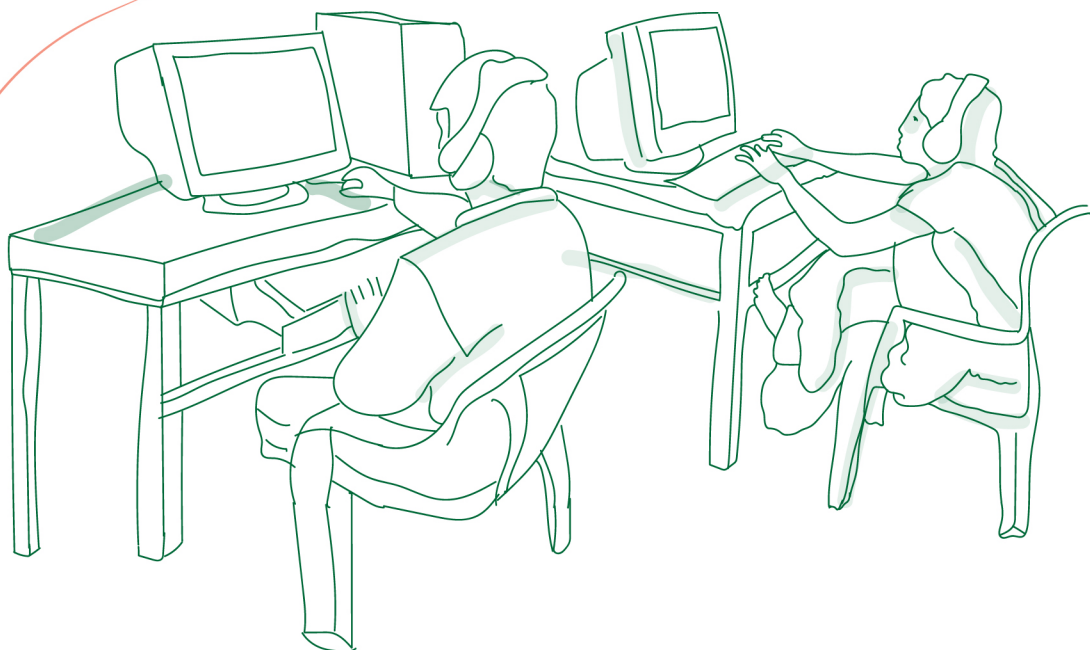# STORIES OF
CHANGE

2019-2020

Case Studies on
Development Action and Impact

Azim Premji University Publication

Stories of Change: Case Study Challenge

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Stories of Change:
Case Study Challenge

Azim Premji University

Modern India has a history of a vibrant and active social sector. Many local development organisations, community organizations, social movements and non-governmental organisations populate the space of social action. Such organisations imagine a different future and plan and implement social interventions at different scales, many of which have lasting impact on the lives of people and society. However, their efforts and, more importantly, the learning from these initiatives remains largely unknown not only in the public sphere but also in the worlds of 'development practice' and 'development education'. This shortfall impedes the process of learning and growth across interventions, organizations and time.

While most social sector organizations acknowledge this deficiency in documentation and knowledge creation, they find themselves strapped for time and motivation to embark on such efforts. Writing with a sense of reflection and self-analysis which goes beyond mere documentation and creates a platform for learning requires time and space. As a result, their writing is usually limited to documentation captured in grant proposals or project updates or 'good practices' literature with inadequate focus on capturing the nuances, boundaries and limitations of action.

Recognizing this need, the Azim Premji University launched 'Stories of Change: Case Study Challenge' with the objective of encouraging social sector organisations to invest in developing a grounded knowledge base for the sector. We are delighted to report

that in the inaugural year of this challenge (2018 – 19) we received 95 cases, covering interventions from education, sustainability, livelihoods, preservation of culture and community health. The target groups included adivasis, small farmers, children, women, youth and differently abled persons, among others. Through a two–stage evaluation process, the university selected 3 winners and 3 special mentions for the 2018-19 Stories of Change Challenge. In addition, we have selected 4 additional submissions, which together with the cited winners, is appearing in this jointly published compendium.

We hope that educators and practitioners alike find these stories valuable in their multiple engagements: influencing policy, building capacity of practitioners, documenting good practices for future learners, providing space to practitioners in teaching, collaborative research and even incubating new ideas for social change.

Acknowledgments

This compendium is a result of Azim Premji University's 2018 – 19 'Stories of Change: Case Study Challenge'. We thank all the organizations who submitted their stories from the field for this initiative. We appreciate the time and effort they have spent in developing the cases.

We had a two – stage evaluation process to select the ten submissions included in this compendium. We deeply appreciate the 19 colleagues from Azim Premji Foundation who agreed to review all the 95 submissions and shortlist the best ones. Their names, in alphabetical order, are: Anchal Chomal; Annapurna Neti; Aparna Sundar; Arima Mishra; Ashok Sircar; Geetisha Dasgupta; Himanshu Upadhyay; John Kurien; Kade Finnoff; Malini Bhatacharjee; Manjunath SV; Manu Mathai; Nazrul Haque; Puja Guha; Rahul Mukhopadhyay; Rajesh Jospeh; Richa Govil; Saswati Paik and Shreelata Rao Seshadri.

Annapurna Neti, Ashok Sircar, Malini Bhattacharjee, Rajesh Joseph, Rahul Mukhopadhyay and Shreelata Rao Seshadri are also the authors of the introductions for the 5 themes in this compendium.

Multiple individuals from the 10 organizations selected for this compendium worked closely with University team as well as with the copy editor, Malini Sood, to arrive at the final print-ready versions of their cases. All of them took out time from their busy schedules and were always very prompt and serious in their engagement. This compendium is a reality only because of each of those individuals. We are also grateful to Malini for her very professional and careful language editing.

Throughout the entire initiative – from publicity and outreach about the case study challenge to final design and page layout of this book – our colleagues from the Communication Team supported and helped at every step. Thank you, Sachin Mulay, Radhika and Nanit for making this happen.

Finally, Anurag Behar, the Vice Chancellor of Azim Premji University, has been very supportive of the Stories of Change initiative. Our Registrar, Manoj P was, as always, enthusiastic and encouraged us to imagine the task at a bigger scale than we had planned earlier. We want to thank Anurag and Manoj for their continuous support.

This is the first Volume of our proposed 'Stories of Change: Case Studies on Development Action and Impact' series and we want to continue this effort in the future as well. We hope this book will reach the intended audience – educators, researchers, practitioners, policy makers as well as students of development – and will be regarded as a persuasive and authentic account of the Indian social impact ecosystem. Readers can write to us at case.study@apu.edu. in with their valuable comments, suggestions and reviews so that we can improve our next editions. Thank you for reading and look forward to hear from you.

Setting the context

1. Case studies on Community Mobilization efforts

Community mobilization has been celebrated by governments, grassroots organizations and international finance institutions as one of the key vehicles for improving development outcomes. One of the reasons is that community mobilization by its very nature induces a certain degree of participation amongst the recipients that in turn leads to empowerment of the community. This becomes particularly important to acknowledge in societies which are marred by inequalities of caste, gender, religion and class.

However, in recent decades, there seems to have been a re-thinking about the value of community mobilization and participatory approaches to development. Part of this scepticism seems to have emerged from the fact that we have witnessed a series of changes in the development sector that are often collectively referred to as 'NGOisation'. In the specific context of community mobilization, it is argued that several NGOs have sought to 'induce' participation in order to empower communities. Critics have argued that an artificial approach such as this which has circumvented the 'spontaneity' and 'organic' nature of community participation has prevented any substantive empowerment on the ground as most of these programmes continued to be owned and directed by the donor organizations. It is in this context that it becomes interesting to observe the two case studies that highlight how community mobilization has been instrumental in making legal aid accessible in one case and facilitating empowerment of youth in another.

The first intervention, titled 'Raan Rede' (literally meaning "radio of the jungle"), involved the establishment of a community radio in Dang district of Gujarat to empower the Adivasi community through access to legal aid and rejuvenation of their own culture. The intervention was designed by the Centre for Social Justice (CSJ). The intervention was designed to encompass the entire cycle of action from awareness- generation, to identification of issues that the community was faced with, to following it up with a mechanism for rights intervention through the Kanooni Salah Kendra. As the case explicitly states, the intervention sought to utilize the potential of community radio to advance the political/democratic free speech movement in India. The intervention facilitated the active participation of members in a follow up discussion after the radio broadcast, led by the volunteers and moderators of the Raan Rede team. A conscious effort seems to have been made to embed the intervention in the Dangi culture so that people did not feel alienated. The intervention also recruited volunteers from the Dangi community itself, allowing people to take charge of their own problems by facilitating an interface with the Kanoon Salaah Kendra.

In recent years' youth mobilization has emerged as an important element of community mobilization and its impacts are being considered important especially since youth form a significant segment of the population. In this context, the case study of Youth for Unity and Voluntary Action (YUVA)'s explores an innovative intervention in Malvani, a suburb in north-western Mumbai. What is interesting in the case of YUVA is that unlike other transnational development bodies that primarily partner with educated youth by tapping into the network of schools and colleges, they are working with the most marginalized sections of the youth who are either illiterate or semi-literate and belong to the most underprivileged sections of society. As in the case of 'Raan Rede', here too, the intervention's emphasis lies in empowering youth through a rights-based approach by generating political consciousness, creating spaces for critical reflection and instilling values of democracy, gender justice, social justice, environment sustainability, secularism and scientific temper. The modus operandi of the programme stems from the conviction of the organization that 'those who face the

problems first-hand are the ones best suited to tackle it themselves, with adequate training and supportive knowledge'. Thus the focus is on enabling youth to diagnose and resolve their problems and taking charge of the movement and eventually driving it independently.

In both the cases therefore, the emphasis on promoting a rights-based discourse is easily discernible. Neither organization seems to have shied away from taking the political route in confronting and resolving social problems, though in the case of the Centre for Social Justice it seems clearer. Both the organizations seem to be driven by a conviction that development can be sustainable only when the community is made aware and empowered to take charge of its own well-being. In both the cases, the organization believed and made it possible for the community to take over the intervention and make it their own by instilling self-confidence. More importantly, both the organizations displayed consistency in embedding the interventions in the spatial and cultural imagination of the beneficiaries. It is this aspect of 'organic participation' of community mobilization projects while taking full cognizance of the specific context, that both these cases make a real difference in the lives of the poor.
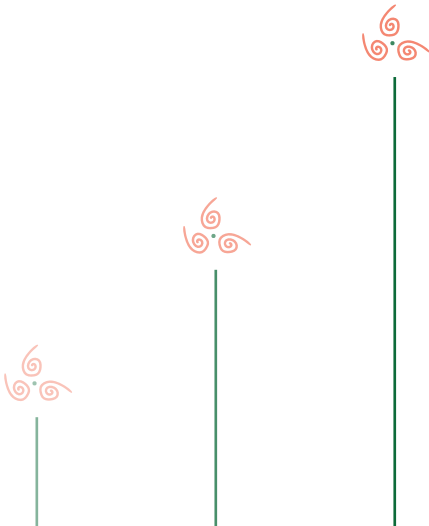
1.1 Raan Rede – Radio of the Jungle:

Experiences of Community Radio in Dang, Gujarat

Centre for Social Justice, Dang, Gujarat

Abstract :

The opening up of the radio media space, alongside other mass media, coincided with the expansion in the scope and intensification of the political and democratic free speech movement in India. This discourse, however, had been largely limited to urban discursive fields, and it is only with the growth of Community Radio that genuine free speech movements have arisen among rural communities, especially Adivasi. Raan Rede places itself as a socio-legal intervention within this environment. Located in Dang, it developed a mechanism not only for building legal awareness—the domain and mission of Community Radio per se—but also followed it up with a strong response strategy involving the local law centre, Kanooni Salah Kendra. Raan Rede's Theory of Change incorporated the dissemination of information, and, through such dissemination, the identification of rights violations which could be redressed. Being communally owned and operated by an all-Adivasi team, Raan Rede thus adopted a novel legal intervention strategy that symbiotically combines legal action–research along with strong and targeted interventions for cultural rejuvenation and empowerment. The programme's influences have continued to be felt long after its termination, and to this day it provides a strategic method to devise a cultural–legal intervention centred on the effective use of community media.

Raan Rede – Radio of the Jungle: Experiences of Community Radio in Dang, Gujarat - Introduction

The liberalization of the Indian media in general was, in hindsight, a watershed moment in the gradual advent of genuine participative democracy. As the fourth estate, it has both witnessed and ushered in unprecedented social and political changes, including increasing demands for holding political institutions to account and transparency in the functioning of public authorities. But perhaps the most significant impact has been the encouragement of free speech and expression, a constitutional guarantee and a foundational Human Right, for which the media in general is not only responsible, but on which it is also dependent. While today public media—most notably, television news—is dictated to by giant multinational corporations, and is subject to their whims and caprices, the roots of a free media and its emancipatory potential lie firmly in community-led and community- controlled media initiatives.

In this broader shift away from state-controlled media, the medium of radio became a key site for communal assertions of free speech and expression. The remoteness of large swathes of the country from metropolitan centres of capitalist development, widespread illiteracy, the expansive reach of radio waves, and cost-efficiency mean that radio is a highly relevant, effective, and appropriate choice for community-owned media across India. The stage was thus set for Community Radio. The first policy on the subject was implemented in 2002, but the availability of radio was extended only to educational institutions. Largely, this meant a lack of utilization. While radio is cost-efficient in terms of broadcast and transmission, it does entail significant capital costs, which is a barrier to entry. Educational institutions were often unable to bear this expense, leading to gross underutilization. In the four years after 2002, till the adoption of the new Policy Guidelines for Setting up Community Radio Stations in India, 2006, civil society organisations (CSOs) launched widespread advocacy efforts and demands for genuine democratization of the medium. Their advocacy proved successful. The 2006 Policy Guidelines reflect the outcome of these efforts.

With the opening up of Community Radio in 2006, three key efforts began to take root across the country (in Kutch, in Karnataka, and then in Dang). These largely focused on awareness building and information dissemination. In part, this modus operandi was driven by the limitations inherent to radio: that of its being a unidirectional communication medium. While social transformation continued apace within this dynamic, questions about the need to address violations of Human Rights could not be accommodated therein. Equally, it was understood that the genuine exercise of the rights to free speech and expression must also entail the ability to act, especially act against injustice. There was thus a need to tie in Community Radio with an effective follow-up mechanism that would address Rights violations. It was in this environment that the Centre for Social Justice (CSJ)[1] developed the Raan Rede intervention.

Raan Rede, which literally translates as "Radio of the Jungle", was an effort to build a symbiotic relationship between Community Radio and robust socio-legal intervention. It began in the Dang district of Gujarat first in 2006/07 and then again in 2011. This unique Community Radio initiative was driven and backed by CSJ's law centre in Ahwa, Dang (Kanooni Salah Kendra). The intervention thus encompassed the entire spectrum of action, from awareness-generation to addressing issues arising from within the community, to providing a follow-up mechanism for redressing Rights violations.

This case study is a snapshot of the entire Raan Rede intervention. It is organized in a roughly chronological manner, beginning with a background on Dang as a social, cultural, political, and geographic region, and the role of Community Radio as a medium of communication. It then describes the scale and conceptual foundations of the intervention, specifically its Theory of Change. It outlines the impact of Raan Rede and the challenges faced by it. It concludes with an examination of future prospects and provides a conceptual way forward based on its own experience of the intervention.

[1] The official name of CJS is IDEAL, Centre for Social Justice. IDEAL stands for Institute for Development Education and Learning.

Community Radio: A background

Community Radio is a "third way" approach to radio broadcasting. It is distanced from private or commercial interests through communal ownership, and from public broadcasting through a highly specific focus on the local community and its interests. Community Radio thus amounts to a radio broadcast or transmission service whose content is localized, contextual, and relevant to local communities, and whose ownership, operation, and control are vested in such communities.

Community Radio is thus a mechanism for enabling individuals, groups, and communities to tell their own stories, to share their own collective experience, and become creators of, and contributors to, not only independent media, but also a larger culture of democratic free speech and expression.

The World Association of Community Radio Broadcasters (WACRB) has established a list of criteria that define, determine, justify, and identify Community Radio initiatives. The criteria are:

- Community Radios promote the right to communication, facilitate freedom of speech and expression, encourage creativity and diversity, and contribute to a democratic process within a pluralist society.

- Community Radios provide educational and production-related possibilities. They encourage local creative talents, cultivate local traditions, and broadcast an entertaining, educational, and development-promoting programme for their listeners.

- Community Radios secure the ownership of the radio or radio programmes in a way that ensures that local representatives of a visible community, or an interest community, own it.

- Community Radios are editorially independent of governments, trade bodies, religious institutions, and political parties in the compilation of their radio programmes.

- Community Radios make sure that marginalized groups and minorities have access to the radio, and secure as well as promote cultural and linguistic diversity.

- Community Radios make sure that listeners receive information from multiple sources, hear multiple perspectives, and allow space for opposing points of view from each person or group.

- Community Radios are organizations that work on a non-profit basis in order to maintain their independence and are financed by a multitude of donors.

- Community Radios recognize and respect voluntary work and acknowledge the right to paid work for organizational matters and for the elaboration of working structures that are beneficial for all the people involved.

- Community Radios provide and adopt elaborate management forms, programme structures, and working conditions, which rule out any discrimination and are accessible to all the people involved, employees and voluntary helpers alike.

- Community Radios maintain communication with other community radios in order to promote and increase understanding on questions of peace, tolerance, democracy, and development.

What these guidelines establish is an identity for Community Radio that conceives of itself as radically democratic and as a space for genuine free speech and expression. Its purpose is to promote

development, and within the context of a socio-legal Community Radio, this is focused on creating legal awareness and highlighting of Rights violations. Equally, it is a means for strengthening intra-communal solidarity and developing shared ideals and normative frameworks. But perhaps most significantly—and certainly of pertinence here—is the conception of Community Radio as a democratic praxis. Community Radio is designed to promote greater democratic engagement and participation from local communities on issues that interest them, and it develops and adopts a democratic method of operation that strengthens such normative ideals. Through complete communal ownership, community-generated and community-controlled content, and deontological respect for the principles of non-discrimination, agonistics, diversity, and cultural heritage, Community Radio develops internally a space for genuine democratic participation that expresses itself in its democratic message externally. As such, it forms a basis for socio-political organization and solidarity for vulnerable communities that are otherwise marginalized.

The "third way" approach of Community Radio is especially relevant to these vulnerable communities for three reasons.

First, vulnerability is a function of discursive marginalization. Communitarian experiences of vulnerability are invisibilized, dominated by a discourse of metropolitan-centric development which relegates questions of Human Rights to a secondary position in favour of a focus on reified conceptions of a skewed national good. By bringing forth these stories and narratives, Community Radio returns the discourse of oppressed communities to a place within the broader discursive sets operating within these communities.

Second, the reification of social relations also results in the negation of cultural rights, a crucial element of the Human Rights framework. Against the onslaught of an all-conquering cultural imperialism, vulnerable communities face identitarian extinction. Cultural practices, heritage, traditional knowledge systems, and governance mechanisms are quickly rendered obsolete in the face of a totality that is identifying, on the one hand, and destroying,

on the other hand. By being rooted firmly in local cultural systems, and by promoting cultural and traditional practices and knowledge systems, Community Radio attempts to stem this tide by rebuilding partially demolished identities, shared histories, and communal cultural experiences.

Third, state-enforced laws often affect vulnerable communities in a manner that differs greatly from the way these laws affect other non-vulnerable constituencies. Laws addressing vulnerability either do not exist, or are not implemented, or act to entrench vulnerability even further. For these communities, the law does not possess the emancipatory potential it promises. It is, in fact, a tool of oppression. This is not to imply that the normative potential of legal concepts such as the Rights framework is irrelevant to these communities. Indeed, it is quite the opposite. It is because of their exclusion from the legal process and justice-delivery mechanisms that the realization of such potential remains untapped. The use of Community Radio as a means of building legal awareness around questions of Human Rights and developing this legal awareness as a basis for a thorough legal intervention is something that Raan Rede addresses and implements, seeing it as the primary mechanism for a return of vulnerable communities to the legal.

> *Community Radio for us is a means to strengthen the existing legal programme using creative means of legal awareness-building.*
>
> *- Roshan Saroliya, Radio Producer, Raan Rede*

Dang: A social and geographical context

Dang (or "The Dangs" as it is known bureaucratically) is a tribal district in the state of Gujarat, in western India. Tribal communities make up a large proportion of the population. The Bhils, Kukna (Kunvi), Varli, and Gamit are the major tribal groups in the region.

The Bhils have been residing in Dang for centuries whereas the other tribes came to Dang in search of a livelihood. The Kukna migrated to this area from the Konkan, a coastal region in Maharashtra, in southwestern India. The name Kukna and their dialect derive from their place of origin.

Historically, Dang has always been characterized by considerable social stratification, stretching back to the precolonial period. Prior to the advent of British rule, Bhil kings ruled Dang (four chiefs and ten naiks). In the first census of 1872, 7,426 Bhil, 6,517 Kukna, 2,491 Varli, and 302 Gamit were counted. In the post-independence period, the situation of the Kuknas improved, whereas the situation of the Bhils worsened. The Kuknas were in a better position to benefit from education and other welfare schemes; they dominated the forest labour cooperatives and also made use of political reservations. In this way, the division of power between Kuknas and Bhils shifted. This power dynamic continues to remain relevant in all aspects of Dangi life.

The livelihood of the people of Dang is heavily dependent on natural resources and forests, economic endowments, and institutional arrangements. Due to the hilly terrain, people have limited livelihood options; agriculture is limited, industrial activity is non-existent, and human development is poor. The primary source of livelihood for the tribal population of Dang is forest-based activities and agriculture.

Dang has an area of around 1,788 sq. km. Geographically, it is remote. As distinct from Dang district, the Dang region encompasses a larger area of broad socio-cultural homogeneity stretching from Narmada district in the north to regions of Maharashtra in the south and up to the regions of Valsad and Navsari in the west. The communities inhabiting the Dang region live in a land that is rugged, with dense forests and an undulating topography. Infrastructure is limited. Modes of transportation are difficult, and roadways are limited. This lack of accessibility has a historical dimension. During the period of colonial rule, Dang's rich forests were plundered for their lumber. The region still bears evidence of this activity; a railway

line extends from the city of Navsari (on the Bombay trade route) to Waghai (a town on the border of Dang and the rest of Gujarat). As pointed out by Ramesh Dhoom, a Radio Producer of Raan Rede, this railway line was constructed for ferrying lumber from the Dang to Navsari and thence to other regions of British India. This history of natural resource exploitation meant that successive governments invested little in infrastructural development within Dang. Such neglect extended not only to roads and bridges, but also to other state services like schools, anganwadi centres, and health centres. When the Raan Rede intervention began, Dang had a literacy rate of only 38 per cent.

Given the unique geography, topography, and socio-political demography of the region, radio proved to be the most effective mechanism for large-scale awareness building on Human Rights issues. It was accessible, cost-effective, and had a wide reach that allowed for a significantly greater impact than other forms of information dissemination such as campaigns and print media.

Criterion	Radio	Print Media	Campaign
Reach	Wide reach	Illiteracy is a hurdle	Limited reach
Involvement of target audience	Direct involvement of community	No linkage with community	Very limited community involvement
Level of entertainment	Entertaining	Lacks entertainment	Depends on campaigners
Access	Easy access	Accessibility requires effort	Terrain and topography of region makes accessibility difficult
Cost-effectiveness	Cost-effective	Expensive	Expensive
Impact	Huge impact	Limited impact	Limited impact
Scope	Vast scope	Constrained by lack of education	Specific to local area
Response	Quick response	Slow response	Pace of response varies

Significantly, the increasing human resource costs associated with a wider coverage meant that an intervention would quickly become financially unfeasible. As Roshan Saroliya, a Radio Producer at Raan Rede, observes, "The average paralegal can reach at best two villages in a day, while with radio we could reach close to 400 villages at once. The cost-efficiency of radio was thus one of its strong points." The table below highlights the relative advantages of Community Radio for effective socio- legal awareness building.

It is against this background that the Raan Rede intervention was set up and operationalized. In the following section, we delve deeper into the programmatic and conceptual underpinnings of the entire programme. As we shall see, the context of Dang, but equally also that of Community Radio as a medium of communication, deeply informed the way in which Raan Rede was conceptualized, built, and operationalized.

Raan Rede: Conceptual underpinnings, theory of change, and o\ operationalization

The team at the Dang law centre, Kanooni Salah Kendra (KSK), was already well versed with the auditory medium being leveraged to increase legal awareness and achieve social change. It had previously developed audio cassettes like 'Kayda na Dastur' which had received a positive response from community members. At the same time, the team consisted entirely of local residents and members of the Adivasi community. As such, it was best suited to tackling the complexities of Community Radio and its unique socio-cultural location. A proposal by the KSK team was supported wholeheartedly by CSJ. Thereafter, discussions and orientations were held with Drishti, an organization involved in community media, and with the Kutch Mahila Vikas Sangathan (KMVS), an organization that had operated a Community Radio before. Drishti and KMVS became part of the larger Raan Rede family and their inputs, especially during training and in terms of technical support, were significant. Due to the high

capital input costs associated with the operation of a radio station, Raan Rede chose instead to broadcast its programme from the All India Radio (AIR) station in Surat.

Central to Raan Rede's strategy was the ability of the KSK to provide a follow-up mechanism. Raan Rede was never conceptualized as a stand-alone awareness programme. The broadcast was followed

Raan Rede- studio

by concrete action, and cases of rights violations that were identified through Raan Rede (or through its influence) were handled by lawyers and paralegals at the KSK in Ahwa, Dang. The KSK was thus not only instrumental in the development and operation of Raan Rede, but it also played a significant role in making Raan Rede unique by providing it the capacity to address illegalities. It is thus pertinent to examine briefly the law centre in Dang and its unique position.

The Law Centre

Having a specific staff strength, built and based on community needs and local requirements, CSJ's law centres operate in a unique manner. The law centre is the point of interface between the community and CSJ. As such, the community identifies not with CSJ, but with the Law Centre. At the same time, in keeping with CSJ's institutional principle of building community leadership, the Law

Centres are constructed around one or more individuals from the community who have worked with CSJ and who have exhibited considerable potential of quality leadership, that is, leader-lawyers. The Law Centre is built in consultation with the leader-lawyer, and is often designed to specifically meet the needs and aspirations of the leader-lawyer. The Law Centre is at once a meta category, integrating the conceptual, theoretical, and action–-research principles designed by CSJ, and a mesa category, being the contact point with the community, with a localized and autonomous identity, and carrying forward CSJ's and the Law Centre's agenda of grass-roots lawyering.

The Kanooni Salah Kendra in Ahwa was set up in a similar mould and focused on questions of legal awareness building. As with all of CSJ's law centres, the KSK–Dang was also built around a powerful team of volunteers, paralegals, and lawyers, all belonging to Dang and the Adivasi community. Throughout all its interventions, the KSK–Dang invested leadership in senior local staff members. Senior volunteers were tasked with the mentoring and training of junior volunteers, for example. This was a natural result of CSJ's deep commitment to the communal ownership of processes of social and legal change. Raan Rede implemented this core principle in its production and broadcasting, with the entire team consisting of local residents of Dang and members of the Adivasi community. The KSK–Dang's experience of working in the region formed the bedrock of several key decisions made by Raan Rede, for example, the use of entertainment as a key part of the awareness- building programme. The team was aware that tamasha, a traditional folk drama, was widely popular and hence would be a powerful medium for building

legal awareness. However, the cost and organizational difficulties meant that tamasha was an unfeasible medium of communication.

Instead, the principle was taken and applied to Raan Rede, where entertainment and "fun" were as significant a part of the programme as were legal knowledge and information. Shows like 'Tivrapada na Tamasha' (we shall return to this later), a fictitious tale about a fictitious village called Tivrapada, became extremely popular and were a huge part of what drew community members to Raan Rede.

During the running of the programme, 'Tivrapada na Tamasha' had become so popular that often we would have community members ask us about the village and its happenings, almost as if the village actually existed.
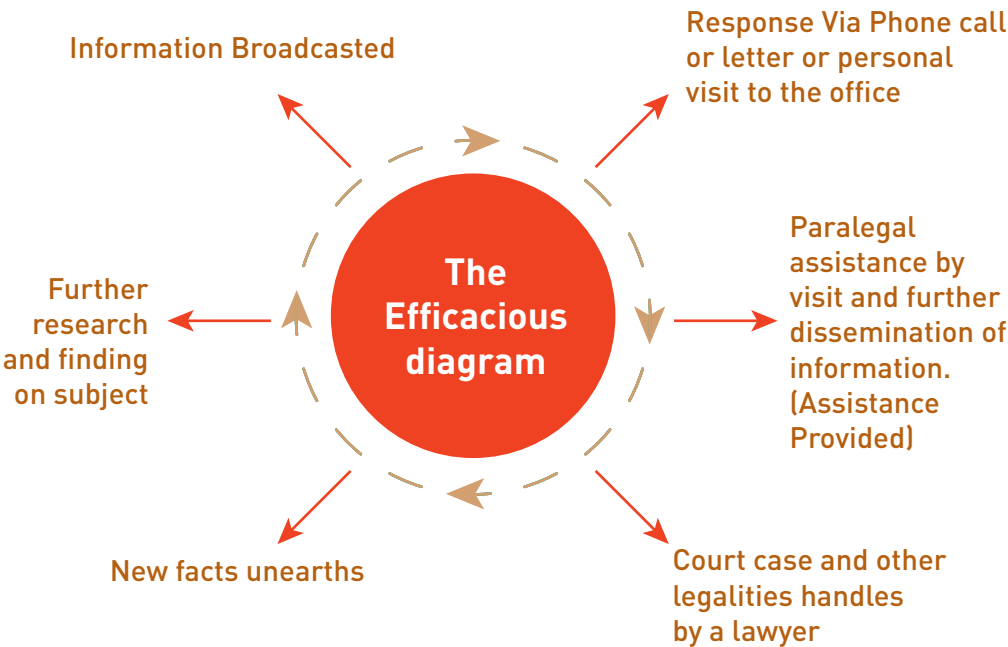
- Roshan Saroliya, Radio Producer, Raan Rede

Theory of change

While the 'Tivrapada na Tamasha' show formed a crucial part of a given broadcast or episode, underlying the development of the design was a theory of change that emphasized the circular (or rather, upward spiralling) nature of the intervention. As the diagram below indicates, Raan Rede engaged in a continually reflexive action–research process where each broadcast formed the basis for a clearly defined action strategy, which, in turn, fed and supported further information dissemination and awareness-raising initiatives. A circular or spiral framework was chosen for two reasons. First, it reflected CSJ's own organizational commitment to reflexive processes and action research (CSJ's own theory of change also forms an upward spiral). Second, a circular framework meant that the intervention was self-sustaining. There was no need for periodic external input or investment, because, through the praxis of broadcasting and response to injustice, new issues arose and were subsequently addressed. The entire framework centred on

two key issues: the development of legal and cultural awareness and the transformation of administrative systems through a constant investment in, and unrelenting focus on, public disclosure and investigative journalism. The diagram below depicts this theory of change.

The Efficacious diagram :

Information Broadcasted

Response Via Phone call or letter or personal visit to the office

The Efficacious diagram

Paralegal assistance by visit and further dissemination of information. (Assistance Provided)

Further research and finding on subject

New facts unearths

Court case and other legalities handles by a lawyer

Baseline surveys and programme design

Community Radio would be a futile and ineffective medium if it were not directly relevant to the needs of the community from which it emerges. Recognizing this, the first step towards the operationalization of Raan Rede involved a comprehensive baseline survey of 90 villages and 1,780 families in Dang and Vansda block of Navsari district. The aim of the survey was to identify folktales, folk music, stories, experiences, and ideas that could be developed into a radio programme. This process of identification was followed by

consolidation and thereafter ratification by community members, only after which was the programme content finalized.

The KSK–Dang team along with 40 volunteers conducted the baseline survey to document the cultural history of these villages. Five sub-units were formed, and each unit looked into the following aspects:

- Tamasha parties

- Folk music and local musical instruments

- Local folk artists

- Traditional conflict-resolution mechanisms

- Potential listener base

- Preferences regarding types of media consumed via radio, e.g. news, music

- Linguistic preferences

- Needs assessments based on what community members wanted to hear on the radio

- Gender-based dynamics of radio listenership, such as when and where women had access to radio
- Technical details, such as radio reception and signal strength.

The survey findings formed the core around which the Raan Rede programmes were organized. Interactions with community members revealed that they did not find the sole focus on purely legal questions relevant or helpful. However, because Raan Rede was fundamentally oriented towards socio-legal transformation, it sought to meet the needs of the community within the ambit of its larger mission. Hence, the following legal points were identified for Raan Rede programmes:

1. Basic Human Rights and Fundamental Rights

2. The role of the police, police powers, rights against abuse by the police, and knowledge of criminal procedures

3. Witch-hunting

4. Atrocities committed by the police and/or officials/guards of the Forest Department

5. Women's rights arising out of the Convention on the Elimination of all Forms of Discrimination Against Women (CEDAW), including issues of domestic violence, rape, gender-based violence, rights to parental and/or matrimonial property, and right to custody of children

6. Court and revenue administration procedures and structures

7. Rights of forest dwellers vis-à-vis forest administration and government departments

8. Implementation of the 73rd Constitutional Amendment Act, 1993 and the reactivation of Gram Sabhas

9. Disaster preparedness and management arising out of the poor implementation of the National Food for Work Programme.

While these highlight the emergence of key legal issues, Raan Rede did not rely solely on these. A host of social practices like gambling, alcohol addiction, denial of women's rights, and cheating in welfare entitlements were also addressed through a rights-based perspective. One such example was reporting on matka gambling. The main focus here was to identify information along two interconnected fields—cultural practice and legal issues. Hence, Raan Rede developed a design for its programmes that seamlessly merged identitarian and cultural solidarity with legal awareness and outreach.

The findings of the baseline survey were assessed keeping in mind the core focus of Raan Rede, that is, ensuring relevancy through cultural and legal interventions, and thereafter a design was prepared for a five-segment radio programme. This design, outlined below, underwent a process of refinement and revision based on inputs from community members. Eventually, the five segments were fitted into a 30-minute slot each. The segments were:

1. *Ai Kar* (Informative): This first segment of the programme was designed to disseminate information. New legislation (or crucial changes in extant legislation) and information about governmental welfare entitlements were discussed. Conducted largely by way of interviews, the segment served as a key source of legal awareness building during the programme.

2. *Dharai Gyas* (Investigative Journalism): Dharai Gyas (literally translated as "captured") was a crucial part of the Raan Rede programme. It focused on illegal actions or acts of omission committed by government officials, thereby observing a central tenet of any Community Radio—building and demanding accountability and transparency in administrative functioning. Atrocities committed by forest department officials, denial of welfare entitlements and governmental services, and instances of corruption and mis-governance were exposed and emphasized from within a rights- based framework. This provided a mechanism for redressal which could be sought through the KSK–Ahwa, which, in turn, resulted in increased pressure for transparency and accountability on the part of the district administration.

3. *Baarik Aash* (Case Story): The shocking accounts of governmental waste and abuse of power broadcast in the previous segment were followed by stories of how community members had acted to redress the wrongs and

injustices committed against them. The stories in this segment covered a wide gamut, from those of daily-wage earners demanding regularized wages to local women's groups petitioning transport agencies to extend a bus route to their village. This segment served to dispel the atmosphere of gloom and negativity and to counter the sense of helplessness felt on account of consistent and unrelenting oppression by the state. It shared and highlighted mechanisms, strategies, and approaches for social transformation that had been and could be undertaken by community members on their own.

4. *Tivrapada na Tamasha* (Fictional Entertainment): Raan Rede was designed keeping in mind contextual forms of information dissemination in which entertainment through fictional theatre and stories (tamasha) played a crucial role. Recognizing this, a segment was incorporated that told the story of the fictional village of Tivrapada. The village was run by a corrupt sarpanch, and the stories revolved around a group of characters, including an educated urbanized young man, a young uneducated village boy, a young girl possessing "revolutionary" zeal, a radio reporter, and a crow as the narrator. The programme provided not only an entertaining story, but its content also conveyed a critical and transformative message. For example, it was the village boy who always came up with innovative solutions and answers, something that is conventionally understood to be the preserve of the educated urban classes. Similarly, the young girl sought to break gender-based stereotypes and question rigid gender roles. Government welfare entitlements, fundamental rights, and legal rights often formed the core of the events that took place in Tivrapada.

5. *Nirop* (Outreach and Letters): Communal ownership was a central tenet of Raan Rede, which was reflected in both its design and content. This last segment supported the notion of collective ownership alongside the adoption of a speedy query–response system. The radio broadcasters read

out and discussed letters received from the community and answered legal questions, if any were asked.

Independently, these segments served multiple purposes. But their specific arrangement served to bolster Raan Rede's Theory of Change. The first segment provided information about one's rights. This was followed by a segment that identified violations of these rights. It was followed by a segment that elucidated methods and strategies to address these violations. The fictional segment provided entertainment while simultaneously addressing socio-legal questions through a traditional cultural medium. The final segment not only allowed for greater dialogue but also provided a base upon which to build the action strategy for the KSK–Ahwa.

Equally important was the decision of the Raan Rede team to locate the recording studio, production house, and administrative centre in Dang. The entire office, the studio, and the editing rooms were made from local materials and used local building practices. This was a conscious effort to enhance the sense of ownership of the programme and to encourage increased participation. It also sent out an important message, that Raan Rede projected and respected the value of traditional cultural practice and knowledge. The use of local materials to build a soundproofed recording studio indicated the suitability and adequacy of locally sourced materials that were increasingly being viewed as inferior and worthless.
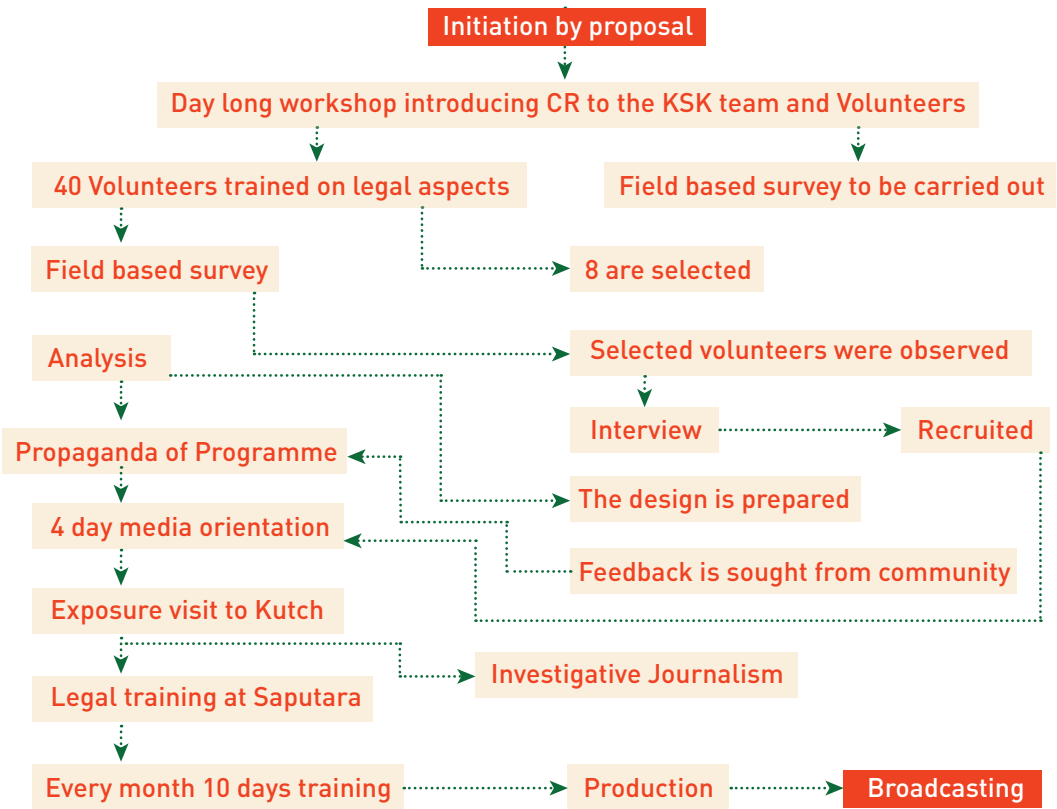
Operationalization

A fire was kindled within us and it was this fire that kept things rolling. We wanted to shake Dang from its slumber by bringing everyone together under one umbrella.

- Jagan Patel, Radio Producer, Raan Rede

Given its ambitious design and agenda, Raan Rede was certain to face significant challenges in its operationalization. A dedicated team was identified, and a systematic operationalization plan was drawn up. This plan is depicted graphically below:

Flowchart :

Initiation by proposal

Day long workshop introducing CR to the KSK team and Volunteers

40 Volunteers trained on legal aspects

Field based survey to be carried out

Field based survey

8 are selected

Analysis

Selected volunteers were observed

Propaganda of Programme

Interview ⟶ Recruited

4 day media orientation

The design is prepared

Feedback is sought from community

Exposure visit to Kutch

Legal training at Saputara

Investigative Journalism

Every month 10 days training ⟶ Production ⟶ Broadcasting

Challenges and hurdles in implementation

Considering the social, geographical, and political environment in Dang, the team was fully aware that the implementation of Raan Rede would inevitably face major challenges and hurdles. Hence, the team of trainers and coordinators from CSJ, Drishti, and KMVS were suitably prepared for what lay ahead. While technical problems were easy to anticipate owing to the complexities of radio production and broadcast, the team truly struggled, in the initial period, to

build confidence and leadership amongst Raan Rede's producers, journalists, and volunteers. Another serious hurdle was the hostile response from certain quarters. Raan Rede's novel attempts to engage in socio-legal awareness building and action research upset local vested interests and disrupted local power dynamics, resulting in aggressive responses to its presence and activities.

The challenges faced by the Raan Rede team can be arranged into four categories. These difficulties and problems are not, and were not, isolated, and the elements in each category intersected with other elements in other categories.

- Training and capacity building
- Technical and logistical issues
- Reactionary responses from groups with vested interests
- Interpersonal conflicts

Training and capacity building

While a significant amount of time was spent on training team members in the use of radio equipment and editing software, the more important task was to build the capacities of the team of producers, reporters, and volunteers to address issues through a rights-based lens and to inculcate a perspective on Adivasi identity (which remains the object of a ruthless cultural imperialism). The programme design of Raan Rede meant that effective local journalism as a practice and method had to be inculcated in the team. This proved to be a challenge because the team and the trainers struggled to acquire effective communication skills, finding it difficult to articulate and express themselves meaningfully and confidently.

Initially, it used to take me three to four hours to cover a story. But with the training provided, I could do the same in just half an hour.

- Santu Gaekwad,
Radio Producer, Raan Rede

Similarly, the development of a rights perspective and the acquisition of legal knowledge were significant challenges, and a systematic plan for legal capacity building and trainings in a phased manner were instituted by CSJ and the KSK–Ahwa.

Training needs changed constantly and often shifted from day to day. Alongside trainings and capacity-building efforts, the preparation and groundwork for setting up the radio and overseeing all the logistics continued unabated.

We took trainings during the day and worked late into the evenings. That is how we overcame time constraints and ensured that the project took off on time.

- Ramesh Dhoom,
Radio Producer, Raan Rede

In the process of confidence building amongst the participants, I constantly built my own. At every stage, their questions remained, "Will it happen? Can we do it?"

- Mehul Makwana,
Media Trainer, Drishti

Technical and logistical issues

Developing the capacities required to use radio equipment effectively was a challenge for the Raan Rede team. Computer trainings to develop the skills required for editing and producing episodes took significant amounts of time and effort. Members of Drishti provided consistent trainings and technical support. KMVS's experience of operating a Community Radio in Kutch was leveraged to identify crucial gaps or spaces where concrete technical training was needed. Owing to the physical features of the region as well as the backgrounds of the members of the Raan Rede team, it took time to develop computer proficiency and technical skills.

> *For the first time in my life I saw a computer. I thought it was a television set. But soon I learnt how to operate it and today I feel proud of myself when I sit at a computer desk and edit an entire episode for my radio.*
>
> *- Sunita Bagul,Radio Producer, Raan Rede*

Alongside such problems, logistical concerns dogged Raan Rede right from the outset. First, the difficult terrain in Dang meant that the range of the radio broadcast was limited and weak and often faced problems. Raan Rede was broadcast from a radio station in Surat. This meant that in certain regions, because of the hilly terrain, radio reception was intermittent. Second, the weather was another complicating factor. During periods of heavy rainfall, especially during the annual monsoon, the quality of radio reception suffered, thus making broadcast difficult. Finally, the Raan Rede team had to deal with major logistical problems. With production taking place in Dang and the broadcast taking place in Surat, the team struggled to arrange the logistics of moving programme material once produced to the Surat station for broadcast.

Responses of vested interest groups

The nature of the issues with which Raan Rede engaged, and the discourse that this generated, inevitably upset local power dynamics. The local mafia, the district administration, the police, the forest department, and local micro-political powers were taken aback by the powerful socio-legal mobilization generated by Raan Rede. The reactionary responses from these groups were expected, and occurred as anticipated. The team uncovered instances of corruption in government schemes, racketeering, etc. and the broadcasting of these investigative pieces provoked a serious backlash. In one instance, Jagan, a producer at Raan Rede, was assaulted by members of interest lobbies regarding investigations conducted by Raan Rede on cheating and organized crime in local gambling practices. In the initial phases, it was difficult to conduct a dialogue with the district

administration and other government bodies. This was partly because of the transformative potential of Raan Rede. Government officials were wary of its power and thus chose to stay away.

Interviews with government officials and institutions were a problem during the first stage. They were very reluctant to speak to us. But now they simply cannot ignore us any longer.

- Dilip Gayen,
Radio Producer, Raan Rede

Interpersonal conflicts

Raan Rede as a programme was collectively owned. This meant that the rigid hierarchies that usually define most other endeavours even within the socio-legal sector did not exist. While this has had tremendous benefits (many of which have been discussed earlier), it has also meant that there was constant negotiation over responsibilities, roles, duties, and, most importantly, boundaries. Intrinsic to the structure of Raan Rede was the potential for interpersonal conflict, primarily ego clashes and conflicts arising from self-designated importance. Instead of dedicating huge amounts of time to establishing procedures or setting up mechanisms to avoid this entirely, the Raan Rede team recognized these conflicts as a central, and inescapable, part of a communally owned programme. To develop a working mechanism built around this reality was the key challenge.

Scale, content, and outreach

At its peak, Raan Rede had a listenership of over one lakh individuals. However, the fact of not holding ownership of a radio station, and only possessing broadcast rights at another station, meant that Raan Rede was subject to the scheduling whims of the station. This had a large impact on listenership, since Raan Rede's programme was designed to be broadcast at particular times in

order to maximize listenership. The programme was broadcast from 6.00 p.m. to 7.00 p.m. This slot was chosen because it allowed for maximum listenership by women. By 6.00 p.m., women had completed their work in the fields and at home and were in a position to gather at a central location in the village as a group to listen to the radio. However, with changes in scheduling, this advantage was lost. Equally, over time, the influx of commercial radio and commercial programming on television meant that Raan Rede faced increasing "competition" and had to vie for a listener base that was increasingly divided between commercial radio, commercial television, and Community Radio.

At its peak, Raan Rede reached more than 400 villages. This included all the 311 villages in Dang, along with several villages in Valsad, Navsari, Surat, Narmada, and Tapi districts. Across the border, in the state of Maharashtra, villages bordering Dang also received these broadcasts, and because the people in all these areas spoke the same language, the transformative message of Raan Rede reached the residents of these villages as well.

The programme content itself also responded to contextual needs, topical issues, and emerging concerns. For example, the National Rural Employment Guarantee Act (NREGA), 2005 was taken up as an issue during the summer months since that is when NREGA work is most needed, as agricultural land is in between crop cycles. Similarly, it is during Diwali and Holi that instances of witch-hunting increase in number, and so the programming focused
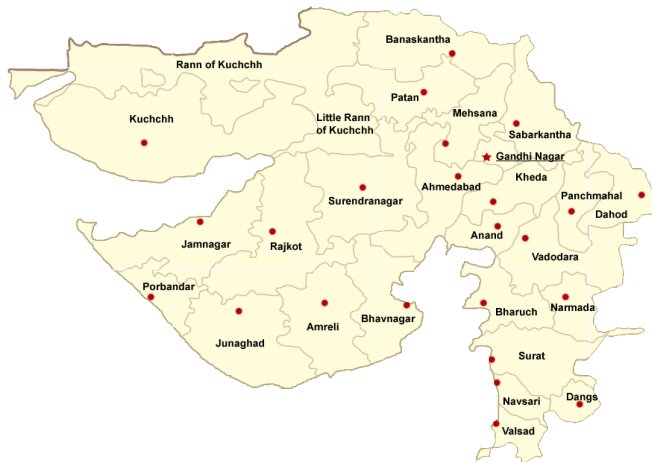
Raan Rede-village visits

more on this issue during that period. Broadcasts just prior to the Dang Darbar, an annual festival, focused on the darbar and reduced the number of other segments that they carried. Similar special programmes were made on events like International Women's Day. Even the fictional segment 'Tivrapada na Tamasha' was written keeping in mind local temporal contexts. The baseline survey and the experiences of the Raan Rede team helped in developing such a framework and in identifying time- or season-specific issues, themes, and events.

Central to the efficacy of Raan Rede was the establishment of listener groups in villages that came together and listened to the programming at the scheduled time. The listener groups were facilitated and moderated by members of the Raan Rede teams and by volunteers. These groups were central to the completion of the circular framework of Raan Rede's Theory of Change. It was primarily (though not exclusively) through these listener groups that cases of injustice emerged on which the KSK–Ahwa could follow up. Facilitators and moderators in each listener group were given information about the content of the broadcast beforehand and would arrive for the listening session with a prepared list of questions. After the broadcast was over, they asked these questions and held a discussion on the content of the broadcast. Through

these discussions, instances of rights violations were identified, and specific advice was either provided then and there, or members of the KSK–Ahwa were contacted who would then pursue the cases. Without the listener groups, the radio would have been a one-dimensional medium, with no effective local participation and with no scope for redressing wrongs. These groups played a crucial role in developing Raan Rede as a dialogic, reflexive process.

We all get together on Thursdays and listen to the radio. It is being broadcast for us and the information given is very useful. It has changed the lives of many in our village.

- Representative, Women's Group, Halmudi village (via phone)

Impact: Historical and continuing

It is often difficult to quantitatively assess the impact of a programme focused on socio-cultural transformation that uses recourse to the law as a key strategy. Changes brought about by such programmes are largely indirect and continue long after the programme itself has come to an end. And so it has been with Raan Rede. The impact is mostly qualitative and pertains in the most part to shifts in the ways in which community members relate to themselves, to each other, and, most importantly, to the state. For this reason, we have outlined below the impact of Raan Rede in four key relational spaces: the individual, the family, the community, and the state.

Individual

The radio producers, reporters, and volunteers of the Raan Rede team become powerful change agents within their communities. Developing crucial leadership and communication skills, specifically honing their ability to articulate and effectively explain complex

issues, helps them increase their leverage and raise their status within their communities. They use this position to propagate a rights perspective and a perspective on Adivasi identity and the Adivasi condition as one of multiaxial oppression. To this day, they remain influential community leaders and have taken up positions of leadership not only within the community and in the space of community practice, but also in several government bodies and civil society organizations. For example, Mangalaben Pawar, a Radio Producer with Raan Rede continues to remain engaged with the KSK–Ahwa through her work in Nirgunmad village.

> *I was so shy that facing a group of five people used to give me goosebumps. But today I can effectively cover a group discussion in any village.*
>
> *- Mangalaben Pawar, Radio Producer, Raan Rede*

As members of the Raan Rede team, community members gained confidence in taking on and challenging government authorities as well as in developing soft skills like conducting interviews, structuring discussions, and organizing village meetings and visits. Savita Rathod, a radio producer at Raan Rede, was instrumental in exposing the theft of grain from the Public Distribution System, following up with the police and ensuring that the appropriate legal procedures were followed.

> *I learnt the style of interviewing, how to start and bring out an objective from the talk. Initially, it was just a set of questions I asked, but after a couple of stories, things changed and I got the hang of it.*
>
> *- Savita Rathod, Radio Producer, Raan Rede*

Family and community

Individual transformation is the force for change within the family and the community. Raan Rede's effective follow-up mechanisms as well as its programming format meant that the broadcast itself was a source of inspiration for communitarian or filial action. For instance, Sangita Dhoom, after listening to the Raan Rede broadcast, approached the KSK to address the domestic violence she suffered at the hands of her husband and in-laws, and with the assistance of the KSK–Ahwa she reached a settlement with her spousal family. Similarly, Urmila Pawar from Mali village, after being inspired by Raan Rede, took up a powerful leadership role amongst the women in her village to fight gender-based violence. Community members also approached the KSK–Ahwa with instances of injustice on the basis of which cases were filed. Santuben Gavit, for example, approached the KSK– Ahwa in connection with a case related to her land.

But by far the most significant shifts occurred in how community members developed a rights perspective and engaged in collective action to redress injustice. In Vanza Tamba village, youths from the community rallied together to address corruption under the NREGA. In Khanpur, three young community members approached the KSK–Ahwa to better understand the law relating to witch-hunting and organized (with the help of a KSK paralegal) a meeting in the village to discuss the law and the penal provisions under it. The incident of grain theft from the Public Distribution System identified earlier also spurred similar vigilance and efforts to enforce accountability and transparency from women's groups in other villages.

Equally, the subject matter of Raan Rede's broadcasts also had larger meta-impacts. It was instrumental in the inculcation of a rights perspective amongst its listener base, chiefly a cultural rights discourse that identified, upheld, and promoted Adivasi cultural practice as a question of Human Rights. Dangi society has faced, and continues to face, the powerful force of "Hinduization". Raan Rede became an effective force in combatting this force and in re-centring

traditional Cultural practice and knowledge systems as the core of Adivasi identity. The use of radio also meant that this transformative message reached the youth, and the legal empowerment and mobilization of Dangi youth was possible through Raan Rede. Most significantly, Raan Rede engendered a communal sense of ownership. By building solidarity across villages on the basis of a shared experience of oppression, it provided a basis for mobilization, inspiration, empowerment, and resources for collective action.

State

Communal transformation and collective action inevitably led to demands for systemic change. Community members quickly realized that they were caught in a brutal and corrupt system of governance that did not listen to them and that continues to ignore, neglect, and marginalize them. But collective legal action, with support from the KSK–Ahwa, was instrumental in bringing about systemic transformations in some areas. In Bhendmal village, for example, Shailesh Gavit approached the KSK–Ahwa with a complaint against the secretary of the local milk cooperative, after listening to Raan Rede. With help from the KSK–Ahwa, the community in Bhendmal successfully restructured the milk cooperative to oust the secretary. Alongside community members who were inspired to take collective action, government functionaries (who were themselves community members) were also deeply influenced. A forest department official, who chose to remain unnamed, wrote a letter to Raan Rede exposing the jungle mafia. This information was aired and it spurred widespread collective action demanding the people's rights to forest produce.

Filing a court case in Dang is a Herculean task in itself. Where 95 per cent of the population is Adivasi and illiteracy is rampant, there one cannot expect people to approach the courts and follow legal procedures.

- Suresh Kokani, Advocate, Kanooni Salah Kendra, Ahwa

The broader objective of Raan Rede, that is, building legal and cultural awareness, was thus fulfilled through these four key relational spaces within which its impacts were felt most strongly.

Organizational learning and the way forward

At the outset, Raan Rede set itself the difficult task of building legal awareness within a cultural rights framework to promote and rejuvenate a powerful Dangi identity while addressing legal wrongdoing. The method chosen was that of a robust legal and cultural awareness building followed by speedy and effective follow-up through listener groups and the KSK–Ahwa. In following this approach, Raan Rede faced several hurdles, most notably technical issues and capacity-related problems. But the key organizational takeaway for all the members of the Raan Rede family was that through an effective mix of technology and strength-in-community, the ostensibly unsurmountable hurdles of geography, human resources, capital, and other inputs could be bypassed almost completely. At the same time, the tremendous success of the symbiotic model of Raan Rede— linking legal awareness with cultural rejuvenation—convinced the organization and its members and stakeholders of the viability of such a strategy. It formed the basis for a subsequent longer-term engagement within the same framework. An intervention was designed and developed to explore the interface, conflicts, and contradictions between law, society, and culture in Dang in light of the learnings from, and the success of, the Raan Rede model, that is, placing culture as a central category in a legal intervention.

As the previous section shows, Raan Rede also brought about changes that had significant long-term effects, with increased long-term capacity building not just of team members, but also of the organization. Similarly, Raan Rede's success revealed a replicability and potential for other Community Radios and also established a strategic landmark within the legal empowerment space. Raan Rede continues to be relevant for marginalized and vulnerable communities looking to assert their voices

Centre for Social Justice, Dang, Gujarat

Centre for Social Justice is a socio-legal, Non-Governmental Organization (NGO) initiated by Institute for Development Education and Learning (IDEAL). CSJ is one of the first organisations of its kind in India that uses the judicial system to fight for the rights of marginalised people. CSJ first began operating through a network of law centres across Gujarat in 1993. The organisation has the vision to strengthen human rights culture and an all-inclusive pluralist society, free of violence, injustice, discrimination, prejudices and stereotyping.

The organisation uses law to bring about systemic changes to remove barriers in accessing justice, particularly for marginalized communities. The interventions of CSJ range from providing legal aid, helping document complaints and leading fact findings, filing cases, contacting relevant authorities, pushing entitlement claims, spreading legal awareness, public advocacy campaigns, to training young lawyers and paralegals, identifying violations of civil liberties and serving as a watchdog for human rights abuses. CSJ not only assists in the empowerment of vulnerable communities through the enforcement of socio-economic and civil-political rights, but also (within a broadly restorative view of justice), engages with reordering social relations that perpetuate discrimination and violence with a view towards a long-term re-alignment of intra- and inter-community dynamics of power.

1.2 When Youth Lead Change:

Tracing the journey of a promising Mumbai youth collective

Youth for Unity and Voluntary Action (YUVA), Maharashtra[2]

Abstract

This case study examines the assertion and exercise of young people's citizenship rights. Youth for Unity and Voluntary Action (YUVA) works to enable marginalized youth self-determine the course of their lives through collective action. This involves the right to associate, to participate, and to undertake action at different levels, from the individual to the family unit, from the community to the larger society, city, and beyond. The process of building youth collectives has driven change,[3] and we will highlight the formation and evolution of one such youth group, the Malvani Yuva Parishad, and the setting up of associated city-level groups to bring about change and to make an impact.

2 Contributed by Doel Jaikishen, Youth for Unity and Voluntary Action (YUVA).
3 Youth collectives bring youth together to develop their articulation of demands, help them build popular support, work on shared objectives, and drive action through collective participation.

When Youth Lead Change - Introduction: Celebrating youth

Asma and Zarin, members of the Malvani Yuva Parishad (MYP), returned home on 12 August 2018 after a long but exhilarating day. They had spent the day with other young people from across Mumbai and Navi Mumbai (Ambujwadi, Parel, Charkop, Lallubhai Compound, Vile Parle, Belapur, etc.) observing International Youth Day 2018. Along with their peers, they organized games, discussions, and sporting events across neighbourhoods in the morning. In the evening, they attended a city-level event on the theme "Safe Spaces for Youth", where a panel of experts from different fields and young people discussed how they could all work together. The day's events saw the active participation of over 300 youth from multiple youth groups across the city.[i]

Just four years ago, Asma and Zarin could not have imagined organizing such city-wide youth discussions and activities. They could not have thought that their small group meetings in the balwadi (child care centre) near their home could coalesce into something so much larger and purposeful, with the promise of driving more change. As girls from marginalized backgrounds struggling to complete their education, hoping to support their families, and trying to avoid harassment and the unwelcome male gaze, they were fighting too many social pressures already. They could not have thought that one day boys would be their partners in bringing about social change through a collective to which they all belonged.

To understand how these changes took place, let's go back in time and examine the site of youth engagement and the prevailing urban realities at the time.

Where it all started: Malvani

Malvani, a suburb area in north-western Mumbai, lies to the west of the Malad Creek and near the corporate park, MindSpace. To the west, along the coastline, lie the lands owned by the Navy while to the north are the Malvani fishing village and Marve village. The

nearest railway station is Malad (about 3.6 km from the main entry into this neighbourhood). Malad occupies an area of 2.82 sq. km, which is densely populated, with an estimated 3,95,000 individuals residing in 27 settlements.[ii]

A 1924 map of Malvani shows the area as predominantly marshland, except for the north-eastern side which is marked as a reserved forest. A 2019 map shows the vast changes the area has undergone since the 1920s. Since the 1970s, the number of settlements has increased rapidly, mostly in the form of resettlement colonies. The Sanctioned Development Plan (1991–2001), Municipal Corporation of Greater Mumbai, allocated large areas for public housing. Some years later, the Maharashtra Housing and Area Development Authority (MHADA) developed the MHADA Colony, offering housing for low-, middle-, and high-income groups. Since the 1990s, more people from marginalized backgrounds have started moving to Malvani in larger numbers and settling in New Bhabrekar Nagar, Ambujwadi, and Azmi Nagar. These settlements have grown rapidly and uncontrollably, constituting an urban sprawl populated mostly by historically marginalized communities living in high-density bastis (informal settlements), and dealing with scarce resources and abysmal standards of living.

When Malvani features in the news today, the most common words and phrases used in reference to it are: forced eviction, disease, poor sanitation, poor garbage management, lack of access to basic facilities, school dropouts, crime, violence, rioting. In the popular imagination, the people living in Malvani are seen as "encroachers" and "illegal citizens", and the prevailing development narratives of the city have further rendered invisible the struggles of the people living here, pushing them to the margins.[iii]

Despite some efforts in recent years to address the demands of residents, much needs to be done before even basic public amenities can be provided. A large share of the local population comprises migrants from other parts of the country who lack legal entitlements mentioning their current place of residence or who may have been dispossessed of such documentation due to repeated forced

evictions. This often becomes another reason to deny people their right to live and work in the city, even though it is their labour that sustains and powers the megacity of Mumbai.

Youth for Unity and Voluntary Action (YUVA) began its interventions in Malvani in 1998. Our work is focused in certain neighbourhoods and is aimed at empowering local people and facilitating their access to universal human rights and basic services. The youth have been an important segment we engage with, and the criticality of our interventions with them is explained in the next section. Our efforts have focused on strengthening the youth and building their capacities to facilitate their collective action and active engagement for social transformation. Our work with the youth has led to several ongoing outcomes at different levels, because we continue to engage with them to further their empowerment process.
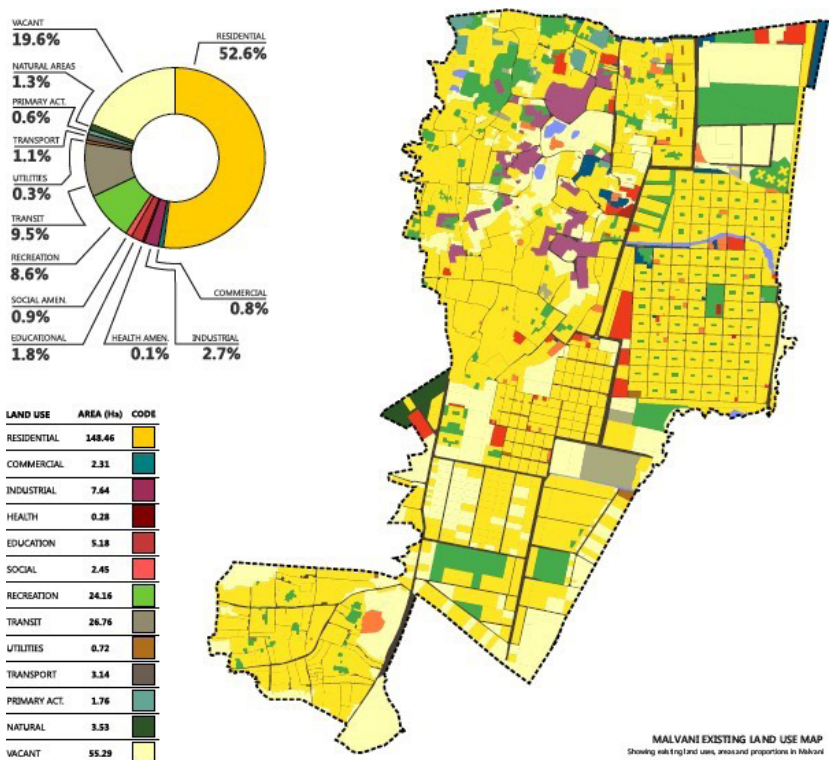
Map 1. Malvani: Existing land use map (Source: Malvani People's Plan, KRVIA and YUVA, 2014)

Photo 1. Inside Malvani (Source: YUVA)

Why engage with youth?

According to a recent UN report, India is home to the world's largest youth population, numbering 356 million people in the age group 10–24 years.iv Every fifth Indian is an adolescent (10–19 years) and every third Indian is a young person (10–24 years).v A youth-dominated demographic offers innumerable opportunities and challenges for India. Investing in the health, education, and well-being of this young generation, and upholding their rights and prerogatives, are critical for the country's future. High numbers of young people could translate to immense productivity if their potential is tapped effectively. However, in the absence of meaningful employment, the result could also be large-scale unrest. Young people are important change agents, imbued with energy and the will to work for the betterment of their societies and communities. Yet attempts to silence their voices, and even misdirect their efforts, could result in a frustrated and cynical populace, which may further extend the cycle of hate and intolerance.

Over the years, young people have been subjected to repeated manipulation by those in positions of authority to suit their own vested interests. Their poor knowledge of, and their lack of access to, opportunities (economic, educational, social, etc.) have been used to maintain the status quo, denying them a chance to pursue better prospects and the right to the full exercise of their rights as citizens. In the absence of conscientization and lack of power, the youth are exploited by sections that benefit from manipulating and subjugating them. For instance, the government of India's Skill India programme, which aims to skill 402 million youth by 2022, was found to have substandard training, assessment, and certification standards, even though the targets were reported as having been achieved.vi Similar piecemeal and superficial attempts at youth work are likely to be projected as efforts that instruct the aimless, and correct ignorant or deviant behaviour, instead of encouraging the youth to come on board as active participants and contributors in the development process.

In the case of Malvani too, the youth are among the most vulnerable groups in the heterogeneous communities. They are doubly marginalized, cut off from mainstream society economically and socially, as well as on religious grounds, and face discrimination from their own people. Without adequate access to education and employment opportunities, they are trapped in their present circumstances, unable to develop as conscientious and empowered citizens, and thus the cycle of deprivation is repeated unceasingly.

To address the issue of youth inequality, and to facilitate the positive, disruptive power of youth through means that are driven by and centred on the youth, YUVA has been furthering its engagements in this space. Our interventions are based on core democratic values, accountability in governance, and youth participation for youth development. Our vision is to enable young people to achieve their potential, to capacitate them to be a part of the problem-solving process, and to help them take ownership of the movement to eventually drive it independently and take it forward. Our primary goal of encouraging and facilitating active youth participation is

based on the belief that those who face problems first-hand are best suited to tackling these challenges themselves, with adequate training, support, and knowledge.

YUVA's work with youth is one of its core interventions. The organization was born in 1984, emerging from a youth work project that began in the bastis of Jogeshwari, a western suburb of Mumbai. Our keen observation of, and our participation in, the urbanization and development processes across the country (especially in Mumbai) and our engagements with multiple stakeholders have deepened our understanding of youth-related concerns. This allows us to better strategize and to equip ourselves so we can engage more effectively with this growing and dynamic population and facilitate the co-creation of just and inclusive cities. Youth citizenship is conceived of in the broadest sense, and its importance is stressed repeatedly to ensure that the youth are fully aware of, and are active in demanding, their citizenship rights. Over the years, our work has also diversified in response to the needs of young people. The full effect of this has been elaborated in the 'Early Achievements' section of the case study.

Initial findings in Malvani

In 2014, YUVA conducted a baseline surveyvii of nearly 4,200 youth (between the ages of 15 and 29) in Ambujwadi, the largest basti in Malvani. We discovered that 61 per cent of the surveyed youth had dropped out of the formal education system as they were uninterested in it, while 17 per cent had been forced to drop out due to early marriage. Among the respondents, 45 per cent were not earning and 65 per cent of the total surveyed women were homemakers. When asked about their area of interest, only 10 per cent spoke about it and mentioned their preferences. The majority of the respondents wanted to learn how to operate a computer, and the second highest demand was for tailoring classes. Many respondents did not specify any vocation, but expressed interest in picking up a skill that could offer them the means to a sustainable livelihood.

Thanks to our long association, extensive engagement, and concerted efforts, we have learned a great deal about the emergent challenges facing youth and other community members. The youth took their time to engage with us, and we in turn were careful not to rush or push the process, but to remain supportive facilitators. It was especially challenging to engage with young girls, as many of them had never left their homes. Their life was mostly spent within the four walls of their home, which made it difficult for outsiders to interact with them. We began slow but extensive engagements with parents along with the other community youth to help them better understand and appreciate the work we were doing in the community. This helped develop trust and build relations, and gradually many parents began to allow their daughters to leave home and be a part of community youth meetings.

Theoretical context

YUVA's work with youth has a multipronged approach and follows a number of frameworks that have been specifically adapted to the unique requirements of Malvani. These are in line with YUVA's methodology:

- A 360-degree integrated development model at the basti level involving interventions in interrelated domains empowerment, habitat, livelihood, governance—to ensure comprehensive change

- Formation and strengthening of networks and collectives as a key solidarity-building strategy to address the issue of shrinking democratic spaces for Indian civil society

- Policy research and advocacy based on evidence-based knowledge to drive dialogue on inclusive and equitable policymaking

The youth work in Malvani, which is part of our larger engagements with youth across the city and beyond, is located within

this framework. Our work focuses on ensuring young people's agency while imbuing them with political consciousness, and offering them space for critical reflection, for asking questions, and for engaging in purposive action in pursuit of their self-determination. It is guided by the principles of justice and participatory democracy. It seeks to enable the empowerment of marginalized populations to uphold their citizenship rights and all related responsibilities and obligations. Our work is aimed at engaging youth in city-level networks, campaigns, and advocacy to highlight critical issues that affect people in urban spaces.

Interventions are focused on supporting the empowerment of young people at both the personal and collective levels. In addition to developing rights-based empowerment processes, attention is also devoted to education, skill enhancement, and capacity building, so that the youth can become economically independent and are capable of exploring sustainable livelihood options. To enable structural transformation, the creation of networks with other civil society partners, government departments, the private sector, and

YUVA's framework for working with young people :

Empowerment	Values	Development
• Association and Participation	• Democracy	• Career Guidance
• Leadership building of individuals and collectives	• Gender Justice	• Scholarship support
• Developing political consciousness	• Social Justice	• Continued Education
• Critical reflection and questioning	• Environmental Sustainability	• Skill training for employment
	• Secularism	• Facilitating marketing linkages
	• Scientific Temper	

other stakeholders is encouraged and undertaken. Underlying these efforts are the values that we hope that this work instils in the youth—values of democracy, gender justice, social justice, environmental sustainability, secularism, and scientific temper.

YUVA's practice of youth-oriented work is aligned with Trudi Cooper's "framework for positive sceptical reflection", a method aimed at improving the youth work model via critique, instead of just offering critique.[viii] Doubt and scepticism are looked upon positively and are connected to reflective practice, aimed at encouraging youth workers (and youth in association) to question established norms and practices and at identifying contradictions, so that they may "usefully guide decision-making".

The practice of constant critical questioning and reflection makes the model of youth work flexible and adaptable in a rapidly changing world, ensuring its enduring relevance and value.

In his essay "Whatever happened to radical youth work?", Tony Jeffs raises an important concern, that is, how youth work is being increasingly driven to devalue the power of the collective, focusing on the individual instead, and attempting to reinforce the idea that individuals are subject to control and powerless in the face of larger systems.[ix] In the Indian context, given the threats to freedom of expression, attacks on people's identities, attempts to control contrary opinions and suppress dissent, and attempts to present a simplified and homogeneous view of diverse and complex realities, there are concerted attacks at multiple levels. In these situations, while it is imperative to promote and uphold individual identities, it is equally important to ensure the creation and strengthening of collectives that can resist political pressure and take forward people's struggles. Given the limited autonomy of young people, along with diminishing spaces for their participation in democratic processes, collective agency has a huge role to play in the assertion of youth citizenship, especially in the context of multiple urban realities such as the informality of the housing and labour sectors, inequality, discrimination, and marginalization of the urban poor.

Our work with youth is also closely allied to an understanding of how "gendered structures of constraint work in different circumstances", to understand how marginalized female youth are affected by the resources they are provided, and how this in turn shapes their capabilities. The growth of individual capabilities is "difficult to observe and measure", but the impact on women's agency and the outcomes that can be achieved as a result (social change, personality development, and so on) are studied and assessed. Our work finds close parallels with what Naila Kabeer states in her essay: "to distinguish between practical livelihood achievements . . . and more strategic changes that touch on underlying power relations and hence have implications for the structures of constraint".[x]

YUVA's work with youth is in contrast to Brian Belton's notion of "relative political neutrality",[xi] as the clear objective of our engagement is enhancing political awareness among the youth. They are encouraged to engage in critical thinking, even to challenge the long-held views of youth workers if these ideas are found to be unsustainable or impractical, and to question them within a participatory democratic framework to arrive at different, unexpected, or unanticipated outcomes. The politicization of young people is viewed positively so that they can reflect on, and act to combat, the different kinds of discrimination they face, to tackle issues of inequality, and deal with questions of injustice. This helps us work towards the United Nations' 2030 Agenda for Sustainable Development and its mission to "leave no one behind", with a renewed commitment towards the Sustainable Development Goals.[xii]

The Malvani Yuva Parishad : A brief history

When we began engaging with the youth in Malvani in 2013, our objectives were clear. We aimed to empower the youth and facilitate the setting up of collectives that would allow young people to take control and ownership of their own rights and demands. We wanted to capacitate the youth and engage them in 360-degree development models and advocacy.

Our initial engagements were focused on establishing relations with the youth and listening to them and their concerns as supportive members. At that point, there were a few local youth groups in the area, and many of the youth had never interacted with people from outside their immediate group or circle of acquaintances.

After a few initial meetings convened by YUVA, the youth from the three bastis of Bhabrekar Nagar, Ambujwadi, and Charkop decided to perform a street play dealing with the issues they faced; they intended to travel to different bastis and speak to their own people. The first play, Dastak, based on the daily harassment faced by girls in public spaces, was enthusiastically rehearsed, and over the next two months 84 performances of the play took place during weekends. Many mistakes were made in those initial days. The presentation skills were amateurish, as the youth were largely self-taught. However, a positive outcome was that a number of young people who watched the play expressed willingness to be associated with these youth. "I must have watched Dastak at least eight to ten times, but from a distance. There was something about the play that attracted me, but I wasn't sure what it was, or how I felt about it. At that point of time, I was quite a different person. I used to catcall girls myself," says Bala Akhade, a member of Malvani Yuva Parishad, as he reminisces about those early days.

Photo 2. From its early days, the Malvani Yuva Parishad has been performing street plays to creatively highlight critical urban issues, especially those concerning the youth (Source: YUVA)

Inspired by the willingness of the youth to engage with one another, a day-long workshop was organized for them soon after. It was attended by 117 youth who participated in identity-building and leadership activities all day. Following this, the youth began developing a loose collective while being active in their respective bastis.

Efforts at youth mobilization continued throughout, with a special focus on reaching out to marginalized youth across communities (adolescent girls, religious minorities, urban poor, deprived castes), and activities were especially planned keeping in mind the interests and concerns of the youth. Exposure visits helped in the early group-building process. These visits were to sites where movements had originated, and to towns where leaders were born. They were organized to acquaint the youth with the life and struggles of revolutionaries and change agents such as B. R. Ambedkar, Savitribai Phule, Shivaji, Birsa Munda, and Fatima Sheikh.

A number of courses were started in the community over time in response to the increasing demand for skill training as well as the increasing interest in empowerment initiatives. Tailoring courses, beautician classes, and mehndi classes helped draw girls (even those who had never left their homes before) while computer and mobile-repairing classes were more popular with boys. Introducing courses for girls that conformed to traditional gender stereotypes and expectations was a conscious decision, as it made it easier for the parents to permit their daughters to leave the confines of their home. These were looked upon as safe occupations for women, and even if they were not allowed to apply for job placements following the conclusion of the course, they could potentially set up home businesses with the knowledge and training they had gained. Once the youth started attending the various courses regularly, it was easier to encourage them to attend youth group meetings and to gradually draw them into the youth engagements then taking place.

Meetings with the youth were regularized, so that they fell into a regular pattern of seeing one another, and feeling sufficiently comfortable in each other's presence to voice their feelings and

Photo 3. Exposure visits are an important medium of learning and interaction for the members of the Malvani Yuva Parishad (Source: YUVA)

concerns without any hesitation. While girls were uncomfortable talking out aloud in the initial meetings, over time they became more relaxed and expressive in front of the group. They gained self-confidence as they began to express themselves not just in their youth group, but also at home, in school, and in other places.

The youth were encouraged to question their existing beliefs and to participate in discussions on gender, democracy, values, and the issues they confronted. Youth groups were also encouraged to reflect on the identity of their collective. Games were a useful medium to engage them and help build teamwork and solidarity, with the participants sometimes not even realizing the power of their collective action until much later. For instance, two teams competed to create the longest line of members without using any external items. Dupattas, shoes, and laces came off, and the youth laughed as they got into the spirit of the game. They approached each other with a hitherto unexperienced sense of freedom and openness, thereby laying the foundation of strong friendships that were built over time.

To strengthen the groups further, 40 youth from different youth groups attended a workshop to set up a youth forum for Malvani.

While the discussions initially took time to shape up, in the end the various youth groups felt the need to merge, and thus the MYP formally came into being in 2014. The members discussed various names for the new body and finally settled on the MYP after a vote.

Learning in the MYP has never been restricted to the four walls of a classroom. Rather, learning takes place through street plays, exposure visits, film screenings, interactive activities, and other formats that have evolved over the years. For instance, an exposure visit to Pune during which girls were denied access to a traditional training facility for men led to a discussion on gender once they returned home. As the youth began to meet more regularly and gained confidence, they began to ask what they could do to improve their communities. Often, the youth also questioned the YUVA staff about their thoughts and ideas, and minor disagreements took place. YUVA's role as a facilitator and not as a driver of the programme remained clear, however, and helped the youth determine the course of action they would take to resolve various issues.

As the group grew in strength and capability, meetings started taking place regularly, without facilitation from a YUVA staff member. The youth became more process-oriented and systematic in conducting their meetings, preparing an agenda for items to be discussed, recording the minutes of each meeting, setting a quorum of members for each meeting, etc. They undertook mapping exercises of their surroundings to better understand the use of local spaces and neighbourhood resources.

Four years after its establishment, the MYP has made many interventions in the local community and even beyond. Let's look at some of their major achievements.

Early achievements

The MYP has been a strong driving force in the life of the youth of Malvani. The group's presence, growth, activities, and engagements over the years have impacted the life of young people on a personal and social level, as described below.

Personal and family-level changes

Developing selfhood: Perhaps the most transformative impact of the MYP has been its influence in shaping the life of its members. The development of individual identities, along with the formation of the identity of the youth group, have been important achievements. Various interventions to empower individuals and develop their personhood were implemented. The development of the culture of the group and its alignment to a set of core values have also been prioritized, to ensure that the group remains a sustainable entity.

Youth group members mention the sense of responsibility that the MYP has imbued in them. "When I was selected as the treasurer of the group in 2014, my excitement knew no bounds. I was so happy to have been selected for this position," says Asma Ansari. The MYP's active efforts to deal with their issues have developed a sense of ownership in them. The members have also been collaborating with YUVA, helping in co-creating activities and processes. Some senior members of the MYP have worked as volunteers on different YUVA projects, contributing their understanding and knowledge to further social transformation efforts.

When some MYP girl members attended their first workshop out of Mumbai, they mentioned the sense of freedom and rush of confidence they experienced. For many years, they had felt that they didn't have the agency to leave the confines of their home. Moreover, as interactions between boys and girls grew, they gained a broader understanding of gender relations and dynamics, and interacted with each other freely, without any awkwardness.

Providing livelihood opportunities (especially for girls) to tackle the issue of early marriage: Youth in Malvani often face discrimination, because of the areas from which they hail and their lack of access to educational and employment opportunities. This results in unequal access to the job market. Moreover, in many areas of Malvani, girls are married off early (even before they reach the legal age of marriage, that is, 18 years). They are restricted to the house from a very early age, and their life holds no promise of economic independence.

To encourage such youth to take up livelihood-generation opportunities, various courses were organized for them. Each course was also designed to introduce many value-based concepts. A segment of the class would be devoted to games and activities that helped develop identity and leadership skills. Even after the course was over, the local youth tried to stay in touch with their fellow course attendees and to engage with those who hadn't joined the youth group already.

Shortly after a few batches of the courses ended, they gained a reputation for offering much more than skill training, and this attracted more youth who sought to sign up for the courses. The MYP played a major role in getting young people together to engage in a co-learning and sharing process with one another, thereby democratizing the process of knowledge creation and knowledge sharing. To ensure accessibility and convenience, they organized classes in places close to people's homes.

Developing critical urban perspectives: The urban landscape is being rapidly transformed, and it is important to understand the various overt and covert processes at play to better grasp how one should react to changing circumstances and how one should work most effectively to achieve the ideal of a just and inclusive society. The MYP members have attended a range of workshops, interactive sessions, and trainings to further their knowledge of the urban landscape. Some MYP members have attended YUVA's City Caravan, a course on co-creating inclusive cities with the help and involvement of youth, to better grasp the complexities of the urban environment and the individual's role in it. As all the movements and campaigns of the MYP are located in the urban sphere, the youth, based on their engagements and experiences, are constantly offering fresh perspectives and ideas, and engaging with the urban with renewed vigour and enthusiasm. The youth members have been participating in a range of workshops and training sessions. Two youth have attended international workshops so far and presented their ideas before the global community, three youth have been a part of national conferences, and eight have represented the MYP at the state level.

Community-level changes

Controlling drug abuse: Drug abuse has been rampant in the community for years. The MYP members decided to stage a street play on this topic to sensitize the community, and they mapped all the local shops selling intoxicants. They engaged with different stakeholders in the community, from school teachers to civil society partners, to decide how the issue could be collaboratively tackled. The play was performed a number of times and was appreciated by the community. However, it was not easy to always nab the drug dealers, as they were closely connected to many community members and managed to evade the MYP members each time.

Photo 4. Asma Ansari (second from right), Malvani Yuva Parishad member, participates in a session on youth work at the World Urban Forum 9, Malaysia, 2018 (Source: YUVA)

On one occasion, a youth member was attacked by a group of addicts. The youth group lodged a complaint with the local police and received police protection for some time. The area where the attack took place was a disused space, frequented by addicts. The youth members thought of reclaiming this space by cleaning it at first, and then using it for their play activities. Over time, this incident led to one of their most powerful movements to date, the city-wide claiming spaces movement (elaborated in the next point).

Claiming spaces for play, self-expression, and creativity: Children's right to play is an inalienable right.[xiii] However, lack of play spaces in the city and lack of access to such spaces is a reality. For many years, the communities in Malvani had demanded spaces that could be used by children and young people in an inclusive and democratic way. In 2016, the youth in the area reclaimed a space for play in Block III which was earlier used by addicts and miscreants, changing the formal use of the space for the creative development of the local youth and children. This space is now frequented by 40–50 children and youth. The community has also started conducting its activities here, helping the space develop in an inclusive manner. News of the early successes of the claiming spaces movements spread to other parts of the city, with the youth sharing their experiences at a city-wide youth forum facilitated by YUVA in 2017. Multiple spaces are being reclaimed by the youth and are being used as safe spaces for self-expression and for the exercise of associated rights.[xiv] This is an ongoing movement which is being taken forward by multiple youth groups. The MYP intends to actively participate and support others within the network to ensure the growth of safe spaces for the city's youth and children.

Towards a more gender-just community: Earlier, many girls from the local communities were not allowed to leave their homes, except to go to school, or to help their parents with household chores. Their cloistered lives at home stunted their intellectual growth and limited their potential. They had no space where they could express themselves and engage with other youth. As the MYP continued with the performances of its street plays across communities, conducted games and activities with the youth, and launched newer engagements and initiatives, the girls gradually started joining the group. YUVA's youth work staff also made it a point to visit homes in the community and speak to the families about letting their daughters spend time in the community centres and with the youth groups. It was challenging to convince the parents to make the attitudinal and mental shift, but gradually more girls joined the MYP and participated actively in various processes.

"My studies had stopped midway, and my life was only restricted to the house. When I started engaging with the youth group, I felt encouraged to see others in similar situations. The first few street play rehearsals that I was a part of got me quite nervous. Over time, I developed a lot of confidence and now I even go to homes in the community and encourage parents to let their daughters spend time with the group," says Zarin Ansari, a member of the MYP since its inception.

The MYP is an important platform for members of the opposite sex to interact with one another and to better understand gender perspectives and nuances. These aspects are presented as a natural part of life, and as an integral component of youth work, through games and honest discussions on sexuality, love, and relationships. Discussions on the identities of individuals belonging to gender-minority groups, and the challenges they face, have broadened empathy and understanding towards them.

Girls have begun to take a stronger stand in demanding their rights and this has had a positive impact on families and communities. Parents are now more accepting of daughters choosing to continue their studies. Some have supported delaying the marriage of their daughters and encouraged them to become economically independent instead. The community earlier was far more averse to the prospect of young boys and girls intermingling, but today they are largely accepting of such interactions. They no longer call out and shame the youth when they see members of the opposite sex together. Thanks to more discussions and presentations on sexual harassment, the community has started taking active measures to help set up safe spaces, and catcalls directed at girls on streets have been drastically reduced. Girls who earlier used to take long, circuitous routes through the neighbourhood just to avoid the gaze of men and boys can now move about much more freely.

Promoting religious tolerance and harmony: Given the vulnerable positions and minority identities of many of the people residing in Malvani, and their limited social interaction with each other (which often does not extend beyond the scope of their work, trade, or

employment), religious tension is ever present in these settlements, and often breaks out into the open. As Bala says, "My uncle had been suggesting that I move to Malvani for many years, but I was unsure because the area that he was recommending had a Muslim-majority population. Even after I eventually moved, I would not really interact much with the youth here." Bala was not alone in feeling vulnerable and unsafe. Many others shared his fear and distrust.

After years of engagement, and through different mediums (community meetings, activities, competitions, debates, street plays) and creative messaging, the youth now regularly interact and communicate with one another, and now it is they who propagate the message of communal harmony. Their sincere efforts to foster peaceful relations with neighbours have inspired other youth to join their ranks to take the message to other communities. Every year, the youth organize iftaari celebrations during the month of Ramzan. During the festival of Ganesh Chaturthi they perform street plays in the local mandals, reaching out to more community members in the process. Festivals of different religious communities are seen as opportunities to unite people.

Towards systemic changes

Promoting awareness of and action for basic rights, and enabling access to welfare measures: The youth continue to engage with their community members on universal human rights, and the need to fight for them. They have participated in efforts to resist forced eviction by the municipal authorities, thanks to their knowledge of legal and other processes, and they have actively taken up the filing of Right to Information (RTI)-based applications to extract vital information related to their community. They are constantly organizing workshops and training programmes for themselves and their family members, to better understand how their rights can be upheld and protected.

Access to safe drinking water is the most pressing concern in the settlements in Malvani. Children and youth are most affected,

because the need to collect water means sacrificing their time, juggling their schedule, and compromising their education to make sure that their families have enough water for the day. When the Brihanmumbai Municipal Corporation (BMC) finally initiated applications for water connections, the youth played an important role in facilitating the process and simultaneously participated in a larger city-level campaign for equal water access in bastis of Mumbai. They remain committed to movements in the city that can further their demands, lending their support and amplifying people's voices so that they can be more heard more widely.

Another issue faced by many people in Malvani is the provision and supply of rations. The MYP decided to do something about this. First, they engaged with shop owners and deepened their own understanding of the country's public distribution system (PDS) through regular discussions and informative sessions. Following this, they began making simple presentations to their communities at night, so that friends and relatives could attend these events after the day's work. The youth shared important information and discussed various legal provisions designed to ease the public's access to the rationing system. The MYP members engaged with community members, especially women and girls, through door-to-door campaigns in different societies and imparted useful information that the community could act upon.

Engaging on policies and plans: During the revision process of the Mumbai Development Plan, officially known as the Revised Draft Development Plan 2034, the youth articulated their demands creatively through a city-level campaign addressed to the local government.xv They not only demanded land reservation for amenities like open spaces, study centres, and community centres (which were their immediate needs), but they also raised awareness of the importance of planning issues in the larger community. They organized campaigns on the Revised Draft Development Plan 2034 to inform and educate the public, initiated dialogue within the community, and conveyed the results of this dialogue to the local government. Thanks to their experience with the MYP,

and particularly their learning about spatial distribution in their neighbourhoods, the youth were able to think at a macro level. In 2017, with the support of YUVA, they began a campaign to reclaim spaces, both open spaces and commons, for recreational and other needs (elaborated earlier in this section). They have since claimed spaces in and around their neighbourhoods, along roads, and under flyovers. These spaces were either being misused or were unutilized. In addition, their active engagement in local governance through the planning process motivated them to advocate for changes in the way land is used and to handle, negotiate, and propagate the issue in their neighbourhoods.

So far, over 1,000 youth have been trained across Malvani, five job fairs have been held, and over 250 youth are employed in different capacities post-training. Over 150 youth have received scholarships. More than 100 youth have returned to the Open University or enrolled for distance-learning modules, having dropped out of the formal education system earlier. Our work has been taken forward by more than ten partners over the years.

Challenges and conflicts

It had been months since the MYP had been set up. Multiple discussions and activities had been organized. The youth had participated actively, encouraged others to join them, and sought the support of the community to take their efforts forward. However, something was amiss. The MYP still did not have a distinct identity of its own.

To address this issue, YUVA facilitated another workshop on building the identity of the MYP. Sessions were organized on the importance of constitutional values, and the formation of one's personal identity was connected to one's larger identity as a citizen of the country. An election was held during the workshop, and a body of leaders was elected for the MYP. While these initial steps in identity formation were being implemented, internal conflicts

started brewing. A few members were unhappy with the leadership structure and decided to break away from the MYP. This was an important lesson for the MYP, as the group had been focusing on participatory and democratic processes from the start. Yet, even while the MYP had been observing these values, a section of the youth had been feeling isolated. This was an important moment for the group to step back and assess what steps could be taken in the future to get everyone on the same page and work together, to the extent possible. The youth discussed how the leadership skills of certain youth members had been prioritized and how it was necessary to focus on building a second line of leadership as well.

Youth from different areas, with conflicting interests and contrary points of view, also fell into disagreements many a time. However, as they engaged with each other in organizing more campaigns and movements, the youth discovered more common ground between themselves and were able to interact with each other with more maturity and mutual respect.

These are some of the challenges that were encountered in the early years of the functioning of the group. As it grows and evolves, the MYP is bound to face newer and more difficult challenges, and these will need to be tackled accordingly.

Learnings

Based on YUVA's engagement with youth empowerment processes, we assumed that we would be able to engage with youth in Malvani in a gradual process of transformation. However, our path with the youth from Malvani has taken a different direction. Over the last few years, traditional "influences" have changed and there has been a major change in the local political landscape. The influence of social media, increasing saffronization of the body politic, and a deepening sense of insecurity among minority communities are some of the everyday challenges faced by youth. In response, we have changed our methods of engagement to address contemporary issues. To better facilitate and empower the youth, we have been constantly updating our training and facilitation processes and

adapting them to the unique requirements of local communities. Learnings from our engagements with the MYP have also helped us implement changes in our interactions with other youth groups across the city. These new flexible and adaptable approaches have also helped bring separate groups together to form city-level forums, offering platforms for freewheeling discussion and debate.

Youth trained by YUVA are now training new batches of youth through refresher camps and orientation sessions. Encouraged by the efforts of YUVA in actively taking up their issues, other youth have approached the organization and shared their ideas about how issues they are facing could be similarly tackled by the collective to which they belong or one that they seek to form. For instance, girls in Malvani repeatedly raised the issue of male domination in personal spaces. This eventually led to the formation of another youth group (Nakshatra) that focused exclusively on issues faced by girls and women. The group launched simple but effective initiatives like the rating-card campaign on the birth anniversary of Savitribai Phule, a champion of women's rights. On this day, girls created a rating card for their mothers and went from door to door, thanking their mothers for supporting them. The campaign ended on an emotional note, with many of the mothers pledging to support the empowerment of their daughter.

Our initial engagements in Malvani were focused more on efforts to empower the local youth. YUVA referred interested youth members to skill-training courses run by other organizations. However, as YUVA's interactions with the youth in Malvani developed, the demand for skill training in addition to empowerment initiatives grew. It was important for YUVA to adapt its interventions to take into account these requirements of the youth and to empower them in a more general sense so they could deal with emerging challenges and ensure their economic independence.

Earlier, the interventions facilitated by YUVA were focused more on building knowledge to address issues faced by people in the community. Over time, the focus has shifted. Now more attention is paid to developing personal capacities, particularly those related

to life skills and attitude development. Sessions on developing one's thoughts and approaches, i.e., understanding how internal, mental, and attitudinal changes can drive and achieve more lasting change and support knowledge-building and skilling initiatives, are already in place. Additionally, sessions on skill development are related to individual areas of interest (such as puppet making) and those that strengthen advocacy efforts (such as video-making and photography).

Conclusion

The MYP is currently engaged in drafting its constitution and vision document, so that these can serve as the guiding light for all future engagements of the group. The youth are detailing plans on how their values can be grounded more firmly and taken forward in their work on different issues across sites. The MYP plans to register itself in the near future. The members are ideating on ways of developing a stronger presence in the city, expanding the operations of the group, engaging in networking activities, and working with more stakeholders to achieve social change. A third line of leadership is also being developed and trained, so that strong leadership at different levels is available when needed. The individual growth of youth members is another priority area.

Photo 5. Malvani Yuva Parishad members celebrate the third foundation day of the organization, 2017 (Source: YUVA)

Youth transformation remains the long-term goal of YUVA's youth work. To achieve this, the first step was establishing the MYP and facilitating the participation of young men and women in a large low-income neighbourhood where young people do not have the opportunity nor the means to fulfil their potential. As this case study shows, the first outcomes of this process were changes at both the individual and family levels. The next round of changes took place at the community level. This transformation was based on the acceptance of various religious identities among the local communities, challenging of gender norms, understanding of urban plans for localities prepared by municipal bodies, challenging of corruption in the public distribution system, and so on. These changes have enabled the youth to engage with government systems, bureaucrats, the police, the media, and other stakeholders. This process of change is gradual but ongoing. It reinforces our belief in the theory of change in our engagements with young people. It also motivates us to do even more to facilitate the processes of youth empowerment in Mumbai.

Acknowledgements

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Youth for Unity and Voluntary Action (YUVA), Maharashtra

Youth for Unity and Voluntary Action (YUVA) is a non-profit development organisation committed to enabling vulnerable groups to access their rights. The organisation envisions to end poverty and

promote human rights in the developing world with focus on urban poor, natural resource management and people- centric urban governance and planning. Founded in Mumbai in 1984, currently YUVA operates in the states of Maharashtra, Madhya Pradesh, Odisha, Assam and New Delhi.

YUVA wants to create a space for engagement with the urban poor so that they can participate in decision making for themselves. Towards this YUVA plans to build organizations of people for direct action, conduct popular education for building awareness, to undertake conscientization through training process, to provide access for the fulfilment of basic rights and needs. YUVA encourages the formation of people's collectives that engage in the discourse on development, thereby ensuring self-determined and sustained collective action in communities. This work is complemented with advocacy and policy recommendations.

Setting the context

2. Case studies on
Public Health concerns

India has made progress in recent years on important health indicators, particularly with regard to reducing infant and maternal mortality, and increasing life expectancy. However, important challenges persist.

First, India faces a double burden of disease: morbidity and mortality due to communicable diseases such as malaria, dengue and tuberculosis are still unacceptably high, while at the same time there is a growing burden of non-communicable diseases such as diabetes, heart disease and cancer. A critical concern has been the neglect of the primary care network which would substantially reduce the occurrence of many diseases, as well as diagnose and treat them much more cost-effectively than hospital-based care.

Second, costs of healthcare have risen alarmingly high: out of pocket payment for healthcare is one of the major reasons for millions of Indians to fall below the poverty line every year. The main reason for this is the lack of a robust public health system which is accessible, affordable, and which provides quality healthcare. As a result, even the poor are having to access care from the private sector.

Most importantly, there are significant disparities in health outcomes due to the social determinants of health. Over time, health inequalities based on caste, class, gender and residence are growing rather than shrinking. For instance, a baby girl in rural Uttar Pradesh

is at four times greater risk of dying before the age of one than a baby girl in Kerala (female mortality in Uttar Pradesh is 43 per 1,000 live births as compared to 10 in Kerala).

The need to establish a publicly funded health system that caters to the needs of the most marginalized populations has been a longstanding recommendation of both national and international experts. The very first Indian National Health Policy (1983) recommended the establishment of a people-centred comprehensive primary care system which would provide preventive and promotive care as well as basic curative care. This meant not only having a functional primary health care network providing community-based services of high quality, but also providing other important public health interventions such as clean water and sanitation, immunization, nutrition services and the like.

Unfortunately, the resources for this type of health system, which would ensure health equity in terms of accessibility and affordability of health care, have never been made available. Health spending has stagnated at around 1.2% of GDP even though available evidence shows that between 2-3% of GDP is required to provide all the inputs for preventive, promotive and basic curative care of good quality that would restore the credibility of the public health system.

One critical barrier being faced by the health system today is the shortage in adequately trained personnel at all levels. The training of personnel should not just impart technical skills but improve the overall quality of care. Importantly, doctors need to be trained to be sensitive to the social determinants of health, particularly gender. Global evidence shows that the indifference of the medical fraternity to issues that disproportionately affect women (pain, for example) has led to a trust gap which inhibits health seeking behaviour of women. For example, obstetric violence during childbirth seriously impacts women's health outcomes and choice of healthcare provider. The first case study in this section, Integrating Gender in Medical Education & Clinical Practice: Transformation of the Department of Obstetrics &

Gynaecology by the Centre for Health and Allied Themes (CEHAT), describes a powerfully transformative intervention that addresses this issue. The case study is of the Department of Obstetrics and Gynaecology (OBGY) in Aurangabad Medical College, Maharashtra which succeeded in facilitating the social determinants approach in healthcare. In general, the scope of medical education is limited to the bio-medical model of medicine and the need of the hour is to integrate gender perspective in all the disciplines of medical education. This intervention is an example of transformation of medical education by incorporating gender sensitization modules into the curriculum, as well as gender sensitive clinical protocols. These remarkable changes in the functioning of the department have resulted in improving the quality of care provided to the women in their care.

The other barrier, mentioned earlier, has been the failure to create a genuinely people-centred health system. Many factors that critically impact health outcomes are grounded in local realities; but these get lost in the pursuit of health targets set at the state or national levels. Recognizing and understanding the multiple dimensions of such challenges, devising a solution and implementing that solution requires a special combination of local knowledge, science and community engagement. The second case study in this section, Fluorosis Mitigation Through Community Based Safe Drinking Water Supply implemented by the People's Science Institute (PSI) in Dhar, Madhya Pradesh describes an intervention that has been able to succeed in bringing together just such a special combination. The intervention is a classic example of community involvement in ground water management with technical assistance which resulted in a cost effective and sustainable solution to the problem of fluorosis - a crippling but neglected disease caused by high concentration of fluoride in drinking water drawn from the ground. The case study shows that awareness created by scientific knowledge and evidence can make a community work better towards a common goal, in this case provision of safe drinking water and mitigation of fluorosis.
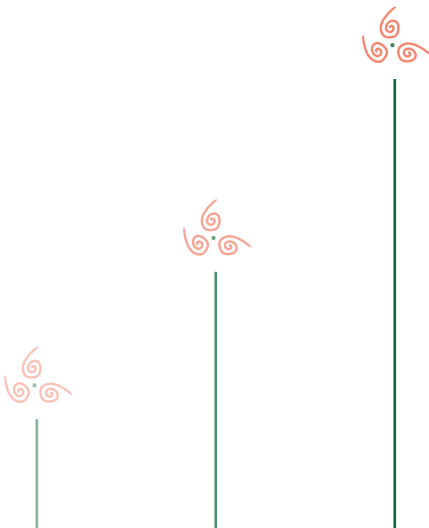
2.1 Integrating Gender in Medical Education and Clinical Practice:

The transformation of the Department of Obstetrics and Gynecology, Government Medical College, Aurangabad, Maharashtra

Centre for Enquiry into Health and Allied Themes (CEHAT), Maharashtra[1]

Abstract

Despite the established role of social determinants in healthcare, neither medical education nor public health services in India have taken cognizance of it. Non-recognition of these social determinants has led to several biases in the dispensing of treatment and care to patients in general and to patients from re marginalized communities and sections in particular. Scholars have critiqued the field of medicine as being gender-blind and male-biased because the body of medical knowledge views the male body as the norm, with men's experiences forming the basis for describing the signs and symptoms of illness. This is a case study of the Department of Gynaecology and Obstetrics (OBGYN) in the Government Medical College, Aurangabad, Maharashtra (henceforth Aurangabad Medical College) which succeeded in facilitating gender perspectives in the teaching of

undergraduate medical students and transformed clinical practice by making it gender informed as well as gender sensitive to the needs of women. Some of the radical changes made in the functioning of the OBGYN department are renaming the Family Planning Department as the Comprehensive Contraceptive Services for All Department, introducing the concept of respectful maternity care, establishing medico-legal care for the survivors of sexual violence, and integrating first-line care for pregnant women facing violence. This evidence-based practice has not only enhanced the patient–provider relationship but has also led to positive health experiences and outcomes for the users of these services.

Integrating Gender in Medical Education and clinical practice: The context

The last two decades have witnessed the emergence of social determinants approaches in the field of public health. The World Health Organization's Commission on Social Determinants of Health, 2005– 2008 has defined the social determinants of health (SDH) as "the conditions in which people are born, grow, live, work and age" and as "the fundamental drivers of these conditions." (p. 26). In other words, these are the factors apart from medical care that influence the health outcomes of the population. A huge body of literature supports the direct and indirect causal relationships between various socioeconomic factors and health. Health inequity, which is the unjust and systemic difference in the health status of different population groups, can be addressed or eliminated by taking reasonable action (WHO, Commission on Social Determinants, 2008); it is the consequence of social factors. It is important to address these factors to achieve the equitable distribution of various health targets across diverse population groups. It has been well established that public health interventions that fail to consider the social context and conditions of patients do not contribute to the reduction of mortality and morbidity rates. National-level data (National Family Health Survey [NFHS]) clearly indicate that diarrhoea, anaemia, infant mortality, and maternal mortality are far more prevalent in households with low socio- economic indicators (International Institute for Population Sciences [IIPS] and ICF, 2017).

The literature on the role of social determinants in influencing health outcomes has identified gender as an important factor leading to inequities in health. Because the consequences of the gender gap are more deleterious for women, the literature has primarily focused on women. The distinction between sex and gender is increasingly being made by advocates of women's health to emphasize its consideration in the development of public health programmes and interventions. In general, women have a longer life expectancy than men because of biological factors. However, in South Asian settings, including India, this advantage is overridden

because the life expectancy of women is lower than or equal to the life expectancy of men. Several studies have highlighted the impact of gender roles on women's health (WHO, 2009). Pregnancy and childbirth are conditions that are unique to women and are normal biological processes, but carry a significant risk to women's health. The health conditions that affect both women and men have more severe consequences for women due to the latter's poor access to healthcare. Women are also less likely to have power to make decisions about healthcare utilization owing to their restricted gender roles and lower status in society (Senarath and Gunawardena, 2009). In the Indian context, several studies have highlighted gender disparities in the incidence of diseases and their treatment (Bhat and Zavier, 2003; Maharana and Ladusingh, 2014; Saikia, Moradhvaj and Bora, 2016). These studies have clearly pointed out the need to address gender disparities by public health interventions in order to improve the health of the population and to achieve global targets.

Gender inequity has significant implications for health in the field of medicine. Medicine as a field is frequently critiqued for not taking into account gender in clinical practice, research, health programme delivery, medical education, and other relevant domains. It is male biased, as the available knowledge is focused on males and is often generalized to women, thus ignoring women's unique physiological makeup. It does not consider the aspect of gender inequity that creates additional barriers for women in accessing health services. Women's health issues are often relegated to reproductive matters and pregnancy-related problems, thus ignoring the other health needs of women, including their mental health needs (Verdonk et al., 2008).

In short, there is no distinction between biological and social factors in terms of health disparities between men and women when seen through the lens of gender analysis. Gender role ideology, which is defined as the attitude of healthcare providers (HCPs) towards male and female patients, accentuates these disparities(Verdonk et al., 2009). Women patients are viewed as more demanding, as they are seen to seek too much information (Foss and Hofoss, 2004) and their health problems are attributed to uncontrollable factors like

behaviour and emotions (Benrud and Reddy, 1998). The negative attitude of HCPs towards women acts as a deterrent for women seeking healthcare. This lack of gender perspective in the field of medicine has a negative impact of the provision of, and access to, healthcare services to women. The family planning programme in India has not been able to integrate gender equity in its services because of the limited involvement of men (Garg and Singh, 2014). The negative attitude of HCPs towards women accessing abortion services is one of the major barriers faced by women in accessing safe abortion services (Sebastian, Khan and Sebastian, 2013).

Integrating Gender in Medical Education: The need for change

Revamping medical education provides an important opportunity to transform the provision of healthcare in India by integrating social determinants, and recognizing their relation to health, in the MBBS (Bachelor of Medicine, Bachelor of Surgery) curriculum. Gender-informed curricula would enable HCPs to be more aware of the impact of gender on health and encourage them to integrate gender considerations in their clinical practice (Zelek, Phillips and Lefebvre, 1997). This change is crucial to enable HCPs to recognize the role of gender, class, caste, religion, and sexuality in relation to health, and subsequently to develop and integrate a gender-sensitive attitude in their medical practice. It is a prerequisite for gender- specific healthcare service delivery and for ushering in social change (Bickel, 2001). Despite the importance of this issue, the scope of undergraduate medical education in India is limited to a biomedical model of medicine with an emphasis on proximal determinants of health like pathogens and treatment modalities. In 2002, WHO made a commitment to implementing a gender policy to mitigate gender inequities in health. A consultative meeting of leaders in the field of medical education was convened which concluded that the key to achieving gender equity in health was to integrate gender considerations into pre-service training curricula. There was a consensus that the gender perspective should be integrated in all the disciplines of medical education and that continuous training should be provided throughout the professional life of medical

practitioners. Developed countries like the USA, Canada, and Australia adopted initiatives to integrate gender considerations in the pre-service training of HCPs. Developing countries, including the Philippines and Thailand, adopted similar initiatives.

These initiatives attempt to integrate undergraduate medical curricula (Australia and Thailand), introduce specific topics in the medical curriculum like sexual and reproductive health (Turkey), and address domestic violence against women (VAW) (the Philippines). One of the first initiatives to address gender in medical education was carried out in the USA by the Association of Professors of Gynecology and Obstetrics (APOG) in 2000. The objective of the programme was to optimize women's healthcare by teaching medical students to recognize gender and sex differences. The curriculum was designed in a manner so as to equip medical students with the knowledge to discuss pathophysiology, aetiology, and differential diagnosis and treatment for common, serious, and women-specific conditions, and efforts were made to build key health competencies in students. The common theme in the teaching of all these subjects was the importance of recognizing gender and cultural differences and to understand the impact of gender-based culturally sanctioned roles on the medical condition of patients.

Another example is the collaboration between Monash University in Melbourne, Australia and the Gender and Health Collaborative Curriculum Project (GHCCP) in Canada; the latter is the work of faculty and students from the six medical schools in the Canadian province of Ontario. Under this joint venture, similar efforts were made to integrate gender in the medical curriculum. The collaboration resulted in the creation of a repository of materials for medical educators, students, and those interested in gender and health. The course material was designed in a manner that it could be taught as a standalone set of modules as well as a gender-integrated medical course for students.

In 2002, the Philippines became one of the first Southeast Asian countries to integrate domestic and family violence concerns in its medical and nursing curricula. The disciplines of community

medicine, psychiatry, medicine, paediatrics, surgery, gynaecology, and legal medicine were called upon to integrate these concerns in their respective courses. At the end of the course, students were expected to have developed into culturally sensitive, gender-sensitive, and compassionate doctors and nurses possessing effective communication and counselling skills.

In 2003–04, Thailand decided to initiate gender-integrated medical teaching for undergraduate medical students for six years of the MBBS curriculum. Their medical curriculum now has topics such as ethnicity, sexual orientation, sexuality, and recognizing the health consequences of sexual abuse.

In India, an initiative to integrate gender in medical education was introduced by the Achutha Menon Centre for Health Science Studies of the Sree Chitra Tirunal Institute for Medical Sciences and Technology, Trivandrum in2002. CEHAT (Centre for Enquiry into Health and Allied Theme) was one of the partners in this initiative. Under this three-year project, different activities were undertaken, such as formulating training modules for gender sensitization, developing criteria for a gender-sensitive setting for imparting medical education, organizing gender-sensitive trainings for medical college teachers, and reviewing Indian medical textbooks through a gender lens. The project led to the creation of a pool of trained medical educators who carried out short trainings and orientations in their respective disciplines in medical colleges.

CEHAT has also led several initiatives on the in-service training of medical professionals to respond to the issue of VAW and demonstrated evidence-based health systems models for responding to domestic and sexual violence. Dilaasa, a hospital-based crisis centre, was a joint initiative of the MCGM and CEHAT, established to sensitize HCPs and to train them to consider domestic violence as a health issue. In 2014, the National Urban Health Mission (NUHM) replicated this model in 11hospitals of Mumbai. Other states have also adopted the model of Dilaasa. This experience of working with the health system on handling gender-based violence was a crucial background for initiating the project on gender in medical education.

Building on these efforts, CEHAT, with support from the United Nations Population Fund (UNFPA) and in collaboration with the Directorate of Medical Education and Research (DMER), Government of Maharashtra, and Maharashtra University of Health Sciences (MUHS), based in Nashik, undertook a project on integrating gender in medical education in the MBBS curriculum in Maharashtra. The project was conceptualized differently so as to integrate gender in medical teaching by building the capacities of medical educators. The project was initiated with a workshop attended by key stakeholders such as DMER, MUHS, and other experts to seek their input. It was agreed that gender integration in medical education should be a joint initiative of CEHAT and DMER, that medical educators should be trained, and that the modules should be tested in select medical colleges to demonstrate the impact in terms of a change in attitude.

About the project

The Integrating Gender in Medical Education (GME) project was implemented in select medical colleges in Maharashtra. The aim was to sensitize medical faculty and medical students to gender equity in health which would subsequently lead to gender-informed health services. The aim was to achieve gender sensitization and awareness of public health issues such as gender/sex differences, sex selection, access to abortion, and VAW by integrating gender perspectives in the MBBS curriculum.

The main objectives of the project were to:

1. Build the capacity of medical faculty on gender perspectives and women's health issues through a training of trainers (TOT) programme.
2. Facilitate the teaching of gender perspectives to MBBS students who had undergone gender- sensitization trainings. An assessment of the feasibility of integrating gender issues and perspectives in medical education as well as bringing about changes in the knowledge and attitudes of medical

students who had undergone a gender-integrated curriculum was also expected to be carried out.

At the conceptualization stage, a consultation workshop on the GME project was organized in September 2011 with senior officials from the Department of Health and Family Welfare, DMER, MUHS, the State Women's Commission, and the Indian Council of Medical Research (ICMR) along with academics, activists, and organizations working on gender and health. At the workshop, several key recommendations regarding the GME projects emerged. One recommendation was the development of a ToT programme that focused on five departments: Forensic Medicine and Toxicology (FMT), Medicine, Preventive and Social Medicine (PSM), Obstetrics and Gynaecology (Ob-Gyn), and Psychiatry. These disciplines were chosen because they form a large part of the undergraduate education.
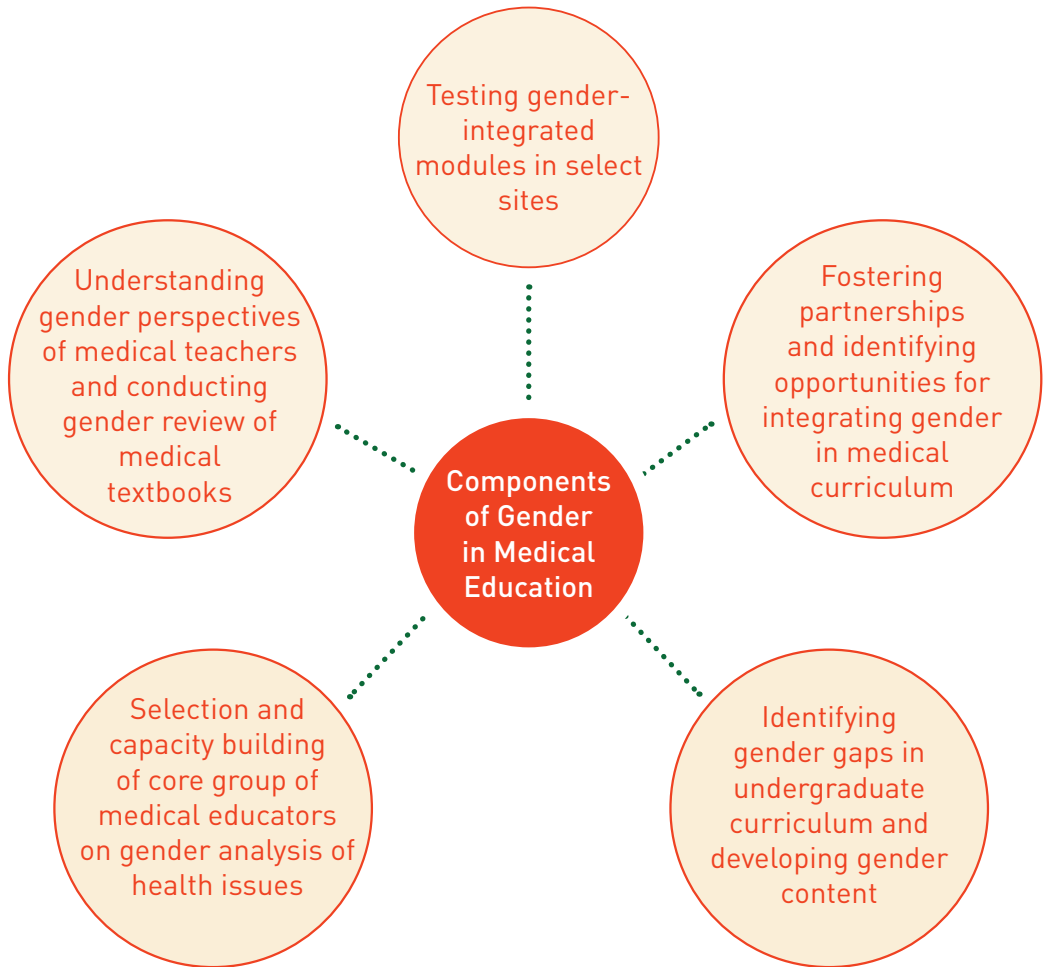
The conceptualization stage was followed by the intervention phase, which comprised the development of gender-integrated modules to facilitate the adoption of gender perspectives by MBBS students and a study to assess the feasibility of teaching these modules to students.

At the inception of the project, medical educators were trained on specific elements such as understanding the differences between sex and gender, recognizing the role of gender in health-seeking behaviour, and understanding how health is experienced differently by men, women, and marginalized groups of men and women (transgender, intersex, sexual minorities). The aim of the training was to understand the relationship between communicable diseases like sexually transmitted infections (STI), reproductive tract infection (RTI), and human immunodeficiency virus (HIV) and their links to gender. Considerable attention was also paid to recognizing the signs and symptoms of VAW and the many ways in which the consequences of VAW are reported to and within the health system. These critical components are currently missing in the MBBS curriculum despite their crucial linkages to health. In short, the following were the areas of training on gender issues:

1. Developing gender-based analytical tools for understanding and treating various diseases

2. Recognizing gender stereotypes held by HCPs and developing gender sensitivity in addressing health concerns

3. Developing an in-depth understanding of the concept of sexuality

4. Providing gender-sensitive reproductive health services for people from diverse groups (men, women, transgenders, people in same-sex relationships)

5. Inculcating gender sensitivity in abortion service delivery for women and girls

6. Being sensitive towards the sexual healthcare needs of different groups

7. Recognizing and responding to gender-based violence (GBV) in a sensitive manner

Components of the project

Post the training, medical educators along with experts reviewed the curriculum to assess how and where to include gender aspects in teaching undergraduate students. This humongous task was undertaken for all five disciplines, namely gynaecology and obstetrics, forensic science and toxicology, community medicine, psychiatry, and internal medicine. The medical educators were of the firm opinion that along with teaching the academic subjects to students, it would be critical to assess them in clinics and in their practical lessons where they interact with patients. This would allow for specific ways of determining whether students had understood and imbibed gender concerns.

Testing gender-integrated modules in select sites

Understanding gender perspectives of medical teachers and conducting gender review of medical textbooks

Fostering partnerships and identifying opportunities for integrating gender in medical curriculum

Components of Gender in Medical Education

Selection and capacity building of core group of medical educators on gender analysis of health issues

Identifying gender gaps in undergraduate curriculum and developing gender content
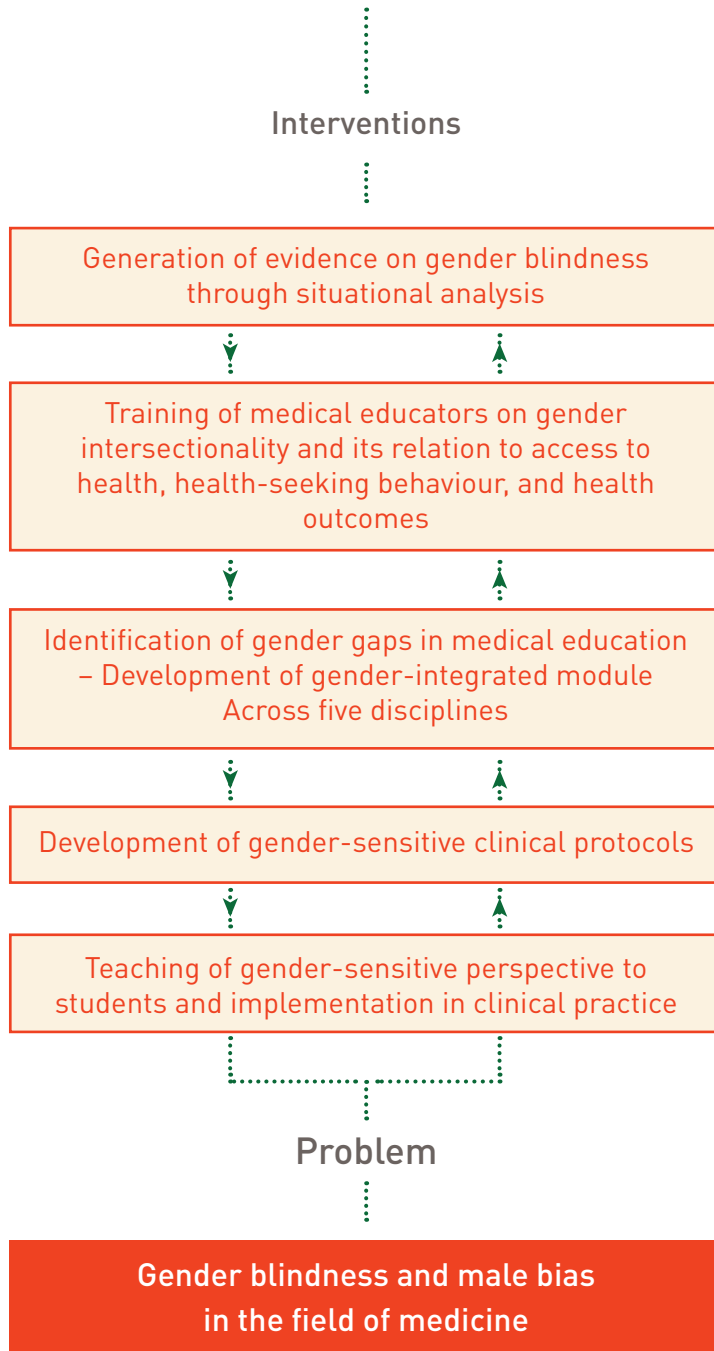
Theory of change

As a part of the GME project, gender-sensitive clinical protocols were introduced across five disciplines, including OBGYN (see Annexure 1). Beginning in 2015, trained educators sensitized and trained their colleagues in order to bring about changes in clinical practice.

Obstetrics and Gynaecological Practice
in Aurangabad Medical College

Outcome

Outputs

- Respecting the patient's privacy during the medical examination

- Replacing archaic medical examination proforma with gender-sensitive medico-legal proforma for sexual violence care

- Developing systems response to cases of domestic violence

- Collaborating with the burns department to provide comprehensive care to burns patients

- Implementing aspects of respectful maternity care

- Adopting women-centric comprehensive abortion services

- Developing IEC material

- Changing the name of the department

Interventions

Generation of evidence on gender blindness through situational analysis

Training of medical educators on gender intersectionality and its relation to access to health, health-seeking behaviour, and health outcomes

Identification of gender gaps in medical education – Development of gender-integrated module Across five disciplines

Development of gender-sensitive clinical protocols

Teaching of gender-sensitive perspective to students and implementation in clinical practice

Problem

Gender blindness and male bias in the field of medicine

About the case study

This case study describes the efforts of medical educators of the Department of Obstetrics and Gynaecology of the Aurangabad Medical College to create gender-sensitive practices in patient management and to incorporate gender-sensitive attitudes amongst doctors at all levels, including professors, lecturers, residents, and interns. Nurses and the support staff were later included as well.

Aurangabad is the fifth largest city in Maharashtra, with a population of over one million. The Aurangabad Government Medical College Hospital (GMCH) is one of the premier medical colleges in Maharashtra and the biggest tertiary care hospital in the state, administered by the Directorate of Medical Education and Research (DMER). The hospital has 1,177 beds. The average monthly patient flow was approximately 58,000 outpatient visits in 2017.

The case study shows that medical educators when convinced of the need to incorporate gender considerations in medical practice can bring about major changes by establishing and providing gender-

Site of change

informed services, despite a large patient load, poor infrastructure, and inadequate staffing. Champions of the initiative such as the head of the department (HOD) and his ob-gyn team demonstrate how they have brought about remarkable changes in the functioning of the department.

Relevance of change

It is noteworthy that the Sustainable Development Goals (SDG), which constitute a global call to action, also address the health and well-being of all (Goal 3) and gender equality (Goal 5). Also, the mandate for Universal Health Coverage (UHC) proposes to ensure "equitable" access for all Indian citizens (Planning Commission, HLEG Report, 2011) and underscores the consideration of gender in the provision of healthcare services.

The need for gender sensitivity in the provision of obstetric care and abortion services, as well as care in responding to VAW, is evidenced by the following. The changes in clinical practice in the OBGYN department of the Aurangabad Medical College are significant for the following reasons.

1. *Gender-sensitive obstetric care:* There is a growing body of evidence that women receive poor care during pregnancy and childbirth, including abuse, disrespect, and neglect (Bohren et al., 2015). Such practices result in health services of poor quality, which impinge on the right to healthcare. Considering this evidence, WHO released a statement titled 'The prevention and elimination of disrespect and abuse during facility-based childbirth' to reiterate strongly the right of every woman to access dignified and respectful healthcare (WHO, 2014). It also released a set of recommendations titled 'WHO recommendations: Intrapartum care for a positive childbirth experience' in 2018 (WHO, 2018). These recommendations include not only clinical guidelines for the management of labour, but also aspects of respectful maternity care. They view childbirth from a woman- centred,

human rights-based lens, and put forth directives to ensure that the experience of childbirth for women is free from abuse and disrespect, and is a positive experience that takes place in a safe environment. In India, too, efforts have recently been undertaken by the government to ensure a positive childbirth experience. In March 2018, the Indian government released LaQshya – Labour Room Quality Improvement Initiative with the objective of reducing maternal and newborn mortality and morbidity, and enhancing the satisfaction of women availing maternity healthcare services.

In this context, the implementation of gender-sensitive services incorporating aspects of respectful maternity care at the level of the department is an important initiative to develop an evidence-based model that can be replicated at other health facilities.

2. *Abortion services:* Abortion has been legal in India since 1972, yet unsafe abortion is the third leading cause of maternal mortality in the country (Henshaw et al., 2009). Although the government has tried to improve the health infrastructure to increase access to abortion services, there are several barriers that compel women to seek abortion under unsafe conditions.

   It is important to note that abortion is an essential component of sexual and reproductive health (SRH), and still service provision is not uniform across health facilities. In the Indian context, several studies on access to abortion have found various defensive practices at the hospital level that act as deterrents for women seeking abortion. These practices include lack of confidentiality and the insistence on securing the consent of the husband or a relative for abortion, even though abortion is mandated under the MTP law. Also, several public health facilities are known to provide abortion services only on the condition that women adopt either sterilization or copper intrauterine device (IUD)after the procedure (Iyengar et al. 2015). In addition, women are

not offered an abortion method of their choice by health facilities. Invariably, the most preferred method of abortion in public hospitals is dilation and curettage, which requires admission, and hence women seeking medical abortion are forced to go to private practitioners or to quacks (Duggal and Ramachandran, 2004).

To address these issues, it is important to build the capacity of HCPs to recognize the barriers faced by women in accessing these services and to improve access to safe abortion.

3. *Violence against women and health consequences*
   Evidence from the literature indicates that domestic violence carries an immense disease burden owing to the fact that it has a profound impact on the physical and mental health of survivors. Many studies have established that domestic violence can lead to physical, psychological, and sexual health problems.

   Violence results in injuries, bruises, fractures, burns, vaginal tears, psychiatric conditions, miscarriages, and so on. One of the largest killers of women of reproductive age in India is violence. Burning, poisoning, assaulting by knife, and abetting suicide are some of the ways in which women are killed within the family. The health effects range from low-birth-weight babies to anaemia, from depression to suicide, from vague bodily complaints to severe illnesses such as pelvic inflammatory diseases, from repeated abortions to chronic pain syndrome, from unwanted pregnancies and unsafe abortions to HIV/AIDS, from pregnancy complications to maternal mortality, from memory loss to heightened anxiety, from fear of sexuality to low self-esteem. Indeed, the psychological consequences of abuse often go unnoticed and unaddressed. These include depression, anxiety disorders, post- traumatic stress disorder, suicidal tendencies, and complaints of chronic pain (such as backache, which can be a psychological fallout of repeated abuse). In order to

obtain treatment for health complaints and injuries caused by violence, women approach the health facility. It is a well-known fact that woman facing abuse are more likely to use health services as compared to women who are not facing violence. According to a multi-site study conducted in seven cities in India, almost half (45.3 per cent) of the women who faced violence reported injuries requiring treatment (INCLEN, 2000) Another study examining the cases of women recorded in the Emergency Police Register of the Casualty Department in a government-run urban hospital in Mumbai found that two-thirds of the women above 15 years of age (66.7 per cent or 497/745) were definitely or possibly cases of domestic violence (Daga et al., 1999). Health professionals are hence in a strategic position to reach out to women facing violence, being the most certain and probably the earliest contact available to a survivor of violence. Early identification of women facing violence and the provision of appropriate psychological first aid by healthcare givers can prevent the more severe health consequences faced by these women if they continue to be abused.

Further, the vital documentation of health complaints resulting from abuse can be done at the health facility. Such documentation can be used by the abused woman in a court of law as evidence if she chooses to pursue a legal course of action. The details about the documentation are shared in other sessions.

The change

As the teaching of the gender-integrated curriculum by medical educators was underway, medical educators of the OBGYN department began seeing their clinical practices more critically. They started questioning several existing clinical practices. There was a recognition that while the teaching of gender-integrated modules is underway, medical students would be able to imbibe such a

perspective only when they observed changes in clinical care offered to women at the department. This led to step-by-step changes made at the level of the department.

1. *Replacing the archaic medical examination proforma with a gender-sensitive medico-legal proforma for sexual violence care:* Medical educators were convinced that they would not be able to go back to the old practice of rape examination where the patient's history is sought cursorily and only evidence is collected. As a part of gender integration, they had taught students to look at rape or sexual violence not merely as a legal issue but also as a critical health problem, because unwanted pregnancies, STIs, injuries, and other forms of trauma are a consequence of it. Hence, educators recognized the need to change this in practice. As a first step, they established a designated space away from the hustle and bustle of an outpatient department (OPD) to carry out the examination and provide care. The second step was to ensure the availability of a trained doctor at any time to carry out such an examination and provide treatment. In an extremely busy hospital, to keep a doctor on standby to conduct such an examination was impossible. Thus, the duty roster was changed to ensure the availability of a doctor who was already on duty and who would be supported by an additional doctor; the latter would take on the other duties of the former when the former carried out work related to sexual violence. A new protocol was laid down that stated that all investigations will be carried out on the same day and that the survivor of rape shall not be called upon again for further investigations. This was a radical change in the practice, as most hospitals in India continue to either admit the survivor or call her the next day. This practice is convenient to the hospital, but extremely distressing for the survivor. The department has also set up a counselling room called Dilaasa Kaksh to provide psychosocial services. As no counsellor is available to respond to such cases of violence, existing social service superintendents were trained to provide these services.

2. *Respecting the patient's privacy during the medical examination:*

   The examination of patients in the presence of a group of medical students is a "given" in all medical colleges as this is how practical teaching has been conventionally carried out in India for several years. However, in all this, very little thought is given to the privacy of the patient. Gender-integrated training has enabled medical educators to entrench the notion of "privacy" across all arenas in their department. In the words of the HOD, "It is something I never thought about and now I realize that it was so simple to implement." During an examination, the woman would be stripped after the doctor entered the room, but this practice has now been changed. A female attendant or nurse readies the woman in the room and exposes only that part of the body that is to be examined. Curtains have been installed at the level of each bed so that there is privacy for individual patients too. In the past, doctors often felt that since all the patients in the OBGYN department are women, there is no need for privacy, but when the situation was analysed through the gender lens, they realized the need to change this practice. The change is not a major infrastructural one but that of perspective and attitude, and that of valuing the privacy of a patient. The most common practice in training medical students was for a doctor to carry out a practical examination of the patient in front of students to indicate a physical condition and then demonstrate treatment. But this has now been replaced with the skill laboratory. Despite this being a Medical Council of India (MCI) requirement, many medical colleges do not have such skill labs in OBGYN departments where teachers train students in ways of examining on mannequins rather than women patients. The skill lab helps medical students sharpen their skills in conducting procedures like a genital examination.

3. *Collaboration with the burns department to provide comprehensive care to burns patients:*
   Women reporting burns are kept in the surgery ward. In cases where women are pregnant and burnt, the gynaecologist is called upon. The earlier practice of gynaecologists consisted of assessing the pregnancy and providing a report. In short, the "burns" aspect was seen to by a surgeon while the "pregnancy"was seen to by the gynaecologist. There was no convergence on the management of treatment other than pharmacological treatment. Thanks to understanding and imbibing a gender perspective, medical educators of the OBGYN department now recognize the need to assess pregnant women reporting burns as possible cases of domestic violence. This has prompted doctors to develop a protocol for asking about the history of burns sustained by the patient and her experience of domestic violence, and to document the findings of the physical examination. This is an important contribution and significant step, as often women of reproductive age who report burns are regarded as having suffered "accidents", without doctors and nurses enquiring into the possibility of domestic violence. This practice has now also been adopted by the burns unit where there is an inclination to develop a proforma for all burns patients.

4. *Created a protocol for the identification of, and the response to, victims of domestic violence:* Medical educators of the department are sensitized and trained to handle cases of violence. Violence in pregnancy has a profound impact on maternal health and pregnancy outcomes, and hence doctors now routinely enquire about it when providing antenatal care (ANC). Training has helped in raising the suspicion index of HCPs by teaching them to recognize the common health complaints of women that can be associated with violence. They ask women about violence at home in a sensitive manner and provide them first-line psychosocial

support. Medico-legal complaint (MLC), which has evidential value, is registered in all cases of domestic violence. One counsellor has been appointed in the department to provide services to survivors, and this counsellor has also been training nurses to provide psychosocial support to women.

5. *Established women-centric comprehensive abortion services:* In most government hospitals in India, access to medical termination of pregnancy (MTP), also known as abortion, is not easy. The MTP law allows adult women to access abortion services. Conditions such as obtaining the signature of the husband or the mother-in-law, making a police complaint if the woman is unmarried, and denial of abortion services to women under the age of 18 years are rampant. Additionally, women who reach the hospital in an advanced stage of pregnancy (second trimester) are suspected of seeking sex-selective abortion in a desire for a male child. Some hospitals even have an unwritten rule of "No contraception, no MTP".
Aurangabad Medical College has adopted several positive changes and replaced archaic and defensive practices with more women-centred and gender-informed services.

There is no conditional access to abortion services in the OBGYN department. Sterilization or insertion of copper T or copper IUD is not compulsory when women seek MTP services. Women are counselled and given information about all the family planning choices available so that they can take informed decisions. With the consent of the woman, the husband is also spoken to about the need to use contraceptives and informed about the adverse impact of repeated pregnancies on the woman.

MPT is not linked to sex-selective abortion. HCPs take a comprehensive history to understand the reason for the delay in seeking abortion. This information is properly maintained in a given format in a register.

In the case of MTP, consent is taken only from the woman now. Earlier, there was an insistence on having the husband's signature on record and consequently in many cases the woman would never return. As HCPs have developed a greater understanding of the circumstances around a woman's decision regarding abortion, consent is taken from the woman only. In terms of the methods of abortion too, the team now recognizes the need to use medical abortion and Manual Vacuum Aspiration (MVA) instead of surgical methods. The department ensures that medical abortion drugs are routinely available, thus making access to safe abortion a reality for women.

Aurangabad Medical College has proactively provided MTP services in cases of sexual violence where the pregnancy has crossed 28 weeks. The department set up an expert committee and made efforts in several such cases as they realized the negative implications of continuing a pregnancy resulting from rape. In the last two years, eight pregnant women between 20 and 28 weeks obtained legal permission for undergoing abortion through a court order after seeking expert opinion from the department.

These women received safe abortion services from the department. It is important to note that many hospitals in India do not take proactive steps in the case of an advanced pregnancy even with the full knowledge that the pregnancy is an outcome of rape. In this context, Aurangabad Medical College has provided a clear example of how the matter should be handled.

6. *A significant and landmark change is the change in the name of the department*: One of the most significant changes was renaming the department. The name of the department was changed from the Family Planning Department to the Comprehensive Contraceptive Services for All Centre. This is an important step because the department believes

that contraception, including abortion services, is not restricted to only limiting the size of the family and that contraception is needed by all women. In the context of a human rights approach, the change in name is important because it replaces the term 'family planning' with the more inclusive term 'contraception', which addresses the contraception needs of all persons, including those who may fall outside the traditional family unit.

7. *Implementing aspects of respectful maternity care:* The GME project enables HCPs in the department to understand and address the issue of ongoing disrespect and abuse faced by women patients. They implemented the core components of respectful maternity care in a government hospital setting to ensure that women receive more skilled and respectful care during delivery.

    Creating a sitting arrangement for women in the antenatal OPD: In the ANC OPD, there was no sitting arrangement earlier; pregnant women were made to stand for long hours. As soon as the doctor arrived, patients would rush into the doctor's room. This created a lot of friction between doctors and patients, with nurses scolding the patients for not queuing up and for generally being disruptive. This situation changed with the gender sensitization of HCPs, with the realization that women travel several hours to reach the hospital; the waiting period could be made bearable by introducing benches and sitting spaces so that women and their families were comfortable and that they also would not crowd the OPD. This arrangement has been found to be helpful to both doctors and women patients.

    Introducing triaging of treatment: Triage is the initial or primary assessment to determine the urgency of care needed by a patient. Compared to the first come, first served basis, triage focuses on maximizing the benefits for each individual patient by giving treatment priority to those patients whose

needs are the most urgent. Triage is important especially in the labour room to distinguish between serious patients and routine patients. All women are examined at 0 hours to establish the triage index. Triage is also helpful in segregating the responsibilities of doctors and nurses when there is an excessive workload and a shortage of staff. The department has allocated an enclosed space near the labour and delivery ward for triaging. It has a reception area with some delivery beds. This has helped HCPs to provide timely care and also to distribute the workload evenly between doctors.

Integrating informed consent across all procedures in the labour room: In general, the obtaining of consent for various procedures during childbirth is often overlooked. If any attention is paid to it, it is regarded as a mere formality about obtaining the signature of a family member for performing some sort of invasive procedure. The resident doctors are trained to take consent from women by providing them all the relevant information pertaining to the procedure. Now, the consent for each procedure is taken separately and has been operationalized in an ethical manner.

Introducing evidence-based childbirth: Over-medicalization of childbirth, which includes excessive or inappropriate use of interventions like episiotomies and caesarean sections, can contribute to morbidity and mortality. The literature on maternity care has defined extensive episiotomies, postpartum suturing of tears, and episiotomy without anaesthesia as a form of physical abuse. In Aurangabad Medical College, the HCPs of the department are trained to practise evidence-based medicine. The focus is on curtailing unnecessary episiotomies and caesarean sections in pregnant women. The department undertakes regular caesarean audits to assess the need based on evidence-based parameters like obstetric history, onset of labour, foetal lie, number of neonates, and gestational age.

Modifying preexisting beds to birthing beds and allowing women in labour to adopt the position of their choice: The beds in the labour room have been modified so that women feel comfortable during childbirth. The freedom to choose labour and birth positions like kneeling on the floor has a positive effect on the woman's comfort level and helps speed the progress of labour. The choice of the birthing position also reduces the need for unnecessary induction of labour. It results in client-oriented maternity health services that are associated with higher satisfaction and increased utilization of facility-based health services. The department aims to encourage the adoption of the squatting position during delivery, which help in vaginal delivery without tears.

Keeping mother and newborn together after childbirth: The baby is placed on the mother's abdomen for two to three minutes and then the umbilical cord is clamped to improve the outcome for both baby and mother. Delayed cord clamping and putting the baby on the mother's abdomen soon after delivery reduce blood loss after delivery, thereby helping in reducing anaemia in mother and newborn.

Allowing women in labour to walk and consume food and fluids as per their wish: The earlier practice was to restrict food and fluid intake during labour due to concerns about the aspiration of stomach contents into the lungs during general anaesthesia. However, there is no medical evidence for this and hence the practice in the department was changed to respect women's choice.

Providing a birth companion: Usually labour rooms have a strict "no entry" policy and a sign stating this is posted for anyone outside of the department. The women in labour are inside while their families wait outside. Labour takes several hours, and the anxiety and stress of the woman inside and of her family waiting outside increase. Given the shortage of staff, nurses and doctors have to attend to a large number of labouring women and cannot provide one-to-one care. This

leads to a lot of anger and frustration. To address this issue, the concept of a birth companion was introduced where the labouring woman is provided support by an experienced woman from her family who stays by her side during the duration of labour and childbirth. Women are given the option of experiencing labour and childbirth, with a companion of their choice providing support and encouragement. There is strong evidence in the literature that the presence of a birth companion improves maternal and newborn health outcomes, including increasing the chances of a normal delivery, ensuring a shorter duration of labour, and encouraging the early initiation of breastfeeding. The birth companions are informed about the danger signs during labour so that they can alert HCPs on duty. The birth companions are provided with gloves and gowns to avoid infection. Women have described the experience of labour with a birth companion present to lend moral support as positive.
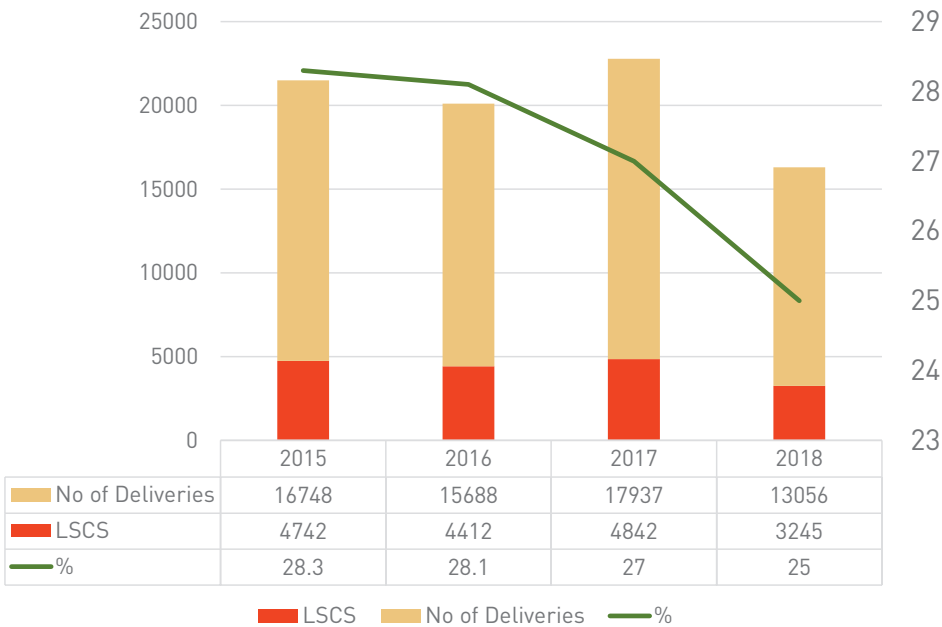
8. *Development of information, education, and communication (ICE) material:* The department has prepared different IEC material for patients waiting in the OPD. The IEC material includes early signs of complications during pregnancy like pre-eclampsia to raise awareness among women.
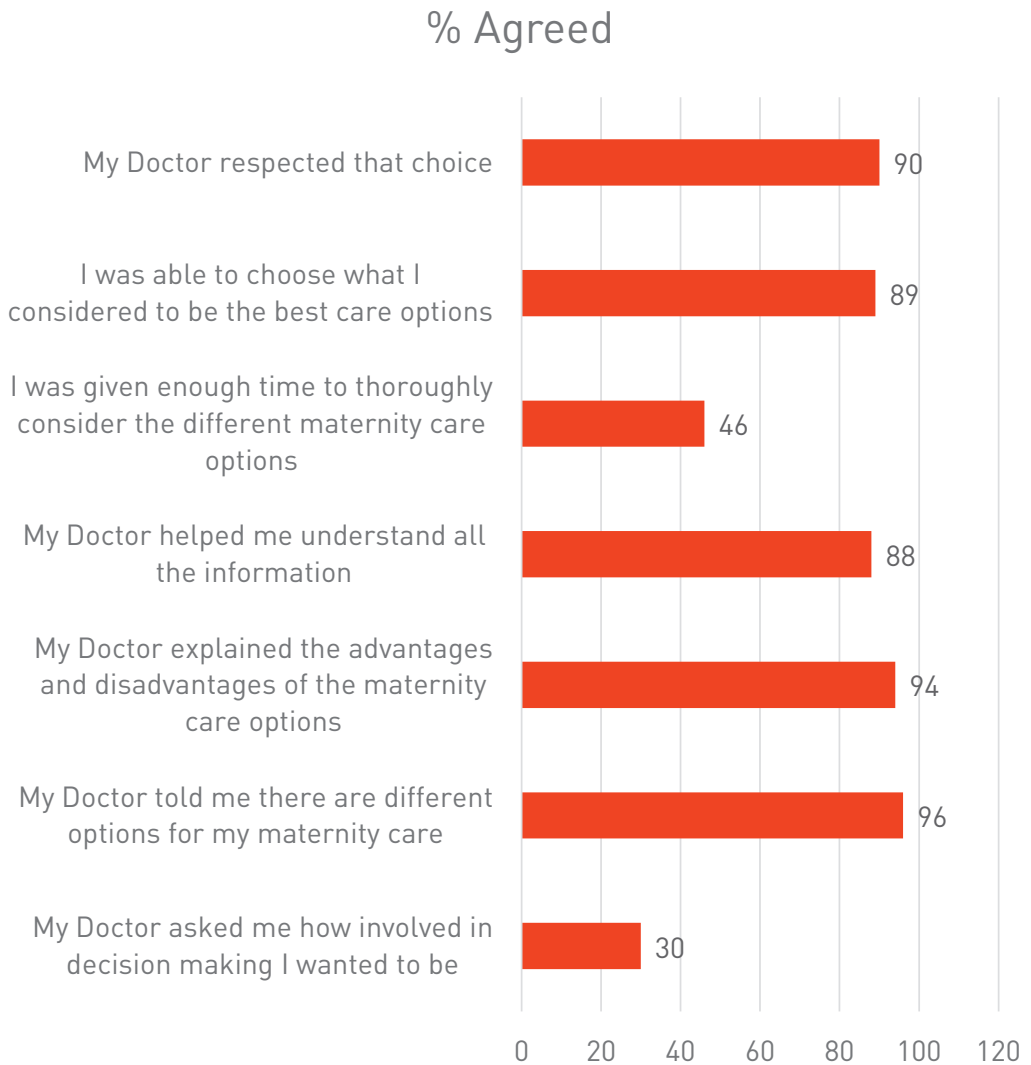
Outcomes of clinical practice changes:

1. *Developing standard operating procedures (SOPs):* This is an important reference manual for resident doctors who are at the forefront in terms of providing healthcare services to patients. The SOP manual has 44 chapters and includes detailed instructions on proceeding with or handling 45 situations. It provides insights not only into the field of clinical practice but also addresses problems relating to the management of one's workload, tackling violence against doctors, and understanding the working of government schemes. The SOP manual is instrumental in promoting better care and more effective patient outcomes. It provides

in-depth knowledge about the proper conduct of the antenatal OPD, labour room, operation theatre, and postnatal care (PNC) room.
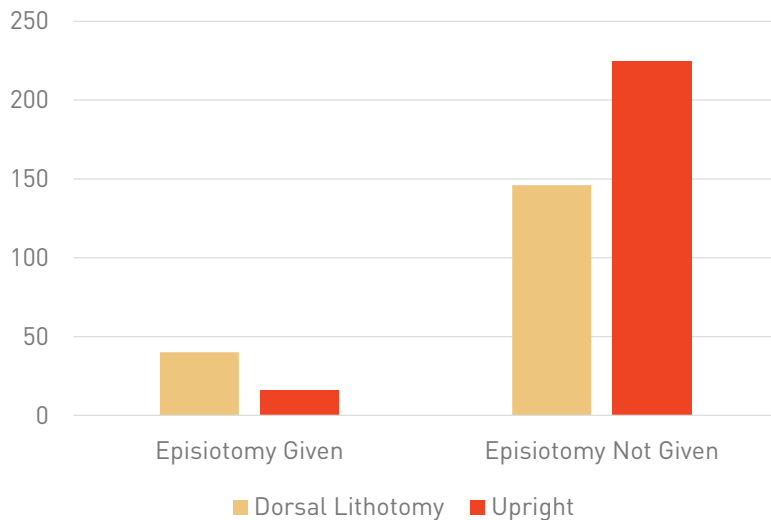
2. *Promoting evidence-based practice:* The department has started maintaining separate records of special cases to promote evidence-based practice. These records help students to learn the intricacies of handling complicated cases. In addition, postgraduate students are encouraged to take up dissertation topics that examine social factors along with biomedical factors in treatment.

3. *Generating evidence to show impact:* The department routinely analyses its data to generate evidence on the impact of introducing changes in its clinical practice. It recently surveyed 300 women to learn about their experience of accessing services from the department.

	2015	2016	2017	2018
No of Deliveries	16748	15688	17937	13056
LSCS	4742	4412	4842	3245
%	28.3	28.1	27	25

The rate of caesarean section has fallen from 28% to 25%.

% Agreed

Statement	%
My Doctor respected that choice	90
I was able to choose what I considered to be the best care options	89
I was given enough time to thoroughly consider the different maternity care options	46
My Doctor helped me understand all the information	88
My Doctor explained the advantages and disadvantages of the maternity care options	94
My Doctor told me there are different options for my maternity care	96
My Doctor asked me how involved in decision making I wanted to be	30

These are the results of the survey assessing women's experience of seeking care.

The graph shows that 22.5% women needed episiotomy in the dorsal lithotomy position whereas Only 7.2% women needed episiotomy in the upright position.

NICU Admissions

	2016	2017	2018
NICU Admissions	2064	1956	1148
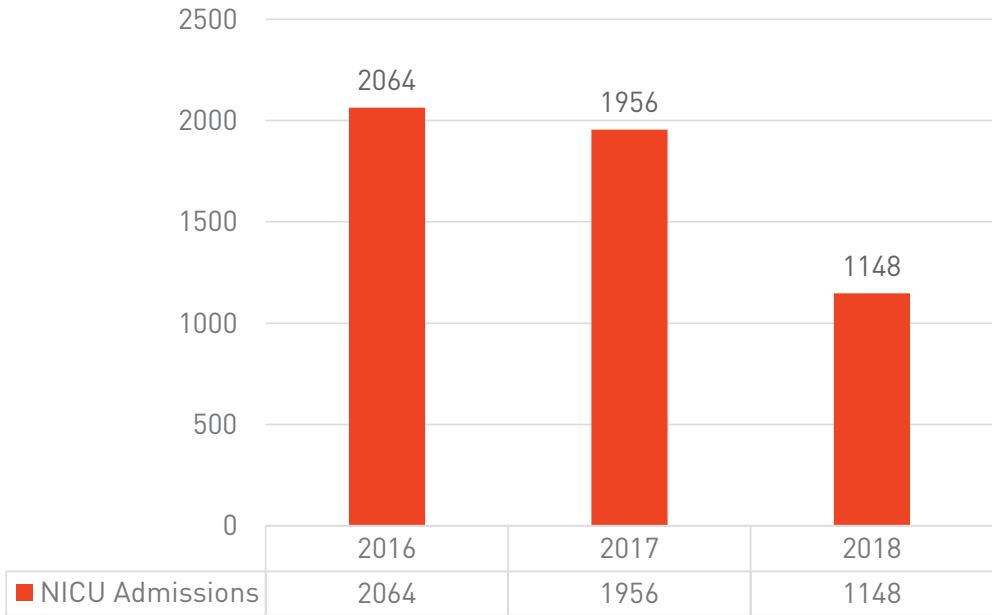
The admission rate of the Neonatal Intensive Care Unit has declined significantly due to practices like delayed cord clamping, skin-to-skin contact between mother and child, and initiation of early breastfeeding.

Overcoming challenges:

The story of change between 2014 and 2018 has not been an easy one. The changes introduced by the medical educators who participated in the GME initiative met with a lot of resistance. The department has a high patient load, with 16,000 deliveries per year, and also a high rate of referral from the neighbouring rural areas. The doctor–patient ratio in the department is very low. As a result, HCPs perceived such initiatives as an additional burden. To address this issue, the gender-trained medical educators adopted an interesting strategy; they designed a standard operating procedure (SOP) that assists doctors in handling routine and difficult situations. Such an SOP did not exist earlier and therefore the communication between different units was very cursory, with the heads of the units having their own ways of managing patients. The development and adoption of the SOP has led to uniformity in procedure. Seeking feedback from other doctors also has led to ownership of the SOP. It has created a healthy, collegial, and cooperative working environment between different departments.

The first challenge was to explain the need for, and the importance of, making clinical changes to the team of HCPs. HCPs often believe that their role is only to treat the disease and its physical manifestation.

Doctors often ask patients about their medical history but without understanding the underlying social factors and causes. Conventional medical training of HCPs does not equip them to address the social determinants of health in an effective or sensitive manner. In the initial phase, gender-trained medical educators were ridiculed by their peers who dismissed them as "gender" doctors who have too much time on their hands and so can indulge in "gender" issues. But the medical educators have slowly made some progress, by inviting their peers to look at the modules and to participate in trainings, resulting in gradual but steady changes.

The department has to function as a team, with doctors, nurses, and support staff working towards a common goal. However, there was a lot of resistance from nurses about certain aspects like allowing the presence of birth companions and allowing women to choose their position of birthing. Their objections were related to fears about overcrowding, apprehensions of babies being stolen from the ward, and also concerns about letting in untrained family members and others. After a dialogue between the entire staff, it was decided that the birth companion would be allowed based on risk assessment. The benefits of the presence of the birth companion in the ward next to the woman were also discussed; it would help nurses in monitoring any emergency and would facilitate early breastfeeding. Medical educators set up various WhatsApp groups so that nurses could alert them about any difficulties faced by them. Such groups were also made for residents to discuss their routine cases, including the challenges they faced. This group sharing has led to the exchange of a lot of information on good practices and has motivated HCPs to adopt evidence-based practices. The department's work has received international recognition from organizations like WHO, UNFPA, UNICEF, and the White Ribbon Alliance. The international acceptance of the initiative has drawn the attention of senior administrators of the health facility who are now also involved with the project.

Infrastructure: Government health facilities are often plagued by inadequate infrastructure, and this is also a contentious issue and a major problem at the Aurangabad health facility. The trained HCPs of the department have managed to bring about some changes with the limited resources at their disposal. They strategized the changes by prioritizing them and by using the available funds from the government efficiently. There is a fund for every surgeon, which is Rs 100 per case, but no doctor takes this money and instead contributes it towards the common fund which is used for various activities in the department. It is also critical to note that due to international recognition of the initiative, the department has been able to raise funds from various organizations.

Experience of implementing gender-sensitive clinical practices

Medical educators stated that they had to be true to the gender-integrated content taught by them to medical students. Hence, clinical changes were essential. Once they made changes in clinical practice, they saw that their peers and students accepted and imbibed them. The approach was not top-down, but rather it was inclusive. These are important lessons for introducing sustainable changes in clinical practice.

In this regard, the HOD, OBGYN, Aurangabad Medical College said, "In case of repeated reproductive infections, clinicians used to advise women hysterectomy or used to tell them that it is a psychological problem. Now these problems are viewed through the gender lens and students are taught to take women into confidence and explore the underlying reasons."

He described his earlier practice when no attempt was made to look at clinical conditions through the gender lens: "I would often chide women seeking abortion more than once and ask them why they didn't use contraceptives."

The other educator from the department who is an associate professor said, "Earlier, I wouldn't pay attention to the vague complaints made by some women. But I can now sense instances of domestic violence."

The improvement in the quality of care can be measured by the impact of changes at the facility level. There has been a decrease in caesarian sections and unnecessary interventions during labour. There has been an increase in the number of deliveries, early initiation of breastfeeding, and better pregnancy outcomes.

Recognition of the initiative

The initiative to implement gender-sensitive clinical services has been acknowledged by various international organizations. It has also been recognized the Government of India. The deputy

commissioner, Ministry of Health and Family Welfare recently visited the department to study the initiative to provide respectful maternity care. The central government is planning to recognize it as a model that can be upscaled at other sites.

The initiative was also covered recently in a report by NDTV which documented the experience of doctors, nurses, and patients. Seehttps://www.ndtv.com/video/shows/ndtv-special-ndtv-india/ motherhood- service-and-respect-482864

Annexure

Checklist to ensure gender-sensitive approach in obstetrics and gynaecology clinics items	Yes	No	NA

Procedures in place to ensure privacy:
Provide an enclosed space to talk to the patient that ensures auditory and visual privacy,
e.g. curtains, some amount of soundproofing
    • during history taking
    • during abdominal and pelvic examination
Ensure that you speak with the patient alone, apart from speaking in the presence of relatives or accompanying persons.			

Checklist to ensure gender-sensitive approach in obstetrics and gynaecology clinics items	Yes	No	NA
Treat information obtained from patient in a confidential manner: Ensure that information given by the patient in any form, whether verbal, written, recorded, or computer-stored, remains confidential and is not revealed to any person without the patient's consent. Do not discuss the patient with other staff members, in front of other patients, with family members or friends. In the case of minors and individuals, in matters that involve legal issues, information has to be shared with their parents and/or guardians, and these patients also should be informed about the reason and necessity for the disclosure of this information. Make patients aware of, and the reasons for which the information given by them needs to be communicated to any other person and obtain their consent for sharing this information with: • Other doctors • Partner and family members • Police/lawyers			
Information pertaining to HIV+ status, incidence of domestic violence or sexual abuse, and suicidal thoughts and/or previous attempts at suicide must be communicated to intimate persons in the family. Details of sexual and reproductive health, i.e. menstrual history, childbirth/pregnancy, should be obtained in a sensitive manner.			

Checklist to ensure gender-sensitive approach in obstetrics and gynaecology clinics items	Yes	No	NA
Maintain non-judgmental attitude, be sensitive, and maintain confidentiality of disclosures about abortion, sex selection, sexual orientation, sexual practices, and gender identity. Physical examination should be done in a manner that respects the patient's privacy and dignity			
Ensure auditory and visual privacy. Ensure appropriate covering of patient. Ensure presence of chaper one wherever necessary. Obtain informed consent after explaining indication, details of procedure. Ensure adequate lubrication, instruments at comfortable temperature (avoid hot/cold instruments).			
Explain findings, discuss diagnosis and further management plans after conducting examination sensitively, and counter check to confirm that the patient understands.			
Be non-judgemental about patients/clients during examination irrespective of the clinical conditions they present, e.g. STI, pregnancy out of marriage. Be respectful in language and behaviour with all patients.			

Checklist to ensure gender-sensitive approach in obstetrics and gynaecology clinics Items	Items	Yes	No
Respect woman's autonomy–her right to refuse examination Ensure a provider/doctor of a sex preferred by the patient			
During pregnancy–abortion Wantedness of pregnancy assessed • If unwanted, discuss options for termination/continuation of pregnancy sensitively while allowing woman autonomy to choose.			
• If woman desires termination of pregnancy, offer MTP or refer to appropriate services for the same. • Do not insist on spousal/other consent for MTP. • Do not make abortion service conditional on acceptance of contraception. During pregnancy–antenatal care: All pregnant women to be screened for domestic viol During labour and childbirth Ensure auditory and visual privacy. Ensure appropriate covering of woman. Provide information on progress of labour, any complications in a sensitive manner and seek consent for any procedure/intervention. Treat woman with dignity and respect. Avoid unindicated procedures, e.g. enema, shaving, routine episiotomy. Allow birth			

Checklist to ensure gender-sensitive approach in obstetrics and gynaecology clinics Items	Items	Yes	No
companion into labour room at all times. Respect woman's choice regarding position, pain relief, etc.			
Contraceptive services Discuss all available options with woman, and if she desires, also discuss these with her partner Seek informed consent and provide adequate information on advantages, side-effects, and complications.			
Ensure provision of contraceptive service of choice/referral to appropriate service for the same. Ensure that there is no coercion or conditional provision of contraceptive service.			
Adolescent services: Maintain non-judgemental attitude regarding marital status, sexual practices, sexual orientation, request for contraception. Provision of services–information, contraception, abortion, consent of adolescent regarding disclosure of information to parent/guardian			

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Centre for Enquiry into Health and Allied Themes (CEHAT), Maharashtra

CEHAT (Centre for Enquiry into Health and Allied Themes) is the research centre of Anusandhan Trust established in 1994. CEHAT is involved in research, training, service and advocacy on health and allied themes. CEHAT's aim is to produce socially relevant and rigorous health policy research and action to promote the wellbeing of the poor and disadvantaged, strengthen people's health movements, and realize the right to health and health care. The organization's strategies include:

1) undertaking research and advocacy projects on various socio-political aspects of health;

2) establishing direct services and programs to demonstrate how health services can be made accessible and provided in an equitable and ethical manner;

3) disseminating health information through databases and relevant publications. Socially relevant and rigorous academic health research and health action at CEHAT is for the well-being of the disadvantaged masses, for strengthening people's health movements and for realising right to health and health care. All efforts in CEHAT endeavour to create space for the participation of people without compromising on academic rigour.
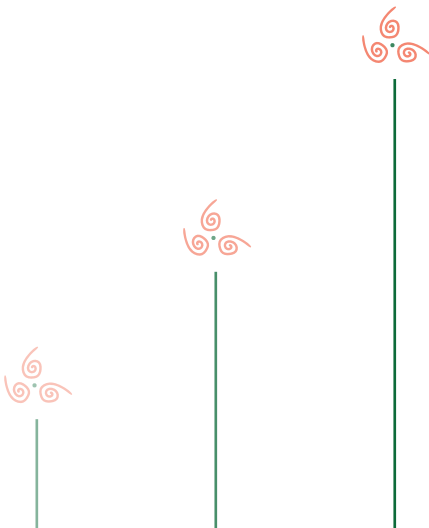
2.2 Fluorosis Mitigation through Community-based Safe Drinking Water Supply in Dhar District, Madhya Pradesh

People's Science Institute (PSI), Uttarakhand[2]

Abstract

Fluorosis is a disease caused by a high concentration of fluoride in drinking water drawn from the ground through sources or devices like handpumps and tubewells. It results in physical deformities which affect not only the health and well-being of the people, but also their socio- economic conditions and status. The case study presented here is of Dhar district in Madhya Pradesh where this crippling disease mostly affects vulnerable population groups and children. The major cause is the dependence of people on groundwater that has fluoride levels that are much higher than the norm of 1.5 mg/l prescribed by the Bureau of Indian Standards (BIS), Ministry of Consumer Affairs, Food and Public Distribution, Government of India (GoI).1 There is no treatment for fluorosis, but the disease can be prevented or mitigated by consuming fluoride-safe water. Interventions like the installation of handpump-based defluoridation units have been largely unsuccessful in this region owing to their difficult operation and maintenance (O&M).2 People's Science Institute (PSI), Dehradun successfully

2 Contributed by Anita Sharma.

implemented community-based safe drinking water supply systems in 17 villages in Dhar district during 2013–18 with the financial support of FRANK Water, UK, a safe water and sanitation charity, and is extending the work in 10 more villages. The interventions were based on hydrogeological studies, groundwater and urinary fluoride monitoring, the creation of village-level institutions to manage water sources, and the adoption of community-based water supply systems that tapped fluoride-safe sources. PSI's initiative has set a successful example of the decentralized management of ground water resources and promises a sustainable and cost-effective solution to fluorosis.

Fluorosis Mitigation through community-based safe drinking water supply in Dhar District, Madhya Pradesh - background

In India, more than 25 million people are estimated to have serious health problems due to the consumption of fluoride-contaminated water.[3] The disease is endemic in about 230 districts across 20 states and union territories of India[4](Figure 1). This is because a large number of Indians rely on groundwater for drinking purposes and water at many places is rich in fluoride due to the minerals present in the rocks beneath. Long-term consumption of water having fluoride level above 1.5 mg per litre results in bone and teeth deformities.
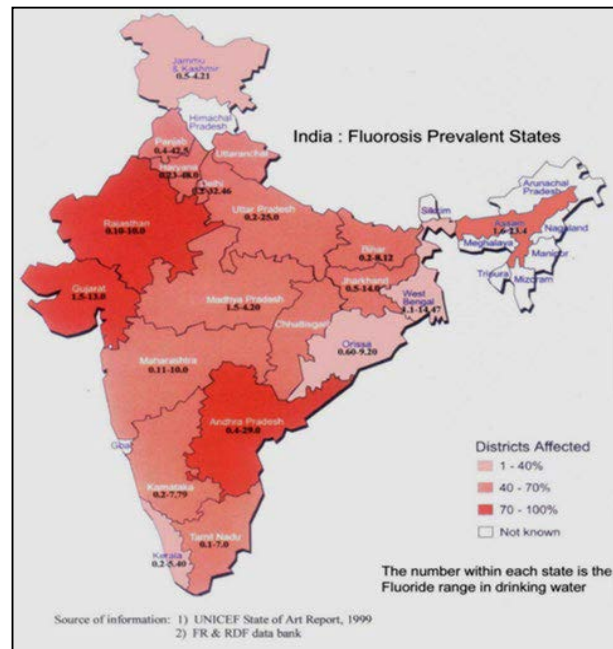
Figure1: Prevalence of fluorosis in India

In many rural areas, groundwater extracted through hand-pumps and tubewells is the only source of drinking water. In these areas, fluoride-contaminated groundwater has emerged as a serious health concern. Fluorides enter the human body mainly through

the consumption of water. Although the intake of fluorides can also be through food products, drinking water is the major source and hence the major cause.

Consumption of groundwater contaminated with fluoride results in dental, skeletal, and non-skeletal fluorosis. Skeletal fluorosis affects the bones and major joints of the body like the neck, backbone, shoulder, hip, and knee, causing severe pain, rigidity or stiffness in the joints, and leading to partial disability and sometimes even complete disability. Dental fluorosis mostly affects children, manifesting itself in discoloured and disfigured teeth. Metabolically active and vascular bones of children accumulate fluoride at a faster and greater rate than adults.[5] Fluoride can have devastating effects, causing mottled teeth and osteoarthritis.[6] It can cause gastric pain at very low levels and can even damage the enzymes in the body.[7] Physical disabilities and deformities have a severe impact on the livelihoods, socio-economic conditions, and quality of life of the affected people. The sufferers face social stigma as well.

Since 1937 when the first case of skeletal fluorosis was reported in India, many efforts have been made by government and non-government agencies to mitigate this problem. The National Programme for Prevention and Control of Fluorosis (NPPCF) was launched by GoI as a new health initiative during the 11th Five Year Plan in 2008–09. Under this programme, assistance to critically affected states was provided for fluorosis mitigation. In 2014, funds were released to 18 states,[8] but these funds were underutilized by most of the states (Figure 2), indicating lack of effective implementation of the plans by the concerned government departments.

Defluoridation methods like adsorption, ion exchange, activated alumina, precipitation, and reverse osmosis have

Figure2 Data Source: Ministry of Health & Family Welfare, GoI[8] been largely unsuccessful owing to their difficult operation and maintenance. In addition, they are expensive and have certain ecological disadvantages that limit their usage on a large scale, especially in marginalized areas. There is no treatment for fluorosis.
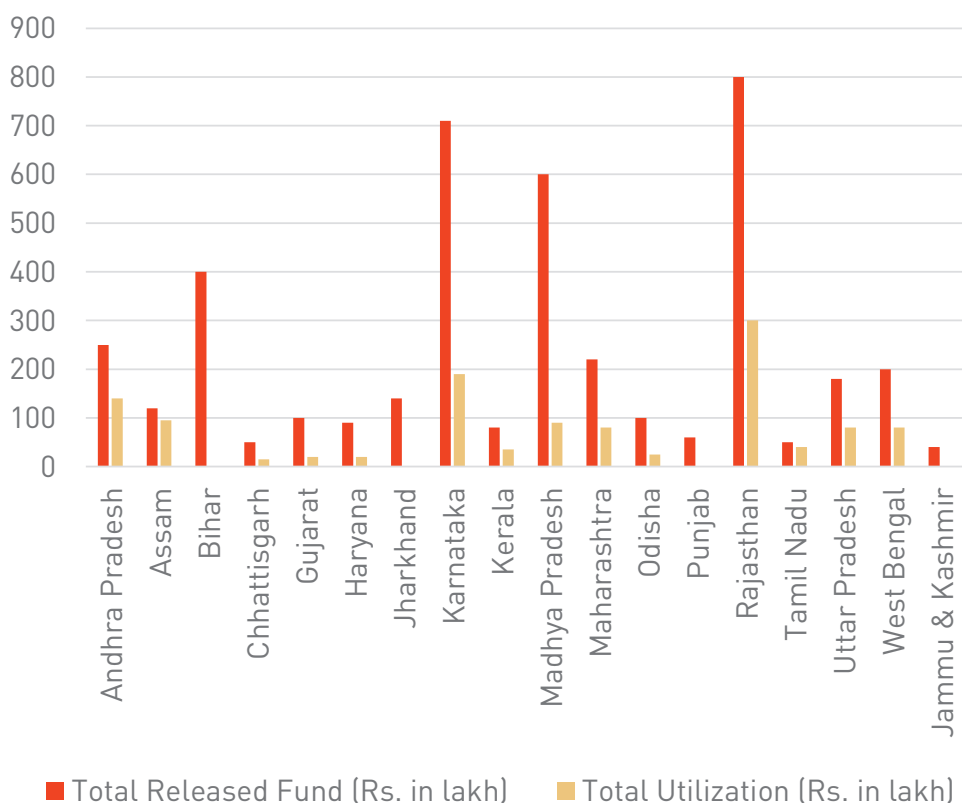
Figure2 Data Source: Ministry of Health & Family Welfare, GoI[8]

But the disease is easily preventable if diagnosed early and if steps are taken to prevent the intake of excessive fluoride through the provision of safe drinking water and the adoption of appropriate food interventions.

Introduction

Madhya Pradesh is one of the states affected by fluorosis (Figure1). The state receives low rainfall of less than 1000 mm per year, which has serious and major implications for the availability of safe drinking water. Although seven major rivers flow through the state, drinking water needs are being met almost entirely (about 99 percent) through groundwater extraction.[9]

The existence of fluorosis was first discovered in Madhya Pradesh in 1997. As per the WaterAid India report published in 2005, there were 4,018 villages with 7,746 water sources in 22 districts of Madhya Pradesh that were affected by fluoride contamination in groundwater.[10] Since then, the number of fluoride-affected districts in the state has been increasing continuously. In 2012, out of the total 50 districts in Madhya Pradesh, 27 districts were fluoride affected (Figure 3).

Increase in the number of fluoride contaminated districts in Madhya Pradesh
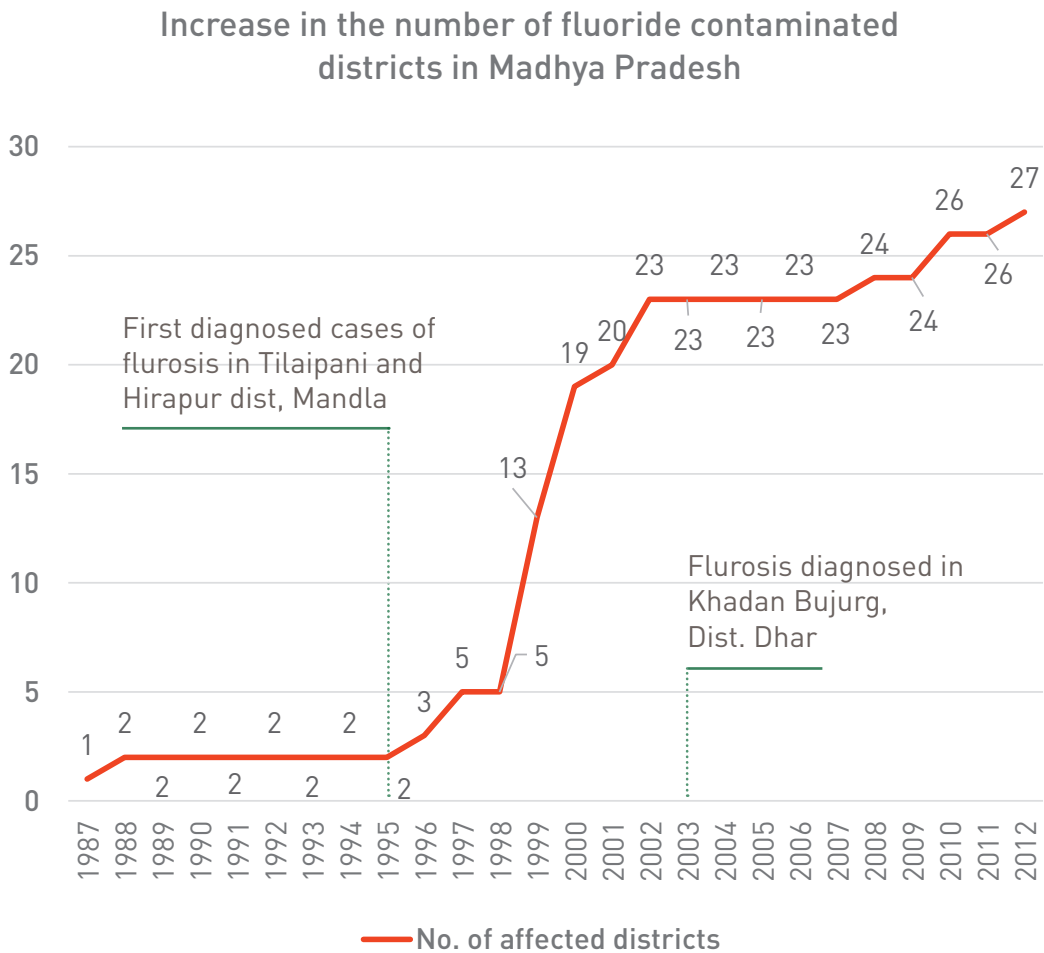
Figure 3: Trend of fluoride-affected districts in Madhya Pradesh
Source : Flurosis Mitigation History in Madhya Pradesh bu India Natural Resource Economics Management(INREM) Foundation and CSIR-National Environmental Engineering Research Institute(NEERI), Support UNICEF, Bhopal

Geologically, Madhya Pradesh state is underlain by some major fluoride mineral-bearing rocks like the Deccan trap basalt, gneiss, and granite.[11] Because of rock–water interaction and long residence time, fluoride is naturally found in higher concentration in groundwater, especially in deeper aquifers. Continuing population growth will necessarily lead to greater drinking water requirement and probably increased dependence on groundwater, which will eventually result in an increase in the areas and population groups affected by fluorosis. Hence, a need was felt for fluorosis mitigation in the region by identifying locally available safe drinking water sources and developing community-based water supply systems.

About the project area and objectives

Madhya Pradesh is the second largest state in the country by area. It is known as the "heart of India" due to its geographical location. There are 46 recognized Scheduled Tribes in Madhya Pradesh, three of which have been identified as "particularly vulnerable tribal groups". Bhil is the most populous tribe. Their highest population is found in Jhabua district, followed by Dhar.[12] Their main occupations are agriculture and labour.

Figure 4: Location of Dhar in MP

Fluoride, Salinity and Iron
Districts: Rajgarh, Shajapur, Sehore, Raisen, Dindori

Fluoride and Salinity
Districts: Jhabua, Ujjain, Dewas, Neemuch, Mandasaur

Fluoride and Iron
Districts: Mandla, Balaghat

Fluoride
Districts: Dhar, Betul, Chhindwara, Seoni, Jabalpur, Sagar, Shivpuri

Iron
Districts: Umaria, Shahdol

Salinity
Districts: Ratlam, Harda, Chhatarpur, Gwalior, Bhind

Figure 5: Districts affected by problems of water quality in Madhya Pradesh[10]

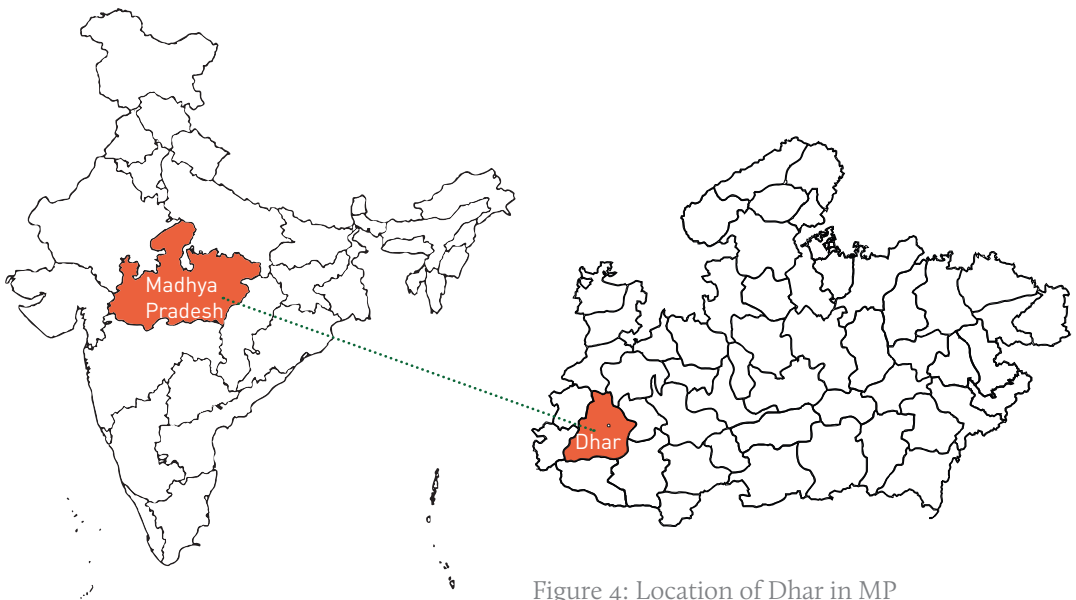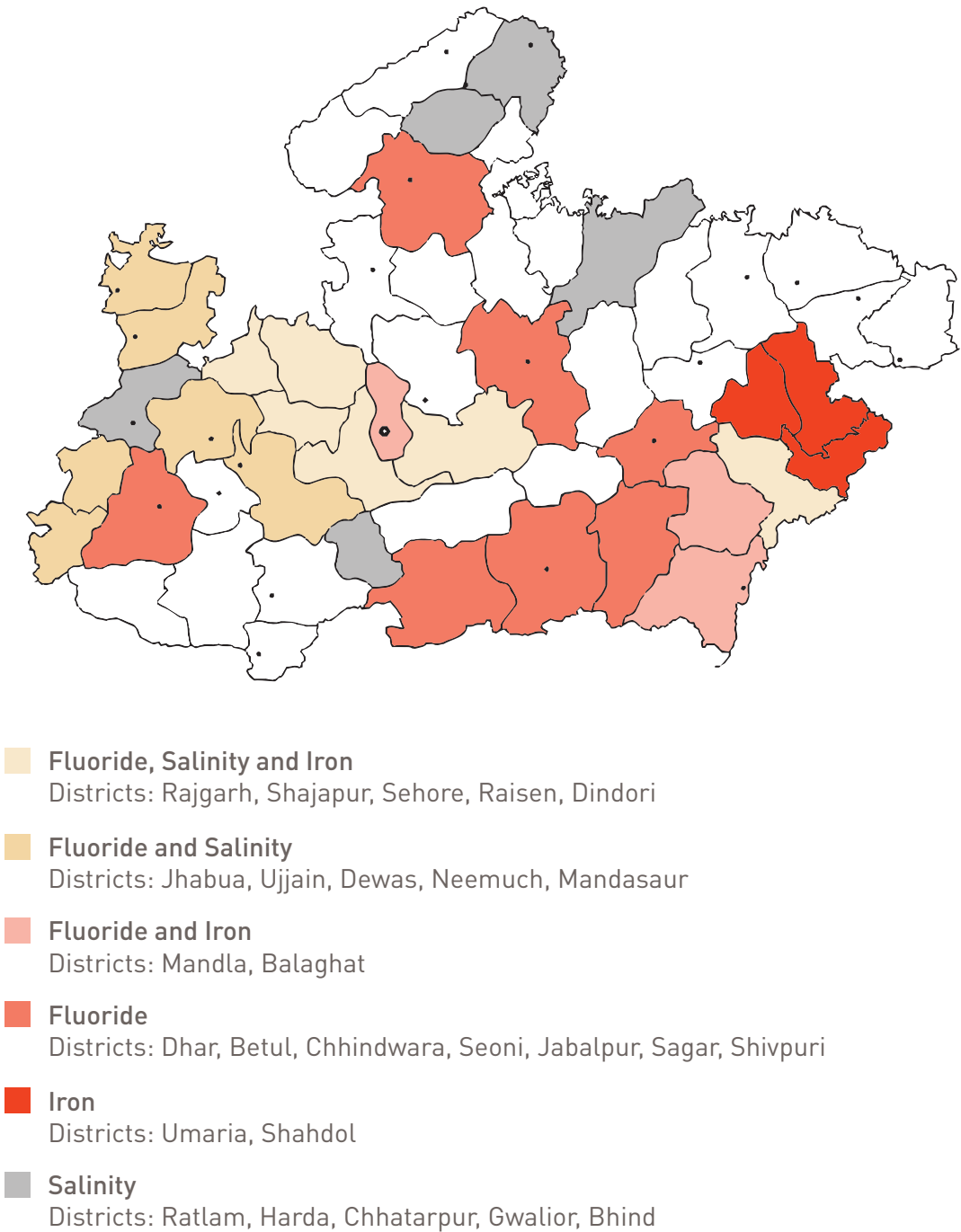Dhar district lies in the southern tribal belt (22° 35' N,75° 20' E) of the state (Figure 4). It comprises 13 blocks, eight tehsils, and more than a thousand villages. It is a drought- prone area and routinely suffers from water scarcity between January to June every year. People are dependent on groundwater, which they traditionally withdrew from open wells. With the increase in irrigated agriculture, the groundwater level has gradually fallen. Wells usually dry up in summer, forcing people to dig deeper and to switch to handpumps. As electricity has made it possible to draw water from deeper aquifers, tubewells were introduced in Dhar. It is these deeper sources of water (handpumps and tubewells) that actually have more concentrations of fluoride. According to a study,[2] Dhar district has an average fluoride concentration of 4.07 mg/l in its ground water against the BIS standard of 1.5 mg/l. Figure 5 shows the districts affected by water quality problems in Madhya Pradesh and Dhar is one such critical district.

To help mitigate fluorosis in Dhar, People's Science Institute (PSI), Dehradun, India and FRANK Water, UK launched an initiative in late 2013 to provide safe drinking water to the fluoride-affected communities. The overall purpose was to provide access to naturally occurring fluoride-safe drinking water to those most in need through community involvement. The basis of this initiative was scientific investigation.

The issues

Hydrogeological and water-quality monitoring studies were conducted by PSI in this area. These studies revealed that geogenic contamination is proportional to the depth of the water source in this area, as deeper sources allow for more contact with subterranean rocks. That is why most of the deeper sources of water here like tubewells and handpumps have a higher concentration of fluoride (greater than 1.5 mg/l) as compared to shallow-water sources like dug wells (Figure 6 shows fluoride concentration in different sources of water in Daheriya village, Dhar district).

Daheriya Village, Dhar District
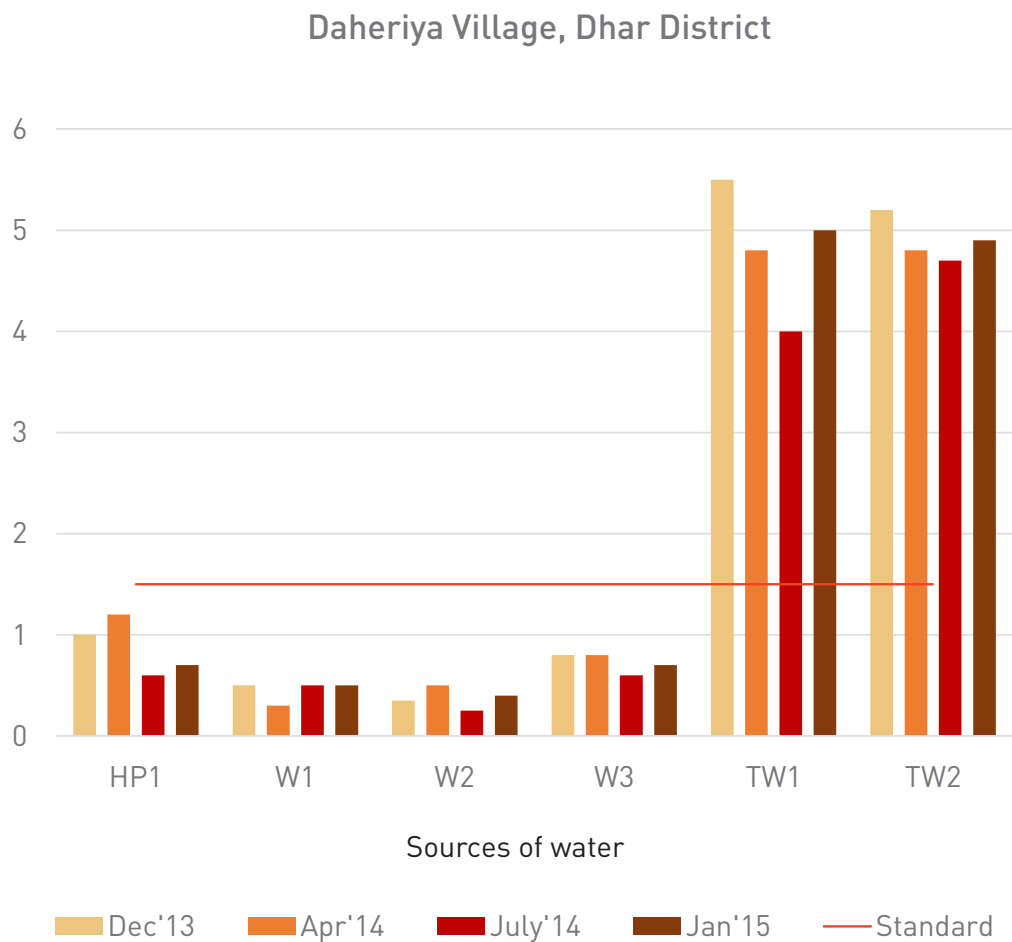
Figure 6: Fluoride concentration in different sources of water.
HP–Handpump, W–Well, TW–Tubewell

Source	Concentration of Fluoride (mg/l)	Depth	Use
Wells	0.3 to 0.7	20-60 ft	Irrigation
Hand pumps	1.6 to 11	200 - 300 ft	Drinking water
Tube wells	5 to 8	160 - 430 ft	Drinking water & Irrigation

• BIS standard for fluoride in drinking water 1.5 mg/l
Figure 7: Relation between water depth and water quality

However, it was observed that the unsafe sources, namely handpumps and tubewells, were being used for drinking and domestic purposes because of their easy accessibility whereas the safer sources (wells) were mostly being used for irrigation (Figure 7).

Secondly, prior to our work, fluorosis-mitigation measures were initiated by some agencies like the Public Health Engineering Department (PHED) by installing handpump-attached defluoridation units in 56 villages in Dhar (Source: Personal Communication with PHED officials). However, the PHED's intervention could not achieve the desired level of success as the programme design had no scope for community involvement nor for proper O&M. This led to the installed units becoming dysfunctional after sometime.

Health concerns

As per a household survey conducted in 2013 by PSI in seven villages— Kalapani, Badichetri, Daheriya, Maalpura, Bankpura, Sankota, and Katchwanya, and covering a surveyed population of 3,332 people, 24 per cent of the surveyed population was found to be affected by dental and skeletal fluorosis (Figure 8). The most vulnerable population group was found to be children.
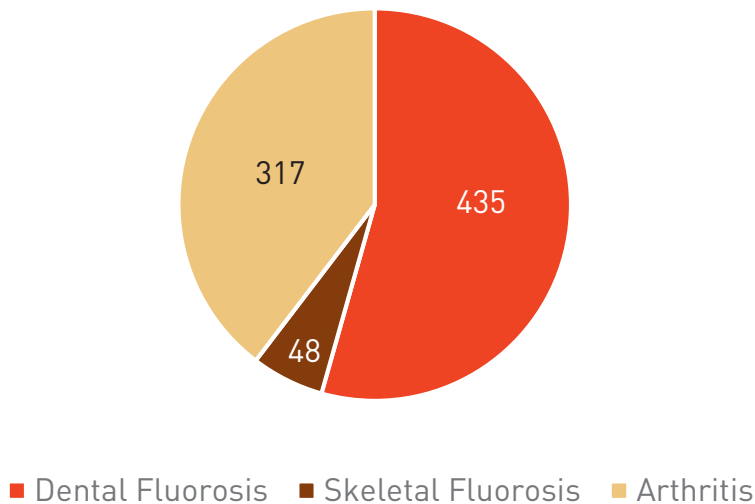
Figure 8: Fluorosis cases in the surveyed villages

The approach

The programme was initially based on the principles of participatory groundwater management (PGWM), which includes recognizing groundwater as a common-pool resource, studying the local hydrogeology to assess the extent of geogenic contamination, and working towards the sustainable and equitable use of groundwater by involving the local communities. To begin with, a pilot programme was designed for Kalapani, Badichetri, and Daheriyavillages in Dhar district, with the financial assistance of FRANK Water, UK. In 2018, the integrated water resources management (IWRM) approach was introduced; it includes community participation, hydrogeological studies, groundwater recharge, and hygiene awareness.

Uniqueness of the approach used

The use of this concept in a fluoride-affected area was probably the first of its kind. Here, the science of hydrogeology was used to correlate the depth of fluoride mineral-bearing rocks and water contamination. Urinary fluoride monitoring was used as a tool to measure the impact of the interventions on the health of the people.

Secondly, use of well water was promoted rather than the installation of defluoridation units or the adoption of rainwater harvesting. The reason was simple: change is hard to bring about and even more difficult to sustain. The closer things are to what people are accustomed to, to what is "natural" for them, the more likely it is that they will adopt new practices and habits, because these changes do not significantly disrupt their lives. The entire system is operated and managed by the communities themselves. This kind of participatory and scientific approach is safe, sustainable, and less expensive than the installation of defluoridation units attached to handpumps.

Approaches for Community Mobilization
- Meetings with the community
- Demonstration of tests
- Awareness-raising drive in schools
- Puppet and street shows in villages

Collection of Scientific Evidence
- Water quality monitoring
- Urinary fluoride monitoring
- Geological study
- Rainfall and water level measurement

Agreements and Documents
- Consent from panchayats
- Consent from WUCs
- Community based safe drinking water supply plans
- O & M plan
- Bank accounts

Community-based Safe Drinking Water Supply

Surveys for Situation Analysis
- Collection of secondary data
- Health survey in schools
- Village survey
- Household survey
- Rapid rural appraisal (RRA)

Implementation
- Safe drinking water supply systems
- Sanitary protocols
- Groundwater recharge measures to sustain safe sources of water
- WASH awareness

Development of Village-level Institutions
- Water User Committees (WUCs)
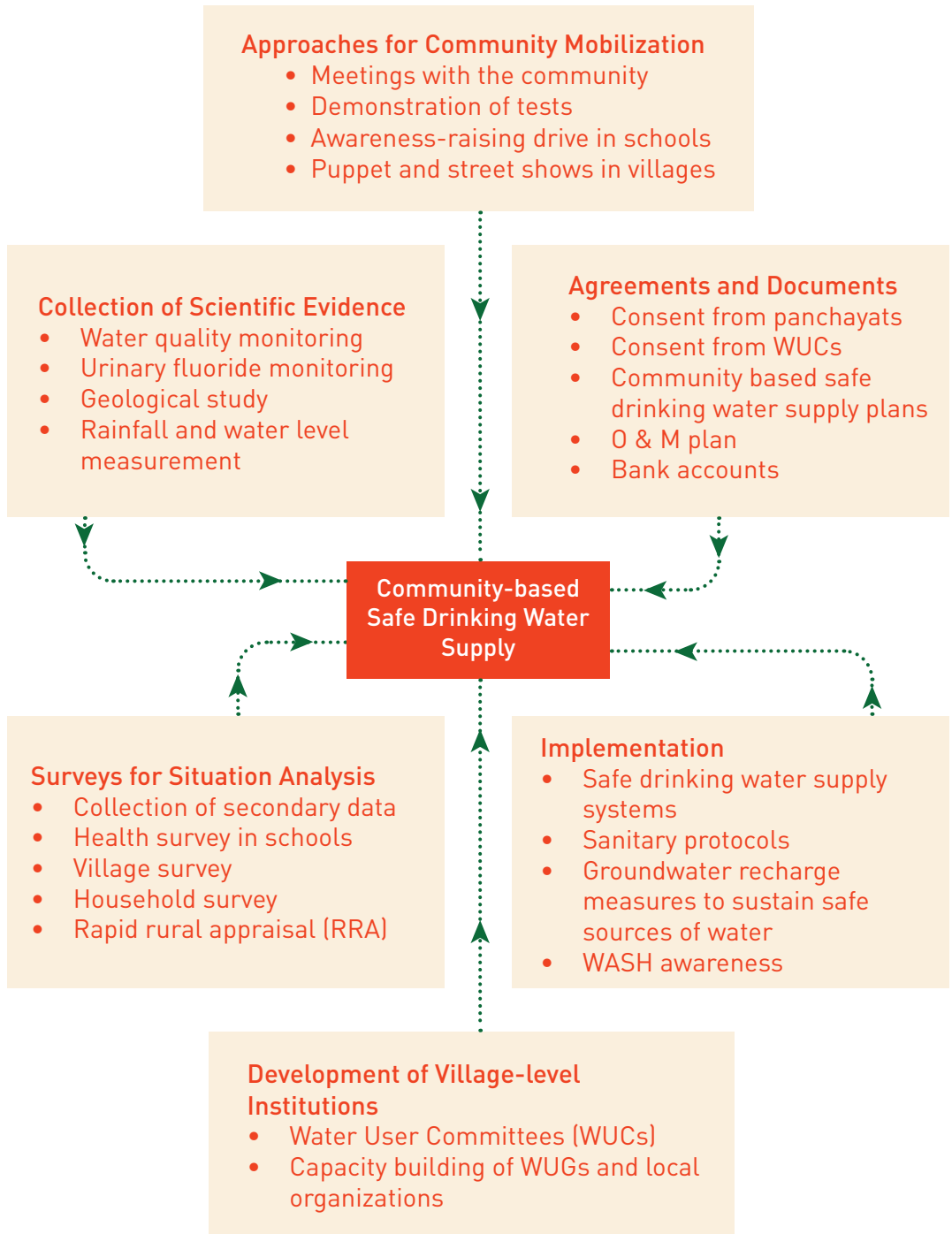- Capacity building of WUGs and local organizations

Figure 9: Methodology used for implementing community-based safe drinking water supply

Methodology

The methodology involved collection of secondary information, setting up of a field station in the project area, and frequent field visits to understand the root cause of the problem (Figure 9). These activities were followed by a dental and skeletal survey in schools, water quality monitoring, and hydrogeological studies. These exercises were carried out in order to shortlist the villages affected by fluorosis. The rationale for choosing schools as a survey site was that the students who attend these schools come from various areas nearby. The identification of students with dental or skeletal fluorosis would thus easily help in short listing the fluorosis-affected villages. Tools like rapid rural appraisal (RRA) and puppet and street shows were used to mobilize the communities. Extensive and effective community mobilization resulted in strong village-level institutions, better O&M of the systems developed, and more equitable sharing of groundwater resources within the village and even between two villages.

Details of the activities

1. *Collection of secondary information and field visits:* To begin with, the PSI team met the PHED officials and collected water-quality data from them. Based on the information received from them, a preliminary survey in two blocks of Dhar district, Manawar and Dharampuri, was carried out to get an overview of the villages in terms of sources of water, sanitary conditions, economic status of the people, and feasibility of the interventions required.

2. *Setting up of the field office:* A field office for conducting laboratory work and for providing accommodation to the PSI personnel was set up in Dhamnod, which is close to the project site. The laboratory was set up for performing water and urine quality tests and for facilitating frequent interaction with the target community.

3. *Dental and skeletal survey in schools:* After identification of the critical blocks in Dhar district in terms of water quality (basically fluoride contamination), the next task was to find the villages in these two blocks that are highly affected by fluoride and to identify the communities that need help. For this purpose, a health survey, including a primarily dental and skeletal survey, was conducted in 20 schools in Dharampuri and Manawar blocks. A survey proforma was prepared for conducting the survey. It included questions about the symptoms of dental and skeletal fluorosis and details of the drinking water sources from where the families collected water for domestic use. Information about the status of dental fluorosis included categorization of symptoms as suspected, mild, moderate, and severe (Figure 10). Some physical tests were conducted to identify cases of skeletal fluorosis. Based on the school survey, we listed more than 40 villages affected by dental and skeletal fluorosis. Out of these 40 villages, 29 villages having the highest number of students affected by dental fluorosis were selected for further study.

Figure 10: Categorization of dental fluorosis symptoms

4. *Village survey:* A village survey was conducted in the 29 selected villages to collect information on the number of households, population, number of SC/ST/OBC and General Caste category people, type of drinking water sources, sanitary

conditions, etc. The details of the village survey are given in Table 1. Based on the type and condition of the available water sources, dependency of the people on these sources, severity of fluorosis, sanitary conditions, etc., some villages were selected for water quality monitoring.

5. Water quality monitoring: Water sources in the shortlisted villages were tested for fluoride and total dissolved solids (Table 2). Standard American Public Health Association (APHA)procedures13 were followed to collect the samples and to test the samples against certain parameters. On the basis of the water quality data obtained, villages were selected for RRA, household survey, holding of village meetings, detailed water quality monitoring, geological study, urine analysis, and awareness-raising campaigns.

Table 1: List of Villages Surveyed

Sl. No	Village	Block	Population	% of Different Caste Categories			
				SC	ST	OBC	GEN
1	Palasiya	Dharampuri	1,780		80	20	
2	Khokarya	Dharampuri	800		10		
3	Kachhwanya	Dharampuri	2,000	10	90		
4	Heerapur	Dharampuri	782		10		
5	Bagwaanya	Dharampuri	2,000	10	80	10	
6	Dhapla	Dharampuri	1,240	20	50	30	
7	Semaldah	Dharampuri	2,500	8	15	75	2
8	Dongargaanv	Dharampuri	1,300	18	70	10	2
9	Chityaawar	Dharampuri	3,625		80	20	
10	Pandhaniya	Dharampuri	1,176	10	75	12	3
11	Daheriya	Dharampuri	750	2	70	28	
12	Baasvi	Dharampuri	556	1	98	1	
13	Ahmedpura	Dharampuri	665		10		
14	Surjapur	Dharampuri	2,100	2	98		
15	Banjari	Umarbann*	1,200		10		

Sl. No	Village	Block	Population	% of Different Caste Categories			
				SC	ST	OBC	GEN
16	Sankota	Dharampuri	1,275		10		
17	Tarapur	Dharampuri	3,500	12	80	5	3
18	Lohari	Dharampuri	1,200	20	60	10	10
19	Bankpura	Dharampuri	800	3	73	12	12
20	Balwari	Dharampuri	5,000	10	80	10	
21	Mehgaav	Dharampuri	1,600	13	75	12	
22	Gujari	Dharampuri	2,925	10	15	75	
23	Imalipura	Dharampuri	600		10		
24	Jamuniya	Dharampuri	1,458	20	80		
25	Kusumla	Dharampuri	3,960	17	80	3	
26	Maalpura	Dharampuri	500		10		
27	Badichetri	Umarbann*	335	75	25		
28	Kalapani	Umarbann*	825		10		
29	Ramadhama	Umarbann*	3,428	3	89		8

Population data source: Village census data received from the village sarpanch and sachiv;*Umarbann block falls under the panchayat of Manawar block.

Table 2: Water Quality Profile of Different Sources of Drinking Water

Sl. No.	Village	Kind of Sources	No. of Sources	TDS (mg/l)	Fluoride (mg/l)
1	Dhapla	HP	8	139–967	0.19–1.29
		Well	1	694	0.78
		TW	0	-	-
2	Bagwaanya	HP	5	452–2460	0.21–1.21
		Well	0	-	-
		TW	1	815	1.45
3	Heerapur	HP	7	295–605	0.40–4.66
		Well	2	370–438	0.69–0.73
		TW	1	527	1.10

Sl. No.	Village	Kind of Sources	No. of Sources	TDS (mg/l)	Fluoride (mg/l)
4	Balwari	HP	5	297–486	0.29–3.55
		Well	1	556	0.61
		TW	0	-	-
5	Sankota	HP	3	258–383	2.87–6.87
		Well	1	277	0.96
		TW	0	-	-
6	Maalpura	HP	3	451–517	0.56–3.21
		Well	1	564	0.58
		TW	1	539	1.02
7	Bankpura	HP	3	414–855	1.44–7.87
		Well	2	423–501	0.53–0.58
		TW	0	-	-
8	Kachhwanya	HP	1	585	6.89
		Well	3	115–669	0.77–1.5
		TW	1	639	2.8
9	Daheriya	HP	0	-	-
		Well	1	430	0.46
		TW	1	785	5.59
10	Badichetri	HP	4	311–475	0.56–7.92
		Well	2	485–527	0.27–0.58
		TW	0	-	-
11	Kalapani	HP	3	451–654	0.46–11.1
		Well	3	283–474	0.23–0.60
		TW	0	-	-

Standard value of fluoride = 1.5 mg/l; TDS = 500–2000 mg/l; figures highlighted in red indicate high level of fluoride.

Geological study: Detailed knowledge of the geological and hydrological features of an area is necessary for correlating the results of water quality monitoring and for identifying safe drinking water sources. Our geological study revealed that there are two major types of rock forms in this area: igneous and granite. They

contain various minerals. Igneous rocks are located in the upper bed rock. Most wells are also in this layer. Granite rocks are located in the lower bed rock. Fluorite, a fluorine-bearing mineral, is present in granite rock and gets dissolved in underground water. Most handpumps and tubewells are located in this layer (Figure 11). That is why the fluoride concentration was found to be more in handpumps and tubewells as compared to wells.
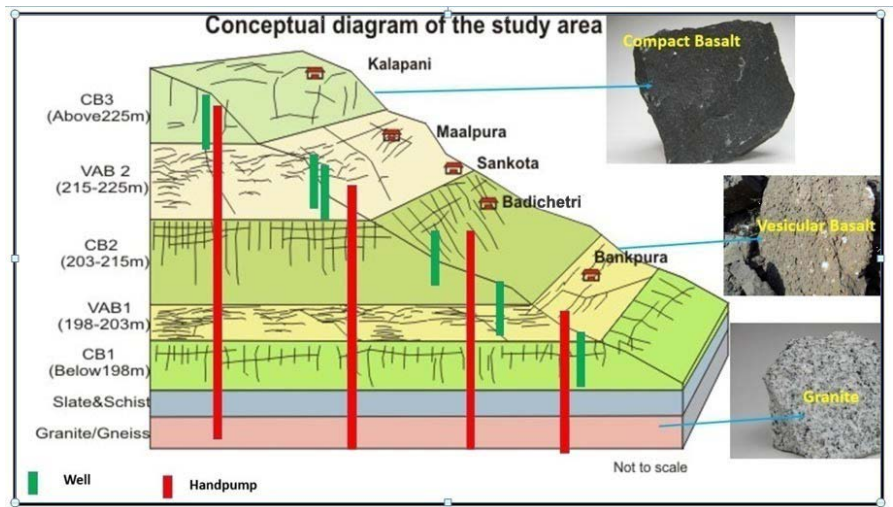

Figure 11: Geological study of Dhar district

Rapid rural appraisal (RRA): For identification of water-related issues (quality of water, uses of water, sources of water, availability of water, sanitary and hygienic conditions), RRA was conducted in the shortlisted villages.

Household survey: The purpose of conducting a household (door-to-door) survey was to collect information regarding the number of households, status of education and employment of household members, sources of drinking water, issues related to drinking water, water-related health problems, willingness to accept water treatment interventions, prevailing sanitary conditions, etc. A questionnaire was used for this purpose. The survey covered 612 households (3,332 people) out of a total of 1,040 households.

Urinary fluoride monitoring: Urine samples were collected in non-reactive plastic containers. During the pilot programme, a total of 500 urine samples from six villages (78 samples from Kalapani, 95 from Badichetri, 79 from Maalpura, 58 from Bankpura, 145 from Daheriya, and 45 from Sankota) were collected and analysed for fluoride content. Out of a total of 500 urine samples, 256 samples were of females and 244 samples were of males.

Selection of pilot villages: After conducting the above-mentioned activities, the three pilot villages of Kalapani, Badichetri, and Daheriya were finally selected based on the following criteria:

- Worst fluorosis-affected village

- Fewer number of fluoride-safe sources of drinking water; more dependency on handpumps and tubewells for water for drinking and cooking

- Distance of safe water source from houses

- Resources available in villages

- Feasibility of water supply plans

- Marginalized nature of the communities

- Willingness of the communities to participate in the programme

- Chances of sustainability of the programme

Community mobilization: After selecting the villages, puppetry and street shows were used to create awareness about fluorosis and the need for safe drinking water. This was the most difficult task and took a lot of time as the people were not ready to believe that it is their drinking water that is causing them health problems.

A profile of the selected villages is given in Table 3:

Village	HHs	Population	Percentage of different caste categories				Sources of water	No. of sources
			SC	ST	OBC	Gen		
Kalapani	100	825	0	100	0	0	Well	3
							HP	3
							TW	0
Badichetri	65	335	75	25	0	0	Well	2
							HP	4
							TW	0
Daheriya	150	750	2	70	28	0	Well	1
							HP	0
							TW	1

A door-to-door campaign and handwashing exercises were also carried out in these villages to spread awareness about the importance of cleanliness, personal hygiene, and use of toilets.

The interventions

The major interventions included the following:
Development of village-level institutions: After the households and communities became aware of, and convinced about, the issue of fluorosis, Water User Committees (WUCs), or Gram Jal Upbhokta Samitis in Hindi, were formed in all the three villages—Kalapani, Badichetri, and Daheriya. The purpose of the committees was to regulate water services at the village level. Bank accounts were opened for these committees.

Signing of agreements: A letter of consent was collected from the panchayat in each village so that, we could begin our work officially. Letters of consent duly signed by the WUC members were also collected. In each village, the O&M plans were prepared by the people themselves.

- Defining the rules and responsibilities of WUCs: The following rules and responsibilities were unanimously agreed upon: Supply of water from the identified safe water source will be done twice in a day for a fixed number of hours.

- Collection of the amount of money decided and depositing it into the WUC's bank account.

- Use of the money collected for the O&M of the water supply system and for paying the motor operator (water man) on a monthly basis.

- Water will be used for drinking and domestic purposes only.

- Water will not be used for gardening, irrigation, or for construction activities.

- During weddings and other functions, water will be obtained only after taking permission from the WUC members.

- Cleaning of water tanks will be done twice in a month.

- Chlorination of wells will be done once in a month

- Open defecation will be prevented near the water sources.

- The WUC will hold regular meetings and will maintain proper record books of its activities.

Implementation of community-based safe drinking water supply: Safe drinking water sources were identified in the three pilot villages through water testing. These sources were the wells that are owned privately by the villagers. There were government wells as well. After understanding the entire issue of fluoride contamination in water and the importance of the availability of safe water sources in the villages, the villagers planned their own water supply system, that is, they planned which well should be tapped for the water supply

system so that it would be accessible to most of the residents. In Kalapani village, the owner of a private well, Udai Singh, donated his well for the water supply system in his village since there was no government well nearby. In Badichetri and Daheriya, the government well was planned to be used. Three drinking water supply tanks were set up in each village, tapping water from the wells that had been selected for this purpose. The tanks were duly inaugurated by the people. Some hygiene awareness activities like hand washing were also carried out.

> *Outsiders often hesitate to marry their daughters into our village as it is known as a cursed village. But now I hope that this situation will change. I hope we will be relieved of this social stigma. There will be fewer fluorosis-affected people in our village and it will turn out to be one of the best villages. I am thankful to PSI for this day.*
>
> *- Sakku Bai, resident of Kalapani village*

Major outcomes

- Development of a methodology that can be replicated in other areas

- Adoption of measures for groundwater recharge based on scientific studies

- Involvement of the local people in the planning and implementation process (Figures 13 and 14)

- Equitable distribution of safe drinking water

- Installation of functional water supply systems

- Sharing of water from a common source within the village

- Creation of hygiene awareness among the people

The major achievements were:

1. *Community-managed drinking water supply systems*
   - O&M plans prepared by the communities of all three project villages

2. *Sharing of water sources*
   - Donation of a well by a villager in Kalapani village
   - Fair sharing of water within the village
   - Sharing of a common well between two villages

3. *Groundwater management*
   - Agreement signed by the villagers that the source well water will not be used for gardening, irrigation, construction, or other purposes until and unless there is urgency.

The impacts

1. *Health improvements:* Within eight months of the project's launch, a reduction in human urinary fluoride was observed (Figures 12 and 13), indicating a reduced intake of fluoride by the body.
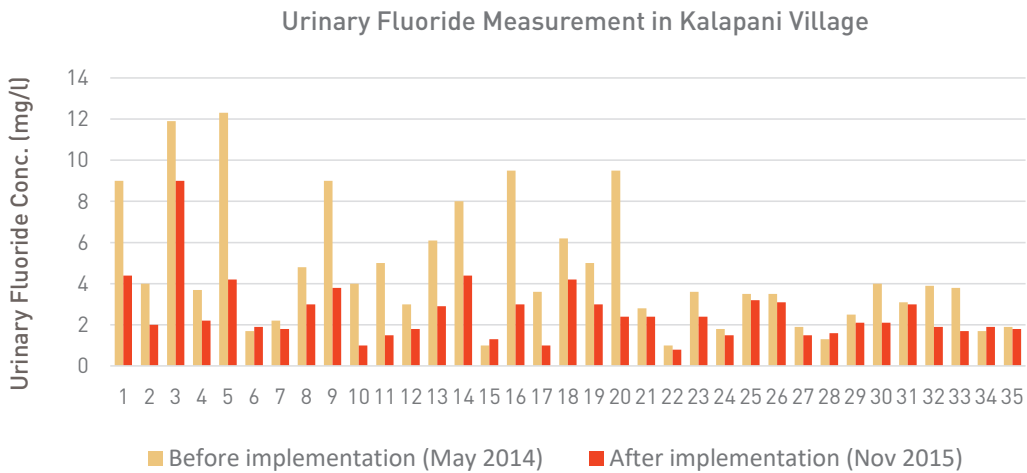
Urinary Fluoride Measurement in Kalapani Village

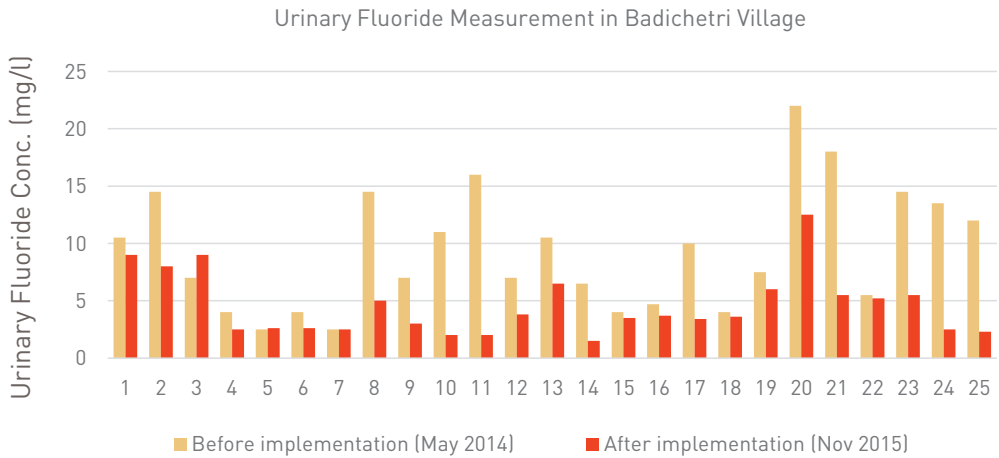Figure 12: Reduction in urinary fluoride in Kalapani village

Figure 13: Reduction in urinary fluoride in Badichetri village

2. ***Improvement in access to safe drinking water:*** An impact assessment was carried out in the three pilot villages. A structured questionnaire was used for this purpose. Information was collected related to the quality of water currently available and the social and economic impacts of this water consumption. The sample size was 225/315 (71.4 per cent coverage of the villages). The conditions before and after the implementation of the safe drinking water supply system were compared. The data gathered revealed that the distance travelled to fetch drinking water per day had been reduced significantly in all the three villages (Figure 14). Earlier women and children had to travel a minimum of 2 km per day to collect water for cooking. But the PSI project had increased the availability of water, which in turn had reduced the drudgery of women (Figure 15). Now women had more spare time to engage in some productive work. With the availability of clean drinking water, they suffered less from waterborne diseases and there was less expenditure on medication (Figures 16).

Results of impact assessment:

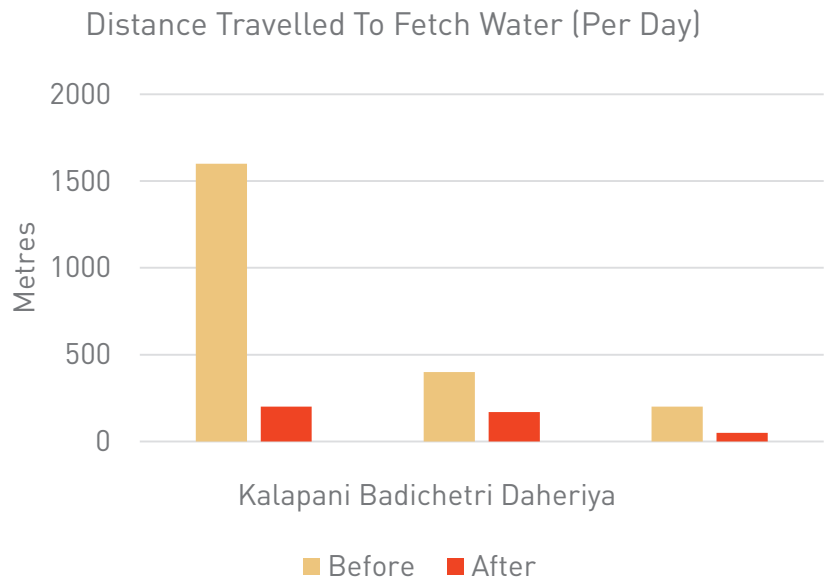## Distance Travelled To Fetch Water (Per Day)

Figure 14: Reduction in distance travelled to fetch water every day

Water Availability (Per Day)
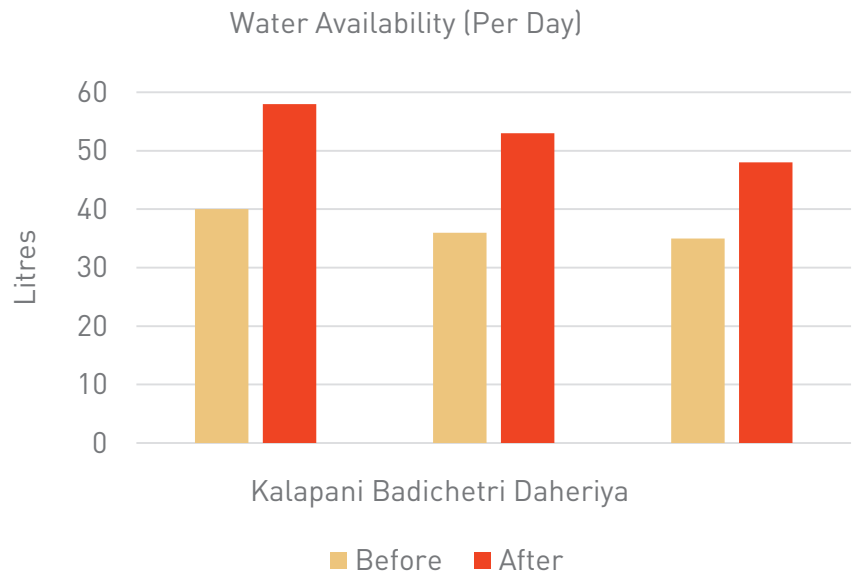
Figure 15: Increase in water availability after implementation of drinking water supply system

Number of Days that People Fall Sick Because of Waterborne Diseases (Per Month)
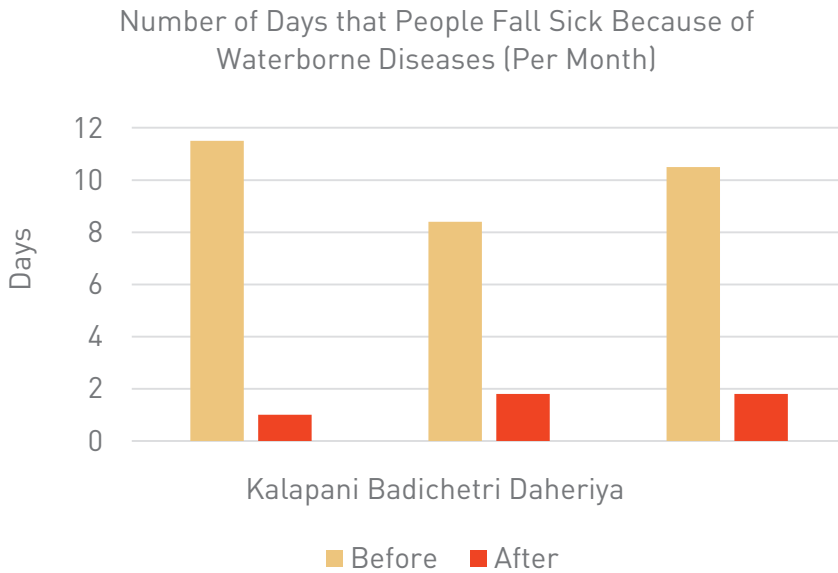
Figure 16: Reduction in money spent on medication

3. *Behavioural changes:* Behavioural changes were also observed among the people. During the survey, 95 per cent of the respondents said that they use soap for washing hands after defecation and feel the need of having a toilet at home (Figure 17).

Behavioural Changes

Figure 17: Survey results indicating behavioural changes

4. *Initiatives taken by the district administration*
   The work carried out in these villages was noticed and appreciated. The District Collector sanctioned Rs. 25 lakh to the self-help group (SHG) of Kalapani village for the construction of 203 toilets.
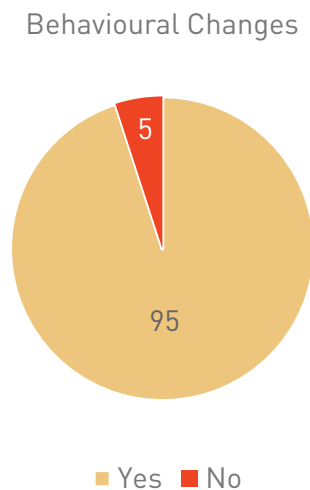
   Some local doctors came forward to help the victims of fluorosis. They organized a health camp and announced free surgery for 23 severely affected people

   Under the National Fluorosis Mitigation and Control Programme, a one-day district-level workshop was organized for local doctors to brief them about the causes, symptoms, and treatment of fluorosis. The workshop was conducted in Dhar on 17 August 2015 by the Department of Community Services and Health.

5. *Information dissemination and awareness creation:*
   Information and data were collected and documented through a continuous process for the purpose of dissemination. Given below are some of the links of the published case studies, all of which appeared on the India Water Portal website.

   - *Safe water to fight fluorosis, 12 July 2018*
     What Basubai and her children needed to fight fluorosis was access to safe drinking water.
     http://www.indiawaterportal.org/articles/safe-water-fight-fluorosis

   - *Setting safe sanitation example, 12 July 2018*
     Villager builds twin pit latrine and sets example for others on behaviour change and safe sanitation.
     http://www.indiawaterportal.org/articles/setting-safe-sanitation-example-0

   - *Well water makes a difference, 9 October 2017*
     A village affected by fluorosis understands the importance

of drinking fluoride-safe water with help from experts.
http://www.indiawaterportal.org/articles/well-water-makes-difference

- *How water brought a village together,11 June 2016*
  The villagers of Bankpura have access to clean drinking water now. In the long run, it will certainly improve their health and quality of life.
  http://www.indiawaterportal.org/articles/how-water-brought-village-together

- *Bringing potable water to villagers of Dhar,1 June 2016*
  Fluorosis-affected villagers can now heave a sigh of relief. The dream of safe drinking water at their doorstep has become a reality.
  http://www.indiawaterportal.org/articles/bringing-potable-water-villagers-dhar

- *Using community support to battle fluoride contamination, 8 December 2015*
  Dhar, a drought-prone district in the southern tribal belt of Madhya Pradesh, has high levels of fluoride in its groundwater.
  http://www.indiawaterportal.org/articles/using-community-support-battle-fluoride-contamination

- *How Bandu Singh recovered hope,8 July 2015*
  Endemic fluorosis exists in 31 villages of Dhar district, Madhya Pradesh. This is the story of how one village is reclaiming its health and dignity.
  http://www.indiawaterportal.org/articles/how-bandu-singh-recovered-hope

- http://hindi.indiawaterportal.org/node/49601

- http://hindi.indiawaterportal.org/node/49600

- http://hindi.indiawaterportal.org/node/49598

Scaling up

The results of the impact study were quite encouraging in terms of scaling up the work. The work was extended to more villages in Dhar during 2014–18. However, it was soon realized that the region requires not only safe drinking water supply and water, sanitation, and hygiene(WASH) initiatives, but also groundwater recharge measures. This is because the district receives the maximum rainfall during the south-west monsoon, that is, from June to September. Hence, surplus water for groundwater recharge is available only during the months of the south-west monsoon.14 The rest of the year is dry. It was thought that groundwater recharge efforts would not only increase water availability but would also help reduce fluoride concentration in water due to the dilution effect. Hence, a holistic or Integrated Water Resources Management (IWRM) approach was adopted in 2018 to mitigate fluorosis through safe drinking water supply systems, groundwater recharge measures, and WASH initiatives with the support and guidance of Arup, UK. The IWRM approach is linked with the United Nation's Sustainable Development Goal 6 (clean water and sanitation) and Goal 6.5 (water resources management). It involves a six-stage process, as mentioned in Table 4.

Stage	Activity	Description of Activity
1	Needs Assessment and Recce Visit	Literature review, collection of data from secondary sources; shortlisting of critically affected villages; informal village meetings; collection of information from the villages about water usage, available water resources, water level, type of catchment area, hygiene and sanitation status; drinking water quality monitoring; dental and skeletal surveys

Stage	Activity	Description of Activity
2	Interim Report	Overview of needs assessment and recce visit; preparation of an interim report; selection of project villages
3	Detailed Field Visits	Baseline surveys, social and resource mapping, awareness campaigns, community mobilization, water quality and urinary fluoride monitoring, village-level institutions, water resource inventory, cropping and irrigation patterns
4	Hydrogeological Studies	Geological cross-sections, aquifer mapping
5	Water Balance Assessment	Assessment of water demand and supply gap, crop water requirements, groundwater recharge potential
6	Implementation and O&M	Summarization of all the information gathered, community-based safe drinking water supply plans, design and estimates of groundwater recharge structures, catchment management and WASH solutions, operation and maintenance plans, implementation of plans, strengthening of village-level institutions, monitoring, learning, evaluation, and impact assessment.

Outreach

During the last six years, the work has been carried out in 17 villages, covering 1,335 households with a population of 8,175 people. In addition, village water security plans based on the IWRM approach are being prepared for seven villages having 332 households with a population of 1,950 people.

Challenges

- *Support from panchayat and PHED:* We could not get any
  financial or material support from the panchayat or the
  PHED, although verbally they had agreed to help us.
  Groundwater recharge measures need additional funding
  support. The concerned government departments should
  provide support through convergence.

- *Community mobilization:* We are working with and for
  the marginalized communities in Dhar. Basic facilities like
  toilets, hospitals, and good schools are almost non-existent
  in the poor villages in the district. The people belong to the
  socially and economically backward categories of the
  Scheduled Castes and the Scheduled Tribes. A majority of
  them are illiterate and work as daily wage labourers. They
  live hand to mouth, eking out a precarious living. Their
  priority is to earn so that they can feed themselves. On top of
  all these problems, there is the prevalence of fluorosis, a
  disease about which they have no knowledge. Their condition
  was both a challenge as well as a constraint. Mobilizing them
  was very difficult because they had other priorities. Clean
  water was not an issue that was sufficiently important to them,
  that it, it was not important or urgent enough to motivate
  them to participate in our programme. To work with them on
  an issue that was not important to them because their
  priorities were different from ours was a big challenge for us.

- *Sanitation and personal hygiene:* Convincing the target
  communities about the importance of personal hygiene, good
  sanitary practices, use of toilets, etc. is very difficult.
  Encouraging the village community to adopt safe sanitation
  practices is not easy due to the prevalence of age-old beliefs
  and practices. Despite the construction of some toilets under
  the Swachh Bharat Abhiyan, it is a challenge to motivate
  the people to use these toilets when they can easily defecate in
  abandoned areas or fields. Community mobilization is a
  continuous and time-consuming process requiring time,
  resources, dedication, and patience.

- *Availability of time to meet people:* Since the majority of the people perform manual labour to earn a living, they are available to meet and talk to the PSI personnel and staff either around 8.00 in the morning or after 6.00 in the evening. Women are mostly busy in their fields. During the day, only small children, a few old men, and women are available at home. Hence village or community meetings with a good turnout are difficult to organize.

- *Training:* Training the communities to follow the rules and regulations that they have set themselves; ensuring the proper and timely O&M of the water supply systems; carrying out the regular chlorination of wells, etc. is a challenge. Creating awareness about the importance of dietary supplements and encouraging the use of organic fertilizers in the fields are also crucial steps to reduce the effect of fluoride accumulation in the body.

Lessons learnt

- The PHED does make an effort to mitigate fluorosis by using handpump-fitted defluoridation units, but it is not able to neither ensure or sustain community involvement nor undertake the proper O&M of the installed units.

- The learning through PSI's initiative is that it is possible to make safe drinking water available without the use of chemical-based and cost-intensive defluoridation units.

- Scientific knowledge and evidence, and actual demonstrations on the ground of the benefits that are claimed to result from certain interventions, can help encourage the target community to involve itself in such project work over the long term. When the water quality and urine tests were demonstrated to the people, they started believing in what was being told to them.

- Scientific evidence such as the findings of a geological study of this area helped us to prove our point that handpump-based defluoridation units will not solve the problem of fluorosis. Geogenic contamination needs to be examined through geological studies and correlated with the depths of water sources in the area to identify safe sources of drinking water. This can reduce the government's expenditure on digging handpumps and on installing defluoridation units. The learning is that we need to conserve, promote, and facilitate shallow sources of water in fluorosis-affected regions of Dhar.

- Groundwater recharge efforts would not only increase water availability but would also help reduce fluoride concentration in water due to the dilution effect.

- WASH is also an important component to be incorporated in safe drinking water supply programmes.

Conclusion

The sustainable use of groundwater and its quality issues are matters of great concern these days, particularly in terms of public health and community welfare. There is an urgent need to promote safe sources of drinking water based on a participatory approach to reduce the adverse health impacts of fluoride. To make this effort sustainable, there is also a need to promote the O&M of these water supply systems by the local communities as is currently being done by PSI in Dhar district. The interventions undertaken by PSI in the villages of Dhar district have led to an improvement in the availability of safe drinking water without the use of chemical-based and cost-intensive defluoridation units.

Awareness building and community-led actions are essential for the success of such programmes, and a rapid extension of the IWRM approach is required to end the water woes of fluoride-affected rural populations. Advocacy is also required to inform policy makers and

civil society organizations about the IWRM approach. The adoption of the IWRM approach in government flagship programmes will pave the way for fluorosis mitigation and the sustainable management of groundwater resources.

This kind of participatory and scientific approach is safe, sustainable, and less expensive than the installation of defluoridation units attached to handpumps which become dysfunctional after sometime.

Acknowledgements

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People's Science Institute (PSI), Uttarakhand[2]

Established in 1988, People's Science Institute is a non-profit research and development organisation. Its activities are spread all over India with a focus on the central-western Himalayan states of Uttarakhand and Himachal Pradesh and the poverty-ridden districts of western Orissa. The operational headquarters is in Dehra Doon, Uttarakhand.

PSI's has ongoing projects focussing on natural resource management, environmental quality monitoring, disaster mitigation and response and developing innovative technologies and social processes. Research at PSI is undertaken to improve the implementation of field projects, identify new areas of work and to innovate new technologies and social processes. It spans a variety of subjects from studies on traditions of water management, food security, work patterns of women in the central-western Himalayas,

environmental quality and urbanization in mountain regions to action research on integrated water and forest management by mountain communities, enhancing productivity of paddy cultivation, development of GIS software, and the design of earthquake-safe rural houses and intermediate-sized hydrams.

Setting the context

3. Case studies on Gender concerns

Social Interventions to improve human development outcomes in general and gender equity, in particular, have taken multiple axes in India -- retention of girls in schools and colleges, more participation of women in the workforce, providing economic opportunities to women through micro- finance and micro-entrepreneurship, public health interventions to reduce mortality and so on. It is heartening to report that more girls are in school, states, where child sex ratio was poor, have started improving, more women are now in the ambit of microfinance and micro-entrepreneurship than ever, and maternal mortality has significantly improved in the last decade. Women's political participation too have significantly enhanced as reflected in women's vote share in all the elections over the last two decades, and in contesting and winning positions in three-tier Panchayati raj institutions in rural areas and urban local bodies.

Despite these encouraging improvements, there are still serious concerns about women's participation in the workforce which is among the lowest in the world, and also about women's overall status in the society, which remains very low. The strangleholds of patriarchy continue to keep women at home as well as treating them as second-grade citizens. How do we reduce the barriers to have more women in the workforce, and also enhance their overall status in society?

A growing body of literature suggests that in patriarchal societies, property rights to women could enhance their social positions. Property rights in this context refer to legal rights and actual

possession and control over land and houses by women. Specifically, in agrarian societies, where land is the most important site of social power, women's effective ownership of land can have multiplier effects in elevating their social position, and enhance their assertion in decision making and economic bargains in and outside the family. Women's ownership of land also has other supplementary benefits – reduction in domestic violence and spending in girls' education. Studies from many countries of Asia, Africa, and Latin America have corroborated these findings.

Increasing women's participation in the productive workforce requires interventions in education and skills, affirmative actions of the state and the corporate sector to have more women in the workforce, and creating conditions that support retention of women in the workforce after childbirth. Studies show longer paid maternity leave as well as well-endowed child care facilities at the workplace can work better towards the entry and retention of women in the workforce.

While the studies tell us what can work well, it is becoming increasingly clear that making them work more and more requires collaboration among civil society actors, the state and the corporate sector as the case may be. Neither the government nor the civil society or the corporates alone can make the desired changes happen. Why is it so? From the experiences, we learn that changes last more when the key stakeholders become active agents of the process of change; it simultaneously helps changes in policy, institutional process, and human behaviour.

The two cases presented here attempt to do the above. The case study was written by the Working Group of Women for Land Ownership (WGWLO) based in Gujarat is an attempt to secure women's effective rights to land by collaborative action of the state and women's organisations. The case captures an innovative institutional arrangement named Swabhumi Kendra, which provides the support needed bythe women to claim their legitimate

legal rights to land. These Swabhumi Kendras enjoy the legitimacy of the state as well as social legitimacy among the population as a result of the grass-root social mobilisation of the WGWLO member organisations.

The second case study by eWIT is another collaborative example between one of the largest self-help programmes of the women – Kudumbashree, the IT industry in Kerala and a local civil society organisation to establish childcare facilities in an IT park. The facilities provide dignified work opportunities to women of marginalised groups, as well as encourage retention of the women workforce in the IT park.

Both the interventions are built upon partnerships among multiple stakeholders, and in both of them, civil society organisations of women play a key role. Both present an attempt to create a new institutional eco-system to fill the gap. They serve as great pieces of learning and inspiration.
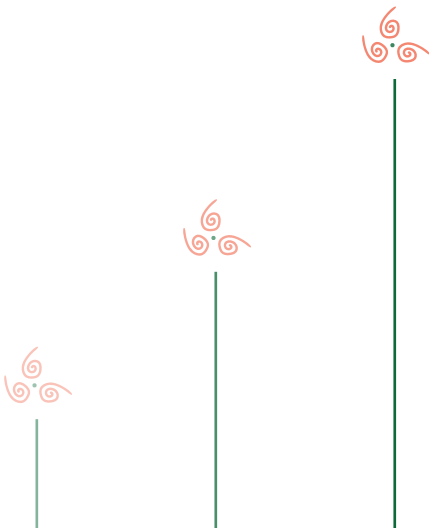
3.1 CC Hub: A child care hub in an IT Park

Empowering Women in IT and ITeS (eWIT), Kerala [5].

Abstract

In September 2012, a group of women working in various IT companies in the Technopark campus in Trivandrum, Kerala, decided to create a networking platform for women in the IT & ITeS sector and launched the Trivandrum chapter of eWIT—Empowering Women in IT & ITeS.

This is an offshoot of eWIT, Chennai, which has a decade-long legacy and considerable experience in gender sensitization, social inclusion, and women's empowerment.

The idea behind the platform was to connect, ideate, and support one another to grow to one's full potential.

A key objective of this not-for-profit society, which is registered as an NGO, is to provide infrastructural and service support to facilitate women. This includes setting up day care centres. Since this was a deeply felt need in the IT campus and also an important business-related issue, because it led to employee attrition and talent drain among women professionals, eWIT has made a commitment to take up this issue and to work for a solution that is viable and replicable in the IT & ITeS industry.

CC Hub (Child Care Hub) is a social inclusion project run by eWIT as a public–private partnership (PPP) programme. It is supported by Technopark and the IT industry in Kerala and Kudumbashree, a grass-roots-level enabling programme for women run by the Government of Kerala. Fit-out sponsorship support is provided by global companies like Allianz, IBS, QuEst, and UST Global in the IT campus, and toys are provided by Baby Shop.

This project has brought women from two strata of society together, enabling and empowering each another.

A day care centre is a pressing need for young mothers in the tech world so that they can pursue their career after returning to work after taking maternity leave and maintain a better work–life balance.

A day care centre also offers better livelihood opportunities and higher living standards to women from marginalized sections in the locality.

This is achieved through a beautifully conceptualized women's empowerment programme that is a win–win situation for all.

This piloted model was run successfully as a self-sustainable profit centre. It is replicable across communities in India. The prototype for success lies in running this as a PPP programme with community intervention as a not-for-profit, non-commercial venture aimed at social inclusion. This connects the dots of social security, women's empowerment, child welfare, and community development and progress.

CC Hub: A child care hub in an IT Park - Prelude

This is the story of a humble day care centre, CC Hub in Technopark, Trivandrum, Kerala, which was set up as a pilot model and proved to be a game-changer in the area of social inclusion, enabling women's empowerment through a grass-roots-level intervention.

Sindhu belongs to a fishing community and lives in the coastal region in Valiaveli, Trivandrum, about 5 km from Technopark.

Technopark is the foremost and greenest IT park in India. It employs more than 50,000 IT professionals, of which 40 per cent are women, who work for more than 300 companies.

Sindhu has studied up to the 10th grade and has some training in tailoring and other skills. At the age of 22, she married Johns, a mason and a daily wager, and eventually became the mother of two daughters. She underwent various travails and faced many challenges. With no regular or assured income, she struggled to support her family, which was below the poverty line (BPL), and provide for two school-going children.

At this time, in August 2014, the local Kudumbashree unit reached out to the women in the locality, announcing a day care taker training programme for unemployed women from the marginalized communities in the area.

A large crowd of about 100 aspiring day care takers was waiting at the selection centre when Sindhu arrived for her interview along with her two little girls. She waited patiently for long hours for her turn.

Meanwhile, the panel of women from Kudumbashree and eWIT shortlisted the 20 candidates for the first batch of training, which was scheduled to commence in a week.

The members of the interview panel noticed Sindhu's plight and were impressed by her sincerity when she promised to give her best in learning a new skill and vocation. She was determined to overcome her difficult circumstances and work hard to improve living conditions for her family and herself.

Following the two-month training period, Sindhu was selected and started her first job as a day mom in the pilot day care centre, CC Hub.

This began as a social inclusion PPP project in Technopark, Trivandrum in early 2015.

Now, after being employed for close to four years, Sindhu comes across as a confident woman who is in charge of her life. She is an earning member of her family, with a regular and decent salary. She rides a two-wheeler to work and is supporting her husband in building a new house by the sea. As a working mother of two young daughters, she is an inspiration to them. The daughters, who are in the 5th and 7th grades respectively in a local school, have aspirations of becoming IT professionals when they grow up.

For Sindhu, life has taken a totally unexpected turn and changed for the better, all because of a crèche run by a not-for-profit organization in the new-age technology park in her neighbourhood.

The journey

The beginning

The eWIT Trivandrum chapter decided to address the pressing need faced by every IT park in the world—providing a safe and secure place where working mothers, and especially those returning after maternity leave, could leave their infants in the expectation that their children would be well cared for.

Teens of Today - Parenting Session - by Haripriya Naresh
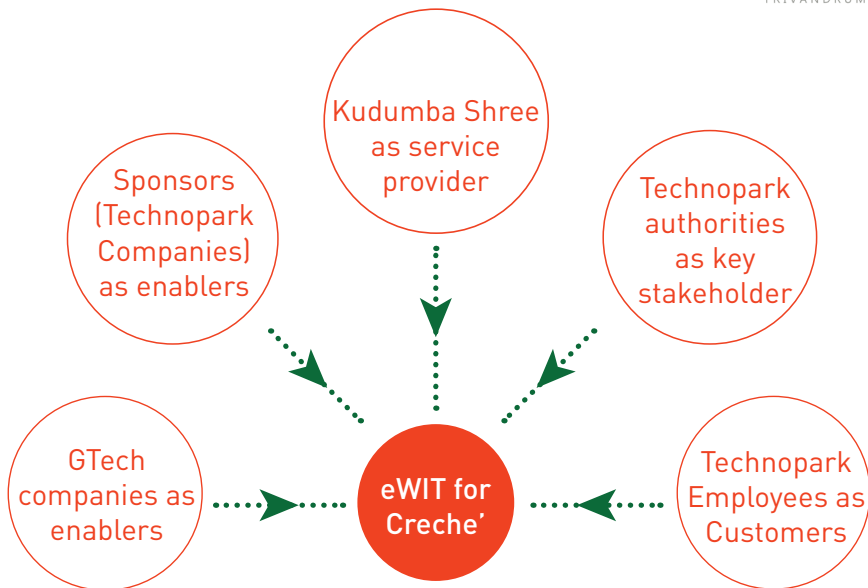Post session interaction with participants – April 2018

The research and data collection for the feasibility study was done in 2013. Armed with positive findings from the survey conducted among women employees in the campus, eWIT decided to set up a subgroup to run the day care centre as a social inclusion project.

The subgroup consisted of six active members of the core team, women from various companies who possessed different competencies, but all complementing each other. They started investing their time, energy, and effort to achieve their dream project together.

February 2014: A detailed blueprint of the project was prepared after collecting details from various stakeholders and industry experts.

The eWIT governing board members embarked on a mission to find stakeholders and to get their buy-in for a concept that was ahead of its time.

CC Hub : Collaborative Model - Public Private Partnership

eWIT
Empowering Women in IT
TRIVANDRUM CHAPTER

Kudumba Shree as service provider

Sponsors (Technopark Companies) as enablers

Technopark authorities as key stakeholder

GTech companies as enablers

eWIT for Creche'

Technopark Employees as Customers

It took about six months of relentless effort and hard work to ensure that all the stakeholders were on board with both the concept and the project.

Collaboration

By September 2014, Technopark and Kudumbashree were on board as partners in the project, which was set up as a PPP initiative. eWIT entered into a lease agreement with Technopark for a 1,100 sq. ft space for the facility and signed a memorandum of understanding (MoU) with Kudumbashree for operational support along with trained child care takers.

IT companies like Allianz Cornhill Information Services Pvt Ltd, IBS Software Services Pvt Ltd, QuEst Global Engineering Services Pvt Ltd, and UST Global in the campus pitched in with fit-out sponsorships to meet the initial investment to set up the facility.

Renowned architect Sumi Shaji of S Squared Architects, Trivandrum, offered her support in designing a model child-friendly facility with an inspiring interior design concept.

Bringing it all together

In September 2014, Kudumbashree announced a certification programme on child care taker training and called for applications from women from the local community to join the pilot batch. A panel of women from eWIT and Kudumbashree screened 100 odd applicants and shortlisted 20 women from the locality for the pilot batch in a day-long process and announced the commencement of training in October.

Aparna Viswanathan, Managing Director, Reflective Learning Practices in Education and Learning (Race), Bangalore, an experiential training firm involved in reflective learning practices, provided her expertise in skill training and entrepreneurship to rural women as part of wider women's empowerment initiatives.

Kumari Selvi, founder of Bloomingdale, and her day care facility, Blooming Dale, an established private day care centre in the vicinity, were selected to provide simulation and hands-on training to trainees during the training programme.

Thus, 20 women in the age group of 25 to 55 years from the locality who are from lower- income groups embarked on a journey for 45 days that became the trigger for a total transformation, both personally and professionally.

The professionally designed training modules spanned 45 days of training. They began with personal hygiene and grooming

for the participants, prompting these women to take a closer look at themselves, starting with their feet and toenails and moving to their hands, mouth, and hair. This module was completely new to many participants and emphasized the importance of daily bathing and personal grooming for a healthy and hygienic life. This training had a deeply profound impact, as the women started flaunting their carefully self- manicured hands and pedicured feet, and also started urging their spouses, children, and family members to focus on their feet and start wearing slippers at home–different ones for indoors and outdoors–with no excuses.

Trainers, including paediatricians, child psychologists, and motivational speakers, were part of the training module.

The training module spanned 45 days and covered healthcare, well-being, emergency nursing aid, and customer care as part of the curriculum.

The trainees received classroom training on the day care process and on the individual duties, roles, and responsibilities of a child care taker.

They also gained hands-on experience at Blooming Dale, which helped them further their on-the-job experience in handling demanding children and parents alike.

Implementation

After the training, based on the assessment and feedback provided by the trainers, eight care takers from the 20 women who had received training, were selected to join the pilot facility of CC Hub in the Technopark campus.

Meanwhile, the fit-out work was nearing completion, with a soft launch planned on 1 March 2015.

Visit by the eWIT Chennai team : October 2015

All eight care takers were brought on board CC Hub in February itself. They were actively involved in the finishing work at the crèche, helping select the furniture and other materials, and conducting the soft launch in March.

The facility was soft-launched in March 2015. Within a few months, it was running to capacity, a trend that has been continuing ever since.

CC Hub is now in the fourth year of its operation. It has never experienced a fall in the occupancy rate nor a decline in its service levels, which are direct indicators of the high demand for such a quality facility in the workplace that enables employees to achieve a better work–life balance. The long waitlist for advance registrations for admission and frequent requests from parents with older children for the opening of an after-school care facility for their school-going children are evidence of the potential of this intervention programme to create a women-friendly, equal-opportunity workplace across industries throughout the country.

Given the changes in the Maternity Benefit (Amendment) Act, 2017 and the mandate to provide a crèche in close proximity to the workplace, more and more organizations are coming forward to support this venture. They are replicating the model in industrial and IT parks in the state. Many companies have now changed their human resources (HR) policies to include reimbursement options for baby care expenses for employees who are mothers of young children.

Premise and Concept

At one end of the spectrum
- Large numbers of highly educated professionals like engineering and science graduates work in Technopark, Trivandrum, the capital city of Kerala.

- At the entry level, women constitute 40 per cent of the workforce—graduates from the engineering, technical, and science streams—in this IT park. They are equally competent, dynamic, and ambitious, aspiring to major career achievements in the IT industry, just like their male counterparts.

- As the years pass, and progress up the career ladder takes place, the representation of women in supervisory and middle management roles falls to 25 per cent. At the higher levels, it becomes almost invisible, at a mere 2 per cent, in the C suite.

- *Root cause:* Life events like marriage and childbirth in a woman's life who is at the prime of her career can have major repercussions on her professional growth. A very high percentage of women opt for a career break, prioritizing child rearing over their blossoming career. After five years, when their children begin school, and these women are ready to restart their career, they find it a major challenge. They find it difficult to cope with rapid technological and other changes

that have occurred in the meantime. For many women returning to work, the restarting point often means returning to square one all over again.

- *Key lever:* Availability of quality infrastructure and service support for child care is highly restricted or altogether absent, or is of abysmally low standards, in industrial parks and IT parks. Those from nuclear families and those who have migrated to the city to earn a living struggle to look after their very young children because of the absence of a reliable support system, forcing women to quit their jobs and continue as non- earning members of the family, thus thwarting their professional aspirations.

- *Fallout:* In financial terms, this translates to significant losses related to talent drain to the company in particular and to the economy in general. In addition, it is a personal loss to the women and their families, both financially and emotionally.

At the other end of the spectrum

- Housewives from lower-income groups remain an untapped employee pool, with very limited opportunities to earn a livelihood and directly contribute to the economy.

- In Kerala, with its high literacy rates, the average educational level of a young housewife from a lower-income group is 10th or 12th class pass. Fifty per cent of them are graduates or are technically qualified, possessing a diploma or certificate in vocational training. They are mostly nursing assistants, midwives, tailors, beauticians, anganwadi teachers, and Asha (accredited social health activist) workers.

- This untapped workforce has the potential to contribute their time, skill, and energy. It is a very willing segment that is ready to seize the right opportunity. It could be galvanized to bring about social change at the grass-roots level.

Kudumbashree has already demonstrated the power of grass-roots-level micro- enterprise units. Kudumbashree supports women in the locality to come together to set up fair-price canteens, pickle-making units, and tailoring units. It also trains women to be waste collectors and auto and taxi drivers, depending on their skills and capabilities.

Project models

A highly skilled woman professional will be able to attain a better work–life balance and fulfil her career potential if she is provided with a support system that can help her cope with major life events like pregnancy, childbirth, and child care during the early phase of her career, and that can also provide her with parental care options and healthcare support when she is in her middle age and employed at the mid-managerial level.

The IT & ITeS industry is now increasingly aware of this talent drain and the gender gap in their workforce, and hence is inclined to retain women employees, who are a precious talent pool, through gender diversity and women-focused policies that offer a better work–life balance. Governments are also focusing on reinforcing gender-sensitive labour laws, providing extended maternity care and child care to create women-friendly workplaces, and encouraging gender diversity and inclusion to create equal opportunities for all.

However, when the child care hub project was conceptualized in 2014, the Maternity Benefit (Amendment Act, 2017, which made it mandatory to have daycare facilities for companies, had not been passed, and hence there was no compelling regulatory pressure on companies to onboard the project.

Technopark's sprawling campus is the workplace of more than 50,000 professionals. Women constitute 40 per cent of this workforce.

Of the 20,000 women who work at Technopark, 30 per cent are estimated to be going through life events like pregnancy and young motherhood at any given point of time. This means a potential target audience of 10,000 young parents. In a metro, the percentage of young parents who live alone, without support from their extended or joint family, is likely to be much higher. Even in Trivandrum, about 25–30 per cent of the workforce consists of professionals who have relocated from other parts of the state and from elsewhere in the country, and hence they have no family-backed support system to fall back on. This target group is highly prone to professional attrition, and women frequently quit their career to focus on baby care due to the non-availability of quality child care support in the vicinity of their workplace. These numbers are substantial and the demand–supply gap could not be bridged even by the ever mushrooming child care facilities in the neighbourhood.

This case study is the story not only of working women in Technopark, Trivandrum, but is also representational of women throughout India, in metros and non-metros alike, and in any industrial area, as this is a global phenomenon.

We have an untapped workforce among local housewives in the vicinity of IT parks and industrial parks where a professional workforce of women is concentrated. The former group of women makes for a potential talent pool who could be trained and groomed to be care givers for babies and older people, thus being the support system for young professional couples who lack reliable support systems at home.

These housewives if professionally trained in personal hygiene, grooming, child care, and nursing care can be an excellent alternative to family support, which was available by default in large joint families in the past. This opens up a new avenue of livelihood opportunity for local women, who are otherwise deprived of a regular income and a decent job owing to their poor social and educational background.

Connecting all these dots, a grass-roots-level intervention was conceptualized as a social inclusion programme that empowers women from two different social strata so that they can help each another. This could be achieved as a PPP initiative by bringing on board Technopark, Kudumbashree, and the multinational companies operating from the IT park along with eWIT, a not-for-profit organization, as the pivot to run the project.

Challenges: Surmounted and overcome

The project has gone through its share of difficulties and setbacks, which have been documented here as project management experiences, lessons, and best practices for reference.

- *Stakeholder management:* The styles of functioning of the partnering organizations were vastly different from those of the government departments on one end of the spectrum, and from those of the NGOs on the other end of the spectrum, and were entirely different from those of the corporates.

  To get all the three vastly different working styles to synergize, to focus on strengths, and to converge on a common ground was a major challenge. This task required the eWIT governing board members to use their best stakeholder management skills, as well as invest a great deal of time and effort.

- *Approvals from the government:* At the conceptualization stage, the project was stalled because of changes at various levels of decision-making in government departments. The commitment made in principle was not converted into an actual document, with signatures on the dotted line, when the project proposal was examined by officials at the senior level. Consequently, the project team had to go back to square one on a number of occasions, but their tenacity, determination, and clarity of vision regarding the blueprint persisted.

- *Financial challenges:* Unbudgeted expenses during the implementation phase resulted in shortage of funds raised through sponsorship commitment. Initially, a couple of corporates in the Technopark campus had shown keen interest in the project and were on-boarded as fit-out sponsors. However, despite their commitment, the budget was still short of the required funds. To add to the financial challenges, an unforeseen statutory expense popped up at the time of signing the lease agreement with Technopark. Although the project is called a PPP programme, the Technopark authorities could not offer any waiver for statutory payments like the security deposit for the space or the caution deposit for the electrical licence, which run into a few lakhs of rupees. This was an additional burden on the fit-out cost.

  There were now two options.

  The first option was to invest time and effort in submitting a representation to the higher- ups in the government requesting a waiver of these statutory payments, although the outcome was uncertain. The challenge here would be dealing with the time lag and delay caused by the non-payment of deposits, and waiting for a decision on the waiver request and the subsequent effect on the project. The project would come to an end because the Technopark authorities would hand over the facility for the fit-out work and the interior designing only after the payment of the statutory deposits and the signing of the agreement.

  The second option was to make the statutory payments upfront and go ahead with the timelines announced for the project and seek more sponsorship from well-wishers inside and outside the campus to meet the deficit funding.

- The project team decided to launch a sponsorship drive to seek additional funds, and fortunately more doors opened. Given the potential of the project and impressed by the

commitment demonstrated by eWIT as the pivot entity in this programme, one of the advisory board members offered to support the project with a personal contribution to meet the deficit amount. This member also referred a branded baby shop in the city, which agreed to support the project; the shop helped reduce the fit-out cost by providing toys worth a very substantial amount. The existing sponsors increased the sponsorship amount to meet the operating costs of the facility during the initial lean phase following the soft launch of the facility. Thus, the project team managed to tide over the financial crises smoothly, without pushing the timelines of the project.

- *Rentals at commercial rate:* eWIT made a representation to the IT Department, Government of Kerala, for a rent waiver for a basic facility like a child care centre in the campus. It referred to the changes in the Maternity Benefit (Amendment) Act, 2017, which mandates that the provision of day care centres in the workplace is the employer's responsibility. This representation yielded results after two years and has changed the landscape regarding the operation of CC Hub. This representation was supported by the parents and other stakeholders, and the matter was followed up relentlessly by eWIT. Consequently, the Government of Kerala issued a circular to the authorities directing that they should provide rent-free space for setting up child care centres within the campus; operations and maintenance (O&M) charges for the allotted space are still payable, though. The retrospective effect of this circular, which waived rental charges for CC Hub from its inception, helped turn the balance sheet of CC Hub from red to green.

- *Staff-related expenses:* The year-on-year increase in staff-related expenses could be tackled only when money could be saved from rentals. Judiciously managed capacity planning has helped keep staff-related expenses in check and has also

helped in maintaining the high standards of quality service, which is the hallmark of success for a service-intense day care facility.

Helping senior staff members find better career prospects in upcoming day care facilities in other IT companies in supervisory roles and backfilling vacancies at the trainee level for child care takers have helped keep staff-related expenses in check, that is, not exceeding 60 per cent of the inflow year on year.

eWIT CC Hub could successfully maintain high levels of staff welfare and retention, leading to high levels of customer satisfaction and Net Promoter Score (NPS) only because it is not a profit-motivated commercial venture, but rather is envisaged as a model initiative for women's empowerment, child welfare, and social inclusion.

- *Project viability under threat:* When the project concept was submitted, it was envisaged as a collaborative model, with support from government authorities.

  However, the pivotal player in the project, eWIT, could not get a clearly written document from the IT Department regarding the latter's commitment to a partnership for the project. This resulted in the cost benefit analysis (CBA) of the project going for a toss, with Technopark charging its standard commercial rentals and O&M charges for the space allocated for the day care centre. This translated to 20 per cent of the revenue being allocated only for the rental charges.

- In this project, the number of children allowable in the facility and the admission and monthly fees are fixed costs, with no scope for increase for the first five years. However, the rental and staff expenses (with revised minimum wages

to anganwadi workers in the state and statutory expenses) are variable components, resulting in increased expenses year on year, and thereby threatening to render the project financially unviable.

The high cost of salaries and benefits as well as the necessity of retaining quality resources to ensure better customer and stakeholder management in a service-oriented industry like a child care facility has meant an additional burden in terms of the cost of running a quality daycare facility with an affordable fee structure.

In the first two years of the post- implementation phase, the project team encountered the following roadblocks: high rentals in the IT campus; high cost of salaries and benefits; and challenges in retaining the staff so as to ensure better customer and stakeholder management.

Success factors: Sustaining the model

The key levers that sustain this model and help meet the ever increasing demand from customers are:

- *Not-for-profit concept—non-commercial venture:* Since the project is aimed at social inclusion, transparency in financial matters is maintained. The monthly fee for availing the facility is kept at a reasonable level in comparison to similar services offered by other facilities. There has been no hike in the fee since the inception of the facility. The inflow of funds is judiciously mapped to the outflow. A large proportion of the revenue (to the tune of more than 60 per cent) is spent on the salaries and benefits of the child care takers.

O&M costs are kept under control to the tune of 20 per cent of the revenue.

The additional expenses incurred are for paediatrician visits, doctor sessions, and parental sessions and for celebrating festivals and special occasions during the year, as well as the regulatory and statutory expenses related to the running of a day care centre.

Year on year, a buffer fund (net profit) comprising 10–15 per cent of the revenue is set aside for conducting programmes, holding seminars, and implementing community projects in the areas of women's empowerment and child welfare for the IT & ITeS community within which CC Hub operates.

- *Sense of ownership among parents and caretakers:* The governance of CC Hub is collectively managed by a committee of stakeholders where parents and care takers voice their concerns and put forward recommendations for improvement. This enhances the sense of ownership and results in parents and caretakers taking collective responsibility for the success of the venture.

- Feather-touch management and governance: Even though eWIT, Kudumbashree, Technopark, and other sponsoring companies are part of the governing council, the direct involvement of the stakeholders in the day- to-day operations is limited. This is a fine example of decentralized management and delegation of responsibilities.

  In addition, the dominant presence of these influential stakeholders reinforces the credibility of CC Hub, making it the preferred choice for young techie parents over other commercially run day care facilities in the locality.

- *Support from industry and community:* As a PPP venture aimed at social inclusion, CC Hub has captured the imagination of the Technopark community in particular and of the IT & ITeS industry in general.

Delegations from the Kerala State Planning Board and the Kerala State Social Welfare Board regularly visit CC Hub, as do the Kudumbashree project teams, to evaluate the model and to assess the success factors, so that this initiative can be replicated across Kerala and in other industries.

This exposure helps in building the project's visibility and credibility among its customers, stakeholders, and patrons in the industry.

Conclusion

This is a fully replicable model, highly sustainable, with long-term social return on investment (SROI), and creates opportunities for financial gain.

A small facility in a 1,100 sq. ft space can accommodate up to 30 children and can provide employment to eight to 10 women from the local community, working in two shifts (morning and evening), within the confines of high-security IT parks.

This model can be adopted by any institution having more than 500 women employees who work during different shifts, or by a number of companies in the locality that come together to set up a community child care centre to support their female workforce.

The model is self-sustainable, requiring an initial investment of 10 lakh rupees for the setting up of the facility. This amount can be raised through company sponsorships or through low-interest business loans from financial institutions.

The initiative will bring many social and economic benefits to the women in the immediate locality by enhancing their standard of living.

It will also help increase the representation of women in the workforce in a highly skilled professional environment and in decision-making positions.

These are the key levers for measuring the success of the initiative.

The way forward

The eWIT CC Hub aspires to grow in scale and scope.

In the next phase of this social inclusion programme, the eWIT CC Hub team plans to set up a Children's Learning Centre in the Technopark campus to provide after-school care facility for school-going children of techie parents.

Given the erratic shift timings of professionals working in the IT & ITeS industry and the lack of an adequate support system at home, many parents of young children, especially children of school-going age, today face various challenges. This facility will be of great help to them.

The learning centre for children will offer e- learning facilities, digital libraries, play stations, outdoor games, as well as opportunities to develop social and cognitive skills, to pursue passions, and to explore hidden talents.

The initiative will again offer a livelihood opportunity for women from the local community.

The eWIT CC Hub plans to launch the second phase of this initiative with project support and grants from the government and sponsorship from various IT companies.

Annexure: Reference materials

1. eWIT CC Hub, Journey in pictures
   Journey through pictures - eWIT CC H

2. Testimonial from a long-term customer, Gibi John, who shared an emotional farewell note when her son who had been in the care of CC Hub moms for three years moved to pre-KG school.

Articles published

Kudumbashree lends a hand to techies

Creche In Technopark By Next Month

TIMES NEWS NETWORK

Thiruvananthapuram: The travails of balancing work and child care are still fresh in the minds of Rani Sasikumar and Parvathy Pillai, IT professionals in their 40s at Technopark. The office-bearers of the Trivandrum chapter of e-WIT – a forum for empowering women in IT – had taken up the initiative for a crèche inside their campus, which will be launched in the second week of January.

The forum has roped in Kudumbashree workers in the neighbourhood for managing the crèche, which is expected to be a boon for thousands of techies. On Monday, it launched a 20-day training programme for caregivers in association with Kudumbashree Mission. The first batch comprises 20 Kudumbashree workers, residing in the neighbourhood, who will manage the crèche in shifts.

A core committee of the forum, led by president Sindhuja R Varma, had selected the caregivers after an aptitude test and interview. "We have tied up with a professional agency, RAACE, based in Bangalore to impart soft skills and behavioural training. It will be leading the classes," Sindhuja said.

The training will also include practical sessions on child care handled by paediatricians and child psychologists.

"We plan to employ eight candidates shortlisted after the training programme to manage the crèche initially. We intend to admit 25 children in the first batch," Sindhuja said.

e-WIT programme manager Rani Sasikumar said the playschool, of 1,000-sq ft area, was being set up inside the Thejaswini building with the support of sponsoring companies.

Technopark chief executive KG Girish Babu said most employees at the facility had toddlers. "Though they can seek the help of babysitters, many of them fail to give proper care to kids. The crèche is a welcome initiative as it assures them that their kids are nearby and safe. This will also help them to concentrate more in their work," he said.

Girish Babu and e-WIT had signed the memorandum of understanding for the crèche in September.

The training programme was inaugurated by Kudumbashree Mission executive director K B Valsalakumari at the head office of the mission at Medical College on Monday. RAACE founder Aparna Vishwanath was also present.

(With inputs from Arya UR)

TRAINING PROGRAMME: President of e-WIT, Trivandrum chapter, Sindhuja R Varma interacts with Kudumbashree workers during a training session on Monday

3. Times of India, Thiruvananthapuram, September 2014

4. Video: Child Care Hub empowering women from two social strata: https://www.youtube.com/watch?v=IOAVqCYIsaM

5. eWIT Trivandrum – networking platform for empowering women in IT and ITeS industry http://ewittvm.co.in/

6. Articles on LinkedIn on everyday role models to create awareness on giving back to society. https://www.linkedin.com/pulse/superwomen-everyday-role-models-who-change-my-life-viswanathan/

Empowering Women in IT and ITeS (eWIT), Kerala

Empowering Women in IT (eWIT) is a voluntary and not-for-profit forum run by a group of senior women professionals associated with the IT/ITES industry. eWIT was formed in March 2006 with support provided by STPI (Software Technology Parks of India), Chennai.

It is a platform that specifically addresses women's issues in the IT industry. eWIT strives to be the preferred forum for interchange of ideas and for pioneering initiatives in order to unleash the potential of women and drive their growth in the IT industry.
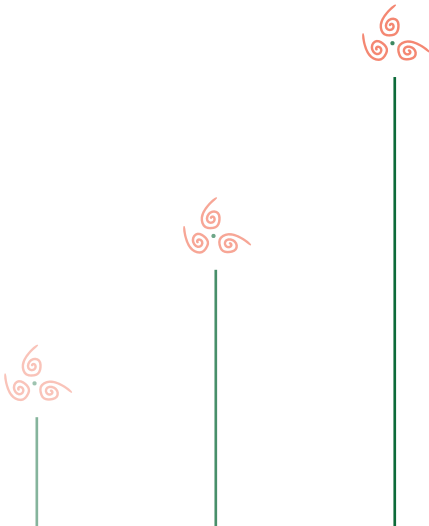
3.2 From Workers on their own Fields to Landowners:

Augmenting the Livelihoods of Women Farmers in Gujarat

Working Group for Women and Land Ownership (WGWLO), Gujarat[3]

Abstract :

The Working Group for Women and Land Ownership (WGWLO) was formed in 2003 to meet the need for a focused, multi-level, collective platform for sustained action and policy advocacy on the issue. Starting with an initial membership of 13 Gujarat-based non-governmental organizations (NGOs), the WGWLO network has grown to include 41NGOs/ CBOs and individuals. This case study examines how WGWLO, a network of organizations and rural women's collectives, has moved beyond the sole issue of land ownership by women and has expanded its area of operation to ensure that women who own land are also able to access other capital and resources so they can augment their livelihoods. The case study also describes the collective efforts of the members of WGWLO to create an identity for women as "farmers", both at the family level and in the government system, and the strategies adopted by the organization for this purpose, their impact, and the learnings and best practices that emerged as a result. The documentation is based on visits to, and interactions with, the member organizations—Navjeevan Adivasi Mahila Manch at Sagbara,

Narmada district; Sarthi at Santrampur in Mahisagar district (both Sagbara and Santrampur are tribal areas); and Bavla, at the Bavla Mahila Vikas Sangathan in Ahmedabad district. Field visits at all the three locations and interactions with women land owners were carried out to understand how women have accessed the services of Swa Bhoomi Kendra to enhance their livelihoods.

Women, Landownership, and Women as 'Farmers': The intrinsic linkages

According to the 2011 census, 74 per cent of the rural female workforce is engaged in agriculture. The percentage is increasing, as men are switching in large numbers to non-farm activities or migrating in search of work. More women-days go into every acre of land cultivated than man-days, across crops and regions. Despite the fact that about 98 million women in India are engaged in agriculture and allied activities and are primarily responsible for producing almost two-thirds of all agricultural produce and about three-fourths of dairy products, their share of the most important natural capital, that is, land, continues to be extremely small. Eighty-six per cent of India's arable land is privately owned, and yet the overwhelmingly patriarchal nature on the ownership pattern is not questioned. Although women-headed families account for over 32 per cent of all rural households, women hold less than 13 per cent of cultivated land. All this despite the fact that the Hindu Succession Act of 1956 mandates equal distribution of property among all inheritors irrespective of gender.[4]

Therefore, despite their hard work, women are not recognized as "farmers" and nor can they gain access to any entitlements as farmers because they are not allowed to own agricultural land in our patriarchal society. The enormous contribution of women farmers remains unrecognized. This lack of title to landed property is an obstacle when women farmers apply for credit or seek any other productive resource to expand their holdings and improve their yields. Women are often bypassed in land reform or land redistribution processes. When people are relocated after being displaced because of government projects, women's land rights are rarely acknowledged. Even when such rights are recognized and women are granted land, powerful vested local interests usually ensure that they cannot till it, particularly if the women belong to groups that have been traditionally discriminated against. These

[4] Factsheets: A Land of My Own. Delhi: Oxfam India, http://www.oxfamindia. org/resources/publications/land-my-own- factsheet

discriminatory practices are so deeply embedded in our social and cultural system that even those who are responsible for ensuring that daughters are not denied their rightful claims believe in patriarchal values and participate in systemic processes to dispossess women of their rightful claims.

National policies and plans have made attempts to address and correct the gender imbalance in agricultural land rights. The National Policy for the Empowerment of Women (2001), which adopted the Beijing Declaration and Platform for Action (1995), aimed at advancing women's rights, underlined the existing gap between the goals enunciated and the related mechanisms, on the one hand, and the reality of women's status, on the other hand. The Tenth Plan (2002– 2007) included a section on increasing women's access to land by regularizing the leasing and sharecropping of uncultivated agricultural land by women's groups. The Eleventh Plan (2007– 2012), too, emphasized the necessity of having a stronger focus on women in agriculture.

Provisions were made for the direct transfer of land to women through land reforms, anti- poverty programmes, and resettlement schemes. The Twelfth Plan (2012–2017) went ahead with the objective of making this goal a reality.

Gujarat has adopted a Gender Equity Policy (Nari Gaurav Niti). The policy reiterates that women's lack of opportunity, access, and entitlement to economic resources acts as a barrier to equitable and sustainable development. The policy provides impetus to efforts aimed at increasing women's control and ownership of land, property, and other common property resources. And yet the fact remains that land ownership is minuscule—hardly 13 per cent— and women are not recognized as "farmers".

Swa Bhoomi Kendra as an approach

It is assumed that village and Block revenue officials will be the guiding force for women seeking to assert their rights. However, the revenue procedures are so complicated that women are at a loss as to how to proceed. In addition, several instances of violations of women's rights involve family members, who need to be convinced about the need to take action. Both these roles require an understanding of women's perspectives, their strengths and constraints. To address this need, WGWLO started building a cadre of community-based Para Legal Workers (PLWs) in 2007–08 to deal with revenue and revenue-related matters. These PLWs create awareness among women and men about women's land rights and guide women who require advice and help. So far, WGWLO has trained 114 PLWs.

In addition, WGWLO realized that while there are several resource centres for women promoted by the government, there is still a dearth of centres that guide women in matters related to land revenue, that take up cases with the women's relatives if needed, and that enable women to access land-based livelihood-enhancement entitlements.

For many years, the PLWs associated with the member organizations of WGWLO had worked to create awareness about the land rights of women at the village level and to support women in preparing their legal paperwork. In 2013, an institutional mechanism, Swa Bhoomi Kendra, Centre for Land, Legal Literacy, and Access to Productive Resources by Women, was set up at the block level, and run by women sangathans, with a view to expanding the scope and reach of the issue of women's landownership taken up by members of WGWLO, by building stronger linkages with block-level revenue and agriculture officers. The Swa Bhoomi Kendra is thus a "space" (located in the office of a local community-based organization (CBO) or a space allocated to PLWs in the Block revenue official's complex) where women come to seek help in dealing with their problems related to:

- women's right to landownership
- access to productive resources as women farmers

For more than five years now, 15 member NGOs or grass-roots women's sangathans have been running such Swa Bhoomi Kendras. These are all located at the block level, are run by PLWs who have been trained centrally by the WGWLO network, and are associated with the local women's sangathans.

Swa Bhoomi Kendra and its efforts to augment livelihoods

1. From agricultural labourers to women land owners

The following are three case studies of member organizations of WGWLO that reflect the approach followed by the network.

Sarthi, Santrampur: Sarthi has been at Santrampur since 1988, consistently working with women and tribals for their economic and social empowerment. Sarthi began with the creation of savings and credit groups. These groups later were merged with government programmes and are now running independently of the agency. In 2007–08, Sarthi received support under an externally supported

programme to establish a platform for single women called the Ekal Nari Manch. Around the same time, Sarthi set up, with government support, a centre to provide women with information and legal aid support. This centre is located in the marketplace of Santrampur and is frequented by women having problems with their in-laws and husbands. In 2013, the Swa Bhoomi Kendra was also housed at this centre. The women frequenting the centre thus got the opportunity to also get their land rights issues addressed.

Manjulaben gets her land back

"I know the land that I have in my name is not that productive, but why does not such land come to me without a struggle?" asked Manjulaben, a widow with six children. Her husband died four years ago and she manages the household and farming with considerable difficulty. Her two grown-up daughters have migrated to Ahmedabad and work as casual daily wage labourers at construction sites. It is their income that is helping the family deal with the current crisis. The piece of land that she finally got registered in her name produced nothing because of the drought this year.

Manjulaben had to fight hard for this land. She faced a double bind: first, she was an illiterate woman; and second, social convention prevented her from leaving her home immediately after the passing away of her husband. The family cultivated a piece of land that was registered in her husband's name in the land records, but her name was not in the land records. During the Campaign on land inheritance Varsai Jumbesh (jumbesh means campaign), the Sarthi PLWs met Manjulaben and thereafter helped her with her struggle.

Manjulaben did not have the documents needed to get her name entered into the land records. The death certificate for her husband was missing. Her brothers-in-law were not forthcoming about getting the affidavit done. Both the PLWs worked hard to get the needed paperwork readied. After almost three months of running around, the village land revenue officer finally got her name entered into the inheritance deed along with the names of her daughters.

The land of most farmers is located in the ravines and in undulating terrain, and hence agriculture has always been a difficult proposition for them. In addition, most farmers in the villages of Santrampur do not have access to irrigation and also lack agricultural implements. They get the land ready for sowing through their own hard work. In the case of Manjulaben, she also had the support of her two adult daughters. The family also works on the land of others in exchange for the tilling of their land for which they seek support from other farmers. This year, the rains were poor and so the family's hard work and investments yielded no returns. Most farmers face a similar situation, although some are slightly better off because they have some access to water points and also have the machinery needed to irrigate their land.

In accordance with the design of the Swa Bhoomi Kendra, Sarthi appointed two rural women members from its own rural women's collective who received regular training from WGWLO to spearhead the efforts. The women PLWs, armed with knowledge about procedures pertaining to land records and being well versed with legal terminology, were confident and capable enough to challenge their male counterparts from the villages. Sarthi's campaign in five villages, its invitation to women to visit their centre, and the holding of interactions at the village level all helped women seek their rights to inherit land. Campaigns were organized on this issue as well as on partition of land, access to productive resources, and sustainable agriculture and farming.

All this has not been an easy task for Sarthi and its two forefront PLWs. They faced difficulties at every juncture:

(i) Patriarchal system: They were asked questions about their intentions, especially by local leaders. Land ownership by women is a huge bone of contention, and many male leaders asked the Sarthi PLWs politely not to meddle in such matters. This attitude was evidence that our understanding about tribal society being egalitarian is not true.

(ii) **Social issues:** Member of the extended family often brand widows as witches and thus drive them away from their homes and villages, and thereafter claim the widow's land as their own. However, it is hoped that with land now being in the name of these women, atrocities against them will decline and perhaps disappear over time. The poor economic condition of many widowed women, who had almost no means of securing a livelihood and were burdened with the responsibility of providing for large families, was also a major barrier.

(iii) Procedural difficulties: Processes were not simple, and there were barriers at many levels. The death certificate of the spouse was not available in most cases. Family members and relatives, and even village-level leaders, often refused to serve as witnesses to affidavits. Land record officials were also not supportive, since the PLWs' knowledge of the rules prevented them from charging any "extra income" as they had done earlier. It was even difficult for the women to cover the cost of filing the necessary paperwork.

(iv) Geographic barriers: PLWs had to make umpteen visits to the homes of women farmers, which were usually faraway. Reaching these households was not easy. Access was difficult because even single individual households are spread out on hillocks, as is the case with most tribal villages in Santrampur. Often the women were not at home when the PLWs made home visits, and this resulted in further delays.

Despite these difficulties, the centre has an impressive record. In just one campaign in 2015 with the government, the two PLWs of Sarthi succeeded in entering the cases of 98 widowed women with 170 married daughters and 14 unmarried daughters into the land records. In addition, the holding of camps and the presence of the Swa Bhoomi Kendra in the villages helped in recording the names of 86 families, including 155 women, as landowners. In the last year and a half, Sarthi has ensured landownership to 59 women: 23 widows, 30 daughters, and six women with their husbands in their joint names. So far, it has ensured landownership to more than 500 women.

Navjeevan Adivasi Mahila Manch Block Sagbara, District Narmada

The Navjeevan women's federation, based in Sagbara block in Narmada district in Gujarat, has always been at the forefront of efforts to empower women. It emerged from the efforts of the Aga Khan Rural Support Programme (AKRSP) to mainstream the agenda of development by and with women. Efforts to promote this federation began in 1999. Today, after 18 years, the women's federation is a force to be reckoned with. They are not only involved in the matter of land ownership as a right for women, but have also led the movement to ensure justice for women within their own cultural context.

The federation operates in 55 of the 97 villages of the block. It has been a registered organization under the Societies Registration Act, 1960 since 2004. The federation is governed by the women members themselves and has played a big role in building the savings and credit of its members, as most SHG federations do. In addition, it has planned and executed two major projects on behalf of AKRSP—biogas and orchard plantation.

These efforts were highly successful. In two years, the federation executed more than 300 biogas plants and helped 250 households to take up orchard plantation in villages. A visit by the federation members to Kutch Mahila Vikas Sangathan (KMVS) in Mandvi, Gujarat, was a turning point in its endeavour to go beyond the realm biogas plants and orchard plantation. The office-bearers realized that they had a much bigger role to play in pursuing the strategic interests of women. Their first step was to request the government to improve the road infrastructure in one of the villages where it operated. This helped gain visibility for the federation as an organization that could get things done beyond savings and credit.

Sharmilaben asserts her rights

Sharmilaben, 38 years old, hails from a small tribal village called Baktura in Narmada district in Gujarat. She is the only child of her parents. Her family has a small landholding of 2.5 acres in which it practises dryland farming. Sharmilaben helped her parents in cultivating the land since her childhood. After getting married, she moved to another village to live with her husband and in-laws. But since there was no one else to help her parents with farming, she continued to help them in cultivating the lands, even after her marriage.

Sharmilaben's father died in 2009. Her mother was now all alone and in failing health. So Sharmilaben decided to move back to her parents' village and started living with her mother. Later, her husband also moved to this village to support his wife and mother-in-law.

Sharmilaben continued cultivating the family land. But following her father's death, the situation changed. Her uncles and cousins wanted the right of ownership to the land to be transferred to them. Sharmilaben asserted that the land belonged to her family and that she had been cultivating it for all these years. This led to a dispute between Sharmilaben and her uncles. Unfortunately,

Sharmilaben did not have any legal documents to prove her ownership. In 2010, Sharmilaben submitted an application to the concerned departments to claim legal ownership of her family's land. Her uncles were required to sign certain documents. They simply refused. Time passed. Sharmilaben's uncles and cousins continued putting pressure on her to give the land to them.

In 2017, the Swa Bhoomi Kendra, supported by the Navjeevan Adivasi Mahila Manch organized a campaign in the village to raise awareness about landownership. Sharmilaben learnt about the centre and its work during this campaign. She approached the centre for help. The team of PLWs at the Swa Bhoomi Kendra advised her to submit her application again, under their guidance. They also helped her in preparing the documents that had been missing in her earlier application. Sharmilaben's uncles continued to refuse to sign the documents. The village leaders took the side of her uncles. But the PLWs facilitated a dialogue between Sharmilaben, her uncles, and the village community.

Their efforts finally paid off. Sharmilaben got the land entitlement in her name. Now that Sharmilaben has got the ownership rights, she plans to access different government schemes so she can improve her agricultural practices and increase productivity.

Another major step, achieved with the help of the District Development Officer (DDO), was the construction of the shopping place where women SHG members could gather and trade their produce and barter their skills. This property continues to be in the hands of the federation, although many efforts have been made to dispossess the women members of their rightful claim over this property.

Over the years, the federation has received substantial support from multiple sources. A grant from the Asian Development Bank sponsored the agricultural tool kit venture. The tractor that was a part of the grant was to be managed by the group, and it was its

role to ensure that BPL (below poverty line) households in the block got the services of the tractor at a rate fixed under the scheme. The tractor has been in operation for almost a decade now.

In 2014, under the Government of Gujarat's Vikashil Taluka Scheme for the development of blocks, the federation received support to operate four more tractors.

Another large grant from the National Bank for Agriculture and Rural Development (NABARD) was used to set up more savings and credit groups. All these efforts consolidated the position of the federation, not only among its members but also helped establish its reputation as an institution that was capable of carrying out work in pursuit of its mission of delivering the benefits of government schemes.

In 2013, WGWLO approached the Navjeevan Adivasi Mahila Manch to start a Swa Bhoomi Kendra at Sagbara. Two functionaries from WGWLO received training which gave them the necessary understanding of land record systems and inheritance-related laws, as well as information about the wider government structure and how to claim entitlements to increase land productivity.

The federation, in collaboration with the Swa Bhoomi Kendra, decided to support women from its villages in claiming their inheritance right to land. The efforts of the federation have yielded benefits not only for the women, but also for the men in the villages. Within five years of setting up the Swa Bhoomi Kendra at Sagbara, the federation has reached out to 357 households in the block. In 2015, in just one block, when the Government of Gujarat carried out a campaign for inheritance entries, the federation made sure that no women were left out, which was normally the case. In a span of just 15 days, they ensured as many as 217 inheritance entries of women, of the total 730 inheritance entries that took place in the block by the government. These inheritance entries of members of households have given daughters and widows a rightful claim over

land, which in a rural set-up like that of Sagbara is the most valuable asset that ensures livelihood security. In the last year and a half, as a result of its campaigns and as a consequence of working with village panchayats, the federation has ensured landownership to 140 women, including 73 widows, 47 daughters, and 20 cases of joint ownership of wife with husband.

The Swa Bhoomi Kendra of the Navjeevan federation subsequently took this campaign to all the villages where it was active. It prepared a plan and worked closely with the revenue officials at the village level. The work was done in consultation with the talati (village revenue official), the elected leaders of the village, and with the women's groups in these villages. Records of deaths in the villages were obtained and cross-verified with the revenue and land records to identify the pending cases of inheritance. Meetings were organized in these villages with the village revenue officials to inform the villagers of the procedural formalities and the required paperwork. The federation extended support to all its women members as well as men who sought support. Affidavits were prepared on non-judicial stamped papers with the support of the revenue officials at negotiated rates with the help of legal professionals. This smoothened a process that is often rendered complex by revenue officials. As a result, of the 730 Varsais done in Sagbara block, the federation's efforts helped in completing 217 Varsais (inheritance entries). In addition, another 120 cases of Varsai were taken up by the

Navjeevan federation. It is now making efforts to procure separate land survey numbers for women, since many government schemes come with the tag "only one per survey number". This is an uphill task because it requires the consent of co-owners, but the federation is confident of success. Finally, the federation has also taken care of the paperwork to link many members to government schemes like widows' pension and old age pension.

Bavla Mahila Vikas Sangathan (BMVS), Bavla, Ahmedabad

The Swa Bhoomi Kendra workers, trained by WGWLO, held a training programme on sustainable agricultural practices in Kesaradi

village in Bavla block in Ahmadabad district. The programme covered the importance of sustainable agriculture and the cycle that needs to be followed for it, as well as the method of systemic rice intensification (SRI).

The training motivated Savitaben, a sangathan leader of the Bavla Mahila Vikas Sangathan, to take up the SRI method for paddy, while also using other sustainable agricultural practices. However,

PLWs of Swa Bhoomi Kendra, Bavla Mahila Vikas Sangathan guiding a woman farmer in preparing her documents on land ownership (at the Block Revenue Complex, Bavla, District Ahmedabad)

her husband refused, saying, "You need not get into these things. We won't have good production." Savitaben, nevertheless, insisted on going ahead and succeeded in trying out the SRI method on a portion of their land. Both Savitaben and her husband then learnt the practices that needed to be followed and planted paddy using the SRI method in one bigha and got excellent results. This motivated them a great deal. The next year, both husband and wife decided to use the sustainable agricultural practices for cotton. Despite a weak monsoon, when other hybrid seeds and chemical- based farming yielded very low production, the couple got good results with their cotton crop.

More than 80 such women farmers have been motivated by the training programmes and demonstrations held by the Swa Bhoomi Kendra run by the Bavla Mahila Vikas Sangathan.

A federated body of village-level SHGs, BMVS, located at a stone's throw from Ahmedabad works with more than 1,500 women from 25 villages in Bavla taluka of Ahmedabad district. The organization came into being as part of an initiative started in 1997 when an NGO, Karma Sangh, worked with the women of these villages and provided them with legal literacy. The women who were then the first to gain legal literacy are today working for BMVS and are also the office bearers of this federated body. The agency was registered as a separate trust and society to manage the entire savings fund, which stood at Rs. 4 million in 2018. In addition to this, the agency has been working on women's issues since the beginning. The fund of Rs. 4 million is used to lend money to members for various purposes. The interest income derived from the fund is used to serve other purposes and activities of the federation (BMVS).

The federation carries out savings and credit activities. It also runs a counselling centre in Bavla where women who have been subjected to domestic violence are helped in getting their cases resolved.

BMVS has been a member of WGWLO since the inception of the latter in 2002. In 2013, when WGWLO initiated the Swa Bhoomi Kendras, the sangathan expressed its willingness to run the centres. The area, being close to Ahmedabad, has witnessed rapid industrialization since 2002 and land has become a precious resource. The land is also fertile, with rich mineral deposits. Thanks to a well- developed system of irrigation canals, and the connection of this canal system with the Fatehwari Barrage (Sabarmati Vasna Barrage), which reaches the villages, the land produces at least two crops every year, with good yields. Paddy is grown in kharif and wheat is cultivated in rabi. Thus, even one bigha of land (five bighas make a hectare) is a valuable resource because it is important for the food security of a household. Because the villages are located close to the industrial areas, the local industries offer employment

opportunities for young men. As a result, agricultural work is now increasingly the responsibility of women in most households. As such, women's association with the land is much more than that of men. For most men, land is a tradable commodity, as land prices have soared beyond their imagination.

In the last five years, BMVS has provided support to both women and men in getting their inheritance rights registered in the official land records. In most cases, this has not been easy. According to BMVS, local village-level revenue officials do not do what they are supposed to do. The records have not been updated in some cases, and in some cases they have not been updated for as long as two generations. Deaths of family members have not been registered by many households. Getting the needed paperwork done requires knowledge of legal processes, as well as running around and, in some cases, considerable expenditure. Legal sharks cheat everyone and deliberately entangle matters so much that those who seek to get the records in their name find it a waste of time and money. Many continue to till the land, without the benefit of having the records registered in their names, but instead being registered in the name of some other family members. This arrangement can be acceptable in male-headed households, as the understanding among the members of the households (extended relationship) is to recognize the continuation of the right of the family member to own the land. However, this lack of clarity about legal ownership of land often leads to the dispossession of property for women, particularly daughters and widows. Because women are less educated, lack knowledge about legal matters, and are not well versed in legal terminology, it is very difficult for them to make and prove property claims.

BMVS managed to convince the administration to allow them to occupy a space within the premises of the Block Revenue Office. The PLWs from BMVS saw this as an opportunity, as now they were visible in the community. As women members of BMVS, sitting twice a week with a table and chair in the government office, and possessing the necessary knowledge about legal procedures, they were approached by women who visited the Block Revenue Office. The PLWs provided support to every single person who approached

them, but on the condition that any land case also had to have the woman's claim as well. The PLWs came across cases of forged entries in the land records made in the past to deny women their rightful claims; cases of fraudulent land sales; and cases where land records had not been updated for generations. Setting things right required patience, tact, and a willingness and ability to work with the administration.

The administration, particularly senior officials, were supportive of the PLWs' initiatives. They sorted out matters by calling on junior officials to cooperate and finish the work without further delay. BMVS workers provided support to women without charging any fees. Local legal sharks charged very high fees for doing paperwork, amounting to hundreds and even thousands of rupees. This paperwork was now done at much cheaper rates (as the legal rates mandated). As word of the Swa Bhoomi Kendra's work spread beyond the block revenue official's premises (where it was located), lawyers and other agents transferred cases to the PLWs. Legal experts also consulted the PLWs about various processes, as these PLWs were not only trained in dealing with land matters, but were also experienced in mitigating various problems and hence were much more knowledgeable in such matters. This was a matter of pride for both the PLWs. One of them, Sumitraben, had experienced her own share of problems and had fought successfully for land that is valued in the crores today. She fights in the same way now on behalf of other women, armed with knowledge about all legal processes. She has the backing of the sangathan, whose reputation is also well established in the area.

From facilitating land ownership to enhancing land productivity for women farmers

Helping women to get land and then to have it registered in their name is one side of the livelihood challenge. The livelihood of women landowners is bolstered when other capital resources are added to their resources. The PLWs of the Swa Bhoomi Kendras,

trained by the collective network WGWLO, have done commendable work in addressing this side of the livelihood challenge as well.

Getting access to institutional facilities, that is, the agricultural schemes of the state government, requires completing various formalities. Due to poor access to information and lack of knowledge about official procedures, this becomes a difficult task. Despite these barriers, the PLWs have helped 214 women farmers who had land records in their name register themselves as farmers under the I-Khedut portal in the last five years. Registration enables farmers to gain registration numbers which then become the reference for applications for availing all government subsidy schemes.

The Swa Bhoomi Kendra, initiated by Sarthi, has also extended its linkages to women farmers so that they can access their entitlements under government agricultural schemes. Registration under the I-Khedut[5] portal has helped families like that of Manjulaben's to get access to a tadpatri, a plastic-like sheet that helps the household in multiple ways. It is not very costly but is particularly useful for women farmers because it saves them the labour of picking up grains that have fallen on the ground after threshing.

Similarly, the Swa Bhoomi Kendra has helped 124 women landowners in Santrampur. It has helped more than 120 widowed women during the last five years to get their names included in the land records and also to get access to government schemes that help women farmers bolster their resources and train them to make adequate use of the land for sustaining their livelihoods.

In addition, Sarthi has helped the daughters of another 217 families enlist their names and thereby stake their rightful claims to family property.

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[5] The I-Khedut portal is an online portal set up by the Government of Gujarat for agriculture. Registration under the portal benefits women farmers, as they save time in getting access to their documents every time they apply for a government scheme. In 2016, manual application to access agricultural schemes was also made possible. WGWLO sees registration under the portal as a way of establishing a woman's identity as a farmer.

The challenges are many, especially when the Swa Bhoomi Kendra works with women farmers: applications made under government schemes are no guarantee of access to the schemes or to their benefits or entitlements. The final list of applicants brought out by the government departments requires each applicant to submit the details of purchase of the item concerned. They have to purchase the item by paying the entire amount, after which the government reimburses the subsidy amount. A woman farmer who had applied to purchase a 3 hp (horsepower) motor could not organize the entire amount of the payment and had to forfeit the benefit. There are many cases of farmers, particularly women farmers, who could not organize the entire amount of money required and hence failed to complete the transaction before the official deadline, resulting in their being debarred from obtaining benefits.

Finally, the most important challenge is dealing with the delay in getting the amount credited to the accounts of beneficiaries. The delay means that women farmers have to pay interest on the borrowed sum to avail benefits. Given the fact that these women have very limited access to formal credit sources, this delay and its consequences only worsens their situation.

In the last four years, the Navjeevan federation, which runs the Swa Bhoomi Kendra, has supported 775 women farmers to register under the I-Khedut portal, set up by the government. Registration under the portal as a farmer is an important step in accessing the benefits of various land-based government schemes. The registration process requires extensive paperwork. Although the registration is done online, at the panchayat office, the formalities are facilitated by the Navjeevan federation. Once the farmer is registered under the I-Khedut portal as a farmer, the khedut registration patrak is generated, which is the primary step for accessing the benefits available under various government schemes. Even after the application has been submitted, there are many steps and procedures for availing schemes for which women farmers require hand-holding support. In the last five years, 1,274 women farmers have accessed these agriculture schemes. In 2013–14, the first year of the Swa Bhoomi Kendra's operations, claims made under such schemes provided

Rs. 149,000 to five women farmer members of the federation. This shows the quantum of valuation of the assets claimed by women farmers with the support of the Swa Bhoomi Kendra.

The benefits of various government schemes are also made available through the Agriculture Technology Management Agency (ATMA) project. Under the ATMA project, seed kits are obtained and provided to members of the ATMA groups. The members of the ATMA groups are also members of village-level SHGs. They have developed a system of taking these kits on rotation. The members have developed mutual respect, cohesiveness, and unity. Consequently, their social capital has been strengthened. In addition, ATMA groups participate regularly in the training programmes conducted by the Farmer Training Centre (FTC) and the Krishi Vigyan Kendra (KVK). The federation is making efforts to have all its groups covered under the ATMA project.

In the last four years, BMVS has also helped many women get access to government schemes. Six groups having a total membership of 110 women farmers are affiliated with ATMA. These women farmers had never been exposed to knowledge-sharing institutions. They have gained new knowledge and a greater understanding about how to cultivate their fields more effectively after attending training programmes organized by ATMA. Having land records registered in their names has helped a few women gain access to agricultural credit from cooperative banks.

The Swa Bhoomi Kendra has facilitated the registration of 137 women farmers in the l-Khedut portal. So far, 64 women farmer members have gained benefits such as physical resources, including oil engine water pumps, storage bins, and tadpatri. This access has greatly helped women farmers increase their livelihoods and improve their agricultural practices.

Augmenting the livelihoods of women farmers through Swa Bhoomi Kendra: The learning

The efforts of the three grass-roots women's collectives and organizations at three locations provide us with ample evidence

that the Swa Bhoomi Kendras have actually worked on many of the aspects of the livelihood framework.

According to the livelihood framework, livelihood augmentation is more effective when those whose livelihoods are being promoted have access to capital, namely natural, financial, physical, human, and institutional. The case studies described above clearly show that the strategic efforts made by the Swa Bhoomi Kendra have made this possible.

Access to physical assets

The registration of farmers, both men and women, under the l-Khedut portal set up by the Government of Gujarat makes them eligible to apply for various government schemes through the Swa Bhoomi Kendras at a no-cost basis. This has helped women farmers gain access to various kinds of physical assets, including micro-irrigation systems, electrical engines, and diesel engines. The Navjeevan Adivasi Mahila Manch also has its own set of four tractors, which are provided to women farmers on a priority basis for the preparation of land for sowing during the months of April, May, and June. The 15 Swa Bhoomi Kendras together have enabled more than 7,500 women farmers to access physical assets, which are normally only available to men farmers.

Agricultural tool banks were set up in each of the three locations with the idea of reducing the drudgery of women farmers and to provide collective access to physical assets to women farmers, something they normally lack. This has helped women farmers not only to reduce the time and energy they spend working in the fields, but also to reduce their dependency on men in gaining access to tools, particularly when their husbands are away or are otherwise not available. The federation has invested Rs. 7.8 lakh of its own funds to obtain these physical assets (tractors along with their machinery) under the government programme. The tools in the agricultural tools bank have been made available to more than 500 farmers.

Access to physical assets also encompasses access to local resources like neem leaves, cow dung, and cow urine to prepare bio-pesticides, bio-growth promoters, etc. This is another value-added service that helps women farmers reduce their dependency on money and the marketplace, as well as on men.

Access to institutions and networks

A major problem faced by farmers is the absence of appropriate institutions, and the lack of linkages between these institutions and other institutions, that can further their livelihoods. For women in general, and for women farmers in particular, this situation is far more serious. Because of their restricted mobility and tremendous workload, they are not able to connect with the external world. To a great extent, the interventions of the Swa Bhoomi Kendras and the efforts of women's collectives have helped in addressing this issue successfully.

WGWLO itself is a network, and hence all the PLWs of the Swa Bhoomi Kendras are linked with each other. They meet every quarter. The meetings are forums not just for an exchange of inputs but also for learning and sharing from one another. This has created linkages between women farmers and their leaders who were not even known earlier. Now the leaders are linked with women farmers in at least 12 districts. When they face any issues or problems, they call one another directly to seek advice and guidance. Establishing these linkages has increased the overall confidence of the members of Swa Bhoomi Kendras.

Women farmers of the block meet at least twice a year during campaigns and district conventions held by the Swa Bhoomi Kendra. This networking has helped them to connect with many good women farmers, and to learn from, and exchange knowledge with, one another.

The linkages with agricultural departments, KVKs, banks, and revenue departments at the block, district, and state levels have furthered the interests of women and members of village-level institutions.

WGWLO has also built linkages with state departments and agencies, through which PLWs of the Swa Bhoomi Kendra also get connected. This has, in turn, strengthened their institutional linkages at the block and district levels. They deal directly with the district agriculture officer, the collector, and ATMA, which is a huge achievement for simple women farmers. Indeed, at all the three locations, government agencies now invite women farmers directly to Krishi fairs, Krishi raths, etc. Swa Bhoomi Kendras have carved out this identify for women farmers amongst government institutions.

Promoting indigenous seeds and accessing seeds from areas of the state where they are available have also increased the confidence and knowledge of women farmers and of PLWs of the Swa Bhoomi Kendras, and shown them that they are all connected.

Access to financial resources

Having land in one's own name is important, and this legal entitlement to land could help in ushering larger social changes. Land ownership has paved the way for women farmers to access credit from formal financial institutions like banks and primary agricultural cooperative societies at affordable rates of interest. Since both BMVS and the Navjeevan federation are women's SHG federations, their members are guaranteed access to credit. Some women land owners have also started getting the Kisan credit card, thereby enhancing their credit reach.

Access to human resources

This refers to knowledge of legal procedures related to land and agriculture, sustainable agricultural practices, as well as government structure, procedures, and schemes for enhancing the land productivity of women farmers on the part of the PLWs who run the Swa Bhoomi Kendras.

Thanks to the centralized training inputs from WGWLO, possession of legal information about land and revenue matters, and a good understanding of the procedural formalities needed to claim inheritance, etc., have given the PLWs of the Swa Bhoomi Kendra a considerable advantage and strengthened their position. Women from the groups associated with the sangathans and with the Swa Bhoomi Kendra also provide guidance to all women farmers in getting themselves registered under the I-Khedut portal and also help them gather the documents for claiming their rightful entitlements.

The membership of women farmers in ATMA's farmers interest groups and the selection of women as farmers friends have increased the access of women farmers to scientific knowledge on agriculture. Women farmers from many villages have been attending training programmes and also have been given support by way of improved seed kits under the ATMA project. Navjeevan federation distributes the kits received through ATMA among its members on a rotational

basis, so that every person in the group benefits from one or another programme. The additional inputs given to women farmer friends have helped even men farmers gain access to knowledge. The federation's agro centre is an outcome of the knowledge possessed by women. Several programmes run by KVK with and for women farmers have enhanced the human capital of women famers; this human capital was never accessible earlier.

The same has been the case for BMVS and Sarthi, where linkages with ATMA and KVK have not only enhanced the human capital of women farmers, but also have established their identity as "farmers", which in itself has boosted their confidence a great deal.

The entire intervention on sustainable agricultural practices is built on the traditional knowledge of women farmers. Preparing bio-seed treatment, bio-growth promoter, and bio-pesticides with local resources has been a new area of learning for all women farmers. All the three Swa Bhoomi Kendras, whose members are centrally trained by the network WGWLO, have made their own mark in this area. They provide specific varieties of seeds to farmers and these seeds have helped increase agricultural yield and thereby improved the livelihoods of farmers.

Conclusion

While this case study has focused on three locations as examples, WGWLO has been working intensively in 12 districts and has supported the establishment of 15 Swa Bhoomi Kendras. The kendras have been run by the member NGOs and women's sangathans of WGWLO for more than five years now. The kendras collectively have facilitated more than 7,000 women to obtain ownership of land; supported more than 13,000 women farmers to register themselves under the l-Khedut portal; and enabled more than 7,500 women farmers to gain access to productive resources in the last five years.

The case successfully demonstrates the impact of an exclusive institutional mechanism like that of Swa Bhoomi Kendra to ensure women's ownership of land and access to productive resources, which are critical for the livelihood of an agrarian household as well as for the Indian economy, which is still a predominantly agrarian economy. The case also shows that an agency needs to work on multiple fronts to augment the livelihood of vulnerable groups. This multidimensional approach has led to the success of Swa Bhoomi Kendras. In the context of the feminization of agriculture and the increasing number of women farmers, such mechanisms are truly the need of the hour; they augment the livelihoods of agriculture-based households. With the country facing an on-going agrarian crisis, the scope of centres like Swa Bhoomi Kendras could also expand to reach out to farmers, especially in suicide-prone areas, where women farmers are the worst hit.

The amount of capital generated is vast because the Swa Bhoomi Kendras are interconnected through a network, WGWLO. Similar centres and networks should be established to provide regular inputs and to facilitate sharing and learning among the members. This would ensure women the right to claim inheritance over land, a right that has been denied to them. The Swa Bhoomi Kendras also facilitate women farmers in claiming other productive resources. Both these processes require long- term financial and human investment. Government departments and development agencies need to make investments and far-reaching efforts to enhance livelihood security for women farmers for the long term.

This case study establishes that mechanisms like Swa Bhoomi Kendras are essential for enhancing the livelihood of millions of women farmers like Manjulaben, Sharmilaben, and Savitaben now and in the future.

Working Group for Women and Land Ownership (WGWLO), Gujarat

The Working Group for Women and Land Ownership (WGWLO), initiated in 2002 is a network of organisations committed to sustained grassroot action and policy advocacy around the issue of women's land rights, to enable women's access and ownership of land and other productive resources. WGWLO is based in Gujarat State and has a diverse membership of more than 40 NGOs and CBO (community-based organization) and individuals with varied expertise, across 17 out of total 33 districts of Gujarat.

WGWLO has successfully been able to address the issue of women's land ownership from the perspectives of women's rights and empowerment as well as livelihood enhancement. Since 2009 onward, expansion of land rights agenda has come into practice – from women's ownership of private land, the network has expanded land rights of women to public land including forest land, common land and government land from a gender perspective. The agenda of land rights and right to productive resource was gradually elaborated and consolidated by working with women farmers for sustainable agriculture. The Network uses its collective strength to lobby for change at various levels through forging strategic alliances with existing other Networks, influencing Government and non-Government agencies, and mass media

Setting the context

4. Case Studies on Education interventions

In India, the school education system has seen significant political, economic, social changes, along with transitions in educational discourse, ever since the establishment of a more institutionalised form of this system in the colonial period. Even after Independence, many of the features of the colonial system—multiple systems of schooling, centralised bureaucratic administration, a marginal role of the teacher in the larger system, a dual-language policy, and poorly developed teaching-learning processes—persisted, and continue to pose challenges to educational reforms.

Post-Independence the school education system witnessed a more central role of the State, a stronger focus on addressing historical social inequalities, and a gradual move towards universalisation. This was an uneasy progress, from a scenario of an existing education system oriented strongly towards higher education instead of school education, and still characterised by strong exclusionary features instead of equity, or even equality. In a sense, therefore, the school education system, till the 1990s, continued to consolidate positional benefits for the relatively more privileged social groups instead of squarely addressing the existing inequalities of a highly stratified society.

The 1990s saw changes at multiple levels. On the economic front, liberalisation of the economy was accompanied with the emergence of the new middle class and rising aspirations for private 'English-medium' education. The involvement of the private sector

in education increased during this period to further stratify the school system into multiple providers based on fees-charged and a range of other characteristics that now cater to different ability to pay among social classes. At the same time, the international discourse around universalisation of elementary education gained greater currency in the national policyscape. A succession of large-scale centrally-sponsored education schemes were launched to align educational reforms to international goals on universalisation.

These schemes, with their focus on educational inputs, greatly expanded the provision and access of school education, especially among hitherto neglected social groups. Thus, what occurred over this period was an expanded presence of marginalised groups in the government schools primarily offering vernacular education, along with the gradual exit of the middle classes from these schools to a large spectrum of emerging private schools purportedly offering 'English-medium' education. The expansion of the school system was not accompanied by other systemic changes that could simultaneously support this increase of mainly first-generation school-going children from disadvantaged backgrounds. As a result, quality of education has become one of the main challenges that the current school education system is facing.

It is not as if there have been no significant reforms in the educational discourse in recent decades. Two of the most significant of these include the endorsement of a more child-centred curriculum through the National Curriculum Frameworks in 2000 and 2005, and the enactment of a rights-based approach to educational entitlements through the Right of Children to Free and Compulsory Education Act, 2009. However, multiple systemic factors and contradictory pulls and pressures continue to persist, and demand urgent attention. At the systemic level, teacher education and the role of teachers as professionals have both been gradually devalued, the former without the development of robust institutional arrangements for teacher preparation and teacher professional development, and the latter through the endorsement of a system of para-teachers and managerial and control-based solutions to address challenges around the work of teachers in the school system.

Therefore, the progressive curricular reforms of recent decades have neither been translated into practice or absorbed in the existing system to the extent to which they should have been. Similarly, the financial commitments for an equitable system of quality school education for a vast, diverse and stratified country has not been commensurate. Consequently, school education is still fraught with the tensions inherent in a system where a rights-based mandate of the State and its broader emphasis on the public good features of education continue to co-exist with the presence of market forces and the often-narrower aims of education endorsed and served by these forces.

The two case studies in this section resonate strongly with the above transition and challenges within the school education system. The Kadam Step-Up Programme of Humana People to People India provides insights into why, despite large-scale programmes for universalisation and the Right to Education Act, large numbers of children are out-of-school, and what, therefore, can complement the efforts of the State in such a context. The need of context-specific, pedagogically strong initiatives to mainstream out-of-school children is evident in these efforts. A similar need for contextually integrated interventions that can address diverse challenges—ecological, livelihoods, and educational—specific to marginalised groups, is evident in the other case study on the Kaigal Education and Environment Program. This program illustrates how bottom-up, multi-pronged, but at the same time holistic efforts, can address challenges around both education and the lifeworlds of disadvantaged groups in a more sustainable manner. Both the case studies raise questions for those working in school education in specific, and development in general, about the nature of education that would be empowering and sustainable in specific contexts of disadvantages and the roles non-State actors can play in such contexts.
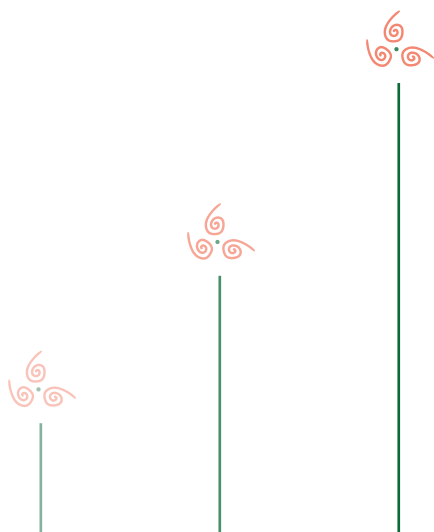
4.1 Case Study of an Integrated Approach to Education, Conservation and Livelihood

Kaigal Education and Environment Programme, Andhra Pradesh[6]

Abstract

The Kaigal Education and Environment Programme (KEEP) was conceptualized in 2008 as an integrated approach combining education, conservation, and sustainable livelihood, all rooted in social ecological principles. The programme is implemented in Chittoor district, in Andhra Pradesh, along the fringes of the Kaundinya Wildlife Sanctuary. The communities here are marginalized mixed communities, many being Scheduled Castes and Scheduled Tribes. The Yanadi tribal community is the predominant tribal group in this area. The underlying theory of change is that human communities are an integral part of the local ecology and hence sustainable interventions must evolve in response to the needs of local communities and must also necessarily include these communities whose right and responsibility it is to protect and conserve the ecology of which they are a part.

[6] Contributed by Sriranjani Ranganathan and Sudha Premnath.

The case study describes the three distinct axes of intervention—conservation, education, and livelihood. However, it must be remembered that these interventions are not independent. Cultural stability, economic independence, and societal acceptance of the tribal communities are dependent on all these three interventions working together.

Over the period of the intervention, the programme has improved the conservation status of different ecosystems covering more than 14,000 hectares, touching over 26,000 people across 60 villages. Over 300 tribal households have been directly affected through the intervention; the community enterprise set up as part of this programme is supporting rural and forest-based livelihoods. The most important outcome, however, is that changing the relationship of human beings to their environment is now recognized as the cornerstone of sustainable development.

Case Study of an Integrated Approach to Education, Conservation, and Livelihood - A tale of two snakes

It was August 2008. There was a visitor to the Kaigal Conservation Centre (henceforth Centre or Kaigal Centre), a man passionate about snakes. The field coordinator at Kaigal, an amateur herpetologist himself, noticed a snake hanging from the tiled roof of the office building and pointed it out to the visitor. The species seemed unfamiliar and they suspected it might be a new species.

They finally caught the snake after two months. It was an exciting day at the Centre when it was confirmed that the snake was a new species.[i] Thus began a programme on studying the diversity of snakes. The members of the Kaigal Centre, the teachers at the learning centres for tribal children, and the students participated in the programme.

Fast-forward a few years to January 2012. Students from the Rishi Valley School were at the Kaigal Conservation Centre to attend an environment education programme. Jayapal, the teacher-turned-conservation biologist, and another field coordinator arrived at the Centre with two large bags. As the students looked on wide-eyed with wonder and perhaps some fear, the two men opened the bag and carefully took out a python that they had rescued from the local village. Jayapal caressed the python as one would a baby while he described how he had to persuade the villagers to release the python back into the forest and not hurt it. The python was held safely at the Centre as they waited for officials from the Forest Department to come and collect it.

What ties together these two seemingly different incidents is an approach to conservation, education, and community. Education, livelihood, and conservation are integrated seamlessly into a holistic approach to the natural environment, providing a model for a bottom-up, community-led educational programme for sustainable development.

And this is the story of the Kaigal Education and Environment Programme (KEEP).

The beginnings

The founding of the programme was inspired by the simple, yet powerful words, of two knowledge holders of the Yanadi tribe, a Scheduled Tribe found in large pockets in Andhra Pradesh.

"You are talking to us about seeds and forests. Can you do something for our children?," Subbarayappa had asked in 2005 when the team that went to Mugilupodalarevu village for tree planting took shelter outside his home during a sudden downpour. Mugilupodalarevu is a tribal village near the Kaundinya Wildlife Sanctuary, in Chittoor district, about 7 km from Byreddipalle, the nearest mandal headquarters and home to the Yanadi community.

"Teach our children well. Teach them about the forests," exhorted Duggeppa to the same tree-planting team as he cleared his goat shed to create a learning corner for children in Kalligutta village, 17 km from Mugilipodalarevu village. Kalligutta is a remote tribal village about 15 km from Byreddipalle and is also home to the Yanadi people.

The journey of the Kaigal Education and Environment Programme (KEEP) began with these two suggestions and proposals.

Sudha, an ecologist who taught biology and environmental sciences at The Valley School, was asked to establish the Kaigal Conservation Centre at a site near the Kaundinya Wildlife Sanctuary. This was in the early years of the 2000s when it was no longer possible to ignore the harmful effects of large-scale destruction of habitats. When the first batch of students arrived in Kaigal to document the region's biodiversity, to map the land, and document land use patterns, what they saw were vast swathes of degraded land, in an area loosely and almost carelessly termed scrub jungle or wasteland. With the support of Krishnamurti Foundation India (KFI) and a

grant from the United Nations Development Programme (UNDP), Sudha, her colleague Premnath and experts from the Wildlife Institute of India, along with the local communities, documented the biodiversity of the region, built a germ plasma bank, and initiated a participatory conservation programme. The goal was to relate to and fulfil the needs of the local communities living in and around the degraded land and to work with them jointly to protect and regenerate 200 acres of degraded land. The project set up a seed bank, a forest nursery, and a training centre to help build awareness about conservation and local biodiversity. It was an exemplar for a participatory approach to biodiversity conservation that drew upon and documented local knowledge. Upon the successful completion of the project, the KFI decided to appoint a caretaker for the land and also made budgetary provision for conservation. And this is where this programme would have ended.

But the words of the two tribal elders changed the scope and nature of the programme.
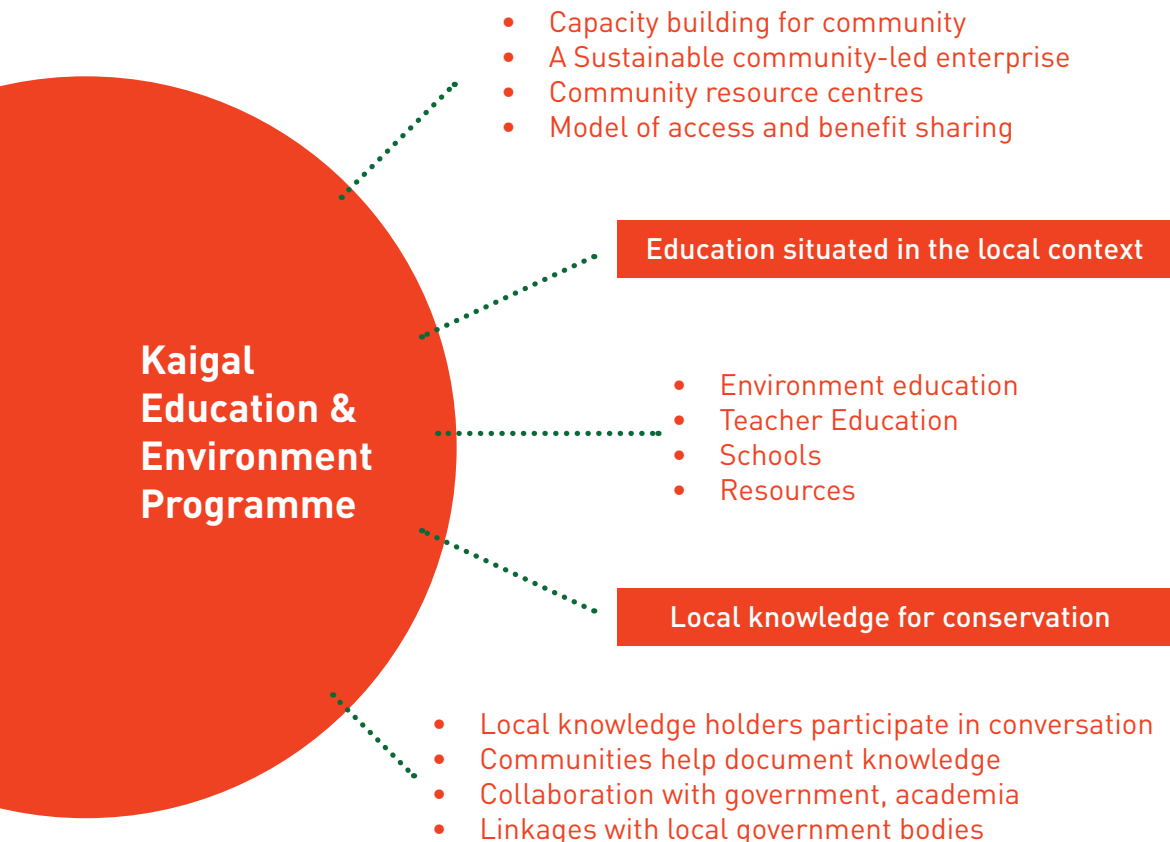
For the team at the Kaigal Centre, though, these words merely affirmed and reinforced what had already been on their mind. This was the conviction that there is a need for a deeper engagement with the community, for building mutually sustaining relationships between forests and humans, for developing and adopting ecologically restorative and sustainable development paradigms and practices. The intervention at Kaigal was thus conceptualized in 2008 on the basis of three beliefs-education that affirms the importance of the community, conservation that is anchored by the community, and livelihoods that can support, protect, and nourish the local environment and ecology.

An overview of the programme

Environmental degradation and its effect on all life on the planet is one of the greatest challenges facing humans today. Forests and wilderness areas the world over are under great stress, and saving and increasing biodiversity is an urgent concern. Responding to this

challenge means educating people about the critical importance of sustainable development and also involves addressing several interrelated dimensions—skills, livelihoods, ecology, communities, equity, and justice. In a large, heterogeneous, and diverse country like India, hierarchies of caste, economic conditions, and gender inequalities pose additional constraints.

The KEEP, working in the tribal and rural communities adjoining the Kaundinya Wildlife Sanctuary in Chittoor district of Andhra Pradesh, is one such intervention. It is aimed at educating people to undertake biodiversity conservation and sustainable development. The programme has worked in and around the Kaigal Valley, near the town of Palamaner where the KFI has established the Kaigal Conservation Centre. This area is surrounded by the forests of the Kaundinya Wildlife Sanctuary (an elephant reserve)

- Capacity building for community
- A Sustainable community-led enterprise
- Community resource centres
- Model of access and benefit sharing

Education situated in the local context

- Environment education
- Teacher Education
- Schools
- Resources

Kaigal Education & Environment Programme

Local knowledge for conservation

- Local knowledge holders participate in conversation
- Communities help document knowledge
- Collaboration with government, academia
- Linkages with local government bodies

on three sides and is bound by the state highway linking Palamaner and Kuppam in Andhra Pradesh on the fourth side. The programme started as an outreach programme for the Environmental Science students at The Valley School. It was reconceptualized in 2008 as an integrated approach to conservation, rooted in social ecological principles. The core belief of the programme is working to create stable communities by bringing together communities and ideas.

The programme has worked with state- and national-level institutions in bringing together local communities and contributing to collective knowledge building. This has resulted in increased awareness and involvement of people in habitat restoration, capacity building and skill building of local communities, and in anchoring biodiversity conservation efforts within the ambit of local panchayats. The community-run local enterprise has demonstrated the effectiveness of a model for sustainable forest management and for the sharing of bio-resources. The schools for tribal children have ensured that all the children in the tribal villages receive formal schooling.

The location and the context

Kaigal village is a three-hour, 140-km journey from Bengaluru, yet it is a world apart. You turn near Mulbagal from the Bangalore–Chennai highway and follow the winding road as it takes you into Andhra Pradesh. Fields line either side of the single-lane road, which is at present under repair for the laying of a water canal that will bring water from the Krishna river. This road meets the Palamaner–Kuppam state highway; Kaigal village is situated off this highway.

The Kaigal Valley, the intervention area of the KEEP, extends between Palamaner in the east and Kuppam in the west in Chittoor district of Andhra Pradesh. Almost all the villages covered under the intervention lie along the boundary of the Kaundinya Wildlife Sanctuary, highlighted in green on the map.

Local biodiversity

The Kaigal Centre is located in a valley through which runs a small rivulet that eventually joins the Palar river. The rivulet forms a waterfall called the Kaigal Falls, which is considered sacred by local communities and whose waters are regarded as having medicinal properties.

Forest and Wildlife: The region is characterized by wet and dry deciduous and scrub vegetation, fed by seasonal water sources like small streams and tributaries of rivers, lakes, and ponds. The natural vegetation found most commonly consists of Albizia amara (chigere in Telugu), Wrightia tinctoria (veppelli in Telugu), Pongamia pinnata (kanaga in Telugu), Sapindus emarginatus (koogattikkai in Telugu), Tamarindus indica (chintakai in Telugu), and Holoptelea integrifolia (tabassi in Telugu). The common shrubs are Randia dumatorum (manga chettu in Telugu), Toddalia asiatica (mirappakanda in Telugu), Dodonaea viscosa (banderi chettu in Telugu), Dichrostachys cinerea (nella jammi in Telugu), Gmelina asiatica (adavi gummadi in Telugu), Canthium parviflorum (sinna balusu in Telugu), Calotropis

gigantea (jilledu in Telugu), and Lantana camera (common lantana). Syzygium cumini (neredi in Telugu) and Terminalia arjuna (thella maddi in Telugu) are commonly found near water bodies.

The forests have a great diversity of flora and fauna. Some of the endangered and threatened flora of this region are Decalepis hamiltonii (maradi gadda in Telugu), Gardenia gummifera (chinna bikki in Telugu), Gardenia latifolia (pedda bikki in Telugu), Madhuca indica (vipa in Telugu), Shorea tumbuggaia (jalari in Telugu), Shorea tellura (jalari in Telugu), Gloriosa superba (gouramma gadda in Telugu), Terminalia chebula (karrakkai in Telugu), and Chloroxylon swietenia (billi manu in Telugu).

The region is also home to many threatened species of fauna like the Asian elephant, slender loris, wild dog, sloth bear, star tortoise, rock python, Indian armadillo, a new species of flying snake (Chrysopelea taprobanica), and the golden gecko.

Communities

The communities here are a mix of marginalized communities and many are Scheduled Castes and Scheduled Tribes. The Yanadi tribal community is the dominant tribal group. Most Yanadis are collectors of forest produce and have a deep knowledge of local biodiversity and traditional medicinal practices. Their main occupation is the collection of various kinds of non-timber forest produce (NTFP) such as fruits, leaves, bark, tubers, honey, and resin from the reserve forests. They supply this forest produce to the Girijan Cooperative Corporation, Tribal Welfare Department, Government of Andhra Pradesh, or sell it in local markets. Their knowledge of the forest-its ecology and biodiversity-is immense and invaluable. They are well known for their knowledge and use of traditional medicinal plants. Since the Yanadi community are traditional collectors of forest produce and healers, working with this community has a tremendous impact on the well-being of the forest.

The Yanadis also have wide knowledge of hunting and fishing practices, living close to forest areas and water bodies. Bio-resources form a large part of their life, and they know[ii] how to identify, locate, and sustainably harvest these resources. They also use these in food and therapeutic preparations. Usually, the collection of resources is a collective activity, which is crucial in transferring traditional knowledge to the younger generation.[iii] Over time, this traditional knowledge has been disappearing[iv] in the face of various developmental imperatives.

How is the programme managed

The KEEP has been implemented by a core team of six members that includes both teachers from The Valley School and members of the local community.

A core team, comprising members from the local villages, joined the programme and has remained with it and has provided leadership in different areas. They were young men and women who were literate, had completed high school, and were looking for meaningful work to do. Jayapal, Krishnamurti, Pushpa, and Sumithra were the core group at Kaigal who were involved in the day-to-day operations as well as community-centred activities. This team also created a network of people from different communities to participate in the various activities of the programme. Educationists from The Valley School—Sudha, Premnath, Sriranjani, and Krishnan—and a group of scientists and educators from Bengaluru comprised the advisory group that worked with this core group as well as the extended community. Participatory processes were embedded into the programme right from the beginning, through collaborative knowledge building and peer learning and sharing. Tribal households and rural communities were brought together, to share knowledge and to work collaboratively; no easy task in our highly stratified society.

The collaborative process of knowledge creation included the local communities, primarily elders from the Yanadi tribal communities. These elders interacted with external researchers who
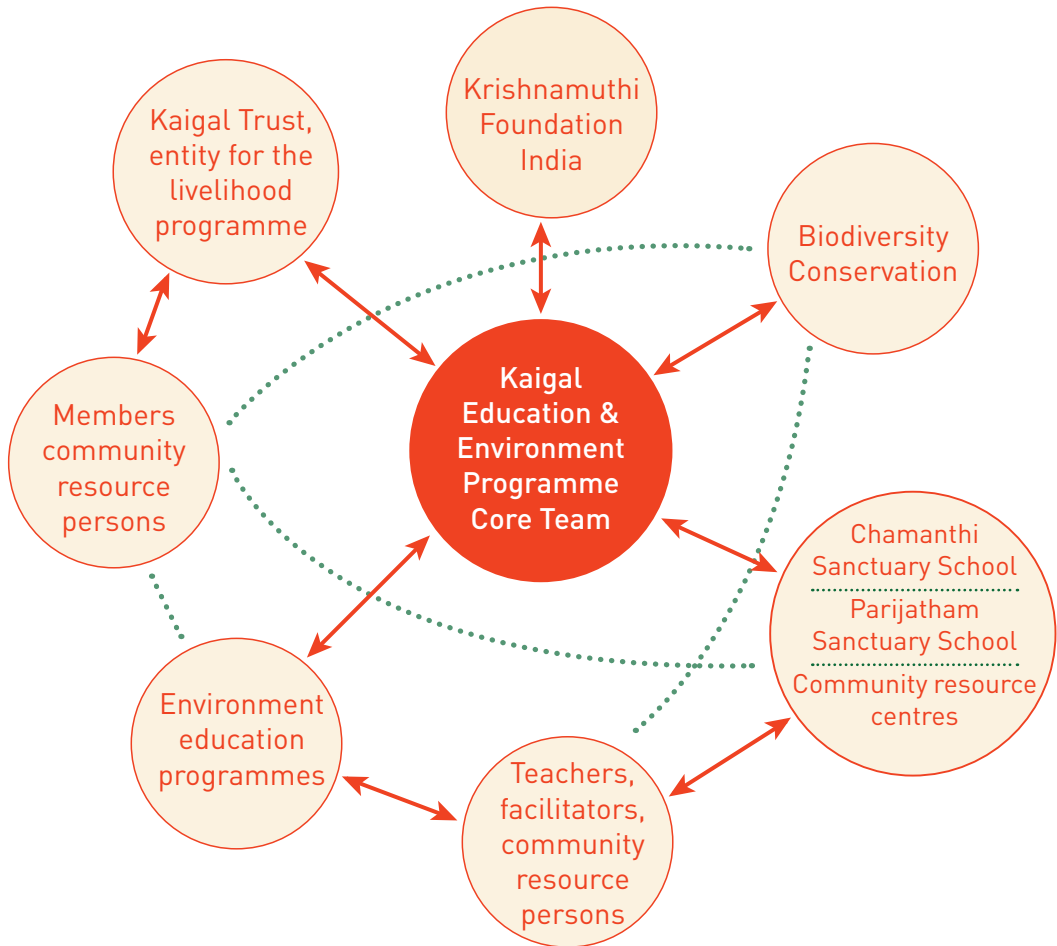
helped document the forest-related data. Local non-tribals were also participants in this process, as some of the communities with which the programme worked were mixed communities comprising tribals and caste people. The programme also worked with academic institutions, research institutions focused on ecology, forestry, agriculture, and indigenous knowledge systems, international development organizations, the Forest Department, and the National Biodiversity Authority at the state and national levels. The livelihood programme also built linkages with different institutions and similar organizations. The schools were established after consultation with

distinguished educationists and in close collaboration with The Valley School and Rishi Valley School. Curriculum development, teacher training, and the daily operations and activities of the school were modelled on the processes in KFI schools and emphasized learning in an atmosphere of freedom and mutual respect.

Theory of Change

The underlying theory of change is that human communities are an integral part of the local ecology and hence sustainable interventions must evolve in response to the needs and demands of the communities and that the interventions must necessarily include these communities whose right and responsibility it is to protect and conserve the ecology of which they are a part.

"Yaanai saami vandhuduchu. Naanga atha kumbuttu maraththu mela eeri ukkandukuttom. Rathiri poora ange irundhom. Kalaila anda saami kilambi poyiducchu." ("The elephant god came. We saluted it, prayed to it, and climbed onto a tree. The whole night we were on the tree. The next morning, the elephant left.") This is how Nagamma describes her encounter with an elephant when she went into the forest to gather medicinal plants. When tribal people go into the forest, they often do so for an extended period lasting a few days.

Her husband, Chinnanna, says, "The forest had everything. There was so much honey, so many things we could collect. It did not occur to us that we needed anything else. We never looked for anything else and we would come away from the forests."

The words of this healer couple exemplify their reverence and compassion for all forms for life, as well as their relationship with the natural world. And it is this relationship that the programme sought to influence, strengthen, and support.

Participatory development approaches emphasize the role of communities and local stakeholders in the design and implementation of projects aimed at their empowerment.[v] Building sustainable and self-reliant communities requires balancing the community's needs with the demands of conservation approaches for the restoration of ecosystems. Traditional knowledge[vi] is also recognized as being critical in the sustainable management of forests across cultures and geographies.

The programme thus began working with communities to deepen their understanding of the forest, and to harness their knowledge to support conservation activities. Schools were set up for children from the tribal village to provide them a formal education and to impart new skills. A community- based enterprise was established to train local communities in different skills and also to procure forest produce in a sustainable manner, to add value through simple processes, and to sell the same to generate income for the local communities. Forest conservation makes sustainable use of natural resources and economic independence possible. Diversifying livelihood opportunities ensures that the environment is not degraded and allows stable communities to exist. Education opens up wider possibilities for the community and allows local people to use the forest with care. Thus emerged a model for sustainable development.

Conservation for and with the community

Forests and wilderness areas the world over are under great stress, and saving and increasing biodiversity and forest cover is a critically important goal. In addition, we recognized that conserving the forest ecosystem and biodiversity is necessary for improving the living conditions of those who are economically dependent on forests. The programme also recognized that it is possible to bring about conservation and regeneration of forest diversity only by the conscious and deliberate sewing together of the

community's collective memory and its knowledge of ecology and forest management practices. The conservation programme was therefore focused on building alliances right from the beginning—with communities, institutions, statutory bodies, and the Forest Department.

A nursery unlike any other

Sudha was at the Kaigal Centre, planning the work with Krishnamurti, the earliest field coordinator, one quiet evening when Subbarayappa and Subbanna came from Mugilupodalarevu village to meet them.

Subbarayappa said, "See, I will tell you about some important trees you must grow. I will bring saplings from the forest. Jalari manu, this has fragrant flowers and is good to grow. Bajji manga is good for lactating mothers and cattle. Karakkai and thandra are both medicinal. Dhupam, errapolichi . . ." He went on naming various trees, plants, and shrubs.

Krishnamurti jumped at the idea and went with Subbarayappa and Subbanna into the forests over many nights and gathered saplings. And so we added more plants to our forest nursery.

The story of Jalari manu reminds us of the immensity of the forests and fills us with humility. Krishnamurti went with the tribal elders to a hill which was the only place where the Jalari manu grew and collected a root sucker, and we planted it behind the centre. Year after year, we watched it grow with great anticipation. When buds appeared, it was a cause for much celebration.

However, the buds did not flower. Disappointed but determined, we grew it again in the nursery and carefully planted the sapling in the forest. The sapling died.

We are still trying to grow Jalari manu, our reverence for the forest and its diversity having increased manifold.

The programme worked on biodiversity conservation through three main approaches-ex-situ conservation, documentation of forest biodiversity, collaborative knowledge building around local biodiversity, environment education. To preserve and protect the forests, the programme worked with the tribal communities to make trenches, to plant trees, and to disperse seed. Many of these activities were conducted by the teachers from the schools or learning centres.

Ex-situ conservation

Very early in the programme, a database on the biodiversity of the region had been built in close cooperation with the tribal elders. The database was used to identify threatened and endangered species. The programme then created a germ plasm bank, set up a nursery, and also took up afforestation activities.

Seed bank

The Kaigal Centre houses a collection of germ plasm (seeds) of over 250 species of native flora in the form of seeds, tubers, suckers, etc. A concerted effort has been made to regenerate medicinally important native species.

These have been raised in the nursery and many have been replanted in the afforestation sites within the grounds of the Centre where they have now become well established. Many of the established trees and shrubs in the reforested sites are now yielding fruits and seeds—the first step of a sustainable germ-plasm conservation effort.

Forest nursery

The forest nursery focuses on research on regeneration techniques for a variety of native plants, and on raising healthy saplings for transplantation in their natural habitat. The nursery is about 6,000 sq. ft. in area. It has a 50 per cent shade cover as well as tree cover for young seedlings and new seed beds. Nursery techniques have been established for approximately a 100 species of

plants. At least 200 species of plants have been raised at the nursery and used for afforestation efforts in the common land and in tribal villages. Regeneration techniques and successful transplantation methods have been established for all the herbal plants and tree species that have been raised in the nursery. Many local people and students have been trained in the preservation of seeds and in the raising and maintaining of nurseries. Saplings are distributed to interested individuals and institutions. They have been widely used for land restoration, water conservation, and afforestation work.

Herb garden of medicinal plants

A herb garden was set up based on local traditional knowledge about plants as well as information obtained from institutions specializing in traditional medicine. The design of the herb garden has been replicated in many places by students of the Sanctuary Schools and by women and youth from tribal communities. They have established herb gardens in their schools and homes, on private land and in tribal villages.

Documentation of traditional knowledge
Forest biodiversity

Phenology is the study of cyclic and seasonal natural phenomena, especially in relation to climate and plant and animal life, including the effects of seasonal changes on fruiting and flowering in plants. This information is important as the community needs to know the fruiting season of plants and it is also necessary for seed collection. This information has been collected systematically for 17 important tree species by periodically recording the changes in 170 individually marked plants since 2010 by local people under professional guidance. The conservation efforts have been actively supported by tribal elders who have shared their traditional knowledge of forests and plants. This knowledge has been documented and many indigenous medicinal plants have been raised and multiplied based on this information.

Documentation of sustainable harvesting practices

Field studies were conducted in 32 tribal villages to understand the sustainable harvesting practices followed by the people. The programme recognized that protecting forests meant being sensitive to the livelihoods of the people dependent on the forests. This included addressing concerns of forest sustainability as well as providing fair compensation for the forest produce that reflected the true cost of the bio-resource, in both environmental and economic terms.

Traditional forest collectors often harvested forest produce and bio-resources in ways that ensured the sustainability of forest populations of the concerned species. However, with increasing pressure on forests resulting from commercial exploitation, bio-resources are now being harvested in ways that threaten the sustainability of forests and destroy tribal livelihoods. The livelihood programme, described below, is very closely linked to these urgent conservation and environmental concerns. The objective of this documentation project of sustainable practices was to compile knowledge of how bio-resources were traditionally harvested and the kinds of bio-resources that were and are still harvested. Such a community-based data-collection exercise also had a salutary effect on the communities' sense of self-affirmation about their ways of living and their traditional knowledge. The primary knowledge so gathered can be used to develop sustainable forest management practices and perhaps also to create interested communities who will take up forest-based livelihoods in a sustainable manner.

Institutionalizing conservation within local governance institutions

Promoting sustainable forest management practices along with equitable practices for sharing bio- resources with local communities is now being recognized as an important national priority, and has been articulated in the Biological Diversity Act, 2002.

The Biodiversity Boards have been establishing Biodiversity Management Committees (BMCs) all over the country to ensure the management of bio-resources at the panchayat level. When the BMCs understand their roles and functions properly, they will have the capacity to regulate access to the different bio-resources within their zones and also fix fair prices for these resources which will be collected by the BMC at the local level. The BMCs thus will work at the grassroots to effectively fulfil and implement the Biological Diversity Act, 2002. The Kaigal programme has been a Technical Resource Group for the Andhra Pradesh State Biodiversity Board (APSBB) and has supported this key initiative of the National Biodiversity Authority by setting up BMCs and also creating awareness among communities of the Biological Diversity Act, 2002.

Building community knowledge-based databases

In collaboration with the National Biodiversity Authority and the APSBB, the programme helped build a Peoples' Biodiversity Register (PBR)[vii] at the panchayat level and a Tradeable Resources Register at the district level. These primary databases have been developed all across the country and are aimed at protecting local bio-resources as well as the communities that depend on them. They

Collaborative knowledge building

- *Identification of medicinal plants and commercially important plants*

- *Creation of a network of knowledge holders*

- *Connections with community-based organizations*

- *Validation of community knowledge of local biodiversity*

contain detailed information on natural resources, populations, existing traditional knowledge systems, knowledge holders, farmers, and healers and their practices.

These databases include updated maps of local land use as well as biodiversity data and were developed through extensive ground-truthing. This exercise brought together different stakeholders—the local community, the Forest Department, local educational institutions, local government bodies, statutory bodies established under the Biological Diversity Act, 2002, and experts from the programme research team. This process of knowledge creation also helped maintain the indigenous knowledge system of the local communities, in addition to training youth and teachers in these communities in scientific methods of data collection and research. Field studies conducted for developing the People's Biodiversity Register for the M. Kothur, Vengamvaripalli, and Kangundi BMCs, and for collecting information on tradable resources for Chittoor and Ananthapuram districts, gave us the necessary opportunities for identifying new bio-resources (for value addition). The fieldwork provided immense opportunities, resulted in the creation of linkages to very knowledgeable people, and yielded important information.

Education for building bridges with communities

Contextually relevant education for tribal communities

To be sustainable, the community needed to 'own' the programme and to support the related operations and activities.

The tribal communities are holders and repositories of tremendous amounts of very valuable indigenous knowledge about the natural world and local forests, and intuitively understand the connection between the local ecology and their way of life. However, with the mainstreaming of tribal communities—through schools, development programmes, and, more recently, the media— there is a perceived need for them to learn to read and write and get a more formal education.

The schools faced three important challenges:

- Developing a responsive, relevant, and engaging curriculum that valued the knowledge, lived experiences, and traditional skills of the students and of the communities to which they belonged;
- Working with the community to help them understand the processes and demands of formal schooling;

- Designing processes of teacher development to help them in their role as facilitators of learning where each member of the school can grow, learn and recognizing that the development of the teachers is in itself an objective of the schools.

Two primary schools were set up and registered under the Right to Education (RTE) Act, 2009, in Mugilupodalarevu and Kalligutta villages. These were established with the support of the community, which was keen that their children be educated. The land for the school was made available by the community and the school infrastructure was developed with donations from different donors.

The vision of the Sanctuary Schools

1. Local knowledge should be integrated into the school curriculum. The curriculum should allow the school to influence the community discourse on education. One of the core activities of the school is Forest Study where village elders interact with students and teachers and take them into the forests to share their knowledge.

2. Teachers should be empathetic adults who accept children from tribal communities without any prejudice and treat them with respect and kindness. Having teachers from local non-tribal communities helps bring different communities together.

3. Tribal communities are multilingual, and the medium of instruction must be in the child's first language. English may be introduced as a second language for older students. Spaces for play, community-based work, creative pursuits, and for silence, reflection, and introspection must be available for both students and teachers.

4. Introduction to skill-based work-like sewing and macramé-that connects the school with a local women's enterprise, must be a part of the curriculum, thereby enabling students and teachers to see the value of meaningful work.

The schools have introduced students to a wide variety of activities, from sports to creative pursuits like painting, pottery, music, and hands-on crafts, in addition to age-appropriate reading and writing skills. Students are encouraged to interact with the world outside their village by participating in structured events and by engaging in academics, art, and sports.

Integrating nature conservation into the school curriculum

The schools also engaged with the community to raise and address issues of environment conservation, as well as water, fuel, and waste management. The schools were enrolled in the Eco-schools programme, which is an international award programme of the Foundation for Environment Education (FEE), headquartered in Copenhagen, Denmark. It guides schools in addressing a variety of environmental themes and provides a simple framework to make sustainability an integral part of school life. The environmental themes taken up by the schools were Biodiversity, Energy, Waste Management, Water, and Healthy Living.

The impact of the Eco-schools programme extended far beyond the project period-in terms of the curriculum that it has been able to demonstrate-and has helped integrate ecological concerns into the core school curriculum, and has connected the community and the schools on issues of environmental conservation. It has also

made possible the professional and personal growth of teachers and enhanced the sensitivity of children to the importance of caring for the environment.

The school as a community centre

During conversations with the students, we attempted to find out how a non-hierarchical classroom and an empathetic teacher can help alter the psychosocial context of first-generation school-going children from a tribal community. The schools have delivered on one important dimension—of changing the discourse on education within the community. Several of the students interviewed spoke of aspirations linked to the education they had received in school. Some of them wanted to change their village, some wanted to become good teachers, and yet others spoke of getting good jobs. One of them said she wanted to contribute to the well-being of society and another wanted to be a forest officer.

All the students reported discussing the school with their parents, an act that could produce change of a more lasting kind. It shows that the children find the school important enough to speak about with their family and that the school is relevant to the community.

On a moonlit night, at about 8.00 in the evening, Subbarayappa enters the one-room Chamanthi school in the tribal village of Mugilupodalarevu. He smiles and begins reading with the other adults assembled in the room. The

teacher is addressing a class quite different from the one he teaches during the day. "If I read, other may follow me and they will also learn," says Subbarayappa as he prepares for a video interview on his journey with the KEEP and the ways of life of a tribal collector of forest produce.

Equally riveting is the scene in Kalligutta, a tribal village 17 km away, where tribal women come to the Parijatham Sanctuary

School every day to learn to read and write, and where they are taught by one of their own children. "I will sit outside my house and read under the street light, even if you have no school. You please continue to teach us, we will come," says Rajamma, a Yanadi tribal woman, with pride.

Environment Education programme

The environment education programme began with the objective of sharing with schools and students the possibilities, challenges, and strategies pertaining to a sustainable and ecologically responsible way of life. The programme brings communities together and creates new contexts for learning, especially for students from urban backgrounds. Providing participants with an opportunity to live close to nature under simple conditions; to reconnect with the natural environment; and to understand our relationship with the natural world directly are some of the objectives of this programme.

Knowledge documentation with Hyder Pasha, a healer, specializing in treating animals

The activities and experiences included in the programme offer young people an opportunity to observe and appreciate the beauty and order of the natural world. They are designed to deepen sensitivity towards, inculcate respect for, and instil a sense of wonder about all forms of life.

The programmes are of different durations, and their scope depends on the nature of the group-whether students, interns, or teachers. The content of each programme depends on the needs of the group. Teachers of the Sanctuary Schools and members of the livelihood initiatives conduct these programmes. Activities include long forest walks to observe nature quietly and participation in forest conservation work (building rainwater trenches, working in the forest nursery, undertaking afforestation, etc.).

The participants are also involved in biodiversity studies. They interact with the tribal communities and with the students and teachers of the Sanctuary Schools. They visit farms and work with the farmers and learn local crafts.

Participants, especially students from urban schools, become more sensitive to the delicate balance of ecosystems, more aware and accepting of different life forms, and get over their fear of wildlife. They experience the natural world directly and appreciate the beauty of nature. They realize that the threat to forests and natural ecosystems is very real and understand that every individual should be actively involved in conservation. The programme involves extensive interaction with adults in the villages as well as the children in the Sanctuary Schools.

Livelihood programme

Livelihoods for stable communities

Integrating livelihoods for rural communities needs to be brought back into the development models being implemented in many countries. In developing countries especially, contextually

relevant skills for creating and sustaining rural livelihoods are necessary for supporting conservation.[viii] India is among the richest biodiversity regions in the world, given the great diversity in bio-geographical regions across the country. Over millennia, people's lives have been closely linked to their local environments, resulting in a wide variety of livelihoods. These include traditional craft and art forms, farming, animal husbandry, fishing, forest-based livelihoods, folk healing, and medicinal practices. In spite of major changes in land-use patterns and landownership rights resulting from industrialization, urbanization, and rapid economic changes in the last three centuries, many people continue to pursue their traditional livelihoods even today.

Closely linked to the traditional livelihood patterns are the traditional practices of conservation and an intimate understanding of the local ecology. Many traditional practices of Non-timber forest products (NTFP) collection have in-built mechanisms for the conservation of natural resources. However, with the rapid depletion of forests, fertile farmlands, wetlands, seasonal rivers, and the diverse life forms nurtured by all of these natural habitats, this symbiotic relationship between ecosystems and livelihoods is being steadily destroyed, and with it is also disappearing the associated knowledge systems of rural and tribal communities. Further, low remuneration for raw NTFP means that more time and energy are being spent on harvesting more of already dwindling bio-resources. People need to collect large quantities of forest produce to be able to earn enough to support their families. Thus, a vicious cycle of low market value for raw goods and excessive harvesting to earn a higher income leads to overexploitation and depletion of natural bio-resources. Degradation of the forest causes greater exploitation and that in turn results in more rapid and more extensive degradation. This vicious cycle destroys the forest as well as the livelihood of the community that depends on it, and this leads to migration in search of livelihood—something that is culturally and economically disastrous.

Kalimbi shows the way

The sack contained 20 kg of wild fruits collected from the forest. The brief had been to bring all edible fruits, and there they were, all bundled in the sack. The team at Kaigal steamed, pitted, crushed, and filtered the fruits, and then patiently watched the mixture as it boiled over a wooden fire for five hours.

This was how Kalimbi jam was first made in Kaigal. This was the first of several products that would eventually lead to the setting up of a new enterprise. The people at the centre asked themselves: Can local and forest produce be converted into products that can fetch more value than the raw produce that the communities take to market? Can this conversion increase the shelf life of the produce? Will a higher return on their products incentivize the communities to conserve and harvest forest produce more sustainably?

There was a need for a model that could demonstrate how sustainable use of the forest could provide other economic opportunities to the community, one that would allow rural and tribal peoples to retain their cultural identity while being part of the larger community.

And so the idea of a self-help group was born.

The objective of this enterprise is to develop and nurture a community-centred approach to biodiversity conservation through the development of sustainable livelihoods and the empowerment of women and youths. The programme has been working with young adults and women from the surrounding villages in creating new occupations and in making existing livelihoods more viable. Working with the local communities, the programme identified the major NTFP species, documented local uses of NTFP, and made commercially viable products through simple value addition.

In 2009, the first woman joined the Kaigal team to explore livelihood creation. She was a young girl from Kaigal village who had been inspired by the outreach programme conducted earlier during the forest conservation programme. In 2010, the Kaigal Trust Self Help Group (KTSHG) was formed to explore ways through which local produce and forest bio-resources could be processed and taken to market. The KTSHG was a small initiative, with about four or five people forming the main group. It networked with a group of about 25 Yanadi collectors, who supplied the raw materials needed by KTSHG during the initial stages. Today, the Kaigal Trust (as KTSHG was renamed) has an annual turnover of over Rs. 25 lakhs and works with a group of 12 women and men from tribal and rural communities.

Women from Kalligutta village being trained

In addition to making and selling products, the programme has helped in the formation and capacity building of a community-based enterprise of women and youth from tribal and marginalized farming communities. They acquire bio-resources and farm produce at a fair price, use simple value-addition techniques, and then take

these products to end consumers. Local women and youths are trained and employed in this enterprise, which is organized along the principles of a local SHG.

Community skill building

Women and young adults have been taught various methods of adding value to forest products using pickling and other preservation processes developed specifically for the abundantly available local produce. Women and older girls have been taught embroidery, tailoring, and stitching. In addition, they have learnt weaving, macramé, basket weaving, and pottery. They use these skills to produce a variety of hand-embroidered, tailored material for sale. Training has been provided in the growing of saplings, specifically medicinal plants and native fruits, vegetables, and flowering plants.

The members of the Kaigal Trust are trained in packing and marketing, stock keeping, accounts, and sales reporting. The Kaigal Trust supports skill building for the children in the schools and also interacts with education programmes. The members proudly declare that they feel good to be running their own businesses.

Model of access and Benefit sharing

The Kaigal Trust sources its raw materials from different panchayats. Under the Biological Diversity Act, 2002, it has entered into an access and benefit sharing agreement (ABSA) with the APSBB regarding bio-resources collected from forest land. In this community enterprise, local women and youths work with local communities in accessing and adding value to bio-resources before taking the products to markets. It acts as a key community space for bringing together people as well as for building skills.[ix] The local enterprise has been able to demonstrate the advantages of an access- and benefit-sharing mechanism that can potentially be a model for similar community-led enterprises that are dependent on local and forest bio-resources.

Personal narratives of change

The programme started with a very immediate objective, that of protecting the land—planting trees, minimizing grazing, and also reducing the impact of tourism—the Kaigal Waterfalls is a major tourist attraction here. For the team that conceptualized this programme, this was just a peg to attach the programme. The change was more subtle and more profound, altering the individual and the community, and simultaneously affirming and changing their relationship to, and their position within, the local ecology.

It rains more in Kaigal Valley. "They say it rains more now in Kaigal because there are more trees here now," Jayapalappa says proudly as he looks at the forested hill slopes from near the kitchen in the Kaigal Conservation Centre. Afforested over the course of a decade, thanks to the work of students and the local communities, the Centre is now unrecognizable from the barren landscape it was when the first group of students arrived here. Left to themselves, the forests have simply grown back; it is really that simple.

Jayapalappa should know. He walked through the forests for many months to document phenological data pertaining to more than 13 species of trees. The Forest Department takes saplings from the nursery at the Kaigal Centre. Jayapal started working as a teenager and had completed his Class 12 so he could "do any job". Over the years, he earned undergraduate and master's degrees and completed a teacher training programme. He now oversees the running of the two schools besides anchoring the environment education programme. He has learnt methods of fieldwork, handles snakes, and can conduct field-based programmes for students. Deeply passionate about education, he is at his best with students and believes that the Sanctuary Schools are places where students can learn about the world around them and where they can negotiate their rightful place in it. He rushes off saying he will go and find a snake now to show the students who are arriving from Bengaluru.

Yes. In one simple word, Raghupathi sums up how life changed for him when he returned to his village after leaving a job at a

granite-polishing firm in Ahmedabad, Gujarat. Raghu was a shy student in the Mugilupodalarevu learning centre till he was about 13 years old, but refused to attend high school. His hands could create magic—with plants at the nursery, with embroidery thread, with macramé, with clay, and with a sketching pencil. He worked with the livelihood programme when it first began in 2008, bottling honey and tending to the nursery. One day, he ran away to Ahmedabad to work in a granite-polishing firm. But, just as suddenly, he came back to the Kaigal Centre, to the same nursery and the same forests of his childhood. Why he went away he is not able to explain, but states firmly that he is here to stay. He now runs the environment education programme along with Jayapal, teaching children about the importance of maintaining a forest nursery and taking them into the forests.

I won't go anywhere and work. So says Sumithra whose strength belies her tiny physique. "What kind of school is this I thought when I first joined," she says with a laugh, talking about her entry into the programme as a teacher in the Mugilupodalarevu learning centre. There has been no looking back since then. She was a teacher and helped set up learning centres and trained teachers in other villages also. As the first member of the livelihood programme, she learnt all the skills—tailoring, macramé, honey processing, pickling, packing, selling, and accounting. She now manages the entire operation. Her mother was dying from cancer, but Sumithra was out with the team, filtering and gathering fresh jaggery, without any chemical additives. "I must be there for the filtration and gathering of the jaggery—there should be no mud," she explains. Sumithra has built a team of women and men from the local communities who take pride in their work. When interviewed for this case study, all of them said one thing— that their involvement has changed something inside for them. All of them spoke about what they have learnt and who they are. "You send me anywhere, I can manage," says Pushpa, a single mother who has raised her daughter to follow the same learning path as her own. "I was an Inter-pass. Now I have completed my degree." Pushpa is now learning bookkeeping on the computer.

"What have I not learnt?" Krishnamurti responds when asked about his journey, from being a young coordinator with the KEEP to being the sarpanch of M. Kothur village. "All that I have learnt is from working here—how to do any job properly I learnt here. I was afraid to talk, to meet people. When we started this place, it was a tourist place. Some not good things were happening. From there, we built (the programme and the place) here." Krishnamurti worked full time with the programme until about 2010 when he was elected sarpanch, but he continues to be involved with the activities directly and indirectly. "When the students come for the environment education programme, it makes a difference to the communities. They are happy to see the students coming and working here, happy to teach them. We are known to do good work," he proudly declares.

The community owns the enterprise. "After I started supplying to the Kaigal Trust, I am able to save money. I have bought goats. My children are studying well", says Raghuramaiah from Nadamanthram village, almost 40 km from Kaigal. "You are paying us well, on time and properly. This helps. If you collect [forest produce] regularly, we can go to the forests regularly. That is what we know how to do. Why don't you also teach our women some skills and set up a centre in the village?" he asked me. Whether it is the tribal selling honey, the oil chakki owner in Venkatagiri Kota, or the farmer in Theertham, what is very clear is that members of the community are benefiting from selling their products to the Kaigal Trust.

"I give it [my product] to the Kaigal Trust at a very low margin. I want to be part of the work that supports and keeps our farmers here. Before you started buying [from me], I was only doing small jobs. Now you buy [my product] regularly, my oil chakki runs regularly. My shop has grown. What you are doing is helping farmers," Balaji, the rice supplier from Theertham, echoes similar ideas.

I enjoy my college. Saritha smiles shyly when she comes to meet me at the Kalligutta School. She completed her class 10 examination through the National Institute of Open Schooling (NIOS) and decided to join a programme that would allow her to get a nursing degree.

I will teach them. This is what Chandrakala said when we asked her if she would conduct the community resource centre in Kalligutta. She was a student with the Kalligutta school since the beginning. She completed her Class 12 examination with the school, through the NIOS, and is now enrolled in a degree programme. She hopes to become a teacher. She wants to help her village come together to work towards a healthier, more peaceful place.

Conclusion

- A sustainable model of development needs to involve the community in an integrated manner. Our intervention has had a direct impact as seen in the educational trajectory of students and the meaningful livelihoods of members of the local communities. More importantly, the changes are embedded in the ways in which the communities respond to programmes and activities. Community mobilization for conservation and education has been demonstrated as an effective method of sustainable development. These interventions have also been organic and integrated. Our school teachers are actively engaged in conservation and biodiversity documentation while members of the livelihood enterprise support schools and are resource persons for the environment education programme. The integration is not merely a tactical requirement but is also reflective of the underlying philosophy of the programme.

- An empathetic school environment can support meaningful education for tribal communities. Teachers have become change agents themselves. Many teachers acknowledge the difference the school has made in their lives. Some of them have moved on to support the livelihood programme. Girls from the communities move back to their villages after marriage as they see the value of school education for their own children. The age at which girls are married has risen steadily. A participatory approach to educational design that includes teachers, students, parents, and the local community can lead to better educational outcomes in terms of retention and student engagement. A sustained relationship that begins

by forging links with the community gives legitimacy to the school and enables its evolution into a resource institution that can adopt a more integrated approach to development, education, and skill building in a tribal community.

- Communities are getting more empowered. Communities are becoming more aware of the links between conservation and livelihood of local communities, particularly tribal, farming, and other marginalized populations. This is particularly relevant given the loss of traditional knowledge. Participatory processes and local leadership and autonomy are key to collective knowledge building. These processes are both the means for and the ends of knowledge creation. Empathetic management approaches that are affirmative of the ways of life, language, and knowledge of the community, the intended target beneficiaries, are critical to winning the trust of the community and in building bridges and forging relationships with all stakeholders.

- Continuous capacity building is critical. Continuous and persistent capacity building is essential for effective and meaningful collaborative knowledge processes. Conscious efforts to bring together institutions and people from different knowledge systems have helped communities to collaborate and learn from each other. Learning and sharing is a two-way process and is essential for ensuring the validation of traditional knowledge systems, while at the same time offering opportunities for learning from and about new approaches and methods.

A brief snapshot of the outcomes

1. The forest cover in the area where the Centre operates has increased; over 14,000 hectares of the ecosystem have been affected.

2. Over 60 villages have been influenced by different interventions; 300 tribal households have been affected.

All children between 3 and 12 years of age in the two villages are now attending school. Children in tribal schools are regular school-goers and many go on to high school. About 30 students have completed their Class 10 exam; about 10 of them are in college.

3. The livelihood programme now has an annual turnover of Rs. 25 lakh and 12 people from tribal and rural communities work for it. It is perhaps the first community enterprise to demonstrate the advantages of an access and benefit sharing agreement (ABSA) for biodiversity conservation.

4. The Kaigal programme has emerged as a resource organization for the local biodiversity authority, building expertise in biodiversity management at the local panchayat level through the formation of Biodiversity Management Committees.*

The learning from this programme could help in organizing, managing, and directing intersections of knowledge systems with dignity and respect, and in an empowering way, based on the principles of ecological and social justice.

Endnote

i It was identified only four years earlier as a new species—the Sri Lankan flying snake or the Indian flying snake, Chrysopelea taprobanica.

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ix   Community Empowerment through Sustainable Livelihood Generation Using Diverse Traditional Knowledge Systems, Detailed Report prepared by the KFI for the Project funded under GEF-UNDP- SGP. Unpublished project report.

Kaigal Education and Environment Programme, Andhra Pradesh

Foundation for Education, Ecology and Livelihood (FEEL) was registered as a Public Charitable Trust in 2014. The overarching objective of the organization is to support life-serving and ecologically restorative education through and for creating sustainable rural communities.

FEEL has taken over the running of the Kaigal Education and Environment Program of the Krishnamurti Foundation India. The Kaigal Education and Environment Program, has been working as a curricular outreach program of the Krishnamurti Foundation India since 2002 and has been working in tribal and rural communities adjoining the Kaundinya Wildlife Sanctuary in Chittoor District of Andhra Pradesh.

4.2 The Kadam Step-up Programme

Humana People to People India (HPPI), Delhi

Abstract

Humana People to People India (HPPI) is a not-for-profit, development organization, registered in India in 1998. Its flagship programme, the Kadam Step-Up Programme, is an intervention for out-of-school children (OOSC).

In India, the issue of OOSC is a major challenge and complex social problem. The Right of Children to Free and Compulsory Education (RTE) Act, 2009, which came into effect in 2010, mandates education as a fundamental right of all children in the age group of six to 14 years. Kadam provides a promising and effective solution by identifying OOSC through need assessment and survey, enrolling OOSC in its centres, providing quality education to the children in the form of accelerated learning to bridge their learning gaps before mainstreaming them at age-appropriate levels of the corresponding grades, and following up on their retention in the formal system of education.

What began as a passionate and idealistic social welfare intervention more than a decade ago has today blossomed into Kadam, an effective mechanism to tackle the issue of OOSC. Its remarkable achievements in the recent past have been recognized by the Ministry of Human Resource Development (MHRD), adopted by many state governments, and praised by many national and international organizations.

This case study of Kadam highlights the small details of the programme that have brought about substantial and meaningful changes in many households. It has been truly said that "small steps can lead to a big leap." Similarly, Kadam has brought about an upswing in the lives of many underprivileged children and their families.

A New lease of life

Chandrika Devi's eyes well up as she runs her fingers through the hair of her 12-year-old son, Vikas. "All my hopes rest on him now," she says, wiping her tears.

Chandrika's older son mysteriously disappeared on his way to their village in the Madhubani district of Bihar, in eastern India, a few years ago. He has not been found. Chandrika and her husband are daily wage labourers in the rapidly expanding city of Gurugram (formerly Gurgaon) in the state of Haryana, in north India. The family of four, including a nine-year-old son, Vishal, is slowly coming to grips with the tragic shock of the oldest son's disappearance.

"I dropped out of school following the incident. I lost all interest in studies," recalls Vikas. "Most of my days were spent playing and loitering with other kids my age around the construction sites where my parents work." On one such day, a Kadam tutor visited Chandrika's house to conduct a survey on OOSC. After enquiring about Vikas, the tutor informed the parents about a project being run at a nearby community centre, Chandrika explains.

Humana People to People India's (HPPI's) Kadam centres identify OOSC, and, following year-long training on academic subjects and social skills, help the children enrol in a formal school in age-appropriate grades. "Initially, I was a little anxious about joining the centre," says Vikas. "But with each passing day, I noticed that the tutors at the centre introduced new activities and games as methods of teaching subjects like mathematics and English. It was very different from and way more interesting than how they taught us at school."

Today, after having spent nearly a year at the centre, Vikas is on his way to being enrolled in a nearby government school in an age-appropriate grade.

"I am very grateful to the Kadam Programme for helping me regain the confidence, learning levels, and social skills necessary for

joining a school again," he says. His mother smiles proudly, reflecting her confidence and hope for the future.

The story of Vikas is a heartening instance of teaching important life skills to some of the many children in India who do not go to school. Many organizations like HPPI are supporting the efforts of the government and providing opportunities to OOSC to acquire foundational education and basic skills that will enable them to join the formal system of education so they can learn and progress in life.

The Kadam Step-up Programme - The background

Humana People to People India (HPPI) is a development organization registered in India on 21 May 1998 as a not-for-profit organization under section 25 of the Companies Act, 1956.

HPPI is a non-political, non-religious body that works as part of civil society to strengthen the capacities of underprivileged people and groups to improve their lives. HPPI's journey of providing education to children who had never been to school began much before this mission was even formally conceptualized as a programme. In 2005, a team of HPPI trainers visited a colony of traditional sex workers (tribes like the Nats and Kanjars, which have been engaged in sex work for generations) in Rewari, Haryana. They were surprised to see that many children from the community, all in the age group of 12 to 16 years, were smartly clad and spoke fluently in their local dialect. When asked about their education, they said they had "never been to school". The HPPI team identified children belonging to a number of "camps" of Banjaras and other migrant communities in the vicinity of all of its training centres. The task of surveying the area and setting up informal education centres for these children was then given to another group of trainers.

A survey of the areas around Behror, in Alwar district, Rajasthan, where a training centre was situated, revealed that many local children were working and had never been to school. Many of them were rag pickers, worked at shops and factories, or helped their parents in the

field. The initial thought was to provide these children, who were in the age group of seven to 14 years, with basic literacy and numeracy so that they could read and write and be aware of what is happening around them. The idea was not to put them through a formal system of education.

With this in mind, HPPI set up two centres in Behror in 2006. Thanks to extensive community mobilization, the parents of these working children were persuaded to allow their children to attend the centres where they were provided with literacy and numeracy education. As the centres had flexible timings, some children would come in the morning and others would arrive in the afternoon, at their own convenience. The centres were a hit. They were successful not because there was a planned programme but because the children learnt what they wanted to learn. It was the children who wanted to change their future, and HPPI made it all happen by creating an atmosphere in which both teacher and student were on the same page, and on the same side of the curriculum, when it came to reaching their goals.

From Behror emerged the idea of setting up the Academy for Working Children (AWC). In 2007, with aid from Humana's sister organization in Finland and with funding from the Ministry for Foreign Affairs, Finland, AWC was conceptualized. In three years, two centres were opened, in Jaipur and Neemrana respectively, both in Rajasthan. Each centre had about 250 children enrolled. The centres started functioning with flexible timings and later adopted a 9.00 a.m. to 2.00 p.m. slot. At this time, what had so far been an ongoing, somewhat random programme was given some shape and direction. Tasks based on concepts described in textbooks were prepared in the form of cards. These card-based tasks proved to be an effective medium of learning and were the first stage in building a step-by-step learning programme, which was formulated along the lines of UNICEF's Multi-Grade Multi-Level (MGML) teaching method, and was also based on activity-based learning (ABL), which was being used at the centre in Chhattisgarh. This was the time when the Kadam programme gained recognition from various agencies and also received funding from Finland (2009–2011) and Dell (since

2009). This was also the time when the Kadam programme was started in Gurugram (Gurgaon), Haryana and in Ghaziabad, Uttar Pradesh.

Meanwhile, the RTE was enacted in 2009 and came into force in 2010. It gave a strong impetus to the provision of formal education to children. HPPI's programme is based on a sound philosophy of child-driven learning. However, it still lacked a distinct package of standardized learning. In addition, the card-based system of learning was cumbersome when it came to scalability, and the need of the hour was to create something that would help to mainstream OOSC while working in cooperation with the education system of the states aligned with Sarva Shiksha Abhiyan (SSA). The Kadam Step-Up Programme was conceptualized to address these lacunae and gaps.

The start of the Kadam Step-Up programme

Building on the events and learnings of the previous years, HPPI prepared the Kadam Concept Paper in 2011 and began working on the contents of the Kadam curriculum. Themes were planned for Kadam and the entire toolkit was designed, field tested, and finally developed for implementation at the Gurugram centre by the end of 2014. Thus was born the Kadam programme for OOSC.

In 2014, HPPI set up Kadam centres for 300 girls in Mewat district in Haryana with support from Humana Italy and Tavola Valdese and a few individuals from abroad. In 2015, Kadam centres were established in Panipat, Haryana, with support from UFF, Norway (U-landshjelp fra Folk til Folk, Norge), for 250 children of migrant parents working in the textile-recycling industry. The next big step for HPPI was the establishment of a year-long partnership with Bharti Foundation in 2015–16 in Madhya Pradesh. The Dell-supported centre in Gurugram adopted Kadam, as did the centres in Panipat, which were supported by the Dutch organization Sympany. HPPI's partnership with Educate a Child (EAC) began soon after. In 2016, in a tripartite agreement between EAC, Bharti Foundation,

and HPPI, HPPI signed a prestigious partnership with EAC through the Education Above All Foundation (EAAF) under which EAC extended support for the mainstreaming of 30,000 OOSC over the course of three years in Haryana and the National Capital Region (NCR). In October 2016, a memorandum of understanding (MOU) was signed with the Government of Haryana for a term of three years for adopting a co-funded model to support the mainstreaming of 30,000 OOSC in the state. Later, more than 15 Indian and international companies supported the Kadam programme through their corporate social responsibility (CSR) funds.

Beginning in the second quarter of 2017, under the MHRD and the then Secretary, Department of School Education and Literacy, MHRD, Government of India, various conferences were organized on the challenges in the mainstreaming of OOSC all over the country. These conferences were held in New Delhi and in five regional areas where prominent organizations were invited to make presentations on their contributions, best practices, learnings, and plans. HPPI was a noticeable part of these conferences, and its role in mainstreaming OOSC was acknowledged by the Secretary and other top state officials.

Apart from Haryana, HPPI has signed MOUs with Chhattisgarh, Maharashtra, Jharkhand, Uttar Pradesh, and Rajasthan for mainstreaming OOSC and it is working closely with the state authorities in these states. In Jammu and Kashmir, HPPI has signed an MOU with the state government department and will begin the work in June 2019. By the end of 2019, HPPI is targeting the mainstreaming of 45,000 OOSC and enrolling about 80,000 OOSC in various Kadam centres in different states.

The current scenario and the need for the Kadam Step-Up programme

The Right of Children to Free and Compulsory Education (RTE) Act, 2010 enshrines the fundamental right of every child in the age group of six to 14 years to avail full-time elementary education in

a formal school. Despite the act being in place, the presence of OOSC is a harsh reality, for it is a constant challenge for the state governments in India to reach out to children who have either never been to school or who have dropped out from school for various reasons, and to bring them into the system of formal education.

Depending on the definition of OOSC and the data source used, estimates of the number of these children in India vary widely. While a UNICEF report[i] for 2014 provides an OOSC figure of 17.7 million, a report[ii] in the same year by the MHRD, Government of India pegs the figure at 6 million. Even at a relatively conservative estimate of 6 million, the number of OOSC of primary school-going age is a major roadblock to the Government of India's efforts to achieve universal primary education. The most widely accepted definition[iii] of out-of-school children as given by the MHRD is:

A child 6–14 years of age will be considered out of school if he/she has never been enrolled in an elementary school or if after enrolment has been absent from school without prior intimation for reasons of absence for a period of 45 days or more.[iv]

Before we discuss strategies to address the issue of OOSC, it is essential to first understand two worrying scenarios that have continued to prevail even after the implementation of RTE. In the first scenario, surveys by many national and international agencies have shown that learning levels in government-run primary schools have remained consistently low. Almost half the children drop out after eight years of elementary education without acquiring the minimum acceptable foundation skills. Once the age limit of RTE is crossed, it becomes extremely difficult to get them back to school. This eventually results in the children dropping out from the education system. A recent study[v] shows that 37 per cent of OOSC are dropouts and 63 per cent of them dropped out within three years

of school enrolment. The same study also highlights that 45 per cent of OOSC never enrolled in school and 18 per cent of OOSC never attended school even if they were enrolled. The second scenario concerns children who never even made it to school. This is even more worrying because these children did not get an opportunity to explore any avenues to make better lives and hence improve their economic and social status in the future. Even today, thousands of children loiter on streets, at bus stands, and railway platforms, begging for alms; they are highly vulnerable, exposed to crime and victims of injustice, poverty, and abuse. Many children run away from home and fall into the wrong hands. As far as girls are concerned, many of them in rural and semi-urban households are limited to performing domestic chores and taking care of siblings. They face discrimination due to social norms, and hence are not allowed to go to school.

Some major factors that compel children to abandon their education are poverty, migration, social barriers, financial constraints, and lack of interest on the part of both children and parents in a formal system of education. The central and state governments have been trying through various schemes to link children to schools; to provide incentives like free and nutritious midday meals, free uniforms, books, and scholarships; and to organize rigorous campaigns for behaviour change of communities. However, the presence of OOSC is still a challenge.

Another reason for children to drop out is the non-learning factor. If children who have never been to school and those who have dropped out from the early classes of primary school are enrolled in school again, in age-appropriate classes, they exhibit learning gaps, which impedes their learning and undermines their confidence, and hence needs to be addressed. This is important because such children will not attain higher-level learning, given their poor understanding or lack of foundation of that concept. Learning is a progressive and continuous process, leading from one concept to the next. It is crucial to address the learning gaps of students and this also needs the immediate attention of the teacher. The more time is lost, the more difficult it becomes to undertake the task. Hence the need for

Special Training Centres (STCs), which help such children bridge their learning gaps and catch up with other children at their grade level.

To address the issue of OOSC and their age-appropriate mainstreaming, it is important that governmental and non-governmental agencies join hands to formulate extensive plans. Prior to enrolling children in formal schools, they first need to be admitted to STCs that have been established specifically to facilitate their mainstreaming. This is a significant step towards the preparation of OOSC, as STCs provide complete mainstreaming support to children through an accelerated curriculum. However, despite offering all these facilities, many STCs have not been able to achieve their real objective for two reasons: first, STCs are often neglected and / or treated as an additional burden for primary schools; and second, the formal system of SSA, which follows the three- to six- to nine-month cycle of the learning programme, may not be suitable for meeting the needs of OOSC, something that requires more flexibility.

The problem will not disappear. Indeed, it will continue to grow if the issue of the learning gaps of OOSC is not addressed effectively. It is important to mainstream the OOSC at age-appropriate levels once their learning gaps have been bridged to ensure their retention in the formal system of education. A robust system of accelerated learning that provides a strong foundational understanding of basic concepts is imperative to stop children from dropping out of the education system. It is also vital to look at the issue of bringing children to school more holistically by reaching out to communities and other stakeholders. Mobilizing parents, communities, heads of government schools, and officials at both the district and block levels to come together to create an ecosystem to help children move towards education and achieve the real goals of education will go a long way in supporting the RTE Act.
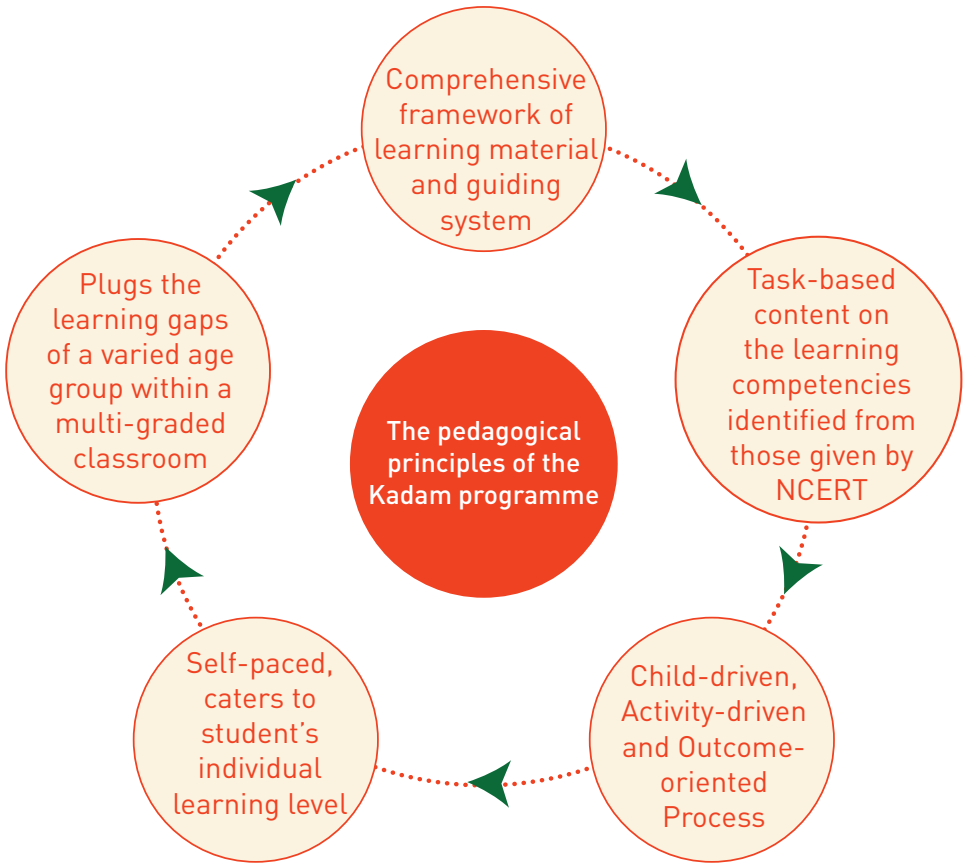
The Kadam Step-Up Programme

The Kadam Step-Up Programme of HPPI has been designed keeping the above-mentioned concerns in mind. To plug the learning gaps of OOSC, HPPI provides a platform based on an engaging pedagogy, targeted curriculum, and teaching practices through Kadam.

The programme is aimed at improving children's subject skills and knowledge, specifically in mathematics, environmental science, Hindi, and English. It blends formal learning and skill-based experiences to engage students effectively. It enhances the formal learning skills of students. It is administered as a package for learning at the individual pace and level of students in the formal system of education.

Kadam has been designed based on the guidelines given in the National Curriculum Framework (NCF) 2005. To make it comprehensive and to ensure a broader outreach, learning competencies developed by the National Council of Educational Research and Training (NCERT) have been incorporated. However, as Kadam is an accelerated learning programme, it was not feasible to take 100 per cent of the competencies for each subject per grade. Instead, nearly 80 per cent of the competencies have been incorporated and exercises have been developed on the basis of these competencies.

The pedagogy of the Kadam Step-Up Programme

The pedagogy of the Kadam programme is based on Kadam's guiding principles, which are shown below:

The Kadam Toolkit

The Kadam Step-Up Programme is a learning package that consists of the following:

- *Student Activity Books:* Known as the Kadam Student Books, these are a set of five books, one for each grade. As the name

'Kadam' suggests, the books are based on Steps, from 1 to 10. Thus, each book for a grade has two Steps. Grade 1 has Steps 1 and 2; grade 2 has Steps 3 and 4; grade 3 has Steps 5 and 6; grade 4 has Steps 7 and 8; and grade 5 has Steps 9 and 10. These books are based on the learning outcomes given by NCERT. The Meri Checklist is an integral part of the Kadam Student Books. It is provided at the beginning of every step, from Step 1 to Step 10. It is a progressive list of the competencies, which are described as Feats and which form the basis for the activities and exercises in the Kadam Student Books. The Meri Checklist is a form of self-assessment done by the students as they move through the programme. It serves as a learning guide to help students self-determine the activity they wish to attempt. The teacher discusses the activity that the students will perform at the beginning of the class and refers the learners to the corresponding competency given in the Meri Checklist. Once the students finish the activity / activities, they write the date on which they attempted the task / tasks in front of the competency as listed in the Meri Checklist. The teacher verifies that the students have completed the activity / activities related to the Feat and confirms this by putting his / her signature in front of it.

- *Teacher's Manual:* The Teacher's Manual is an important document that provides teachers and other resource persons a detailed view and understanding of the programme's pedagogy and structure. It is a guide and support tool which includes various subject-based strategies, teaching tips, activities, and thinking-based questions. It familiarizes teachers with the objectives and methodology of the Kadam programme and helps them in achieving their goal of making learning an active, engaging, and meaningful activity.

- *Theme Book:* To help teachers conduct theme-related activities, they are provided with a Theme Book to plan and roll out the themes for each month. Once a theme is taken up, activities are planned according to the level of the students. In this way, all the children are involved in the

activities related to the on-going theme. The Theme Book provides details on planning and executing the themes. Themes address the building of life skills in the children and provide an opportunity to build the attitudes, values, and behaviour of sharing, acceptance, teamwork, being proactive, and creativity.

- *My Progress Book:* My Progress Book is a complete assessment booklet that provides an overview of the beginning level of the student along with the progress made by the student over the course of the programme and the result at the exit or end, after the student has completed the programme. It contains the following: Enrolment Form, which has all the contact and personal information of the student; Baseline Assessments – Levels 1 and 2, which indicate the learning level of the student and place her/him at an appropriate starting step of the programme; Grade End Tests, which assess the student once the two Steps of a grade are completed (it is like a final test after each grade) Endline Assessments – Levels 1 and 2, which assess the student's final learning progress at her/his exit from the programme vis-à-vis the Baseline Assessment results, as both are exactly mapped with each other (they also indicate if the student has reached the age-appropriate learning level at the end of the programme) and Records of the student pertaining to her/his mainstreaming and retention in a formal school.

- *Tracking our Progress (ToP) Chart:* The Tracking our Progress (ToP) chart, which hangs on a wall, gives a quick glimpse of the status and progress of each child enrolled in the Kadam programme. It includes a tracking checklist that tracks the subject-wise progress made by each student, providing a overall picture of the competencies completed and attained by the student for each Step. The teacher fills in the checklist in the early grades and the students do this task in the higher grades. The checklist on the Subject Status reflects the number of Feats completed by the student in each Step of each subject. As the student completes a Feat of a Step, the

box corresponding to that Feat in front of the student's name is filled in either by the teacher or by the student.

- *Training of Trainers (ToT):* The trainer's tool for conducting the training of teachers and other resource persons is the most important training document. It consists of a series of questions in the form of a checklist that the trainees need to answer. The correct answers are also given at the end of the document, so there is complete clarity about the various points of the programme.

Special features of the Kadam model

Holistic learning: The Kadam programme for OOSC seeks to help children at the primary school level to improve their subject skills and knowledge by focusing on mathematics, environmental science, Hindi, and English. The programme enhances the formal learning skills of students and is administered as a package of learning that children can pursue at their own individual pace and level in the formal system of education. Kadam differs from other programmes because, along with attending to the cognitive skills of students, it also develops their social, emotional, and real-life skills. The building of life skills is done through thematic learning. By blending formal learning and skill-based experiences to engage students effectively during their course of study, the programme helps in the all-round development of students. This approach integrates reasoning and analysis with the application of learning to real-life situations.

Connecting with the community and sharing experiences enhances and deepens learning. The programme has several events—Theme Days, Student Competitions, and Parent–Teacher Meetings (PTMs)—that involve students' interaction with members of the community in the school. Learning beyond the book is an important element here. Singing and reciting, drawing and painting, creating and building, scripting and presenting role-plays are some activities that encourage creativity and holistic learning. Thematic learning, under the headlines (headings or topics for the month)

of different Themes, is an important part of the programme, as the headlines address the skill-building component of the programme. They are aligned with the guidelines in NCF 2005. A Theme headline is taken up for a month and activities are planned according to the level of the students in the programme based on the theme. Themes provides an opportunity to build the following attitudes, values, and behaviour: sharing, acceptance, teamwork, being proactive, creativity, reasoning, and analysis, and thus help in the application of learning to real-life situations.

The entire programme is divided into 11 Themes and each Theme runs for one month. The Themes are chosen to help the students learn more about their own personality and character and explore their immediate surroundings, which include the worlds of both living beings and non-living things. The Themes also help to connect many other areas of the curriculum and thus links learning in the course. They allow learning to be more natural and less fragmented. They also allow learning to grow progressively by building upon a new associated vocabulary, which, in turn, helps students to read, to speak, and to write sentences linked to the idea of the Theme. Some of the Themes taken up in the Kadam programme are: The World I Live in; Nature, Healthy Body, and Healthy Habits; Maths in Everyday Life; Living on Earth; How People Travel, Communicate, and Work. These Themes help children increase their awareness of everyday activities and of the world around them. The active involvement of students in the Themes speaks volumes about the effective learning that takes place, and this is showcased by the outcomes in the form of the tasks that they complete during these activities, also known as "products". A Theme Week is held every month. It helps the students reflect on the monthly headlines and showcase their work.

Self-paced, multi-graded learning: The Kadam programme is transacted in the classroom by building a multi-graded learning environment where children learn progressively from one step to the next, at their own pace. The learning level of each child varies, and so does the step from where they begin the programme and the step where they end it. Hence, the classroom becomes multi-graded.

Self-pacing or self-paced learning is an essential element of a multi-graded classroom. Because children are at different learning levels, they need to work their own way through the programme at their own pace. The programme takes into account the fact that some children learn more quickly than others, some children are regular, and some children are able to grasp concepts better. Self-paced learning by students is the answer. Children in Kadam take their own time to complete their tasks, without having to deal with the burden of a deadline or other time restriction, thus freeing them to explore various concepts and areas of learning.

To pursue learning effectively in a self-paced, multi-graded classroom situation, TRIOs of children are formed (that is, three children form a group). Care is taken that the TRIO members are at different learning levels. Teamwork and peer learning play a very important role in the personal development of students, as they make children not only socially viable but also confident enough to take on challenges in life with each other's support. HPPI builds its programmes around group work where students work in cooperation and coordination with each other. According to Rohrbeck et al., "One of the major advantages of peer learning in modern school systems is that it has been shown to be effective in allowing minority groups to integrate better, and the shared experience has increased the likelihood of continued positive interaction."[vi]

TRIOs are, therefore, an integral part of the programme execution. Students in TRIOs may work on their individual tasks or on the group project, allowing each child to self-pace their learning and yet work together as a team. Working in TRIOs encourages cooperation, coordination, and a sense of responsibility in students.

Child-driven learning: Another important feature of the Kadam programme is facilitating children by applying previous learning to new situations, learning from their own experiences, being responsible for completing tasks on their own, and self-assessing themselves in the process. Many programmes are child-oriented, and it is the child-driven feature that instils a sense of responsibility and ownership in them so they can self-direct their learning.

In Kadam, children steer their own learning. The sequence is simple. Before attempting the exercises in the Student Books, the children go through the learning competencies as given in the Meri Checklist to determine what they are going to do; then they attempt the exercises for the related competency; once all the corresponding exercises are finished, the students go back to Meri Checklist and fill in the date on which they completed all the exercises for the competency, thereby self-assessing themselves. Their entry in Meri Checklist is later corroborated by the teacher with a signature.

Another component of the Kadam programme that allows children to drive their own learning is the Tracking our Progress (ToP) chart. The ToP chart displays the status and progress of the children in the programme. When they enter the programme, how they progress, and when they are supposed to exit—all these details are visible at a glance in this chart. The ToP chart is filled in either by the teacher, which is the case for younger children of about seven or eight years, or it is filled in by the students themselves in the case of older children. The children mark their entry and exit levels in the programme as given to them by the teacher by shading the Entry and Exit Step circles. When they complete the Feats for each subject starting from their entry mark, they shade the Feat boxes given for the subjects. The ToP chart also gives an approximate idea of when the children can be mainstreamed.

Creating a fluid learning environment: The Kadam programme inspires and motivates children in many ways to develop teamwork, and to find solutions to problems on their own or with the help of their peers. Apart from learning, it helps immensely in facilitating the personal growth of children. The learning environment in the Kadam centre is relevant to, and reflective of, the children's socio-cultural background and is also based on their past learning experiences. Various child-initiated teaching approaches are employed to ensure the efficacy and sustenance of learning. Learning is not limited to the amount of time the learners spend in the programme alone. Fluid learning flows out of the classroom into multiple social contexts that provide authentic learning opportunities.

The Kadam programme is notably run through TRIOs. Three children form a team and work through their own learning targets as laid out in the programme. As the members of a TRIO are at different learning levels, they essentially help those behind them as and when the need arises. This contributes to a peer-directed learning environment. Many activities also require TRIOs to work as a team and sometimes more than one TRIO forms a small group. This helps in creating an atmosphere of fluid learning within a TRIO as well as with other TRIOs. Fluid learning is (1) learning from one TRIO to another; and (2) learning for a new TRIO member. When a child exits the programme in order to be mainstreamed, her/his position in the TRIO is filled by another child who is in the programme. This doesn't stop the flow of learning of the TRIO, as the other two members of the TRIO immediately start working in cooperation and coordination with the new member and maintain the momentum of the learning flow in their TRIO. Hence, the learning flow in the Kadam centres is active and interactive, building a fluid learning environment that prevails all the time.

The teacher as a facilitator and co-constructor of learning: The role of a teacher in the Kadam programme is markedly different from that of a traditional classroom teacher. In the Kadam programme, the teacher is more like a facilitator who guides and helps the children by clearing their doubts rather than imposing his / her ideas on them. The teacher creates opportunities for the children to explore, discover, and experience the world around them on their own. The children are not merely taught through the "chalk and talk" method; instead, they learn by doing. The entire learning process is child-oriented and child-driven and is aimed at achieving specific learning outcomes.

The Kadam teacher is also the co- constructor of activities, who creates a conducive learning environment and provides engaging activities to help the children gain formal learning and social skills. The teacher supports the children from the beginning of the programme till they are mainstreamed and retained in the formal system of education.

The Kadam teacher's mantra is: "It is much more than academics that makes a student." The Kadam teacher intentionally creates an environment that is conducive to the overall development of the children, which proves instrumental in grooming polite and educated individuals, by inculcating the values mentioned below and practising the following with them:

- Showing respect by listening to the children and responding to them to show that one cares about things that are important to them.

- Allocating "circle time" (students sitting in a circle) is a good way of connecting with the children and observing them. (Sitting in a circle is an excellent way of maintaining eye-to-eye contact with each other and for addressing each other directly.)

- Thinking through a problem with the students is important. Instead of just coming up with a readymade solution, the teacher shares the situation or problem with the students and takes their views into account. It is critical to guide them to think about the pros and cons of any ideas or solutions that they might suggest.

- Talking to children often, and talking to them beyond lessons and outside the classroom, is important. Asking them about different aspects of their lives not only creates a bond between teacher and children, but it also helps the children to express themselves clearly and more confidently.

Handholding retention in the formal system of education: Another special component of Kadam is the post-mainstreaming retention, tracking, and follow-up of students in the formal system of schooling. Once the child has been mainstreamed at an age-appropriate learning level, the Kadam teachers and resource persons track the child in the school on a monthly basis for the next six

months. A proper tracking system and a reporting mechanism are essential components of My Progress Book in which a record is kept of the child's progress.

It has been found that when the child is mainstreamed at an appropriate age level, the chances of the child dropping out are reduced, because the child is able to associate new learning with the foundational learning from the bridge course. Hence, at Kadam, a great deal of attention is given to providing a robust system of learning activities that remain with the child for a long time, building a rock-solid foundation for the concepts on which further lessons are based.

It is also preferred that the Kadam centres (which serve as STCs) are located inside the primary school premises. This helps the child to adapt to the school system and feel a part of it.

Especially for children who have never been to school, it is a motivating factor that creates a readiness for entering the school. Parents of these children get a picture of where their child would be once the bridge course is completed. Thus, this helps to mobilize the community, particularly when the children are first-generation learners.

Implementation model of the Kadam Step-Up Programme

HPPI has a well-organized structural model for implementing the Kadam programme in states, which is described below:

- Level 1: At the grass-roots level of the organizational structure are the Kadam Teachers. There is one teacher for 25–30 children per Kadam centre.

- Level 2: 10 Kadam Centres form a Teacher Council of 10 Teachers. A Kadam Accelerator (KA) heads the Teacher

Council and provides leadership, on-the-job training, mentoring, supervision, and control for the Teacher Council of 10 Kadam Teachers.

- Level 3: A district with 40–80 Kadam centres is coordinated by a District Organizer (DO) who liaises with the District and Block Education Department, provides training, and ensures quality assurance.

- Level 4: At the state level, a State Project Management Unit leads the intervention. There is a Programme Manager, an MIS (Management Information System) Expert, and a Kadam Trainer.

- Level 5: At the national level, the programme is led by the National Kadam Team, based at the HPPI headquarters in New Delhi, with the Kadam Leadership and the MIS Head.

The rollout of the Kadam programme follows a systemic plan of activities. These activities are conducted in three phases, namely Phase 1, Phase 2, and Phase 3.

Phase 1: Phase 1 is instrumental in the strategic implementation of the programme. The important stages of this phase are:

- *Activation of the channels:* The State Project Director, District Project Coordinator, Block Resource Coordinator, and Cluster Resource Coordinator are oriented on the Kadam programme, on its pedagogy and implementation, and on developing a close partnership with various authorities to ensure the success of the programme in the state. The teachers and headmasters of the concerned primary schools are oriented on how to implement the programme, and their tasks and responsibilities are discussed, from ensuring that the OOSC in the Kadam centres are mainstreamed to their age-appropriate grades in a formal school to ensuring their retention in the school for six months after they have been mainstreamed.

- *Identification of pockets of OOSC and schools for STCs:* A robust tracking mechanism is necessary not only to identify OOSC but also to identify the pockets, or catchment areas, for setting up the STCs on the basis of the number of OOSC. Once the catchment area is selected, a door-to-door survey is conducted by the teachers / resource persons.

- *Adoption of the structural components: The structural components of the Kadam programme are:*

1. Every Kadam centre has one teacher / resource person and 25 to 30 students.

2. Two Kadam centres are generally paired together and are located in the premises of a government school.

3. The headmasters of government schools support the Kadam teachers / resource persons in the daily implementation of the programme.

- *Selection of teachers and accelerators; and provision of training:* The teachers / resource persons are either selected by the state or are jointly identified by the state and HPPI. The minimum qualification of all the facilitators is a senior secondary school certificate and a two-year diploma in education from a District Institute of Education and Training (DIET) or an equivalent institution. It is important that the facilitators belong to the same catchment area as the OOSC and speak the local language. Initial induction training is imparted to the team by the DOs. This is an extensive three-day training course and includes training on conducting the survey for identifying OOSC. Training and mentoring are provided at quarterly intervals over the course of the year.

- *Conducing of survey* : A door-to-door survey is carried out to identify OOSC, to verify all details about the OOSC with the school heads / authorities, and to facilitate their eventual enrolment in the Kadam programme. A standard survey form

is shared with the teachers / resource persons. The survey covers every household in the catchment area, obtains exact or accurate information, and also mobilizes the community. It is important that the survey is conducted at a time that is convenient for the family (in many cases, both the parents of the OOSC are daily workers and are available only in the evenings). If the parents are not present, the surveyors visit the house again at a convenient time. The surveyors use the native language or mother tongue of the family and put them at ease; this is extremely important as it helps in convincing the family about the benefits of sending their children to school. Every bit of information is critically examined, verified, and noted in the survey form.

Once the door-to-door survey is completed, a list of OOSC is prepared. This list is taken to the government school heads / authorities to verify whether each child has never been to school or is a school dropout. The School Registration (SR) number of those who have been to school is identified. SR numbers are generated for children who have never been to school. Aadhar cards of OOSC are made as identity cards and to track them in the system of education in the future, especially when they migrate to other places or return to their hometown. When the list is approved, the Enrolment Form for the OOSC given in the My Progress Book is filled in for the purposes of record-keeping. An STC or a Kadam centre is set up in the premises of the primary school, with 25–30 children and a teacher.

- *Baseline assessment of children to obtain their learning level:* Age-appropriate mainstreaming of OOSC is required to ensure their retention in the education system. It is important to ascertain their learning levels to identify their learning gaps which need to be filled before they can be mainstreamed in the formal education system. Hence, a Baseline Assessment is conducted for OOSC to ascertain or determine the learning level of each child. The Baseline Assessment also helps in placing the child at the suitable level of the bridge course so

that her/his learning gaps can be appropriately bridged. Each child is given 15 minutes to finish the Baseline Assessment with the facilitator.

Phase 2: In Phase 2 of Kadam, the child participates in the programme to bridge her/his learning gaps in systematic and progressive steps to achieve the required goal. Regular assessments are conducted to ensure that the child's learning and progress are on track. The entire learning journey of the child is noted, regulated, and reported to all the nodal agencies. The important stages in this phase are:

*   *Progressive Kadam Steps of bridge education:* The children are placed at appropriate steps of the programme based on the results of the Baseline Assessment. They are the masters of their own learning and attempt tasks based on the core competencies pertaining to their learning level. Skill learning takes place by engaging with themes that are an integral part of the curriculum. Once the child achieves the competencies of a Step, he / she progresses to the next Step of learning.

*   *Students assessed at the end of each two Steps/each grade:* A robust system of linear assessments is followed throughout the Kadam programme. Five Grade End Tests, for grades 1 to 5, are designed to test the students' achievements after the completion of each grade of primary school. The moment a student completes the feats required for a grade, he/she is given a Step End Test. The purpose of each Step End Test is twofold: first, to check the level of learning achieved by the student in that grade, and second, to check the prerequisites needed by the student for the next grade.

*

Phase 3: Once the learning gaps of the children at the Kadam centres are bridged, they enter Phase 3 of the programme, which is their exit point from the Kadam centre.

Thereafter, they begin a new phase in formal schools.

- *Endline Assessment to determine age- and grade-appropriate competency:* As the child achieves age-appropriate learning and becomes "school ready", an Endline Assessment is administered. The Endline Assessment is the exit-level assessment, mapped exactly with the Baseline Assessment. It helps in determining the difference in the learning level of the child at the beginning of the programme and at the end of the programme, thereby providing a measure of the effectiveness and impact of the Kadam programme.

- *Mainstreaming OOSC in the formal system of education:* It is necessary to mainstream OOSC at their age-appropriate learning levels to help them make the best use of their education and to ensure their retention. Mainstreaming begins on the very day the child enters the Kadam programme. The child is included in the mainstreaming plan once the Baseline Assessment is completed; this involves defining the child's entry and exit levels. The documentation work that had begun earlier is completed within the first three months of the child's enrolment. After the Endline Assessment has been administered, the child is ready to be mainstreamed in the formal education system in an age-appropriate grade. A date is selected in consultation with the school headmaster on mainstreaming the child.

- *Retention follow-up:* A monthly monitoring schedule is followed for six months to ensure the retention of the mainstreamed student. This a unique aspect of the Kadam programme and has shown phenomenal results in retaining OOSC from Kadam. The Kadam facilitator fills out the retention chart in the My Progress Book on a monthly basis and shares the record with all the nodal agencies from time to time.

Operational models of the Kadam Step-Up Programme

The Kadam programme follows three operational models. These are:

- *Model 1. CSR / Foundation Funded:* In this model, the entire cost of the programme operation is paid by the donor agency. With funds provided by CSR partners, HPPI implements the programme; it identifies OOSC, enlists and verifies them, and gets them enrolled in primary school. It also identifies local qualified teachers or resource persons as Kadam teachers, pays them, and trains them from time to time. HPPI provides all the related content material pertaining to the Kadam programme and also extends on-ground support in starting, organizing, and running Kadam centres. HPPI undertakes systemic monitoring and supervision as well as impact assessment at regular intervals and reports the results to all the nodal agencies.

- *Model 2. Co-funded by State and CSR / Foundation:* In this model, HPPI implements the programme under SSA in partnership with the related state/district offices. The state pays for the operation of the programme and HPPI pays for its own expenses. It extends handholding and support to the state throughout the programme. It provides soft copies of the content and other material required to run the programme in the state centres; the cost of printing is covered by the SSA funds of the state. The state identifies the teachers and resource persons available or hires resource persons for running the programme. Their salaries and stipends are paid by the state, and HPPI provides training at regular intervals. The expenses of training and capacity building of teachers and resource persons are covered by CSR funds. HPPI identifies its own Structural Team to liaise and work with state / district officials and provides them with training. It also sets up discussion sessions with the National Kadam Team. The Kadam State Team supports and monitors the programme, and creates an MIS on a quarterly basis, the cost of which is covered by CSR funds. HPPI guides the state through the various processes of the programme, beginning with the identification of OOSC and ending with their mainstreaming. HPPI also orients the state / district officials at various stages, particularly at the start of the programme.

- *Model 3. Consultation Approach:* In this model, HPPI works as an advisory body to the state by providing training on programme modules and capacity building to state officials at different levels.

Some challenges in the implementation of the Kadam Step-Up Programme

Some challenges are faced in scaling up the Kadam programme in different states. For one, the definition of OOSC varies from state to state and also at the centre. HPPI follows the definition given by MHRD. Collecting the latest and authenticated OOSC data from nodal authorities is difficult. Getting local teachers to run the programme in the Kadam centres is another major challenge. Since the programme begins by talking to the parents and persuading them to send their children to the Kadam centres, there is a strong need for teachers who know the local dialect. Convincing the parents is a challenging task. To train teachers and other resource persons on obtaining, recording, and reporting the credentials of OOSC (without any mix-ups) for generating MIS has also proven to be challenging. Sometimes there is a delay in communication with nodal agencies regarding the allocation of teachers, funds, and other resources for the Kadam centres. These impediments keep rising at different stages of the programme. They are best resolved by keeping all the concerned parties in the loop.

Kadam's interventions so far

HPPI is present in the states of Haryana, Chhattisgarh, Jammu and Kashmir, Maharashtra, and Uttar Pradesh where it has signed MOUs with the state governments for taking the Kadam programme forward in order to bring OOSC into mainstream education. In Delhi, Rajasthan, Uttarakhand, and Madhya Pradesh, HPPI has partnered with private organizations to take the Kadam programme forward in these states. In Jammu and Kashmir, the work will begin soon.

The latest information on the Kadam programme in various states is given in the table below:

Since July 2016, HPPI has successfully mainstreamed 42,329 students and enrolled 63,499 children in Kadam centres. HPPI's contribution has been lauded and appreciated by various agencies and bodies.

S. No.	State	Total Number of OOSC Enrolled (Since Project Inception)	Total Mainstreamed Students as on July 2019	% Mainstreamed
1	Haryana	51,348	34,435	67%
2	Maharashtra	1,109	786	71%
3	Rajasthan	271	116	43%
4	Delhi	699	313	45%
5	Uttar Pradesh	4,056	1,767	44%
6	Chhattisgarh	3,704	2,869	77%
7	Uttarakhand	63	-	0%
8	Madhya Pradesh	2,249	2,043	91%
	Total	**63,499**	**42,329**	**67%**

State-wise Kadam Status

What makes Kadam a success story?

The success of any programme, project, or intervention depends on many factors, such as establishing programme centres, defining and implementing control processes, communicating effectively at all levels, and adopting a rock-solid system of monitoring. At Kadam, all these requirements receive close attention and elaborate inputs, which is why the programme has been a huge success.

Some of the key factors that make Kadam effective and successful are:

- Kadam's pedagogical model is effective in filling the learning gaps of OOSC so they can be successfully mainstreamed at age-appropriate learning levels

- The Kadam programme's unique, holistic approach encourages the development of cognitive skills along with social and life skills.

- Kadam's operational model is designed for scalability.

- Kadam successfully introduces OOSC to the regular school routine, as many of the children are first-generation learners, and mobilizes communities and other stakeholders.

- There is continuous retention follow-up for six months once OOSC have been mainstreamed.

- Kadam enjoys some leverage in the designing and implementation of government programmes and schemes.

These essential parameters of the Kadam programme make it effective and efficient, ensuring a better rate of retention of OOSC in formal schools. So far (as on September 2018), the retention rate of mainstreamed students has been approximately 85 per cent, as analysed by HPPI. The Kadam programme excels because, besides attending to the learning of children, it also involves parents, government officials, and other stakeholders throughout the entire process of programme implementation, beginning much before the children are actually enrolled in the Kadam centres. This involvement provides a distinct identity to the programme, ensures the commitment of all stakeholders, encourages learners to accord education a degree of importance, and nurtures a sense of responsibility in providing education to OOSC among all those involved—the parents, the community, the school authorities, the government agencies.

The Vision

HPPI shares its vision of mainstreaming OOSC with other governmental and non-governmental organizations working at the grass-root level. HPPI's confidence comes from the fact that Kadam's holistic approach makes it a sustainable programme. As learners gain confidence, they begin enjoying learning and being a part of the formal education system. Along with this, the community's commitment to education is also strengthened. When the school routines are set, learners and their families accept the school as a regular part of their lives, with everyone following the school schedule without any questions.

The aim of HPPI is to ensure that all OOSC can bridge their learning gap so they can join regular schools and learn along with other children. In the next five to six years, HPPI plans to work with 500,000 OOSC and to motivate state authorities and teachers to adopt methodologies and practices that will enable children to learn how to learn with responsibility and to construct knowledge in a natural progression (being a partner with the child to build knowledge rather than being just a provider of knowledge), in a way that is truly in line with the spirit and idea of the National Curriculum Framework.

Just like Vikas (whose story is described briefly in the section "A new lease of life"), who benefitted from the Kadam programme, many others are waiting their turn. HPPI, keeping in mind the United Nations' Sustainable Development Goals, is striving to provide quality learning aimed at bringing children into mainstream schools so that they can fulfil their potential, realize their dreams and ambitions, and secure their future. HPPI's hope is that once the first generation of learners grows up, they will inspire other generations to be more literate and to pursue education, thereby making the term "OOSC" a thing of the past.

Humana People to People India (HPPI) is a development organization registered as a not-for-profit company under section 25 of the Companies Act, 1956 as of 21 May 1998. It is a non-political,

non- religious organization working for the holistic development of underprivileged and marginalized people in rural and urban India through social development and poverty alleviation interventions, particularly coordinated and focused interventions in education, life skills, livelihood, empowerment of women, health and sanitation, and environmental sustainability. HPPI works in partnership with international and national private and public organizations. HPPI is currently implementing around 74 projects across 14 states in India, with an outreach of over 2 million people.

Endnotes

i https://thewire.in/education/the-un-report-on-out-of-school-kids-is-bad-news-for-india-but-the- real-picture-is-worse

ii National Sample Survey of Estimation of Out-of-School-Children in the Age 6–13 in India (2014). Draft report by Social and Rural Research Institute and Educational Consultants India Limited.
http://mhrd.gov.in/sites/upload_files/mhrd/files/upload_document/National-Survey-Estimation- School-Children-Draft-Report.pdf (accessed 26 September 2018). Also see https://www.cprindia.org/news/6124

iii Right of Children to Free and Compulsory Education Act, 2009 / Sarva Shiksha Abhiyan Interventional Strategies for Special Training (2013). http://mhrd.gov.in/sites/upload_files/mhrd/files/upload_document/OoSC.pdf (accessed 26 September 2018)

iv MHRD. Guidelines & Special Training and Definition of OoSC, Para 2.2, p. 2.

v National Sample Survey of Estimation of Out-of-School Children in the Age 6–13 in India. ssa.nic.in/pabminutes-documents/NS.pdf

vi C. A. Rohrbeck, M. D. Ginsburg-Block, J. W. Fantuzzo, & T. R. Miller (2003). Peer-assisted learning interventions with elementary school students: A meta-analytic review. Journal

of Educational Psychology, 95(2), 240–257.
Also see http://www.psy.gla.ac.uk/~steve/courses/ceredocs/
oldwikis/9.peerInt.pdf

Humana People to People India (HPPI), Delhi

Humana People to People India is a development organization registered as a not-for-profit company, in 1988. Humana People to People India's Mission is to unite with people in India in order to create development in the broadest sense through the implementation of projects that aim at transferring knowledge, skills and capacity to individuals and communities that need assistance to come out of poverty and other dehumanising conditions. Humana People to People India works together with the people in the projects as partners in finding solutions and in creating the necessary conditions to improve their living standards and to achieve people's aspirations towards a just and humanised life for the individuals, the families and their communities. HPPI is working for the holistic development of the under- privileged and marginalized people in rural and urban India through social development and poverty alleviation interventions by coordinated, strategic approaches focusing on education, life skills, improved livelihoods, health and sanitation, the empowerment of women and environment protection.
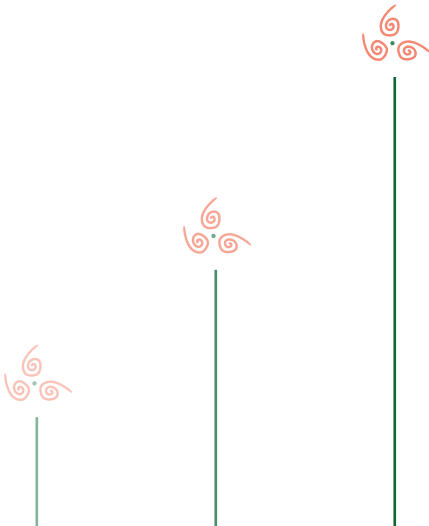
Setting the context

5. Case studies on interventions in Livelihoods

Traditional livelihoods such as agriculture, pastoralism, forest-based livelihoods, and handicrafts have been in a flux for many years. People in these occupations are compelled to look for additional or alternative means of livelihood and are engaged in a constant struggle to be gainfully employed while their traditional livelihoods are threatened.

In order to improve the livelihoods of the poor, the marginalised and the vulnerable, state and non-state organisations have implemented multiple programmes and interventions. These interventions have been in the form of enabling access to resources such as inputs, financial services and technology, capacity building, promoting livelihoods diversification and others, either as standalone or integrated, combining atleast two of these interventions. These interventions are aimed at improving incomes, and reducing the uncertainty of cash flows, promoting resilience among poor households and ultimately reducing poverty.

Many interventions have usually been conceived and implemented as a 'one size fits all' approach with little or no attention being paid to the knowledge and needs of the intended beneficiaries. As such, the outcomes and benefits of such interventions across beneficiary groups have not been uniform and, in many cases, the desired impact has not been achieved. The realisation that decentralisation and local participation may work better where centralised efforts could not succeed, spurred a growth of various participatory and collaborative approaches during the last few decades.

Participatory development approaches and interventions involve local communities, social sector organisations, research organisations, government and other stakeholders. They include interventions in production, service delivery, governance of commons, conservation of local resources, capacity building, giving a voice to the grievances and concerns of local communities to name a few. However, participatory approaches have been criticised for reducing the communities' involvement to perfunctory ways rather than attempting to change the existing power relations in favour of the communities they work with and enabling the communities to take charge of their own lives, rights and livelihoods.

The two case studies 'Collective unity triumphs' and 'Collaborative learning unleashing sustainable transformative development' explore and depict multiple facets of participation and decentralization – people's agency, importance of community involvement and active participation at all stages of an intervention and collaboration between various stakeholders: government, social sector organisations, research organisations and communities.

The case study 'Collective unity triumphs' is about the Maldharis who are the pastoralists of Banni in the Kutch region of Gujarat. It describes the adverse impact of partition, industrialisation and shortsighted interventions on pastoral livelihoods and how the Maldharis overcame the political, ecological, and

economic constraints through collective action and community led initiatives. The elders of Maldhari community realised the precarious situation their livelihoods were in and through collective action made concerted efforts to conserve the Banni buffalo breed, reclaim their rights to the grasslands of Banni and restore pride among the people of the community in their traditional way of living. The Maldhari community has been supported in its efforts by Sahjeevan, a social sector organisation working with marginalised communities in Gujarat. A key outcome of these efforts was the registration of a collective Banni Breeders Association (BBA), with

a membership of more than 1000 Maldharis. BBA further paved the way for consultations with government for recognition of the community's rights over common property resources and formation of forest rights committees in each village. BBA collaborated academic and research institutions and government departments to get the Banni breed of buffalo registered (leading to a doubling of the prices of buffaloes) and set up a research station for studying and documenting various aspects of Banni ecosystem and communities.

The case study 'Collaborative learning unleashing sustainable transformative development' is about PRADAN's experiences of working in Churinsoro, a remote forest village in West Bengal. As in the first case study, this case too highlights the importance of collaborative development efforts between various stakeholders, with the local community playing a meaningful and substantial role. In particular, it dispels the notion that research is the exclusive domain of academics and development practitioners and makes a strong argument for involving the people, particularly women, whose life and actions are being studied. Through deep engagement of small holder farmers at every stage of framing the research questions and objectives, the role of 'community as researcher' was firmly established from the very beginning. Another unique aspect of this project is the involvement of women farmers organised under SHGs in management of research, decisions related to levels of participation in the project, sharing information and monitoring. The four-year project resulted in food sufficiency for participating households through changes in cropping systems, improvements in quality and quantity of food intake, reduced drudgery for women farmers and women empowerment.

The key takeaway from the two case studies Sahjeevan and PRADAN is that community ownership of interventions and actions has led to significant positive consequences. People's agency upheld by the NGOs and other stakeholders collaborating with them and supporting them by tapping into their existing knowledge and skills, encouraging local need-based planning and implementation and

peer-to-peer learning, rather than top down methods that ignore the capacity of communities to take charge of their own needs, can work successfully in bringing long-term and lasting positive changes to the communities. One can only hypothesize if this would have been the case had these organisations directed and controlled the interventions with the community being an inert beneficiary.

5.1 Collaborative Learning:

Unleashing sustainable and transformative development

Professional Assistance for Development Action (PRADAN), West Bengal[1]

Abstract

The prevalence of extreme poverty and hunger renders agriculture-based livelihood a pivotal intervention. The interventions for agricultural livelihoods, however, are often found in the form of technological and agronomic prescriptive solutions, aimed at either increased income or enhanced productivity. In pursuit of this goal, often the real concerns of farmers, especially women farmers, remain unaddressed. The critical problems of agriculture-based livelihoods can be addressed more effectively if community organizations, developmental agencies, and research institutions work in collaboration to find contextual solutions to the problems identified and articulated by the community.

[1] Contributed by Kuntalika Kumbhakar and Sumita Kasana.

This case study describes an intervention aimed at bringing about positive changes in the livelihood and life of the residents of a remote forest-fringed village called Churinsoro in the Ayodhya Hills, in Purulia district, West Bengal. The community, the development agency, and various research organizations worked together to bring about change. Based on the research questions framed by the farmers, a unique farmer-focused research methodology was adopted, based on the core belief that the capacity of women farmers was a crucial driver of change. Collaborative farming, farmer-to-farmer learning, and interface with scientists were the means of bringing about a transformational change in women's self-perception, from being the secondary drivers of agricultural output to being the principal drivers as farmers, researchers, teachers, and change agents.

I. Collaborative Learning: Unleashing Sustainable and Transformative Development - Introduction

The challenges of agriculture-based livelihood opportunities can be addressed more effectively when we collaborate with partners doing research on topics that are relevant to the particular livelihood opportunity, like agriculture, soil, and hydrology. Generally, research and development (R&D) interventions do not collaborate. It is seen that research often only highlights the cause of the problems, or examines certain interventions that have already been carried out by development agencies, rather than working on identifying the problems jointly with the target community, planning action collaboratively with research participants, and then conducting research on the planned action in order to make it more effective, or, in other words, doing action research. When we make the community an equal partner and collaborator in our research undertaking, when we learn jointly and evolve together, then we have a recipe for sustainable transformative development led by the community, one that enhances the people's capacity to generate solutions to their own problems through active experimentation.

This case study examines an agricultural research for development project that was a partnership between Australian universities, the Indian NGOs PRADAN and ACWADAM, the international research organization World Veg (earlier AVRDC), and, most importantly, the smallholder farmers who were the intended beneficiaries of the research. A distinguishing and innovative feature of the project was the deep engagement of farmers as partners in the research activity. The project evolved a process of engaging farmers as partners in research. It adopted Kolb's learning cycle as the base approach in all modes of engagement with the community. The outcomes of this process of farmer engagement exceeded the initial researcher expectations. The outcomes included greater rigour during the critical stage of identifying the research questions, identification of opportunities for learning that were built into the research activity, ownership of the research outputs, farmer-to-farmer dissemination of the research outputs, an enhanced sense

of agency and empowerment of women farmers, and a permanent legacy of enhanced capacity for independent innovation that goes beyond agricultural research.

II. Context: People and the social and ecological landscape

Churinsoro village is located in Ayodhya panchayat in Baghmundi block, in Purulia district in West Bengal state. This is one of the most remote and most underdeveloped areas of West Bengal. Till 2011, it was a hotbed of the Naxalite movement. It shares a boundary with Jharkhand, a heavily forested area whose jungles and hills offered a convenient passage for the Naxalites. Government programmes and facilities were not easily accessible to the people.

The residents of Churinsoro village are homogeneous tribal groups like the Santals, Ho, and Bedia and maintain exclusive identities. They face widespread discrimination and are isolated from mainstream society. Their basket of livelihood options is excessively laborious, involving back-breaking physical labour with low returns. The women suffer the most in theseconditions. They are seen as labourers, whether they work in their own agricultural field or in fields belonging to others; whether they go to the forest to collect wood and forest produce or do earth-cutting work.

Table 1: Demographic profile of Baghmundi block according to Census 2011	
No. of households	27,508
Total population	1,35,579
Rural population	1,35,579
SC + ST population (%)	35.46
Literacy rate (%) male	60
Literacy rate (%) female	35

The people live in mud houses with thatched or tiled roofs and own very few assets. The language of this area is distinctly different from that in the rest of West Bengal and is regarded as less developed. Often the people of this region are looked down upon and treated as ganwar (uncivilized).

Table 2: Deprivation data from the Socio Economic and Caste Census (SECC)				
Deprivation level (%)	India	West Bengal	Purulia	Baghmundi
D1	13.28	21.06	32.83	42.89
D2	3.64	2.41	2.89	3.49
D3	3.86	3.55	3.86	4.25
D4	0.40	0.47	0.45	0.37
D5	21.56	30.15	35.69	34.47
D6	23.52	25.73	32.68	40.12
D7	30.04	44.32	27.93	36.46

The region is characterized by high but variable rainfall (1,100–1,600 mm, 80 per cent received in June–September), frequent and sometimes long dry spells during the monsoon, little irrigation (~8 per cent of the area), high runoff and soil erosion, terraced monocropped paddy lands, and subsistence agriculture. The uplands are often degraded and make little contribution to overall agricultural productivity. Poor farmers have little, if any, access to the lowlands where rice has traditionally been grown. There is little mechanization; seeds of crops other than rice are generally hand-broadcast; weeds are removed by hand; and fertilisers (if used) are hand- broadcast. The use of inputs is inhibited by the extreme risk-aversion of these poor farmers, combined with the inherent riskiness of farming in this area. Consequently, most villagers are food

insecure, with only 50–60 per cent of their food grain requirement being met by on-farm production. These drivers contribute to widespread malnutrition, low levels of literacy, particularly among girls, and limited access to medical services due to limited disposable household income. The SECC deprivation data reflects the higher levels of deprivation in terms of proper housing (D1), literacy (D6), and manual labour as the primary source of income (D7).

III. Conceptualization

Considering the complex context, the need to develop a scalable, context-appropriate model that would ensure sustainable changes in the community, strengthen their water security, and bolster their resilience to climate change was realized. This research project was built on the findings of the Australian Centre for International Agricultural Research (ACIAR) Project LWR/2002/100, 'Water harvesting and better cropping systems for smallholders of the East India Plateau', led by Professor Peter Cornish, University of Western Sydney (2006–11). The contexts for both project areas were more or less the same, except that Churinsoro was more physically remote and the villagers' lack of exposure to better agricultural practices was more extensive. Some of the learnings that were adopted in Churinsoro from earlier projects were:

- Working on agriculture-based livelihood development involves bringing about complex changes and demands a new approach to extension based on adult-learning principles, with a central focus on the meaningful engagement of women as farmers.
- Farmers will develop their own unique climate-responsive systems, but they need to be equipped and trained to understand their water resources (which vary in space and time), and to match these to a range of crop options (access to quality seeds of proven varieties of pulses, mustard, wheat, and vegetables). This does not require any new technology,

but it does require an appropriate, modern approach to extension that is respectful of the capacities and aspirations of farmers.

- Extension agencies should adopt a participatory approach, allowing farmers to learn rather than being told.
  This builds their self-confidence and increases their capacity for independent learning and innovation.

- Women's institutions (self-help groups [SHGs]) should be recognized as leaders of agricultural innovation, with their role not being restricted to microfinance and women's issues, nor should they be seen merely as instruments for reaching male farmers.

Based on the above learnings, the project was designed to achieve both R&D outcomes. The research component was funded by ACIAR. The aim was to refine and validate the research over a larger geographic area in three districts in the East India Plateau (EIP). This process is driven by farmer-led experiential learning, facilitated by PRADAN and supported by the Australian research teams, AVRDC,[i] ACWADAM,[ii] and BCKV,[iii] thereby ensuring that the research is transdisciplinary. The duration of the project was four years, from 2012 to 2016.

The project has evolved a unique farmer-focused research methodology drawing on several complementary approaches, including Participatory Action Research (PAR – Kurt Lewin), Agricultural Research for Development (AR4D), and collective or social learning theories (Kolb's learning cycle). A common characteristic of all these methodologies is maintaining a focus on the farmer as the centre of all research activity. The core element of our approach is our process of farmer engagement.

Farmers are involved in all aspects of the research process, including:

1.   Identifying and developing research questions

2.   Conducting experimental treatment in farmers' fields and undertaking agronomic management

3.   Assisting in data collection and maintaining observations of treatment effects

4.   Contributing to the interpretation of experimental results and adding practical insights

5.   Communicating the research results to other farmers.

In tune with our farmer-focused approach, the project works with a group of women farmers, who are collectivized under SHGs. Churinsoro has two SHGs, which collectivized approximately all the households in the village. SHGs provide a platform for sharing learning and knowledge and for building systems for mutual help; they foster cohesiveness and collectiveness, which bring about remarkable changes in the lives of members. The project focused on community processes, and the SHG was the forum where these community processes were fostered.

IV. Operationalization

A. Inception of the project and arriving at the research questions and objectives

The overall aim of the project was to improve livelihoods by enabling local farmers to develop flexible and responsive cropping and livestock systems that better utilized available water resources, thereby building resilience to climate change/variability at the household level. This required research on water, soil, crops, and livestock, and the integration of all these activities at the farmer level. Thus, suitable partners were identified to join the project team. The team included professionals from ACWADAM, AVRDC, BCKV, ACIAR, and PRADAN. Maintaining the spirit of the participatory

approach at every level, an inception workshop with other project team partners was conducted. Some of the basic principles to be followed in this project were outlined at this meeting. These were:

- The focus would be on the individual and on the individual's local knowledge.

- The SHG would be the focal point and women would lead the research.

- No alien crop would be introduced initially; rather, the focus would be on understanding the nature, scope, and characteristics of the existing crops.

- The research questions would be linked with the aspirations of the community.

To introduce the project to the villagers, a series of workshops and meetings were conducted in Churinsoro, especially targeted at the SHG members and their spouses and the research partner. These meetings and workshops were predesigned, and the participation of the community, both women and men, was ensured. PRADAN professionals were the key facilitators of these events and discussed the idea and objectives of the project with the villagers. It was communicated clearly that the project was a research project whose results at that point were largely unknown and that the farmers would learn by doing. The pros and cons of the project, and the need for commitment by the people to ensure successful learnings, were also discussed at the meetings.

Using participatory rural appraisal (PRA) tools, problem mapping vis-à-vis the objective of the project was done, whereby land-related problems across different categories of land, the crops grown in those lands, productivity, irrigation, livestock, and other such problems were discussed in depth with the villagers. During these events, research questions and experiments were identified, articulated, and designed jointly with the community. The community's role as a researcher was established from the

very beginning, and it was emphasized that it was their land, their agriculture, and their research. Some of the issues articulated by the farmers for the research project were:

1.   How to increase paddy productivity in the midland and upland areas: The farmers had only three to six months of food sufficiency and their major landholding comprises mid-upland. This land is not very suitable for transplanted rice and with erratic rainfall, rice crops often fail.

2.   How to make maize a lucrative crop: Maize is a traditional crop in the region. It is also part of the staple diet, consumed in the form of porridge when paddy is unavailable. However, its low productivity was a problem. Farmers wanted to sustain maize as an important crop and enhance its productivity.

3.   Whether it is possible to cultivate a second crop after kharif: Farmers wanted to cultivate mustard and other crops. They thought it would not be possible to harvest two crops without irrigation.

4.   How to improve tomato cultivation: Farmers cultivated tomatoes on small plots of land, but they were unable to make a good profit. They wanted to increase productivity on the same piece of land, considering water and labour constraints. Another problem was the short shelf life of their tomato crops, which compelled them to sell at low prices. The farmers wanted to increase the productivity of tomato and undertake the varietal trial of tomato with a longer shelf life and consistent fruit size suitable to the local climatic conditions.

Considering these issues, the research objectives were identified and articulated. They were:

1. To analyse the variability and seasonality of the available water resources (rainfall, residual soil water) across the landscape, and to present this information in a manner that was helpful to farmers in making crop-management decisions, identifying both risks and opportunities.

2. To remediate soils degraded by traditional paddy cultivation so as to facilitate the growing of a second crop following rice.

3. To work with local farmers to develop a wide range of crop options, emphasizing preparedness and flexibility, to enable farmers to take advantage of innovative sowing opportunities.

4. To analyse opportunities and risks associated with new integrated cropping systems in terms of productivity, resource-use efficiency, and household food security and income.

5. To study the process of scaling out: To develop effective and efficient methods for scaling out development programmes that focus on enabling farmers to develop their capacity for generating local innovations that enhance food security, household income, integrated natural resource management, and crop production.

B. Selection of researcher farmers and experiment plots

For this on-farm research activity, PRADAN required farmers who were willing to be participants. The engagement of the community from the inception of the project set the stage for the farmers to be equal partners. The first step in the project was to identify and finalize the research questions. The next step was the selection of farmers. When discussing the agenda, the SHGs presented an interesting aspect. They said that all their members,

that is, about 30 families, needed to be involved in the research study. This compelled us to think out of the box, because for us experimentation and the monitoring of such large numbers of participants would be an uphill task. Initially, PRADAN had planned on involving two types of farmers: the first were researcher farmers, who would participate in the research study, with ACIAR and PRADAN as partners, with a recommended package of practices for research on the new and innovative farming system; and the second were control farmers, who practised traditional agriculture.

After a discussion, PRADAN came up with three categories of researcher farmers. The first category was the "core farmer researcher"; research data pertaining to this category would be collected intensively; the second category was the "medium farmer researcher"; research data pertaining to this category would be collected only on some parameters; and the third category was the "basic farmer researcher"; production data for this category would be tracked and collected, addressing the requirement of having control plots of traditional crops that were cultivated using traditional practices for the purpose of comparing and contrasting. This grouping was acceptable to the women, and they quickly divided the households into the three categories depending on their interest in research and the size of their landholding. The point pertaining to landholding was interesting, because they thought, quite prudently, that farmers with smaller landholdings should not take risks with the experiments. Later on, the families got overlapped. The same farmer sometimes had a plot for core research as well as a plot for control research. This change was introduced because of the needs of the research study and also in response to the growing enthusiasm of farmers.

Thirty households of the village hamlet were included, which led to the better management of the research activities. For example, the problem of cattle grazing, cited as a major roadblock in expanding the cultivation of vegetables and other crops, was dealt with smoothly. To provide fodder for cattle, the villagers grew napier grass in small plots, which in itself marks a change in agricultural practices and a shift in the mindset of the farmers.

After the selection of the farmers, women SHG members were given an opportunity to select the land and/or the plots for various research experiments. The minimum land requirement was ten decimals of the medium upland category, which the women identified keeping in mind ease of management and demonstration. Taking the decision as a collective made it easy and convenient to plan and conduct the experiments in various plots of land.

C. Systems and processes adopted

SHG meeting – *a platform for motivating, sharing, and monitoring:* One of the key components of the work, as well as the main focus of the approach, was having the SHGs at the helm of managing the research programmes. The SHG weekly meeting became the forum for updating and discussing progress regularly. Initially, the PRADAN professionals attended the weekly meetings and later, as the SHGs took charge, they attended the meetings every fortnight. The SHG members, with the support of the PRADAN professionals, set the schedules of the experiment. The details of each experiment, along with the relevant instructions, were deliberated upon, explained, and discussed. The women followed up with the schedule, monitoring and evaluating the progress. Any problems that came up were discussed and addressed by all the SHG members. They ensured the implementation of all the components of the field research, and the precision required in following and monitoring it, through regular field visits. The women participated actively, conducted the research, and provided updates on the progress they had made at the weekly meetings.

The women would explain to the men the details of the experiment and its components and would then jointly carry it out with them. This activity became a part of their weekly meeting, making monitoring and evaluation a seamless process.

The SHG platform was set up as the nodal forum for any communication by the other partners too. In the weekly meetings of the SHGs, the research partners explained their research component.

The idea was to build the capacity of the women members and to impart all the relevant technical and other knowledge in simple language at this platform.

Farmer Field School (FFS) – *a platform for learning, experimenting, and doing:* The FFS model was adopted for the demonstration. The farmers' school was run on the basis of a specific crop or a particular group of crops. Women who planned to grow that particular crop attended the farmers' school. Usually four or five separate demonstrations were conducted at various stages of the crop's growth. A brief meeting was held before every demonstration, during which the women shared their field experiences and learnings from the previous demonstration. The entire package of practices (POP) was broken down into four or five modules. Each was taught in a separate demonstration. The SHG members were trained in operating various agricultural tools and implements and were also trained in the new agronomic practices in FFS. Simple tools and games were used to explain and understand various concepts. For example, the sponge was used to explain the concept of soil

moisture content. Similarly, simple tools were described in the local language so that the SHG members could understand the cropping system and the water requirements of different crops (Figure1). The purpose of FFS was to make the women more confident about taking up agricultural work, so that they could also think of themselves as farmers and could actively take part in decision-making. The learnings from the FFS were brought back to the SHG so that the members could reflect, analyse, and make action plans. The cyclical process of Plan–Do–Observe–Reflect–Plan as the core process was followed at every step.

AVRDC, one of the research partners, adopted the FFS model in its interactions with the SHG members to demonstrate crop diversification and improved agronomic practices. The ACWADAM staff trained the women in measuring the water table, assessing the levels of infiltration and residual moisture, and using the corresponding instruments. In its other projects, ACWADAM would have hired a separate staff for this work. However, here it built the capabilities of the women, which was a new experience and learning for them. A mini weather station was set up in the house of one of the members and the women were trained to operate it and take the readings. The women's low literacy rate was a hindrance in the keeping of their records and reading the gauges, but nevertheless the information was understood by mostly all. Data interpretation and analyses were carried out in consultation with the SHG women, which built their confidence and increased their understanding of the movement of water and its relation to crop productivity.

Agricultural seasonal meeting – a community learning forum: These meetings were held at the end of one cycle of research, which coincided with the end of the agricultural season. At these meetings, space was created by the facilitator for the hearing of specific community observations. The meetings were fixed in advance and all the partners—AVRDS, ACWADAM, SHG members and their spouses—attended. PRADAN played the role of the key facilitator. The duration of these meetings was about four to five hours. They were organised in the middle of the kharif and Review reflection meeting in Churinsoro rabi seasons, and at the end of one cycle of

research, which usually coincided with the end of the agricultural season. So annually there would be at least two meetings.

The discussions during the mid-season meetings were about the research experiments that were being conducted during the period. These meetings included discussions on field transacts at the beginning of the meeting when all the attendees shared their observations and commented on these. Space was created by the facilitator to hear specific community observations. A critical discussion using the five WHs framework (who, when, what, where, how), supported by field transact observations, took place. Probable solutions and actions to be taken were also discussed jointly.

The end-of-the-season meeting held at the end of one cycle of research, including both the agricultural seasons of kharif and rabi, was an annual event attended by all partners. Data was shared through graphs and other simple tools; the scientific data as well as the wisdom of the community were analysed. The experience was consolidated and new action plans for the next year were drawn up.

D. Exposure, learning forum, and out-scaling

The plots chosen by the farmers for the experiments were mostly located on the main road, which is accessible by other villagers. Many farmers, therefore, became curious about the experiments

Review reflection meeting in Churinsoro

being undertaken and the resultant crops drew their attention and triggered their interest. Some unplanned exposure took place initially when the community shared their experiences informally. During the second annual event, a focus group discussion (FGD) on agricultural practices and the effects on the lives of the farmers was conducted during a workshop with three categories of farmers: research farmers, control farmers, and spouses of research farmers. The purpose was to get a broader view and to compare the research and control farmers, to assess the changes that had taken place, and their perception of and reaction to those changes. During the FGD, when discussing the positive changes in their lives, the women came up with the idea of helping others bring about similar positive changes in their lives. Thus, the idea of a learning forum emerged, inspired by the "professional learning forum" used for school education. In the words of Louise Stoll et al. (2006: 221): "Developing professional learning communities appears to hold considerable promise for capacity building for sustainable improvement."[iv]

The SHG institutions in their various forum meetings spread the word about their planned schedule for inviting villagers to see their life-changing achievements. These exposure visits were free, wherein farmers and SHG members from other villages came on their own to learn about and observe the activities. The women, along with the PRADAN professionals, designed the visit and the steps of the field transact. Building on their own experiential learning, the women asked the visitors trigger questions, to help them explore the subject in greater depth. The women also decided not to restrict the exposure visit to agriculture, but to also speak about the changes brought about in their own life. In all, 28 exposure events were conducted, covering all the 90 SHGs spread across 34 villages. To make the learning comprehensive, each group was brought in for a visit at the beginning of the agricultural season when the land was being prepared and seeds were being sown. The next visit took place towards the end of the agricultural season when the crop was at the full fruiting stage and harvesting had begun. The women farmer researchers were confident about their knowledge and learning,

which was reflected during the visit when they fielded all kinds of questions from the visiting farmers. Some offered to support the visitors and guide them in the field if they wanted to adopt these new practices.

V. Changes and transformation

A. Change in livelihood basket and cropping system

Food sufficiency was the major concern of the farmers, and hence increased paddy yield was one of the intervention points. Farmers wanted to use the mid-uplands rather than the mid- lowlands for paddy cultivation. However, they could not cultivate paddy because of the unavailability of water. Based on the soil type and the availability of water/moisture, it was proposed to cultivate System of Rice Intensification (SRI) paddy in the lowlands and Aerobic Direct Seeded Rice (ADSR) in the mid-lowlands and mid-uplands. Although the farmers were familiar with SRI, which they had been cultivating in the lowlands, the concept of ADSR was new to them. They were initially sceptical about growing ADSR, as they thought that it would not yield results. This was because instead of transplanting the paddy, they would have to directly sow the paddy seeds in a line. They found it very similar to their traditional broadcasting method, which they no longer practised because of its low productivity. In the first year, only seven farmers piloted ADSR. "The villagers thought we were dumb. They used to say how will you get a good yield if you don't put in the effort. The more effort you put in, the better the yield you will get," said an SHG member who had piloted ADSR. "The people who were not part of the SHG doubted and ridiculed us in the first year," said another SHG member. However, the results were immediate, as productivity in the first year was affected by low rainfall, and the mid-uplands that were under ADSR were green and produced a good yield. In the second year, many farmers turned to ADSR; even the control farmers wanted to try ADSR. SRI multiplied production in the farmers' medium lowlands, thereby increasing the period of food security,[v] and ADSR helped to shorten the period of hunger, thereby making the families in the village entirely food

secure. Figure 2[vi] shows the shift in the number of families to food sufficiency. The data shows that at present 70 per cent of the families have 12 months of food security and 30 per cent of the families have food security of between six and 10 months.

The second concern articulated by the farmers was making the cultivation of maize sufficiently lucrative so that they could continue growing it. Cultivation of maize had been declining because of its low productivity. Farmers feared that maize, like other millets, would also disappear from their diet. Since maize has a cultural significance and has been a traditional crop, farmers wanted to make maize cultivation lucrative enough so it could be sustained. Line sowing of maize was done to aid intercropping and this also reduced the unruly growth of weeds. The women adopted many new agricultural practices such as intercropping of maize with legumes for the first time, adding to the income of the family. Farmers did staking of legume plants on maize plants. Hemlata didi, a research farmer, commented,

"Earlier we felt that we had no control over maize production.We would never look at the plots after sowing and weeding was very cumbersome, but now with intercropping, we tend to the maize fields more often and the yield is also good."

Farmers also tried cultivating different crops along with maize like beans, cowpea, and green pea. Soya bean was tried as a new crop, but failed; the seeds did not germinate. So the farmers cultivated cowpea and French beans along with maize a local crop.

For the third research question, a varietal trial of tomatoes was carried out. Tomatoes were cultivated using the pit method, which helped in the better staking of the plants, resulting in the growth of healthy plants and the production of superior round fruits.

The farmers were also introduced to other vegetables. With increased confidence, farmers in the subsequent years tested and

Change in food security

Past   Present

Food security in Months
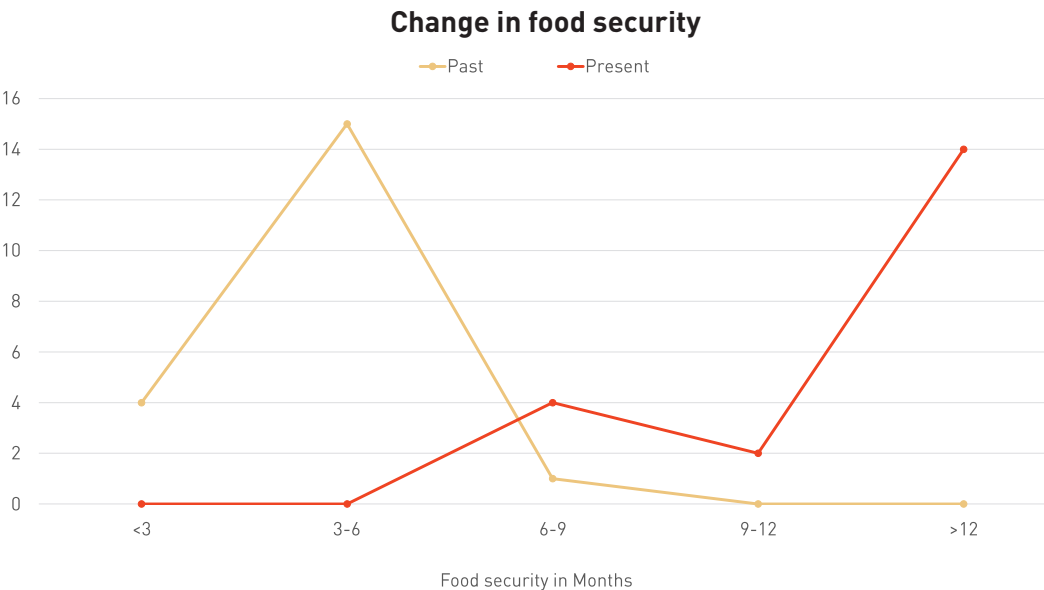
tried out various varieties on their own. One farmer said, "I want to test this variety, so even if I lose productivity to some extent, I will know what is suitable." They adopted the pit-and-trellis method for creepers. They grew new varieties of tomato as well as pumpkin, garden pea, and cabbage. Newly adopted crops like pulses, including pigeon pea and horse gram, ensured cash supply and food diversity for the family.

B. Change in diet and nutrition[vii]

New and innovative agricultural practices brought food sufficiency to the families and ensured food security in terms of the quality and quantity of diet and food intake (see Figure 3).

The food intake of the village women improved in terms of both quantity and quality. Five years earlier, the women and their families used to have one meal a day, comprising only rice with salt

Diversification in crops and diet : A comparision

■ Past   ■ Present

	No. of crops Diversified crops				Food item in plate Diversifies food plate		
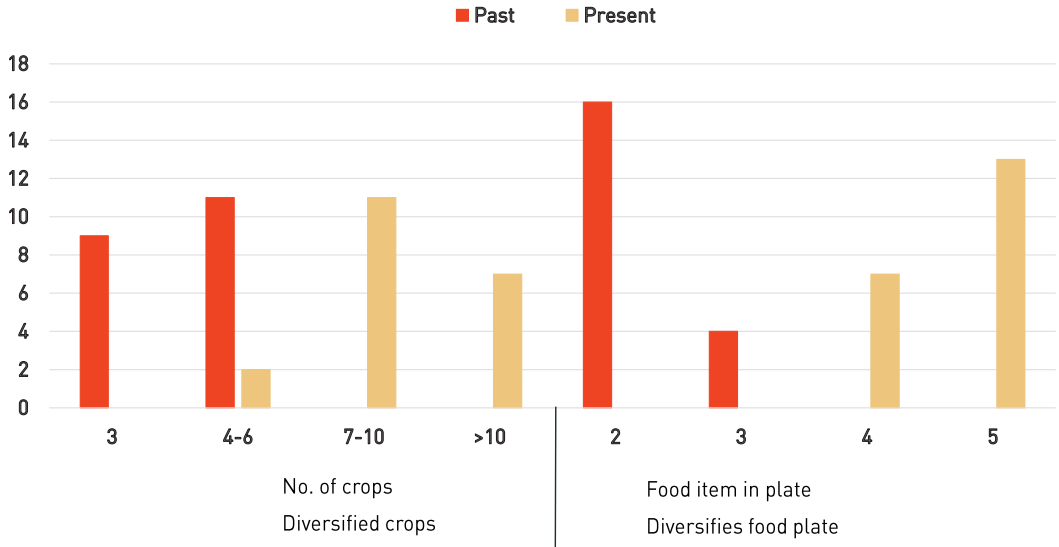
and sometimes rice with wild leafy green vegetables at night. To satisfy their hunger during the day, they would eat wild potatoes or boiled semi-liquid maize, when available. However, after the project, they now have three meals a day; they eat rice in the morning; for lunch they have rice with various vegetables that they either grow themselves or buy from the market; dinner consists of rice, vegetables, and dal. The families now consume vegetables like French bean, peas, pumpkin, ridge gourd (which they consumed for the first time), bottle gourd, bitter gourd, cowpea, chickpea, spinach, water spinach, and mustard leaves. The consumption of meat has increased in the last five years, with 65 per cent of the families reporting that they have meat, eggs, and fish two or three times a week, and 35 per cent of the families have these foods two or three times a month (see Figure 4). Earlier, families only consumed meat during festivals or when a relative visited them. Awareness and knowledge about the benefits of good and nutritious food is quite high now among the women. Although the women find their current diet quite healthy and nutritious as compared to the previous five years and think there is a need to improve their diet further by the regular consumption of meat, fish, egg, pulses, vegetables (especially leafy green vegetables), milk, and fruits.

Improvement in Diet

■ Daily ■ Twice a week ■ Once a week ■ Once a month

	Meat Intake		Pulses Intake		Vegetables Intake	
	Past	Present	Past	present	Past	Present
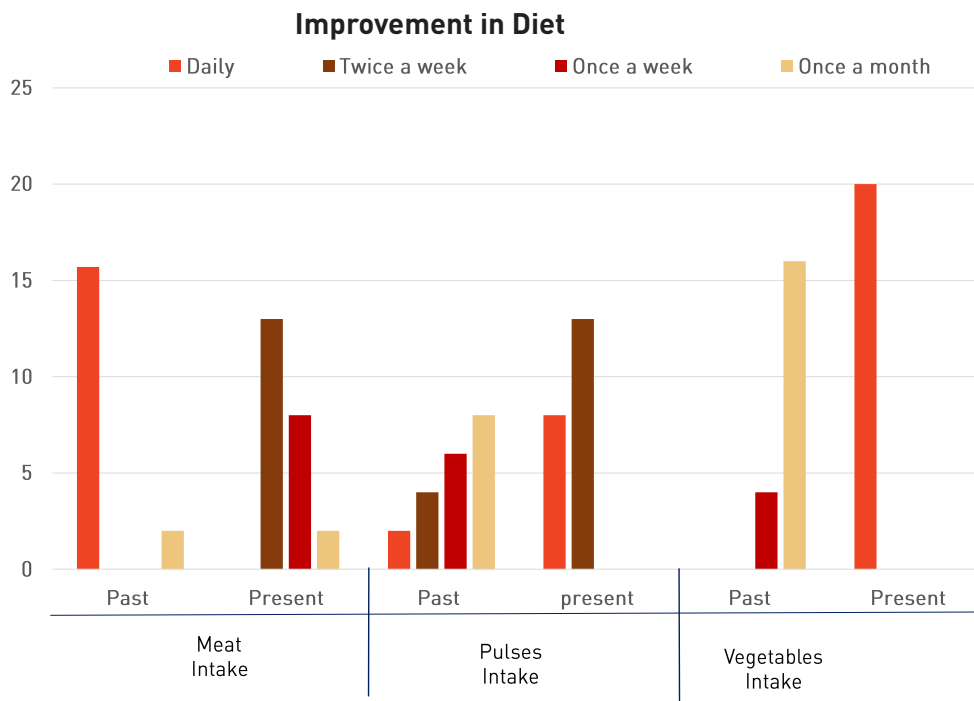
C. Change in conditions of women

Interestingly, the need to reduce the drudgery of women farmers did not emerge as an issue in the initial meetings with the farmers. But as the women were leading the research, they soon raised it as a concern in different forums. The women were mostly engaged in back-breaking work like sowing, transplanting, weeding, and harvesting. Subsequently, the introduction of innovative tools like the line marker, wheel hoe, Cono weeder, and earthing-up machine in agriculture has brought about significant changes in the scope and nature of women's role in agriculture, making it less time-consuming and reducing the drudgery. Consequently, women now have more time for themselves, their children, and their family.

These new and innovative agricultural interventions have brought better returns and drastically decreased the women's dependency on the forest and on forest produce. This has had a

positive impact on the health, well-being, and general environment of the women. "Women would go to the jungle to collect forest produce and sell it in the market, but now with improved agriculture and more income, women do not go to the forest. This is also a big respite for us and we can look after our children and our house," said Sonamuni. The women said that earlier they did not have time for themselves and their children because they were very busy working in the forests. Usually, they bathed once in a month or two with mud and washed their clothes with ashes and warm water. Their involvement in the agricultural research project has allowed them more time and more income, so they can now take better care of themselves. "Now I have enough time for myself because I do not need to go to the forest. So I oil my hair and bathe with soap every single day and wash my clothes with a washing soap. I feel healthy and good," said a contended Hemlata Mandi. They also make sure that their children are clean and healthy; they bathe them every day before sending them to school and ensure that they wear clean clothes.

With an assured supply of food and increased income in the family, women are prioritizing their children's education. The study also revealed that 80 per cent of the families now spend most of their income on children's education and food. "Besides food, I spend most of my earnings to pay for my child's education in a private school for which I pay Rs. 1,700 per month," said Sadhmoni didi. The mindset of the women shows a distinct change. Earlier, their main focus was basic survival, but now they prioritize the education of their children and send them to private schools for better education. The desire for higher living standards and personal well-being marks a significant transformational change in the lives of women.

D. Women's empowerment

Women's empowerment in this context was seen in various areas where decision-making power was based on income, expenditure, time, labour, ownership of assets, skills, and knowledge of new agricultural techniques. Given the deeply patriarchal nature of Indian society, it is not surprising that men controlled all aspects

of life in Churinsoro, from work, income, expenditure, labour, skill, education, and so on. However, the inception of SHGs and the agricultural research project introduced different gender dynamics among the villagers. The project and the SHGs created space for women's involvement in decision-making, where they started saving their income, planning agricultural activities, and deciding what crops to cultivate and which technique or system to adopt. Women's active role in planning and deciding the scope and nature of the research study resulted in improved agricultural production, and consequently brought about a new perception of women in the community, including among the men. About 75 per cent of the women stated that now they are treated as equal to men to a large extent. Women now participate more actively in decision-making at home, and they have an increased say in decisions pertaining to agriculture and family expenditure

Change in decision making
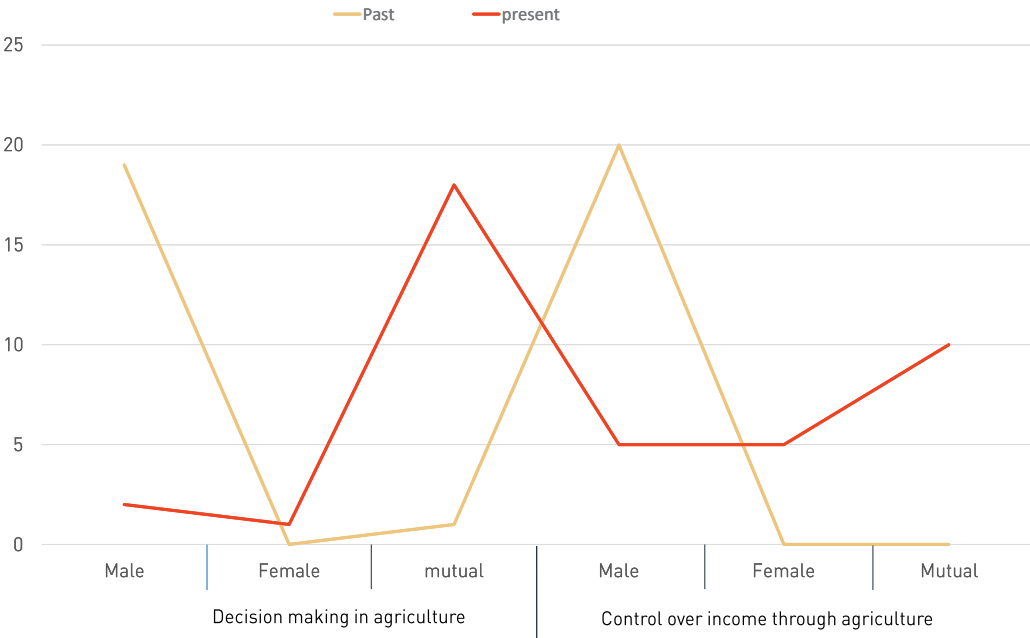
> *"If I give money to men, they will finish it all off by drinking. That is why I have taken charge of the expenditure at home,"*
>
> *- Hemlata*

This ensures a better, happier, and more harmonious family life. Many studies across the world have shown that income controlled by women is more frequently used on food and health care for the family, particularly for children.

A noticeable shift has occurred in the traditional gender- based distribution of roles for agricultural work with the adoption of new innovative agricultural interventions like a new cropping system and mechanization. The women said that agricultural activities such as sowing/transplanting, weeding, harvesting, collecting of harvested crops, which used to be the work of women, are now performed by both men and women equally.

> *"Now with the introduction of mechanical weeders, men also do weeding. This is a big shift,"*
>
> *- The SHG members during a meeting*

The women also said that currently they are able to reduce their workload during pregnancy and in the lactating stage due to this role-sharing. The women stated that their improved knowledge of agriculture has gained them recognition as farmers. About 80 per cent of them said confidently that they can teach other farmers what they have learned.

As a group, the women also reported that they teach other women and men farmers from other villages what they have learned from the agriculture project. These women's groups have established an entrepreneurship model by teaching others for a remuneration

of Rs. 300 per day per group. The women say they feel good and confident and now aspire to continue good agricultural practices, to grow new, high-value cash crops, to gain access to markets for their produce, and to avail of amenities like housing, electricity, toilets, and an all-weather road. Furthermore, in order to mitigate the gaps in agriculture, they are ready to take up an irrigation project that will provide them surplus water, give them additional income, and enhance their well-being. Figure 6 captures the change in the perceptions of the 20 women SHG members who were interviewed and who participated in FGDs.

Perceptions in women
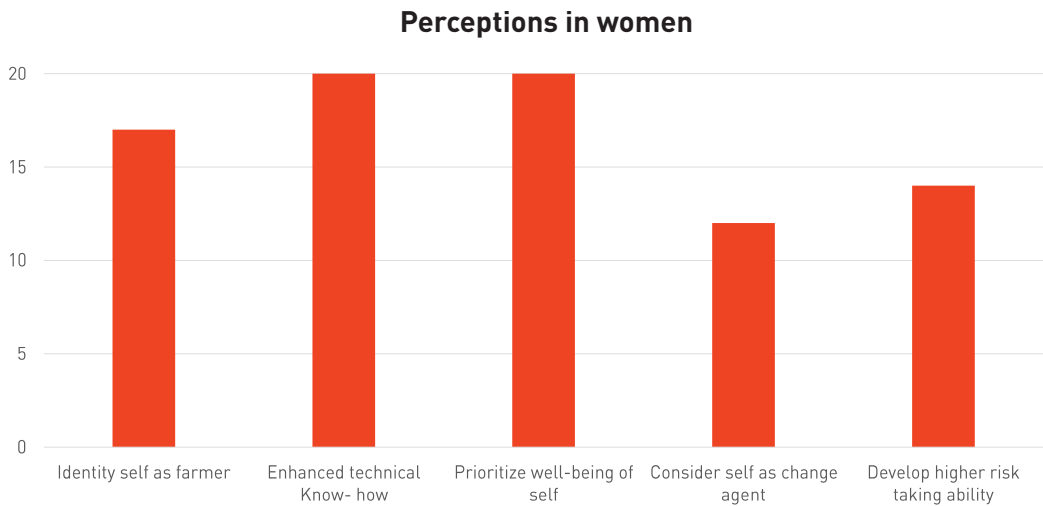
These women give complete credit to the SHGs for the changes they have experienced. The SHG is another factor contributing to women's empowerment, claimed a group of women.

"As a group, we are one family. We share our strengths and weaknesses, sadness and happiness,"

- Anjani Mandi.

The SHG allows women to save money and take loans whenever required, reducing the need to borrow money from moneylenders at high interest rates or to mortgage land. Using their own money that

they have pooled together, they take loans at annual interest rates of 12–24 per cent, with flexible repayment options. The SHG is a vital learning forum for women, where they plan their agricultural activities and experiments, and where they reflect on and review their concrete experiences, to get a better yield and a higher income in the coming year.

VI. Out-scaling of the model in Baghmundi

Building on the experience and learnings of this project, the PRADAN team designed its agricultural livelihood intervention differently. The team implemented the Upasangha[viii]-level agricultural training programme in all its eight Sanghas[ix] to facilitate and encourage the involvement and equal participation of the SHG collectives in agricultural livelihood interventions. The training design incorporated holistic concepts around women and development. It introduced gender issues and gender-based discrimination in agricultural work. It discussed the roles of men and women who take decisions related to agriculture using various gender tools. It captured the state of women's health and nutrition through experiential processes. It included knowledge building of women on different advanced agricultural activities like SRI, direct seeded rice (DSR), trellis, tomato rain shelter, and provided training in the use of agricultural machines like weeder, marker, and earthen up. Focusing on technical aspects related to agriculture, women were trained to plan their agricultural activities effectively in order to increase their annual income. Women agricultural trainers undertook year-round agricultural planning with the help of Upasangha members. The planning process was focused on enhancing their knowledge of their main livelihood option, that is, agriculture. The farmer field school (FFS) model was adopted to disseminate learning on a large scale. SHG women members were encouraged by women agricultural trainers and Upasangha women to engage in the FFS to learn new techniques of agricultural work. In the financial year 2018–19, the team was able to engage with 650 SHGs through the agricultural programme. The team reached out to almost 7,000 families in this year to make them aware of the advanced agricultural concepts,

practices, and techniques with the help of the FFS model. The Upasangha holds monthly meetings where the members review the progress of demonstrations as well as of the farmers who have adopted the advanced techniques. In these meetings, professionals facilitate in making the agricultural programme sustainable.

VII. Key learnings

This agricultural research programme was unique for two reasons. First, the research was conducted with real farmers and in their own fields. Second, women were given primacy as farmer researchers. The project mainly focused on women as individuals, to enhance their sense of agency and to build their capacity (human resource capacity). Experience shows that local need-based planning is more effective than project need-based planning because it incorporates data that is based on reality, providing more space and opportunity to women to plan and act in accordance with their own needs and problems rather than sticking to the strict guiding principles of a project, as is the usual way. In addition, local need-based planning takes into consideration indigenous knowledge and practices, thereby developing and enhancing the women's capacity to solve their own problems.

The progress from a farmer to a researcher to a teacher is a gradual and continuous process. It involves planning, experimenting, reviewing, and reflecting, with insights and lessons learned from experiences and from the changes implemented to improve performance in future activities. This process follows the model of cognitive development, as depicted in Figure 7.

The engagement approach, or the action research cycle, employed in interactions with the community was based on Kolb's learning cycle where the focus was on experimentation and learning (Figure 8). The project activities were designed accordingly, beginning with the inception meeting and ending with the annual review meeting, where analysing experiences and synthesizing the lessons learned to come up with new activities was a regular cycle. In

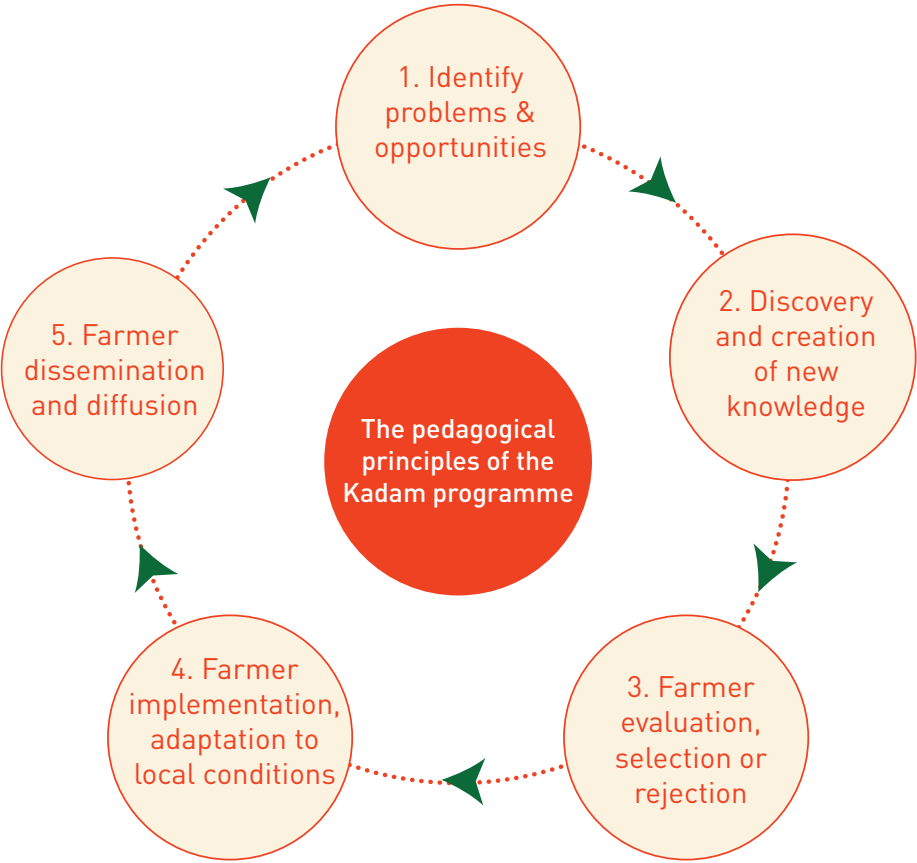**Figure 7: Model of Cognitive Development**

Time
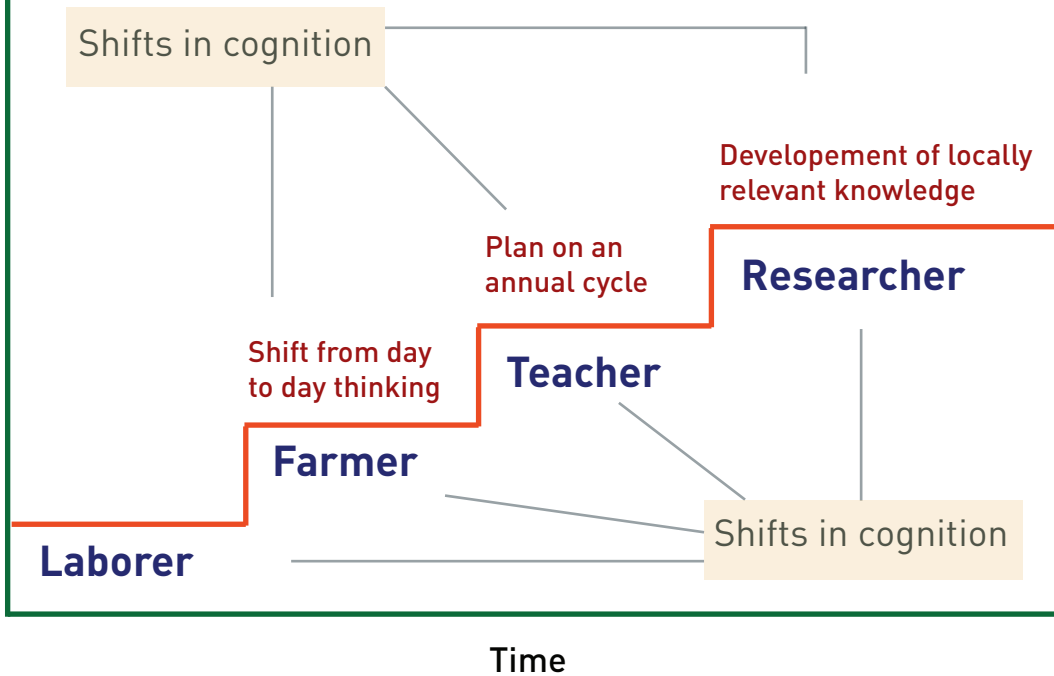
a review meeting also, this process was diligently followed. The cycle of activities began with joint field visits, observing the experimental farm plots while transacting the farm field, interpreting the observations and analysing them to derive learning, and making action plans.

It was ensured that all the processes were participatory, and the research followed the action research framework.

The engagement approach and the processes[2] adopted in this project ensured a shift in the identity of the participant—from being a "farm labourer to a farmer to a researcher" and finally to a "teacher". Various PRA activities reveal that women do more than 85 per cent of farming and agricultural work. Their role and contributions are

not acknowledged. If they work on the family farm, they are seen as assisting in family work. If they work on someone else's field, they are treated as labourers and paid lower wages than male labourers. None of the women identified themselves as farmers or saw farming as their occupation. The engagement throughout this project sought to create an identity for women as farmers and research farmers. These researcher farmers are now role models for other women. Farmers from outside the research village observe them and their farming practices and desire to learn from them.

Figure 8: Action Research Cycle

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[i] AVRDC: Asian Vegetable Research and Development Center, based in Shanhua, Tainan, China.

[ii] ACWADAM: Advanced Center for Water Resources Development and Management, based in Pune, Maharashtra, India.

[iii] BCKV: Bidhan Chandra Krishi Viswavidyalaya, also known as Bidhan Chandra Agricultural University, located in District Nadia, Mohanpur, West Bengal, India.

iv L. Stoll, R. Bolam, A. McMohan, M. Wallace, & S. Thomas (2006). Professional learnincommunities; A review of the literature. Journal of Educational Change, 7(4), 221–258. https://link.springer.com/article/10.1007/s10833-006-0001-8

v Food security here implies the availability of cereals/grains for consumption.

vi Data was collected from sample farmers through a questionnaire and was then consolidated.

vii The data and analysis have been drawn from the report of a research study on the link between nutrition and agriculture by Stuart Vermaak and Damien Balzer, students at the University of Western Sydney, Australia, to satisfy the course requirements of an undergraduate degree as well as to meet the requirements of any agency or individual external to the University with whom the students had contracted in the year.

viii Upasangha: Village-level SHG collective under the West Bengal State Rural Livelihoods Mission (WBSRLM) programme

ix Sangha: Gram Panchayat-level SHG collective under the WBSRLM programme

Professional Assistance for Development Action (PRADAN), West Bengal

PRADAN's (Professional Assistance for Development Action's) mission is to enable the most marginalized people, especially rural women, to earn a decent living and take charge of their own lives. PRADAN was created in 1983 by two young professionals, Deep Joshi and Vijay Mahajan, who were convinced that even the stubborn, endemic poverty of rural India can be solved. They believed that well-educated professionals working within communities can bring both the empathy and knowledge needed to help poor people improve their lives. The organisation believes that all people, no matter how

poor, are capable of driving the change they need. This calls for well-educated professionals with empathy and knowledge to work with poor communities to help them improve their lives. PRADAN works in the poorest regions of India to help vulnerable communities organize collectives that help people, especially women, earn a decent living and support their families. Assistance is also provided to access government programs and other entitlements as citizens. The primary focus is to help people in marginalized communities develop their own skills and initiatives, instead of delivering services or solutions to them. PRADAN also partners with other civil society organizations and the government to influence development policies.

5.2 Unity and Collective Action among Pastoralists in Banni, Gujarat

Sahjeevan Trust, Gujarat[1]

Abstract:

The pastoral grassland of Banni in Kutch, Gujarat has faced serious challenges since independence, but things came to a head in 2008. The age-old system of generating food and other resources with a very small carbon footprint was at serious risk. All indications pointed towards its demise, as has been the case with many other similarly decentralized local production systems across India. As many waited for the end, a small group of elderly pastoralists rose to the occasion and decided to organize themselves into a collective to arrest the downward spiral of their environment as well as combat the threat to their livelihood, culture, and way of life. This case study examines the actions and achievements of these and other pastoralists which are truly inspiring and which provide hope for many people engaged in similar local economies in India. It also shows how a few determined local people with a strong belief in their way of life, with appropriate external support and guidance, can work wonders.

1 Authored by Ramesh Bhatti and Shouryamoy Das on behalf of Sahjeevan
*Some segments of this case study have been adapted from an earlier article, "Joining hands to revive pastoral economy", written by the authors which was published by LEISA India. https://leisaindia.org/joining-hands-to-revive-pastoral-economy/

Unity and collective action among Pastoralists in Banni, Gujarat - Preface

Pastoralism is one of the oldest human occupations. It is the art of rearing animals on marginal lands, that is, lands that are not suitable for agriculture. Pastoralism is generally practised in regions with extreme or harsh climates. Historically, humans have managed to survive in the most difficult terrains thanks to pastoralism. Pastoralism succeeds because tough, hardy, and resilient animal breeds have the ability to live on whatever little grows on the land. The two most important elements of pastoral systems are mobility and dynamism. Mobility is the ability to walk long distances in search of food and water, and dynamism is the ability to respond appropriately to evolving environments—economic, political, or ecological—and to adapt quickly to change.

The study of pastoralism in India has long been ignored and it is only now that researchers and policymakers have started realizing the real economic, ecological, and ethnographic value of pastoral systems. These systems have come to be valued especially in the face of the looming threat of drastic climate change; research shows that pastoral breeds can not only survive extreme weather but can also be productive under extremely distressed conditions. All pastoral systems have developed in tune with, and in response to, local ecological, environmental, and topographical conditions, and the animals have been bred selectively over millennia to adapt to the vagaries of the local climate and the peculiarities of the local terrain and topography. As such, pastoral systems are carriers of precious animal genetic resources. Institutions and governments worldwide have recently started allocating resources to conserve pastoral breeds.

India has some of the richest and most diverse pastoral systems in the world, found in different terrains and climatic zones—in the deserts of Rajasthan, the arid grasslands of Gujarat, the hot Deccan region, the cold deserts of Ladakh, to name a few. There are about 34 million pastoralists in India, that is, close to one in 30 Indians is a pastoralist. Most pastoralists in India have their origins in 15

states, but they travel across many states, and hence belong to every state in the country. Pastoralists in India contribute to our daily lives in several ways, often in ways that remain unseen and hence unacknowledged. Some relevant examples are:

• Almost 60 per cent of the milk we drink comes from a line of indigenous breeds that have been developed by pastoralists;

• The food we eat is also fertilized (the best nutrients come from dung and urine from pastoral animals) under the age-old arrangement between farmers and herders of having the latter's pastoral animals, especially goats, sheep, and camels, sit (pen) on the former's farms after the crops had been harvested in exchange for money and fodder;

• Pastoral animals provide wool, leather, bone, and other raw materials that are made into products of daily use.

• Pastoral landscapes have a unique spirituality and their culture has given birth to music and mystical poetry that continue to elevate our consciousness.

Introduction

This case study describes the work done by a community of pastoral people in Banni, in Kutch district, Gujarat, and their association with Sahjeevan, a local ecological organization. Banni has been the home of the Maldharis (as the community of pastoralists is known in Kutch) for almost five centuries. Banni, once Asia's second largest grassland, was considered to be the finest of all grasslands in India. It is spread across 2,500 sq. km and is home to a variety of flora and fauna. More than 7,000 families live in Banni today, and most of them are Maldharis. Pastoral people from many regions, including north India, present-day Baluchistan, Afghanistan, Pakistan, and Central Asia, have settled in the Banni grasslands over the centuries.

The Maldharis of Banni have traditionally raised bovine animals, especially buffaloes and cows. Interestingly, the Maldharis of Banni were able to rear a fantastic breed of buffalo that has the ability to graze alone, without human supervision, in the night. These buffaloes have been selectively bred over generations to graze in the dark on their own. Thus, they not only avoid the hot sun during the day but can also live on less water. This breed is known as the Banni buffalo. Banni is also the only buffalo breed that is adapted to an arid ecosystem.

The Banni Maldharis have traditionally sold adult animals for use on agricultural farms, as draught animals for local transport, and for breeding. This has been the sole source of income for them over the past four or five centuries. The milk produced by these animals was never sold, because animal trade was profitable and also because the milk was needed to raise both strong animals as well as children. Several Maldhari communities, content with the rusticity and simplicity of their lives, lived in peace in Banni till independence disrupted the economic, political, and ecological balance of the land.

Winds of change

Kutch is geographically close to Sindh, and the Kutchi Maldharis have had close trade and familial relations with the people of Sindh for centuries. Partition put an end to this trade and erected barriers between people on either side of the border. Trade with farmers on the Indian side of the border was the only source of income after 1947 when the borders were sealed for good. The ecological landscape started changing too. The government sanctioned projects to harvest and use water fruitfully. Short-sighted interventions blocked and diverted water streams that used to wash away the salinity of the Banni grasslands every year. Banni started becoming more and more saline; increasing salinity soon became a serious problem. In 1965, the government came up with another myopic solution to address the problem of increasing salinity. The government planted

seeds of a hardy but invasive woody species known as Prosopis juliflora across Banni. This shrub, which is native to Mexico, South America, and the Caribbean, has taken over large tracts of lands in Banni. Native vegetation or grasses are difficult to find in the Banni grasslands these days. As a result, the amount of feed available for pastoral animals has decreased over the years. Wildlife in Banni has similarly been hit by the rampant Prosopis juliflora. It is known locally as gando baval (crazy shrub) because it is highly invasive.

In the late 1980s and early 1990s, farmers started adopting mechanized means of tilling land. Consequently, bulls from Banni, which were once prized as farm and draught animals, stopped being valued. Bulls, traditionally used to pull carts, started losing out to motor vehicles as a means of local transport too, with jeeps and buses comfortably outpacing them in speed, style, and comfort. Cow vigilantes started become active around the turn of the century and adversely affected whatever little trade in animals was still prevalent. The hold of the Maldhari communities on Banni came under threat too around the same time. The Maldharis have held grazing rights to Banni from the time when Kutch was a princely state; the rights were conferred in lieu of the payment of a grazing tax. The Maldharis still hold documents dating back to 1856 that codified their rights to Banni during the period of princely rule. Decisions on the utilization and management of the grassland were taken by leaders of the Maldhari communities, and the community as a whole ensured that the norms were followed by all.

Banni was classified as a protected forest in 1955. However, no survey or settlement process was carried out at that time. The governance of the grassland has been a thorny issue ever since. The Revenue Department transferred administrative control of Banni to the Forest Department in 1998. However, the Forest Department refused to administer the land till the survey of the villages located within Banni was completed. Since neither the Forest Department nor the Revenue Department stepped in to take administrative control, the Maldhari communities, in spite of having no formal authority, continued to manage and govern the grassland through their customary local governance bodies. Banni was conserved

because the Maldharis understood that caring for ecological resources was fundamental to their way of life. This has also led to the development of a syncretic relationship with the ecosystem as well as an elegant culture of maldhariyat, a culture that is best experienced on the land itself.

There were rumours that the Forest Department would stake a claim to the grassland and barricade large swathes of Banni as off limits to herders. This alarmed the herders since loss of access to grazing lands would prove suicidal for the pastoral system on which they depended for survival. Such fears were to come true later, but, as we will see, the Maldharis were much better prepared to deal with the situation thanks to their own efforts.

The existence of pastoralism in Banni, which had thrived for centuries, was under threat, and traditional sources of livelihood and people's access to ecological and natural resources were atrisk. The younger generations of the Maldharis started believing that pastoralism as a form of livelihood had no future and started migrating to cities to work as labourers. We can safely say that at this point of time, the Banni pastoral system, built on the pillars of breeds, communities, ecosystems, and livelihoods, found itself assailed from all directions.

The Maldharis and Sahjeevan hold the fort

Sahjeevan has worked on grass-roots issues related to ecological conservation and regeneration for a long time. Sahjeevan felt that it needed to intervene, considering the stressed conditions in Banni and the harmful effects of ecological degradation on the Maldhari communities. Sahjeevan was driven primarily by the need to conserve pastoral systems in Kutch. Sahjeevan realized that pastoralism, as a bank of genetic resources, was of key significance. The pastoral system in Banni was under severe stress and it was essential to conserve, support, revive, and protect the system. Sahjeevan has always partnered with local communities and realizes the value of

getting the local people involved in, and committed to, a cause first. Hence, Sahjeevan started actively developing a close relationship with the herding community and designed its programmes and interventions to ensure that the community would be equal partners in the implementation of these projects.

The economic and ecological conditions under which the pastoral system of Banni operates have also changed. Sahjeevan realized that along with efforts to conserve the buffalo breed and to protect and safeguard ecological resources, it was also necessary to ensure that the pastoral herders continued to earn a respectable livelihood. Hence Sahjeevan decided to work on developing a milk-based economy in partnership with the National Dairy Development Board (NDDB). The idea of a pashu mela (cattle fair) also proved to be a success. It is an excellent platform for the community to celebrate and showcase their traditional knowledge and to highlight the resilience and strength of their animals.

The elders of the Maldharis of Banni also made a significant contribution. They were as resilient as their animals, if not more. They realized the need to make concentrated efforts to augment the livelihood of their community; to work for the official recognition of the Banni buffalo; to address the issue of the community's rights to the grassland; and to develop formal plans to conserve the Banni grasslands (which had been degraded because of the spread of an alien invasive species called Prosopis juliflora, as mentioned above). They issued a call for action and the Maldhari community rallied around.

Sahjeevan played an important role in raising resources for the activities of the Banni Pashu Uchherak Maldhari Sangathan (BPUMS), particularly in the initial years. The entire initiative needed funds to collect and document data and to organize the pashu mela. Sahjeevan partnered with various funding agencies to raise the necessary resources. Sahjeevan also invested in building the capacities of the Maldhari communities. Today, BPUMS raises most of its resources by itself.

In 2008, the Maldharis decided to organize a pashu mela to celebrate the cattle breeds, pastoral culture, and human ecology of Banni, and the event became a platform for ushering in change. This was perhaps the first time that the Maldharis came together at one place. The pashu mela was a space not only for displaying the best specimens of animals, but also for sharing stories about the communities amongst themselves. This was also the first time that the Maldharis came together in public to express their love for their animals and their pride in their way of life. Both these proved to be common threads across villages and communities.

The Maldhari elders decided to use these threads to tie all of Banni together. Salim Node, Hasam Halepotra, Ramzan Halepotra, Alla Judiya Jat, and Mir Mohamad Hingorja led the movement. The elders divided themselves into groups of four or five and went to each and every village of Banni to hold long sabhas to discuss ways of countering threats to their culture, livelihood, and way of life. They managed to convince most Maldharis (about 1,200 of them) and enrolled them in a collective known as the Banni Breeders' Association. Every member contributed an annual fee of Rs 100 and this financed the collective's programmes and administrative costs.

The Banni Breeders' Association was registered under the Bombay Public Trust Act, 1950 and the Society Act, 1860 as Banni Pashu Uchherak Maldhari Sangathan (BPUMS) in 2009 and started working to pursue the aforementioned objectives. BPUMS formalized its governance structure. It is managed by a 21-member executive body elected for a term of three years. The executive body comprises one representative from each of the 19 panchayats and two Scheduled Caste members. BPUMS joined hands with Sahjeevan to work on registering the Banni buffalo. They also decided that the practicalities of the day demanded the establishment of a milk-based economy because income from animal sales was no longer enough to support their families, who were already living a life of austerity. BPUMS

soon started working with NDDB to establish a milk-based economy. They also started addressing the issue of conserving Banni through traditional governance models and restoring their formal rights to the land by holding negotiations with the government.

While BPUMS is a formal body at present, it was more loosely organized in the initial years. In the early period, BPUMS needed active handholding as well as considerable organizational and administrative support. Sahjeevan has worked tirelessly to ensure that the activities of BPUMS are held regularly, are monitored, are audited, and that all necessary financial as well as governance controls and systems are in place.

Registration of the Banni Buffalo breed

BPUMS has realized that conserving the breed of buffalo is important and that conservation measures can pick up steam only when the breed is recognized by the Government of India. The Banni buffalo has been bred and developed by pastoralists in Banni over generations. This breed has unique characteristics such as drought resistance, disease resistance, high yields even under distressed conditions, calm demeanour, and ability to graze in the night by itself which makes it perfectly suited for an arid or semi-arid climate and harsh terrain.

Sahjeevan played a crucial role in communicating the importance of breed registration to the pastoral communities. Once they were convinced, Sahjeevan worked to bring on board other organizations that had expertise in the area of animal breeding and could support the efforts to get the local buffalo breed registered. Sahjeevan tied up with Sardarkrushinagar Dantiwada Agricultural University (SDAU), located in Banaskantha district, Gujarat, as well as the National Bureau

of Animal Genetic Resources (NBAGR) to collect scientific evidence through molecular characterization and genetic characterization of the local buffaloes. The development of these partnerships was a significant achievement, and Sahjeevan continued being the coordinating agency between the scientific institutions and the pastoral community. Sahjeevan also took over the responsibility of conducting ground-level data-collection exercises as well as documenting the knowledge of the keepers of the breed. BPUMS, with support from Sahjeevan, SDAU, and the Directorate of Animal Husbandry, Government of Gujarat got the breed registered in 2010. While Sahjeevan helped with the groundwork and mobilization of the breeders, the application for the registration of the Banni buffalo was done by the community members themselves (through BPUMS). This was the first time in India that a community successfully applied for the registration of their pastoral breed.

Registration has led to the recognition of both the breed and the breeders, and the price of the Banni buffalo has doubled since then. The National Biodiversity Authority, Ministry of Environment, Forest and Climate Change, Government of India and the Local Livestock for Empowerment (Life Network) conferred the Breed Saviour Award in 2009 to Haji Musa, a Maldhari, and BPUMS jointly. Salemabad Halepotra, the president of BPUMS, was appointed (and still continues to be) a member of the management committee of the NBAGR. The Banni buffalo was the first buffalo breed to be recognized in India after independence and since then 55 new breeds (till August 2019) of livestock have been registered by NBAGR.

The registration of the Banni buffalo spurred the Government of Gujarat into action and it started taking an active interest in community conservation and the official recognition of pastoral breeds. The state government also developed a scheme to invest Rs. 25 lakh per pastoral breed. This money was spent to form a breeders' association which would work to develop community livelihoods as well as to conserve local breeds.

A milk-based economy

As mentioned above, Sahjeevan first started working on developing a milk-based economy in Banni. In 2008, the elders of the Maldhari communities in Banni, facilitated by Sahjeevan, held meetings with NDDB for the collection of milk. In 2008, a deal was stuck with NDDB. NDDB agreed to pay a premium of Rs. 15 per kilo of fat on milk prices as long as BPUMS could arrange for the collection of 500 litres of milk each day. Sahjeevan was responsible for mobilizing the community to deposit the milk at the bulk milk chilling (BMC) facilities and NDDB was responsible for setting targets for the milk collections. Convincing the herders to sell milk to the BMCs was difficult, as they had a long-standing relationship based on trade and credit with the local milk vendors. The local vendors generally lent money in advance to the herders and the herders were obligated to sell their milk and milk products to the traders till the debt was repaid. Sahjeevan managed to convince many members of the pastoral community to switch to selling milk to the BMCs so that the BMCs could be viable. In the initial days, the amount of milk collected at the Powerpatti BMC far outstripped the target and initiated a mini-revolution of sorts because it upset the dynamics of the traditional milk-based economy.

A BMC facility was setup in the village of Bhirandiyara. The milk collection was a paltry 265 litres on the first day, but within a month it rose to more than 500 litres. Within a month, the collection of milk rose to 5,000 litres in a day, which was the maximum capacity of the BMC. Enthused by the success of this BMC, NDDB and the Sarhad dairy came together to establish another five BMCs within a period of two years. The Sarhad dairy, the Kutch District Co-operative Milk Producer's Union Ltd, soon sensed an opportunity and started investing heavily in infrastructure. A decade later, Banni is one of the major milk-producing regions of the country, producing 110,000 litres of nutritious milk, most of which is organic, every day. This milk is valued at more than 4 million rupees a day and close to 1,500 million rupees annually.

The success of the milk dairy pilot project was significant in other terms too. The local population in Kutch was largely unaware of the intricacies and complexities of the pastoral system. The pastoral communities of Banni were thought to be backward, primitive, and corrupt. Sahjeevan understood the need to change the perceptions of the wider community of people in the district and the state, so that the pastoral economy could be supported by all. The establishment of the milk dairy, the registration of the Banni buffalo breed, the holding of the pashu mela, and the formation of BPUMS all helped to change traditional mindsets and attitudes, and the larger populace of Kutch became more amenable to the prospect of working with the Banni pastoralists.

The fight for governance rights

The situation in Gujarat (and in Kutch in particular) has been no different. BPUMS's consultation with the government on the formalization of its rights has proved to be a much more arduous task, and one that is still not over. BPUMS began by documenting its community rights and ways in a Bio-cultural Community Protocol (BCP) developed under Article 8(j)– Traditional Knowledge, Innovations and Practices of the Convention on Biological Diversity, 2002, as well as the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity, 2010. In 2009, the Forest Department came up with a working plan to fence large areas of Banni. This working plan, developed without consulting the community, proposed not only cutting the pastoralists' access to a number of wetlands within Banni, but also turned a blind eye to the pastoralists' need to move across ecosystems in a single calendar year. The Banni Breeders' Association decided to ask for their communal rights instead, since it was evident that the implementation of the working plan would have been a threat to the ecosystem that sustained them, and this in turn would have affected their own livelihood, cattle breeds, and culture. The Banni Breeders' Association also realized that the FRA could be instrumental in formalizing their rights to the grassland of Banni, and provided an opportunity to

revive their traditional governance systems while they were engaged in a struggle for their rights. BPUMS launched a signature campaign across all the 54 villages in Banni. This campaign, now famous as "Banni ko banni rahene do",meaning "Let Banni remain as the commons", worked to reestablish the way the grassland had been traditionally used, conserved, and managed by pastoralists. BPUMS organized numerous meetings in villages and panchayats and decided to collectively express their disapproval of the government's policies, to spread awareness about their rights as pastoralists and herders, and to urge the state government to implement the FRA in Banni at the earliest. The elders of the Maldhari communities and BPUMS representatives held a series of consultations with officials from the Ministry of Tribal Affairs and the Ministry of Environment and Forests. The Ministry of Tribal Affairs informed the BPUMS representatives that while the implementation of the FRA had begun in the state, the act was yet to be implemented in Kutch, since the nodal agency for the implementation of the FRA in non-scheduled areas (such as Kutch, with its small tribal population) was yet to be finalized. In 2011, the implementation of the Working Plan was initiated by the Forest Department. It aimed to scientifically manage forest resources by enclosing specific areas of the Banni as well as by restricting access for pastoral herders to the forest areas. The working plan did not take into consideration the traditional rights to and the dependency of the pastoral community on the grassland of Banni. The Maldharis responded by organizing a rally in Bhuj and submitted a memorandum to the collector of Kutch, informing him and the State Level Monitoring Committee that as long as their rights remain unrecognized under the FRA, they would continue to resist peacefully. On 5 June 2012, BPUMS invited the media to witness and report on their way of managing the grassland and solicited the media's support for their struggle.

At the behest of BPUMS, the gram sabhas in Banni started forming Forest Rights Committees (FRCs) in each village and began claiming their rights to Banni. These efforts led to an official missive from the Government of Gujarat directing the collectors of all the non-scheduled districts of the state to implement the FRA. The district administration of Kutch then formally instructed the gram

sabhas to form FRCs in each village. A resource-mapping plan was developed based on participatory exercises that took into account traditional grazing practices, biophysical conditions, dependency on livestock, and the existing faunal and floral biodiversity. These community claims were approved by the Sub-Divisional Level Committees (SDLCs) while the District Level Committee (DLC) agreed to them in principle. Out of the 54 FRCs that were formed, 48 of them decided to file for common rights to Banni. This was a remarkable achievement for BPUMS, since it reflected and underlined the pastoralists' need for access to regions across Banni. This was also the first time that such a large community had come together to submit common claims to a whole forest.

The efforts of the Banni Maldharis opened the gates for the formalization of not only their claims, but also those of the other communities who lived off the commons in non-scheduled areas or districts of Gujarat and who needed the support of the FRA to establish their rights. Efforts to formalize community rights to Banni are still ongoing, and BPUMS is now negotiating this matter with the district collector of Bhuj and the chief minister of Gujarat. This journey has been marked by trials and tribulations, and the Maldharis have managed to deal with all of them successfully so far thanks to their collective strength. The Banni Maldhari community is the only pastoralist group in India that has been able to successfully stake a claim for their common rights. Notably, Banni is also the largest area of grassland over which land rights are being negotiated between the community and the government. The commons in India have long witnessed degradation due to an absence of governance or mis governance. The Maldharis, through BPUMS, have proposed a system to resolve this situation, a system that can be replicated across the country. Recognition of their rights would be a landmark achievement not only for the pastoralists of India, but also for the democracy of India. We can only hope that recognition of the rights to Banni will inspire other pastoral communities in India to follow suit and start registering their claims to their communal lands and commons.

Establishment of ramble

BPUMS and Sahjeevan joined hands with pioneering research institutions such as the Ashoka Trust for Research in Ecology and the Environment (ATREE) and the National Centre for Biological Sciences (NCBS) to set up a research station called Research and Monitoring in the Banni Landscape (RAMBLE) in Banni. Sahjeevan once again played a significant role in getting ATREE and other premier research organizations to establish RAMBLE. RAMBLE was set up to study the social and ecological transformations in Banni and to help answer some difficult questions about land use and management. RAMBLE is an open research platform where scholars undertake disciplinary and interdisciplinary research on various aspects of the Banni grassland ecosystem, its pastoral communities, and their interaction with the Banni grassland. Research is expected to help deepen the understanding of the ecological, institutional, social, and economic drivers that continue to shape this ecosystem. The research conducted by RAMBLE helps the Maldhari community to respond to changing ecological needs and also lends credence to their traditional knowledge and governance systems. Ultimately, such an understanding is expected to feed into ongoing policy dialogue on the management and use of Banni in the future.

Challenges during the journey

Not everything was easy during this long journey of ten years. Sahjeevan faced several challenges, some of which are noted below.

Building of formal institutions: While the Banni herders had traditional governance systems, there were no formal bodies as such to enforce the community's norms. The concept of, and the need for, a formal institution was alien to the herders, and convincing them to come together and form a formal body took many months of negotiation and persuasion.

Tagging of animals: Banni is amongst the most remote regions in India. The literacy levels are low and the people harbour many superstitions. The registration of the Banni buffalo required that some of the animals be tagged and monitored over a period of time. The herders believed that the tagging of the animals would lead the banks to claim a lien on them. Most of the herders refused to cooperate and again it took a great deal of effort to persuade them to cooperate.

Communicating the importance of the FRA as a means of access to, not as a means of taking over, traditional lands: The villages of Banni lie in a forest area. There was always an apprehension that the Forest Department would have the power to evict the local community. The mere mention of the word forest would cause panic in the community. At one point, Sahjeevan introduced the topic of the FRA and requested the community to come together and claim their rights under the act. This created confusion because the community felt that claiming rights under the FRA would mean that they accepted that the ownership of land lies with the Forest Department and hence they refused to even listen to Sahjeevan's representatives. Exposure programmes and literature on the FRA were used to clear the confusion and to get the community to cooperate.

Some general learnings

Importance of breed registration: The registration of indigenous breeds is essential for engaging the formal sector in efforts to conserve a particular breed. Till the time a breed is registered, information about its characteristics, its population, and its productivity remains uncertain, unverified, and undocumented. In some instances, the same breed has different strains, which, in turn, have different local names. All this contributes to confusion. The registration of a breed also ensures that the government takes note and formalizes the process of investment in the conservation of the pastoral system that

rears, maintains, and depends on the breed. The registration of the Banni breed, which was achieved in collaboration with NBAGR and SDAU, was vital in branding the local population of buffaloes. Since the registration of the breed, not only has the pastoral community attracted more public attention, greater official interest, and increased monetary investment, but the prices of the buffaloes have also increased, as this breed has come to be known, and officially recognized, as highly productive even in distressed conditions.

Foundation of KUUMS –mobilization and learning in the wider community: The mobilization of the community of buffalo pastoralists in Banni inspired the camel herders of Kutch to take similar action. Soon after the successful formation and establishment of BPUMS, the camel-herding community of the district joined hands to form the Kachchh Unt Ucherak Maldhari Sangathan (KUUMS), their own community-based organization (CBO). KUUMS has been working to improve the conditions of camel herders in Kutch. KUUMS, learning from the experiences of BPUMS, worked to develop a camel milk-based economy and source of livelihood. Since then, the camel milk dairy has come to play a crucial role in conserving camels in India. Camel milk has immense therapeutic potential and Amul has started marketing camel milk as well as camel milk chocolates and other products across India.

Importance of community involvement and ownership: The Banni initiative showcases the importance of the involvement of the community in any intervention designed to benefit it. What has been achieved was only possible because the community played an active role and was engaged in the entire process. The Banni initiative also highlights the importance of community knowledge; competitions were held during the pashu mela on identifying and rewarding the purest breeds of animals. The competitions were judged by the elders of the Maldhari community, people who were real experts on animal health, fertility, and productivity. The animals that were judged to be the best in Banni always found ready buyers amongst local farmers and fetched high prices. Over the years, the farmers

had noted that the judgement of the elders was close to perfect, and it made business sense to acquire the award-winning animals even at a premium.

Sahjeevan's investment in BPUMS has also paid off handsomely. The CBO has over the years taken the lead in advocating for the rights of the Maldhari community with the government. BPUMS members have met the collector of Kutch district as well as the chief minister of Gujarat to ask for access to, and governance rights over, Banni. BPUMS has also developed an intimate relationship with NBAGR, and one of the elder Maldharis was recently recognized for his work by NBAGR. The Directorate of Animal Husbandry of Gujarat has also acknowledged the work of BMPUS and Sahjeevan on the registration of the Banni buffalo and has initiated a programme to identify the native cattle breeds of Gujarat and then form a CBO whose objective will be the registration and conservation of these breeds in their native habitat.

BPUMS has diversified the ambit of its work and is now working to resolve a long-standing dispute between the Revenue Department and the Forest Department, neither of which has accepted the responsibility of managing this land resource of Banni. This mismanagement has led to encroachment, and BPUMS has moved the National Green Tribunal to remove the encroachments and to press for the right to manage the grasslands. It is hoped that BPUMS's efforts to resolve the dispute over the grassland will soon result in success.

The way forward

While the Maldharis of Banni have won the first round of the battle against globalization, and have successfully resisted the upheaval it brings in its wake, a lot more needs to be done to secure the future of pastoral lands and their resident communities. BPUMS has shown remarkable foresight in continuing to work to achieve this
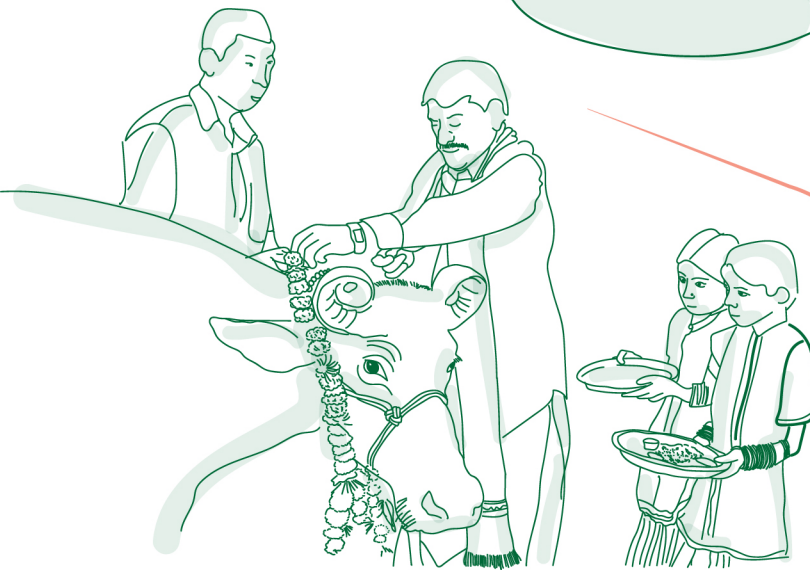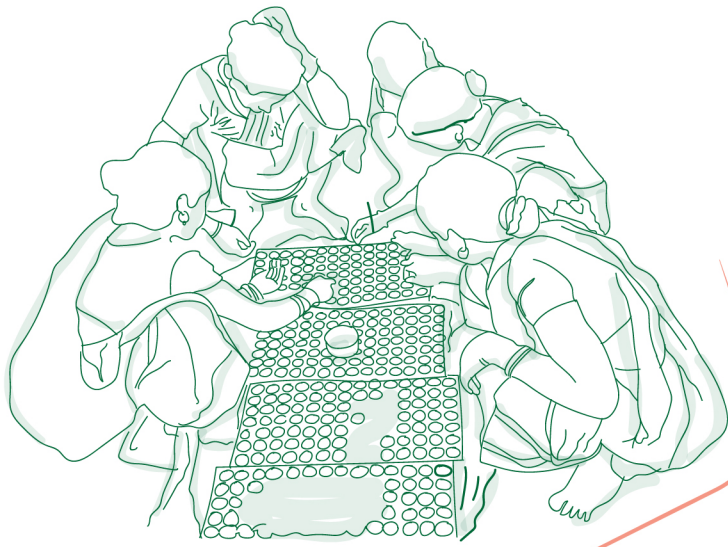
objective and in nurturing and maintaining the feeling of brotherhood and unity across the lines of religion, caste, and community in Banni, which has been absolutely vital to their work since the beginning. The Banni Maldharis realize that urban consumers are willing to pay for food that is wholesome, pure, nutritious, and healthy, and consequently BPUMS and Sahjeevan together have launched an initiative to see how the milk produced in Banni can be certified as organic and marketed to niche consumer segments. The battle for the FRA continues, and every day the herders take a small step forward in claiming their rights to Banni. The herding community realizes the need to manage their grasslands too, and there have been many pilot projects for the uprooting of the invasive Prosopis juliflora by villagers. These pilot projects have led to the reemergence of vegetation that was thought to have been long extinct in the Banni grasslands. The research station at RAMBLE continues to inform and inspect every move made by the communities, by providing data and facilitating experiments. It has shown that thanks to the milk-based economy, the grasslands of Banni may be carrying a larger number of animals than its vegetative mass can support. Research is still ongoing, and BPUMS can be trusted to work with its members should the RAMBLE researchers' apprehensions turn out to be true.
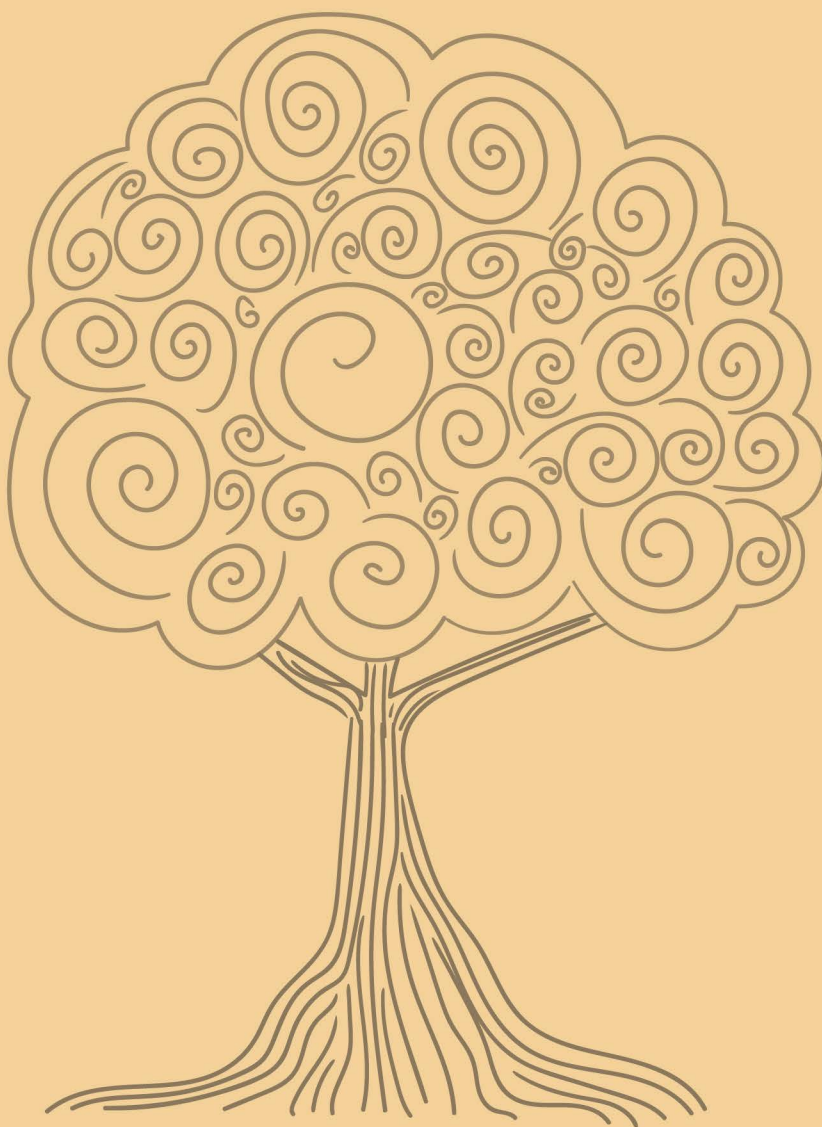
Sahjeevan Trust, Gujarat

Sahjeevan strives for the conservation of ecosystems and the integration of gender equality, human values, indigenous knowledge and novel technologies to strengthen traditional livelihoods, demonstrated by communities at the grassroots and policy level. It has identified four thematic areas that need attention; namely Pastoralism, Water, Bio- diversity and Urban issues; and has established specialized units to work on them. Sahjeevan has been inspiring and supporting marginalised communities to revive their traditional ecological knowledge systems, engage with relevant technologies and scientific methods to conserve their ecological resources, and strengthen their livelihoods. Based in Kachchh for

over 25 years, the organization has influenced local governance institutions, communities and the region as a whole to conserve biodiversity, regenerate tradition water systems based on local geo hydrological solutions, revitalise pastoralism, promote indigenous livestock breeding practices, and strengthen resilience through rain fed agriculture.

Today Sahjeevan works across the state of Gujarat and has earned itself the recognition of being one of the foremost civic society institutions in the country.