

# Informal urban settlements and modern energy conundrum:

# Experience from Asia, Africa and Latin America

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# Outline



UN City, Copenhagen

- Brief introduction of GNESD
- Setting the scene for the UPEA discussions
- Background and methods to the study
- Supply & Demand side barriers (both electrification & cooking fuels)
- Suggestions for Policy considerations



# Global Network on Energy for Sustainable Development (GNESD)

### Knowledge network

Policy analysis on environmentally benign **energy systems and services** that:

- ➤can help achieve Millennium Development Goals
- ➤are not harmful to human health;
- >does not conflict with our food supply;
- ➢ result in poverty alleviation and
- achieving sustainable development in member countries



#### Selected GNESD Publications:







### COP 16 Side Event, Cancun/Mexico

### - Eradicating Energy Poverty Workshop









### **COP 21 IEA Side Event**, Paris/France – Energy Efficient Prosperity

#### GNESD Invited Talk - IEA Side Event:

- Expanding Energy Access by Scaling-up Energy Efficiency in Sub-Saharan Africa





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- Concluding Recommendations





# SE4AII & SDGs

- UN Sustainable Energy Year targets by Secretary General by 2030
  - Universal energy access
  - Doubling the rate of energy efficiency
  - Doubling the amount of RETs in the energy mix







### **Relationship between Energy Access & Prosperity**

GDP/capita, \$ thousand, 2012



Electricity Access Database, IEA WEO, 2013; McKinsey, 2015





### Urban Poverty and Lack of Clean Energy Access in Developing Countries

**Urban poverty** 

Lack of access to clean energy

- Concentration of poverty in developing countries- More than 50% of world's poor live in developing countries
- Concentration of poverty in urban areas in developing countries- 70% urban residents are poor in Sub-Saharan Africa and South Asia



1.37 billion people in developing countries lack access to electricity



2.70 billion people in developing countries rely on biomass for cooking

Improved access to clean sources of energy - highly neglected in policy and programmes in rural areas but also **urban/peri-urban slums** 





## **UPEA Study – Participating Centers**





# **Research framework**

Focus on electricity and LPG

### Setting the context

- Study area description
  - Demographic profile
  - Urban poor situation in the city (numbers, settlements, basic services availability)
  - Energy access situation for urban poorsources of energy, mechanism to procure energy services, issues related to clean energy access











# **UPEA Study - Methodology**



# □Interviews with utilities

□Household surveys

□Focused group discussions

□Policy panel fora





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# **Supply side barriers**





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## **Demand side barriers**



# Some key observations

- Slum electrification not included as target Kenya, Senegal etc
- Illegal connections (Drivers: High upfront cost and Lack of proof of residence)
  - South Africa: Renting out backyards to poor families
  - Thailand: Connecting through a neighbour's connection
  - Kenya: Renting out electricity as income generation means
  - Senegal: Illegal connections posing safety concerns

### Lack of awareness

- South Africa, Kenya: Consumers are unaware about the safety features or labels on appliances; Fear of cylinders exploding
- Argentina: Low awareness on prevailing programmes for subsidised LPG cylinders



# Recommendations

Responsive urban poor/urban development/energy policies

**How?-** Inclusion of clean energy access for the urban poor, & recognized as basic urban service (social inclusion)

#### Convert responsive policies into effective programs/schemes

**How?** – Creation of implementation ecosystems, specific roles for the involved institutions & institutional coordination, working with local body, NGOs/CBOs, etc.

#### **Barrier Specific Actions**

- Affordability- targeted subsidy, pre-paid services, innovative financing
- Tenureship- *innovative solutions like quasi/temporal IDs*
- Lack of awarenessmassive efforts by supply agency, NGOs/CBOs, international cooperation, 'Good Practices' knowledge sharing

Improved Clean Energy Access for the Urban Poor



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#### **Output: Video Documentary**

### - GNESD Urban and Peri-Urban Energy Access



Link to video: <u>www.gnesd.org</u>

or request: emac@dtu.dk





### 'It always seems impossible until it's done'

– Nelson Mandela

# Thank you

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