

# RESEARCH PEARLS | FEDU PEARL #8

In our series “Research Pearls” we are providing first-hand insights into our dynamic and powerful diaries research. In this Pearl we demonstrate how our data can be presented spatially. We will zoom into the distribution of access to power and brand distribution of solar energy.

## How mapping can help us understand the findings

### Exploring regional differences in access to power through maps

As already mentioned in Pearl #5 more than half of respondents are not connected to any electricity system. The Western region has the highest percentage of population connected to grid (30%). Across the different areas about 15% of the respondents are connected to solar.

The big surprise is that the urban residents in Mbarara have the highest grid access with almost three out of four having a grid connection. Mbarara is more connected to the grid than urban areas very near to Kampala like Mukono and Kayunga.

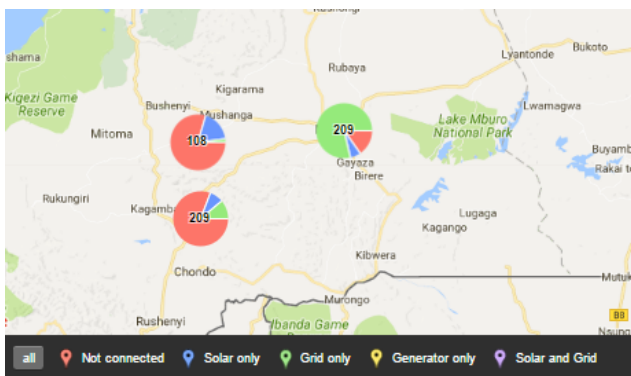


Figure 1: Access to Power Western Region

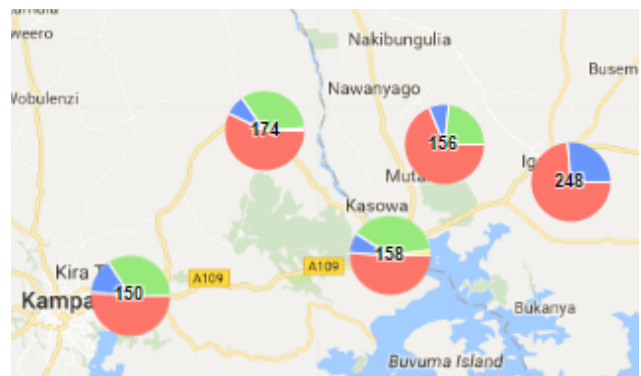


Figure 2: Access to Power Central/Near Eastern

The location with the lowest access to power in our sample (no-one has grid) is not the most remote location. It is Iganga and Mayuge, which is a location that is partially near a major through-road. Iganga and Mayuge is also the location with the highest portion of solar users: more than one in four of the baseline respondents. The Far Eastern portion of our research could be considered the most remote. Nevertheless, access to grid is around 25% for Tororo District and around 10% for Manafwa and Mbale districts.

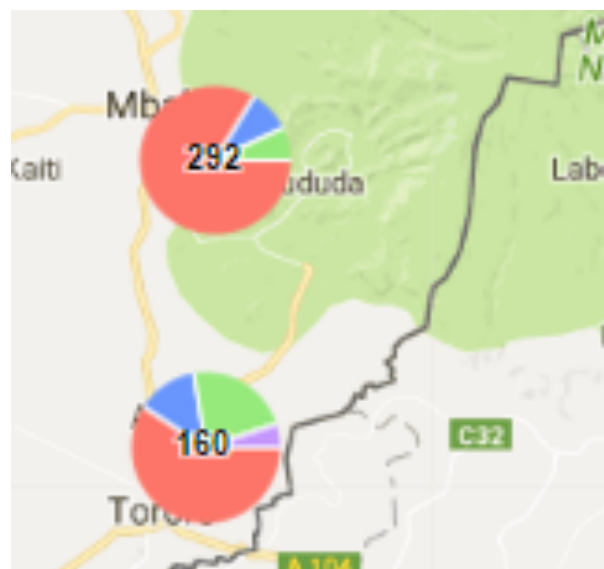


Figure 3: Access to Power Far Eastern

The map here on the right shows more detail about the distribution of solar in Iganga. We see that all the locations have a combination of solar (blue colour) and no connection at all (red). There seems no spatial pattern for uptake of solar. The location most to the south of this map is practically in Iganga urban zone, but shows below average uptake of solar. The two locations farthest from the roads (marked with a 15 and 36 in this map) appear to have average or above average uptake of solar for this region.

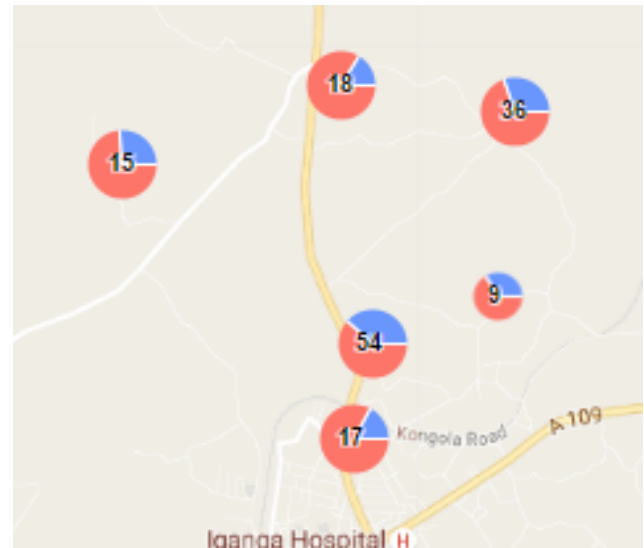


Figure 4: Map Zooming into Detail Iganga District

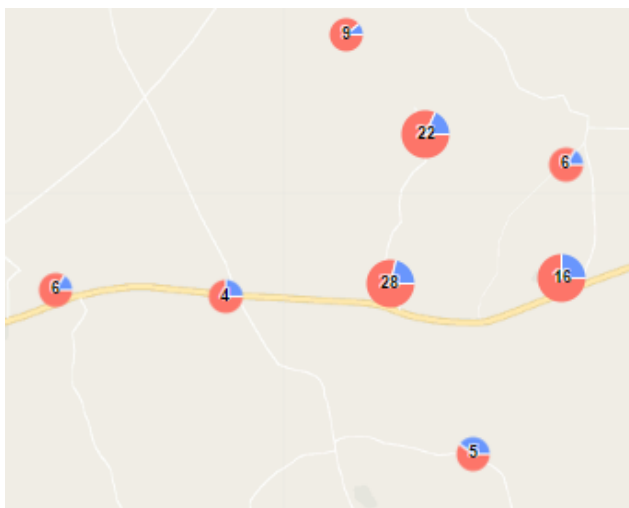


Figure 5: Map Zooming into Detail Mayuge District

In Mayuge district, we see a similar pattern. No location has uptake of solar beyond about one in three. No location has no solar. Proximity to the road does not appear to have a higher uptake of solar.

This leads to us mulling over some new assumptions that you might want us testing: Is promotion for solar as effective away from roads as along the roads? Or would people along roads be less likely to adopt solar as they expect the grid to expand along the road soon (despite higher exposure to promotion)? Or do communities on purpose encourage a few to try out solar and the others wait and see how their experiences are?

### Solar brand distribution visualized through maps

Some of our Research Pearl readers have an interest in which solar brands are successfully spreading where. In our baseline we have found that spread of some brands is very specific to certain regions while others appear to have a more even distribution.

Maybe the most important finding is that almost 40% of all solar reported has brand name “other”, most of which were solar devices for which the brand name was unknown to the owner.

On the following page you can see an our overview map of solar brand spread in Western as well as Central and Eastern Region

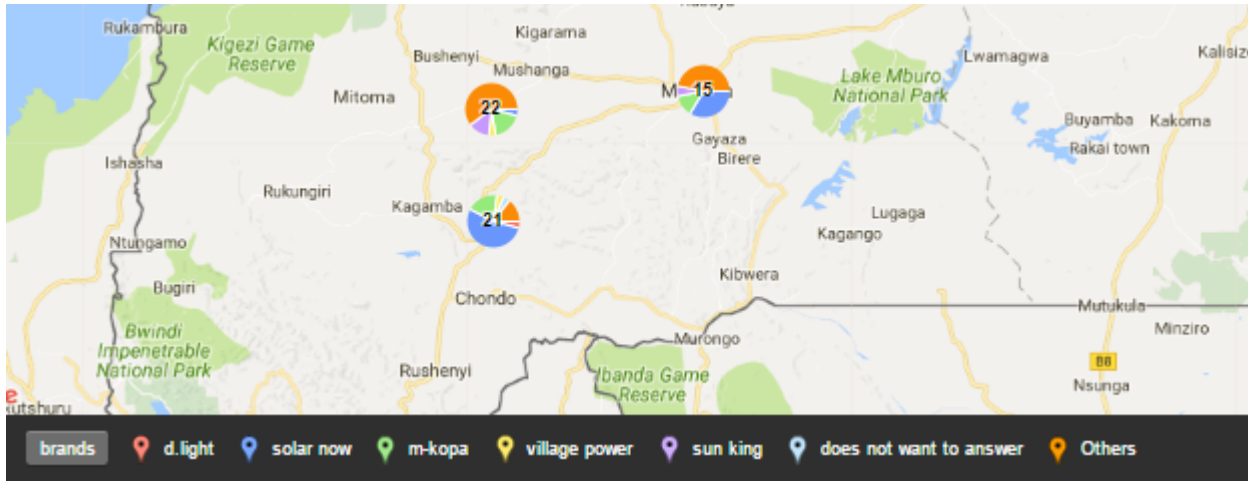


Figure 6: Solar Brand Spread in Western Region

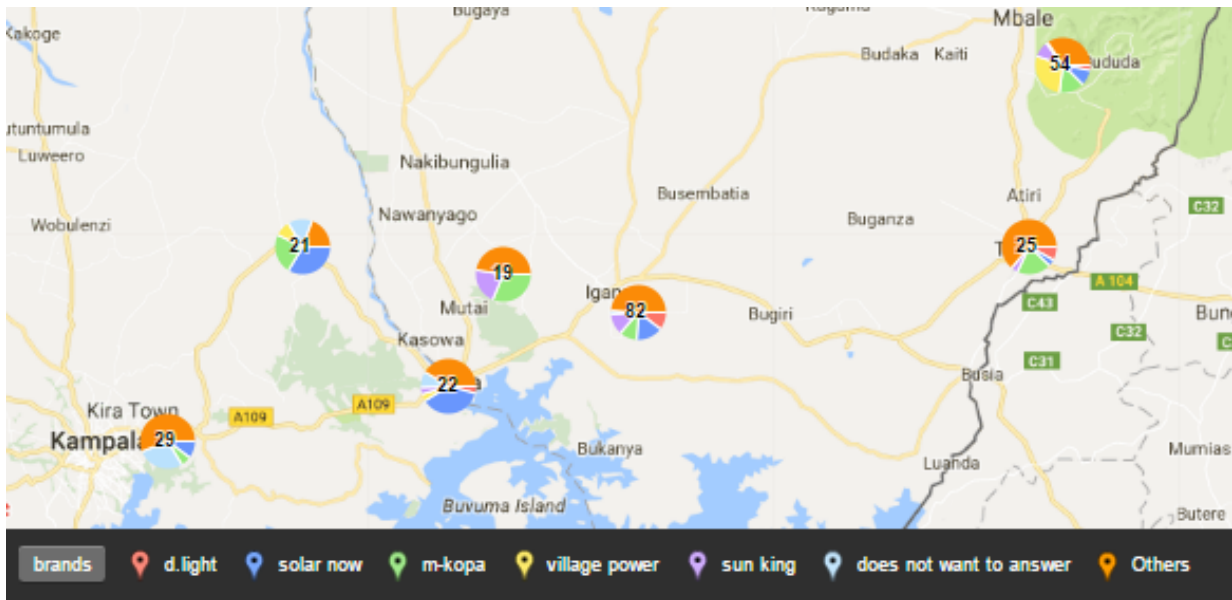


Figure 7: Solar Brand Spread in Central and Eastern Regions

Solar Now (blue segment of the pie charts) is an important brand in Ntungamo (Western), Buikwe (Central) and Kayunga (Central) and in Mbarara (Western). In other locations Solar Now is quite rare. M-Kopa (green segment of the pie charts) can be found in most pie graphs with around 10-35%, apart from Buikwe and very little in Mukono. Village Power, on the other hand, is very prominent in Mbale and Manafwa, and has some presence in Kayunga and limited in Buikwe. Sun King is relatively big in Jinja, Iganga, Mbale and Sheema.

The following map zooms into the individual owners of solar in Kayunga District. Even if we saw earlier that people do not as entire communities adopt solar, we do see in detailed maps that in certain localities one or another brand is a lot more common and other places other brands are more common.

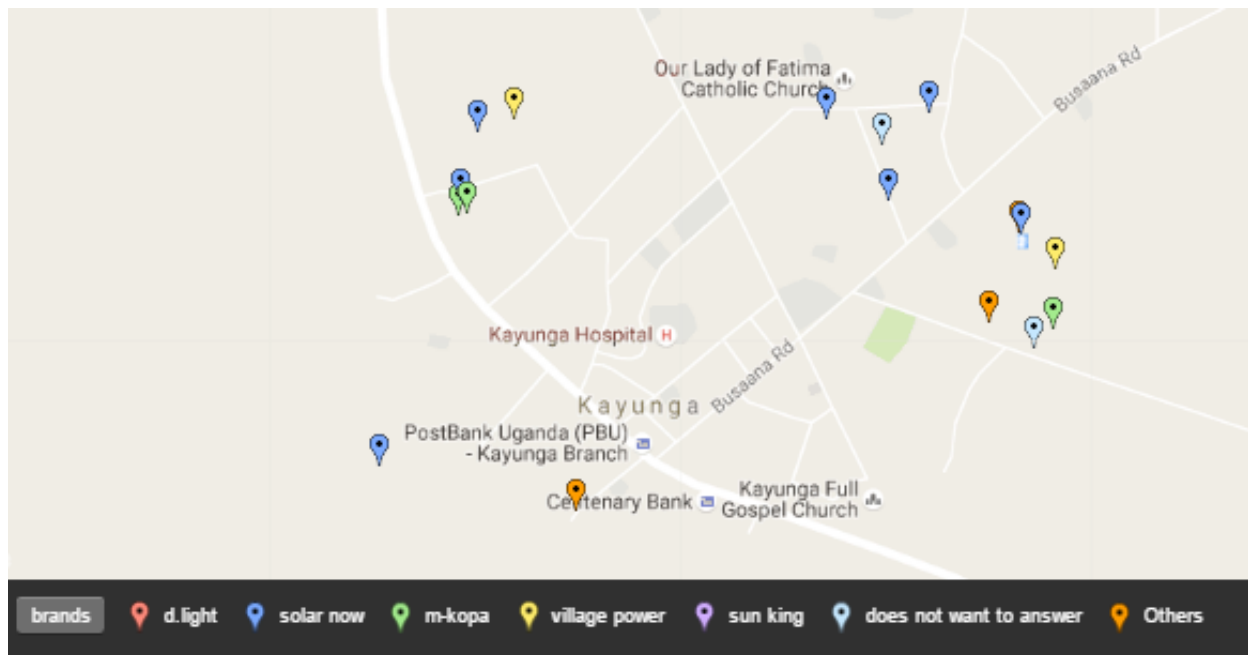


Figure 8: Detailed Map of Solar Brands in Kayunga District

### Let us know what maps you need for your organisation

As you know, L-IFT is conducting this research to support the financial sector and the clean energy sector with meaningful data. We hope that the above examples of how our findings can be presented gives you some ideas.

Let us know which maps you might need for your work!

Send your suggestions to:

[learning@l-ift.com](mailto:learning@l-ift.com)