

DHARANI

Towards holistic agriculture

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FOREWORD

In Telugu speaking regions, the first thing that anyone you encounter will ask you is "have you eaten?" ("tinnara?"). Food is an essential part of social life, and so is agriculture. In Ananthapuramu and Sri Sathya Sai districts of Andhra Pradesh, the second most arid region of India, the agricultural landscape is dominated by smallholder dryland farmers.



The author during an interview with Dharani members (2023)

This report is based on a 2-month long ethnographic fieldwork that I did within my PhD project, following closely the activities of Dharani Farming and Marketing Cooperative, promoted by the Timbaktu Collective, and interacting with its members. In the months of October 2023 and February 2024, I conducted extensive data collection using qualitative research methods, such as semi-structured interviews, participant observations, focus group discussions, shadowing, and participatory activities. Throughout my fieldwork, I spoke and interacted with many members of Dharani Coop, leaders and farmers performing different duties, as well as Dharani team members. This insightful and inspiring experience left me with a myriad of rich data that will inform my PhD dissertation and should be shared with the wider public, including policymakers and civil society members aspiring to promote people-owned enterprises. It will be useful to those curious about the functioning of a democratically governed business, highlighting personal testimonials from its members, whose worldviews and values are often absent from dominant narratives. The presentation of main findings is structured around five spheres of transformation, mainly economic, ecological, democratic, social, and cultural, following the "Flower of Transformation". This framework conceptualizes alternative initiatives and it was designed in a collective effort by the members of the Vikalp Sangam [1] network (see the appendix). Unless otherwise indicated, all information comes from the interview data, observations, field notes, and group discussions with Dharani members. I wish to thank all the participants for sharing their valuable knowledge with me, as well as the members of Timbaktu Collective for facilitating the research process. I hope this report will help to spread knowledge about how agricultural businesses can work towards a broader holistic societal change, for which the case of Dharani can offer us some important lessons.

^[1] Vikalp Sangam ("Alternatives Confluence" in Hindi) is an evolving process of searching for grounded alternatives to the current model of mainstream development. The network started in 2014 and now federates over 90 movements and organizations across India. More on: www.vikalpsangam.org

ABOUT DHARANI

Dharani means "Earth" in Telugu. Dharani Farming and Marketing Cooperative (Dharani FaM Coop Ltd, from now on "Dharani") is a producer-owned and managed business enterprise of smallholder farmers (less than 5 acres), registered under the Andhra Pradesh Mutually-Aided Cooperative Societies Act (MACS Act). It was promoted in 2008 by the Timbaktu Collective (TC) [2], a nonprofit organization working towards sustainable development of marginalized people in the region, specifically within TC's broader "Dharani Program" focusing on sustainable agriculture. Using loans from other women's credit cooperatives promoted by TC and supported by TC itself, Dharani acquired small machinery for groundnut and millet processing, and initiated internal value-added processes. The processing is two-fold and, in addition to the machine processing, includes an important part of manual processing, in which the cooperative employs approx. 55 local women. Today, Dharani provides extension services to farmers cultivating diverse organic food crops, including timely procurement at the farm gate at a fixed premium price, correct measurement of the produce, processing, storage, value addition, packaging, and marketing.

Located in the drought-prone and ecologically challenged Sri Sathya Sai and Ananthapuramu districts of Andhra Pradesh, Dharani promotes organic, local, and climate-resilient farming among marginalized smallholder farmers. At the core of Dharani's mission is the promotion of millets - indigenous, nutritionally rich, and climate-resilient crops that support diversified cropping systems [3]. Moreover, the product line of Dharani also includes groundnut, pulses, wild honey, and ready-to-eat and cooked items, with a total of 123 organic products. These are then sold under the brand "Timbaktu Organic" in two local retail outlets, as well as through retailers in 13 Indian states. Dharani Cooperative owns one production and one processing unit, three storage units, and a cold storage facility. Currently, it operates through two different verticals, or operational lines: a non-perishable vertical (millets, grains, and produce that can be stored up to three to four years) and a perishable vertical (vegetables, with the future goal to include fruits). Over the years, the cooperative has empowered farmers to take control of the agricultural value chain, improve their returns, and provide nutritional food for their families.

^{[2] 35-}year-old grassroot organization facilitating social change through promotion of organic agriculture, natural regeneration, community-based institutions, alternative banking, rural entrepreneurship, and the rights of women, children, and persons with disabilities. For more details, please see www.timbaktu.org

^[3] FAO. 2023. Unleashing the potential of millets - International Year of Millets 2023. Background paper. Rome. https://doi.org/10.4060/cc7484en

OPERATIONAL AREA

As of April 2024, Dharani works in 70 villages across two districts in ten mandals (sub-districts) (see Figure 1). The total membership amounts to 2118 members federated in 162 sanghas (village-level groups of organic farmers), out of which 1648 are men and 470 are women. The total land committed for organic farming is 11,422 acres.

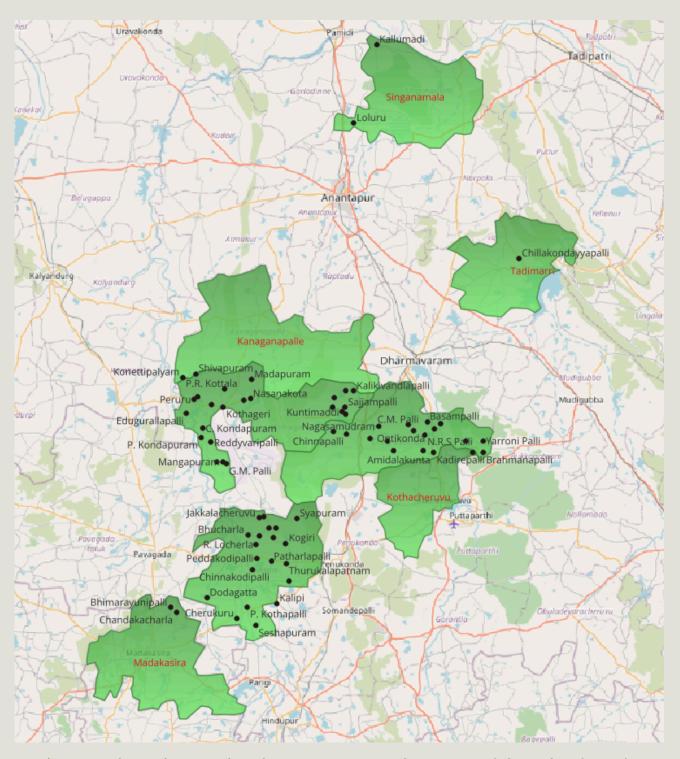


Figure 1: Dharani Operational Area. Source: author's own elaboration (2024)

ECONOMIC ORGANIZATION

"If we sell groundnut to outside people, they'll cheat us, weigh incorrectly.

They also cheat us with payments. In Dharani this doesn't happen.

Everything is different in Dharani. The outside people would tell us they will pay us in 10 days, and they pay in 3 months. In Dharani they pay us on time, within 15 days. In Dharani, everything is done on time."

(Sangha member, 2024)

Dharani members pay 1,020 INR as they enter to be part of the cooperative. This includes a 20 INR membership fee, and a 1,000 INR of share capital. Furthermore, at the time of procurement, farmers deposit 5% on their crop sale (for sales superior to 10,000 INR), which becomes their savings within the cooperative, on which there is an annual interest of 4%. In previous years, with the support of an EU grant, TC assisted 1,200 farmers in purchasing 2,300 pairs of halikar cattle, an Indigenous breed local to the area. Those farmers who benefitted from this initiative were asked to financially contribute to the purchase (25% of the total cost), and that contribution constitutes a deposit that farmers get back when selling the cattle - the so-called "cattle deposit". The above-mentioned practices exemplify how Dharani accumulates financial capital necessary for marketing and procurement within the cooperative, while strengthening the collective ownership of the farmers and making them financially more resilient by building their own savings. What is more, after years of membership in the cooperative, the crop deposit and accumulated savings may constitute a pension for the future retirement of farmers and therefore represent a safety net. In November 2022, the board of directors of Dharani decided to start the thrift program, inspired by the work of Swasakthi program [4], in which a federation of four cooperatives promoted by TC is involved in savings and credit activities. Since then, every month farmers have deposited savings within their sangha, from 100 to 2,000 INR, according to their capability. In 3 years from the start of the program, in November 2025, and once there is enough savings, members will collectively decide whether to begin a credit program to take loans internally within the cooperative. In case of membership withdrawal at any point in time, members get back their shared capital, the cattle deposit, the thrift, and the crop deposit with the calculated gained interest. Only the membership fee of 20 INR is non-refundable.

^[4] More on Swasakthi here: https://timbaktu.org/swasakthi/

All the financial and economic decisions are made by the board of directors previously informed by the sangha members (see Figure 2). This includes procurement prices for the crops which are discussed at the beginning of every season by the procurement committee, composed by board members and cooperative team members (staff), including the CEO, sales and marketing representative, and field representative (see Figure 3). When deciding the prices, the committee looks at the market prices for organic produce and fixes them approx. 5-10% higher than the market rate. To encourage cultivation of millets, Dharani gives a financial bonus of 5 INR/KG to those farmers who grow them. There is also a 3 INR/KG bonus for pulses. Through this approach, Dharani prioritizes the cultivation of local, sustainable, and nutritious crops among the members. These efforts led to an average of 1, 200 - 1,500 farmers cultivating millets every year, depending on the rainfall. Another way in which Dharani promotes millets is through fixed premium procurement prices. If the market price for millets increases, Dharani will also increment its prices accordingly. However, if the market price goes down, Dharani prices remain fixed and favorable to the members. Finally, any additional profits that the cooperative makes are redistributed back to the farmers. It is important to mention that, in general, there is no market for millets or for organic produce in the area, so in the past farmers used to only cultivate groundnut and other commercial, nonorganic crops. With the start of Dharani cooperative, farmers have the possibility to cultivate local and healthy organic crops in a profitable way. "We got to see all these changes after joining the sangha. There was no market for organic products here. Now we have a market (sangha member, 2024).

The annual turnover of Dharani cooperative for the financial year 2023-2024 was INR 50.2 million (increased from 43.2 million in 2022-2023) and the total revenues were INR 70 million. The net worth of the cooperative is 5 crores (INR 50 million) (approx. 599,793 US dollars). Dharani is yet to be financially self-sustainable – it relies on support from TC for certain operations (i.e.: employment of cadre/field officers, grant proposal writing, training sessions for farmers, outreach for sales) and takes loans from other cooperatives promoted by TC (as part of the inter-cooperative lending strategy). According to the Dharani's business plan, the cooperative is scheduled to be a self-sustaining business within the next two years.

DEMOCRATIC FUNCTIONING



Sangha meeting in Chinnapalli village (2023)

SANGHA

The basic operational and governance unit in Dharani is sangha, which can be loosely defined as a village-level association of farmers. Usually, sangha is composed of 12-15 farmers who get together once a month to discuss important matters related to agricultural practices, as well as to take decisions regarding the functioning of the cooperative. Every meeting is facilitated by a cadre (field officer) responsible for that particular sangha, and it usually starts with a pledge to organic farming and a song. The agenda depends on seasonal matters related to farming and can take out an hour and a half. Normally, the discussions revolve around crop planning, preparation of organic concoctions and manure, problems and solutions related to pest management, benefits of certain practices such as multi-cropping, seeds and their protection, timely procurement of the produce, organic certification (PGS) procedures, etc. Sangha is also an important platform for mutual support. Members share knowledge and problem-solving related to farming practices, as well as help each other in their fields when the need arises, i.e.: in weeding or sowing.

New sangha members are given a training on Dharani's principles and rules, including total prohibition of usage of any chemical inputs, zero tolerance for any type of discrimination along caste, religion, or gender lines, mandatory attendance of the sangha meetings, commitment to selling the produce to the cooperative only, etc. Membership can be withdrawn by the board of directors if rules are not being followed. Sangha members elect two leaders within their group. If they are not satisfied with the elected leader, sangha members can agree anytime to find a replacement.

Recently, farmers started saving up in their sangha groups through a thrift program, depositing between 100 to 2,000 INR every month on which they get 4% of interest (but no credit yet) and through which they create internal capital. In the future, members are foreseeing the possibility of giving out loans from the common saving account. At times, the saving system can be a contentious matter with some members being reluctant to pay their share; it's a process of progressive ownership building. Other issues that may arise in the sangha relate to the failed procurement due to inadequate quality of the produce (e.g.: containing too much moisture); failed achievement of procurement targets; or irregular attendance of sangha meetings. It is the responsibility of sangha leaders and directors to mediate such potential conflicts and solve the problems.

LEADERSHIP & ROLES

"We make sure there is a way out in handling situations rather than letting any fights arise. If there is politics, it will happen especially when you see some raising in their stature [of the members]. But here, the members and the director, everyone equally grows things. And the director doesn't have any avenues to grow and earn more. We are just growing as farmers, not political leaders. There is no jealousy that someone is using cars like political leaders. We just walk our fields on foot and use our vehicles when needed. There is no scope to even earn more money through wrong means" (Director, 2023)

Dharani is a members' cooperative. This means that the cooperative belongs to the members, and everyone has an equal share according to the cooperative principle (one person-one vote principle). Despite any variations in quantity of produce that members may provide, or the leadership functions they perform, everyone has equal rights within the cooperative. The leadership positions serve the purpose of governance functioning. In any case, all the major decisions taken by the directors must be ratified in the Mahasabha, the annual general body meeting, where all members are present. All the leaders are farmers themselves, as well as members of the cooperative, and the leadership positions do not result in any additional compensation. Finally, Dharani is engaging directors, leaders, and some sangha members in other crucial operations such as sales and marketing, relations with retail partners, etc.

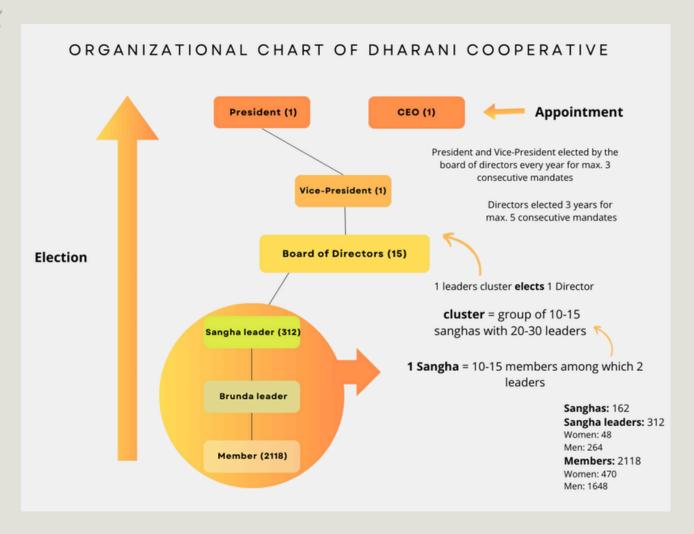


Figure 2: Organizational chart of Dharani Cooperative. Source: Author's own elaboration (2024)

BRUNDA LEADER

"There are five members in the brunda. If one member needs help, for example in preparing the concoctions, the others will come and help him. If a single person has to do something it will not be possible. A group is what makes the job easy."

(Sangha member, 2023)

Each sangha further divides into a few brundas. One brunda is composed by five members whose agricultural fields are in proximity to each other. Brunda leader is responsible for the other four members when it comes to attending the meetings, calling members to attend trainings or do the preparation of organic concoctions. Members of the same brunda attend the Farmers' Field School together.

They also inspect each other's farms and follow organic certification (PGS) procedures. The goal of brunda is to foster a shared vision, horizontality, participation, transparency, trust, and learning (the six elements of PGS) [5] between the members.

SANGHA LEADER

Two sangha leaders are elected for each sangha, usually unanimously nominated by the members. Voting only occurs if there is disagreement on who is the right candidate. The sangha leader can stay in charge for several years or even decades if members are satisfied with the mandate. A good sangha leader is expected to learn about organic farming and encourage others to gain new knowledge. He or she attends leaders' meetings and other important events at TC, and ensures the facilitation of information between the fellow sangha members and the directors.

"I do not see myself as higher than anybody else. I am very happy they chose me as their leader, I can go to TC and attend meetings and then convey the messages to other members. I have the opportunity to showcase my leadership skills when I get back from the Collective to my sangha. I have a chance to learn and give my knowledge to others."

(Sangha Leader, 2024)

DIRECTORS

There are a total of 15 directors in Dharani, elected by the sangha leaders. The director's mandate is three years long and the maximum re-election is five consecutive times. The board of directors is the executive body of the cooperative. The main responsibility of the director is to share the information discussed at the directors' level with the sangha leaders, and vice-versa. Each director is responsible for a group of sanghas that form a cluster. If any issues arise, it is their responsibility to provide solutions or appropriate advice. Directors have the power to decide the rate at which crops are sold. They also have the responsibility to accept new members or remove those who do not obey the cooperative's principles. Finally, they collect savings from different sanghas under their supervision.

^{[5] &}quot;Shared Visions, Shared Ideals: PGS concept document" (2013). IFOAM Organics International. Available at: https://www.ifoam.bio/shared-visions/shared-ideals-pgs-concept-document

"Even though I am a director, when we go to the nearer villages, we see ourselves as equal to all of them. We share with them the methods we follow in our fields. And also assure them that I can give some resources to them that they could in turn spray in their field. Or, I will come myself to your field. You get your material, and I will help you make the needed mixtures and everything" (Director, 2023)

VICE-PRESIDENT & PRESIDENT

Both vice-president and president are elected every year at the annual Mahasabha (general assembly). The president has the signing authority in relation to financial documents, monetary transactions, budget approval, etc. He or she monitors the sales processes. Sometimes he or she needs to attend sangha meetings if there are any issues, i.e.: related to failed procurement, or if farmers do not deposit their savings. The president is responsible for the board of 15 directors, presides their bi-monthly meetings and considers suggestions and feedback that comes from the sangha members, through leaders to the directors.

FARMER RESOURCE PERSON

After attending multiple training courses, sangha members can become farmer resource persons (trainers) and teach organic farming methods to their fellow sangha members. Farmer resource persons suggest what kind of seeds to sow, how to protect the crop and get a good profit. Their teaching also follows the specific needs of each sangha, depending on their requests to prepare certain organic concoctions or fertilizers. According to the members, a good farmer resource person should be patient, able to answer all the questions and speak clearly. The training task also involves some challenges, i.e.: maintaining members' attention during training sessions.

"My ancestors used to do organic farming but as the generations passed by, we are using chemicals in farming which resulted in health problems, degradation of soil quality, crop failure and many other problems. This organization has given us a chance to improve the farming process which in turn helped in improving the quality of crops, soil, and our health. I have joined as a trainer so that I could learn and influence others to learn this farming technique to help them improve their health."

(Farmer resource person, 2023)

CADRE

Cadre is a field officer employed by TC whose main responsibility is to mobilize farmers to join the sangha meeting as well as to facilitate it, including following the agenda and taking notes. Cadre also makes sure that the targets in terms of procurement are achieved for each sangha they supervise, working with up to 150 farmers in total. Cadre takes note of which crops are grown by a given farmer and on how many acres of land they cultivated during regular field visits. Some of the challenges that a cadre may encounter relate to achieving established targets in terms of crop procurement (i.e.: due to untimely or abnormal rains), mobilizing members for different meetings, or convincing some of the more reluctant farmers to try out new organic techniques. Overall, cadre is the person who works very closely with the farmers on a regular basis.



Farmer and cadre checking the quality of groundnut together (2024)

"I like the mobilization aspect and making the farmers grow crops. Only when I meet at least two farmers a day and work with them, I'll have the satisfaction that I did some work on that day." (Cadre, 2024)

DHARANI TEAM MEMBERS

The governance of a member-owned cooperative run by a representative board and the structure of its paid staff are different. Contrary to the democratic governance of the cooperative, team members (staff) group supporting the operations of the cooperative has a hierarchical organizational structure, with two main operational lines falling under the leadership of the enterprises manager and the CEO of the cooperative. Both figures are employees of TC, and the CEO has the "double hat" of being program manager of TC's "Dharani Program" as well as the CEO of Dharani cooperative. Those team members working with field operations are employed by TC, while all other team members are Dharani's employees. This division can be understood as the "back-end" work (i.e.: farmers' mobilization, cropping, PGS, procurement) and "forward-end" work (i.e: storage, processing, value-addition, packing, sales, marketing). As of now the back-end work is managed by TC and the forwardend work is managed by Dharani, with the goal of Dharani managing both aspects and paying all salaries within the next couple of years. Although not unfolded in this research about Dharani, potential challenges deriving from structural division of this kind could be considered in similar initiatives and research studies, i.e.: possible power inequalities or hierarchies between hired team members versus voluntary members of the cooperative. All the different roles and functions included in the 'team members' group are represented in the figure below.

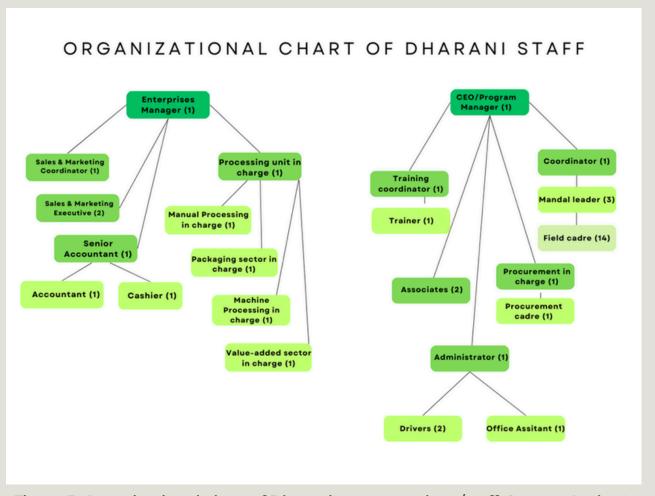


Figure 3: Organizational chart of Dharani team members/staff. Source: Author's own elaboration (2024)

ECOLOGICAL WELLBEING - WHY ORGANIC FARMING?

"My grandfather used to do organic, natural farming. [When] we started using chemicals the earth, the soil, the environment was damaged. Our health also got ruined. We incurred losses. Now, we started practicing organic farming [again] because of Dharani. Dharani taught us how to do organic farming. Dharani formed organic sanghas here. All this was done with our will. We also had interest to do organic farming. If it wasn't for Dharani, maybe we would have continued to use chemicals. Now we have less investments and more returns. Everything improved since we started doing organic farming – our health, that of the soil, of environment."

(Sangha member, 2024)

Dharani works in the second most arid region of India, affected by severe land degradation, biodiversity loss, water shortages, and deforestation, among others [6]. Within this context, most people work in agriculture, increasing their dependence on surrounding ecosystems. With that in mind, the commitment to organic farming is a priority and a non-negotiable principle of Dharani cooperative. Economic, health, and ecological advantages as well as challenges of this type of farming, as seen from the perspective of Dharani members, are described below.

ECONOMIC AND HEALTH BENEFITS

Beginning in the mid-1960s, the "Green Revolution" in India resulted in, among others, the development of capitalist relations of production in agriculture, creating a market-dependent farming community characterized by wide-spread adoption of new technologies, shifts to industrial monocropping, and an over-dependence on chemical inputs [7]. The new neoliberal economic policies and a gradual withdrawal of the state from the agricultural sector resulted in a major agrarian crisis, manifested in its extreme form in perpetual state of indebtedness and waves of farmers' suicides across the country [8].

^[6] Rao, N. R. (1999) 'Ecology and environment of Anantapur District in Andhra Pradesh'. Indian Forester, 125 (11), pp. 1089-1094

^[7] Kumbamu, A. (2009) 'Subaltern strategies and autonomous community building: a critical analysis of the network organization of sustainable agriculture initiatives in Andhra Pradesh', Community Development Journal, 44(3), pp. 336-350.

^[8] Vasavi, A.R. (2012) Shadow Space. Suicides and the Predicament of Rural India. New Delhi: Three Essays.

In the mid-90s TC was promoting its first women's cooperative with thrift and credit activities, and realized that most of the loans taken were being spent on agricultural purposes, especially for chemical pesticides and fertilizers. There was a strong urge to go back to traditional organic farming, where inputs are less costly, and the benefits are enhanced. As one member explains, "Initially, the yield was very good, but as time passed, the returns were less. [Farmers] had to use a lot of fertilizers, pesticides, and all, for which they started taking loans. They started getting in a debt trap and many farmers started committing suicide. (...) Now we are healthy, our soil is healthy, and our kids are healthy. There are no more suicides happening, [and] we do not have to take loans from others" (Interview, 2024). As such, health benefits are another gain in organic farming. "The older generations had organic food, they used organic manure, so they were very healthy. (...) The generations now are having food full of chemicals, because of which the health of the soil and their health is getting damaged. These days, when we turn 20-30, before 50 we have all kinds of diseases, back then it was different. It's good to use organic manure" (Sangha leader, 2024). Importantly, Dharani members first keep their produce to ensure food security for their families for one year's consumption, and then sell the rest to Dharani. In addition, members reported switching from eating only white rice to diversifying their diets with millet-based items, resulting in improved health conditions. "We have no problems at all. I am 60 years old and healthy. We usually work for 24 hours a day. Even though we do this we are still fit and fine. We have ragi mudda for lunch. We also have millet rotis. (...) We started eating these after joining Dharani. They told us what's good for our health. Before we used to have rice, now we are seeing this change." (Sangha leader, 2024). This important shift can be seen not only as a dietary change, but also a cultural one, as historically millets have been stigmatized as 'poor people's crops', receiving limited attention with respect to other commercial cereal staples [9].

ECOLOGICAL ADVANTAGES AND HUMAN-NATURE INTERCONNECTEDNESS

In addition to the highlighted economic and health benefits of organic farming, Dharani members strongly emphasize the ecological advantages of this type of agriculture.

^[9] Bombom, A., et al. (2023) "Millets: Traditional "Poor Man's" Crop or Future Smart Nutri-Cereals?." Millets-Rediscover Ancient Grains. IntechOpen.



Pearl millet from the farm of a Dharani member (2023)

"In Dharani, farmers understood that if they use chemicals, earthworms and other microorganisms will die; and, if they do organic farming, they are doing ecological justice. When people do not use chemicals in agriculture, they protect the environment, soil, and microorganisms, and maintain ecological balance. Animals are also having good grass from such lands. (...) Through democracy and people's involvement, we are creating awareness about how people are harming the environment. Growing forests, making organic manure, controlling pests, etc. are all done with people's participation. That's why the chance of democracy and the environment moving forward together is very high."

(Field and Training Coordinator, 2024)

According to some members, the organic approach to farming incorporates the interconnectedness and a cyclical movement between humans and animals, creating harmonious systems of well-being: "For farming, cow dung is used as a fertilizer to improve the land and soil fertility. Instead of using tractors, cows can be used to plough the fields and they give us milk and curd too which are healthy for us. Investment costs are also reduced in this way" (Focus group discussion with farmer resource trainers, 2023). Dharani members emphasize that all living beings have the right to live, and therefore when they cultivate millets, they also think about birds, beneficial pests, and insects, and all the species that need to feed on their crops to survive. The farmers' operations are of cyclical nature: "Farmers here also bring soil from different places and add it to their land. Here farmers save the trees, and they use the leaves to make organic concoctions. (...) Then the concoctions go again to the trees. It's a cycle" (Field and training coordinator, 2024).

FOSTERING TOGETHERNESS: COMMUNITY SEEDS AND ORGANIC CONCOCTIONS

"Kalesi-melesi" is the local word in Telugu that can be roughly translated as "togetherness". "Togetherness and equality are one and the same", said one sangha member (Interview, 2024). Dharani, organic farming practices entail a lot of cooperation between farmers. As an example, members of the same brunda or of the same sangha often prepare organic concoctions together to spray them on their fields. This is a collective process that involves not only sharing of the resources (i.e.: when farmers share cow dung or cow urine necessary for the preparation of organic manure) but also involves important passage of knowledge and collective problem solving.



Farmers in Seshapuram village preparing organic concoction together (2023)

What's more, Dharani helps farmers to obtain seeds for cultivation. Most crops are grown from indigenous seeds, with a few exceptions of vegetable crops utilizing a mix of hybrid and high-yielding varieties, due to limited availability of local seeds and because the cultivation was started only in 2022. Farmers themselves are already saving indigenous seed varieties for millets, pulses, and groundnut. Dharani members get most of the seeds for free, and they return double the quantity they received after the harvest. This way, the cooperative is building its own internal seed bank, with a long-term goal of increasing the number of varieties with a focus on indigenous seeds, relying less on the external seed procurement.

CHALLENGES

Finally, while practicing organic farming involves less costly inputs and enhanced yields over time, it may also present some challenges. One of them could be the transition period when usage of chemicals is limited, and yield may be lower and/or it cannot be marketed at the premium organic price since the organic certification is not yet in place [10]. Another challenging aspect is that organic farming is labor-intensive which can prevent some of the 'bigger' farmers (cultivating on more land) from shifting into organic. In this regard, sangha and brunda can be seen as possible ways to overcome the burden of labor-intensive processes thanks to their collaborative nature. Climate change poses another big threat to organic farming, often resulting in untimely or irregular rains. Only about 30% of Dharani farmers have an irrigation facility (e.g.: a borewell) to irrigate their fields during the dry season, within the conditions of severe water scarcity. This means that most of them can harvest only once a year, and therefore must take other seasonal jobs, such as daily wage agricultural labor or unskilled manual work within the MGNREGA scheme [11].

SOCIAL DIMENSION

SANGHA AS A VECTOR OF SOCIAL JUSTICE

"Farmers are not respected in society, but in Dharani, each and every farmer is recognized. If farmers go to the market to sell their produce, market people do not respect farmers. But when we go to Dharani, they tell us to sit, they talk to us, they give us respect. Businessmen do not give us the respect, but Dharani does." (Director, 2024)

[10] Zinati, G. M. (2002). Transition from Conventional to Organic Farming Systems: I. Challenges, Recommendations, and Guidelines for Pest Management. HortTechnology horttech, 12(4), 606-610.

[11] The Mahatma Gandhi National Rural Employment Guarantee Act was passed in 2005 by the Government of India. The Act gives legal guarantee of a hundred days of wage employment in a financial year to adult members of a rural household who demand employment and are willing to do unskilled manual work. To learn more, visit: https://nrega.nic.in/MGNREGA_new/Nrega_home.aspx

Dharani is embedded within a complex and historically highly stratified and patriarchal social context. When forming a sangha, Dharani members pay a lot of attention to creating mixed groups, to avoid all members coming from one social category - one caste, age group, or gender. As such, a strive for diversity is one of the core principles that the cooperative promotes within its structures. When new members join the sangha, rules about total prohibition on any type of discrimination are explained to them. In addition, politics should not be brought into the sangha. People can have their own political preferences and affiliations, but they should not discuss them in the sangha to avoid conflicts. Overall, when joining the sangha, members consciously decide to partake in the activities and to follow the sangha rules. "We eat together, we sit together. No one mentions caste. Here we only ask the name, and what the person does. My name is [farmer's name], I'm a farmer. We only talk about these points. We do not ask any person's caste, they don't ask us, we don't see caste anywhere here" (Sangha leader, 2024).

"When we come to the sangha meeting, we are all equal. We have a set of principles we follow. If someone wants to fight over such issues, they need to deal with them outside. They cannot become part of a sangha. Conflicts, fights, discrimination, politics, caste, cannot happen here in the sangha. They can do whatever they want outside the sangha, but here they cannot do it. If someone doesn't follow any of the rules, we take the matter to directors' level, and the board will take a decision on whether to keep that farmer as a member or cancel their membership. Once they are here as sangha members, they have to follow the rules. Outside the sangha, they can do whatever they want." (Cadre, 2024)

Finally, being in a sangha empowers farmers to acquire new skills, such as public speaking, and facilitates the development of leadership skills. "We can speak confidently with anyone, even with the district collector" (Sangha member, 2023). While a few members reported to do so, it would be interesting to explore in a further study whether participation in the sangha empowers the members to take on the leadership positions in the local political life, for example in the Gram Panchayat [12]. Although the topic of party politics is excluded from the discussions in the cooperative for functional and pragmatic reasons, it is evident that members develop a strong sense of self-worth and confidence through their participation in the sangha, which over time could potentially lead to increased empowerment in political and social life outside of sangha, too. Finally, through their membership in Dharani, many farmers reported travelling to other places in the country, expanding their horizons, meeting new people, and becoming more confident and prouder in their profession as farmers.

^{[12] &}quot;Village council", a basic governing political institution in Indian villages elected directly by the people.

WOMEN & GENDER EQUALITY



"Women take care of the crops just like they take care of their children." (Sangha member, 2024)

Sangha member showing her millet field (2023)

Currently, only 22% of Dharani members are women. According to the members, the main barriers to women's participation include household and reproductive work responsibilities, but also the safety concerns, as some trainings and other meetings might happen outside their village and women do not feel at ease to travel alone at the nighttime. Furthermore, sangha meetings happen mostly in the evenings, and women fear scoldings from family members for getting home late. Furthermore, there is apprehension of being judged by fellow society members (e.g.: neighbors), and other systemic barriers deriving from gender inequalities persisting in society.

Dharani members recognize the need to empower women and actively work to create more access for them in the cooperative. "We have discussed that aspect and told that there should be equality between men and women and talked about the membership. It is slowly changing, and we will bring more change" (Director, 2023). This is done, for example, through the vegetable program initiated in 2023 which prioritizes female membership. Members also claimed that in certain aspects women may have more agricultural knowledge than men. As one farmer resource person explained, "Some women check the crop quality better than men. They do have a better understanding of crop quality at the end of the day. We do not stay at the farms completely" (Focus group discussion with farmer resource persons, 2023).

Dharani members also spoke about the need for men and the rest of society to do their part in empowering women farmers: "The husbands should have trust and allow their wives to go farming. Some husbands are very strict and do not want to send their wives to the farm", one female resource person reported. Some women may be limited by their household responsibilities. As one resource person pointed out: "A mother sends his son to farm and keeps the daughter-in-law with her to take care of the house so she may not be aware of farming". Finally, women are often constrained by social judgments: "Some people in the society think ill of a woman who travels late or alone. Society and their mentality must change" (Focus group discussion with farmer resource persons, 2023).

Often women do not have the sense of ownership and identity around the agricultural work. As one female cadre explained, "Women do most of the agricultural work. However, the decisions regarding crops are taken by men. Why should they decide? Women work very hard. From irrigating the fields to harvesting the crops, everything is done by women. Despite them doing all the work, they tell their husbands are farmers, sons are farmers, the men in their families are farmers. When they work, they should tell others that they are farmers. Women also should have an opportunity to tell everyone that they are farmers, for which I felt we need sanghas (...) When women do most of the work in the fields, they should also have deciding power" (Cadre, 2024).

Notwithstanding the need to increase female membership, sangha remains an important tool for gender empowerment, and a space where women farmers can come forward and actively participate in the decision-making, learn, and share their knowledge with others. As some women farmers participating in the vegetable program explained, "Women shouldn't be confined to the kitchen. They should also see the world outside. Only when they come out, will they gain knowledge. That's why they should join Dharani" (Focus group discussion with women farmers, 2024).

"Before joining Dharani, I was doing agricultural labor. I would come home after work to do housework and be at my house. But in Dharani, after I became a sangha leader I also worked as a party leader for 6 months. After that I became a director. Now I can speak in Mahasabha [general assembly], Women's Day celebrations, I gained respect, the respect increased. (...) Outside, if women become a board member, president or vice-president, their names won't be taken out in public. If someone asks, they will tell their husbands' names. If she or I are in leadership positions, if they ask who the president is, people would say Raja, or Raja's wife. In Dharani it's different, women get the recognition. Here, if someone asks who the president is, we will say [the interviewee's name]."

(Female Director, 2024)

CULTURAL PRESERVATION AND INDIGENOUS KNOWLEDGE

Dharani farmers put efforts into bringing back traditional practices, customs, art forms, foods, and knowledge related to farming – in short, they are bringing back the local culture that has been slowly forgotten. This is done, for example, through revival of traditional agricultural festivals proper to the area, such as Sankranthi, a traditional harvest festival. Below are some of the ways in which Dharani promotes cultural preservation of indigenous farming practices while increasing farmers' autonomy.

PGS AND PEER-TO-PEER FARMER FIELD SCHOOLS (FFS)

Peer-to-peer inspection of farmers plots is done following the PGS [13] certification protocol, through Participatory Guarantee System. It is a community-based organic certification in which farmers certify themselves in a peer-to-peer process, instead of a third-party (and often costly) certification. But how does it work exactly in Dharani? Five members of the brunda have their fields close to each other, and therefore know what is happening there on a daily basis. They collectively prepare organic concoctions, inspect each other's farms, and discuss their problems as well as share the solutions. Farmers maintain a sangha diary, in which they note down everything that regards their fields and agricultural practices they employ. Then they share this information with each other at the sangha meeting. Typically, one month before the harvest, farmers organize the final inspection meeting. There, all the records are checked to make sure that each farmer followed only organic practices. In case of any usage of chemicals, the farmer will not be able to sell the produce to Dharani for the consecutive three years, which is the period necessary for a conversion back to organic production. If organic practices were followed correctly and the farmers' pledge to organic farming is completed, brunda members will perform the final physical inspection on the field in question, accompanied by a cadre who is responsible for cross-checking. The whole process is then thoroughly documented on the inspection sheet and reported back to the sangha. If the produce is correctly certified, the matter goes to the board of directors, which needs to take note of the procurement to be done.

^[13] Participatory Guarantee System for India is a decentralized organic certification system promoted by the Ministry of Agriculture and Farmers Welfare. More on: https://pgsindia-ncof.gov.in/

PACKAGE OF PRACTICES (POP) - REVIVAL OF TRADITIONAL FARMING PRACTICES



Dharani farmers in Seshapuram village participating in a training session (2023)

"They taught us how to prepare concoctions, we learnt how to do [organic] farming. All the practices we are following now had been followed by our great grandfathers. Now, because of Dharani, they re-introduced those practices to us" (Sangha member, 2023)

In addition to training specific to PGS, members receive training on the Package of Practices (PoP). PoP is a joint documentation on good organic practices. It was developed not by scientists, but by the farmers themselves. In 2005, Dharani members started visiting farmers and documenting their best practices around organic farming. This knowledge was then compiled and includes information on all the processes from land preparation to the harvest for each crop, coming straight from the field. Now, the documentation process is given back to the farmers in the form of trainings. "It's not like we got this data from USA, Hyderabad, or some company. No. We got this data from the farm, we met the farmer, farmer shared something, we documented it, we experimented it, we compiled it, and we share it with everybody" (CEO, 2024).

Training is given to the farmers through Farmer Field School (FFS) and takes place on a regular basis. Those sangha leaders that attend trainings will then reiterate their learnings to their fellow sangha members. In addition to the FFS, sangha leaders and directors occasionally participate in exposure visits to relevant organizations in other parts of the country and undergo additional trainings about organic techniques, i.e.: the preparation of biodynamic manure. Some of the challenges that farmer resource persons may encounter when giving training sessions are the problem of attendance, or scarce attention paid by the participants. This requires a lot of patience and good communication skills, which farmer resource persons develop over time. From the side of the farmers, the preparation of the organic concoctions can be time-intensive when gathering the necessary natural ingredients (as opposed to the quick fix of spraying chemicals), requiring a certain commitment and determination.

Overall, Dharani has a strong focus on the capacity building of its members. This is evident, for example, in the presence of cadres and farmer resource persons who create a solid internal autonomy in terms of knowledge production and resources. The members do occasionally collaborate with the local KVK [14] with the scope of knowledge exchange or sourcing of high-quality seed varieties, but they are independent when it comes to agricultural expertise and formation of the members. Finally, an open question related to the cultural preservation and passage of knowledge concerns the intergenerational continuity of Dharani. As more and more young people decide to get into higher education and leave the rural areas, members ask themselves who will continue the important work they do in their fields. This is not the case for all, as some families do agricultural work with their children and other young people come back home after completing their studies. Dharani is trying to tackle the intergenerational aspect by, among others, piloting an enterprise program in organic vegetables with the local youth.

[14] "KVK (Krishi Vigyan Kendra) is an integral part of the National Agricultural Research System (NARS), aims at assessment of location specific technology modules in agriculture and allied enterprises, through technology assessment, refinement and demonstrations. KVKs have been functioning as Knowledge and Resource Centers of agriculture technology supporting initiatives of public, private and voluntary sector for improving the agricultural economy of the district and are linking the NARS with extension system and farmers." (Source: https://kvk.icar.gov.in/)

CONCLUSION - CHALLENGES, FUTURE, AND PATH TOWARDS HOLISTIC AGRICULTURE

Dharani is currently diversifying its basket of products. After starting the vegetable program in July 2023, the next project is to start with fruit procurement. A few members also want the cooperative to procure dairy products and oil seeds. Some of the other needs that farmers may have include the need for more machinery to reduce labor costs, increasing the number of visits from cadre to the fields throughout the agricultural season, obtaining more varieties of seeds, getting cattle at subsidized rate, collateral-free loans, equipment such as cycle/power weeders, and more.

As for the future growth of the cooperative, Dharani management is planning to expand the membership to a maximum of 2,500 farmers. As the CEO of Dharani explained, "Beyond 2,500 farmers, then you need a lot more team members. You need a lot of land (...). And you need to invest in machinery again. You need to increase the sales and marketing capacity. I mean, all things go up. Which means more investment" (Interview, 2024). The question of scale remains somewhat ambiguous as many of the farmer-members express the desire to see Dharani expand more than the suggested numbers, and there is an increasing demand from villages to create new sanghas. "We want Dharani to grow" is a recurring statement in the interviews. It is important to remember that growth in membership also results in increased pressure on the internal capacity of the cooperative, putting additional burdens on already overworked team members. Finally, it may affect the quality of democratic participation.

Moreover, while Dharani is on its way to financial viability, it continues to receive institutional support from TC, and it remains unclear on what it implies for the autonomy (i.e.: in terms of marketing of the produce) and institutional sustainability of the cooperative in the long term. Related to this is the clear challenge of finding adequately skilled team members to run the operational processes due to multiple reasons, such as historical inequalities in access to formal education in the area. Furthermore, the remote location of the office, the huge workload and challenging working conditions result in a high turnover of younger team members in particular (usually coming through university placements from all over the country) who often leave their position after a couple of years of experience. This is problematic as training requires a significant investment in time and capacity building and afterwards creates discontinuities both within the team and in relation to farmers in the field.

The case of Dharani offers important lessons to be learnt from both its accomplishments as well as its challenges. "But what we are trying to show is a model. For everybody to replicate. (...) If anybody wants to learn from us and do it like that, do it. May not be exactly like this, but more or less similar kind of institutions. Everybody can build up and do it" (CEO, 2024). In 2020, the Government of India has launched an important scheme for the formation and promotion of 10,000 Farmer Producer Organizations (FPOs) with a total budget of Rs. 6,865 crores, that aims at "enabling farmers to enhance their bargaining power, leverage economies of scale, reducing cost of production and enhancing farmers' incomes through aggregation of their agricultural produce" [15]. As the CEO of Dharani pointed out, the crucial condition for realizing this vision is to enhance farmers' participation and create a sense of ownership and shared responsibility. In this aspect Dharani has been very successful, as members carry a strong sense of identity related to their membership in the cooperative. "It's good if we are all together. We are here, so we should share our duties and responsibilities like children from the same mother", as one sangha member put it.



Biodiversity around the vegetable farm of a member in Chennekothapalli village (2023)

^[15] Press Information Bureau, Ministry of Cooperation: "Farmer Producer Organizations (FPOs) by Primary Agricultural Credit Societies (PACS)", New Delhi, December 2023. Available at: https://pib.gov.in/PressReleasePage.aspx?PRID=1988649

All in all, the case of Dharani can offer important lessons on how smallholder dryland rural communities can live with dignity and in harmony with nature if provided with appropriate support, opposing the mainstream discourses around the 'backwardness' of peasant farming. Quite the contrary, Dharani farmers can be seen as agents of change on many different levels - they contribute to the ecological wellbeing of the natural environment through organic farming and reversing land degradation; they control part of their economic activities and increase their autonomy through bottom-up and democratic governance system; they preserve vital traditional and indigenous knowledge about farming as well as important local cultural practices; and work towards social justice and gender empowerment by bringing people together regardless of their caste, religion, gender, or social status. Not without their challenges at stake in an ever-learning process, grounded initiatives like Dharani can be of inspiration in working collectively towards a sustainable development that is more localized and aims to be holistic.

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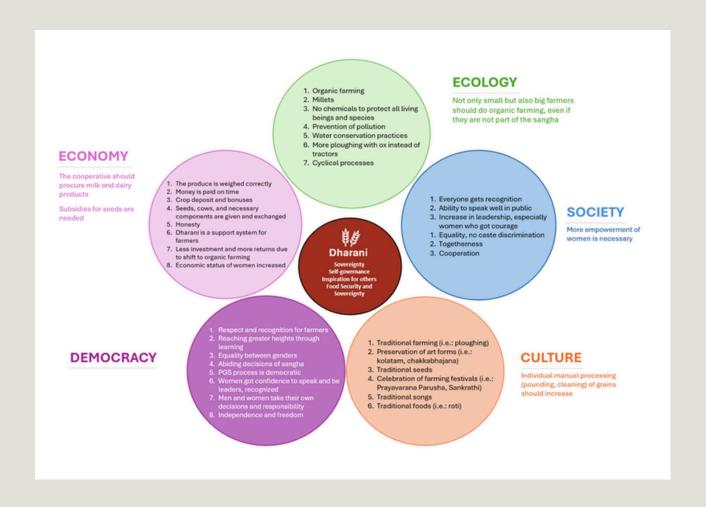


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APPENDIX: FLOWER OF TRANSFORMATION

The flower of transformation is developed by green democratic initiatives in India which are part of the Vikalp Sangam (VS) network, VS works to transform societies and provide for a just, sustainable, and inclusive world. A key idea of the flower is to conceptualize different aspects of transformation and develop a tool that can be used by the initiatives in self-analysis or scenario building. Participation of the community is crucial in this process and the format is not meant for an external evaluation [16].

Together with a group of six Dharani members, a version of the Flower was developed through a collective reflection on the transformative aspects of the Dharani cooperative in five spheres of transformation. Below is the summary of this exercise held in February 2024.



[16] Source: Kalpavriksh 2017, available at:

https://vikalpsangam.org/wpcontent/uploads/migrate/Resources/alternatives_transformation_format revised 20.2.2017.pdf.