

United Nations Commission on the Status of Women
Fifty-fifth session
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New York

INTERACTIVE EXPERT PANEL

**Key policy initiatives and capacity-building on gender
mainstreaming: focus on science and technology**

**WOMEN BAREFOOT SOLAR ENGINEERS
A COMMUNITY SOLUTION***

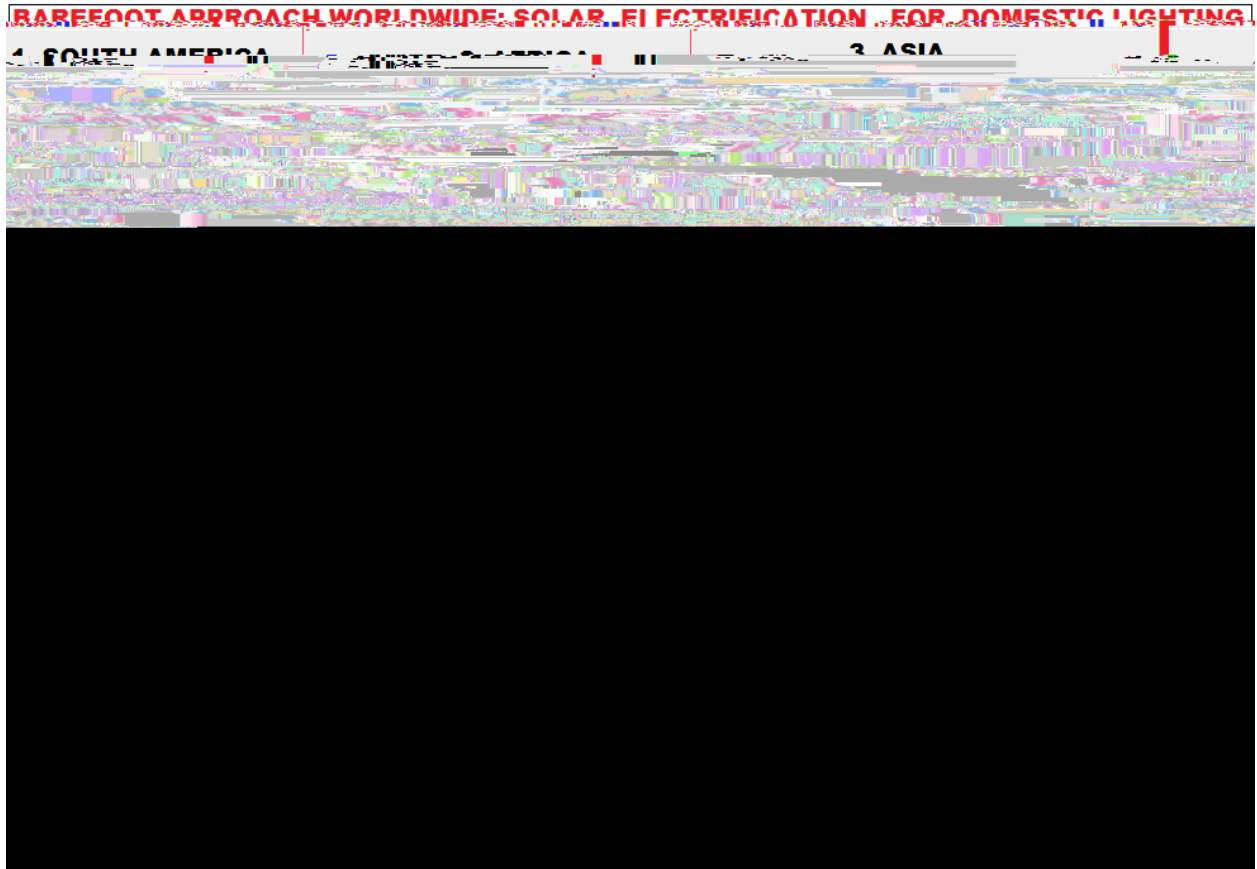
by

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*The views expressed in this paper are those of the author and do not necessarily represent those of the United Nations.

A Pressing Need for Affordable Clean Energy in Developing Countries

A rural family in Africa burns around 60 liters



A Proven Model for Self-Sustaining Community Development

The Barefoot Approach was designed to demonstrate the first technically and financially self-sufficient, solar electrified rural villages in Afghanistan, Bhutan and Africa.

The target constituency has been the rural poor families living on less than \$1 per day in rural communities where the women spend hours fetching wood or kerosene, or rely on candles and flashlight batteries for lighting at very high costs. After food, the highest family expenditure is on lighting.

By training an illiterate rural grandmother to be a fully competent solar engineer there is no need for an urban, paper-qualified solar engineer and eliminates the dependency of rural communities on urban experts.

By getting the communities to pay every month for the use of the solar units (thus reaching the very poorest of the poor who cannot afford to buy these systems even in installments), the financial commitment is assured for the purchase of replacement components and payment of the monthly salary of the woman solar engineer. This salary provides the incentive for the woman solar engineer to work and look after the units regularly or she will not receive her monthly salary.

Each household agrees to pay a fee between \$5 to \$10 a month for the solar lighting, roughly what they used to spend on kerosene, candles and flashlight batteries.

A Scalable Solution for Solar Electrification Across Africa

This Barefoot model for implementation of community-owned and managed systems has resulted in solar electrification benefiting nearly 190,000 people in over 750 communities in 16 states in India and is being replicated in 24 other countries in Africa, Latin America and South Asia.

The Barefoot Approach leverages local community contribution and participation with public and private sector investment and financing. Working in partnership with the local community, the Barefoot Approach draws on a mix of resources including government and international funding agencies, private foundations, and corporate and individual sponsors to enable the appropriate investment for cost-effective and self-sustaining solutions for delivering solar power in poor, rural communities.

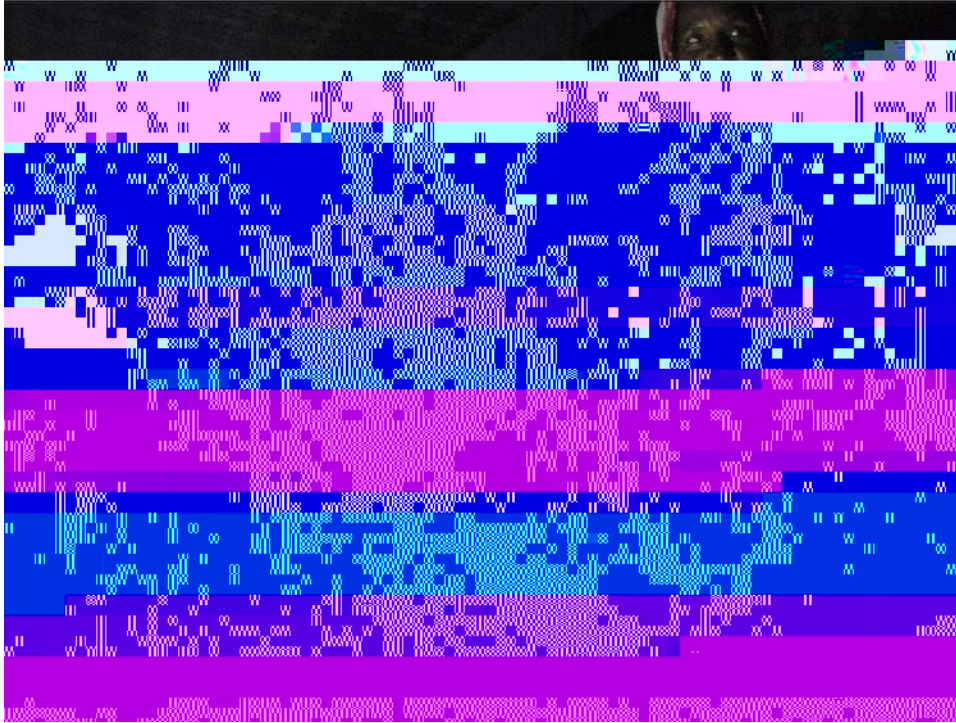
The Government of India is funding the air travel and training costs of the African women being trained by the College in Tilonia.

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Decentralizing and Demystifying Technology

Very ordinary people written off by society because they are labeled as poor, primitive and backward are doing extraordinary things that defy common expectations. What the Barefoot College has effectively demonstrated is how the combination of traditional knowledge (barefoot) and demystified modern skills can bring lasting impact and fundamental change when the tools are created and controlled by those who are using them.

That is why a change in work style and mindset is required to provide clean, inexpensive, pollution-free light to the poor around the world.



*Solar lanterns
fabricated by*