Innovative Solar Cooker Using Discarded Tyres: A Sustainable Entrepreneurship and Technology Solution Made by Jugaad

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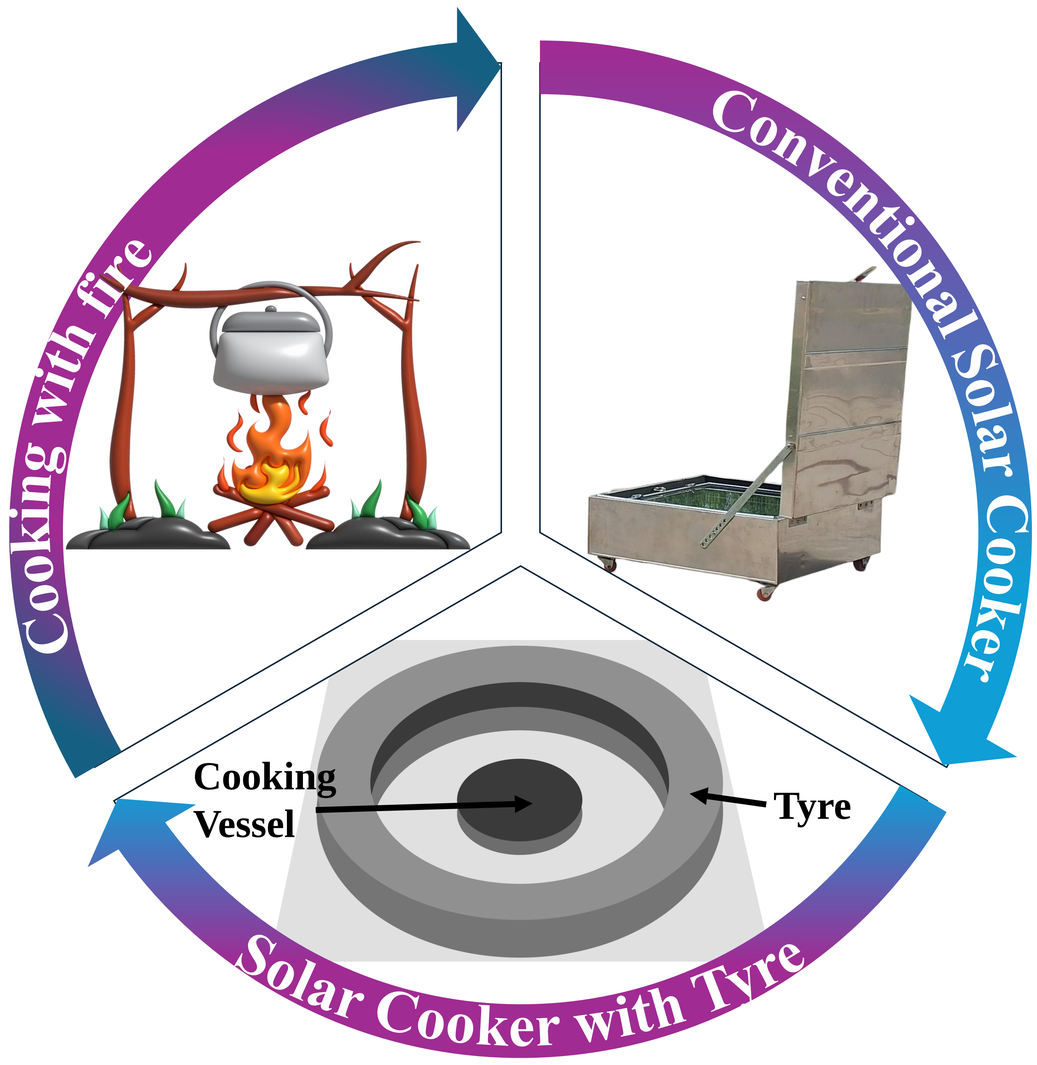

Objective: **Promote affordable, sustainable solar cooking solutions using repurposed materials**

Introduction

- **Empowering Communities with Affordable Solar Cookers:** Harnessing discarded materials like tyres to create low-cost, sustainable cooking solutions for rural and semi-urban households, reducing dependence on LPG and biomass fuels.
- Promoting clean energy through local production and job creation, while using waste materials to reduce emissions and drive innovation.

Conclusion

- Solar cookers provide affordable, clean energy solutions for BoP communities.
- Repurposing discarded tyres promotes environmental sustainability and waste reduction.
- The initiative fosters local entrepreneurship, job creation, and economic empowerment.
- Reduced dependence on LPG and biomass fuels lowers emissions and health risks.
- Collaboration with NGOs, government agencies, and community networks ensures scalability.

Future Work

- Product Innovation: Enhance the design of solar cookers for improved efficiency and durability using advanced materials.
- Expansion of Distribution: Scale operations to reach more rural and semi-urban regions through partnerships with local cooperatives and entrepreneurs.

Business Model Canvas

Designed for:	Designed by:	Date:
Solar Cooker	**Dr. Sanyka Banerjee**	March 17, 2025

Key Partners

- Local automobile workshops for sourcing discarded tyres.
- NGOs and social enterprises promoting clean energy solutions.
- Government agencies providing subsidies and policy support.
- Micro-financing institutions for enabling affordability.
- Academic institutions for research and innovation.

Key Activities

- Designing and manufacturing affordable solar cookers.
- Sourcing and repurposing discarded tyres and other materials.
- Establishing a distribution network with local entrepreneurs.
- Conducting awareness campaigns and training programs.
- Engaging with policymakers to promote adoption.

Key Resources

- Discarded tyres and low-cost solar-capturing materials.
- Technical expertise in solar cooking and thermal insulation.
- Financial support from micro-financing institutions and government subsidies.
- Network of local entrepreneurs for manufacturing and sales.
- Digital and offline marketing infrastructure for outreach.

Value Propositions

- Affordable and sustainable cooking solutions for BoP communities.
- Utilization of waste materials, promoting environmental sustainability.
- Reduced dependence on LPG and biomass fuels, lowering emissions.
- Job creation and economic empowerment through local production.
- Easy-to-use, low-maintenance, and durable solar cooker design.

Customer Relationships

- Community-driven approach through training and education.
- After-sales service and support for maintenance.
- Partnership with NGOs for continued engagement and outreach.
- Trust-building through pilot projects and demonstrations.

Channels

- Local retail shops and self-help groups.
- Partnerships with NGOs and government welfare schemes.
- Social media and grassroots marketing campaigns.
- Door-to-door sales by local micro-entrepreneurs.
- Community fairs and clean energy awareness programs.

Customer Segments

- Rural and semi-urban BoP households.
- NGOs and government programs focused on clean cooking solutions.
- Social enterprises and micro-entrepreneurs interested in manufacturing and distribution.
- Community cooperatives promoting self-reliant energy solutions.

Cost Structure

- Low-cost raw materials (discarded tyres, aluminum foil, glass/acrylic sheets).
- Labor and manufacturing costs for local production.
- Distribution and marketing expenses through community networks.
- Research and development for product enhancement.
- Training and capacity-building programs for entrepreneurs.

Revenue Streams

- Direct sales through community cooperatives and self-help groups.
- Revenue from micro-entrepreneurs involved in assembly and sales.
- Partnerships with NGOs and government agencies providing bulk orders.
- Training programs for local entrepreneurs on solar cooker assembly and maintenance.
- Licensing and collaboration opportunities with clean energy organizations.