

**Legal Name of the Organization:** Snehakunja Trust

**Project Title:** Strengthening and greening rural economies in Karnataka and Gujarat

**Reporting Period:** 1<sup>st</sup> September 2020 to 28<sup>th</sup> February 2021

**Please tell us about your progress towards the larger goal you established in the beginning of the program. What have been some of the milestones.**

<b>Key Objectives</b>	<b>Progress and Milestones</b>
Research, design and adoption of need based renewable energy solutions for 35 micro-enterprises across 10 FPOs and developing collaborative business models	63 renewable energy based micro enterprises promoted across 10 FPO ecosystems in Karnataka and Gujarat
Unlocking Govt funding sources and/ or financial support from local financial institutions to provide loans or grants for DRE solutions	<ul style="list-style-type: none"><li>• Convergence with scheme of Dept of Agriculture, Govt of Karnataka, in Belagavi for purchase of 5 Solar Bubble dryers for Maize FPOs, with 70% subsidy.</li><li>• Linked Chaff Cutter enterprise under government scheme in Gujarat.</li><li>• Entrepreneur from Gir Somnath district, GJ got the benefit of KCC amount to purchase of Solar Dryer for dehydration of vegetables.</li><li>• Financial leverage from IDFC Bank for implementation of 2 Roti lolling Machine in Belgavi district, KA</li><li>• Scheme leverage – PM Kusum Yojana for installation of 5 Solar Water Irrigation Pump of 7.5 HP with farmers who doesn't have electricity connection.</li><li>• Revolving fund support to 4 Micro enterprises for purchase of renewable energy assets.</li><li>• Applied for Equity Grant Scheme of SFAC for 2 Producer Company Somnath and Okhamandal.</li></ul>
Incorporating key learnings from Phase 1 to replicate successful and high potential RE enterprise models from Phase 1	Draft case studies developed on CFC model, cotton DE topping, banana slicer, seed dryers, Roti Rolling, Drum stick powder Following interventions have been replicated in Phase 2: <ul style="list-style-type: none"><li>• Solar dryers for dehydrated vegetable powder and Kachari making</li><li>• Smokeless stove and biogas for cow-urine based floor cleaner</li><li>• Solar-powered sewing machines</li><li>• Solar fencing for crop protection</li><li>• Solar powered pulverizer for spice processing</li><li>• Roti rolling machine</li></ul>
Engaging in policy deliberations with Govt and non Govt stakeholders to adopt successful and sustainable solutions based on policy inputs and learnings	<ul style="list-style-type: none"><li>• Participated in SELCO Foundation webinar on decentralized cold storages</li><li>• Refining policy inputs with new schemes under Atmanirbhar Bharat package</li><li>• Promoting DRE-based micro-enterprises within FPO valuechains for CSR funding from FICCI member corporates, Heifer Foundation, GiZ, Value</li></ul>

**Please tell us about your progress towards the success metrics you established for target communities and persons (Targets vs Achieved)**

<b>Metric</b>	<b>Targeted</b>	<b>Achieved</b>	<b>Remarks</b>
Improved income for 135 micro-enterprises through sale of value-added products	135 micro-enterprises (including Phase 1)	61 enterprises in Phase 2 95 livelihood interventions in Phase 1	Continued handholding for Phase 1 micro-enterprises
Improved resilience to supply chain and marketing shocks by adoption of digital tools, hygienic processes, strategic partnerships	Leveraging Indiamart, Whatsapp for marketing, Training and adoption of FSSAI regd. For food production, Covid19 awareness and safety protocols	Digital Listing of FPO products on IndiaMart.com, Facebook Page, Product exhibition, Product Placement and Sales via Sales Representatives etc  1) <a href="https://m.indiamart.com/saurashtra-svanirbhar-khedut-producer-company-limited/">https://m.indiamart.com/saurashtra-svanirbhar-khedut-producer-company-limited/</a> 2) <a href="https://www.facebook.com/SFPCL13/">https://www.facebook.com/SFPCL13/</a> 3) All microenterprises availed FSSAI regd where applicable. 4) Covid19 awareness campaign with pamphlets, masks and sanitizers distributed in all project areas	1) Developed common brand name "Sopan" for selling of micro enterprises products in Saurashtra Svanirbhar FPO 2) Appointed 8 Individual Sales Representative in 8 FPOs especially for Sales, Promotion and Marketing of FPO's and Micro Enterprises Products in districts
Improved access to ecosystem service – finance, technology, maintenance	Leveraging ~Rs 60 lakhs for asset co-financing;  Facilitating partnerships with service providers	1) 2 Proposal submitted and get approved from IDFC bank for implementation of 2 Roti Rolling machine in KA 2) Availed benefit of Rs 5,000 under KCC for purchase of Solar Dryer 3) Leveraged Revolving fund support from Bee Collective (SHG) for 4 micro enterprises. 4) PM Kusum Scheme benefit to 5 Farmers 5) Agriculture department subsidy to 5 FPOs for purchase of Maize dryers in KA	1) IDFC Bank loan of Rs 50,000/- to 2 women Entrepreneurs 2) Rs 44,440/- disbursed under revolving fund support 3) Rs 10.56 lakh leveraged under PM Kusum Scheme 4) Leverage Grant fund of Rs 2 lakh from Eco Development Committee of Forest Department to implement solar lighting and butter churner in forest off grid area. 5) Rs 10.17 lakh subsidy leverage from Department of Agriculture Government of Karnataka

Reduced carbon footprint and improved energy efficiency	NA	To be measured post installation	Reduction in fuel-wood consumption and electricity usage to be determined
Govt schemes accessible by FPOs and micro-enterprises	3 unique schemes	1) Farmer entrepreneur from Amreli district, GJ sanctioned subsidy benefit to purchase Chaff Cutter via Agriculture department web portal: - <a href="https://ikhedut.gujarat.gov.in/">https://ikhedut.gujarat.gov.in/</a> 2) PM Kusum Yojana for Solar Irrigation Pump 3) Apply for Equity Grant scheme of SFSC: - Somnath Farmer Producer Company Limited for Rs 8.87 lakh and Okhamandal Farmer Producer Company Limited for Rs 9.56 lakh	Equity Grant Application Number: -  1) Somnath FPO: - Application No.: EGFS20210210685  2) Okhamandal FPO: - Application No.: EGFS20201007605
Best practices, learnings, policy inputs disseminated	30 stakeholders	Participated in SELCO Foundation webinar on decentralized cooling solutions; Shared learnings with CLEAN, AEEE and FICCI-SEDF	Refining policy inputs and case studies for dissemination

### Number and Types of Intervention in Phase-2

Models	Individual	FPO	Community	Total
Number	50	10	1	61

- Total 61 renewable energy base micro enterprises promoted in both the state Karnataka and Gujarat
- 2 Dall Mill and Cleaning Grading unit proposed in 2 FPOs: - Dhanvantri Farmers Producer Company Limited – GJ and Revaiyaswami FPO in Belgaum, KA

Sr	Sector	No of Entrepreneur	Total PO Cost	End User Contribution / Scheme Leverage	Grant Contribution
1	Food Processing	10	23,07,950	6,84,820	16,23,130
2	Food Drying	14	17,14,818	12,63,328	4,31,690
3	Irrigation	5	17,61,035	14,08,828	3,52,207
4	Dairy Value Chain	18	10,80,710	5,40,355	5,40,355
5	Farmers Service	3	1,91,408	1,47,483	41,565
6	Retail Business	3	1,02,100	69,095	33,005
7	Tailoring / Textile	2	70,350	39,225	31,125
8	Crop Protection	7	1,99,500	99,142	1,00,358
9	Bio-Pesticides	1	30,000	19,500	10,500
	<b>Total</b>	<b>63</b>	<b>74,57,871</b>	<b>42,71,776</b>	<b>31,63,935</b>

## **What were the key learnings from this program which emerged during the reporting period?**

- High cost of solar infrastructure has been the key deterrent to its adoption
- Micro-enterprises (individuals and SHGs) can leverage FPO distribution network and brand name for local marketing and credibility
- Entrepreneur expecting installation of higher capacity machineries, where cost of renewable energy component is much higher
- We have received various leads for the new interventions from potential entrepreneur by organizing workshop at FPO level
- Common Facilitation Centre (CFC) works successful only if the enterprises are within 10-15 km radius.
- We have seen that Agriculture Processing works only 6-8 months in the year, Agriculture processing is not round the year activity, it is seasonal business say for Kharif Produce – 2-3 months and Rabi Produce 2 – 3 months, For the remaining period infrastructure of FPOs and Rural entrepreneurs remains idle.
- While processing of Cereals, Pulses and Oil seeds, Moisture plays important role – hence entrepreneurs avoid processing during Monsoon and immediately after Harvesting due to higher level of Moisture.
- We have observed that Rural Entrepreneurs works on an average 4-6 hours in a day and 20-25 days in a month.
- There is a need of storage infrastructure in rural areas like Warehouse and Cold Storage.
- Sales & Marketing is important for sustainability of these enterprises.
- Just asset procurement support does not work for developing rural value-chains, unless ecosystem development approach is adopted and handholding for adoption.
- A minimum timeline of 3 years is critical to ensure pre and post intervention sustainability of micro-enterprises.
- Peer-to-peer experiential sharing and replication for scale in current geographies – that is deepening the intervention, would be a key adoption strategy for DRE promotion.

## **Challenges**

- It is challenges to convert people into entrepreneurship and it is more challenging to convert those potential entrepreneurs into renewable energy-based enterprises.
- People are not ready to adopt new technology for increasing capacity and income, they are compromising and happy with traditional methods & systems.
- In most of the dropped-out sites we have observed that entrepreneurs were looking for higher capacity machines considering expansion and future need of proposed business, hence we could not convert them in our proposed solution.
- After Covid-19, people don't want to take risk in new businesses, their mind set changed to saving of money rather than invest during uncertain situation like Lockdown.
- Energy efficient machinery and its electric motors are not easily available in local level.
- High cost of Solar system but limited production.
- Recommended Solar design of machines vs Local design provides by vendor.
- It is challenging to train rural entrepreneurs for operating and maintenance of machines and Solar instruments. At least 2-year handholding support needed after installation, 1 or 2 workshops are not sufficient.
- Cost is big factor even there is a need: - while implementing renewable energy-based enterprise's people are usually comparing similar non-renewable energy-based machine which is available at very cheap rate, we had tried to do financial linkages but banks are not sanctioning loan to all potential one due to various reason, main reason behind not sanctioning loan is low CIBIL score, no credit history, crop loan repayment issue and insufficient documentation from entrepreneur's side.
- In some cases, Financial Institutions take long time to sanction loan which further leads to delayed in implementation.

- A need-based Revolving Fund as a short-term venture bridge loan, as set-up by this project, could increase entrepreneurial onboarding, special due to Covid19 adverse impact on rural families' investible income availability.
- Marketing of products: - quality issue, packaging issue, higher cost due to lower scale of production, difficulty in brand visibility etc. FPOs collaboration with microenterprise on sales and marketing support and specific support on 4 Ps post installation and commissioning of enterprises for a minimum period of 6 months essential.

### Feedback from field

- Entrepreneurs need projects with lower investments with less maintenance cost.
- There is demand of maintenance free system, people are usually afraid of maintenance cost of Solar System.
- Machines with low cost and inbuilt source of renewable energy like Solar Dryers are more successful in rural area.
- Consider recommendations of Solar design from local vendor.

### Were there any learnings that could fit into the long-term strategy of the organization? How would you incorporate these?

- Vision, Theory of Change, Implementation approach, Collaborations, Target audience.

	Short-term (1-2 years)	Medium-long term (3-5 years)
Vision	Promoting clean energy-based livelihood interventions for improving income in rural areas	Strengthening the DRE ecosystem in rural India and creating change agents within the communities
Approach	Scoping high potential opportunities, co-creating viable business models, capacity building, facilitating access to finance, technology and markets, handholding support in business operations	Handholding existing micro-enterprises, replicating interventions in new geographies, facilitating ecosystem partnerships with financial institutions and technology service providers to develop innovative financing models and reduce asset costs, policy advocacy for mainstreaming interventions and subsidizing assets
Collaborations	SELCO Foundation, FICCI-SEDF, CLEAN, AEEE, RRAN, financial institutions	SELCO Foundation, FICCI-SEDF, CLEAN, AEEE, NAFPO, RRAN, Other incubators (Villgro, IIM B, Upaya, Social Alpha), impact investment funds (Acumen, Yunus Social Business) financial institutions, Govt Depts
Target audience	Rural micro-enterprises in areas with poor energy access, forest-dependent communities, marginal farmers, FPOs	Rural micro-enterprises, FPOs, policymakers, ecosystem partners

**How have the lessons from this project been used to influence your sector, either by sharing learnings, enhancing skills or changing practices in meaningful ways.**

**Sharing learnings:** We have shared the concept, objectives and potential of DRE interventions to strengthen and green rural value chains, with potential donors and networks like CLEAN, AEEE.

**Enhancing skills:** ProCIF staff have developed competencies for conducting site surveys and needs assessment of micro-enterprises

**Changing practices:** It is hoped that once the DRE assets are operational, more local entrepreneurs can be inspired to adopt DRE/ energy-efficient solutions and become change agents within their community and guide others in adopting DRE interventions

Promotion of fuel-efficient dryers and other DRE solutions in the environmentally sensitive central Western Ghats and Gir forest can improve livelihoods of forest-dependent communities and reduce dependency on fossil fuel and firewood. Policy briefs are to be refined to include Atmanirbhar Bharat schemes and disseminated among relevant stakeholders for discussion and replication.

**Were there any risks faced which might have caused changes in the program timelines? How were they mitigated?**

Sr No	Risks	Effects/ Changes in program timelines	Mitigation strategy
1	Higher dropouts due to high cost of solar infrastructure resulting and top-down targets	Expectations of identified entrepreneurs not aligned with project; they were not aware of strategies for reducing costs or improving sales ; top-down approach and targets led to hurried onboarding by RERPs without proper expectation setting	Capacity building of EDMs and RERPs; conducted physical orientation workshops in areas with high dropout rates, co-developed business model and discussed strategies to reduce costs and leverage other schemes/ funds
2	Unwillingness of farmers/ rural entrepreneurs to apply for loans	Many entrepreneurs and farmer groups have shown reluctance in raising loans and are more keen on grants to fund their enterprises; In some cases, farmers are already in debt and don't want to take further loans	The grant disbursement guidelines have been clearly communicated to promoting organizations and entrepreneurs; The grant is meant to be a seed capital and the remaining amount has to be invested by entrepreneurs either through debt or equity
3	Limited travel and physical workshops due to Covid-19 pandemic	Delays in operations – site identification, site surveys, asset delivery, market linkage, etc.	Digital capacity building modules developed on key business planning and operations; assets to be procured on a rolling basis to avoid delays in delivery and installation

**Have there been partnerships developed specifically to take learnings from this project forward? This could be partner organizations, institutions, government agencies or funders who are interested in adopting the developed models or replicating it to expand or scale?**

Sr No	Partnership scoped	Type	Details
1	CLEAN	Knowledge, Advocacy	Became a member of CLEAN and disseminated learnings and potential DRE-based livelihood solutions

2	FICCI-SEDF	Funding, Replication	FICCI CSR has approved projects to replicate the promotion of DRE micro-enterprises and micro-food enterprises to strengthen food and income security across 6 districts in Karnataka and Odisha
3	RRAN	Knowledge, Advocacy	Focusing on improving market competitiveness of rainfed commodities and FPOs
4	AEEE	Advocacy, Replication	Focusing on scoping and replication of energy-efficient and decentralized cooling solutions for agri and rural healthcare
5	NAFPO/TRIF	Replication, Knowledge, Advocacy	Exploring opportunities for DRE adoption at FPO level and promoting CFC models

**How can the support from SELCO Foundation be improved upon to help you succeed in integrating energy as part of your work.**

- Technical capacity building for project staff
- Exposure visits to SELCO Foundation's intervention areas
- Technical guidance on leveraging existing solar infrastructure effectively
- Collaborating with financial institutions to develop affordable financial products

**Have there been any changes in deliverables and budget allocations. Please explain: -**

- Budget reallocation

**Please attach relevant project case studies, pictures of relevant projects, links to videos etc**

- Video link to access digital content modules - <https://we.tl/t-8rleOvZlhp?src=dnl>
- Case studies enclosed separately

## Highlights from field

### 1) Roti Rolling Machine: -

Mrs Sunita is from Gokak block of Belagavi district Karnataka she procured a **Solar Powered Roti Rolling Machine** and setup a roti making unit at her home and **employed 2 workers** to support her



in the roti making and other allied activities like raw material purchase, day-to-day supply of ready to eat roties etc. Sunita and one of her daughters work at the roti making unit as well.

The enterprise makes **500 Roties per day** at its full capacity and supplies them to restaurants, parties and events as per order

### 2) Flour Mill and Butter Churner: -

Village Galakiya Ness is situated in Gir Forest area in Gujarat where electricity grid connection is not available. There are such 50-55 nesses (ness is forest word, called village) in area of Gir Forest. People are suffering from power issue in their routine life, but due to strict norms of forest department, possibility of having grid connection is negligence.

People of this village are belonging to Scheduled Tribe (ST) community they engaged in animal husbandry; each family has on an average 10-15 cattle (mostly buffaloes') they are living in forest since many decades, forest department has given them solar lighting systems for domestic purposes.

Primary issue of this community is for making flour of grains and pulses for daily meals. 1 family need an average 10-15 Kg wheat/millet flour in each alternate day. At present they are going to nearest taluka place "Mendarda" which is 25Km far away from their village. We had identified Mr Goganbhai for setting up of mini flour mill at village level to solve issue of flour.





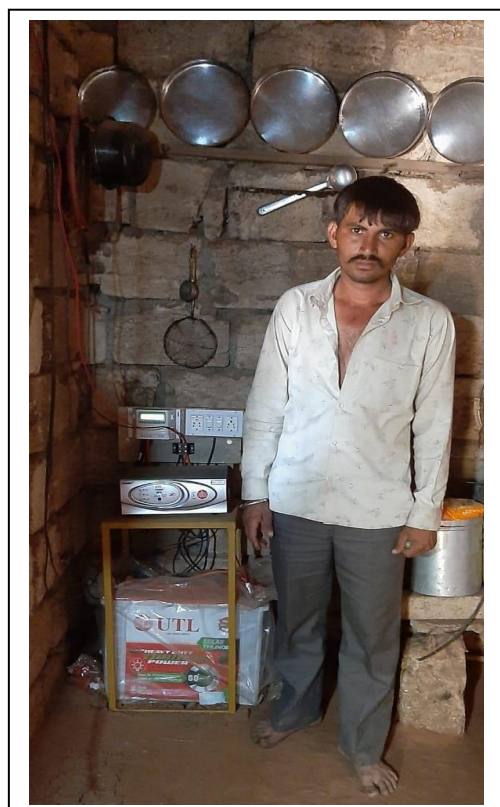
### 3) Demo Processing unit for Mini Dall Mill and Cleaning-Grading unit:-

Revayyaswami and Dhanvantri Farmers Producer Company Ltd engaged in trading of cereals and pulses from its member. Farmers of these FPOs are growing Groundnut, Cotton, Wheat, Gram, Black Gram, Green Gram, Red Chilly, Coriander during Kharif and Rabi season every year.



Since inception, FPOs are engaged in input trading business, supplying seeds, pesticides and fertilizer to farmers. FPO were planning to start processing of produces grown by farmers, but due to irregular power supply, limited capital and insufficient credit history FPO was unable to raise credit for setting up of processing unit. we have proposed to set up mini dall mill and cleaning gading unit at FPO location to serve farmers. Installation of these processing unit are goin on, Installation get delay due to restriction of Covid at vendor location.

### 4) Solar Lighting & Butter Churner in complete off grid area belongs to Gir forest: -



## Skill Trainings: -

As part of the project activity, we had conducted Skill workshop for Existing and New Entrepreneur developed in project. technical know how about machineries & assets installed for starting business operation is important for newly developed enterprises. To facilitates these entrepreneurs on developing skill for running successful business venture we had scheduled skill workshops for them. Highlights of points covered in skill workshops: -

### 1) Maintenance of Assets: -

- Maintains, services, repairs or overhauls machineries, tools, electric motors and equipment.
- repairs or replaces defective parts, reassembles them with prescribed settings, clearances, timings and adjustments by further tooling as necessary and ensures accuracy of fit.
- Installs assembled or repaired parts & other accessories securely in position on machines.
- Maintenance for Components of a PV System: Battery, inverter and Charge controllers, Various Tracking mechanisms, Trouble Shooting of different PV system and its important tools used.



### 2) Setting up of organization structure and goal: -

- Understand process flow of business operation
- Setup structure, goal, vision and mission

### 3) Application of Food Safety & Standards norms while manufacturing food products: -

- Food Safety & Standard Act
- How to prepare quality & hygienic products

### 4) Promotion of product and services

- Digital Marketing, Promotion and Sales
- Supply chain for market
- Design digital poster and identity
- Different models / channels of sales & marketing

### 5) Maintenance of accounting & records for business

- Bookkeeping, sales-purchase register
- Raw material and stock book
- Labour day book etc