

# wPOWER HUB

REPORT 2013-14



Promoting Women's Critical Role in Clean Energy Solutions to *Climate Change*



A partnership with the U.S. Department of State

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*Recognizing that sustainable development, democracy and peace are indivisible is an idea whose time has come.*

*~Prof. Wangari Maathai*

”

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# ABOUT WANGARI MAATHAI INSTITUTE

“  
We need to promote  
development that  
does not destroy our  
environment.  
~Prof. Wangari Maathai”



Prof. Wangari Maathai

Wangari Maathai Institute for Peace and Environmental Studies (WMI), located at the University of Nairobi, (UON) College of Agriculture and Veterinary Sciences is a center of excellence in experiential learning and environmental governance and was established in recognition of the experiences of the late Prof. Wangari Maathai who felt the need for a pioneering academic institute in Africa that trains and researches issues of environmental governance and its linkages with democracy and human rights.

Thanks to the support of Prof. George Magoha former Vice Chancellor, University of Nairobi and Prof. Agnes W. Mwang'ombe, Principal College of Agriculture and Veterinary Sciences (CAVS), and the continued support of the current vice Chancellor, Prof. Peter Mbithi, the institute is well on its way to being a center of excellence in experiential learning - an approach that bridges the gap between knowledge and practice.

WMI is uniquely placed to host the wPOWER Hub due to its close link to the Green Belt Movement (GBM), a nearly 40 year-old grassroots conservation organization working mainly with grassroots women to empower them to transform their lives by engaging in environmental, social and civic activities. The experience, community goodwill and extensive countrywide grassroots network GBM has built over the years has served to inform the development of the Hub and provide a strong platform on which to expand and facilitate access to clean energy technologies and other Hub activities.

In addition, WMI is an Institute of the University of Nairobi, and as such is well supported by

academic members of staff and the Government of Kenya. Supporting the building and strengthening of markets (demand and supply) for small-scale clean technologies through linking women to economic opportunities and capacity building on energy access has resulted in greater adoption of clean energy technologies and an increase in the number of women involved in the development and distribution of these technologies internationally.

The Institute also collaborates with a number of international Institutions including United Nations Environment Program, the University of Copenhagen, the U.S. Department of State, the Energy Resource Institute, and the University of Tokyo. Thanks to the Kenyan Government, the Wangari Maathai Institute will soon have its own campus.

Architectural Impression of the Wangari Maathai Institute





# LETTER FROM DIRECTOR & ACADEMIC DIRECTOR

Dear Friends,

We are delighted to present to you the wPOWER Hub's 2014 Annual Report. It has been an energizing year for the Hub as we continued to structure and scale up the Hub to build the evidence base on women's leadership in clean energy entrepreneurship and climate change.

We all know that the global demand for clean energy is growing at an exponential rate. Today, more than 1.3 billion people lack access to electricity, 98% of rural households use firewood for cooking and kerosene for lighting. While not the primary source of climate pollution, inefficient lighting and cooking contribute negatively to climate change, personal health and the degradation of natural resources. In off-grid communities, women are the primary users of clean technologies like solar lamps and clean cook stoves and are at the forefront of adopting the use of new technologies. We are proud of the strides we made this year in working to unlock this largely untapped potential of women and women's groups.



**Wanjira Mathai**  
Director, wPOWER Hub



**Kiama Gitahi**  
Academic Director, wPOWER Hub

In this report you will read the successes we have had in setting up the wPOWER Hub, recruiting staff, developing a holistic curriculum in clean energy technologies and entrepreneurship and the hosting of a Training of Trainers (TOT) course in Nairobi, the clean energy technology exhibition and the exciting and inspiring India-Africa exchange visits.

The growth of the Hub in this first year has been inspiring. We look to 2015 with renewed confidence and buoyed by the centrality of the clean energy discourse globally today. The role of the wPOWER Hub remains ever so critical and we are committed to ensuring that 2015 is even more enriching for our partners.

We welcome you to celebrate with us as you read through the pages of the 2014 Annual report. Thank you for your continued commitment and interest in the work of the wPOWER Hub. We hope the pages of this report will inspire you.

# THE wPOWER HUB AND RESOURCE CENTER

The U.S. Department of State launched the Partnership on Women's Entrepreneurship in Renewables ("wPOWER") in January 2013. The wPOWER project aims to empower more than 8,000 women clean energy entrepreneurs across East Africa, Nigeria and India to deliver clean energy access to more than 3.5 million people over the next three years.

To reach this goal, the U.S. Department of State has teamed up with Green Belt Movement International (GBMI-US), to create and scale up a wPOWER Hub at the Wangari Maathai Institute for Peace and Environmental Studies (WMI). The Hub will work together with the Green Belt Movement, the MacArthur Foundation, the Global Alliance for Clean Cookstoves, CARE International, Solar Sister, Women for Women

International and the Swayam Shikshan Prayog (SSP) India, to empower women clean energy entrepreneurs across wPOWER geographic focus areas.

The wPOWER Hub will build the evidence base on women, energy access and climate solutions; hold ToT workshops; facilitate African and Indian women entrepreneur and leadership exchanges to build a network of women climate leaders, and build public awareness.

This has been enriched over time by the main output components of the wPOWER Hub mainly;

- Development of the Hub and a Resource Centre.
- Curriculum Development.
- Targeted training reviews, exchanges and partnerships on clean energy and entrepreneurship.

## The wPOWER HUB Team

**Director** | Wanjira Mathai

**Academic Director** | Kiama Gitahi

**Project Officer** | Simon Kiragu

**Communications Officer** | Tindi Sitati

**Project Accountant** | Albert Jesijeri

**Finance Coordinator** | Javan Lewela

**Administrative Assistant 1** | Janet Ndoro

**Administrative Assistant 2** | Lilian Kong'ani



**Simon Kiragu**



**Tindi Sitati**



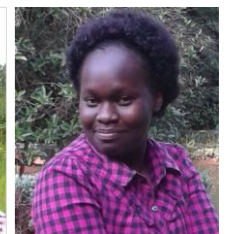
**Albert Jesijeri**



**Javan Lewela**



**Janet Ndoro**



**Lilian Kong'ani**



# GLOBAL ENERGY SCENARIO

## THE BURDEN

GLOBALLY, MORE THAN

**1.3 BILLION PEOPLE**



LACK ACCESS TO ELECTRICITY



MORE THAN

**620 MILLION PEOPLE**



IN SUB-SAHARAN AFRICA ARE WITHOUT ACCESS TO ELECTRICITY.



AT LEAST

**2.7 BILLION PEOPLE**



ARE WITHOUT CLEAN COOKING AND LIGHTING FACILITIES IN THE WORLD.



MORE THAN **50% OF PREMATURE DEATHS AMONG CHILDREN UNDER 5** ARE DUE TO PNEUMONIA CAUSED BY PARTICULATE MATTER (SOOT) INHALED FROM HOUSEHOLD AIR POLLUTION AND

**4 MILLION PREMATURE DEATHS**

ANNUALLY FROM NON COMMUNICABLE DISEASES INCLUDING STROKE, ISCHEMIC HEART DISEASE, CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD) AND LUNG CANCER ARE ATTRIBUTED TO EXPOSURE TO HOUSEHOLD AIR POLLUTION.

RIP

IN SUB SAHARAN AFRICA, MORE THAN

**72%**

OF URBAN AND

**98%**

OF RURAL HOUSEHOLDS USE FUEL WOOD FOR ENERGY AND KEROSENE FOR LIGHTING

## THE OPPORTUNITY

**FUEL SWITCHING (FUELWOOD, CHARCOAL OR PELLETS) AND THE SPREAD OF IMPROVED COOKSTOVES** COULD LEAD TO A DECREASE IN THE NUMBER OF PEOPLE IN SUB-SAHARAN AFRICA WITHOUT ACCESS TO CLEAN COOKING BY

**650 MILLION**

BY 2040 – A

**10%**

DECLINE IN RELATION TO MORE THAN **730 MILLION CURRENTLY**



WITH THE LOW ELECTRIFICATION RATE, **THE COST OF SOLAR IS PROJECTED TO FALL ANOTHER**

**40%**

OVER THE NEXT FOUR TO FIVE YEARS AS **GRID-BASED ELECTRICITY PRICES ARE RISING** ACROSS THE WORLD.

SOLAR POWER COULD PROVIDE UP TO

**27%**

**OF GLOBAL ELECTRICITY BY 2050**, AND BECOME THE LEADING SOURCE OF ELECTRICITY GLOBALLY AS EARLY AS 2040.



**WOMEN ENTREPRENEURS DEMONSTRATE MORE THAN TWICE THE LEVEL OF BUSINESS CAPACITY AND SUCCESS AS COMPARED TO MEN.**

CUSTOMERS THAT PURCHASE A COOKSTOVE FROM A WOMAN WERE MORE LIKELY TO REPORT THAT THEY USED IT ALL OF THE TIME, FELT IT WAS BETTER OVERALL THAN THEIR TRADITIONAL STOVE, WAS VERY SAFE, AND EASY TO USE AS COMPARED TO CUSTOMERS WHO PURCHASED THE COOKSTOVE FROM A MAN.



STRENGTHENING WOMEN'S ECONOMIC EMPOWERMENT OPPORTUNITIES NOT ONLY INCREASES ADOPTION AND SALES, IT CAN HAVE OTHER POSITIVE AND IMPORTANT IMPACTS. STUDIES SHOW THAT

**90%** **WOMEN REINVEST OF THEIR INCOME INTO THEIR FAMILIES AND COMMUNITIES,**

WHILE **30% - 40%** **MEN REINVEST**



# wPOWER HUB ACHIEVEMENTS 2013/2014

## Curriculum Development

In April 2014, the wPOWER Hub developed the **Training of Trainer's (ToT) Course on Sustainable Clean Energy Entrepreneurship.**

This course was aimed at nurturing change agents and equipping them with the skills and tools they need to bring about community transformation in clean energy, environmental stewardship and livelihood improvement.

### Objectives of the Course

- Instill knowledge and values on linkages between sustainability, clean energy, livelihoods, environment, climate change and gender.
- Enhance agency and skills in women-led entrepreneurship in sustainable clean energy markets.
- Develop trainers who can catalyze change, inspire, empower, transform and create champions of sustainable clean energy.
- Equip trainers with knowledge and skills on effective communication and training skills.

### Training of Trainers Course Modules

#### Empowering and Developing Transformative

**Leaders:** Anchors Ms. Njoki Njoroge Njehu (Executive Director, Daughters of Mumbi Network) and Ms. Ayla Schlosser (Executive

Director, Resonate).

This module was designed to inspire and reinforce the transformative and leadership potential of all the participants. This was meant to motivate all the learners to appreciate their role as leaders and community agents of change.

**Sustainable Clean Energy Entrepreneurship:** Dr. Mary Njenga (Post-Doctoral Fellow, Bioenergy/Wood fuel at the World Agroforestry Centre (ICRAF) & Adj. Asst. Professor Dept. of Geography at North Illinois University), Roshan Paul, Ilaina Rabbat & Peter Fella (President, Executive Director and Operations Manager, Amani Institute respectively). This is a technical module and was designed to provide the participants with a clear understanding of the various small-scale, home-based technologies, while also equipping them with the tools and skills they need to establish businesses along the sustainable clean energy value chain. Participants were taught about access to and economic opportunities associated with, markets for some of the most widely used and appropriate small-scale clean technologies like biomass energy, solar lighting and clean cook stoves.

**Environmental Stewardship:** Dr Thenya Thuita (University of Nairobi) and Mrs. Lilian Njehu (Board Member & Food Security Expert, GBM). This was intended to build skills in the areas of environmental governance, climate resilience, forest rehabilitation, the protection of water sources and environmental stewardship. Through field visits to indigenous forests participants

developed a deeper understanding and appreciation for the importance of forests and their intricate linkage to livelihoods and energy.

**Developing and Delivering Content:** Prof. David Mungai (University of Nairobi). This module was motivated by the fact that all the participants were expected to conduct a similar training when they returned to their communities and countries. It was expected that the context of these trainings might differ from community to community in line with the cultural diversity of the participants. As a result, each participant was expected to develop training materials that were relevant to their target community. It is often assumed that after a ToT exercise, trainers know how to deliver the training. This is not always the case. This module was intended to equip the participants with the tools they require to both develop training content and deliver the training.

“  
*We cannot tire or give up. We owe it to the present and future generations of all species to rise up and walk!*  
”  
~Prof. Wangari Maathai







## Training

### Training of Trainers

The first ToT course on sustainable clean energy entrepreneurship was organized by the wPOWER Hub at Wangari Maathai Institute for Peace and Environmental Studies. The training took place at the Green Belt Movement Langata Training center in Kenya.

26 participants drawn from wPOWER Partner organizations - GBM, Care International, Solar Sisters, SSP and Women for Women International - from different countries and regions participated in the Training of Trainers Course.

## Community Exchange Visits

### Community Exchanges/Site Visits:

The ToT participants were taken to field-based sites to experience what they had learnt in the classroom.

**Briquette Making in Mwamko Foundation in Soweto slums:** Mwamko Foundation is a community-based organization that, among other activities, engages women in their local

community in briquette making. The visit offered an opportunity to both witness briquette making and also to hear from the women leaders how they are transforming their own lives through entrepreneurship.

**Energy Entrepreneurship with ESVAK Community Development Initiatives in Kayole:** ESVAK is a community development organization involved in women's empowerment activities. The ToT participants accompanied ESVAK women entrepreneurs as they sold the stoves in their communities and witnessed first hand the opportunities and challenges involved. Founded in August 2001, ESVAK is working in partnership with Envirofit to distribute wood burning cook stoves. Envirofit supplies and trains the women on the value of their clean cook stoves and facilitates them with sales training.

**Thima Pico Micro-Hydroelectric Project in Kirinyaga:** This is a community-led initiative that uses a relatively small river to generate hydroelectric power for 100 households that would otherwise have no access to electricity. This project served as a great inspiration to the participants, many of whom believed hydro-power projects are only viable on a commercial scale.

### Transformative Leadership in Karura Forest & Uhuru Park:

The participants visited Uhuru Park (a 13 ha park in the heart of the city of Nairobi) and the remarkable Karura Forest Reserve, the second largest urban forest in the world fully within a city limits (second only to one in Toronto, Canada). Both green spaces are a shining example of how Prof. Wangari Maathai (Founder of GBM and 2004 Nobel Peace Laureate) demonstrated transformative leadership in safeguarding them for current and future generations. The participants heard about her story and the characteristics that facilitated her spirited and sustained multi-year advocacy campaign to protect the park and forest from unscrupulous politicians. Today, Uhuru Park hosts thousands of Kenyans daily, and Karura Forest is slowly building a reputation that is spreading beyond Kenyan borders. It has become a success story that has inspired other cities and their environmental struggles. School groups and more than 8,000 individuals visit the forest every month.

**Kijabe Environment Volunteers (KENVO):** The participants visited Kijabe Environmental Volunteers (KENVO) which is a Community Based Organization that seeks to ensure that the Kikuyu Escarpment forest (part of the larger Aberdare

forest range) and other natural resources are conserved for biodiversity and to support community livelihoods. KENVO also has a project that involves supporting dairy farmers to install biogas digesters for the production of biogas as an alternative source of renewable cooking energy at the household level.

During this visit, the participants witnessed the production and use of biogas at a household level. The participants, together with the women in the community, received further training on the making of briquettes and the efficient production of charcoal, at the household level, using a simple gasifier. A visit to the Kereita forest was the highlight of this trip during which the participants witnessed directly the benefits of forest conservation by enjoying the beauty of a dense indigenous forest and waterfalls.

**GBM's Bamboo Biomass & Entrepreneurship Project, Murang'a County:** Participants experienced community based agroforestry activities in action in an area supported by GBM. The participants also visited a project in Maragua where GBM is piloting the possibility of using bamboo biomass both as a source of fuel and as a raw material for the production of bamboo products like cooking tools, chairs and other useful implements.



# ADVOCATING FOR CHANGE IN CLEAN ENERGY



Photo courtesy Clinton Foundation

The wPOWER Hub continues to take steps towards increasing public awareness about the work of the Hub and that of its partners to demonstrate the critical role of women in the clean energy value chain.

The wPower Hub Director, Wanjira Mathai and Academic Director Prof Kiama Gitahi, have participated in several high level assemblies which presented excellent opportunities for raising public awareness about wPOWER Hub activities and thereby highlighting the critical role of women in addressing the climate crisis through energy entrepreneurship.

- September 10-11**  
**Women & Girls Rising Conference**  
 Wanjira participated in the Roosevelt Institute's Women & Girls Rising Conference in NY at the Ford Foundation. The gathering brought together policy makers, activists and scholars working on a range of issues relating to the achievement of basic human rights and

development opportunities for women and girls around the world. Wanjira's presentation focused on the role of the historical Women's Conferences in nurturing women's movements around the world. Wanjira highlighted the role of women in the energy access value chain. She noted that when women are directly involved in the value chain: energy access will increase, livelihoods will improve, and environmental degradation will decrease. More specifically, she noted that wPOWER partners believe that

clean energy technologies like solar lamps and clean cookstoves will be adopted in greater numbers as women entrepreneurs market and sell them and use them themselves.

- September 22:**  
**Opening of the Clinton Global Initiative**  
 Wanjira attended the Clinton Global Initiative. There was a strong focus on successful commitments to action with short videos from the field punctuating every panel discussion. The Hub has already shared the Climate Reality Project's "24 Reasons for Hope" video, which highlighted wPOWER partner activities, with the CGI secretariat for their viewing.
- September 22:**  
**Leader's Forum on Women Leading the Way**  
 The Mary Robinson Foundation and UN Women co-hosted the Leaders' Forum on Women Leading the Way: Raising Ambition for Climate Action. The forum was designed to

showcase women's leadership, raise ambition at the national and international levels and share how women are successfully overcoming obstacles to design and implement effective actions on climate change. Present at the forum were current and former heads of government, ministers, scientists, leaders from grassroots, youth, indigenous organizations, civil society and the private sector. Each table was chaired by an eminent personality. Wanjira was invited as one of the Women Leaders from civil society and presented the work the wPOWER Project is doing in East Africa, India and Nigeria at a roundtable chaired by a member of the Elders, HE Graça Machel.



- 24 Reasons for Hope**  
**On September 16 & 17, 2014, The Climate Reality Project** broadcasted the fourth annual live-streaming multimedia show dedicated to sparking action on climate change. The broadcast, dubbed 24 Reasons for Hope, featured both wPOWER and GBM as two of the 24 Reasons for Hope.

Photo courtesy Cookswell Jikos



# MONITORING AND EVALUATION

wPOWER Hub's monitoring and evaluation efforts have vastly expanded since early 2014 through the great support of New Course, the organization contracted to carry out the Hub's Monitoring and Evaluation activities.

New Course has been working with wPOWER Hub and partners to begin building the foundation for the Hub's monitoring and evaluation system. This has involved revising the Project Monitoring Plan for the project to better reflect the realities in the field, and the development of the methodology and tools to be used for monitoring the impact of the project.

New Course has also begun developing a common monitoring protocol with wPOWER partners to ensure that the measures of impact used by each partner, are consistent and aggregated to demonstrate the overall impact of the wPOWER program.

When completed, these components should provide a strong basis for both measuring the impact of the program and generating lessons learned to enhance project implementation and inform similar projects across the globe.

Over the course of the project, the wPOWER Hub at the Wangari Maathai Institute has facilitated for targeted research, to capture key statistics on impact, barriers to success, knowledge and attitudes around clean energy technologies, and the role of women's entrepreneurship in advancing clean energy adoption.





# PARTNER HIGHLIGHTS

“All of us have a God in us, and that God is the spirit that unites all life, everything that is on this planet.”  
~Prof. Wangari Maathai



## The Green Belt Movement (GBM)

wPOWER Hub's partnership with The Green Belt Movement has benefited from GBM's extensive network of 4,000 nationwide community tree nursery groups that are empowering women clean energy entrepreneurs and providing clean energy access to thousands of women.

The Green Belt Movement (GBM) has four main areas of activity— Tree Planting and Watersheds, Climate Change, Mainstream Advocacy, Gender Livelihood and Advocacy.

The Hub has involved GBM community leaders in the training of trainers program, and has trained 5 GBM Trainees during the ToT Course.



## Care International

wPOWER Hub at Wangari Maathai Institute trained 8 Care International trainees during the ToT course on sustainable clean energy entrepreneurship held in July 2014. Two of the trainees were from Care International Rwanda, two from Care International Tanzania and four from Care International Kenya.

The Care International wPOWER project is an

Access Africa program supported by U.S Department of state covering three years from September 2012 and to December 2015. The main goals are reducing carbon emissions and deforestation and improving the economic status of women through increased uptake of clean energy products by rural and peri-urban households.



## SSP India

wPOWER Hub at Wangari Maathai Institute trained 5 Swayam Shikshan Prayog (SSP) trainees during the ToT course on sustainable clean energy entrepreneurship held in July 2014.

Swayam Shikshan Prayog (SSP) is a learning and development organization that brings women and communities from the margin to mainstream by building competencies, collaborative platforms and partnerships.

The wPOWER project at SSP started in 2012 and by July 2014 SSP had reached out to 700 women entrepreneurs and about 4000 community members with clean energy products such clean cook stoves, solar products, biogas and solar water heaters.



## Solar Sister

Solar Sister eradicates energy poverty by empowering women with economic opportunities.

wPOWER Hub at Wangari Maathai Institute trained 6 Solar Sister trainees during the ToT course on sustainable clean energy entrepreneurship held in July 2014. One of the trainees was from the Solar Sister Tanzania, two from Solar Sister Uganda and three from Solar Sister Nigeria.

Solar Sister combines the breakthrough potential of solar and clean cooking technology with a deliberately woman-centered direct sales network to bring light, hope and opportunity to even the most remote communities in rural Africa.



## The Global Alliance for Clean Cook Stoves (GACC)

The Global Alliance for Clean Cookstoves is a public-private partnership that seeks to save lives, improve livelihoods, empower women, and protect the environment by creating a thriving global market for clean and efficient household cooking solutions.

The Alliance is working with the wPOWER Hub to help create awareness of the importance and use of clean cook stoves in developing countries.

## MacArthur Foundation

### MacArthur Foundation

The MacArthur Foundation works to defend human rights and advance global conservation and security.

The Department of State, together with parallel support from the MacArthur Foundation created the wPOWER Hub at the Wangari Maathai Institute.

MacArthur's conservation grantmaking, aims to preserve ecosystems and species and to promote development that respects the environment.



## Women for Women International

wPOWER Hub at Wangari Maathai Institute trained two Women for Women International trainees during the ToT course on sustainable clean energy entrepreneurship held in July 2014.

Women for Women International's main objective is to equip women with skills and resources to move from poverty to a stable society. They will be working in the near future with Solar Sister so as to integrate solar energy product entrepreneurship in their training program.



# FINANCIAL STATEMENT

Statement of Comprehensive Income

Particulars	Year Ended September 30, 2014
<b>Income</b>	<b>(USD)</b>
Federal Grants	241,574
<b>Total Income</b>	<b>241,574</b>
<b>Expenditure</b>	
Personnel Expenses	119,225
Fringe Benefits Expenses	4,646
Travel Expenses	52,464
Supplies	11,533
Contractual Expenses	47,716
Development & Resource Center Expenses	5,733
Other Direct Expenses	257
<b>Total Expenses</b>	<b>241,574</b>
<b>Surplus/(Deficit) for the Year</b>	<b>-</b>

49% Personnel Expenses

2% Fringe Benefits Expenses

22% Travel Expenses

5% Supplies

20% Contractual Expenses

2% Development & Resource Center Expenses

0% Other Direct Expenses

wPOWER Hub  
Expenditures  
Year Ending  
September 2014



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*The generation that destroys the environment is not the generation that pays the price. That is the problem.*

~Prof. Wangari Maathai

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**wPOWER Hub** | Wangari Maathai Institute for Peace and Environmental Studies,  
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All photos: *wPower Hub Archives*