

Society for Promoting Participative Ecosystem Management (SOPPECOM)



Annual Report 2023-2024

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Summary of the Projects:

Table 1: Projects at a glance

S.no	Project Name	Grant Amount	Donor	Project Duration	Team Members
1	Agro-ecology for sustainable and just groundwater governance (Careful Irrigation)	€64,500	IHE Delft	2023 – 2027	Seema Kulkarni, Sneha Bhat, Swati Satpute, Bhumika Kadu
2	Understanding the nature, forms, and implications of structural violence against rural women in the context of agrarian distress	\$550,000	Ford Foundation	Dec 2021 – Nov 2024 (No-cost extension to June 2025)	Seema Kulkarni, Sneha Bhat, Rucha Vasumati Satish, Vanita Tumsare (Research teams in Telangana and Punjab)
3	Identify and build capacities of women leaders amongst cane cutters for feminist organizing	€205,771	Women's Fund for Asia	Dec 2021 – Nov 2024 (No-cost extension to May 2025)	Seema Kulkarni, Pallavi Harshe, Aarti Bankar (Health experts and field team of 10 from Beed and Hingoli)
4	Towards Brown Gold: Reimagining off-grid sanitation in rapidly urbanizing areas in Asia and Africa	£33,530 (+ £2,999.15 additional)	GCRF-UKRI	Oct 2020 – Aug 2023 (Extended to March 2025)	Seema Kulkarni, Pallavi Harshe, Prakash Ransing
5	Agroecology Programme	AEF: \$50,000, PPI: \$10,000, AJWS: \$20,000, AEF Video: \$10,000	Agro Ecology Fund (AEF), American Jewish World Service (AJWS), People for Progress in India (PPI), IHE Delft	Ongoing since 2021	Seema Kulkarni, Sneha Bhat, Swati Satpute, Bhumika Kadu (Field team of 5 district coordinators)
6	Restructuring water distribution from the Tembhu Lift Irrigation Scheme (TLIS), Atpadi, Maharashtra	₹14,790,830	Azim Premji Foundation	Apr 2020 – Mar 2025	K. J. Joy, Kiran Lohakare, Neha Bhadbhade, Sarita Bhagat, Umesh Lemte

S.no	Project Name	Grant Amount	Donor	Project Duration	Team Members
7	River Commons	Not specified	Wageningen Interdisciplinary Research and Education Fund (INREF)	Sept 2021 – Aug 2026	Sarita Bhagat
8	SEWOH Lab Project	€55,241.90	TMG Research Group, Berlin	Since 2022 (Multiple Phases)	K. J. Joy, Kiran Lohakare, Neha Bhadbhade, Umesh Lemte
9	Soft Systems Analysis: fairSTREAM (Food-Water-Biodiversity Nexus)	€51,000	International Institute for Applied Systems Analysis (IIASA)	Apr 2022 – Sept 2024	K. J. Joy, Radhika Kanade, Kiran Lohakare, Neha Bhadbhade

Table 2: Summary of the projects (2023-24)

S. No	Project/Program	Objective	Key Activities	Key Outcomes
1	Identify and build capacities of women leaders amongst cane cutters for feminist organising for their rights	Strengthen women's leadership, facilitate grassroots organisation building to improve working conditions, and healthcare access for women sugarcane cutters.	Surveys on basic entitlements to migrant workers. Health initiative: - Arogya Sakhi model (training women in basic healthcare). - Training on advance settlements, time-use diaries, and capturing work-life realities. - Networking with organizations in Maharashtra and Karnataka.	20 Arogya Sakhis trained, providing healthcare at migration sites. 1256 women & 1137 men received ID cards, ensuring official recognition 14 health camps conducted, providing essential screenings.
2	Towards Brown Gold Reimagining off-grid sanitation in rapidly urbanising areas in Asia and Africa.	Examine the sanitation services in urban slums and marginalized communities in Nanded Waghala Municipal Corporation.	- Research on off-grid sanitation in urban centers like Nanded. - Workshops, policy briefs, and sanitation worker rights advocacy.	- Strengthened policy discussions on sanitation workers' rights. - Raised awareness about safe faecal sludge management.

S. No	Project/Program	Objective	Key Activities	Key Outcomes
			Documentary on sanitation workers' struggles	
3	Agroecology Programme	Promote chemical-free, sustainable farming for women farmers.	- Training 250 women farmers in six districts. - Seed distribution, kitchen garden initiative for food security. - Exchange visits and documentation of successful farming practices.	- Women gained greater control over decision making around agroecology based farming. - Nutritious food to eat - Improved food security and economic resilience for participating families.
4	Agro-ecology for sustainable and just groundwater governance- Careful Irrigation	Documenting stories of women farmers practicing Agroecology using water as an entry point	Inception workshop (Dec 2023, Morocco) - Planning detailed activities for 2024	Initial planning and identifying case stories
5	Understanding the nature, forms and implications of structural violence against rural women in the context of agrarian distress	Examine and document gendered impacts of agrarian distress in Maharashtra, Telangana, and Punjab.	- Large-scale surveys (2,424 women) and in-depth case studies. - Workshops and policy consultations with government stakeholders.	- Identified high indebtedness, unpaid labour, and lack of social security. - Advocacy efforts engaged policymakers at state and national levels.
6	MAKAAM	- Strengthen leadership among women farmers and sugarcane cutters. - Formation of a state-wide women farmers' organization Advocate for women farmers' rights. - Support women sugarcane cutters through legal aid and access to government schemes	- Perspective-building workshop (May 2023) for 25-30 women leaders on agrarian and social security issues. - Regular meetings with district facilitators and women leaders - Meeting in November 2023 to discuss the vision, objectives, and constitution. - Mobilization through village meetings and taluka-level gatherings - Consultations with government officials and community-based	- Improved awareness of agrarian and social security issues among women leaders. - Strengthened leadership roles in local governance - Women farmers and cane cutters expressed readiness to join. - Drafting of the organization's constitution underway

S. No	Project/Program	Objective	Key Activities	Key Outcomes
		Raise awareness on women farmers' struggles at national and international levels	organizations (CBOs). - Published reports, case studies, and visual materials on structural violence against women in agriculture - Workshops and legal sessions. - Assistance in obtaining government benefits, health services, and ID documents - Speaking tour by Association for India's Development (AID) in seven cities (Oct 2023). - Participation in Political Economy Research Institute (PERI) conference at the University of Massachusetts Amherst (Nov 2023).	- Increased recognition of women's contributions to farming. - Raised awareness through policy discussions and publications - Increased access to government schemes and entitlements for women cane cutters - Strengthened national and international advocacy for women farmers.
7	Restructuring water distribution from the Tembhu Lift Irrigation Scheme (TLIS), Atpadi taluka, Sangli, Maharashtra	- Formation of the WUAs - Streamlining the functioning of the WUAs and Capacity building of the WUAs for equitable, participatory and integrated water use	- Field visits (Shivar pheris) to understand the issues related to pending work of the PDN network, - Melawa to mobilise people for the expediting the work of the irrigation system in the 12 excluded villages - Participatory Resource Mapping for understanding the how local water regime can be strengthened through watershed works	- Inclusive list of farmers of 7 WUAs was finalised. - The notification of the election program was published - Increased and improved capacities of 45 Board of directors from Buddhihal Medium Irrigation project including the federation of the of WUAs on participatory irrigation management under the MMISF Act 2005
8	SEWOH Lab Project: SOPPECOM - TMG	Development of digital tool for Water User's Association to aid in	- Carry out need assessment survey for development of app - Development of app-E-PAVAS	E-PAVAS app developed for Water User's Association

S. No	Project/Program	Objective	Key Activities	Key Outcomes
		decision making and improve water governance	• beta testing and piloting of the app on two WUAs in Buddhihal medium irrigation project	• Successfully piloted in 2 WUAs on Buddhihal Medium Irrigation Project and rabi data for 2023-24 collected from the 2 WUAs.
9	Soft systems analysis: Streamlining participatory approaches and agent-based models to explore ideas of fairness at the food-water-biodiversity (FWB) nexus (fairSTREAM)	Co-producing knowledge with stakeholders to articulate divergent views on challenges and opportunities and, and robust analysis of how the effects of decisions propagate through the Food Biodiversity and Water System	• Engagement with local stakeholder including farmer groups, tribals, women and local organizations • Household Surveys • Larger workshop in Pune in February 2024 for stakeholder consultation.	Situation analysis of the Upper Bhima basin specifically around food-water and biodiversity nexus.

Identify and build capacities of women leaders amongst cane cutters for feminist organising for their rights

Donor: Women's Fund for Asia

Total Grant: Euros 2,05,771

Project duration: December 2021-November 2024 (No-Cost Extension until May 2025)

Principal Investigator: Seema Kulkarni

The program entered its second phase in January 2022, with Hingoli being added alongside Beed. Last year, the focus was on the selection of District and Block coordinators, finalizing four blocks and 40 villages in each district, and selecting 80 women leaders. We successfully conducted various trainings for the Block and District coordinators, as well as for the women leaders, to equip them to articulate the issues and demands of women cane cutters, conduct studies, and initiate dialogues with the local government.

Additionally, a consultation was organized, and steps were taken toward building a network. Several meetings, local campaigns, submission of appeals, and dialogues with government officials were carried out to push for specific demands. Awareness materials were also prepared during the last reporting period. Below are the various activities implemented from April 2023 to March 2024, which are covered in this annual report.

Studies Conducted:

Survey of children, pregnant and lactating mothers

As evident from studies, observations, and our work with cane cutters, basic amenities such as healthcare and education are unavailable in the destination districts. A large number of pregnant women, lactating mothers, and children aged 0 to 18 also migrate, either to work or accompany their parents. To address the lack of healthcare services for children aged 0-6, such as Take Home Rations (THRs), vaccinations, and ANC/PNC services for pregnant and lactating mothers, we planned to conduct a survey based on the previous year's baseline data. This survey aimed to collect data on children, pregnant women, and lactating mothers migrating for sugarcane cutting from 76 villages across Beed and Hingoli districts. The goal was to present this data to government authorities and advocate for healthcare services at migration sites.

The women leaders were provided with the previous year's data and tasked with collecting additional data by conducting meetings. Unlike the previous year, this was not a household survey, but rather a community-based data collection effort through discussions and gatherings.

The survey helped compile a list of sugarcane workers, their destination districts and blocks, as well as data on pregnant and lactating women, and children aged 0-18 migrating from 38 villages in Beed (Beed, Dharur, Wadwani, Gevrai) and 38 villages in Hingoli (Vasmat, Hingoli, Kalamnuri, Aundha Nagnath).

The findings revealed that 8,307 sugarcane workers from these 76 villages in Beed and Hingoli districts migrated to Maharashtra and Karnataka during the 2023-24 sugarcane cutting season, with 46.52% being women and 53.47% being men. To ensure these workers received necessary services at the migration sites, we shared the data on children, pregnant women, and lactating mothers with

government officials and social organizations in Kolhapur, Solapur, Parbhani (Maharashtra), and Belgaum (Karnataka).

However, several challenges emerged. Organizations that tried contacting cane cutters reported that many had already migrated to other locations, rendering the data less useful. Additionally, the government did not take significant action based on the data provided, even after sharing it with them.

Documentation of Work Hours and Unpaid Days for Women Cane Cutters

The cane cutters face immense economic exploitation in their work. To gain a clearer understanding of this, we focused on key aspects such as the number of working and non-working days during the cane cutting season, work hours, the number of vehicles they load daily, and how often they change locations during the season. A calendar diary was provided to 30 women cane cutters, most of whom were leaders, and who had successfully maintained calendar entries in the previous year. These women were asked to document their daily work details throughout the season.

Analysis of Time Spent on Household Chores by Women Cane Cutters

Women cane cutters, who endure grueling 12- to 18-hour days of cane cutting, also devote their remaining time to household chores, which often go unrecognized as work. To address this, prior to the 2023-24 cane-cutting season, a diary featuring images of various household tasks was created for them to document the time spent on these activities. Thirty women cane cutters, who had successfully maintained calendar entries in the previous year, were provided with this diary. The diaries will be collected once they return from cane cutting.

Capacity Building training/ workshops:

Trainings on calculations of advance settlements

The cane cutters receive advances from the Mukadam (Agent) based on their requirements. They are then expected to migrate to sugarcane-producing areas, cut the cane, and repay their advances through their work during the cane cutting season. However, there have been many instances where the Mukadam miscalculates, leading to economic exploitation. Typically, the advances are given to the men of the household, while women, who also work as cane cutters, do not receive these advances directly. They are often unaware of the processes, making them more vulnerable to exploitation.



Picture 1: Training session of the sugarcane cutters

To raise awareness among women cane cutters and help prevent this economic exploitation, taluka-wise training sessions were organized for women cane

cutter leaders in Beed on April 18th and 19th, 2023, with 32 participants, and in Hingoli on May 17th and 18th, 2023, with 25 participants. The training, conducted by Ravindra Thorat and Manisha Tokle, focused on teaching participants how to calculate the settled advance after the cane cutting season. The sessions covered the economic exploitation faced by women cane cutters, understanding the

documents necessary for calculating the settled advance, and hands-on practice in calculating the cleared advance against the work done by half or full koyta (couples or single person).

Exposure visit to Kagad Kach Patra Kashtakari Panchayat, Pune

It is essential that the district and taluka coordinators are capable of envisioning what can be achieved with the support of the organization, and they must understand the importance of constructive work to envision new models which can lead to sustainability of the women cane cutter organization. To provide such exposure to the coordinators, an exposure visit to Kagad Kach Patra Kashtakari Panchayat (KKPKP) and its allied organizations was organized from 25th to 27th April 2023.



Picture 2: Discussions during the exposure visit to KKPKP

In 1993, waste pickers in Pune and Pimpri Chinchwad formed the Kagad Kach Patra Kashtakari Panchayat (KKPKP), a trade union advocating for their role in Solid Waste Management (SWM) and their recognition as workers. Members received ID cards endorsed by the Pune Municipal Corporation (PMC), along with benefits such as interest-free loans and educational support. KKPKP also pushed for the integration of waste pickers into door-to-door collection (DTDC), which led to the formation of SWaCH, a cooperative under a pro-poor Public-Private Partnership. SWaCH Plus expanded beyond DTDC to include initiatives like e-waste collection, composting, and awareness-raising events.

During the exposure visit, the coordinators were exposed to the actual work of waste pickers in both slum areas and bungalow colonies, as well as to the functioning of the SWaCH Cooperative, SWaCH Plus, and the Credit Cooperative of waste pickers. They also had the opportunity to attend a Board Members' meeting and KKPKP's monthly meeting, which proved to be very insightful and a great learning experience. The Board members' confidence and understanding of the institutional framework, as well as their active participation in rule-making, offer hope for making the organization of women cane cutters more democratic.

Two-day workshop on Ensuring the Health and Social Security of Sugarcane Workers: Enabling Immediate Intervention and Developing New Opportunities

SOPPECOM, in collaboration with Sathi, organized a two-day workshop on "Ensuring the Health and Social Security of Sugarcane Workers: Enabling Immediate Intervention and Developing New



Picture 3: Geeta Ramakrishna addressing during the workshop

Opportunities" on June 14-15, 2023, in Pune. The workshop brought together activists, academicians, and representatives of the Women Cane Cutters Organization from Beed and Hingoli. The primary objectives of the workshop were to gain insights into the experiences of organizations dedicated to addressing the social security and health issues of unorganized workers and to develop an effective model of addressing the specific concerns of women cane cutters based on these insights. Key speakers included Geeta Ramakrishnan, Jagdish Patel, Abhay Shukla, Com. D.L.

Karad, and Chandan Kumar, who shared

insights on welfare schemes, the politics surrounding cane cutter issues, and action plans for future advocacy.

The workshop featured presentations on the challenges faced by women cane cutters, including health concerns and work burdens. Participants also discussed the structures needed to address both short- and long-term health issues. A preliminary action plan was developed, with inputs from various experts and activists, and it will be shared with the group for future implementation.

Training on second round of survey

In the first year of the program, a baseline survey was conducted to gather primary information about cane cutters migrating from 80 villages. In the second year, following discussions during a health workshop, an intervention plan was made to support ICDS and vaccination services for children aged 0 to 6 years, as well as for pregnant and lactating mothers during the cane cutting season. Consequently, a second round of the survey was conducted to collect information on children aged 0 to 6 years, school-going children, and pregnant and lactating mothers. To facilitate this process, an online training session on how to complete the second survey was organized on July 24th and 25th, 2023.

Training on women's health, menstrual hygiene

Women cane cutters face numerous health issues due to the lack of basic facilities during the cane cutting season and the physically demanding nature of their work. To improve their health conditions, it was crucial to raise awareness about women's health-related issues and inform them about local health structures. Additionally, the women's cane cutter organization is actively working to include women cane cutters in local health committees. Once appointed as members of these committees, it is essential that they understand their roles and responsibilities.



Picture 4: Trupti Matli speaking during the training session on menstrual health and hygiene

To achieve this, a women's health and menstrual hygiene training session was organized for women leaders simultaneously from August 16th to 18th, 2023, in both Beed and Hingoli. The training covered topics such as anaemia, menstrual hygiene, the use of saline, common illnesses, improving water quality at the phad, the powers of the Jan Arogya Samiti at both PHC and Sub-Centre levels, and the responsibilities of JAA members. The training was conducted by Bhausahab Aher and Trupti Malti from the Sathi organization.

Arogya Sakhi training



Picture 5: "Arogya Sakhi" training session in Pune

To address the health issues of sugarcane workers, the Women's Cane Cutter Organization, with support from SOPPECOM and Anusandhan Trust (Sathi), launched the "Arogya Sakhi" (Health Companion) model. This initiative provides basic healthcare and reduces medical costs for cane cutters during cane cutting season. Twenty literate women from Beed and Hingoli were trained by SOPPECOM and Anusandhan Trust (SATHI) from September 13-15, 2023 at Pune, on first aid, menstrual hygiene, water purification,

sanitation, and government healthcare schemes. Each "Arogya Sakhi" received a medical kit with essential medicines and supplies. The Arogya Sakhi model is a crucial step toward addressing the healthcare needs of sugarcane-cutting women workers, helping them access timely care and reducing their financial burden on healthcare services.

Training sessions on daily calendar entries and Time Use Survey entries

In September 2023, training sessions on calendar entries and Time Use Survey (TUS) entries were conducted. Selected women cane cutters, who had consistently filled calendar entries regarding their hours of cane-cutting work, the work and idle days and the vehicles uploaded daily in the last cane-cutting season for more than 100 days, were chosen. A total of 30 women cane cutters were provided with a print of calendars to document their cane-cutting work hours and idle days and a Time Use Survey to record the hours spent on household chores throughout the day. The calendar was to be filled for the entire season and the TUS for 10 days in a month. Physical training sessions for this purpose were conducted in Beed and Hingoli.



Picture 6: Training session on Time Use Survey (TUS)

Training on the types of photos and videos that can be taken while in the phad



Picture 7: Training session on photo documentation

In the last cane-cutting season, cane cutters captured various photos and videos to share their work and issues, significantly enhancing our understanding of their lives. However, there were repetitive photos, and many were taken from a distance. Despite limitations in the quality of photos we can receive from cane cutters, we conducted a training in September 2023. The training focused on the types of photos and videos that can be captured, along with techniques on how to take effective photos. The session

also covered how these photos can be used later to amplify their voices and highlight their issues. The session was conducted by Bhausahab Aher.

Consultations/ Melawas:

Block level Melavas:

Last year, four Block-level Melavas were organized to facilitate the formation of the women cane cutters' organization: Wadavani-Dharur Taluka Melava on June 10th, 2023, Wasmat-Aundha Melava on June 12th, 2023, Hingoli-Kalamnuri Taluka Melava on June 28th, 2023, and Beed-Gevrai Taluka Melava on June 30th, 2023. The participation in these melavas ranged from 300 to 600 participants.



Picture 8: One of the block level melava

Various government officials, including District Collectors, were invited to respond to the issues and demands presented by women cane cutters and to the findings from the baseline survey of 40 villages of the Beed district which was conducted and presented by SOPPECOM. In the afternoon sessions, the focus shifted to raising awareness among women cane cutters about the need to form organization and assessing their readiness to become members and pay membership fees.

Resolutions from these meetings centered around campaigning for the registration of women cane cutters, their willingness to join the organization, and their preparedness to contribute financially. Notably, no financial support, such as travel expenses, was provided to the women cane cutters attending the Melavas. Organizing these four taluka Melavas required significant efforts from all block and district coordinators.

Network Building in other districts and with other organizations and networks:



Picture 9: Networking meeting

We have been building a network in destination districts to support cane cutters, holding meetings in Kolhapur and Solapur, and engaging with Karnataka organizations, including Spandana in Belgaum. Our collaboration has advanced cane cutters' rights in several ways:

1. **Health Initiatives:** During a visit to a phad in Kolhapur with the organizations in network, scabies and pregnant women's health issues were reported, leading to ASHA intervention and ANC services for two women.
2. **Support for Arogya Sakhi:** Network organizations committed to replenishing Arogya Sakhis' medical supplies through PHCs or Sub-Centres.
3. **Tracking Migrants:** We shared data on children and pregnant women with network organizations and authorities for benefit provision, though tracking remains a challenge.
4. **Incident Response:** A tractor accident involving women cane cutters led to organizational follow-up. Despite the women's fear of the powerful driver, continuous communication raised awareness of rights.
5. **Legal Action:** Our organization was involved in a Suo Moto case for cane cutters' rights, facilitating lawyer visits to cutting sites to verify government claims.
6. **Collaborative Workshops:** We hosted workshops on cane cutters' health and social security, with activists and academics, and began preparing a joint charter of demands with CITU.
7. **Recognition:** Our networking efforts have earned recognition for our work, with block coordinators receiving awards and being invited to significant events. Dipa Waghmare received the Com. Ashok Manohar Youth Energy Award in March 2023.

Activities carried out at District, Block and Village levels and achievements:

1. In the past year, the organization, through the efforts of women leaders and block coordinators, has successfully registered women cane cutters from 37 villages across four talukas – Wadawani, Gevrai, Dharur, and Beed – in Beed District. Due to these efforts, a total of 1256 women and 1137 men have received cane cutter IDs, and 1768 are registered online but have not been issued IDs. Non-cooperation from the computer operator assigned to the registration task has caused delays in obtaining IDs. While there has been progress in Beed district, we continue to face challenges in Hingoli, where the registration process has been stalled due to the delayed commencement of a central app promised by the Maharashtra Government.



Picture 10: Provision on IDs to canecutters

2. We have been actively working towards the selection of women leaders on local-level health committees since last year. Although the response was limited initially, we successfully appointed 25 women leaders as members of the Jan Arogya Samiti (Sub-Centre level health committees) across various sub-centers, particularly in Beed. However, we are facing a



Picture 11: Health camp for canecutters in Hingoli

- significant setback in Hingoli. After submitting a letter to the District Health Officer (DHO), we received a response stating that there are no guidelines in Hingoli for selecting women cane cutters on the committee. Despite this, the women leaders have taken various actions, such as ensuring that meetings are regularly organized and that sub-centres remain open every day. Some leaders have also addressed and resolved health issues in their respective villages.
3. As per Government Resolutions, it is mandated to organize camps in villages before the cane cutters migrate. We have consistently followed up since last year to ensure the implementation of these camps. While only a few villages had camps organized last year, this year, we engaged in a dialogue with the Government, resulting in camps being organized in 10 villages in Beed and four villages in Hingoli. In these camps, tests for BP, sugar, HB, and cervical cancer were conducted. There was reluctance to conduct cervical cancer test among women. This reluctance is attributed to fear of detection of illness and shame associated with undergoing the test in the absence of symptoms. In one of the village the women cane cutter experienced some irritation during the test and hence others also refused to do the test. In Hingoli, we are still facing challenges in this regard.
4. Additional efforts included submitting a statement to the District Health Officers of both Beed and Hingoli districts, outlining demands such as providing TT injections at subcentres for cane cutters and supplying kits to cane cutter families. The proposed kits would include chlorine

bottles for water purification, ORS sachets, and sanitary pads for women cane cutters before they migrate for cane cutting. Additionally, we advocated for the provision of three months' worth of medicines (related to sugar, BP, and anaemia) for cane cutters following the health camps. However, there have been no steps taken in response to these demands.

5. The health-related and Arogya Sakhi trainings have empowered women to take immediate action at the local level. Women have assisted their families and neighbors in emergencies by arranging ambulances, while Arogya Sakhis and women leaders have raised awareness about menstrual hygiene and affordable water purification techniques. During the cane cutting season, they ensured that children and pregnant or lactating mothers received vaccinations and THRs (Take Home Rations).
6. Taluka Coordinators have worked to build confidence and trust among women cane cutters by helping them access various government schemes and resolving issues, such as securing ration in villages, pension schemes for children and widowed women, follow ups to get ID cards like aadhar cards etc. and job cards.
7. The confidence of women cane cutter leaders has grown significantly. They have begun confronting Mukadams, demanding that advances be given either in front of them or directly into their hands, and pushing for better basic facilities during the cane cutting season.
8. As a result of training on calculating advances, some women leaders have started requesting the necessary documents to calculate advances and are keeping track of their work, ensuring fair settlements.
9. The Block Coordinators are organization regular monthly meetings in each village where various issues of women cane cutters are discussed and solved.
10. In response to the suo moto case filed against the Maharashtra government by the High Court and the challenges related to the ICDS scheme, field visits were conducted between December to February 2024. The SOPPECOM team visited the following areas: Kavthe village in Satara district, Zaki Pimpiri in Osmanabad district, Kumbhari



Picture 12: Field visit to phad in Satara

Pimpalgaon in Jalna district, Mirji in Belagavi district, and Hundergal in Bagalkot district in Karnataka, to provide medicines to the women working as "AAROGY SAKHI" under the Aarogy Sakhi programme was the another objective of this visit. During the visit, the team monitored the calendar entries, observed the phad and discussed outreach of Government services in the phad. During the visit to Satara, some lawyers were also present regarding the suo moto case. They engaged in discussions with the sugarcane workers about the facilities and challenges faced by workers at the site.

11. Asha-Phadavarchi- The barefoot doctors: Arogya Sakhis: Additionally, the leaders are in



Picture 13: Training on basic first aid and health and illnesses under Arogya Sakhi

dialogue with the women cane cutters of their village. Various campaigns are run to ensure that the women cane cutters leaders' gain recognition and appreciation from the women cane cutters. Especially an experiment named 'Arogya Sakhi :Asha Phada Varchi' (literally-the hope on the worksite) under which 20 women cane cutters who will be migrating this year are trained for basic illnesses and knowledge of basic medicines related to fever, body ache, vomiting, dysentery etc. who are supposed to check the patients in their own toli and give them medicines if

required, or to refer to doctors/hospital in serious cases. This experiment has been specifically very useful in gaining appreciation among women cane cutters. Support at the worksite We have also ensured that we are in communication with the women cane cutters leaders during their migration period. Some of them are facing specific issues like exploitation from Vehicle driver, theft in the makeshift huts, animals destroying all the grains they have carried at the phad etc. Due to continuous follow ups with the women cane cutters, others in the phad are realizing the need for collective and are willing to join it. Two of our women cane cutters leaders who contested Gram Panchayat (Village Council) elections in December 2022 won the elections due to their work with women cane cutters.

Awareness material

- Through her Lens – English, Marathi (A photo story based on photos shared by women cane cutters or field staff during last cane cutting season)
- A video based on the photos/ videos shared by the women leaders, block coordinators, SOPPECOM staff
- Moli 4, a newsletter of women cane cutters, which describe the work of the women cane cutters organisation and also highlight the experiences and issues of women cane cutters.

Change Story 1

Arogya Sakhi: Pioneering Health Initiatives for Women Cane Cutters.

Although a large number of sugarcane workers migrate for nearly six months for cane cutting in sugarcane growing areas, serving as the backbone of the sugar industry, they are entirely devoid of basic facilities and live in inhumane conditions for a significant part of the year. They reside in temporary makeshift tents, often situated in unclean areas of the village without access to clean water for drinking or daily use, lacking toilets, bathrooms, and other essential amenities. Moreover, they endure prolonged working hours, ranging from 12 to 18 hours a day, without any leave for an extended period.

Our work with women cane cutters since 2019 has revealed that these working and living conditions have a detrimental impact on the health of cane-cutting families, particularly affecting women cane cutters. Through our dialogues, observations, and research, we have learned that the nature of cane-cutting work hinders cane cutters from easily accessing nearby sub-centers or Primary Health Centers (PHCs).

To address these challenges, we initiated a pilot project, training some women cane cutters as 'Arogya Sakhi' (barefoot Health Worker) this year. These individuals are equipped to provide basic treatment at the work site and refer cases to hospitals for serious illnesses. We aim to document this model and recommend to the government that similar models could be effective. Either the government or sugar factories could undertake the training and payment of such skilled cane cutters, providing the medicines from nearby sub-centers or PHCs, thus enabling on-site treatment. Selection criteria of these Arogya Sakhis included basic education, and migration for cane cutting in the current year, with consideration given to the positive experience with the women cane cutters from the previous year.

We selected a total of twenty women cane cutter workers as 'Arogya Sakhi' from Beed and Hingoli districts this year. These women underwent a three-day health training session in Pune, where they received information on providing primary treatment for diseases such as fever, body pain, and vomiting. Before migrating for cane cutting, these individuals received a kit containing medicines for common ailments, bandages for wounds along a guidebook. The team in SOPPECOM along with the health experts is constantly in touch with the Arogya Sakhis to assess their performance and support them in their work.

One such 'Arogya Sakhi' is Aruna Mahendra Ghongde, a women cane cutter leader from Jalaldabha village, Aundha Block, Hingoli district. Aruna, belonging to the SC community, has been working as a sugarcane cutter for the past fourteen to fifteen years, actively participating in various campaigns. She migrated to the village of Kavthe in Wai taluka of Satara district this year and was trained as an 'Arogya Sakhi.' Despite initial doubts, Aruna quickly realized the positive impact of her role, treating 133 patients in a short span of one and a half months for ailments such as fever, body/headaches, and cuts due to tools.

Aruna has gained recognition as the "Phadavarchi Aasha" in her Phad (living sites), signifying hope. After her one and a half months of experience, she confidently mentioned that she saved nearly 30-40 thousand rupees which the workers would have spent in accessing basic health care through private practitioners. Other cane cutters in the Phad expressed relief, noting that the presence of an 'Arogya Sakhi' allowed them to continue working without missing days for illness-related reasons, ultimately saving time and money.



Picture 14: Aruna Ghongade (left) helping women cane cutters and treating them for basic illnesses and injuries.



This year, the entire model operated voluntarily. Aruna emphasized that sugarcane women cannot sustain this role permanently on a voluntary basis. Hence, she urges the government or sugar factories to take this model seriously and provide additional financial support to women cane cutters

undertaking this responsibility. She also emphasized that such models wouldn't be necessary if proper facilities were provided at the migration sites.

Change Story 2

Trishala Mhaske's Journey in advocating for Women Cane Cutters Recognition and Registration

Over the past 12 months, there has been a notable increase in the engagement and commitment of women cane cutter leaders in the organization-building process. They have started proactively addressing their challenges. One significant struggle they faced was during the campaign for registration at the village level, particularly in Aranvadi village, Dharur Block, Beed district.

Trishala Raghu Mhaske, a dedicated leader, played a crucial role in ensuring the separate registration of 75 women and 75 men (75 cane-cutting families) after facing numerous challenges. Despite the government's earlier recognition of cane cutters through a GR (Government Resolution) prompted by persistent demands from various organizations, including the MAKAAAM-associated Women Cane Cutter Organization, there was still no acknowledgment of women cane cutters as individual workers; they were merely viewed as dependent family members.



Picture 15: Trishala Mhaske: An inspiring personality

Trishala Mhaske, along with other women cane cutter leaders, conducted various campaigns to initiate separate registration and obtain distinct IDs for women cane cutters. The leader mobilized women cane cutters in their villages, ensuring they acquired the necessary IDs. This process was far from easy.

Trishala Mhaske's initial attempt involved organizing a Mahila Gram Sabha (Women's Village level assembly) in the village, although she couldn't pressure the local self-government to conduct it. Undeterred, she organized a separate meeting, inviting the Sarpanch (Village Headman), and submitted a letter (with a signature campaign) regarding the registration of women cane cutters. Simultaneously the same submissions were made at Block, District and State levels.

Subsequently, efforts were made to ensure that every woman received an identity card. The District Coordinator personally attended a meeting at the village level with women cane cutters. During the meeting, the importance of these matters was emphasized. Trishala Tai had also visited every household even before the meeting to create awareness about the registration process. After the meeting, she took the initiative to personally visit every household to ensure that the women had the necessary documents. She helped the women cane cutters complete the forms, and she visited every corner of the village to achieve this. However, some families, particularly from upper castes and SBCs, did not show interest in this process. Trishala Mhaske faced additional challenges due to her SC category background, where some individuals were hesitant to trust her. Even one of her relatives was not ready to trust her and filled out the form himself, trying to give it directly to the District Coordinator. The District Coordinator cleverly dealt with this situation and rerouted the forms through Trishala Tai. Trishala Tai's husband and son were also supportive in this process.

Trishala Tai herself submitted the forms to the computer operator of the village. He does not stay in the village but at the Block office. Consequently, she was forced to travel to the Block nearly 8-10 times for follow-ups. She also pursued similar approaches with the Gram Sevak, informing him about the non-cooperation from the computer operator. Trishala Tai communicated to the Gram Sevak that she had submitted all the forms, required documents, and the fees for the necessary process, yet she wasn't receiving a positive response. Unfortunately, the Gram Sevak was also non-cooperative.

After several attempts, when there was no response, she informed the District Coordinator, who intervened. After understanding all this, the District Coordinator directly called the computer operator. He mentioned that there is some issue with the computer; either it's not downloading or not opening. So, she directly called the district council's computer operator, Mr. Rote, who handles the technicalities of the registration process. He intervened and the technical issues were eventually resolved. Trishala Mhaske distributed the IDs successfully in the presence of the Sarpanch (village headman.) Trishala's dedication resulted in the registration and acquisition of IDs for 75 cane cutter families in the village.

The continuous efforts, dedication, and perseverance demonstrated by Trishala Mhaske in navigating the complexities of the registration process highlight her commitment and increased involvement in the organization-building process. For a rural woman, doing a constant follow up, navigating and dealing with the idiosyncrasies of officials and seeking their assistance when required is commendable.

Activities conducted from April 2024 to September 2024

Yearly Reporting Meeting

Held in Lonavala, Pune, on April 3–4, 2024, to review work done in Beed and Hingoli districts and plan upcoming activities.

Arogya Sakhi Review Meeting and Refresher training

On May 1–2, 2024, eight Arogya Sakhis shared their experiences and challenges at migration sites, enhancing the Arogya Sakhi model. Refresher training for 20 Arogya Sakhis was conducted before the cane-cutting season, ensuring they remain equipped with skills and medicines.

Training on Advance Settlements

Conducted on May 28–29, 2024, in Beed and Hingoli, with 50 women trained on calculating settlements for cane-cutting advances by Ravindra Thorat.

Jan Arogya Samiti Training

Organized in Pune on June 6–7, 2024, for 27 women sugarcane workers to empower them as Public Health Committee members.

Food Distribution System Training

An online session on July 16, 2024, addressed challenges with ration cards, involving 20 women to enhance their understanding of the system.

Meeting with Social Welfare Commissioner

On July 30, 2024, testimonies about health, accidents, and violence at migration sites were presented to Maharashtra's Social Welfare Commissioner.

Exchange Visits to Beed District

Hingoli coordinators visited Beed for four days to share experiences, gain insights, and strengthen team approaches.

Meeting with Sugar Commissioner

Ahead of the September 6, 2024, consultation, key demands of women cane cutters were presented to the Sugar Commissioner.

State-Level Consultations

A consultation on September 5–6, 2024, finalized the women farmers' organization structure and addressed women cane cutters' issues, chaired by Baba Adhav with the Sugar Commission Joint Director in attendance.

Future Action Plans and Outputs:

This will include a range of activities including monthly taluka and village meetings, research visits during the cane-cutting season, and implementing the Arogya Sakhi initiative to ensure health and maternity benefits for migrant women. Efforts will focus on resolving issues like ration access, NREGA work, and scheme benefits, alongside video documentation, training on social media, MGNREGA, and podcast creation. Health camps, photo exhibitions, consultations, and workshops will enhance outreach, while collaborations with organizations in various districts aim to expand the network. Outputs will include infographics, booklets, reports, and innovative projects like crèche demonstrations and health studies.

SOPPECOM Team members: Seema Kulkarni, Pallavi Harshe, Aarti Bankar, supported by Health experts.

Field team includes 10 people from Beed and Hingoli districts

Towards Brown Gold Reimagining off-grid sanitation in rapidly urbanising areas in Asia and Africa.

Project implemented by SOPPECOM in collaboration with Institute of Development Studies (IDS)

Donor: GCRF-UKRI

Total Grant: £ 33530 with additional grant of £ 2999.15

Project Duration: 1st October 2020 to 31st August 2023 with extension till 30th September 2024.

Principal Investigator: Seema Kulkarni

Brown Gold Project Annual Review Meeting

19th – 26th November 2023, Kathmandu, Nepal

The annual meeting for the project *Towards Brown Gold: Re-imagining Off-grid Sanitation in Rapidly Urbanizing Areas in Asia and Africa* took place from November 19 to November 24, 2023, in Kathmandu, Nepal. The purpose of the meeting was to review and discuss research findings from project sites in India, Ghana, Wa, Nepal, and Alleppey. Key discussions focused on major research outcomes, future project plans, and strategies for publishing research papers. SOPPECOM's research team shared insights from Nanded. As part of the meeting, participants visited a faecal sludge management plant in Bagmati, Kathmandu, and Nepal Engineering College, where the Gulper machine was demonstrated to project partners. Seema Kulkarni and Prakash Ransing participated in the meeting.



Picture 16: Seema Kulkarni addressing during the annual meeting

Workshop to disseminate multi/ interdisciplinary research findings of Nepal, India, Ethiopia and Ghana

November 23, 2023, Kathmandu, Nepal

On November 23, 2023, the Integrated Development Society Nepal organized a one-day workshop at Shankar Hotel in Kathmandu, where researchers from Ethiopia, Ghana, India, and Nepal presented their interdisciplinary and multidisciplinary research findings. This event provided a platform for comprehensive discussions on the current state of water and sanitation in Nepal and other countries. A diverse group of 70 participants attended, representing government and non-government organizations, international NGOs, and universities.

The Brown Gold team, along with partners including SOPPECOM, shared their research findings on various aspects of the sanitation value chain, circular economy, safe sludge management, and the

challenges of marginality and agency in sanitation. Seema Kulkarni and Prakash Ransing were present at the workshop and presented key findings from the study.

The primary objectives of the workshop were:

1. To disseminate multidisciplinary research findings from various countries.
2. To highlight the alarming threats of groundwater contamination in the Terai region and related social issues, such as health, gender equality, and marginalization.
3. To enhance understanding among sectoral stakeholders on safely managed sanitation practices.
4. To address issues related to sanitation work and the reuse of humanure, aiming to inspire new practices and policy considerations.



Picture 17: Discussion during the interdisciplinary workshop in Kathmandu, Nepal

Workshop on Challenges for Non-Networked Sanitation in India

18th March 2024, IIT Bombay Campus

The workshop on "Challenges for Non-Networked Sanitation in India" was held at IIT Bombay on March 18, 2024, the workshop was jointly organised by Ashank Desai Centre for Policy Studies at IIT Bombay, the Society for Promoting Participative Ecosystem Management (SOPPECOM), Pune, and the Institute of Development Studies (IDS) UK. Part of the 'Towards Brown Gold' project funded by UKRI-GCRF, the workshop focused on non-sewered sanitation complexities in urban India, spotlighting Alleppey and Nanded. Discussions covered FSM infrastructure challenges, community participation in policy formulation, and understanding marginality and agency in sanitation, particularly the issues faced by sanitation workers and marginalized communities. Research findings from Nanded and Alleppey were presented, with participants including sanitation workers, union leaders, academicians, policymakers, administrators, and local residents.

SOPPECOM's Contributions: SOPPECOM presented findings from a study conducted on the Nanded Waghala Municipal Corporation (NWCMC), with Ms. Seema Kulkarni, Ms. Pallavi Harshe, and Mr. Prakash Ransing leading the presentation. Their presentation focused on the intersections of caste, class, gender, and migration in sanitation, highlighting challenges faced by sanitation workers and marginalized communities in accessing and utilizing sanitation facilities.

Community representatives and sanitation workers from Nanded shared personal experiences, exposing stark disparities between mechanized and manual sanitation services. A union leader emphasized the persistent challenges in securing fair wages and benefits for sanitation workers.

SOPPECOM's Recommendations

- Recognize and address the complex historical relationship of sanitation work with caste, class, and patriarchy.
- Policy makers must acknowledge the persistence of manual scavenging and its implications.

- Pair behavior change efforts with infrastructure improvements to facilitate safe sanitation practices.
- Ensure NWCMC connects all neighborhoods to the sewer network for better sanitation access.
- Incentivize the production and use of "brown gold" from faecal sludge to promote sustainable practices.

Publications and Documentaries:

Documentary - "Kondmara: (Buried Beneath: The Unseen Struggles of Nanded Sanitation Workers)"

The documentary delves into the harsh realities faced by sanitation workers in Nanded, emphasizing the impact of inadequate sanitation infrastructure on their lives. It features interviews with workers and union leaders, bringing their voices to the forefront. Directed by Prakash Ransing and Nihar Sapre, with support from Pallavi Harshe, Seema Kulkarni, and the SOPPECOM team, *Kondmara* aims to raise public awareness and inspire policymakers to implement effective solutions for these essential yet marginalized workers.

Documentaries on Migrant Women Sugarcane Cutters and their Sanitation Issues

Two documentaries are being made to show the tough conditions faced by migrant sugarcane cutters, especially the lack of clean water, toilets, and proper bathing facilities. These poor conditions are leading to serious health problems, especially for women workers.

The documentaries are directed by Aanda Pagare and Bhausaheb Aher, with coordination by Arti Banker and Prakash Ransing, and support from Pallavi Harshe and Seema Kulkarni. The goal of these videos is to raise awareness and encourage policymakers to take action on these important issues.

Policy Brief - "Centering Marginality in Sanitation Service Delivery in India"

The policy brief, developed from the Nanded study, delves into the intersections between unsafe sanitation practices and marginalization, specifically examining class, caste, and gender dimensions within the Nanded Waghala City Municipal Corporation. Additionally, it addresses socio-technical issues related to the Brown Gold initiative, offering key findings and actionable recommendations. The brief was developed and written by Seema Kulkarni, Pallavi Harshe, and Prakash Ransing, with copy editing by Shruti Patil.

Activities carried out between April 24 to September 24

1. On August 12, 2024, SOPPECOM organized a workshop in Nanded titled *"Dissemination of the Study on Marginality and Access to Sanitation in Nanded-Waghala Municipal Corporation."* The workshop brought together a panel of experts in City Sanitation Planning and Faecal Sludge Management, along with officers from the Nanded-Waghala Municipal Corporation. Sanitation workers and local citizens also joined, fostering a comprehensive discussion on the study's findings. The event was widely covered in the local newspapers and TV channels.



Picture 18: Dissemination workshop of study on marginality and access to sanitation in Nanded-Waghala Municipal Corporation

2. From September 14 to 22, 2024, the Institute of Development Studies hosted a Final Project Meeting in Sussex and Brighton, UK. This meeting aimed to review and discuss draft country papers and research based on cross-cutting themes. Representatives from SOPPECOM, including Seema Kulkarni, Pallavi Harshe, and Prakash Ransing, participated and shared insights from the Nanded study.
3. 'वणवणती जीव पाण्यासाठी' / Burning soul for water : Documentary in English and Marathi on Migrant women cane cutters and water during cane cutting season

Future Activities

1. A Zine document based on the findings of the study
2. Animation film depicting the burden of the poor and sanitation workers in a sanitation crisis
3. Documentary in English and Marathi on migrant women cane cutters and toilets/ bathrooms during cane cutting season
4. Final report of the study
5. India Country paper and Marginality paper to come in international journal based on the data findings across countries.
6. Marathi article based on the study

SOPPECOM Team members: Seema Kulkarni, Pallavi Harshe and Prakash Ransing

Agroecology programme

Supported by multiple donors: Agro Ecology Fund (AEF), American Jewish World Service (AJWS), and People for Progress in India (PPI), IHE Delft

Grants: AEF USD 50,000; PPI USD 10,000; AJWS USD 20,000; AEF for video documentation 10,000 USD

Principal Investigator: Seema Kulkarni

Background

The agroecology program, initiated by SOPPECOM, continues to address the interconnected issues of the disempowerment of women farmers and environmental degradation caused by mainstream, chemical-intensive farming practices. This initiative began as a relief measure during the pandemic in 2021, supporting women farmers from drought-prone and suicide-affected regions of Marathwada and Vidarbha. It has now grown into a comprehensive program that encourages sustainable, self-reliant farming models, promoting biodiversity, food, and nutrition security, while also preserving and amplifying the role of women's local knowledge in agriculture.

The programme

The agroecology program, initiated in 2021, began as a relief effort to support small and marginal women farmers from suicide-affected households, particularly those severely impacted during the pandemic. The initial focus was on transitioning these women to chemical-free agriculture rooted in the principles of agroecology. By 2022, the program evolved into a comprehensive initiative promoting self-reliant farming practices, enabling women farmers to adopt and sustain eco-friendly agricultural methods independently.

The program is running in six districts of Maharashtra, and in 2023-24, 250 women farmers took part, with 100 new women joining. These women are using agroecology on half to one acre of land.

Two years of work confirms the need for mentoring women farmers who have actively engaged with the programme but have also shown the potential to expand it in their own and neighbouring villages. So, in the third year, 40 women farmers were selected as champions of the programme. Training programmes were conducted to increase their capacities and create awareness among their village and beyond. On the other hand, the programme includes more women farmers from the same villages who have shown interest in joining the programme. Support was provided in terms of seeds, and engagement was



Picture 19: Training for women on agro-ecological approach in cultivation

monitored throughout the year.

Key Activities in 2023

Training of champion women

A four-day training of the champion women was conducted in May 2023 at Chetana Vikas in Wardha. Since many participating women already had one round of training last year, this year, the content was modified considering their needs. Discussions were held about their experiences of the past two years and what they feel are the areas that need to be explored further. Some new topics like seed preservation were introduced this year, considering a way forward for the programme. Seven women from the Yavatmal district, along with the coordinators, participated in the training

Direct support

Direct support of manure and seeds has been provided. As mentioned earlier, we are trying to expand the programme in the same villages, and seeds were provided to additional women farmers. They were encouraged to apply manure themselves. Like previous years, the seed kit includes a mix of cash crops (non-BT cotton/ soybean), food crops, vegetables, and plants

[illegible]

Research and documentation

Based on learnings from the past two years, significant efforts were made in 2023 to streamline monitoring and documentation processes. Daily diaries were introduced, empowering women to document their



Picture 21: Monitoring of the plots

document their progress and farming activities, ensuring accurate and first-hand data collection. It includes sections for: weather conditions, farming activities, production, challenges encountered, innovations and experiments

Field visits

SOPPECOM and the agriculture expert Ms Niranjana Maru are conducting joint visits. In September this year, a field visit was conducted, and individual plots of all champion women were observed.

Meeting with farmers

In 2024, an AEF grant partner visited one of the field sites to observe the progress of the agroecology program. A one-day meeting was held with women farmers in Wardha, where participants from Yavatmal, Akola, and Nagpur came together. The discussion focused on the activities of the women farmers, the agroecological practices they have adopted, the challenges they face, and their overall



Picture 22: Field visits to plots



Picture 23: Farm-level activities of women

experience with the program. Following the meeting, a field visit was conducted on the farm to observe the practical implementation of these practices. This visit allowed the grant partner to gain a deeper understanding of the impact of the program and provided an opportunity for farmers to showcase their progress.

Change story 1: Chanda Ghodam

This is like my grandmother's time. All the crops that we are taking she used to cultivate. At that time, we used to cultivate brinjal, tomato, beans, chillies and other vegetables. We also kept our own seeds. In the years between we had lost that practice. What all we did was go to market and buy vegetables. I had never sown a brinjal plant before, I didn't even know whether it would grow. I didn't know moth beans could be grown in our area. Looking at all this it feels like my grandmother's times are back. My daughter had a baby this year, and she was here for her delivery. I could make vegetables from the fresh produce for her. We could eat as many as we wanted. Usually I never buy so many vegetables from the market.

Previously, Chanda Tai leased out half of her 12-acre farm, growing cotton and pigeon pea with heavy use of chemicals, which resulted in high expenses. However, with agroecology farming, she realized she could farm at a lower cost. Confident in her new methods, Chanda Tai stopped leasing her land and now cultivates the entire farm herself.

Change Story 2: Sanjeevani Salve

Sanjeevani Tai from Beed district, a sugarcane labourer, had grazing land, coming from a Dalit, marginalized group, she was never seen as a farmer by the upper-caste landowners around her. She was known only as a sugarcane labourer. However, since she started practicing agroecology farming, she began to gain a different identity and respect that she had never received before. One day, a woman from an upper-caste family visited her farm to see the diversity of crops, especially the rare old varieties of seeds. She even asked for seeds from Sanjeevani Tai. Similar experiences have been shared by other women as well. This change would have otherwise been impossible, but through the agroecology farming experiment, there has been communication between farmers beyond caste barriers. As a result, women are expressing a sense of receiving respectful treatment.

Publications and Films

Policy brief: - women farmers show the way

-published a policy brief highlighting the achievements, challenges, and lessons learned over two years of implementation. This publication serves as a resource for stakeholders and policymakers, emphasizing the importance of agroecological practices in sustainable farming.

Films

Through the agroecology program, five impactful films were produced, showcasing the inspiring journeys of women farmers who transitioned to sustainable and self-reliant farming practices. Each film highlights unique stories of resilience, innovation, and hope, aiming to motivate others to adopt agroecological methods.

1. स्वावलंबी शेतीने दिला आत्मविश्वास (Sowing Seeds of Change: Sumitra's Quest for Self-Reliance)
Link- <https://youtu.be/FpyLYzhbxVI>
2. स्थलांतर रोखणारी स्वावलंबी शेती (Breaking Chains, Sowing Dreams: Migrant Labourer to Self-Reliant Farmer)
Link- https://youtu.be/O_FMHvZqnOo
3. अर्ध्या एकरात मुबलक बहर: अनिता ताईच्या मिश्र शेतीची गोष्ट (Harvesting Hope Through the Year)
Link- <https://youtu.be/NII47qAKT5I>
4. निराधार शेतकरी महिलेला स्वावलंबी शेतीचा आधार (From Despair to Hope: Vaishali's Journey)
Link- <https://youtu.be/ELxFIJSNX0U>
5. महिला शेतकऱ्यांचा पर्यावरणसन्नेही स्वावलंबी शेतीचा प्रयोग (Women Farmers Lead the Way)
Link- <https://youtu.be/aRbDeBtgPUQ>

Participation at workshop

Seema Kulkarni presented the work of SOPPECOM-MAKAAM in a workshop organised by IRMA from 16-18 November 2023 at Anand. The workshop was titled Managing Sustainable transitions in Agriculture: New directions for Research and Action.

Activities carried out between April 24 to September 24

In 2024, the agroecology program will continue with a focus on preparing for the upcoming agricultural season and enhancing the capacity of women farmers.

- Block-level meetings were organised in the summer 2024 to plan for the monsoon season.
- Two key training programs were held in April 2024: the first for women in the program who have not yet received formal training, and the second for champion women farmers to strengthen their skills and deepen their knowledge of agroecology principles.
- Direct support was provided, including providing solar fences to protect crops.
- Exchange visits for champion women were organised in September 2024 to facilitate learning from each other's experiences.
- Furthermore, the program was scaled through distribution of kitchen garden seed kits to additional women, promoting food security and enabling women to diversify their crops at the household level.

SOPPECOM Team members: Seema Kulkarni, Sneha Bhat, Swati Satpute and Bhumika Kadu

Field team includes 5 district coordinators

Agro-ecology for sustainable and just groundwater governance (Short title: Careful irrigation)

Donor: IHE Delft

Total Grant: 64,500 Euros

Project Duration: 2023 – 2027

Principal Investigator: Seema Kulkarni

This is a multi-country project bringing together partners that work on agro-ecology and/or groundwater. The project starts from the premise that transformations to water sustainability in agriculture require a shift to less intensive crops and farming systems. More regenerative forms of farming such as agroecology are promising here, as these are potentially much less water-demanding. The project aims to re-think and re-do irrigation to make it compatible with more regenerative forms of farming, which is called care-ful irrigation. The project aims to identify and document such farmer experiments which will form the basis for more systematic and longer-term grounded engagement and practice-based processes of co-learning and experimenting.

An inception workshop was organised in Morocco in December 2023, and detailed activities would be planned in 2024.

SOPPECOM Team members: Seema Kulkarni, Sneha Bhat, Swati Satpute and Bhumika Kadu



Picture 24: Farm cultivated on agro-ecological principles

Understanding the nature, forms and implications of structural violence against rural women in the context of agrarian distress

Donor: Ford Foundation

Total Grant: 5,50,000 USD

Project Duration: December 2021 – November 2024 (no cost extension up to June 2025)

Principal Investigator: Seema Kulkarni

About the project

The main objective of this action research is to understand the political economy of agrarian distress and its interconnections with violence and everyday harassment against women across diverse social groups. This research project is supported by the Ford Foundation.

The study is being conducted in the states of Maharashtra, Telangana, and Punjab and in all the states, districts that show indicators of agrarian distress have been selected: Nalgonda and Medak in Telangana and Yavatmal, Akola and Parbhani in Maharashtra, and Mansa, Bhatinda and Sangrur.

Activities in 2023-24

In the year 2023-24, Large scale quantitative survey in Maharashtra and Telangana was completed. Following the pilot study in previous year, the research teams from the two states refined the methodology for the survey, and developed the survey tool. The survey tool was discussed thoroughly among the research team, and with the advisors in order to capture as many facets of agrarian situation today, and how it is affecting women. A rigorous process was followed to select sample – blocks, villages, and then households within the village. Time was dedicated to building the team of investigators, and detailed trainings were organised with the women investigators. Through the quantitative survey, data has been collected from 2424 women across five districts of the two states.



Picture 25: Discussion with women to understand the issues

Data was collected in the two local languages: Marathi and Telugu. So once collection was completed, all the data was translated to English, and was prepared for the analysis. Workshops were planned with the investigators post data collection to understand challenges they faced and adaptations they did during conducting the survey. Insights shared by the investigators were important in further exploration through case studies. By the end of March 2024, preliminary analysis of the survey was completed.

The large-scale quantitative study was also complemented with qualitative data collection through different methods. Detailed case stories from women farmers have been collected from all the study districts. To contextualise the survey and case stories, detailed village and district profiles were compiled simultaneously.

A workshop with MAKAAAM partner organisations was organised in November 2023 to share the preliminary findings, and discuss experiences from the other districts of Maharashtra. A workshop with the study advisors was organised in January 2024 in Hyderabad to share initial survey findings and discuss more possibilities for analysis. A decision was taken to initiate the study in Punjab at this meeting.

District workshops were organised in Maharashtra and Telangana between February and March for the dissemination of findings. In Maharashtra district workshops were conducted jointly with Tata Institute of Social Sciences (TISS) in Akola, Yavatmal, Nagpur and Parbhani. District level officials from the revenue, agriculture, women and child and Police departments were invited for the workshops. Similarly, CBOs, CSO, Local committee members, students of colleges and university, interested faculty were invited for the workshops. Similar workshops were conducted in Medak (one in Siddipet and one in Sangareddy) and Nalgonda districts in Telangana.

Key insights from the study

Before looking at the current agrarian issues and how they are affecting the women farmers, we tried to understand their context through their caste and marital status, age at marriage, education level, ownership of land and other resources, and experiences of domestic violence. Data from this profile building clearly pointed how the women farmers we talked with begin from a disadvantageous position. Getting married at young age, without education beyond high school, they have limited opportunities for livelihood and mostly depend on cultivation and agriculture labour.

The study brings out various facets of agrarian distress faced by women farmers: mono-cropping, dependence on markets for inputs increasing the cost of cultivation, impact of erratic weather on crops, and reduced work opportunities. The survey pointed out that in Maharashtra only 123 days of agriculture labour work was available for women agriculture labourers. On the other hand, cultivator women said they have difficulty engaging women labourers, and have to take up extra work themselves. This paradox is the effect of mono cropping where work is available only during certain periods (e.g. during cotton picking), when cultivators have difficulty getting labour. While rest of the year, labourers have to struggle to find work.

The agrarian changes are affecting women in different ways: reduced work opportunities and dependence on multiple activities to make the ends meet, increased burden of unpaid work, increased responsibility to meet family's food and nutrition security, and its effects on physical and mental health. Indebtedness is also significant among women farmers, especially loans taken for household purposes, daily needs and health expenses. These loans are often taken from informal sources like money lenders, and MFIs, increasing their vulnerability.

This situation is worsening due to lack of social security: the survey clearly points out dismal access to P M Kisan, MGNREGA, and public health care systems, along with other social security schemes.

Insights are also emerging about various forms in which violence is manifesting in private and public spheres, boundaries of which are more often than not are blurred for rural women working in agriculture sector. While women experience violence in various forms, their reach to redress mechanism is almost non-existent.

Findings from the report are discussed in more detailed in the state summary reports, which could be found here:

<https://www.soppecom.org/publications-techstudyrepots.htm>

Publications

By the end of March 2023, following publications have been completed:

- District summary reports for the five districts from Maharashtra and Telangana
- A series of posters based on the study findings Activities carried out between April 24 to September 24



Picture 26: one of the participant addressing during the district level consultation

A quantitative study of 711 women farmers was conducted in Punjab following the same methodology as that of Maharashtra and Telangana study.

Preliminary analysis of the survey data has been completed, and collection of case stories is ongoing.

Following events were organised for the dissemination of findings between April and September 2024.

- State level Consultations: State Level consultations were organised in Maharashtra and Telangana in collaboration with MAKAAAM. In Maharashtra Gender and Women's Studies Department of Savitribai Phule Pune University (SPPU) was a co-organiser, in Telangana it was Gramya Resource Centre for Women
- Findings were presented before a gathering of about 100 women farmers who had come to Pune from different districts of Maharashtra to discuss the formation of a state wide women farmers organisation
- National level consultation 'Understanding Structural Violence against Women in Farm Suicide Affected Households': participants from Maharashtra, Telangana, Punjab, Andhra Pradesh, Karnataka, and Kerala participated in this workshop. Around 100 participants including women farmers from across diverse sections participated in the consultation.
- At each of these events, a parallel event of photo exhibition was organised. The photo exhibition focussed on women farmers in the context of agrarian distress.



Picture 27: Women farmers with posters on violence against women

Following publications were completed between April and September 2024:

- Maharashtra state report in Marathi
- Telangana state summary report

Following publications are in progress by the end of September 2024

- State study summary reports in English
- A collection of ten graphic stories
- A collection of five photo stories
- A booklet of in-depth case stories
- Posters on violence against rural women

SOPPECOM Team members: Seema Kulkarni, Sneha Bhat, Rucha Vasumati Satish, Vanita Tumsare

Research team in Telangana: Rukmini Rao, Ashalatha, Usha Seethalakshmi

Research Team in Punjab: Anupama Uppal and Simran Vohra

Creative Medium: Vidya Kulkarni

MAKAAM

Apart from specific programmes, SOPPECOM, as the Secretariat to MAKAAAM Maharashtra, also supported the following activities. These are non-project activities

Perspective building workshop

Between 23-25 May 2023, a workshop was conducted of all the key women leaders of MAKAAAM to build perspective on the larger political context. While MAKAAAM focusses on women farmers' issues, it was felt that there is a need to develop a wider understanding of the agrarian issues, social security issues that affect rural women. 25-30 women leaders were present for the workshop

Organisation formation

In November 2023, MAKAAAM organised a meeting to discuss the formation of a state-level organisation of women farmers and sugarcane cutters. The objectives, vision mission and constitution of the organisation were discussed at the meeting. Experts on the subject were invited to guide the participants at the meeting.

Mobilization efforts have taken place through village meetings and taluka Melawas to engage women cane cutters in discussions about the need for organization. Many women cane cutters and farmers from different districts have expressed their readiness to become members. We are currently in the process of finalizing the constitution and continuing to mobilize women cane cutters and other women farmers towards the formation of the organization.

Regular meetings with women leaders and district facilitators are held to discuss the activities of MAKAAAM.

Speaking tour organised by the Association for India's Development (AID)

AID has been supporting the work of SOPPECOM since 2019. The specific focus of the work supported by AID is to develop leadership among rural women associated with MAKAAAM. AID has additionally provided support during COVID.

As part of their fundraising effort AID organised talks in 7 different cities to allow us to share the work done by MAKAAAM in Maharashtra and elsewhere in the country.

Seema Kulkarni was invited to give these talks from 15 October to 30th October.



Picture 28: Seema Kulkarni speaking on behalf of MAKAAAM at the conference in University of Massachusetts, Amherst

Seema Kulkarni also represented MAKAAAM as a featured speaker at a conference at the Political Economy Research Institute (PERI) at the University of Massachusetts Amherst on November 2 – 4 2023. The title of the conference is “Advancing Well-Being and Power Among Low-Wage Workers: U.S. and Global Opportunities.” Her presentation at the conference can be found [here](#).

Team: Seema Kulkarni, Sneha Bhat, Pallavi Harshe, Swati Satpute

Restructuring water distribution from the Tembhu Lift Irrigation Scheme (TLIS), Atpadi taluka, Sangli, Maharashtra

Project Period: April 2020- March 2025

Project Status: Ongoing

Budget: Rs. 147,90,830

Funder: Azim Premji Foundation, Bengaluru (APF)

Collaborating Partners: Pani Sangharsh Chalwal, Irrigation department, government of Maharashtra, SOPPECOM

Principal Investigator: K. J. Joy

Background:

Atpadi- a drought prone tehsil located in the eastern part of Sangli district - receives an average rainfall of 350 mm and agriculture is mainly rainfed. Recurrent droughts have led to tanker-based water supply for basic needs and distressed migration with people looking for alternative livelihoods in non-agricultural sectors. The sustained efforts and struggle of the Shramik Mukti Dal Pani Sangharsh Chalwal (Pani Chalwal in brief) led to the restructuring of the Tembhu Lift Irrigation Scheme on equitable lines in Atpadi tehsil. Under the leadership of Shri Nagnath Anna Nayakwadi, Dr. Bharat Patankar and Shri. Anandrao Bapu Patil, the farmers of Atpadi tehsil put forth a long struggle for 10 years, which finally saw a logical end with the government agreeing to the equitable distribution of water in Atpadi, Sangola and Tasgaon tehsils. Atpadi tehsil has been selected as the pilot for the implementation of this model.

The equitable water distribution model is based on the principle that for maintaining a healthy lifestyle and sustained livelihood, a minimum of 1000 m³ of water should be made available per capita, annually. Atpadi is allocated a total of 4.4 TMC from the Tembhu Lift Irrigation Scheme (TLIS) as per to the original plan. According to the recent revision, Atpadi will receive an additional of 1 TMC which makes its total allocation from TLIS as 5.4 TMC. The water available from the Tembhu will only be a supplementary source to the existing local water resources. The total water i.e. local water including the groundwater and water from the TLIS, approximately accounts for a little over than 1000 m³ per person in Atpadi. Therefore, every household will receive approximately between 5000 – 6000 m³ of water annually for their domestic and livelihood needs.

The salient features of the project are:

1. Integrated water use: Water coming from TLIS (exogenous water), the local surface water available in the minor irrigation tanks, check dams, wells and the groundwater would be used together in an integrated manner.

2. Equitable water distribution: Unlike the conventional irrigation systems, every family, including landless people, will annually receive 1000 m³ of water on per capita basis to meet livelihood needs.

3. Participatory irrigation management and cluster WUAs: Another unique feature of this project is that water would be managed by water user associations (WUAs) formed on the basis of clusters. Unlike the conventional flow irrigation systems which have water user associations along a minor, here

the delineation of the WUA area is done along the distributaries and branch canals dependent on the type of users (those taking water from well, or lake etc).

4. Volumetric water supply and pricing: The Irrigation Department (ID) would charge the cluster WUAs on the basis of the volume of water used.

5. Closed pipeline: Water will be conveyed through a closed piped network right upto the field channels resulting in significant water saving due to the reduction of conveyance losses and thus improving irrigation efficiency.

SOPPECOM is providing support to the Pani Chalwal for the institutional building of the project and its implementation on the ground.

Key activities taken place in the past year (2023-24)-

1. Formation of Water User Associations (WUAs)

Shiwar pheris were conducted to check the pending works of 17 water user organizations on Kharsundi and Ghanand distributary areas, where there is demand from farmers for new outlets and to inspect pipeline leakages etc. As per the demand from WUA farmers,

correspondence was written to the

irrigation department to complete all the

pending works, including leakages and proposing new outlets. In December 2023, a meeting was held with the irrigation department at the Irrigation rest house in Atpadi. The meeting was attended by irrigation officials, farmers and Pani Chalwal members. In the meeting, the finding from the *Shiwar pheri* were discussed in detail, the insufficiency of work and a time period was set to complete the pending works.

In this meeting, it was decided to conduct meetings in the 12 villages which were excluded from the TLIS implementation in the beginning. A protest was also planned in order to complete the tendering works for these 12 villages. On 21 June, 2023, a protest was held at the Tehsil Office in Atpadi. On 4 December, 2023, a sit-in-dharna or protest was held again to fulfil the same demand. On 14 February, 2024, a water conference took place, which were attended by the farmers of the 12 deprived villages in the Lingivare village.



Picture 29: Shiwar pheri to monitor the physical system of TLIS in Atpadi



Picture 31: Checking the voter's list for WUA cluster 8,9,10



Picture 30: Lingivare Parishad

Apart from these protests, frequent meetings were being conducted with the irrigation department, urging them to complete and finalise the voter's list and conduct elections for the formation of WUAs. In March 2023, the department announced the election schedule. The necessary information was collected for preparing the electoral rolls of water use institutions in clusters 8,9,10. Information such as race, age, etc. of the account holders was collected. A basic survey was conducted to collect information such as family, population, landless, mobile number etc. in clusters 8, 9 and 10. We collected information about the deceased, migrants as well as the account holders who got married and left the village. All these information were useful in preparing electoral rolls as well as determining the rights of families.

2. Knowledge generation and resource literacy:

Socio economic data for 60 villages was collected in 2022. The analysis of this data was done using the SPSS software. All the information regarding water resource mapping and well survey for every village were compiled as well. Draft reports for all the 60 villages are ready, which includes the socio-economic survey, well survey, land-use coverage and water resource maps. These reports will be shared with the villagers. The individual village reports act as baseline and will be useful to map the changes, once the WUA starts functioning. In Vibhutwadi village, participatory resource mapping (PRM) was done in January 2024. For this about 15 youth were provided 2 day training on PRM in which they were taught in to collect and map detailed information on water resources, land type, cropping patterns, etc. The youth then collected all the data in the period of February and March. Using this information, the water resources plan and balance sheet of the village will be prepared.

3. Capacity building

A two-day training programme was held for the directors of Cluster Water Use Institute No. 8, 9, 10 in March 2024 as well as for Buddhihal WUA federation, Sangola in December 2023. Thirty-three directors from cluster 8,9,10 and around 40 directors from Buddhihal WUA federation attended the training programme. Women directors were also present. The directors were trained about the role and functioning of the WUAs, how WUAs can be strengthen while implementing the TLIS, the TLIS and role of the movement, the MMISF Act of 2005 and its rules 2006 and the use of E-Pavas application to increase the efficiency and functioning of the WUAs.



सोलापुर जिल्हा पुल आउट 18-12-2023

पाणीवापर संस्थांना काटकसरीबाबत धडे

बुध्देहाळ प्रकल्पस्तरीय पाणी वापर संस्था आणि सोपेकॉम संस्थेच्या वतीने कार्यशाळा

प्रतिनिधी | नाझरे

संगोला तालुक्यातील बुध्देहाळ तलावावरील सर्व पाणी वापर संस्थांच्या प्रतिनिधींसाठी १४ डिसेंबर रोजी एकदिवसीय प्रशिक्षण विविराचे आयोजन चोपरीतील बाळसावे देसाई विद्यालयात करण्यात आले होते. दोन सत्रात झालेल्या या प्रशिक्षण विविराप्रभे बुध्देहाळ तलावाच्या लक्ष्यक्षेत्रातील ९५ गावांतील ४० हून अधिक शेतकऱ्यांनी सहभाग घेतला. प्रकल्पस्तरीय पाणी वापर संस्थेचे अध्यक्ष गणेश वावर यांनी बुध्देहाळ तलावातून होणारे सिंचन, पाणी वापर संस्थांची सध्याची कार्यपद्धती, तसेच त्यांना वेगळ्या अडचणींची मांडणी केली. बुध्देहाळ प्रकल्पासाठी बंद पाव पद्धतीने सिंचनाची गरज बोलून दाखवली. सोपेकॉम संस्थेचे



विक्रम लोहकरे यांनी प्रशिक्षणाचा उद्देश सांगितला. पाणी प्रयत्नांशील अभ्यासक के. जे. जीव यांनी मांडणी करताना महाराष्ट्रातील एकूणच पाणी वापर संस्था आणि त्यांचे यशस्वी वावर प्रकाश टाकला. प्रभावी सिंचनयंत्रेवरच पाणी वापर संस्था काय करू शकतात याची माहिती त्यांनी दिली.

शेतकऱ्यांनी नोंदवलेली माहिती या अंमलबंधी पाणी वापर संस्था व शिखर संस्थांच्या पाठळीवर एकत्रित करता येणे शक्य असल्याने या माहितीचा उपयोग

पाणी वापर संस्थांना त्यांच्या पणव्याच्या आकर्मणाच्या निवेदनसाठी होणार आहे. प्रशिक्षण विविराचा समग्रच क्षमिक मुक्ती द्यावे राष्ट्रीय अभ्यास डॉ. भारत पाटणकर यांच्या मार्गदर्शने झाला. विभागाप्रभे पाणी वापर संस्थेचे मॉडेल व पुरव संचालक, शेतकरी उद्दीष्टात होते. या प्रशिक्षणासाठी सोपेकॉम संस्थेचे अमोल माने, भीमराव बगर, अजय बहानूर, अंकुश मुंडे हे उपस्थित होते. उमेश लेमटे यांनी आभारप्रदर्शन करून प्रशिक्षण विविराचा समारोप केला.

Picture 32: Local newspaper clipping about the training of Buddhihal WUA Federation

SEWOH Lab Project: SOPPECOM – TMG

Donor: TMG Research Group, Berlin

Total Grant: Euros 2,05,771

Principal Investigator: Dr. Neha Bhadbhade

Project duration: December 2021-November 2024

The SEWOH Lab, a project led by TMG Research Group, Berlin, analyses the linkages between digital and social innovations for achieving food security and sustainable livelihoods of smallholder farmers. The cornerstone of the project is unlocking the potential of digital solutions for inclusive rural and agricultural development in sub-Saharan Africa and India with a primary focus on smallholder farmers and marginalised communities. The project was executed in three different phases.

Background:

SOPPECOM has collaborated with TMG Research Group since year 2022 on different Phases as mentioned below:

Phase I: Ecosystems Restoration Workstream-Digital tools to cover the last mile in restoration monitoring

The Ecosystem Restoration work stream sought to understand the challenges involved in monitoring ecosystem and soil restoration projects, exploring social and digital innovations that can empower farmers and local communities in the monitoring of project activities, to reduce transaction costs. The study focused on two distinct work packages – i) Situational Analysis of current monitoring systems: To understand existing tools (digital or otherwise) for monitoring and impact assessment of Soil Organic Carbon (SOC) and soil health resulting from agricultural and farm management practices; ii) Scoping study on the monitoring, verification, and reporting in ecosystem landscape restoration: To assess, how the implementation of programs and projects in the field of ecosystem restoration is reported to the state and national level in India.

Phase II: Ecosystem-based limiate adaptation (EbA) workstream

The Ecosystem-based climate adaptation (EbA) workstream: “Digitalization in ecosystem-based climate adaptation. Bridging the last mile through social innovations” sought to understand how local support systems can provide “last mile connectivity” by facilitating access to digital information in climate adaptation. In this regard, digitalization is not regarded as an end but to enable farmers and other land users to make better-informed decisions to enhance the resilience of their production systems in the face of climate change. Through this project, we sought to learn from existing EbA approaches that merged technological solutions such as 3D aquifer modeling within the architecture of participatory processes such as community-led groundwater governance. There were three distinct work packages for the project as below: 1) Deep analysis of the Water Stewardship Initiative 2) Scoping studies to understand the use of digital tools in locally led water governance 3) Development of the research framework itself for pilot action research.

Phase III: Nature-based solutions workstream, “Strengthening local led water governance through digitalization”

The nature-based solutions (NbS) workstream of the SEWOH Lab investigates how local institutions in smallholder farming contexts can be strengthened through digitalisation in climate adaptation, with a focus on water resources. In this regard, digitalization is not regarded as an end but to enable farmers and other land users to make better informed decisions with a view to enhance the resilience of their production systems in the face of climate change. The envisioned action research under the SEWOH Lab seeks to strengthen local institutions, like Water User Associations and watchdog organizations like farmer social movements, to manage and govern water resources with the help of digital tools. More concretely, this research projects seek to achieve, a digital system for participatory monitoring and managing water resources is easy to use/ does not require advanced technical skills to use. The research was carried out in Atpadi Sangli where WUAs are being formed. This phase of the project was from March 2023 to December 2024. The project used a transdisciplinary approach to co-develop and co-pilot a digital tool along with the local institutions which are WUAs in Atpadi. The research was guided by the following questions:

1. What type of data, knowledge and monitoring systems are needed for WUA and other local institutions to fulfil their role in effective and inclusive water governance (knowledge)?
2. How can the design, development and experimentation of the digital system be made participatory (participation)?
3. What are the capacity development requirements for local institutions to utilize digital tools and to ensure last-mile connectivity for all water users (capacities)?
4. How can the knowledge and data created on water resources transform into behavioural changes, such as changed cropping patterns and water harvesting practices (behaviours)?
5. How can local water institutions use the digital data to hold the government accountable for their water entitlements (accountability)?

Specifically, the function of the digital tool was to help in the following three actions:

- Monitoring of water use from different water sources (local surface water bodies like minor irrigation tanks and check dams, groundwater (open wells and bore wells), lift irrigation scheme and farm ponds), for WUA to understand who is using how much water with a view to improve equitable water use.
- Monitoring of water demand for more effective water budgeting and crop planning, through farmers’ provision on cropping and land surface area.
- Reporting grievances and on leakages in the water delivery system, and issues related to water access.

SOPPECOM conducted a needs assessment survey with different groups in the different villages in Atpadi including youth, women, landless and the dalits. From the insights received from the needs formed the basis on how the tool should be co-developed, what are the most important elements, whether it should be a custom based or an open source based tool. After consultation with also some expert on digitalisation, it was decided to go ahead to develop a customized digital app for the WUAs. SOPPECOM approached a Delhi based software company called Microware Computing and Consulting Pvt Ltd that has the domain expertise for developing such digital apps.

Design and Development of E-PAVAS:

The digital tool called E-PAVAS was developed by Microware. E-PAVAS which stands for Electronic – Pani Vapar Sanstha aims to improve transparency and efficiency of WUAs and ensure integrated, equitable water distribution. The main features of the app are as follows:

- **Monitoring Water Demand:** Facilitates effective water budgeting and crop planning.
- **Grievance Reporting:** Addresses issues related to water access and system leakages.
- **Data Visualization:** Supports evidence-based decision-making and facilitates water entitlement claims with the district-level irrigation department.

E-PAVAS consists of two main components that support the functions of the WUAs: the E-PAVAS mobile application and the E-PAVAS web portal. The mobile application is designed for WUA members (farmers). Through the app, farmers can submit their water demands to the WUAs and file complaints. WUA data on crops and other relevant information can also be updated through the app, and members can receive notifications from the WUAs related to frequency of water rotation, status of raised complaints, etc. The E-PAVAS web portal supports WUA board members by helping them make collective decisions regarding water management within their WUAs. It allows the management board to perform the following tasks:

- **Manage the list of crops:** Add or remove crops based on the WUA's crop planning. Any changes to the crop list are reflected in the E-PAVAS mobile app, allowing farmers to see or not see specific crops in the list.
- **Manage WUA members:** Add new members, update existing members' information, and manage membership records.
- **Set water tariffs:** Each WUA has the flexibility to set its own water tariff, enabling it to generate a corpus fund. This fund can be used for minor maintenance and repairs, office expenses, and overheads.
- **Analyse water demand:** E-PAVAS collates data seasonally to provide an overview of total water demand received from members, helping the WUA make decisions on whether it can meet these demands.
- **Grievance redressal:** The E-PAVAS web portal compiles grievances and allows the WUA to respond by sending notifications to farmers, updating them on the status of their complaints.
- **Send notifications to members:** The WUA board can send notifications through the E-PAVAS web portal, either collectively or individually. For example, they can notify members about upcoming meetings for planning the rabi season or update individual farmers on the status of their complaints.



Picture 33: Snapshot of the E-PAVAS app and the web portal

The app was piloted in December 2023, in 2 WUAs on the Buddhihal Medium Irrigation Project in Sangola as the WUAs in Atpadi were still not formed by the end of December 2023. A formal one-day training was provided to the directors of the Buddhihal WUAs. In addition, few youth were trained, for the initial handholding of the app. Some information from the pilot WUAs is as below:

Adarsh Pani Vapar Sanstha:

- Total members – 517
- Number of farmers that have downloaded the app: 397
- Number of farmers that have demanded water: 45

Lokmanya Pani Vapar Sanstha-

- Total number of members (farmers): 234
- Number of farmers that have downloaded the app: 199
- Number of farmers that have raised demand: 19

Farmers found that the E-PAVAS app, was very compatible and easy to use. They said that they can demand water and send complaints from remote locations without physically going to the WUA offices.

To share the local insights, Joy and Neha attended a week-long conference in Rome, Italy in October 2023, titled “From Data to Action: Forum on inclusive digitalization for Food Systems”. The objective was to promote knowledge exchange, based on concrete examples of scalable innovative approaches that empower people like women, indigenous people, and smallholder farmers, to inclusively collect, own and make use of the data that strengthen their participation in food system transformation.



Picture 34: Handholding the farmers to use the E-PAVAS application in Sangola tehsil

The following outputs were generated from this Phase of the TMG project:

- E-PAVAS digital tool – mobile application and digital tool
- Process documentation of E-PAVAS
- Needs assessment report
- Manual for E-PAVAS
- Instructional video for E-PAVAS (Youtube link: <https://youtu.be/NcVbhAEU9iY>)

Next steps:

- Continue with the on-field training programs with the farmers
- Conduct refresher training programs for WUAs and given them copies of the E-PAVAS manual, both webportal and mobile application
- Conduct training program for the Federation at Buddhihal Minor irrigation tank and set up the system for them to manage their demands and tariffs at federation level
- Continue data monitoring for the summer season (March to May 2024)

Soft systems analysis: Streamlining participatory approaches and agent-based models to explore ideas of fairness at the food-water-biodiversity (FWB) nexus (fairSTREAM)

Project Period: April 2022- September 2024

Project Status: Ongoing

Funder: International Institute for Applied Systems Analysis (IIASA), Laxenburg

Budget: 51000 € (Rs. 42,09,540)

Collaborators: International Institute for Applied Systems Analysis (IIASA), Laxenburg & Indian Institute for Science Education and Research (IISER), Pune

Principal Investigator: Dr. Sussanne Hanger Kopp (IIASA), Co-PI: K.J. Joy (SOPPECOM)

Brief overview

There are conflicting views on what are fair outcomes and this had complicated the process of finding viable solutions for many policy issues at the water-food-biodiversity (WFB) nexus. Improving our ability to understand and reconcile these claims about what is fair is key for managing risks in this complex and rapidly changing nexus system. This is a major challenge that requires the integration of multiple sources of knowledge and the cooperation of many different societal actors. Science can support this endeavour by developing fair procedures that enable the promotion of fair outcomes. Doing so effectively requires: 1) co-producing knowledge with stakeholders to articulate divergent views on challenges and opportunities and, 2) a robust analysis of how the effects of decisions propagate through the FWB system.

fairSTREAM project takes a bottom-up approach to knowledge co-production and looks at the ability of large-scale agent-based models (ABMs), dynamically coupled to hydrological and biodiversity models, to simulate the distributive effects of decisions through the system with respect to trade-offs, burdens, and benefits for individual farmers and other stakeholders. This co-production process was undertaken in a sub-section of Upper Bhima basin in India as a case study. The project aims to produce an expanded toolkit on systems-based and fair co-production processes, to be published as a working paper or handbook. Based on the stakeholder-driven assessments quantitative scenarios using a modelling approach would be developed. Through this we can represent stakeholder heterogeneity, synergies, and trade-offs at the individual level.

Summary of activities

1. Engagement with local stakeholder including farmer groups, tribals, women and local organizations

We conducted several field visits to the study area during May 2023 - March 2024. During this time, interactions were made with groups of farmers, tribals, women, local CSOs and activists. The discussion was built on the inputs received during the first stakeholder engagement workshop conducted in January 2023.

With these insights, a situational analysis report¹ for the Upper Bhima basin in the context of water-food-biodiversity nexus was prepared. The report summarizes the findings of the preparatory and problem-framing phase, to contextualize the WFB nexus in the Upper Bhima, and what specific challenges it raises, both from a sustainability, equity and fairness perspective.

2. Household Surveys

Household surveys were conducted in the study area during May-June 2023. The aim was to gain a comprehensive understanding of cropping patterns, water access and usage, farming practices, and adaptation strategies employed by the farmers in the Upper Bhima basin. It also aimed to understand farmers' decision-making trends, to uncover the factors driving their choices and actions. Additionally, the survey collected detailed ground-level data to inform and enhance the accuracy of Agent-Based Modeling (ABM) outputs and their interpretations, ensuring the results are rooted in real-world insights.

The surveys were conducted in three sections of the Ghod River Basin: Upper, Middle and Lower sections. In each section 100 households were surveyed in four different villages. The key findings were as follows:



Picture 35: Household survey in the Ghod river basin

1. Income from farming activities is highest in the middle section and lowest in the upper section of the basin.
2. Crop diversity is high in the middle and lower sections. Various irrigated crops are cultivated in the middle section, with high water availability.
3. With more income and enough water available, farmers in the middle section have already invested or were more willing to invest in adaptation measures in the future. They also have better options for income from non-agricultural sources, such as jobs in the nearby industrial area or the city.
4. Lack of funds, lack of labour and no access to credit are important reasons for farmers in the upper section not implementing any adaptation measures. Due to limitations posed by the complex terrain, the suitability of adaptation measures like irrigation wells is uncertain.

3. Stakeholder engagement at the fairSTREAM Workshop II

The second stakeholder workshop was a follow-up workshop organised in the context of the fairSTREAM project. In the first stakeholders' workshop, held in January 2023, we identified and

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<https://pure.iiasa.ac.at/id/eprint/19014/1/WFB%20Nexus%20Situational%20Analysis%20Bhima%20Basin%20Kandam%20et%20al%202023.pdf>

discussed the challenges, priorities, and trade-offs concerning the food-water-biodiversity nexus in the Upper Bhima basin. The modellers in the fairSTREAM team incorporated the inputs provided by the stakeholders along with the data in an agent-based model to develop scenarios of food-water-biodiversity futures. The model aims to understand the consequences of different decisions and explores the potential opportunities to maximise sectoral co-benefits. The second stakeholders workshop provided an opportunity to discuss the intricacies of the model and validate the preliminary results.

The workshop objective was to give an update on the state of the project, introduce the model that has been developed and co-produce actions leading to more equitable and diverse futures. The workshop was held for one and a half days on 6-7 February 2024 at the Indian Institute of Science Education and Research (IISER), Pune. A session was dedicated to a TRUST (Science)– Tools for Raising and Understanding Trust in systems science through citizen engagement–survey. The TRUST (Science) Strategic Initiative aims to better understand the linkages between engaging in participation-driven science and attitudes towards science among the participating public, opening the door to more self-aware scientific processes.



Picture 36: Second stakeholder engagement at IISER in February, 2024

River Commons

Project Period: September 2021 to August 2026

Project Status: Ongoing

Funder: Wageningen Interdisciplinary Research and Education Fund (INREF)

Collaborating Partner: Wageningen University and Research, the Netherlands and SOPPECOM

Principal Investigator: Sarita Bhagat

Background

River Commons is a Wageningen University's Interdisciplinary Research and Education Fund (INREF) project which aims to develop transdisciplinary concepts and methods of research, education, and multi-stakeholder interactions to understand and support river co-governance initiatives. River Commons and its sister project, Riverhood uses a common framework that illuminates the complexities that exist around the riverine system and its management. The four dimensions of the framework are:

1. River-as-Ecosociety: Focuses on the interrelations between hydrological, biophysical, ecological, and cultural aspects, understanding rivers as socio-nature;
2. River-as-Territory: Focuses on river governance rules and institutions;
3. River-as-Subject: Focuses on how people and rivers claim voice and rights as agents and subjects, as exemplified in ideas such as Rights of Rivers;
4. River-as-Movement: Looks at how riverine communities and allies organize and advocate for river co-management.

The River Commons is a network of researchers, NGOs, activists, social movements, research institutions, and policy-making institutions, thus representing a wide range of disciplines and expertise. SOPPECOM is part of this initiative and also guides a PhD candidate to do her research in the Warna river basin in India. More information about the project can be found at

<https://movingrivers.org/>

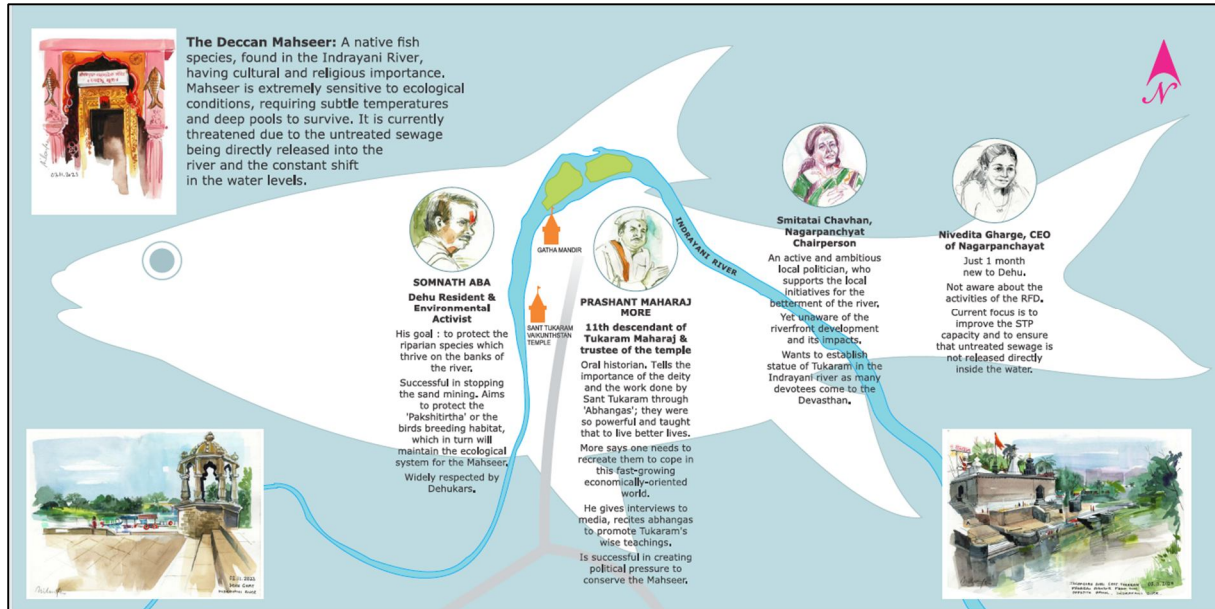
Activities

River Co-governing Arenas (RCA):

Each of the PhD student with the different riverine communities and local partners aims to foster changes in their respective research area through collaborative action, research or dissemination. The activities can be in terms of workshops, methods used for research, river walks that helps in collaboration for alternate co-governance strategies. The river commons also provides a platform to cross-exchange knowledge and multi-scale engagement across the PhD cases globally.

As part of the RCA, counter mapping exercises was done in Colombia, Ecuador and in India. In each of these contexts, the mapping method was different, but done with the riverine communities. In India, the counter mapping was done along two different river stretches. This particular activity was done in alignment with the India River Week's theme 'Riverfront Development in India'. Counter mapping was done in collaboration with Jeevit Nadi, Wageningen University and members from Pune river revival and local activists on the Indrayani river, near Dehu and the Mula river near Aundh ward, on 22 and 23

November, 2023. On both these river stretches, an artist accompanied us to capture the discussions through art form. The objective of the counter mapping was to look at the spaces around the river stretches and the capture the historical changes, local knowledge of the various riverine communities. In addition, river walk and informal interviews were conducted with the various stakeholders, with questions focusing on the riverfront development.



Picture 37: Counter map of the Indrayani river stretch near Dehu

International Conference in Colombia

Manizales conference, 11-15 March

As part of co-exchange of knowledge, Joy and Sarita participated in the 'Rios in Movimiento', International meeting from 11-15 March in Manizales, Colombia. The purpose of the meeting was to bring together communities, activists, social movement representatives, collectives and academia to share and exchange knowledge, practices and experiences about the defence and care for the rivers, and to identify spaces for solidarity and cooperation. On the first day, Joy presented the ontology on 'River as movement' citing examples of his experience around social movements in India. In the next session Sarita along with other PhDs conducted 2 hour workshop on River Commons. The objective of this workshop was to create a global dictionary around commons. Each PhD student shared her experience as how commons and communing initiatives are seen in their own individual case study. Sarita also contributed sounds around rivers to an experimental process called 'Riverside Soundscape'. The experiment is to use 'sounds' collected across different rivers in the world to create a sensory experience, which can help build awareness for protecting or defending the rivers. The next day, we visited the China river basin in the Caldas province of Colombia. The locals are currently fighting a proposed hydropower project for the last few years and there has been lot of land transformation in the area, due to industrial projects. We then visited the kitchen garden initiative in an urban sprawl, taken by the local organisation.

The 3rd and 4th day of the conference was an open session to general public as well. These sessions were held in the University of Caldas in Manizales. On 14th March, Sarita presented in the plenary session the insights from the counter mapping exercise done in Indrayani river, with a focus on the

ontology, 'River as Subject', as how religious practices are used to conserve the fish species. Joy presented in the afternoon plenary session on 'river and onto-epistemological struggle' the work on water conflicts in India. During this event, the documentary on 'traveling rivers' was introduced. The conference was very useful to see similar issues around protection of rivers and it was a perfect blend of academics and activist, coming together to conserve and protect rivers for a better future.

LDPI Conference, 19-21 March, Bogota

The Land Deal Politics Initiative (LDPI) organised a 3-day international conference on land and river grabbing in Bogota. Joy and Sarita had submitted an abstract on the privatisation practices around rivers in India and we presented the same during a plenary session. Here, the concept of hydrosocial territories was used to understand the nature of river grabbing, we received lot of positive as well as critical feedback. Similarly, Sarita along with her supervisor, Edward Huijbens, submitted a paper on aquatic geopower, where we theorize the concepts on geopower and counter mapping as a method to develop understanding around rivers.

Other than these conferences, field visit were carried out in Honda, which represents the middle region of the Magdalena river of Colombia (equivalent to Ganga in India) and the head region of Bogota river in the Suesca and Villpinzon regions. We visited the river museum in Honda, which was a very interesting initiative, showcasing the historical development of Magdalena river and the social practices around it. In Suesca, we conducted several river walks, exploring the head region and local initiatives taken to protect the river.

SOPPECOM and other Networks and Collectives

SOPPECOM believes in building and sustaining issue/theme based networks or larger collectives for better impacts. It has been actively involved in the following networks: 1) Forum for Policy Dialogue on Water Conflicts in India (<https://waterconflictforum.org>), 2) Mahila Kisan Adhikar Manch (<https://makaam.in>), 3) Vikalp Sangam (<https://vikalpsangam.org>), 4) India Rivers Forum (<https://indiariversforum.org>), and 5) Ecosystem Based Adaptation for Resilient Incomes (<https://ecobari.org>)