

Q&A:

SE4ALL WEBINAR April 5, 2016 | 1 – 2.30 pm (Abidjan), 2-3.30 pm CET, 9-10.30 am EST

TOPIC:

Multi-Tier Framework for Tracking Energy Access | Update on the framework design and implementation of global surveys

Question
<ul style="list-style-type: none">• Joy Clancy University of Twente (NL): In response to that comment on solar lamps - Wouldn't it be better to talk about energy services? - this is after all what people want.• Joseph Kapika: Question from Zambian clients: Can you clarify how the MTF distinguishes connectivity from access?• Natalia Realpe (MEI): Given the objective to provide guidelines for policy intervention and considering that most of the attributes have binary thresholds, is there a plan to further 'define' the spectrums for each attribute?
Keywords: <i>Definition of energy access</i>

Response

Enhancing the service orientation of energy access definition is precisely the purpose of MTF. MTF moves away from the binary definition of energy access as "having / not having an electricity connection" and "having /not having access to non-solid fuels" by instead measuring the quantitative and qualitative aspects of energy service from the user's point of view.

Having a connection in the house may be meaningless if the users cannot use the electricity this connection can provide. The focus therefore is on measuring not only whether households are "connected" – which is really just a theoretical access - but how "usable" this access really is. This is done through measuring several attributes of energy access: For electricity, these include: how much capacity the electricity solution can deliver; how many hours does the household receive electricity service every day, and in particular in the evening; is the service reliable and of adequate quality; (outages and voltage fluctuations); is the service affordable; is it provided legally; and is it safe.

For cooking, MTF records the combination of all cookstoves and fuels used by a household in order to determine the impact on indoor air pollution, stove efficiency, convenience, safety, affordability, and the quality and availability of fuels.

Regarding Ms. Realpe's question: each attribute is measured in a tiered spectrum - from tier 0 (= access level does not comply with minimum requirements) to tier 5 (the highest level of access). Each tier has a minimum and maximum threshold. In theory, it would be possible to divide tiers even into smaller units, but we don't think this would be very practical - it would result in too much fragmentation and probably complicate comprehension of this already complex access measurement system.

Question
<ul style="list-style-type: none"> • Karin van Doorn, the Netherlands: How is the multi-tier framework related to SDG7? Is it used to measure the accomplishment of SDG7? • Billy Yarro, West Africa Energy lead for Practical Action: My concern is about how to adapt the monitoring to already existing Action Agenda or those in progress, I had the chance to read the one of RDC and the objectives, and agenda were a bit confusing.
<p>Keywords: <i>SDG, Action Agenda, SE4All</i></p>

Response

The MTF could be considered in the future as a method for tracking the SDG 7.1 target, which calls for achieving universal access to reliable, affordable and modern energy services by 2030. The MTF is a suitable candidate for tracking this target because it includes all aspects of SDG7.1 target formulation - reliability, affordability, modernity and service orientation. The UN Statistical Commission adopted the SDG indicator framework in March 2016, including access to electricity (7.1.1) and clean cooking (7.1.2). The next SE4All Global Tracking Framework could build confidence of MTF by widening the country coverage and show quality data availability, which can help efforts to mainstream MTF into SDG indicators in the future.

We are currently working with an AfDB team on how best to integrate the MTF approach into future Action Agendas. For already existing Action Agendas, which already have monitoring frameworks, there are no plans to modify this framework. However, in the case of government interests, the MTF could be considered a complementary measure, as MTF surveys provide useful statistics related to energy access.

Question
<ul style="list-style-type: none"> • Abigail in South Africa (Research group led by University of Twente, part of the Energia programme). Will the surveys distinguish between informal and formal electricity connections? Possible answers are that they are connected through a neighbor, or connected with their own meter. • Grace Cineas- Will the multi-tier framework measure access to/availability of formal infrastructures to pay for electricity? In rural Haiti, for example, people

were not aware there was a bureau they could go to to pay for their access to electricity. This question moves away from affordability and more to the mechanism for actually remitting payment through a formal channel.

Keywords: *Attributes of energy access, legality, affordability*

Response

The surveys will distinguish between informal and formal electricity connections. Legality is one of the attributes of MTF and therefore surveys include questions to assess a proxy for this attribute. Detecting the legality of a connection is not easy if done through a direct question to household. Surveys include questions on metering and billing, including whether and to whom households pay the bill to determine whether the connection is formal or not.

Regarding Ms. Cienas’ question - this is an important aspect of electricity service provision, but the surveys will not go as far as to measure the convenience of payment (beyond determining the overall payment method - e.g. to the utility, landlord, by mobile phone etc.). Convenience of payment overall is difficult to standardize and to objectively measure, and it is not directly necessary for any of the MTF attributes

Question

- Louis Sek: With solar lamps, can we talk about access: if I have a solar lamp, can we say I have access to electricity? Do we have a minimum of services to say we have access to energy; what is this minimum?
- Sarah Baird from Let There Be Light International: Does the tier system take into account the number of people per household in respect to watts in lower tiers? For instance, in our surveys of lighting need and impact we find that the provision of a solar light to an elder with no dependents meets her need, whereas an elder with 8 dependents would not be fully in Tier 1 at a household level.

Keywords: *Basic lighting service*

Response

The advantage of the MTF approach is that it acknowledging the incremental benefits of all energy access solutions without equating access to a solar lantern to access to a well-functioning utility grid. The minimum level of access in MTF is Tier 1. In the case of electricity access, Tier 1 requires a capacity of 3W - measured in terms of the service level, this mean a lighting service of 1,000 lumen-hours and cell phone charging for at least four hours a day, of which at least one hour must be in the evening – whether or not this access is provided by grid or off-grid solutions.

MTF, however, also acknowledges incremental benefits of individual solar lanterns, which provide access below Tier 1. MTF has developed a methodology that allows the counting of solar lanterns towards energy access proportionally to the lighting/cell phone charging levels they deliver e.g. a lantern may electrify a half or a quarter of a household. Specifically, data collected by Lighting Global reveals that over 90 percent of people across Africa and India are satisfied with brightness levels around 25 lumens, and use of about 4 hours each evening.

Based on the observation that low-level lighting is an individual service, MTF has placed a benchmark at 100 lumen hours for meeting the needs of one person. Use of a shared light source simultaneously by multiple persons can reduce its utility because it is difficult to spatially distribute light across more than one person. Thus, there are declining access returns on additional light as more people are served, up to a full household of 5 being served by 1,000 lumen hours.

Regarding Ms. Baird's question, we have considered Tier 1 definition for a typical family of 5, but your point is well-taken that the requirement will vary depending on the number of household members. We will consider your recommendation to take into account the family size in the multi-tier analysis of the survey data.

Question
<ul style="list-style-type: none">• Elisa Ebenezer: I want to know whether Ghana is part of the priority countries for the MTF for tracking energy access.• Louis Sek: When you do survey who is your correspondents in the countries, is my country Senegal member of countries you are now making survey.• Omar Seido from Ghana Statistical Service: Can a country's NSO outside the 15 selected countries join in? What is the process?
Keywords: <i>country selection</i>

Response

Our intention is to carry out MTF surveys in as many countries as possible. There are two ways a country can participate in the MTF survey. Currently, World Bank/ESMAP is conducting comprehensive baseline surveys. The initial list is included below. Additional countries, however, can be added based on available funding. Government interest is among the most important selection criteria, therefore we would like to urge any government interested in participating in the MTF survey to get in touch with us. (The World Bank MTF team: drysankova@worldbank.org, and eportale@worldbank.org).

In addition, World Bank/ESMAP has developed a short MTF module that can be incorporated into any national household survey by the National Statistical Office (NSO). The advantage of incorporating the module in a regular household survey is in ensuring consistent reporting of MTF data over time to measure progress towards universal energy access under SE4ALL and SDG7.

We would be happy to engage and discuss further with any NSO interested in pursuing this modality. ESMAP funding is available to provide technical assistance to interested NSOs.

The current list of countries for MTF baseline survey include: Democratic Republic of Congo, Ethiopia, Kenya, Liberia, Niger, Nigeria, Rwanda, Uganda, Zambia, Bangladesh, India, Cambodia, Myanmar, Haiti, Costa Rica, Honduras.

Question
<ul style="list-style-type: none">• Larua Williamson REN21: My question is about collecting data/information on installed capacity: Is there any plan to collect this? Adding additional questions to the household survey may not be possible but could there be another layer of analysis where information on PV equipment could be done from which PV capacity could be deduced• Indira Shakya, CTR Nepal: How will MTF take into account the multiple energy use in a household?• Juliana Baumgartl: What is the role of productive use? Has this also been measured in a different way?• Lucia Fort, World Bank: For Dana and Elisa, Are there plans to extend the work to measure the energy access and use of business, especially micro and small businesses that may operate out of the household.
<i>Keywords: Installed capacity; Energy usage, productive use,</i>

Response

The surveys will collect or estimate information on the capacity of supply sources for off-grid solutions. For individual household systems this information will be collected through a household survey, based on the size of the panel and/or estimated based on the appliances in use. For mini-grids, this information will be collected from a community survey. This information will be collected both for the main source and back-up sources.

For cooking, the surveys will also take into account the fact that households may use several different cookstoves and fuels (fuel stacking). Information will be collected for different cookstoves and fuels in use.

Regarding electricity usage, information on appliances will be collected (including information on which household members use those most). There will also be a time module which can provide further information on usage of electricity within the household.

Regarding access for businesses/productive uses: while the global baseline surveys are focusing on household access, the team has also developed an enterprise module which will be applied in several countries on a pilot basis alongside the main household survey. The results from the pilots and all tools and instruments will be shared with the SE4ALL access community. The baseline survey will also include a community module, which will assess energy access at the community level and key public institutions, like schools and health clinics.

Question
<ul style="list-style-type: none">• Ana Rojas, from IUCN: How are you disaggregating information in the surveys to ensure you can have sex-disaggregation in your analysis? Which is the most efficient manner in which you are addressing this to report for SDGs and SE4ALL? Is sex-disaggregation also done in other sectors besides household energy use?• Indira Shakya, CRT Nepal: How does MTF consider gender aspects of Energy Access?
Keywords: <i>Gender analysis</i>

Response

The survey will provide multiple insights into the gender dynamics of energy access. All data will be gender disaggregated, which will allow a comparison of energy access levels and its impacts between male-headed and female-headed households. In addition, specific questions will be included to obtain insights on gender differences in terms of time spent on fuel collection, stove preparation and cooking; exposure to indoor air pollution; and the decision-making process for obtaining both cooking and electricity appliances and the use of appliances. Below some more details of Gender in the MTF survey

- Overall differences in the energy access tiers and all outcomes between male and female-headed households
- Decision to purchase appliances--female, male or joint-spouse decision-making
- Cookstoves
 - Respondents will be the main cook, who is usually female. Information will be collected for time spent cooking, collecting fuel and preparing

stoves; exposure to indoor air pollution (e.g. time spent cooking/time spent in kitchen) and cookstove purchase decision-making

- Willingness to pay for an improved cookstove--this will be administered to both the main cook (usually female) and the person who decides to buy the cookstove (usually male head of household) across the sample so we will be able to compare their preferences on these measures.
 - Time Use is asked across different combinations of gender and age (e.g. Women 15 years and older, Girls 15 years and younger, Men 15 years and older, Boys 15 years and younger)Time for household tasks (cooking, fuel collection) versus leisure and productive activity in gender analysis
 - Health Impacts is also measured across different combinations of gender and age
 - Examine impact of exposure to cookstove/non-solid fuels on health across males and females
- Attitudes (all responses can be gender disaggregated based on female/male headed households)
 - Overall life satisfaction as it relates to energy outcomes
 - Perceptions of electricity reducing time for household tasks and increasing safety
 - Perceptions on whether street lighting makes it safer for girls and women to be out at night
 - Household decision-making regarding energy and appliance use/purchase

Question
<ul style="list-style-type: none">• Augustus Goanue from Rural & Renewable Energy Agency - Liberia: Does the MTF address energy access and its corresponding impacts on the livelihoods of the poor?• Johanna Diecker from GOGLA: How will the quality of life be measured?• Sarah Baired from Let There Be Light International: When bringing the extreme poor into Tier 1 access, can the implementation programs also piggy back onto existing social service channels or other anti-poverty initiatives/programs? Also, is there any evidence that the provision of a solar light can be envisioned as a gateway to broader modern energy usage? In our programming in Uganda we have seen through our last follow-up survey that of 735 solar light recipients, 98% are explaining the benefits of solar to their neighbors, 99% would recommend the purchase of a solar lights and 8% are using savings from solar lighting to purchase other renewable lighting products.
Keywords: <i>Energy-poverty nexus; impacts</i>

Response

MTF itself does not measure impact - the focus is on measuring service level (which is a necessary but not the only pre-condition for impact. However, the surveys will include data (including income estimates) which will provide some insights into the impact of energy access and relationships between energy and poverty.

For example, since MTF survey collect information on income/expenditure of households, the attributes of energy access and service can be analyzed and compared across expenditure quintile or decile.

MTF will not measure quality of life, but the surveys will include an attitude module, which will include questions on overall life satisfaction and allow possible simple correlation between these and level of energy services.

Regarding Ms. Baired's question - MTF will not be involved in the implementation of energy access programs, it will just collect information on the level of access. This information, however, over time can provide insights into what extent the solar light is the starting point of broader modern energy use, that is, the first step on the energy ladder.

Question

- Natalia Realpe Carrillo from MicroEnergy International and TU Berlin: On the implementation of the MTF through governments, will the ESMAP group provide data analysis and continuous monitoring?
- Also, will the Global Survey be available to NGOs? We currently use a pre- and post- solar light distribution tool that we developed in-house, but we would like to be collecting data that complies with global standards.
- Johanna Diecker from GOGLA: Will the questionnaire itself be made available for better alignment with other research projects?
- Ana Rojas: Is the MTF Global Analysis Survey template available to the public.
- Setu Pelz from MicroEnergy International GmbH in Berlin: Thank you for the presentation. Will raw anonymized data sets you collected be made available to the public?
- Dr Rodriguez, from I4SD: How will you open the tools and platform to other types of stakeholders (ie. NGOs, consulting organizations and other actors) to help reporting?
- Nina Fenton from European Investment Bank: Where can we access the survey tools developed for the MTF? It would be great if you could send a link. Are the tools country specific? Is there a manual or other guidance on data collection and analysis/interpretation?
- Natalia Realpe Carrillo from MicroEnergy International and TU Berlin: With the

CAPI system, will consolidated information be publicly available for academic/practitioner purposes?
<i>Keywords: availability of the MTF survey results and tools;</i>

Response

All MTF data and tools will be available to the public on the ESMAP website by the end of 2017. This will include:

- Survey tools – questionnaires and manuals (will be available as of July 2016)
- Methodological note (how to sample, and how to proceed with the survey)
- Guidance on how to analyze MTF data

Data from ESMAP baseline surveys (starting with 10-15 countries mentioned above) – will be available on the ESMAP website – both results and the data that will allow stakeholders to do their own analysis. To the extent possible, the data from the household surveys carried out by the National Statistical Offices (NSOs) will also be posted here, subject to the approval of the NSO to make this data public (this decision depends on the particular NSO).

Question
<ul style="list-style-type: none"> • Leonna Hoijtink from SNV: To what extent is it feasible for NGOs with a relatively small budget for M&E to report on the multi-tier framework? It seems that quite a lot of data needs to be collected for this? Perhaps Lucy can elaborate on how Practical Action does it? • Hannah Mottram- ACCESS Coalition & CAFOD. What do you see as the role for CSOs (both national and international) in this process? How will you work with CSOs to ensure the benefits of their experience and networks are maximized?
<i>Keywords: monitoring, Civil Society Organizations (CSOs), collaboration</i>

Response

We are interested in collaborating with all stakeholders interested in advancing MTF. CSOs in particular can play a very important role - both as partners for collecting MTF information, but even more so as partners in disseminating MTF information, and leveraging their networks once data become available.

We believe that the MTF survey can be carried out by an NGO, even with a limited budget. ESMAP/World Bank is carrying out large-scale national surveys, which are more expensive. But donors/NGOs could carry out smaller surveys focusing on their project areas, possibly also using the short MTV module. We are testing other methods to make MTF data collection more affordable (e.g. cell phone surveys) and will continue to inform the SE4ALL stakeholders about such methods.