

Side Event: South Asian Eco-Village Solutions in NDCs and Climate Finance -  
Renewable Energy and Organic Farming at  
UNFCCC SB44, Bonn. 16.45 - 18.15, 20 May 2016, Room: Berlin



## ECO VILLAGE DEVELOPMENT

### A Solution to Bridging the Gap Between Climate Intentions and Action

Kavita Myles

WAFD / INSEDA / INFORSE-South Asia, India

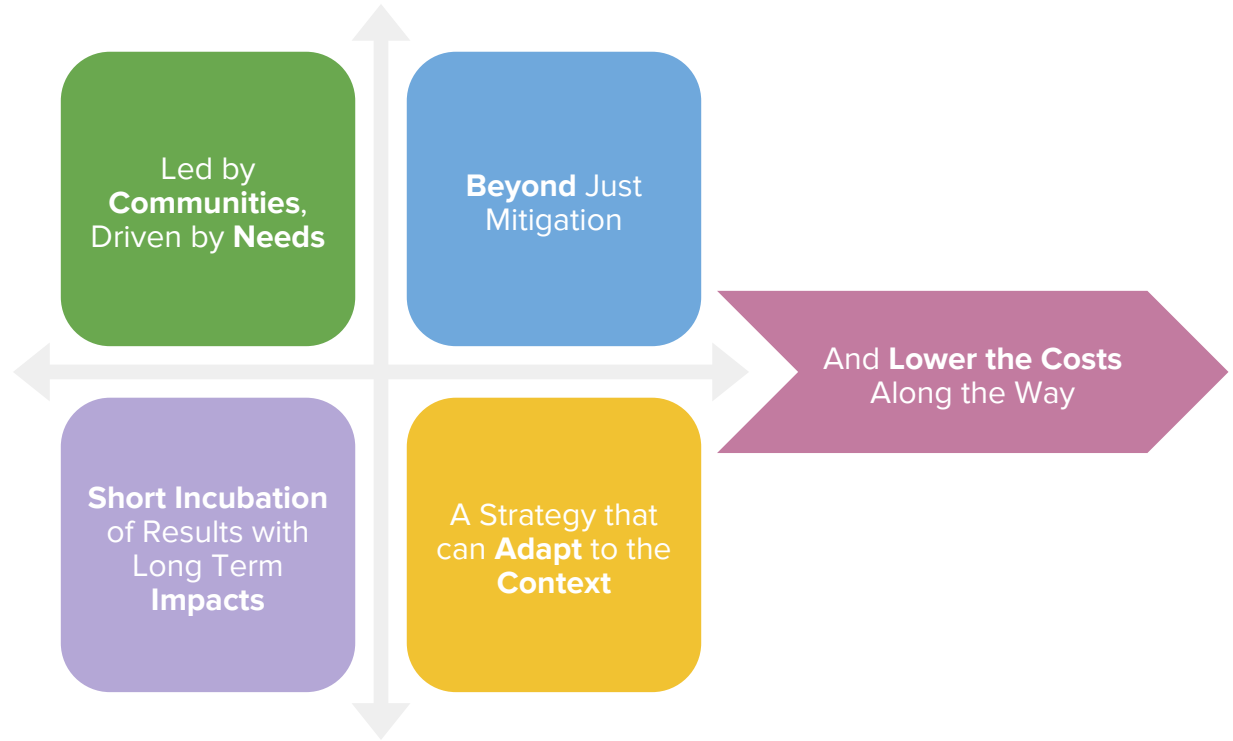


## THE GOAL

To create a climate-resilient solution for sustainable development that:

- Supports the country's development objectives and INDCs.
- Includes a comprehensive approach to adaptation and mitigation.
- Is inclusive and has elements of gender mainstreaming.
- Has a multiplier effect.
- Can be implemented immediately.
- Is a low-cost solution that maximizes scarce climate finance resources.

A  
THE SOLUTION



A

THE SOLUTION

## ECO VILLAGE DEVELOPMENT

CIRCLE OF SUSTAINABILITY

360-DEGREE  
APPROACH



BOTTOM-UP, DE-  
CENTRALIZED



PARTICIPATORY,  
INCLUSIVE



Low Cost



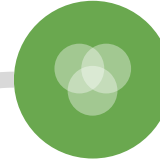
Linked with Nation's INDCs



Participatory Process

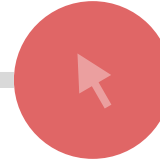


User Driven



### MITIGATION

- Low-carbon, green technologies
- Diversified basket of technologies



### ADAPTATION

- Livelihoods support
- Capacity development



### SUSTAINABLE DEVELOPMENT

- Focus on women
- Intra-community equity

## SOME INTERVENTIONS



COMPOSTING



ORGANIC GARDEN



GREENHOUSE



SOLAR COOKING



BIOGAS TECHNOLOGY



SOLAR DRYING

A COMPLEMENTARY APPROACH TO INDCs

## A GREEN DEVELOPMENT PATH THAT DOES NOT CREATE LOSERS

### ENERGY ACCESS



Decentralized, household access to **clean low-carbon energy access** in off-grid areas.

**Future proofing the energy supply while building more capacity.**

### SUSTAINABLE DEVELOPMENT



Long-term development based on **environmentally sound principles**.

**Moving towards a higher HDI.**

### CAPACITY BUILDING



Knowledge transfers, skill trainings, income generation activities, **participative processes** and focus on community building.

**Rural livelihood security**

### ADAPTATION & MITIGATION



India is already facing climate impacts, and mitigation activities alone aren't a complete response given the low levels of per capita energy access and low-energy use.

**A holistic solution**

To create a climate-resilient solution for sustainable development that:

- **Successfully replicated** across a range of **different geographies**.
- By using **locally available resources**, the concept can be easily diffused to other countries as well.
- Using **simple technologies** allows local women and men to understand their use and also assist in their building.
- These are need-based technologies based on **locally available skills**.



**Women's Action For Development**  
INDIA



**IDEA**  
SRI LANKA



**CRT/N**  
NEPAL



**Grameen Shakti**  
BANGLADESH

Side Event: South Asian Eco-Village Solutions in NDCs and Climate Finance -  
Renewable Energy and Organic Farming at  
UNFCCC SB44, Bonn. 16.45 - 18.15, 20 May 2016, Room: Berlin

## INDC of Bangladesh & Approach of Eco-Village Development (EVD) for Achieving Sustainability

**Mohammad Mahmudul Hasan**  
**Manager**  
**Grameen Shakti, Bangladesh**



Grameen Shakti



inseda

wafd

women's action for development



INFORSE-South ASIA

International Network for Sustainable Energy



Grameen Shakti

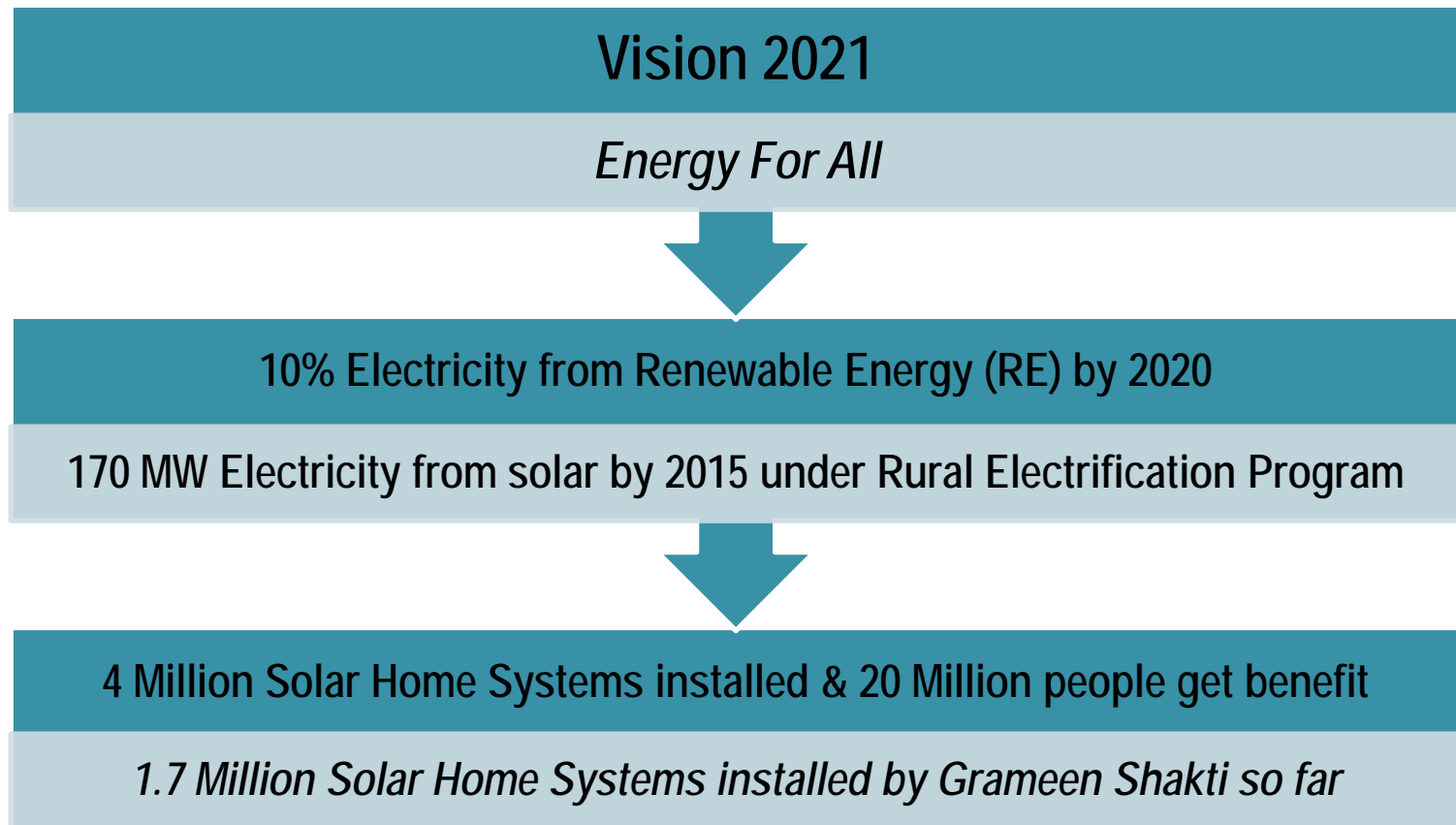


Proceedings : [www.inforse.org/europe/conf16\\_SB44-Bonn.htm](http://www.inforse.org/europe/conf16_SB44-Bonn.htm) [www.inforse.org/asia/EVD.htm](http://www.inforse.org/asia/EVD.htm)

UNFCCC SB44: <https://seors.unfccc.int/seors/reports/archive.html>



# Focus of Bangladesh



# INDC of Bangladesh

- Bangladesh's emission- *less than 0.35% of global emission*
- Without any ambitious action by world, the cost to Bangladesh of climate change – **annual loss of 2% of GDP by 2050 & 9.4% of GDP by 2100**

## Aim of INDC:

- *To limit temperature to two degrees or preferably 1.5 degree above pre-industrial level.*
- *To move to a low-carbon, climate resilient economy with ensuring it will not cross the average per capita emission of the developing world*

# Mitigation Contribution

Three sectors have been focused in INDC  
Power, Transport & Energy

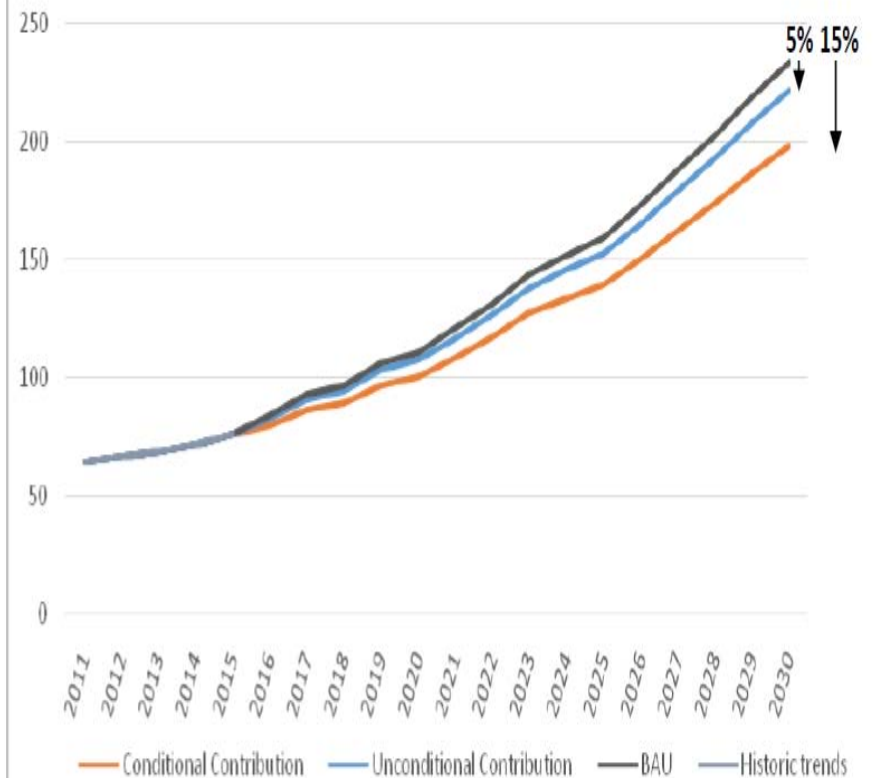
## *Unconditional Contribution*

Bangladesh would reduce 5% below Business as Usual level of emission from these sectors by 2030

## *Conditional Contribution*

- Bangladesh would reduce 15% below Business as Usual level
- It depends on international supports like- Finance, Investment, technology development & transfer & capacity building.

GHG emissions (MtCO<sub>2</sub>e) for Power, Transport and Energy demand in Industry to 2030



# Existing Mitigation actions in INDC

## *Focus of Eco-Village Development (EVD)*



The Solar Home Program providing electricity to off-grid villages  
*4 Million homes connected by solar power*



Improved Cooking Stove all over the country  
*1.5 Million ICS*



Biogas plant all over the country  
50,000 Biogas plants



Solar Irrigation pump replacing diesel  
300 pumps in field with target of 1,550 by 2017

# EVD partner in Bangladesh: Grameen Shakti

*Outreach: Till April 30, 2016*

Solar  
Energy

**1.7 Million** Solar Home Systems

Biogas

**32,000** Biogas Plants

Improved  
Cook  
Stove

**950,000** Improved Cooking Stoves

Better  
Life

Above **18 Million** Beneficiaries

# EVD Solution: Solar Home System

## *Ensuring sustainability*

1.7 M Solar  
Home  
Systems  
installed by  
Grameen  
Shakti

8.5 M  
villagers  
get benefits

180 M liter  
of  
Kerosene  
saved



# Adaptation issue in INDC:

## *Key area to address adverse impact of climate change*

1. Food security, livelihood & health protection
2. Comprehensive disaster management
3. Coastal zone management
4. Flood control & erosion
5. Climate resilient infrastructure
6. Increased rural electrification
7. Enhanced urban resilience
8. Eco-system based adaptation (Forestry co-management)
9. Community based conservation of wetland & coastal areas
10. Policy & institutional capacity building



# Thanks and...

## ...do it with joy





Side Event: South Asian Eco-Village Solutions in NDCs and Climate Finance -  
Renewable Energy and Organic Farming  
UNFCCC SB44, Bonn. 16.45 - 18.15, 20 May 2016, Room: Berlin

## Linking Eco Village Development (EVD) to INDCs and National Agendas of Sri Lanka

Dumindu Herath

Integrated Development Association

IDEA, Sri Lanka



Proceedings : [www.inforse.org/europe/conf16\\_SB44-Bonn.htm](http://www.inforse.org/europe/conf16_SB44-Bonn.htm) [www.inforse.org/asia/EVD.htm](http://www.inforse.org/asia/EVD.htm)

UNFCCC SB44: <https://seors.unfccc.int/seors/reports/archive.html>

# Organization Overview and Interventions



## Integrated Development Association (IDEA)

Interventions : Rural Energy  
Energy : Biomass (about 70%)

Population by Sector %  
Urban -18.3 Rural - 77.3  
Estate- 4.4

- Nationwide dissemination and commercialization of the “Anagi” improved cookstoves –  
Over 300,000 Stoves produced Annually
- **4 Million Stoves Marketed since inception**
- Industrial and large stoves installation
- Rural kitchen improvements and IAP
- Bakery, Brick making combustion improvements
- Village hydro
- Organic Gardening

**Basket of EVD Solutions – Integration through Village Planning**

Reduction- 0.5 tCO<sub>2</sub>e / Year



# Sri Lanka INDCs – EVD linkages

Ministry of Mahaweli Development and Environment, Sri Lanka. April 2016

**Key Features :** Mitigation -5 Sectors, Adaptation – 8 Sectors, Loss and Damages  
Climate Financing not Quantified

## Mitigation: Sectors

Sectors and EVD association	Reductions by 2030
➤ <b>Energy-</b> 50% NCRE by 2030 Promotion of wind, solar, biomass, Mini Hydro, Demand side Management	<b>20%</b> (approx. 36010.2Gg) (4% Unconditional, 16% Conditional)
➤ <b>Transport</b> Enhancing Efficiency and Quality for Public Transport	
➤ <b>Waste</b> Organic fertilizers for agriculture, Energy generation from waste	
➤ <b>Industry</b> <i>Eco Industrial Parks and Villages, Energy Efficiency in SMEs</i>	
➤ <b>Forest</b> Restoration and Increase in Forest cover	
	<b>10%</b> (3% Unconditional, 7% Conditional)

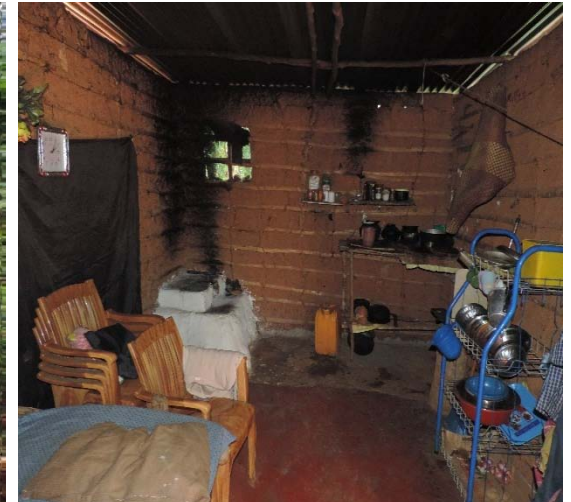
# Sri Lanka INDCs – EVD linkages

Adaptation: Based on NCCAS and NAP

Sectors:

- Health Sector
- Food Security - Mitigation of Chemical fertilizers
- Water - Conservation of drinking water catchments
- Irrigation – Improved irrigation for Agriculture, Water harvesting

**Other Sectors:** Coastal and Marine, Bio Diversity, Urban City Planning and Human Settlements, Tourism and Recreation



*INDC inclusions- Rural Energy Sector and Health due to energy Inefficiency and Malpractices not highlighted - in National Programmes*

# Other National Initiatives Following COP21

## ➤ Sri Lanka NEXT Initiative

The BlueGreen Era

Pledging for 2°C

EVD Linkage -Green Villages and  
Cities



## ➤ “Toxic Free Nation” – 3 Year National Programme

- Reduce the utilization of Chemicals in Agriculture
- Mainstreaming and upscaling Organic Agriculture



# Other National Initiatives Following COP21

## Organic Agriculture -“Toxic Free Nation”, INDCs

### Eco Village Developments Initiatives

- Organic Gardening – Home Gardening  
Entry Point and facilitates Integration of solutions , Huge Scope



**Sectoral Composition of GDP of Sri Lanka: Agriculture 11%, Industry 31%, Service 58%Z**

**Agricultural Labour force 30%**

Boost productivity and productive employment – Improve Agricultural livelihoods, Agro Products , Market Avenues, Training and Capacity building on sustainable farming practices and technology...etc

# Pro Poor Low Carbon EVD - Integration

## Going forward: Sri Lankan Perspective

- Awareness and Education
- Social Acceptability and Branding – Lifestyles Changes with Income
- Capacity Building and Technology Transfer
- Establishment of Support Systems, Structures and Infrastructure
- Long Term Proactive measures: Introduction of Low Carbon Livelihoods
- Civil Society Involvement: Participatory approach
- Operationalizing and Implementation of National agendas at Grassroot level
- Building capacity on climate resilience
- **Finance!**

More than 200 families are missing after a massive landslide buried three villages in Sri Lanka following days of torrential rain



Side Event: South Asian Eco-Village Solutions in NDCs and Climate Finance –  
Renewable Energy and Organic Farming at  
UNFCCC SB44, Bonn. 16.45 - 18.15, 20 May 2016, Room: Berlin

## Accessing Climate Finance for EVD in South Asia

**Anoop Poonia**

**Finance Coordinator, CAN International**

**&**

**Programme Officer, CAN South Asia**



**inseda**

**wafd**  
women's action for development



**INFORSE-South ASIA**  
International Network for Sustainable Energy



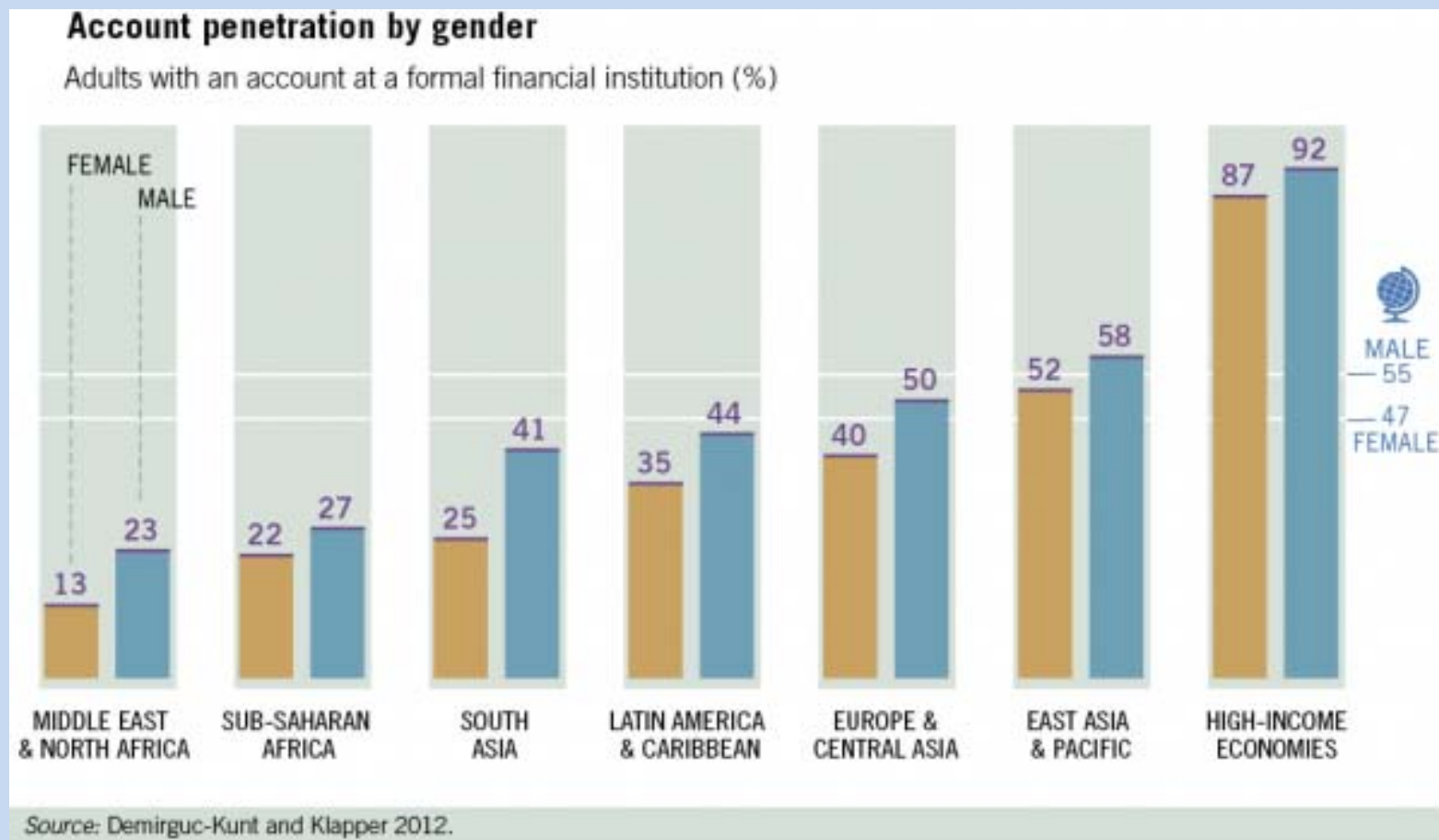
Grameen Shakti



Proceedings: [www.inforse.org/europe/conf16\\_SB44-Bonn.htm](http://www.inforse.org/europe/conf16_SB44-Bonn.htm). [www.inforse.org/asia/EVD.htm](http://www.inforse.org/asia/EVD.htm)  
UNFCCC SB44: <https://seors.unfccc.int/seors/reports/archive.html>

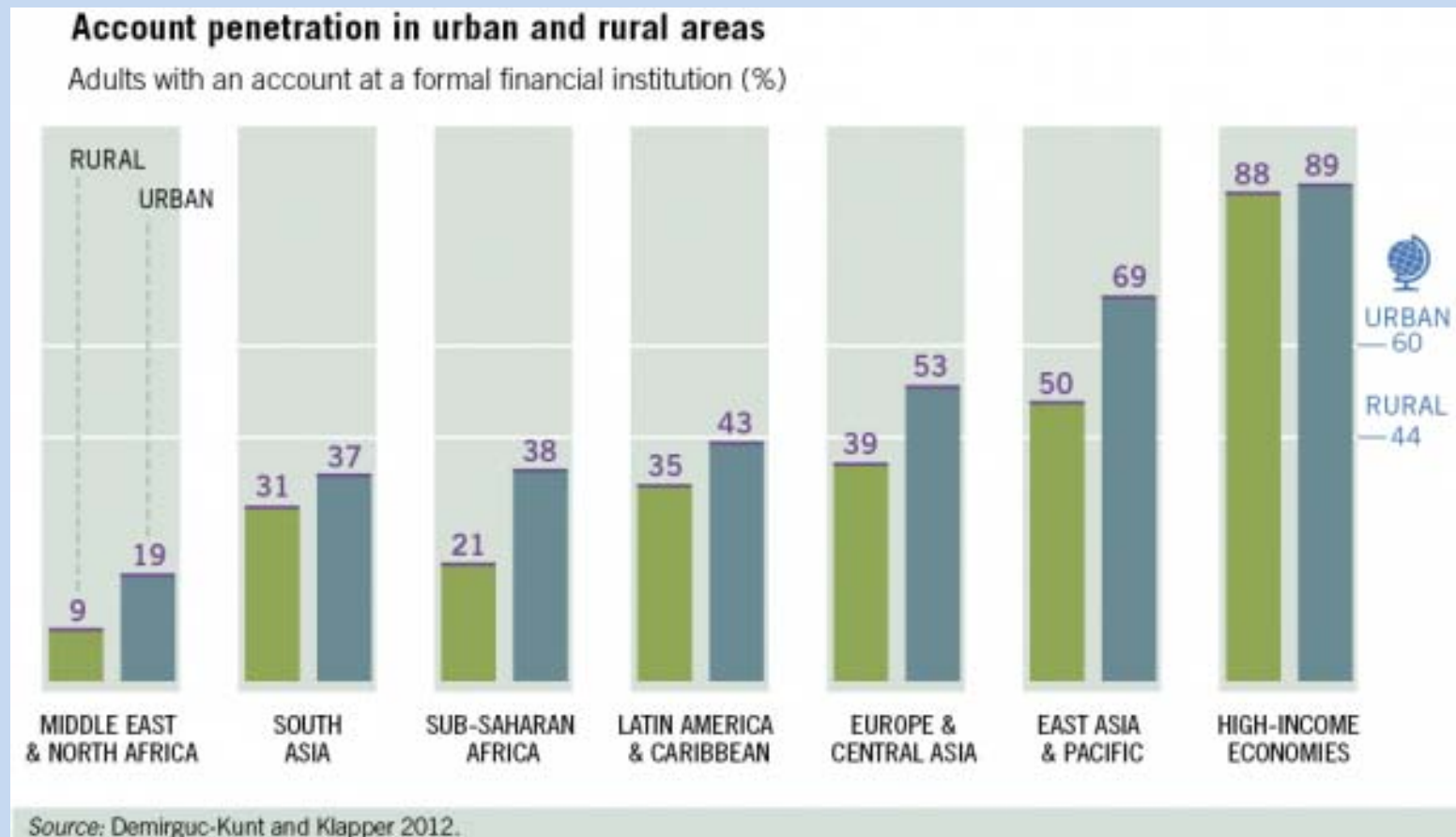


# Financial Inclusion: by Gender



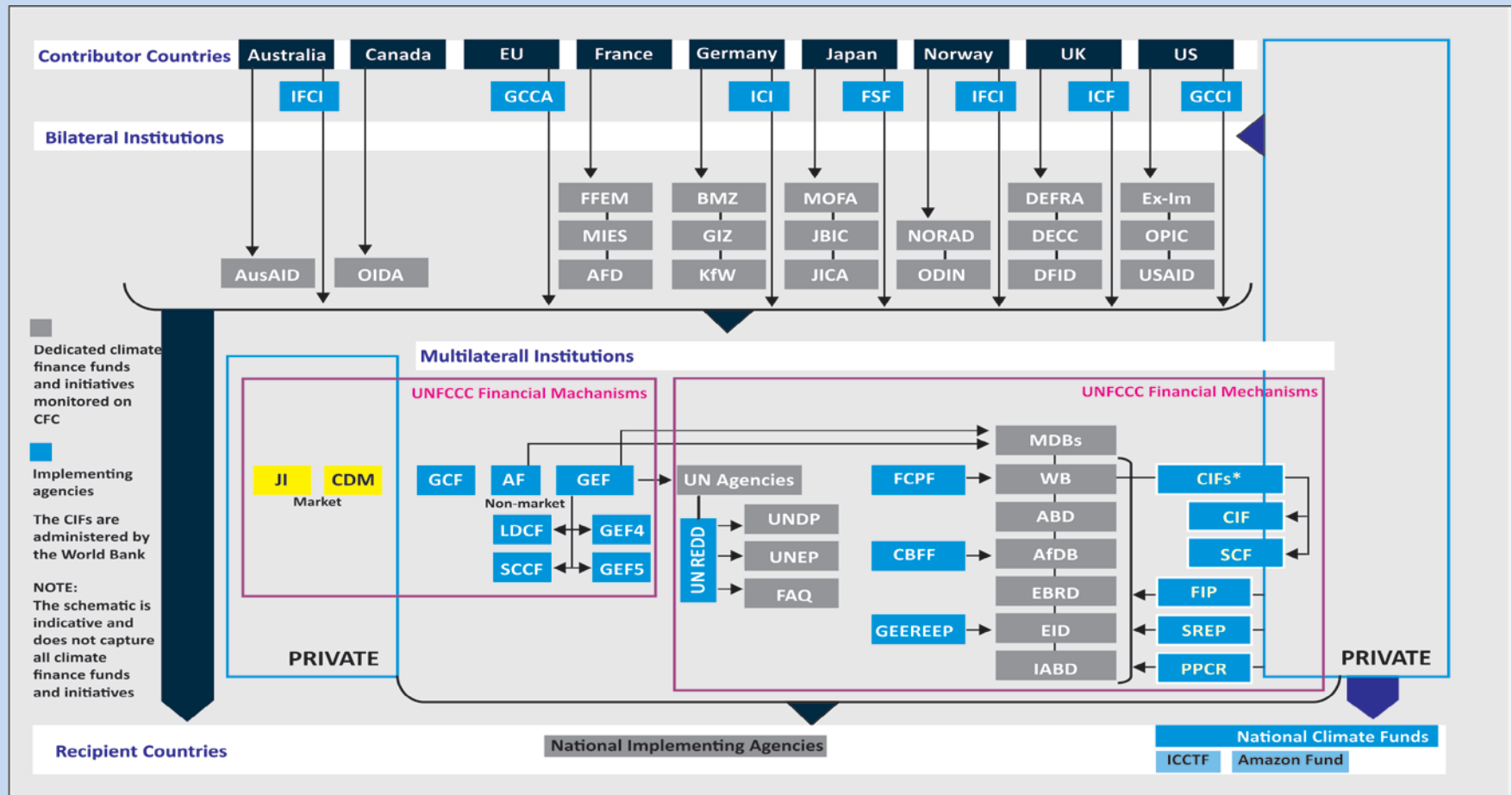
Source: Global Findex Database

# Financial Inclusion: by Location



Source: Global Findex Database

# International Climate Finance Landscape



**Source:** "The Global Climate Finance Architecture-Climate Funds Update."  
<http://www.odi.org.uk/sites/odi.org.uk/files/odi-assets/publications-opinion-files/8685.pdf>

# Asks – Specific Needs

- Finance for scaling-up activities to cover more areas through:
  - Capacity (Trainers)
  - Skills
  - Resources
  - Needs assessment
  - R&D
  - Solutions with co-benefits

# Asks - Access

- Funds should be demarcated for supporting local, grassroots sustainability innovations - direct & quick access to funds to reduce path dependency
- For example, Small Technologies Fund - should be set up with enhanced & direct access for projects & technologies that have low set-up costs and are ideal for rural settings. This can be brought in within the purview of existing funds such as CTF
- Schemes should incorporate last mile delivery to reach remote areas

# Emerging Issues

- Loss and Damage:
  - Building new climate resilient infrastructure
  - awareness activities
  - Relocation & land reclamation,
  - Compensation
  - Disaster risk mapping
- Vulnerable areas need to have infrastructure that is climate resilient, and this addition of infrastructure and support systems needs to be done on the basis of EVD principles.

# Opportunities

- Green Climate Fund – micro proposal fast track special clearance mechanism
- Alignment of national and sub-national policies for low-carbon climate-resilient development, SDGs, SFDRR
- UNFCCC negotiations to emphasise on provisions that support EVD – for low-cost durable pro-poor action

Side Event: South Asian Eco-Village Solutions in NDCs and Climate Finance -  
Renewable Energy and Organic Farming at  
UNFCCC SB44, Bonn. 16.45 - 18.15, 20 May 2016, Room: Berlin

## **Eco-Village Development as Climate Solution in South Asia**

**Gunnar Boye Olesen**

**INFORSE - International Network for Sustainable Energy**

**Local Solutions' Technology Needs**

**Local Solutions' Mitigation Effects**

**Launch of Publication**





# Local Solutions' Technology Needs

- Success with local solutions are dependent on using best technologies (light, PV, stoves) in sufficient quality and good frameworks (capacities, policies). Development does not stop.
- The Climate Technology Mechanisms (TEC) must give focus to local technologies
- CTCN must give priorities to local solutions and adaptation to local conditions in its advice and its upcoming technology database

# Local Solutions' Mitigation Effects

- Organic Farming: no chemical fertilizer, but sometimes lower yields
- Solar dryers: increase farming output / replace electric and fossil drying
- Improved cookstoves: reduce fuel use and emissions, but not fully (sustainable biofuel?)
- Biogas: replaces fuel use and produces fertiliser, but can give methane
- PV and hydro: replace kerosene / fossil fuel power

# Local solutions' Mitigation Effects

- In total EVD Solutions reduce emissions
- Evaluations are complex, but necessary
- We will develop proposal and we look for cooperation on documentation



# Publication Launch

## Eco-Village Development as Climate Solution Proposals from South Asia



INFORSE-South ASIA  
International Network for Sustainable Energy



Second Edition: May 20, 2016

# Contents

- **Eco-Village Development in South Asia as Climate Solution (why?)**
- **Eco Village Development (the concept)**
- **Actions Needed to Build Sustainable Villages on a Large Scale**
- **What Villagers Want?**
- **Local Success Stories**

# What the Villagers Want



*Bimla said:*

*"I want to learn an income generating skill so that I can earn money for myself and my family. I would also like to have the confidence to help my community with the knowledge that I gain."*



*Ibrahim Mia said:*

*"I want safe access to light so that my daughter can study in peace."*



# EVD and Global Climate Agenda

- South Asian countries should include EVD solutions in their project requests to the GCF.
- Other climate funding should give priority to local / EVD solutions, including funding from MDBs
- A 'Leapfrog Fund' be established with global mitigation financing to support development towards low-carbon economies, with local / EVD solutions.
- The UNFCCC climate-technology mechanism also should facilitate the exchange of knowledge, experience, and technologies in support of EVD



Thank You  
Read Publication on  
[www.inforse.org/asia](http://www.inforse.org/asia)