

INTERVIEW GUIDES AND WORKSHOP PLANS

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1 Research and analysis themes

KEY AREA	QUESTION	INFORMATION SOUGHT
Current state of energy supply	<p>What is the state of current energy infrastructure?</p> <p>What are the key sources of energy in [CITY NAME]?</p> <p>How is energy provided?</p> <p>How much of the city is provided for and which parts of the city do not have either heating and lighting? What are the different qualities of supply around the city?</p> <p>What is the interaction between energy and other urban services?</p> <p>What information sources are used to monitor and manage the energy system? What information do you use? Do you use any kind of map or cartographic information?</p> <p>Maps are used, how are they used?</p>	<p>Actual geographical distribution of infrastructure</p> <p>Inequalities in energy access; energy poverty</p> <p>Key sources of energy</p> <p>Quality differences in the supply</p> <p>Cross-infrastructure interactions, related challenges and trade-offs</p>
Governance of energy supply	<p>Who is responsible for the energy supply/ who are the main providers?</p> <p>Under which institutional arrangements is energy provided?</p> <p>At what scales do different energy actors operate?</p> <p>Do you have any old maps of the energy system?</p> <p>What is the relationship between developments in the energy system and planning?</p>	<p>Institutions and business models involved in the delivery of energy</p>
Future challenges and plans	<p>What are the most urgent needs to address in [CITY NAME] today in its energy system??</p> <p>How could these needs be addressed?</p> <p>Who are the main innovators in terms of providing energy to [CITY NAME]? How are they innovating?</p>	<p>Future plans for the provision of energy in [CITY NAME]</p>

2 Energy mapping workshop: Structure and outline

Activity one: photograph elicitation

Facilitators select a collection of images, and participants will be invited to select them and explain what is on the photographs to the whole workshop. Responses tend to be short, so the facilitator has to do some work to elicit information. The facilitator questions should be directed 1) towards eliciting the understanding of participants about the provision of energy; 2) towards eliciting the participants understanding about the use of energy.

Example questions in relation to 1)

Where does [whatever is in the photo] come from?

How is it procured? Who provides it?

Example questions in relation to 2)

How is [whatever is in the photo] used? In your household? By other people?

Has its use been continued/discontinued? Why?

Activity two: Conceptual mapping

The facilitators provide a space to draw and a variety of materials to do so (colours, modelling clay, stickers). Participants are distributed in 4/5 groups to discuss the different uses of energy (lighting, cooking, space, and communications/ and power) in relation to the temporal patterns of energy use through the day and throughout the year and one participant in each group is designated as a facilitator. Groups are invited to draw a conceptual diagram in the paper. The conceptual diagram is thought to represent answers to two questions.

- 1) How is [an energy use] met in your household/neighbourhood through the day?
- 2) How is [an energy use] met in your household/neighbourhood through the year? Do the different seasons influence how you use energy?

After 20-30 minutes, participants except the group facilitator rotate groups and they rework the diagram (same sheet of paper or a new one) but taking into considerations the previous discussion. At the end each group will share the discussion and explain the conceptual map to the plenary.

Activity three: Spatial experiences of energy systems

The final activity is a 'walkshop' that is, a walk around neighbourhood during which different conversations about the energy landscape emerge. Participants are asked to show different things in their neighbourhood that are relevant for them in terms of access to energy. This could include the objects that energy powers, the

infrastructures that are visible in the neighbourhood or the built environment changes that are done or have been made to accommodate different energy needs. Participants themselves design the routes and when they return to the venue they draw the walk on a printed map. They will take cameras with them so they can photograph relevant objects or landscapes. At the end each group report on the contents of the map and the different places they looked at during the walkshop.

3 Themes for Energy Biographies

Part 1: Energy Supply (may not need to ask, just observe)

Energy Supply (where different forms of energy come from)

What household fuels do you use?

Do you have access to electricity?

How is mechanical power, if needed, provided? (mechanical power refers here to any energy used to facilitate work, e.g. small industries)

Part 2: Energy Services

❖ Lighting

- BASIC QUESTIONS: When do you use lighting used and for what purposes? How many bulbs or other lighting appliances do you have homes? Are street lighting services sufficient?
- ENERGY RYTHMS: How do your lighting needs change through the day? And through the year? E.g. monsoon?
- ENERGY BIOGRAPHIES: Do you remember how lighting was provided in the past? When did you first had electricity? How did electricity change the lives of the people in your household?

❖ Cooking and water heating

- BASIC QUESTIONS: What fuels do you use for cooking? Where do you get them from? How much they cost? What kind of cookstoves do you use? How do you do your cleaning and laundry? Where do you get hot water from? How do you use it?
- ENERGY RYTHMS: How do you organize all the cooking, washing and cleaning activities through the day? Do these change through the year?
- ENERGY BIOGRAPHIES: Do you remember how cooking was made in the past? How has that changed? Or also: Is this a new kitchen? When did you change it? How did you decide to change it?

❖ Space heating

- BASIC QUESTIONS: Do you need to heat the space? What do you use for heating?
- ENERGY RYTHMS: How does this change through the day? Or through the year?
- ENERGY BIOGRAPHIES: Do you remember how needs for heating have changed over time?

❖ Cooling

- BASIC QUESTIONS: Do you need to cool space? Do you use air conditioning or fans? Do you do anything to facilitate natural ventilation? Do you have a fridge or a colling box? How do you maintain it?
- ENERGY RYTHMS: Do cooling practices change through the day? And through the year?

- ENERGY BIOGRAPHIES: Do you remember how cooling was done in the past? Do you remember when did you get the first fridge? How did it change your life?
- ❖ Communications and information
 - BASIC QUESTIONS: Do you use radio, TVs, mobile phones, computers, Internet, etc? Do you use them a lot? Do you use them at home or somewhere else?
 - ENERGY RYTHMS: Do you use these different appliances over the day? At which moments? And during the year? Are there particular moments when you have greater need of these onces?
 - ENERGY BIOGRAPHIES: Do you remember when you first bought a TV or when you first bought a computer? Have mobile phones changed the way you communicate? And Internet?

CONCLUSION

Wrap-up question: how do you think your use of energy will change in the coming years?

Thank you

Do you have any questions yourself?

Do please feel free to contact us.

4 Spatial profile form

Basic information
Name of settlement (as per official list)
Location (street names)
Coordinates (if known)
Date of study
Background of settlement
<p><u>Brief history of the settlement:</u> how long has been there, who started it (or how), where did people come from, how it has changed (in terms of who lives there but also, changes in architecture/buildings and water source, roads and basic infrastructure profile, general occupation of the inhabitants, any demolition drives that it has survived, the key issues faced by the inhabitants – including sanitation, health, flooding and waterlogging, mosquitoes and so on, then about the state of the basic facilities in the settlements – <u>not a house hold survey- but general observation and information from common discussions</u> – on house hold equipment- TV, Fridge, Cooking utilities, vehicles, lights; then composition of household in general- are there school going kids, nuclear or joint household, how many people broadly lives in a household, what kind of area (range) of typical house in general – range of the house- and so on)</p>
Prospect of settlement (is it being upgraded/ or regularized, or is it at risk)
Energy Supply (where different forms of energy come from)
<p>What household fuels are used and how much (cost –quantity/month)?</p> <p>Examples:</p> <p><i>Using non-standard solid fuels such as plastics</i></p> <p><i>Using solid fuel in an open/three-stone fire/ mud chula, smokeless chula, etc etc.</i></p> <p><i>Using solid fuel in an improved stove</i></p> <p><i>Using solid fuel in an improved stove with smoke extraction/chimney</i></p> <p><i>Mainly using a liquid or gas fuel or electricity, and associated stove</i></p> <p><i>Using only a liquid or gas fuel or electricity, and associated stove</i></p>
<p>Is there access to electricity?</p> <p>Examples:</p> <p><i>No access to electricity at all</i></p> <p><i>Access to third party battery charging only</i></p> <p><i>Access to stand-alone electrical appliance (e.g. solar lantern, solar phone charger)</i></p>

<p><i>Own limited power access for multiple home applications (e.g. solar home systems or power-limited off-grid)</i></p> <p><i>Poor-quality and/or intermittent (broken- power cut etc) Alternate Current connection</i></p> <p><i>Reliable AC connection available for all uses</i></p>
<p>How is mechanical power, if needed, provided? (mechanical power refers here to any energy used to facilitate work, e.g. small industries,</p> <p>Examples:</p> <p><i>No household access to tools or mechanical advantages</i></p> <p><i>Hand tools available for household tasks Mechanical advantage devices available to magnify human/animal effort for most household tasks</i></p> <p><i>Powered mechanical devices available for some household tasks</i></p> <p><i>Powered mechanical devices available for most household tasks</i></p> <p><i>Mainly purchasing mechanically processed goods and services.</i></p>
<p>Energy Services</p>
<p><i>Lighting</i></p> <p>What are the current needs for lighting? When is lighting used and how?</p> <p>How does children study?</p> <p>How many bulbs or other lighting appliances people have in their homes?</p> <p>Is there street lighting? What is the quality of lighting in shared/public spaces?</p> <p>Are current lighting services sufficient? (Both in the household and in shared/public spaces?)</p> <p>How have lighting needs/appliances changed over the years?</p>
<p><i>Cooking and water heating</i></p> <p>What fuels are used for cooking? Where are they obtained from? How much they cost?</p> <p>What kind of cook stoves are used for cooking?</p> <p>Do people dedicate time to collect fuels?</p> <p>Is there pollution from the use of fuels? How do people manage it?</p> <p>How have cooking practices changed over the years?</p>
<p><i>Space heating/cooling</i></p> <p>Do people have needs for space heating/cooling? How are they met? What kind of appliances people use to heat/cool themselves?</p> <p>How have heating/cooling practices changed over the years?</p> <p>Do heating/cooling needs change through the year?</p>
<p><i>Cooling</i></p> <p>Do people have needs for space cooling? Do they use any specific appliances (air conditioning, fan, air cooler). Do they have any ventilation/air circulation practices to deal with temperature?</p> <p>Do people own a fridge or a cooling box? How is this maintained?</p>
<p><i>Communications and information</i></p> <p>Do people use radio, TVs, mobile phones, computers, Internet, etc? How are they</p>

powered? Are these services accessed within the home or in shared spaces?
For what uses do they use this kind of appliances? How do they support local
livelihoods?

Have these uses changed over time?

Any other matters of significance for the study

5 Community interview

Interview guide

Demographic questions:

Gender: Male / Female

Age: <20 / 21-30 / 31-40 / 41-50 / 51-60 / >60

Institutional role/ organisation:

Everyday Practices in relation to services

- Lighting
 - Can you describe how lighting is important for you? How it affects you?
 - Where do you get lighting from?
 - What are the different choices you have to procure the service you need?
 - Do you use different lighting implements during the day?
 - Do you use lighting in different ways in different seasons?
- Thermal comfort (cooling)
 - Can you describe how temperature is important for you? How it affects you?
 - Where do you get thermal comfort from?
 - What are the different choices you have to procure the service you need?
 - Do you use different thermal technologies during the day?
 - Do you use these implements in different ways in different seasons?
- Cooking, preserving food, cooling food
 - Can you describe what different forms of cooking you do, and how you use different sources of energy for cooking?
 - What are the different choices you have to procure the service you need?
 - Do you use different modes of cooking during the day?
 - Do you use these modes in different ways in different seasons?

- Communication
 - Can you describe how lighting is important for you? How it affects you?
 - Where do you get lighting from?
 - What are the different choices you have to procure the service you need?
 - Do you use different lighting implements during the day?
 - Do you use lighting in different ways in different seasons?

Energy in the neighbourhood

- In which ways different forms of energy services are provided for at the building services level?
- In which ways different forms of energy services are provided for in the wider neighbourhood?
- Do you use shared services/shared spaces in different ways?

Material objects

- Can you describe different objects that you have in your house that relate to energy uses? For each one, can you explain where did you get it and how did you choose it?
- Can you describe different objects that you have in your house that relate to energy uses? For each one, can you explain where did you get it and how did you choose it?

General questions

- Is energy access/energy poverty a concern in the city? In which sense?
- What kind of values or concerns should, in your opinion, inform policies for a sustainable transition in the city?

End of the interview

Thank you for your help, this is all very useful. Do you have any questions? (Please write down)

END