



## PROGRAMME BRIEF



# WOMEN'S ENTREPRENEURSHIP FOR SUSTAINABLE ENERGY | DRIVING WOMEN'S ACCESS, LEADERSHIP AND INFLUENCE IN CLEAN ENERGY TECHNOLOGY IN INDIA

Photo: (L-R) Laxmi Pangi, Padma Patra, Gormani Nayak, Samri Masti are indigenous women from Luhaba Village, Koraput, Odisha, and are engaged in solar-powered food processing. Photo Credit: Narayan Manjhi

*Women's Entrepreneurship for Sustainable Energy programme facilitates women's access to clean energy as consumers, as well as producers, distributors and stakeholders in the energy value chains. The programme works to mitigate gender stereotypes and barriers that women in India face as entrepreneurs and consumers of clean energy.*

Access to clean energy has multigenerational impact around the world. In rural India, women and girls walk for miles to collect fuel, wood and water. Accessing traditional fuels not only takes up time, but the lack of clean energy also has fatal consequences. Close to 4 million people<sup>1</sup> – mainly women and children – die prematurely every year from household air pollution caused by using traditional fuels. Conversely, improved and clean energy access leads to significant increase in rural girls' enrolment in school and opens entrepreneurial opportunities for women. In many parts of the developing world, including India, women are largely absent in the clean energy workforce, value chains and decision-making.

Since 2017, the Women's Entrepreneurship for Sustainable Energy programme has delivered impact by investing in technology that is most responsive to the energy needs of women and has potential for women's energy entrepreneurship, such as solar rooftop solutions and solar dryers. The programme builds leadership and entrepreneurial skills of women through training sessions where they learn to operate, maintain and manage solar rooftop systems and solar dryers that can be used to produce and market dehydrated food products that generate more income.

UN Women also works to integrate gender perspectives in clean energy policies. As part of the task force created by Madhya Pradesh Urja Vikas Nigam (the Department of Renewable Energy) on renewable energy-based cooking solutions, UN Women provided recommendations on integrating women's energy needs in the design and upgrading of clean energy products.

## PARTNERS FOR CHANGE

UN Women and Madhya Pradesh Urja Vikas Nigam (Department of Renewable Energy) co-financed the pilot programme to bring clean renewable energy to the Anganwadi centres in Madhya Pradesh. UN Women contributed **INR 62,59,558 (USD 84,000 approximately)** from its core resources, while Madhya Pradesh Urja Vikas Nigam contributed **INR 3,78,000 (USD 5,000 approximately)** towards maintenance of the initiative over five years.

UN Women partnered with **S4S Technologies, PRADAN and Chaitanya Foundation** to implement the solar energy dehydration project, with an investment of **INR 70,19,000 (USD 95,000 approximately)** from its core resources.

<sup>1</sup>WHO. 8 May 2018. Key Facts: Household air pollution and health. Accessed on 8 September, 2021 at <https://www.who.int/news-room/fact-sheets/detail/household-air-pollution-and-health>

## SMART ANGANWADI CENTRES

In 2017, UN Women partnered with the Government of Madhya Pradesh to bring solar energy to women-run and managed *Anganwadi* centres that are community centres providing basic health services, education and nutrition to underprivileged children and mothers. The pilot installed decentralized solar energy stems at 63 centres in Alirajpur and Burhanpur districts so that they had electricity for lighting and cooling, as well as mobile and computer charging facilities for the first time. As a result, more children started attending classes, stayed longer, and could access technology-based learning.

The initiative also trained women *Anganwadi* workers in the management and maintenance of the installed solar energy systems. The centres are now better equipped to provide technology-enabled spaces that are well-lit and safe to use for women's self-help groups to meet, learn vocational skills and participate in income-generating projects. The Department of Women and Child Development in Madhya Pradesh replicated the initiative in additional *Bal Shiksha Kendras* (early childhood care and education centres) across the state once they saw the impact that solar energy brought to women's lives.

## PROMOTING WOMEN'S ENTREPRENEURSHIP THROUGH SOLAR DRYING



*Photo: Dhurpadaa Shevare is a seasonal farm worker in Vadala-Vadali village in Jalgaon, Maharashtra. With the solar dryer installed, she learned to dry ginger and onion, staples in Indian cuisine. Today, she earns an additional income of INR 5000 per month, which has boosted her family income significantly. "It is so convenient for me to be able to work from home and to not have to visit the farm. I am also able to take care of my entire household expenses myself with the money I earn," she says. Photo credit: Sandeep Patil, S4S Technologies*

Through the programme, S4S Technologies installed 60 solar dryers and trained 60 women who are small-scale farmers from "aspirational districts" in Odisha and Maharashtra to use clean solar-powered dehydration technology to produce and sell dried and processed foods. The programme also assured market access through a "buy back" provision through which S4S Technologies, bought the dehydrated food products from women farmers. Women entrepreneurs who benefited from this

initiative have reported up to a 250 per cent increase in their daily income since November 2020. The aspirational districts are designated by the Government of India as vulnerable and marginalized communities with high poverty pockets, in need of targeted support. By improving access to clean energy and income of women in the aspirational districts, UN Women delivers on the promise of "leaving no one behind" as part of the 2030 Agenda for Sustainable Development.

## RESULTS AT A GLANCE

UN Women's clean energy project in India has achieved the following results:

- Installed decentralized solar energy system at **63 off-grid Anganwadi centres** in Madhya Pradesh to provide electricity. This resulted in **increased numbers of children enrolling and staying** for education, nutrition and health services.
- Installed **60 solar dehydration units in two aspirational districts** in Odisha and Maharashtra to boost small-scale women farmers' skills and income. At least **60 agri-entrepreneurs** have reported up to a **250 per cent increase in their daily income**.
- Trained **185 women** to access and manage solar rooftop systems, enhancing their skills, leadership and access to renewal energy.
- **Improved skills, leadership and market access for women entrepreneurs** through ensured buy back of solar dried products by S4S Technologies, a programme partner who distributes and markets them to hotels and retailers across India and internationally.
- **Increased family nutrition security** through women's improved access to better income and dehydrated food products for year-round consumption.

## JOIN US

Partner with UN Women to strengthen women's inclusion in India's clean energy policies and value chains. Deliver high-impact, sustainable and scalable results aligned with the national goals towards renewable energy. Contact [Suhela.khan@unwomen.org](mailto:Suhela.khan@unwomen.org) for more information.

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