Survey Field Force Allocation and management using GIS

Traditionally, household survey samples have been based on a clustered sampling design. However, this design choice comes with a cost in accuracy. Another feature of household surveying was to have separate field forces for each survey. While this has been acceptable in the past, this approach is becoming increasingly difficult in the face of more and more surveys.

The focus of the presentation will be around the development of a process to assign and distribute multiple surveys over the course of a year to a single unified field force. There are several aspects to the work:

- Implications of survey design such as Simple Random Sample [SRS], Stratified Simple Random Sample [StSRS] and Clustered Sample: [2SSCS] on field force travel distance.
- Picking indicative locations for interviews.
- Assignment of samples (i.e., households to interview) to interviewers.

The result of the project was that having a single field force to carry out several different surveys over the course of a year is feasible, both on a cost basis as well as with regard to desired accuracy of results. A process has been implemented to have a single field force carry out multiple surveys simultaneously over each quarter and year. However, this approach does come with an increase in complexity and forward planning needed. Other aspects of the presentation will cover improving situational awareness and agility in operational management that become possible with spatial data and integrating it with existing systems and process modification.