40 years.
- Understanding various coping mechanisms adopted by the farmers.
- Evaluating the various coping mechanisms to determine

effectiveness, suitability and scope for replication.

• Pilot testing intervention measures to enhance the disaster preparedness of the tribal farmers in Pudurnadu pocket.

Lesson Learned

- Farmers here have developed a number of coping mechanisms to deal with unpredictable rainfall including: producing commercial crops, which allow them to have more cashflow in all seasons, shifting to banana cultivation, which has recently become particularly lucrative, taking on sheep rearing, and migrating following construction work in the lean season as a second source of income.
- The creation of a seed bank, the establishment of community-based financial services, the availability of insurance, a rope pump for irrigation, a strategy to market crops as organic to the budding market of interested consumers, and improved transportation facilities might go further to help farmers build resilience

What is next?

The project holders will evaluate the above-mentioned measures to determine whether they will suit farmers in the study area. Then project holders will begin the process of implementing these measures.

Disaster Preparedness for Tribal Rainfed Farmers of Koraput District in Orissa

Objectives

- To identify and understand various disasters faced by the rainfed farmers in the Koraput district of Orissa.
- To understand traditional coping practices to mitigate the disaster vulnerability and preparedness relevant to the agro-ecological and socio -economic situations of Koraput, validate them and share them.
- To understand various measures adopted by the farmers to manage the natural disasters and identifying the gaps in disaster preparedness.
- To develop site specific disaster mitigation measures and implement these with farmers association. To identify a suitable package of practices

for crops grown in Koraput district.

Methods

- Project holders collected quantitative data and qualitative field-level data in focused group discussions and interviews from three different blocks namely Koraput, Similiguda and Borigumma of Koraput district, to understand the farmers experience on rainfall distribution.
- Project holders compared this with the rainfall data collected from the rainfall recording station.
- Project holders worked with farmers in Koraput to determine their perceived needs and to meet some of those needs.
- Project holders then determined gaps in disaster risk reduction coverage and made recommendations to full those gaps.

Outcomes

- Level farmlands and more stone bunds to prevent erosion, which successfully controlled runoff from hard rains and protected the paddy crops grown in low-lying areas.
- Renovated old well
- New KB-lift irrigation pump to help farmers pump water more easily and quickly.
- Farmers trained in "zero budget natural farming" and the system of rice intensification, methods which use no chemical inputs, and which rejuvenate soil and which allow farmers to pocket more of their earnings.

Lesson Learned

- Farmers in Koraput have employed a number of coping mechanisms, including erosion checks gates, or longer lasting stone bunds, to protect low land farms from erosion and runoff, and simple irrigation techniques including tenda, a local liftirrigation system, and gravity-fed irrigation from nearby runoff streams.
- Other farmers are coping with changes in the climate by shifting to other livelihood options like wage labor.
- A new KB lift-pump irrigation system, zero budget natural farming techniques and the system of rice

intensificiation (SRI) could further help these farmers cope with climate change.

What is next?

As a result of this research, the Rainfed Farmers Development Program of the DHAN Foundation will continue to support the farmers of Koraput, not just by the methods described above, but also in promoting dryland horticulture like tamarind, live fencing to the agricultural field, and mutual crop and livestock insurance.

Disaster Preparedness and Drought Mitigation in the Rainfed Areas of Tuticorin District, Tamil Nadu

Objectives

- To understand the cropping pattern followed in the black cotton soils of Tuticorin district.
- To understand the rainfall pattern and length of growing period of the study area.
- To understand the natural calamities such as drought and flood which affect the crop yield in the rainfed areas.
- To document the drought mitigation strategies and coping mechanisms of the community.
- To identify and pilot the buffer activities to mitigate the disasters.

Methods

- Conducted participatory rural appraisal techniques like social mapping, seasonality mapping, time line and focus group discussion (to understand the cropping patterns, risks, and potential pilot activities); conducted key informant interviews to understand the project area as whole.
- Collected rainfall data from the nearest weather station at Agricultural Research Station, Kovilpatti to validate some of the changes mentioned by farmers.

Outcomes

 From this study, the effects of climate change on rainfed agriculture of Malaipatti village has been understood.

• Researchers supported the farmers to form the Malaipatti Rainfed Farmer's Association. The researchers donated Rs. 61,000 to the association in order to fund this project. With this money and in this association, farmers oversaw the construction of a check dam in Malapatti, which has been useful for the 60 to 70 farming families that use it, and provides drinking water for livestock.

Lesson Learned

 People in Malaipatti face the risks of drought, insufficient rainfall during emergence of seeds, heavy wind and excess rainfall during the boll formation and boll bursting stage of cotton, heavy rainfall during harvest of pulses like green gram and black gram.

- Because of these problems, farmers face crop loss in some years.
- Farmers also have some coping mechanism like changing the cropping pattern and changing cultivation practices according to the change of rainfall pattern. Farmers adjust the date of sowing according to the rainfall behaviour. Intercropping is one among the best practices farmers follow to manage climate-related risks.

What is next?

Farmers expressed a desire for more check dams in another three places and for farm ponds in their own lands. This would allow them to harvest and store water, leading to better crop yield even during deficit rainfall years. Farmers could also benefit from planting droughttolerant horticultural tree crops. The Rainfed Farmers' Development Programme at the DHAN Foundation will use this pilot to identify new interventions and improve existing interventions.

Project Holder

Rainfed Farming and Development Programme, DHAN Foundation 18, Pillaiyar Koil Street, S.S Colony, Madurai-625 016 Tel: +91-452-2610794, 2610805 Fax: +91-452-2602247 Email: rfdp@dhan.org Website: http://www.dhan.org

Project Funding Support

OXFAM America Global Headquarters 226 Causeway St., 5th Floor, Boston, MA 02114-2206, Fax: (617) 728-2594

Brief compiled by Kate Tighe. Edited and designed at Tata-Dhan Academy.

ACEDRR

The Advanced Centre for Enabling Disaster Risk Reduction (ACEDRR) is a specialized centre of Tata-Dhan Academy established to enhance the knowledge and practice on disaster risk reduction through research and pilot projects, training and education, networking, consultancy, and policy advocacy activities to ensure secured lives and livelihoods of vulnerable communities.

Tata-Dhan Academy

Tata-Dhan Academy is promoted by DHAN Foundation, a pioneering grassroots organization, and Sir Ratan Tata Trust, Mumbai, to identify, nurture, and groom young graduates into development professionals through its flagship two-year Programme in Development Management. The Academy offers a number of short-duration Development Management Programmes and undertakes research, documentation, and consultancy services.

DHAN Foundation

DHAN Foundation works with about 8,50,000 families in 12 states of India, striving to improve the lives and livelihoods of vulnerable communities by organizing them to reduce poverty and address their various development needs. The interventions are spread across urban, rural, coastal, and tribal contexts. DHAN works in different thematic areas including microfinance, tank-fed agriculture, information and communication technology for the poor, and local self-governance.

Tata-Dhan Academy

T. Malaipatti, Thenkarai (PO), Mullipallam (SO), Solavandhan (via) Madurai -625 207, Tamil Nadu, India Tel: +91-4543-293405/406, +91-452-2301510 Fax: +91-452-2602247 Email: tatadhanacademy@dhan.org Website: www.dhan.org/acedrr