



Resolve Trash²Cash
Waste recycling craft enterprise

Positive Style

**Developing Green Alternative Packaging Solution through
local community based enterprises for rebooting local
economic resilience in the Pandemic time**

Narrative & Pictorial Report of July 2022 - March 2023

Supported by
Price Water Coopers Service Delivery Center (Kolkata) Pvt. Limited

Implemented by
South Asian Forum for Environment, SAFE

Project Title:	“P O S I T I V E style: Developing Green Alternative Packaging solutions through local community-based enterprises for rebooting local economic resilience in Pandemic time.
Funded by:	Pricewaterhousecoopers-Service Delivery Centre
Implemented by	South Asian Forum for Environment, SAFE
Duration of the project:	July-March 2023 (9 months)
Reporting period	July March (Final report)
Project Location:	Kolkata, West Bengal

Project overview:

The project focus is on green recycling and sustainable lifestyle education, and that demands a wide-scale action with a holistic design approach in enhancing the user value of resources, market value of recycled products, and as well developing sustainable value chains. In most of the urban households' products and deliveries, the volume of virgin materials used for packaging and safe transportation has been a major contributor to trade waste that eventually becomes a significant source of emission from landfills. With a committed focus on the circular economy, based on recycling objectives, sustainable packaging solutions are included to leverage ecological and economic benefits. It brings a new approach to creating Lenovo materials from biodegradable fibres and non-timber fibre residues mixed with recycled paper and textile wastes. It acts as a supply value chain with a green quotient that is completely in alliance with the Green India mission. The circular economic benefits leverage alternative livelihood opportunities for women entrepreneurs, as the direct beneficiaries of the intervention to excel as green business leaders developing a new market share of biodegradable packaging materials and containers to sustainably intensify the supply of eco-friendly packaging solutions.

The project implementation in steps entailed the eco-green packaging research and delivery of a wide range of quality packaging and material-carrying solutions. The positive style project in continuation is supporting and contributing towards an earth-friendly and socially-responsible business environment.

The project output includes:

1. Manufacturing of eco-friendly, packaging products through recycling waste materials, that are innovative and useful.
2. Creating alternative livelihood opportunities, and income-generating work platforms for poor unemployed women and youth, by formation of a micro-enterprise, which facilitates an entrepreneurship journey.
3. Bringing of its kind recycling innovation into reality, offering the production of a range of handcrafted eco-friendly utility products at an affordable price.
4. The intervention transfers the technology of manufacturing biodegradable packaging materials and containers through the built capacities of over 500 women beneficiaries towards entrepreneurship development.

The project objectives in brief:

1. To reduce single-use plastic packaging, and non-biodegradable materials usage by scaling community-based enterprises into sustainable manufacturing of alternative packaging solutions.
2. To build capacities through technology transfer, and skill training, for marginal unemployed women and youth, creating new entrepreneurship opportunities.
3. To promote the use of recycled eco-friendly and other biodegradable materials for packaging use based on renewable resources.
4. To grow consumer concern for the environment and sustainable packaging through promotional exhibitions, social media, and other public communicative platforms.
5. To aim for high circularity in the value chain and contribute through local enterprises to a green economy.

Roadmap and Sustainability:

The business sustainability of the intervention is pivoted on 3 verticals of which the first one leverages the circularity of recycling technology; the intervention promotes entrepreneurial advantages through MSME and cooperative business propagation which is largely being supported through several government schemes and start-up supports. With the potential growth in the service delivery sector, the material has the advantage of accessing a demand-driven market that is core to any sustainable economic growth. The project in this phase has engaged over 500 beneficiaries, mainstreaming them through skill training and organizing the functions of manufacturing and supply to cater to the domestic market, in the forthcoming days the efforts are to bring each of the artisan beneficiaries under the Producers organization. The Packaging Industry in India is expected to register a Compound Annual Growth Rate of approximately 26.7% during the period (2021-2026). Positive Style project with ResolveT2C is committed to Sustainable development with green recycling art for the community.





Activity milestones and outcomes and impact

Sl. No.	Activity details	Outcomes	Impact
1.	The socio-economic survey on the range of workers at the grassroots level involved in micro-packaging catering to the local markets, and to initiate a study on that after the COVID-19 pandemic. And how Indian manufacturers evolving to keep up with transport, and consumer goods, including e-commerce and retail packaging.	<p>The survey not only gives baseline data but also provides a platform for the community to share views, and is ice-breaking with beneficiaries in a way.</p> <p>Under the purview of the project, 300 women slum dwellers and informal waste workers were interviewed via survey. And 50 manufacturers and entrepreneurs were interviewed, to understand the acceptance of eco-friendly packaging in the consumer market.</p>	<p>About 87% of unemployed poor women, dwelling in Kolkata slums near East Kolkata Wetlands and Dhapa waste dumps, expressed that they are eager to learn new skills and get employed. About 55% said, that many times as daily wage workers they are exploited, harassed, and feel uncomfortable at work. 95% said, that as cooking fuel prices are very high and thus, they are compelled to scavenge waste in landfills to collect scraps, wood, and plastics, mainly used to cook food. 97% are adversely impacted by the pandemic and are looking for work opportunities and are ready to learn new skills.</p> <p>The manufacturers and shopkeepers, restaurant owners, expressed that sustainable packaging is important for the environment, and also for food packaging, single-use plastic is more used, also easily available. 87% of entrepreneurs, expressed that if sustainable packing products are available readily and prices are low, single-use plastic can be reduced.</p>
2.	The promotional campaigns for consumer awareness remain important and the activity under the project entails increased penetration through exhibitions, awareness campaigns on media platforms towards building new consumer behavior patterns,	Under the pur view of the project, SAFE initiated a partnership with the Indian Institute of Packaging, IIP, and has conducted in a total of over 63 campaigns and sessions through exhibitions both at private and government levels platforms. Recently, the project was	<p>Over 15000 citizens, including academicians, scientists, researchers, corporates, govt. offices, institutes, and schools reached through this sustainable lifestyle awareness campaign.</p> <p>During the climate carnival festivals in corporates, there was a high demand for eco-friendly handcrafts and utility products. The project supports the micro-enterprise development in recycled handcrafts and</p>

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		showcased in Amrit Mahotsav, by Govt. of India, promoting sustainable case studies.	sustainable packaging could fetch a business of INR 3.5 lakhs by December 2023. The revenue returns financially strengthen the enterprise in gaining near -future stability and sustainability.
3.	To transfer the technology to develop local enterprises involving the marginal unemployed and provide skill development training to enhance capacities at the grass-root level.	With collaborative efforts and by hiring experts in the field, innovations with user-friendly technology were developed to manufacture a wide range of eco-utility and green packaging products. Consecutive 20 training sessions helped in building capacities of 150 women, now directly involved in steps of manufacturing.	<p>The technology and usage through skill training have helped in increasing the capacity of production.</p> <p>The procurement of machines under project support, specially customized for women artisans to work and carry out the production, helped in increasing the capacity of handmade paper, and biodegradable plant pots, as replacements for plastic grow bags, is now under certification from the Indian Institute of Packaging.</p> <p>The enhanced capacity of women artisans delivers high-quality products and has attained higher acceptability, in the market.</p>
4.	To develop further innovation and diversification through eco-safe alternative materials in the packaging segment catering to the need and growing demand of domestic suppliers, and manufacturers, through the scale of the local enterprises.	<p>The production units now have the capacity to produce 1000 handmade paper per day, A3 size, by recycling waste materials like waste paper, waste textiles, and plant fibers.</p> <p>The recycling production units have diversified in the usage of different waste materials to bring a varied range of sustainable lifestyle products branded as 'Positive style'. As the initiative has a huge positive impact on the environment.</p>	<p>The innovation and diversification included; the heavy inclusion of:</p> <ul style="list-style-type: none"> a) Vegetables and fruit peel, potato, gourd, brinjals, and banana peel etc, also tea, and coffee residue waste are used as an ingredient mixed with natural fibers to manufacture handmade paper up to 300 GSM. b) Water hyacinth; A plant weed that grows in excess and is usually thrown or burnt; the stem of hyacinth is a spongy natural fiber, that is used in making a wide range of products. Also, the spongy stem if processed effectively can be a substitute for (Polystyrene). c) Jute is an excellent substitute for plastic bags

Sl. No.	Activity details	Outcomes	Impact
			and is washable to reuse over and over again for shopping and carrying materials.
5.	With the range of marketing of recycled handicrafts, the community-based enterprise will diversify into the alternate green packaging segment, creating job opportunities during the pandemic situation.	The community-based micro-enterprise is merging eco-friendly solutions to municipal solid waste management bringing green packaging solutions; that have, directly and indirectly, created alternate job opportunities for over 300 women and youth, in areas of Ghuni, Dhapa slums, Mollarbheri in Kolkata.	The project in itself is gaining momentum to develop into a well-established enterprise; thanks to the support of PwCSDC, beneficiaries, and a dedicated team, to make a vision into a reality. Every ton of waste recycled paper produced can help save 20 trees, considering the amount of paper used worldwide. The resultant paper made from waste can be treated like normal paper. In the project period, in every step from training, to production and marketing, the production is ready with the delivery of 12 range of new eco-friendly packaging solutions.
6.	To develop alternate packaging solutions segment-wise: a) Jute Grocery carry bags, b) Reusable, recyclable shopping bags, c) waste paper recycled packaging boxes, d) handmade gift-wrapping papers, e) recycled fiber material cardboards, boxes, f) plant pots made of all biodegradable materials and much other range to cater to at least 25 % of consumer goods.	In fact, in several consumer items, plastic packaging can be replaced by handmade paper and other biodegradable fiber-based packaging materials. Also, for plant packaging and transportation, millions of plastic grow bags are thrown as waste, instead biodegradable pots can replace tons of this single-use plastic.	With greater levels of outreach under this initiative, there is an increased number of corporate houses, donating waste to the community-based micro-enterprise entitled as ResolveTrash2Cash, the urban climate initiative of SAFE, resulting in the handling of an average of 15000-20000 kg waste per month. The resultant by-products are sustainable packaging utility items like, chocolate boxes, gift boxes, shopping bags, carrying bags, heavy boxes, incense sticks, and soap, wine bottles eco-packaging solutions.
7.	To develop a Producers Organization, with skilled artisans and workers for mainstreaming them into the entrepreneurship journey.	In total, the women trained and working in the processes of recycling art and sustainable packaging are organized into the formation of self-help groups. The SHG is currently in the	The self-help group, when combined with a purposeful entrepreneurship-oriented revenue-based model, has an immense social and economic impact. It strengthens social cohesiveness and empowers women with confidence, and creates a bonding that one stands

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		<p>process of bank-linkage of 300 women and youth in the coming days and shall formalize the groups as a Producers organization.</p>	<p>for each other's crises and problems. Also on the economic front, they can save INR 500.00 per month in the self-maintained group account, say for example if 12 members in a group are saving INR 500 each then, they are able to save INR 6000.00 per month, annually they are able to save INR 72000.00 helping in internal lending, in times of crisis, with a nominal interest fee of 2-3% only.</p> <p>The target by (March) 2024 is to bring 500 women into a producer's organization group, and the bank linkages can strengthen the group with their self-savings annually of up to INR 30 lakhs. This process building can take up to 1-2 years, considering the beneficiaries are marginal poor. Any member can withdraw their savings amount at any time; however, this will be regulated by the women group themselves, and SAFE will be working as catalytic support and monitoring organization in the journey of entrepreneurship and formalizing the SHGs as producers' organizations.</p>
8.	<p>In this phase formalizing the training workshops with National Skill Development Corporation, N.S.D.C, to further converge resources in terms of creating more employment opportunities for the marginal poor.</p>	<p>The NSDC schemes support skill training, through various organizations, like NABARD, IIP, etc.</p>	<p>The project initiative has received in-kind support from NABARD, by getting opportunities to participate in government-level fairs and exhibitions. The NSDC office has expressed support, however for the micro-enterprise to become a certified training enterprise, it's a long process and may take 5 years. The preparation has started already, and we shall proceed as per the NSDC guidance.</p>
9.	<p>Employee Programs, Volunteer through brainstorming workshops, involving community members for learning to understand consumers' preferences, further</p>	<p>SAFE organized virtual sessions for employees, and there was an overwhelming response from participants, on understanding in depth</p>	<p>The employee volunteers contributed with important advice, like framing a cost-benefit analysis, then financial management of the enterprise. Also knowing the correct mechanisms of how to price a</p>

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	organizing workshops with school and college students, on eco-safe packaging awareness.	the processes of recycling and the range of products. Also, at an exhibition of the products in the month of April at the PwCSDC Kolkata office, the products were highly appreciated by the employees.	product. The data documentation is currently carried out by the SAFE project implementing team and needs further guidance from PwCSDC for structuring the same. In the span of 4-5 hours of exhibition time, at PwCSDC office, a sale of INR 4800.00, reflects the potential of the products and also the growing trend of lifestyle preference of eco-friendly utility products.



Challenges if any:

Overall, the initiative requires increased resource support in building a high level of infrastructure as it can recycle a greater volume of municipal solid waste; producing a wide range of by-products giving new life to waste. This eventually will create jobs, and a spin-off will prevent tons of waste from reaching landfills and polluting the environment.



Emission Calculation:

Assumption:

123MT releases 117.5 MT

1MT releases 117.5 / 123 MT

Conversion factor = 0.96 CO₂ eqv.

Calculation:

Total average MSW recycled per month = 17500 kg

Total / Year – 17500 X 12 = 210000 Kg

Total emission abated / year = 0.96 X 210000 kg = 201600 kg CO₂ equivalent.

Reference:

U.S. Environmental Protection Agency (EPA); Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2015, EPA 430-P-17-001, Washington, D.C (2017)

<https://www.sciencedirect.com/science/article/pii/S0959652617317316#bib29>

CASE STUDIES



Name: Saraswati Mondal
Age : 35

She is working in the water hyacinth unit preparing baskets and recycling unit making recycled handicraft products and paper recycling products. Previously she was a housewife now her work efficiency is 30 handwoven hyacinth products per day. For this project, she is earning and helping with the education of her 2 children and is able to support her family as well. She also invested her earnings to make their own house. She is disciplined and committed to her work and is now a proud master artisan, inspiring several other marginal unemployed women in her locality.



Name: Ganga Mallo
Age : 30

She is working in the waste paper recycling unit preparing handicraft products and waste paper recycling products. Previously, for a brief period, she worked in a spice factory, where she faced a lot of harassment and exploitation, and she left the job, then she came to know about the skill training programs at the SAFE recycling workshop, where she joined and went through a rigorous training regime, and finally, with her merit, she qualified to work as a full-time artisan at the micro-small enterprise specialized in sustainable lifestyle products, supported under the project, Positive style, by PwCSDC, implemented by SAFE.



Name: Jaya Mondal
Age : 44

Currently, she is also working as a master artisan for our new unit which makes biodegradable tubs and also helps other artisans to improve their work skills. Previously she was a housewife now her work efficiency is 35 to 40 products per day. Now she is a financially independent woman, and with her earnings, she could support the expenses of the marriage of her elder daughter marriage, and she also spends most of her earnings to support younger daughter's education.

CASE STUDIES



Name: Suchita Das
Age : 38

A resident of the Chainavi area, behind Dhapa waste duma p, she was a housewife, facing a financial crisis, then she joined the workshop after training and now is working in the water hyacinth unit preparing baskets, making recycled handicraft products, and paper recycling products. She is also a Master artisan of weaving hyacinth products and helps to train the artisan, particularly in weaving. Now her work efficiency is manufacturing 30 to 40 products per day. Now she is a self-independent woman. Initially, her family members were skeptical about her coming to the recycling unit for work, however, with her dedication to work, finally, she was supported by the family and she is a proud artisan now.



Name: Madhu Nayak
Age : 37

She is working in the textile waste recycling unit and is a master artisan in stitching and embroidery, she is deaf and dumb by birth, and after the sudden death of her father, she suffered severe depression, and she and her mother were facing a terrible financial crisis. One day, knowing that training workshops are organized, her mother brought her to the session, where she started learning new skills. The master trainer was impressed by her dedication to work and intelligence, she is very creative, and apart from working in the textile waste recycling unit, she also likes to assist the working team in making a new range of handmade paper and she enjoys working at the workshop a lot. Her earnings help her old mother run the household expenses.



[All artisans as mentioned are earning 6800-8000) per month for now.]



Handmade paper making unit from recycled waste paper.



Biodegradable grow bags from plant waste, cow dung and compost materials, to replace plastic grow bags.



Water Hyacinth
Products
Making Unit



Textile waste recycling unit to make a range of utility products.





Ongoing training at the recycling units at Chainavi, and manufacturing of recycled handcrafted products.





Sustainable packaging solutions



PRODUCTS



Handmade paper and waste paper recycled products.





Water hyacinth recycled products, along with Eco-friendly packaging solutions.





Textile products mainly jute, canvas and discarded clothes.





NABARD officials gifting the Honourable Chief Minister, West Bengal , a ‘Positive style’ project supported handwoven water hyacinth storage basket.



The Honourable Tim Watts, Assistant Minister for Foreign Affairs, appreciates the community- based recycling program by SAFE. At a meeting with Amrita Chatterjee, Trustee, SAFE.



At Resolve T2C MSME, unit, ongoing Positive style project visit by the Hon. Consul General, Rowan Ainsworth, Australian Embassy Kolkata.



Australian High Commissioner, in India, Barry O' Farrell, Consul General, Rowan Ainsworth, with Dr. Dipayan Dey, Chair and Founder Trustee, SAFE, and Amrita Chatterjee, Trustee, SAFE at recycling workshop along with artisans.



India G20 summit, Resolve T2C climate initiative of SAFE , presented Positive Style project, on 29th April, 2023.

Organization	Topic
Keynote: Dr Basistha Director at the Department of Science & Technology and Climate Change, Govt. of Sikkim	NECTAR
WOTR (Watershed Organisation Trust)	Climate-SDGs Integration Project: Supporting the Implementation of the Paris Agreement and the 2030 Agenda through Ecosystem-based Adaptation
TERRE Policy Centre	Community-based ecological restoration of degraded forests for sustainable livelihood development in the biodiversity hotspot of the Western Ghats in India.
Sacred Earth Trust	Protecting Sacred Groves in India
Dharmalife Foundation	The Jaya Alliance – The Green Weave Programme
Association Syndicale Libre de l'Ecohomeau du Plessis	The Plessis Eco Village
Sahyadri Foundation	Aastha Beggars Homeless Rehabilitation Shelter, Nagpur
Auroville Design Consultants	Humanscapes Habitat – Youth Housing Program
Bunko Junko	An eco-friendly initiative by Upcycling textile for Promoting Green Recovery For Jobs, Income and Sustainable Growth
Maanushi Foundation	Maanushi for Earth
Resolve Trash2Cash	Sustainable Management of Waste
POP (Protect Our Planet) Movement	POP Country-based Initiatives
Industree Foundation	Nurturing The Next Regenerative Economy
SARVATHOBHADRAM	Sarvathobhadram-Organic Initiative: Cooperative Model for Resilient Agriculture by Adopting System of Rice Intensification.
SUVARNA, All India Women's Conference, KOZHIKODE Branch, Kerala	Safe Veggies – a Capacity Building initiative in organic farming for Women
Saukhyam Pads	Reimagining menstrual health through sustainable methods



One day Capacity Building Training Program on “Packaging for Export of Food & Handicraft Product of West Bengal” organized by Indian Institute of Packaging, Kolkata Centre & Sponsored by Department of Commerce.



Received Certificate of Participation from Indian Institute of Packaging.



Ongoing fair and Exhibition at Corporate office and Mela Ground.



Ongoing fair and Exhibition at Corporate office and Mela Ground.

*Thank you
for your support*



Registered Civil society Organization for Sustainable Development & Poverty Alleviation
In Consultative Status with ECOSOC and major stakeholder in UNEA.

www.safeinch.org



RT2C is community-based registered micro-enterprise in the 'Art of Recycling' towards the promotion of sustainable consumption and community entrepreneurship, an urban initiative of South Asian Forum for Environment, SAFE,

