Access to modern energy by the urban poor in developing countries:Potential for poverty alleviation and sustainable development

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Access to modern energy by the urban poor in developing countries:

Potential for poverty alleviation and sustainable development

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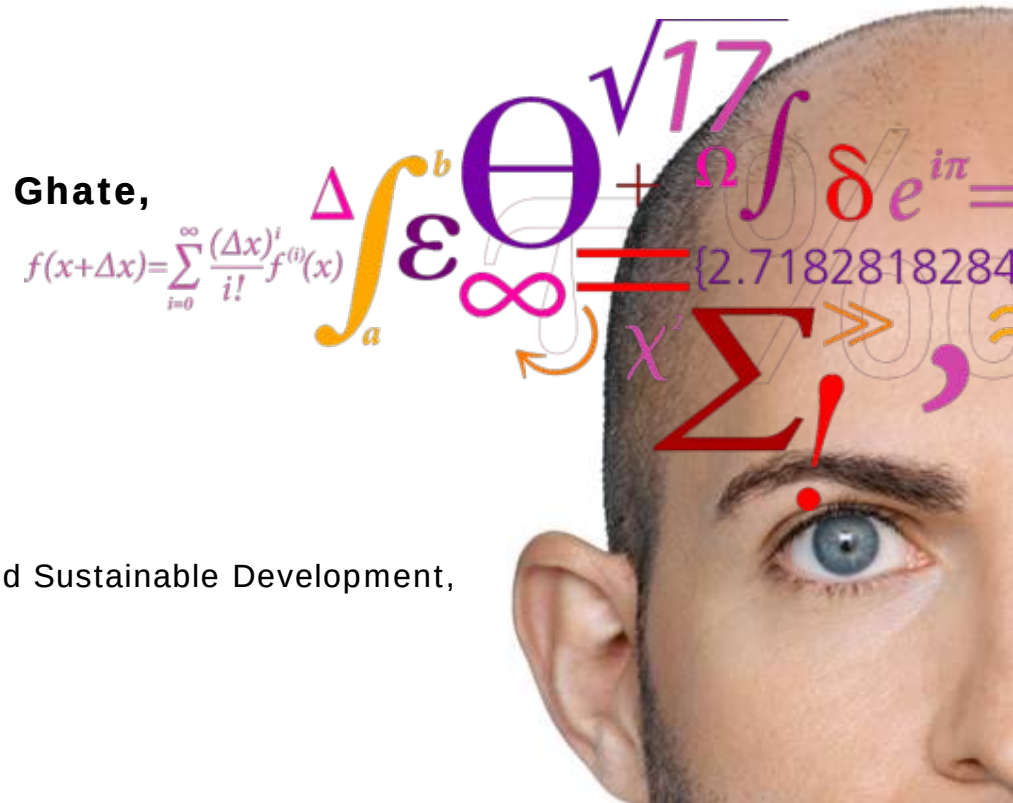

Second Annual International Conference on Poverty and Sustainable Development, Colombo, Sri Lanka, 15-16th December 2015

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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)
- Concluding Recommendations

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Global Network on Energy for Sustainable Development (GNESD)

Objectives of 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

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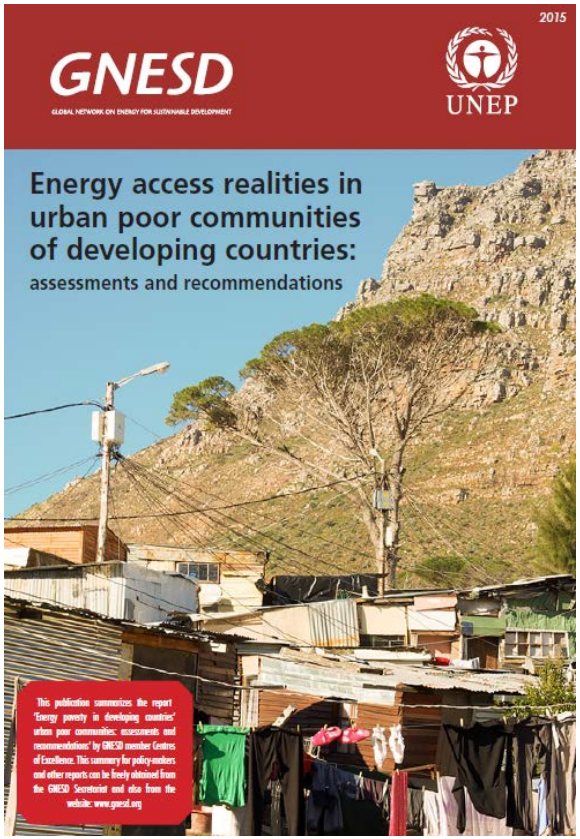
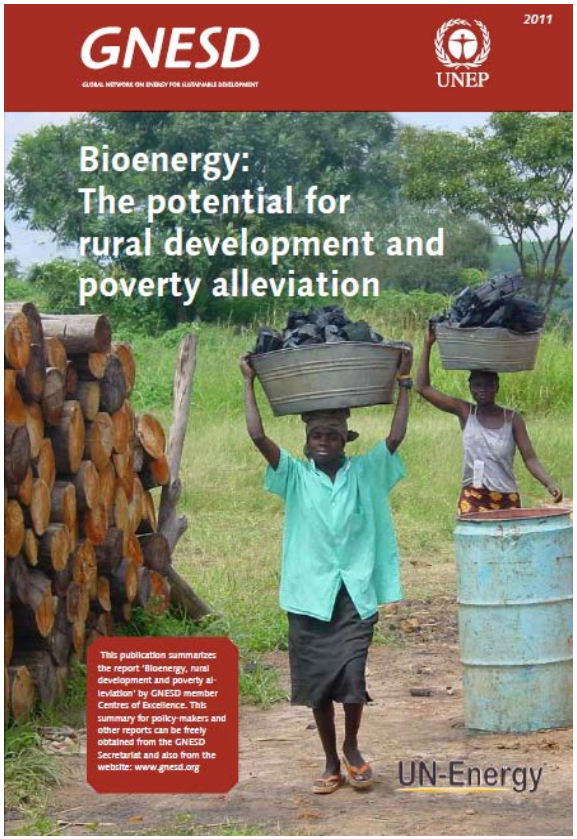
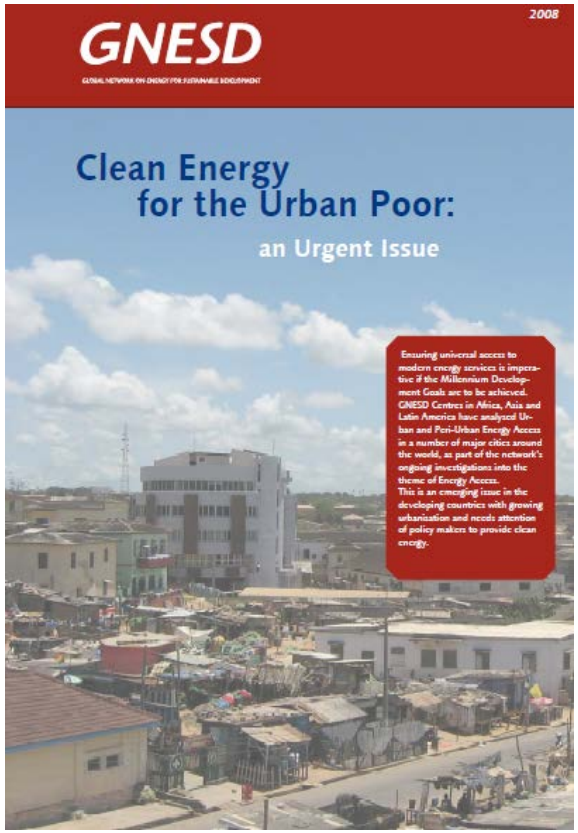
Selected GNESD Publications:







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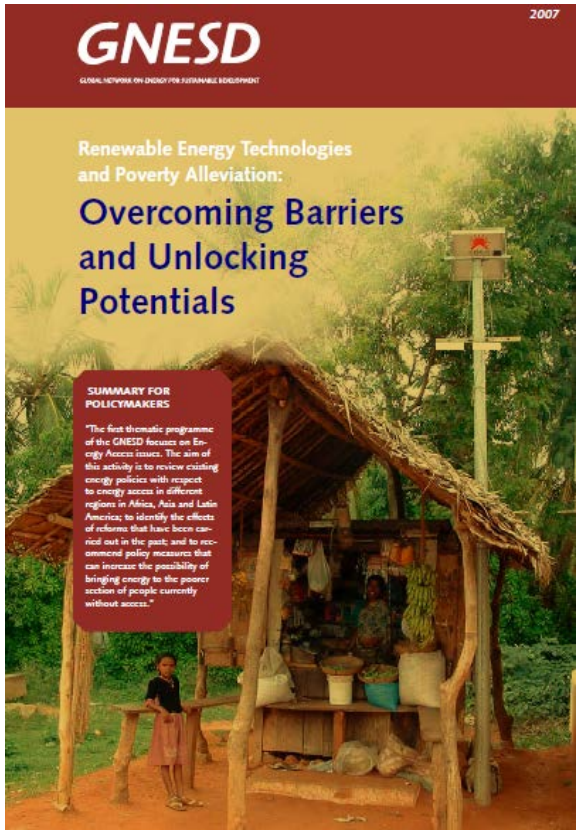
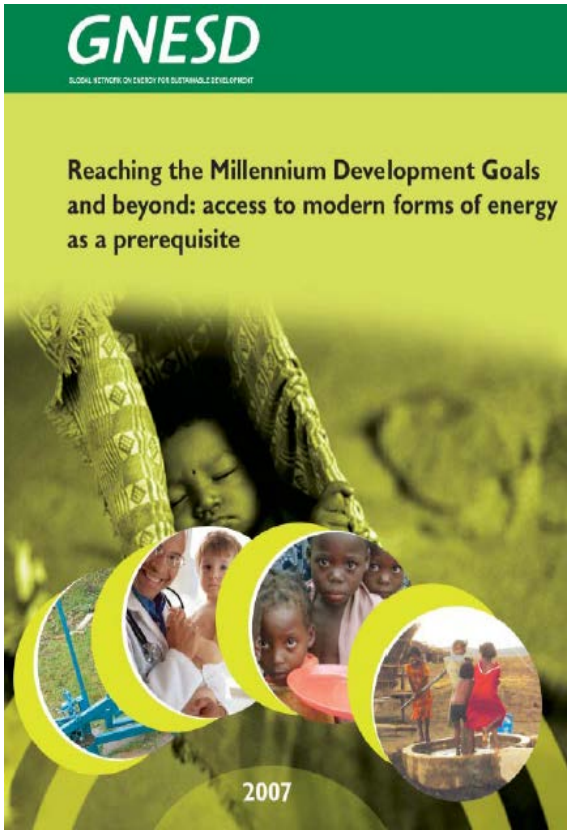
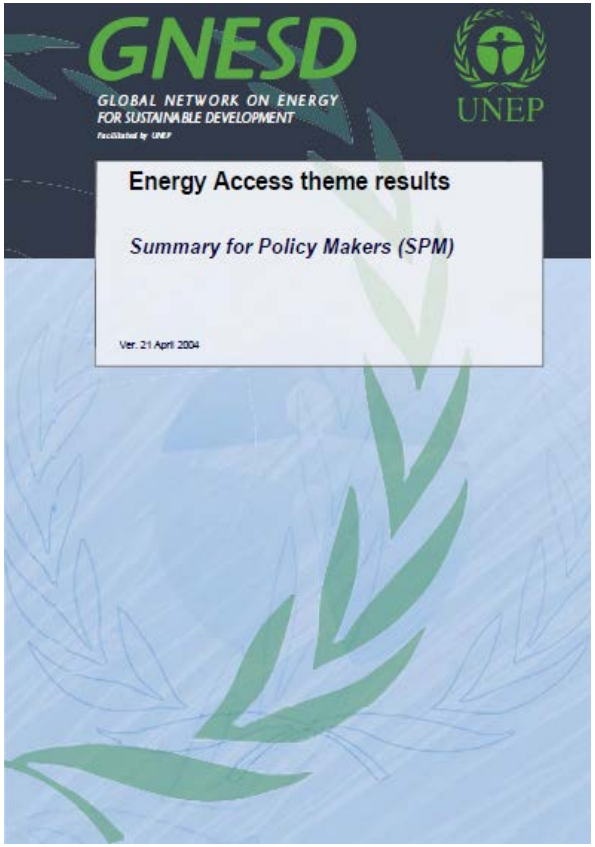
Selected Publications: *More at www.gnesd.org*







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COP 16 Side Event, Cancun/Mexico

– Eradicating Energy Poverty Workshop

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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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SE4All & 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

SDGs

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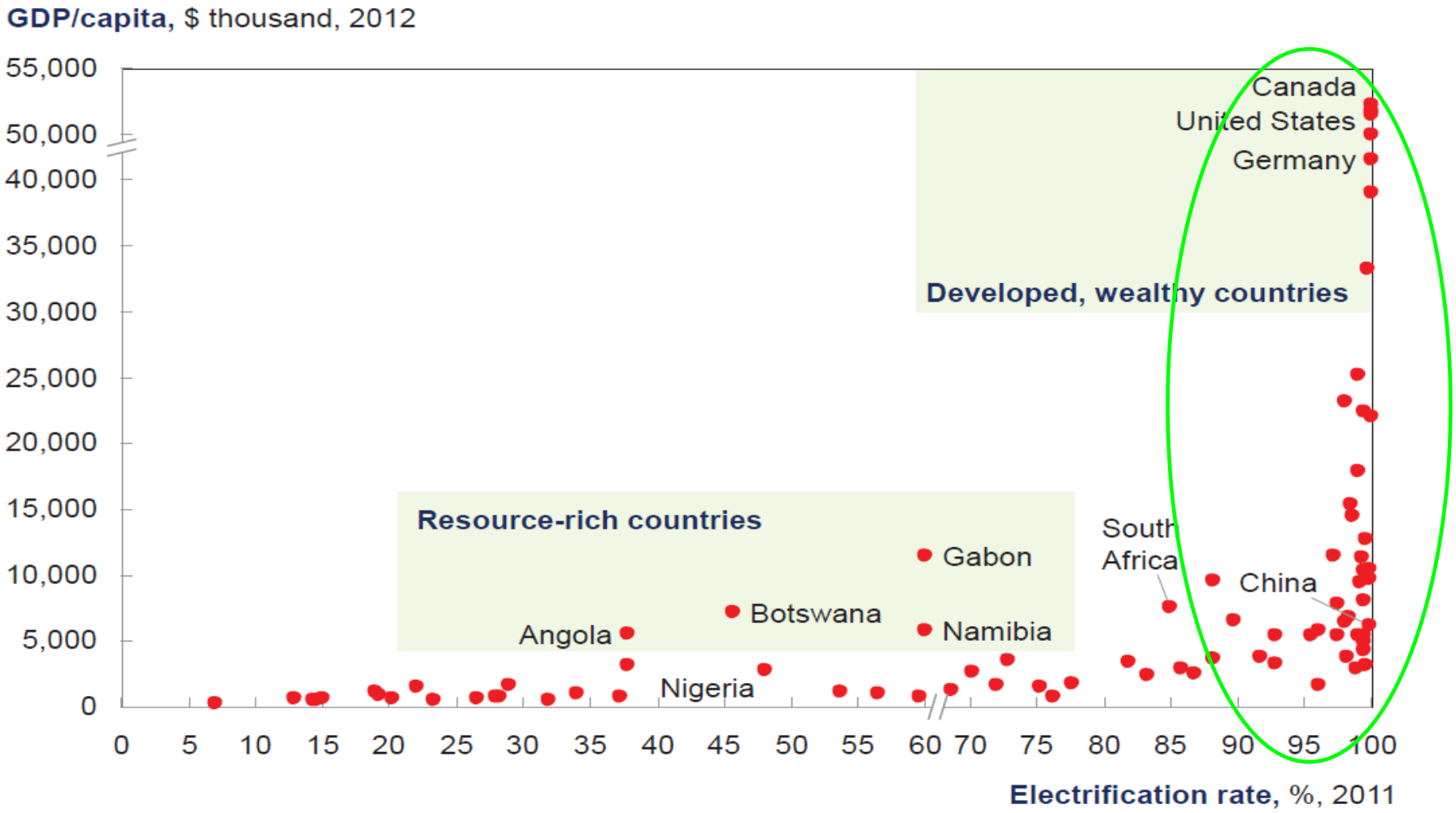
Relationship between Energy Access & Prosperity



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

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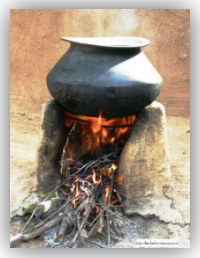
Urban Poverty and Lack of Clean Energy Access in Developing Countries

Urban poverty

- **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

Lack of access to clean energy

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**

Background

- 3 phases of the ‘Urban & Peri-urban Energy Access (UPEA)’ studies started year 2006

- Theme objective –

  ‘To identify challenges and policy options in order to facilitate clean energy services to the poor in urban slums from the perspective of poverty alleviation, environmental protection and productive use of energy.’

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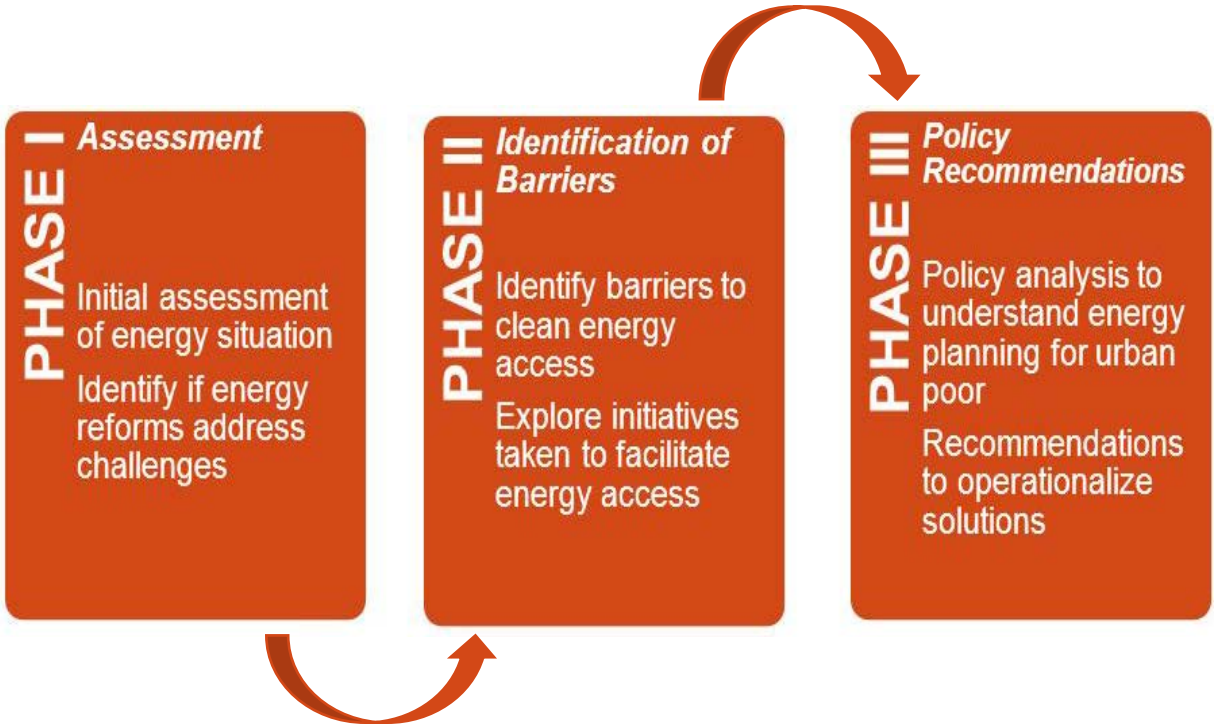
GNESD's Urban Peri-Urban Energy Access (UPEA) Study

- Aim- enhance clean energy access for the urban poor by strategic and specific interventions in governing policies.
- A pragmatic and phase-wise approach



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Research framework

*Focus on **electricity and LPG***

TASK 1a: SETTING THE CONTEXT

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

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UPEA Study - Methodology

- Interviews
- Household surveys
- Focused group discussions
- Policy panel dialogues

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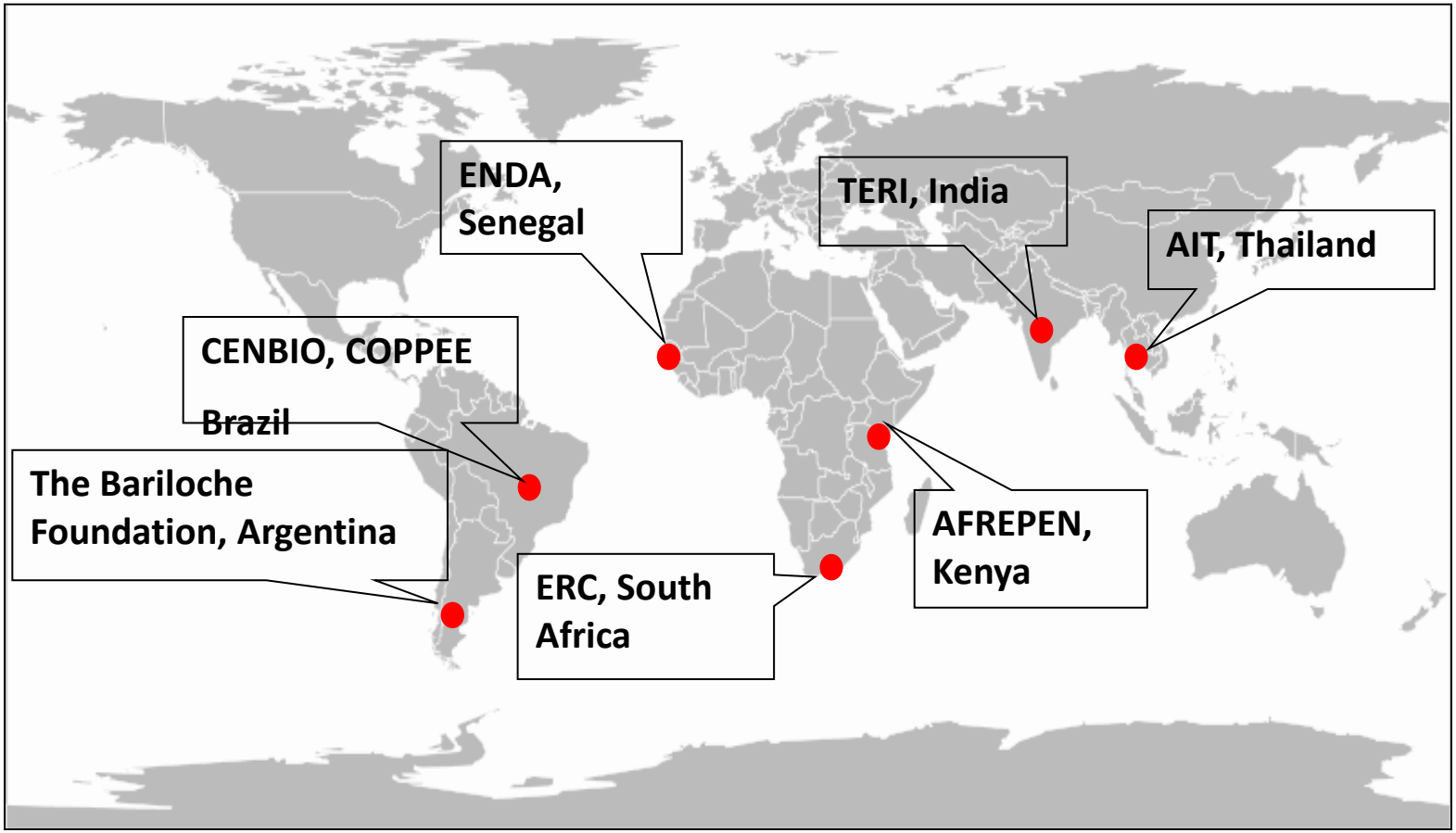
UPEA Study – Participating Centers



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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

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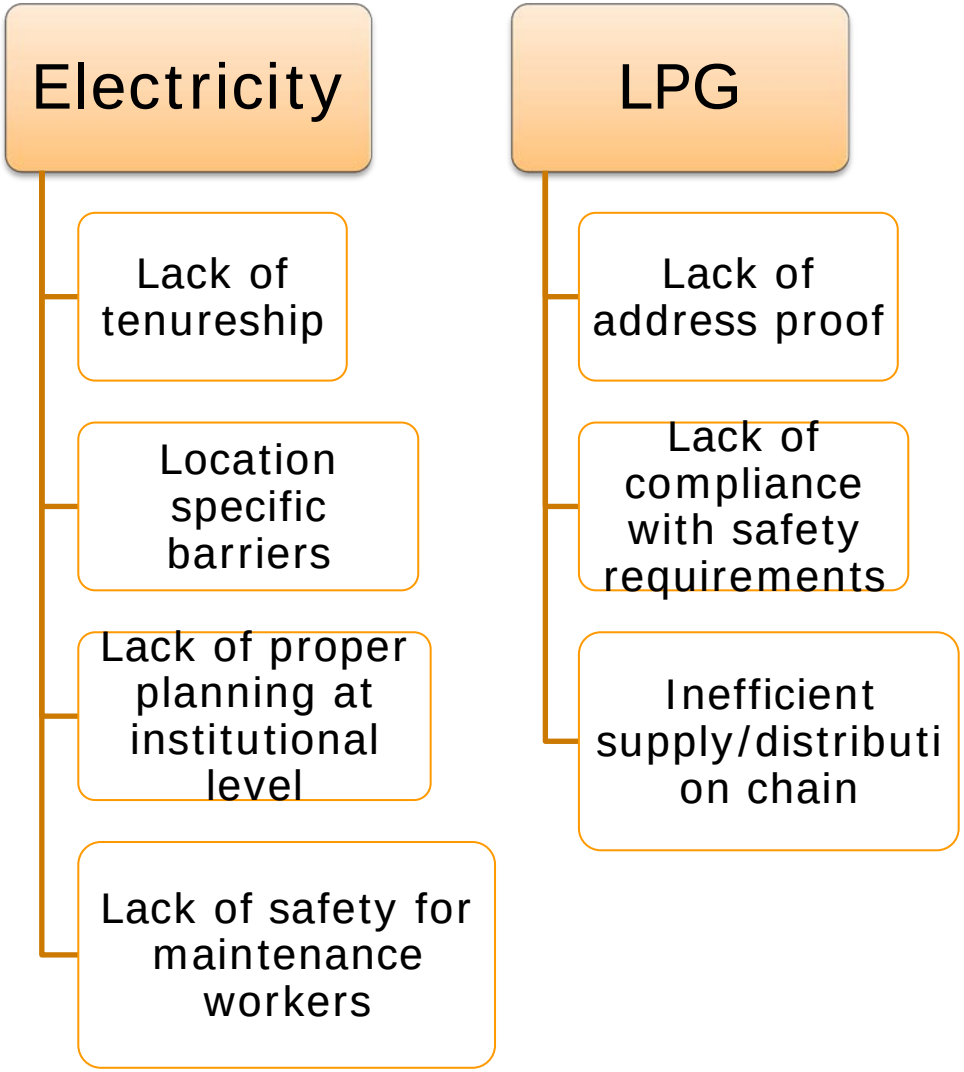
Supply side barriers



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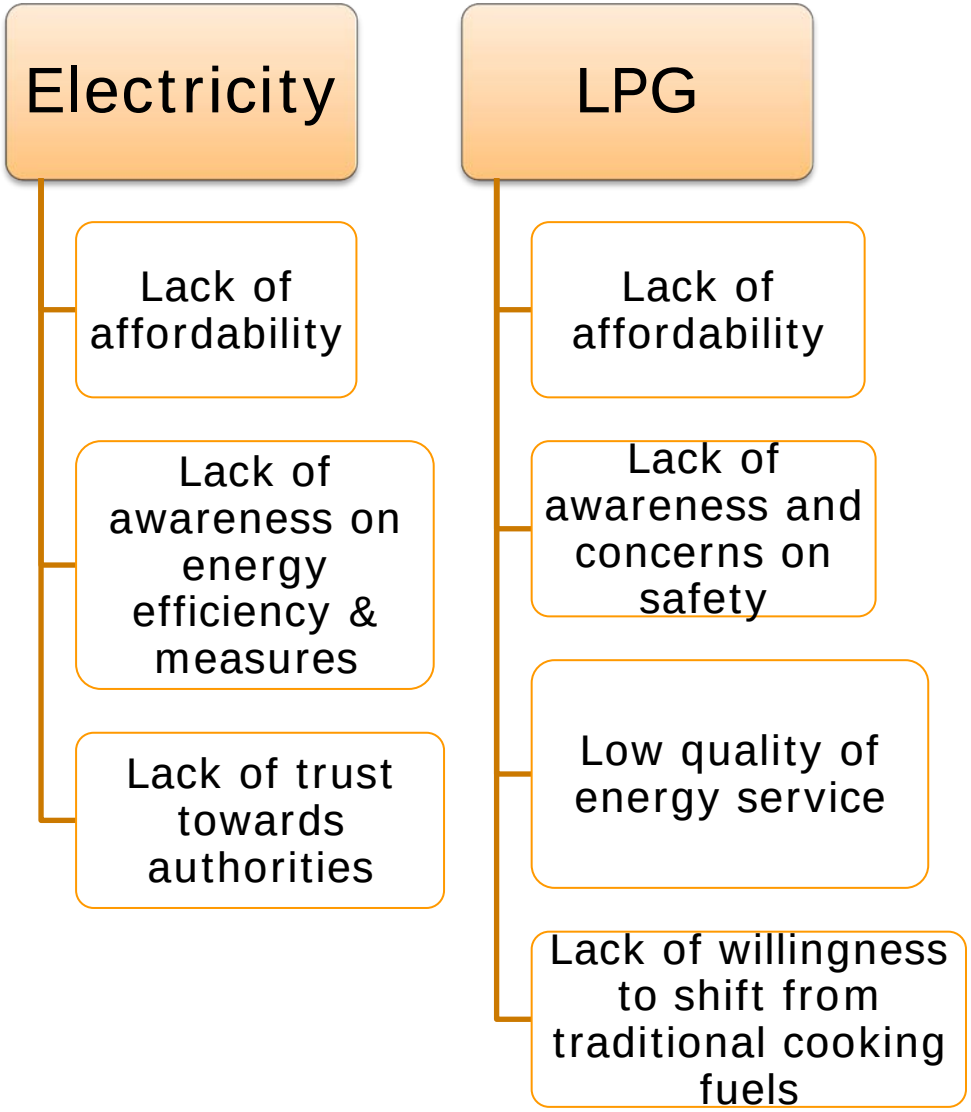
Demand side barriers



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Study Findings - Barriers

Barrier	Impact on Access
Nature of urban poor settlements- illegal, non-notified	• Inability to provide residential proof, a pre-requisite for new connection (LPG, Electricity)
Type/quality of housing structures- temporary	• Difficult for the supply agency to mount meters (Electricity) • Safety hazard (LPG)
Affordability, High upfront and recurring costs	• Default in bill payment, results in disconnection (Electricity) • Unaffordable connection cost (LPG)
Lack of trust- between consumers and supply agency	• Consumers reluctant to trust private companies • Supply agencies apprehensive about bill payment by the consumers
Lack of awareness- misconceptions and fears about safety of using LPG	• Scared to use LPG for cooking hence do not opt for it
Traditional cooking methods and taste preferences	• Urban poor migrants from rural areas used to cooking with kerosene/firewood • Prefer taste of food cooked using firewood

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Addressing Barriers - via Innovative Practices

Barrier	Innovative Practice
Nature of urban poor settlements	**'Quasi ID' allowing grid connections, Thailand** •Temporary house registration numbers,- **'Quasi household IDs'** •Reduced number of illegal connections
High upfront and recurring costs	**Targeted LPG subsidy, smaller sized cylinders, Senegal** • **Creation of specialized distribution outlets** that provide LPG in 6 and 2.75 kg cylinders at subsidized price. • **Outlets only in poor areas** • **Subsidized LPG access card given to poor** after identification
Absence of enabling policy environment	**Amendment in relevant (Slums Act) Act, Mumbai, India** •No legal acceptability = no basic services **•Amendment in Slums Act removed legal and tenureship-related barrier**

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Addressing Barriers
- via Innovative Practices

Barrier	Innovative Practice
Lack of trust	**'Community Agents', Brazil** Multi-stakeholder dialogs • Established mutual trust

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.*

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Barrier Specific Actions

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

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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: www.gnesd.org

or request: emac@dtu.dk

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Thank you

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