

Rethinking Cooperatives for Sustainable Development: Insights from Vasudhara Dairy and Dharani Organic cooperatives

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Abstract

The Sustainable Development Goals have unfortunately been developed without sufficient consultation within the cooperative movements. Cooperatives have an important role in nurturing, strengthening and giving shape to a sharing economy that could provide alternate forms of organisation of goods and services. Yet, these ideas find inadequate mention in the SDG processes. This paper takes two contemporary case studies in different parts of India – Valsad district in Gujarat and Anantapur in Andhra Pradesh – to reflect on how these cooperatives have grown and contributed to sustainable development in the region providing sustainable livelihoods to vulnerable populations in the twenty-first century.

As value-based and principle driven organizations, cooperative enterprises are by nature a sustainable and participatory form of business. Cooperatives foster democratic knowledge and practices and social inclusion. They have also shown resilience in the face of the economic and financial crises. These potential gains as highlighted in some of the recent cooperative literature need articulation and contextualization from existing work on the ground. The paper begins with an overview of cooperatives and sustainable development goals and seeks to point to some missing dimensions in the current discourse on sustainability and cooperatives. The paper then looks at two cases of how some of the SDG goals like promotion of sustained, inclusive and sustainable economic growth for poor and marginalised communities and ending poverty and hunger through appropriate use of natural resources is achieved. The first case details how the Vasudhara dairy or Valsad dairy cooperative in Gujarat has been able to establish itself as a leader in the state in terms of gender inclusion and dairy as a livelihood for tribals. It illustrates how newer dimensions such as gender parity and social inclusion in cooperatives can be achieved and the importance of grassroot leadership and the important collaboration between grassroot leaders and professional management.

The second case on the Dharani Farming and Marketing Mutually Aided Producers Cooperative Limited, (Dharani FaM Coop) has evolved with the cooperative drawing from sustainable principles of natural resource management and has offered credible alternatives to small and marginal farmers in moving away from a single crop in an arid drought prone district of Andhra Pradesh. Cooperatives as organisational forms has fallen out of favour in many parts of India in recent times due to excessive governmental interference and the contrasting cases will be explored to rethink cooperatives and their role in sustainable development in today's context. Bringing the sustainability lens helps rethink some issues of scale and replicability that Dharani has been facing in terms of its outreach and its ability to attract investments. The Valsad dairy too had initial difficulties as the idea of including tribals with their meagre milk production was deemed unviable and unsustainable but was proved otherwise due to the persistence of its founders. The two cases will be contrasted and in the final section of the paper lessons for rooting the sustainability dimension in cooperatives will be explored and public policy options highlighted. Specifically the importance of exploring diversity and understanding marginality would be highlighted that currently is missing in the SDG debates.

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1. Can SDGs be achieved without Cooperative Enterprises?

The United Nations has in recent years worked hard to expand on the Millennium Development Goals to a set of goals to end poverty, protect the planet, and ensure prosperity for all as part of a new sustainable development agenda that includes a set of 17 Sustainable Development Goals or SDGs. These have been ratified by nation states with many bringing out specific national reports on how they seek to achieve these targets. These goals and the processes though have been contested with scholars suggesting that the concerns of developing countries have been inadequately addressed and that processes are more “déjà vu” rather than “developmental” (Muchhala and Sengupta, 2014). Others have questioned the depth of engagement on sustainability issues indicating a continuation of “cock-pitism” or the top-down steering of agendas by governmental and intergovernmental agencies and inadequate attention to “planetary boundaries” and insights from “the energetic society” (Hajer et al., 2015). Importantly though there is little mention about cooperation as both process or embedding principles. The understanding of cooperation in the SDG document is limited and there is hardly any reference to collective action processes. Cooperation is seen largely in terms of development cooperation or intergovernmental or inter-agency deliberations and not in terms of collective action processes that is quite abundant in the cooperative literature.

While the content of the SDGs has been discussed and debated by international organizations, states and civil society organizations; participation by cooperatives is very recent and consequently voices of cooperatives and the cooperative movement have not been heard in the SDG process. As has been suggested one possible reason for the invisibility of the cooperative option in the debate is a lack of understanding of the actual and potential contribution that cooperatives can make to sustainable development, partly due to the disparate nature of literature on this subject. The International Cooperative Alliance (ICA)’s initiative, along with ILO recently, to bring cooperative voices into the SDG debate and its implementation (Wanyama 2014) is welcome. In this paper we suggest however that the ICA-ILO report is insufficient and needs to be bolstered from field level insights from cooperative initiatives in countries like India. The ICA-ILO report does well to highlight the absence of cooperative enterprises but perhaps frames the debates in rather broad terms and it is hoped that this conference would provide more insights on how exactly have cooperative enterprises moving the SDG agenda silently over the years and what needs to be done to bring these ideas to the forefront. In this paper we draw upon insights from two such cases on agricultural and dairy cooperatives from two different parts of India to illustrate these possibilities.

ICA and ILO's attempts to fill the gaps in the neglect of cooperative enterprises rightly suggests that cooperatives were not actively engaged in the design and implementation of MDGs even though they made significant contributions to the realization of these goals. Cooperatives have been successful in poverty reduction initiatives (Goal 1) and contributing towards gender equality by expanding women's opportunities to participate in local economies and societies in many parts of the world (Goal 5). Cooperatives play a significant role in employment creation and income generation by promoting sustainable livelihoods and contribute to food and nutrition security by helping small farmers, fisher folk, livestock keepers, forest holders and other producers to solve numerous challenges that confront them in their endeavours to produce food (SDG 2&8). There are many other ways by which cooperatives can further the SDG agenda that could be specific to their engagement in health or renewable energy etc. but for the purposes of this paper we hope to focus only on agriculture cooperatives to reemphasise their role in the above.

The survey carried out since highlights some ideas of how coops can be part of SDGS but given the shortage of time could only be limited in scope. Our suggestion is that rather than map SDGs and cooperative enterprises on a one-to-one basis the real role of cooperatives needs to be understood in the depth of their engagement and their mechanisms of inclusion, empowerment and sustainability imperatives that they bring to the discussions on sustainable development. Drawing from case studies that look into these processes could, we suggest, enhance the case for cooperative enterprises not just fulfilling SDGs but leading the agenda and implementation. SDGs otherwise might suffer from having too much of pious intentions without the rich experience and insights that the cooperative movement, with all its difficulties and challenges, brings to the idea of "our common future".

As has been pointed out in the International Council of Science (ICSU) and International Social Science Council (ISSC) on SDGs (ICSU, ISSC 2015) one of the key aspects missing in SDGs is the interrelatedness of some of the goals. "Progress on ending poverty (SDG 1) cannot be achieved without progress on the food security target under SDG 2, macroeconomic policies related to targets on full and productive employment and decent work under SDG 8, the reduction of inequality under SDG 10, and without enhancing resilience to climate change under SDG 13." This aspect of interlinking of targets has been elaborated by Le Blanc (2015) whose study suggests that SDGs need to be seen as a "network of targets". Using network analysis Blanc shows how two of the proposed goals, SDG 12 on sustainable consumption and production (SCP) and SDG 10 on inequality, provide critical connections among other goals and make the SDGs more tightly linked as a network. Another two, particularly relevant for the discussions in this paper, SDG 1 on ending poverty and SDG 8 on promoting sustained, inclusive and

sustainable economic growth, full and productive employment and decent work for all together with SDGs 10 and 12 relate to goals that are most interlinked (see Table 1 below).

Table 1: Link between the SDGs through targets: An aggregate Picture

Rank	Sustainable development goals	Number of other goals to which connected
1	12 - Ensure sustainable consumption and production patterns	14
2	10 - Reduce inequality within and among countries	12
3	1 - End poverty in all its forms everywhere	10
4	8 - Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	10
5	2 - End hunger, achieve food security and improved nutrition and promote sustainable agriculture	8
6	3 - Ensure healthy lives and promote well-being for all at all ages	8
7	5 - Achieve gender equality and empower all women and girls	8
8	4 - Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	7
9	6 - Ensure availability and sustainable management of water and sanitation for all	7
10	11 - Make cities and human settlements inclusive, safe, resilient and sustainable	6
11	13 -Take urgent action to combat climate change and its impacts	6
12	15 - Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss	6
13	16 - Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels	6
14	7 - Ensure access to affordable, reliable, sustainable and modern energy for all	3
15	9 - Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	3

16	14 - Conserve and sustainably use the oceans, seas and marine resources for sustainable development	2
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Source: Le Blanc 2015: 6.

This interpretation by Le Blanc needs qualification though. The focus on sustainable production and consumption is particularly important in highlighting developmental inequalities and indicates the need for cities and countries with large urban populations to rethink their strategies from a sustainable development perspective. This however does not highlight the other half of the world that still continues to live in rural areas whose ecological footprint remains low though they score low on many economic development parameters. We suggest that the discussions on cooperatives and SDGs should highlight the fact that sustainable production and consumption is strongly linked to rural livelihoods and agriculture in particular. Our case studies from India highlight how this has happened in the case of a dairy cooperative and a cooperative of millet farmers.

2. Engendering Dairy Cooperatives: Vasudhara Dairy and the SDGs

Amongst dairy cooperatives world over the Gujarat model of dairy cooperatives, popularly known by the brand Amul, is much celebrated for its spectacular and continued growth, and ensuring considerable returns (in excess of 80%) of consumer price³, and for demonstrating that investment in cooperatives can lead to poverty reduction and sustainable development (Heredia 1999). However one of the criticisms about the dairy revolution in Gujarat has been the relative failure in inclusion both in terms of women headed cooperatives as well as tribal farmers in the cooperative movement. As pointed out by some scholars (Shah et al., 2015) 65 years after Amul was founded, not even one out of over 30 crore Adivasisin districts across the central Indian plateau of India (with over 30% of the Adivasi population) has a successful dairy cooperative.

It is in this context that the story of the Vasudhara cooperative stands out. The cooperative today has organised 1,20,000members, mostly Adivasi women, from Valsad, Navsari, Dang and Dhule districts of Gujarat into a Rs 1,000-crore dairy business, presenting a possible model for India's second White Revolution to empower Adivasi women. Unlike most other dairies in Gujarat, Vasudhara, has the largest number of women-led cooperative societies, more tribals as members, and has shown that dairying is

³ See interview with R S Sodhi (February 2016). [http://www.amul.com/files/pdf/4-2-15 We are focusing on branded products to maximise Amul.pdf](http://www.amul.com/files/pdf/4-2-15%20We%20are%20focusing%20on%20branded%20products%20to%20maximise%20Amul.pdf) also <http://www.amul.com/files/pdf/GCMMF-turnover.pdf>

indeed profitable even with large share milk from cows than buffalos. Vasudhara dairy cooperative also challenged the orthodoxy that the Amul pattern could succeed only in milk sheds with high milk production density and an entrenched tradition of profitable dairy husbandry (Shah et al., 2015). It is the only Indian cooperative that has been recognized by the Asian Institute of Management Manila for its outstanding performance in eradicating poverty and providing livelihoods to rural tribal women.

The success of Vasudhara dairy can't be merely restricted to establishment of successful dairying in a tribal region; it is an important case in lessons on tribal development, grass root leadership and the need for a strong linkage between professionals and grassroots leaders. The Valsad region (Valsad, Dang, Navsari districts) is known as the tribal belt in South Gujarat with over 50% of population being tribal (Dangs is closer to 100%). The tribes include Kokna, Dhodia, Bhil, Gamit, Warli, Kotwalia, Kolcha and Kathodi tribes and coexist with Patels, Desais, Bohra Muslims, Rajputs and Koli Patels. The largely hilly terrain limits the scope for agriculture. Valsad faced recurrent droughts in the early 1970s that forced tribals to migrate to other towns in search for employment. The only other source of income generation was through sale of timber, which caused deforestation in the region. The late Dr. Mogabhai Desai, a freedom fighter and a social worker thought of reversing the situation of migration and deforestation and was of the firm belief that the best way to develop this region was through dairying based on the Amul pattern of cooperative dairying. The journey of Vasudhara dairy though was not a smooth one and in fact had a rather long gestation period before much of the spectacular results. Here the importance of grassroots leadership in incubating business models in underserved regions becomes critical. Inclusion is not possible without sustained incubation and concomitant investments not just in financial terms but in human resources.

Mogabhai Desai got in touch with the young Narendra Vashi, a fresh National Dairy Development Board (NDDB) recruit, who was also from the Valsad region and asked him to join the Valsad Dairy as the Managing Director to operationalise the Valsad Dairy in the early 1970s. As soon as Valsad Dairy was registered January 1973, Mogabhai started touring villages of Valsad district and began to persuade the farmers to start milk collection societies in their villages. In the villages that already had village level societies, he persuaded them to increase their membership and collection. The milk that was collected from villages of Navsari and Valsad was sent to Sumul Dairy for processing.

Initially, when Valsad dairy sent its milk to Sumul, the dairy went through severe financial crisis because the farmers were not getting a good price for their milk in comparison to the more productive milk collection centres the Sumul dairy was serving. The professional inputs of Vashi under the overall leadership of Mogabhai ensured both backward and forward linkages on a systematic basis. Gradually

there was a good increase in the number of milk collection societies and a good growth in milk collection.

Babubhai Patel, the then Chief Minister, whom Desai approached to start a dairy in Valsad got NDDB (the National Dairy Development Board) to conduct a survey in 1973-74 to explore the feasibility. The survey reiterated the constraints - the low yielding animals and poor economic conditions of tribal farmers coupled with adverse geographical conditions – in developing the district into milk shed area. Desai and Vashi were swimming against the tide. NNDB officials then told Mr Vashi that you cannot start milk cooperative in a region where the tribal people don't even have water to drink. NDDB refused to finance Vasudhara after evaluating the poor conditions of the region and raising serious doubts on the viability of the project. The minimum threshold for viability was collection of 30,000 litres per day and Vasudhara would not be able to do so. Despite the discouraging report from NDDB Desai and Vashi worked at the backend mobilizing farmers and organizing village level Dairy Cooperative Societies (DCS). Initially these societies collected milk and processed it at Sumul Dairy's plant in Surat.

In 1978, Vasudhara raised resources from the Small Farmers' Development Agency to buy buffalos. However and by 1980, most of the buffalos died and the milk procurement fell as low as 7300 litres per day. The buffalos were not suitable for the local conditions and the tribal farmers had no knowledge of commercial dairy farming. From 1985 onwards Vasudhara shifted to cows.⁴With a commercial bank loan and a government subsidy in 1981 Vasudhara Dairy installed its own milk processing plant (30000 l/d capacity) eight years after the original attempt. Milk collection grew from 11000 l/d in 1985 to 90000 l/d in 1990 (see Figure 1). Looking at Vasudhara's success, NDDB offered to finance a 100,000 l/d dairy plan under Operation Flood III.

Vasudhara started opening DCSs in tribal areas. Vasudhara's milk procurement grew from 7900 l/d in 1981-82 to 516900 l/d in 2014-15. Against their procurement the local sales grew from 27000 l/d in 1981-82 to 255100 l/d in 2014-15.

⁴In 1985 Thalpakar cows from Rajasthan were introduced to the farmers. Later in 1986, Kankreji cows from Gir, Gujarat were introduced. Eventually from 1988 onwards Vasudhara has been promoting the use of crossbred Jersey and HF cows.

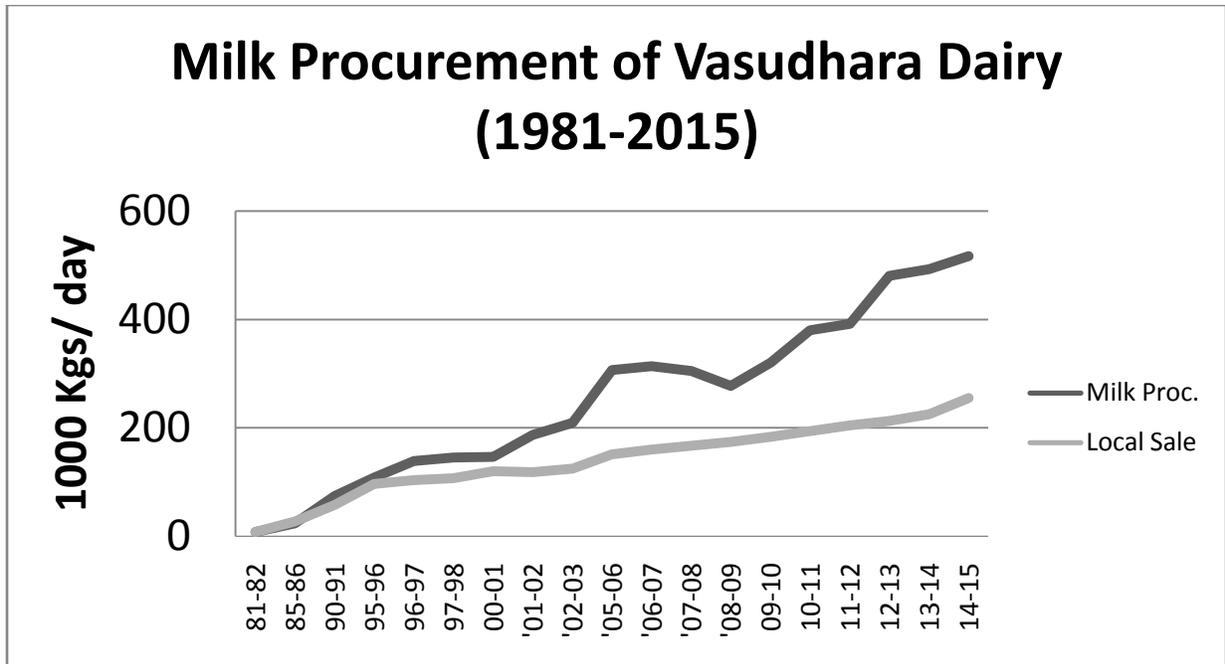


Figure: 1 Average milk procurement of Vasudhara Dairy (per day in thousand kgs)

India liberalized its economy in 1991 and opened its doors to multinational companies. Dr. Kurien, insisted to all Dairy Unions that they should enter the business of ice-cream making to fight the entry of multinationals like Kwality Walls, etc. Vasudhara decided to act upon this advice and with the increase in procurement, Vasudhara expanded its activities with support from GCMMF by installing an ice cream plant in Boisar (Maharashtra) in 1997. Boisar was selected for the ice-cream plant because Vadilal was selling its Boisar plant. Vasudhara also bought another ice cream plant in Nagpur (Maharashtra) in 2002 to be able to penetrate markets in the south of India and a new dairy plant in Boisar in 2006. Vasudhara will be soon commissioning cattle feed plant with a capacity of 200-300 metric tonnes in Navsari district.

In this success Vasudhara also paved the way for gender inclusion through dairy cooperatives. Vasudhara gave preference to opening all-women’s DCSs. Out of the total 1133 functional DCSs, 925 are women DCSs. Women got special offers to buy cattle and other equipment on loan. Loan was given to any woman who had a guarantor from the village. Vasudhara helped the women with paper work and the application procedure for the loans. Mr. Vashi believes that women are more resilient, innovative, trustworthy and experimental than men. The encouragement for women did not come only in assistance to get bank loans, but also in through other schemes like ‘Swavlambi Gramin Nari’, (self-sufficient rural women) which aims at empowering women by making them self-sufficient and independent through the

business of dairying. Under this scheme Vasudhara has covered 8483 women who have received finance of Rs. 10.15 million. The recovery rate of this scheme has been 82.6%.

Vasudhara also helped the women form 421 Self Help Groups (SHG) that cover 7169 women from 152 DCS. Women were trained on various aspects of animal husbandry like scientific raising of heifers, maintenance of cross breeds, optimal feeding practices, vaccination, building cow sheds, artificial insemination, hygiene and sanitation, and other issues related to animal husbandry. Alongside animal husbandry, Vasudhara also trained women on aspects of dairy management like book keeping, auditing, milk collection, etc.

Vasudhara dairy was set up with the primary objective then of preventing migration of tribals and providing them (especially women) a secure and sustainable livelihood at their doorsteps. It is through this that Vasudhara has been able to satisfy many of the SDGs starting with SDG 1 and 2 relating to eliminating poverty and ensuring food and nutrition security. In doing so it has also contributed to SDGs 4 (ensuring inclusion) and 8 (employment, decent work and social protection). All of this has been through an important element of gender inclusion (SDG goal 5) by enabling women Dairy cooperative societies and leading the cooperative movement in that direction. While one could elaborate on each of these objectives in greater detail what is important to note is that the form of organisation, cooperatives, actually enables simultaneously meeting more than one SDG and enables interdependence and synergy. The case study on Dharani amplifies this and we present the same below.

3. Dharani Farmers' Cooperative and Sustaining Livelihoods in Extreme Conditions

The Vasudhara dairy cooperative operated in relatively favourable agroecological conditions in regions with good forest cover and soils. In contrast the Dharani Farmers' Cooperative in Anantapur district faces the challenge of sustaining livelihoods in arid regions with degraded soils and a fragile natural resource base, a phenomenon that is likely to increase in many parts of the world. The district of Anantapur is one of the driest and most drought prone districts in India. Agriculture continues to be the main livelihood of the close to 90% small and marginal farmers in Anantapur district despite the absence of any perennial rivers, an annual rainfall of 530mm, and less than 10% irrigated crop lands. The district has seen large-scale migration of youth and a fair number of suicide deaths by farmers (estimated at over a thousand in the last decade).⁵

⁵<http://www.af-ecologycentre.org/about-us/why-anantapur>

Traditionally, the farmers in this region had adapted to dry land, rain fed agricultural techniques including the cultivation of millets (like jowar, bajra, ragi, etc. which have the ability to extract oil moisture and grow under extreme stress conditions). Millets offer better harvest in less fertile soils and Anantapur was almost entirely a millet cultivating region until the 1960s with little use of agro-chemicals. Extraneous factors (including minimum support price and procurement of rice and none for millets, incentives to grow commercial crops) over few decades led to aggressive promotion of ground nut cultivation as it promised higher economic returns making it a single crop district (90% of the total area under cultivation is underground nut). The promises of good returns diminished with time and soon farmers were trapped in a vicious cycle of higher input costs (for agro-chemicals), declining soil fertility and no crop diversification.

The Timbaktu Collective, a voluntary organization (founded in 1990) in Chennethapalli (CK Palli) village of Anantapur district, began operations in a few villages with the firm belief that this situation could be reversed through collective action, bringing back the link between agriculture and forests and rejuvenating the natural resource base in the region. Following their award winning intervention in reclaiming barren lands in the initial years, Timbaktu Collective (TC) launched the “Seeds of Hope” project in 1999 to revive the local knowledge, document traditional forms of cultivation; collecting native crop seeds and conduct experiments in organic farming with a few farmers. Bringing farmers from chemical agriculture to organic farming was a slow process. By 2005, 350 farmers from 8 villages agreed to implement organic farming exclusively on at least 3 acres per farming household.

3.1 Ushering in rural, collective entrepreneurship

In a global food market where nearly 50% of the world’s seeds are controlled by only three corporations the farmer has often no control. Timbaktu Collective believed that as small and marginal farmers have traditionally been individual sellers, unless organised in collectives it would be virtually impossible for them to compete in today’s markets. This belief in the collective strength of the small holding farmers enabled TC in promoting a model of collective entrepreneurship with complete ownership by farmer-producers.

Timbaktu made good use of the enabling Mutually Aided Cooperative Societies (MACS) Act in Andhra Pradesh that enabled producers to organise without over regulation and interference from the Registrar of Cooperatives. The role of women in establishing and running of the cooperative has been

paramount. In the early years of the organic agriculture program, the women's thrift cooperative Adisakthi took on the responsibility of marketing the organic produce. The business venture was called "Adhisakthi Dharani" with seed capital from Adhisakthi MACS that helped set up a processing unit at Chennekothapalli, to store and process the organic produce of the participating farmer families. With more and more farmers joining TC and becoming organic, it was decided that the farmers register a producer owned business enterprise to take ownership of marketing their produce. In April 2008, Dharani Farming and Marketing Mutually Aided Cooperative Society Limited (Dharani FaM Coop Ltd or Dharani for short) was registered as a wholly farmer owned and managed enterprise, with all the organic farmers as shareholders of this enterprise.

Dharani today has 1800 farmers as shareholding members and addresses a range of farmers' marketing challenges such as:

- (i) unavailability of credit and increased indebtedness
- (ii) exploitative practices of private traders and local mill owners
- (iii) increased exposure to market risk and varying trade policies
- (iv) no access to a growing organic food market

The cooperative's organisation is captured in Figure 2

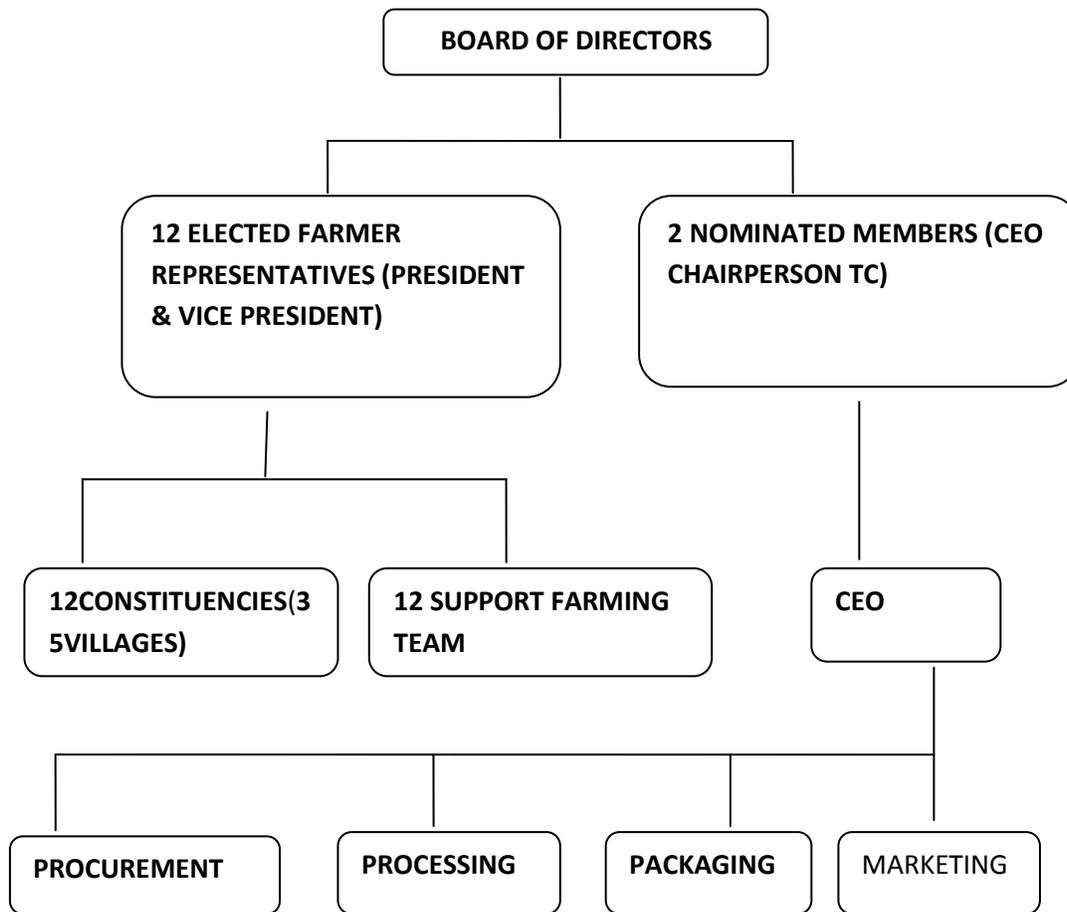


Figure 2 Organizational Structure of Dharani

Dharani has a Board of Directors consisting of 12 elected directors representing 12 constituencies of Timbaktu working area. All the directors are elected through a democratic process by the sangha leaders who, in turn, are elected by member farmers and thus elected body will elect the President and Vice-President of the Board. 15 members- 3 nominated and 12 elected farmer-representatives. The term of the Board lasts three years after which elections are conducted to elect new representatives. To ensure equal representation from all villages, the 35 member-villages were divided into 12 constituencies with three villages representing each. A Chief Executive Officer (CEO) executes the decisions of the Board and over all administration of Dharani.

Some of the innovations by Dharani in collective leadership include

- a. Farmer Sangha Clubs: To enable both technical knowledge on organic farming (conventional agriculture extension on sustainable organic agricultural practices do not exist

in most parts of India) farmers are organized into Sanghas of 25-30 farmers and smaller groups Brindams (5-6) farmers to organize both production and procurement. Brindam members are responsible for assisting each other and also to ensure the organic integrity of their lands.

- b. Participatory Guarantee System: TC and Dharani have pioneered, with other organic groups in the country, the Participatory Guarantee System (PGS) for certification of farmers and their produce as organic without having to go through expensive international certification processes that make organic out of reach of many small farmers.⁶
- c. Infusing greater value in supply chains: Cooperatives like IFFCO support farmers by enabling input supply of chemical fertilizers, there is little support for farmers practicing organic agriculture. Dharani does so by creating the knowledge base and support through linking agriculture and livestock in the region and other processes too. Dharani FaM had provided 490 pairs of *Halikar*, a sturdy indigenous breed of cattle to the farmer members in 2010-11 that has enabled both increase in farm and milk output. Proper weighing of produce has led to enhanced income of farmers. Have been able to see that the local traders on off at least 10% of the goods through faulty weighing. Further, Dharani offers a premium procurement price which varies from 25 to 35% in excess of the local market prices.
- d. Marketing of the organic produce: Dharani Marketing is an important activity of the enterprise and as seen from Figures 3 & 4 Dharani has been able to build on a constant shareholder base and procurement by enhancing value through value added products and reaching out to different rural and urban consumers through food fairs and exhibitions. A brand name and slogan (“Timbaktu Organic – Food for the soul”) and other marketing efforts has meant that “Timbaktu Organic” is currently established in 40 towns and cities of Southern India through a network of 246 retailers, bulk buyers and direct consumers.

⁶For more details visit <http://www.pgsorganic.in/> . For latest members of the Council see <http://www.pgsorganic.in/pgs-organic-council/>

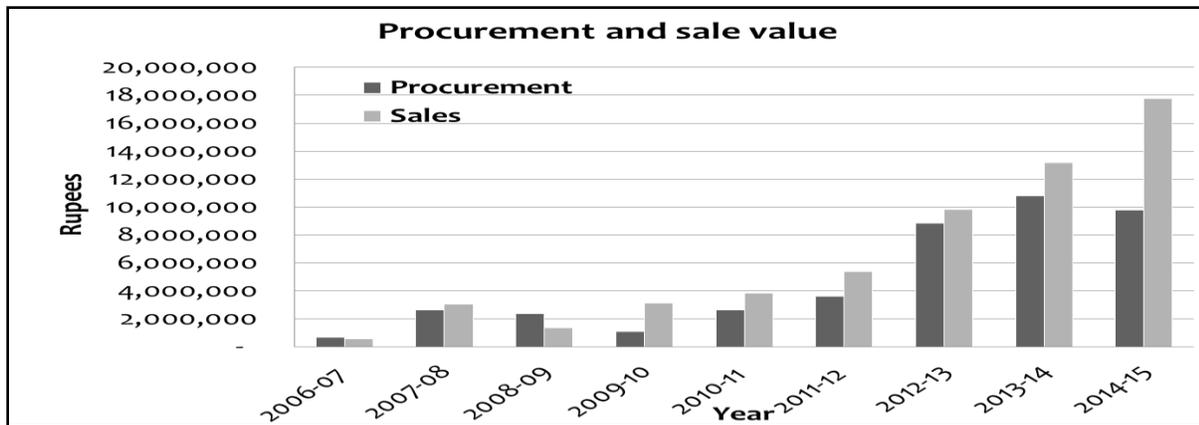


Figure 3: Procurement and Sale Value of Dharani Farmers' Cooperative

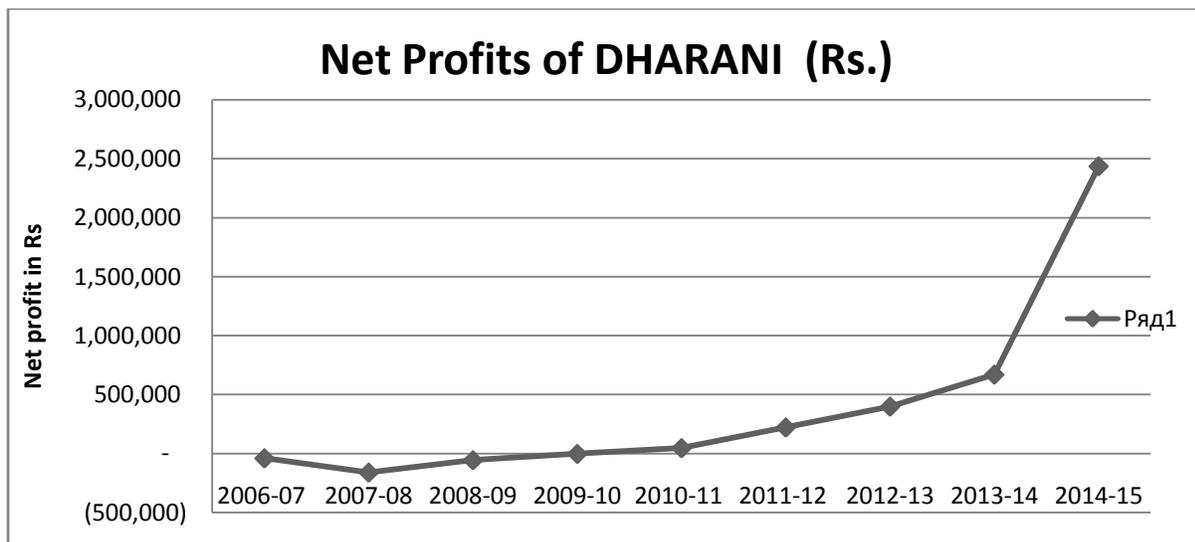


Figure 4: Net profit of Dharani Farmers Cooperative

Dharani continues to innovate in many directions. One of which is in financing as many banks have been reluctant to provide working capital for agricultural cooperatives under the MACS Act. Dharani and TC have raised resources in a diversified manner as indicated by the Table 2 below.

Capital requirements of Dharani (Source)	Amount in Rs Lakhs
Member shares and deposits	27
Grants	35
Loans from friends	18

Loans from other Cooperatives promoted by TC	30
Loans from staff of the Collective and the Cooperatives	65
Retained profits	17

Table 2: Capital requirement of Dharani

Further, Dharani is not a typical growth minded cooperative alone. The founders believe that sustainability needs to be embedded and have been following principles of local production and consumption and seek not to sell their produce beyond a 350km radius. These decisions could weigh on profitability but are important considerations in sustainability and development. Dharani's revenues in 2015-16 touched Rs 2.04 crores with an 18% growth despite poor monsoons. The increased growth in millet production and sales has also contributed to the local economy in terms of labour days generated, since millet processing is labour intensive in nature. 14,073 labour days of work was generated in C.K. Palli during the year, of which 12,534 days were provided for women.⁷ Dharani has recently also introduced solar power in its processing centre and a power purchase agreement has been signed with the distribution company to sell electricity to the main grid.⁸

3.2 Dharani and SDGs

We notice that the Dharani Farmers' Cooperative has some features that are similar to the Vasudhara dairy cooperative in meeting SDG goals. Both work with and include marginalised communities in ending poverty and reducing migration (tribals in Vasudhara and marginalised farmers in Dharani). Both the cooperatives have had a strong gender empowerment aspect in their strategies for meeting the SDG goals 1, 2, 5 and 8 (End poverty in all forms; End hunger, achieve food security and improved nutrition; achieving gender equality and empowering women; and promoting sustained, inclusive and sustainable economic growth, full and productive employment). These have been summarised in the discussion later in Table 3. Apart from many commonalities it is evident from the Dharani case there are a few important additional goals that Dharani meets. High on the list is the work by Dharani and Timbaktu Collective's work on emphasising sustainable consumption and production patterns (SDG 12). This is an important SDG that connects 13 others (refer to Table 1). By bringing back traditional knowledge, reinstating climate appropriate crops and encouraging customers in the value chain Dharani engages with this critical SDG. Organic practices modified through experiential and contemporary knowledge on

⁷ The share of millets in total sales value increased from 33% in 2014-15 to 39% in 2015-16. Millet sales registered a 20% growth in volume terms and 49% growth in value in 2015-16. Annual Report of Timbaktu Collective 2015-16.

⁸ In August 2016 the fully solar operated facility reached its maximum potential and exported 1259.37 units to the main grid!

agroecology helped the soil of the farmer's lands to remain healthy and productive. Dharani worked on eliminating external inputs, promoting seed sovereignty, and encouraging less water consumption and building up of bio-mass to enable farming communities cope with climate change risks (SDGs 13 & 15).

Dharani has ensured better income for the marginalized dry land smallholder farmers by enabling a diversification of their livelihood options and enabling them better prices for their produce, lower input costs, access to much needed credit, improved productivity of their lands and animals while supplying much needed healthy food. By growing, processing and marketing organic food, farmers were not only able to reach out to the ever growing demand in niche markets but also heal their lands, bring back the cattle, sheep, goats chickens into their lives, increase the productivity of their lands and earn more from their animals. Farmers started eating better and started growing what is right for them, their animals and their land. Innovations such as the Participatory Guarantee Scheme (PGS) and recent fully solar operated facilities at their processing centre has helped Dharani Cooperative fulfil SDGs 7 too (Ensure access to affordable, reliable, sustainable and modern energy for all). Importantly, Dharani meets a critical institutional goal (like Vasudhara) in meeting SDG 16 - Promoting peaceful and inclusive societies for sustainable development, and **building effective, accountable and inclusive institutions at all levels** (emphasis added). It is this deepening of democracy at all levels by well-functioning cooperatives like Dharani and Vasudhara that merit greater investments in the cooperative enterprise.

Rethinking Cooperatives and SDGs

We began this paper by reviewing the current efforts of ICA and ILO in bringing back the cooperative agenda into the SDG discussions. The two case studies above have shown that there is actually a much stronger case for cooperative enterprises than the ICA document (Wanyama 2014) linking SDGs and the cooperative movement. Table 3 summarises how cooperative enterprises enable meeting SDG goals. The table shows that there is a strong case for investing in cooperatives given the multi-dimensional nature of returns – economic, social and environmental – through the business enterprise rooted in collective action. Unlike traditional forms of enterprises that often need the social or environmental to be corrected for later through initiatives such as Corporate Social Responsibility (CSR) or making businesses Green etc, cooperative enterprises have many things going for them in meeting SDGs. Table 3 indicates that both Vasudhara and Dharani meet 7 of the 16 SDGs despite being in quite different sectors. Dharani meets an additional four and Vasudhara one other (together they thus play a role in meeting 12 of the 16 SDGs).

SDG no	Sustainable development goals	No of other goals to which connected	Vasudhara Coop	Dharani Coop
12	Ensure sustainable consumption and production patterns	14		✓
10	Reduce inequality within and among countries	12	✓	✓
1	End poverty in all its forms everywhere	10	✓	✓
8	Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	10	✓	✓
2	End hunger, achieve food security and improved nutrition and promote sustainable agriculture	8	✓	✓
3	Ensure healthy lives and promote well-being for all at all ages	8		
5	Achieve gender equality and empower all women and girls	8	✓	✓
13	Take urgent action to combat climate change and its impacts	6		✓
15	Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss	6		✓
16	Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels	6	✓	✓
4	Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	7	*	*
7	Ensure access to affordable, reliable, sustainable and modern energy for all	3		*
9	Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	3	*	
14	Conserve and sustainably use the oceans, seas and marine resources for sustainable development	2		
6	Ensure availability and sustainable management of water and sanitation for all	7		
11	Make cities and human settlements inclusive, safe, resilient and sustainable	6		

✓ Strong connect * Moderate connection Adapted from Le Blanc 2015.

It can be suggested that the two contemporary producer collectives were some of the better governed ones and not all cooperative enterprises function as well. However it is important to recognise that given the challenges of climate change and poverty facing us it requires more systemic and holistic thinking rather than addressing these in a piecemeal fashion. These cooperatives show the true potential of collective enterprises and present a strong case for investment by multinational donors and

government agencies. Importantly, both Vasudhara and Dharani have had long lead or gestation times when their business models have been refined through experience. This requires patient capital and leadership. Cooperative enterprises are not quick-fixes or silver bullets but can help us rethink the sharing economy. As pointed out by Iyer (2015) the sharing economy is being spurred by Millennials disenchanted with the economic crises, the housing bubble, concerns over the environment, and lack of interest in ownership of auto and houses. In today's world the social commons, as represented by Dharani and Vasudhara, are relevant not just because they help in constructing an *Internet of Things* infrastructure that optimizes collaboration, universal access and inclusion, but because they precede them and have a rich history rooted in the creation of social capital and in ushering a sharing economy. There is thus a need for the cooperative movement to provide a much stronger case for providing the mechanisms of meeting the SDGs. The experiences of Dharani and Vasudhara provide useful insights and it is probably important for the cooperative movement to understand how SDGs are met through these local and significant case studies as well.

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