2nd International Conference

# Micro Perspectives for Decentralized Energy Supply



Feb. 27 to Mar. 1, 2013 in Berlin, Germany

### The role of energy in development processes

Towards an Energy Plus Approach: Good practices and lessons learned from Asia-Pacific

Martin Krause UNDP

#### The challenge... Energy-Poverty Cycle



Practitioner Paper

- 800 million people in Asia-Pacific are without access to electricity
- more than 1.9 billion people in Asia-Pacific depend on biomass for cooking and heating
- nearly 2 million people around the world die prematurely each year from illness attributable to indoor air pollution
- 6% of global deforestation is due to fuelwood collection







### The challenge... Energy-Poverty Cycle

Access – grid extension - cooking fuels – technology choice





### Adverse conditions

- policies
- institutions
- capacities

#### **Acceptance**

- failed attempts
  - lack of trust

#### **Affordability**

- subsidies
- markets



### The challenge... Energy-Poverty Cycle



Practitioner Paper



Moving towards an Energy-Plus approach







**EE stoves Solar Lanterns Solar Energy Women SHGs Lao PDR Philippines** India Renewable Renewable **Rural RE EE Stove Energy Energy Timor-Leste** China China Nepal Renewable Renewable Rural Vanuatu **Energy Energy Electrification** Community **Powerhouse Philippines** Fiji Sri Lanka Model **BioGas Water Mills** Rural Nepal Electrification Nepal India **EE Stoves BioGas** Micro-hydro **Informal** China Bhutan **Industry** 

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India





Listening

**Policies** 

**Financing**Project End-user

Practitioner Paper



#### **Good Practices & Lessons Learned**



Listening

#### **Policies**

Financing
Project End-user

Practitioner Paper



### Rural Electr. Fiji

- National targets
- National investments



### **RE China**

- Market based instruments
- Combining public, private & development financing

**Long term Government Commitment** 

#### **Good Practices & Lessons Learned**



Policies

Project End-user

Financing (Project)

Domestic/ Internat. Public Finance

Listening

Financing institutions/ instruments – microcredits, loan guarantees

Private sector
- companies
- building
commercial
markets

#### **Financing**

Project End-user

Building on existing supply chains

**EE Stoves China** 

Consumer confidence through quality assurance

BioGas Nepal



**Practitioner Paper** 

Clustering dispersed markets Solar Energy Philippines

Building Commercially Viable Markets Investing in market development & consumer awareness BioGas China







### Development Dividends of Energy Access





reduced household expenditure on energy



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electricity
brings
lifestyle
changes &
makes work
easier

MDG 1: Reducing extreme poverty and hunger

energy for productive purposes increases incomes



RE projects create employment for communities



MDG 2

MDG 3

MDG 6

MDG 4&5 MDG 7&8

### Development Dividends of Energy Access



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Improved
lighting
enables
children to
study in the
evenings

Freeing
children from
fuel-wood
collection =
time to study
& attend
school

MDG 2:
Achieving
universal
primary
education



MDG 1

MDG 3

MDG 6

MDG 4&5

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**MDG 7&8** 

### Development Dividends of Energy Access



**Practitioner Paper** 

MDG 1

MDG 2

MDG 3

MDG 6

MDG 4&5

MDG 7: Ensuring Environment Sustainability

Reduced fuel wood

consumption



positive impact on forest resources

reduced air pollution

**GHG** emissions





### Breaking Energy-Poverty Cycle

**Coordinated Collaboration** 

Governments: policies, subsidies

Development partners: capacity development + business skills

Private sector:
manufacture,
sell & service
energy
technologies +
embrace
entrepreneurial
spin-off

Civil Society:
mobilize
communities &
disseminate
information

Financial Institutions: loans, microfinancing



## Thank you

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