ICTS TO ACHIEVE BROADER PUBLIC-POLICY OBJECTIVES

DR CHRISTOPH STORK

/ GENERAL

- All very good research papers
- Policy briefs need refinement: translation
- Focus on how to extent research to increase usefulness for policy makers
- My view on how to translate research into policy advice
- CPR South not just R South

Policy Brief Evaluation	Stand Alone?	Addressing policy makers?	Pratical recommendations?	Adequate communication?
Understanding Complex Social Network of Government Officials in Decision Making	No	No	No	No
Improving Disease Outbreak Forecasting Models for efficient targeting of Public Health Resources	No	Yes	Vague	No
Predicting Socio-Economic Characteristics of the Sri Lankan Population using CDRs	No	Yes	Vague	No
Leveraging big data to support measurement of the SDGs	No	Yes	Vague	No

WHAT IS IMPORTANT FOR A POLICY BRIEF?

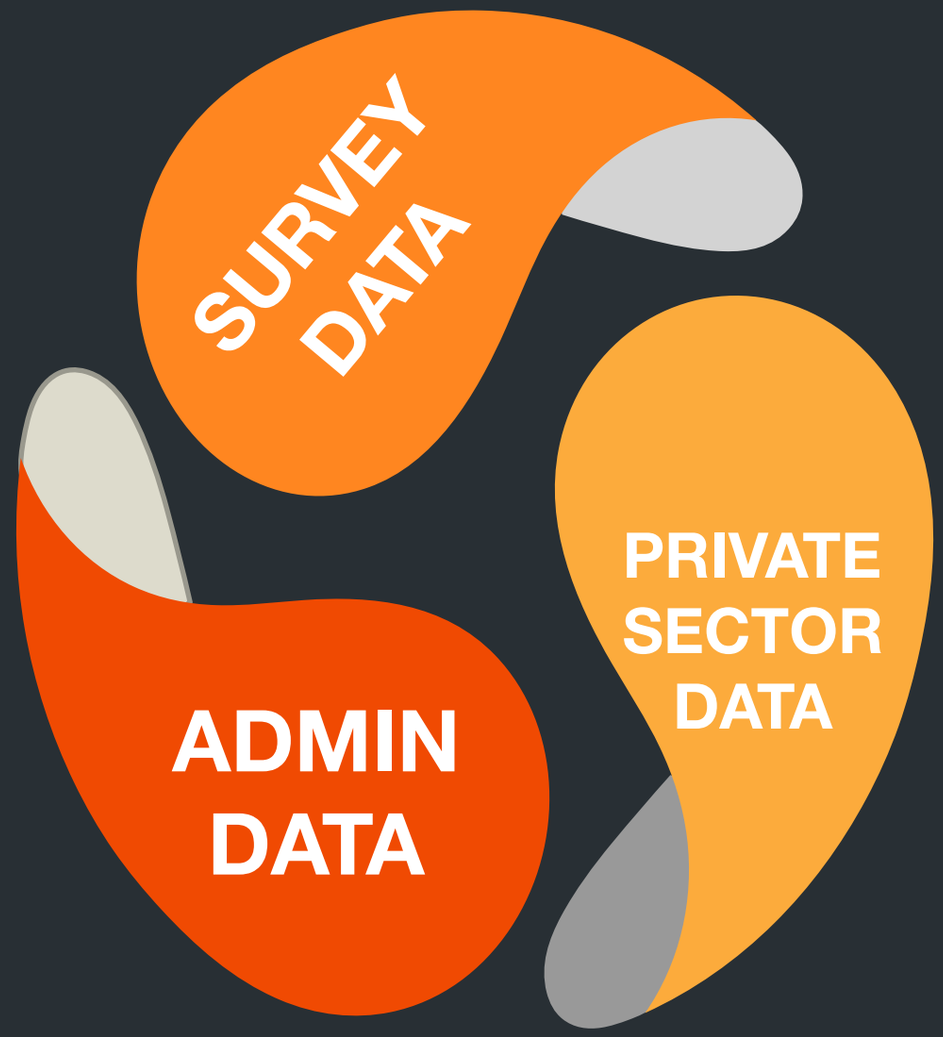
- Which policy maker am I addressing
- What is the decision scope of policy maker
- What do I hope to change
- What evidence do I need to affect that change
- How do I need to communicate that evidence

IMPROVING DISEASE OUTBREAK FORECASTING MODELS FOR EFFICIENT TARGETING OF PUBLIC HEALTH RESOURCES

Lasantha Fernando, Sriganesh Lokanathan

/DISCUSSION

- Very good example of big data
- Combining large data (CDRs) with admin data (Dengue fever stats)
- “CDRs for estimating human mobility to improve predictive performance of dengue fever models”
- Policy briefs needs to be better targeted and more convincing



Policy Brief does not have enough evidence to convince policy makers to utilise CDRs

Dengue fever risk according to paper

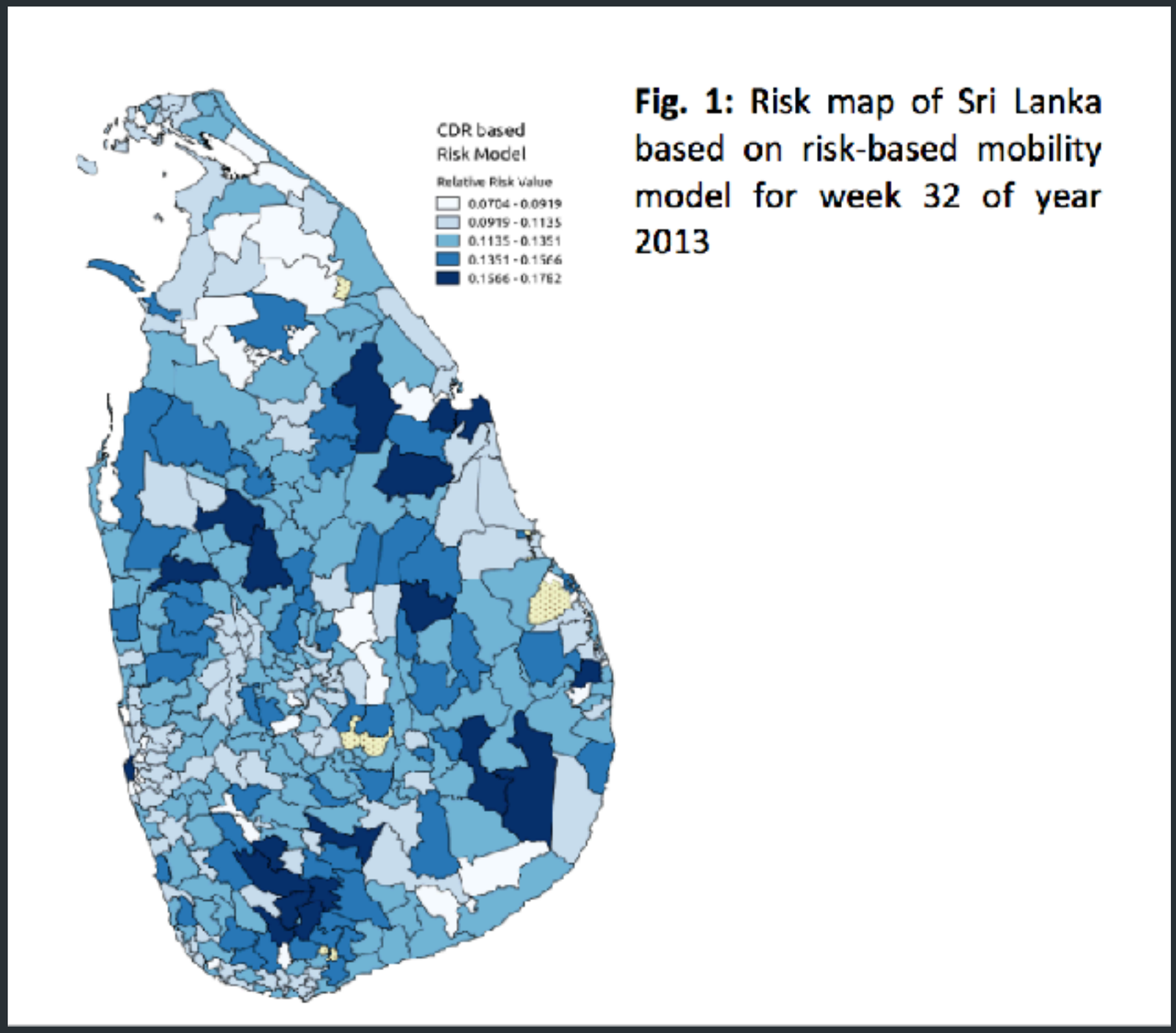
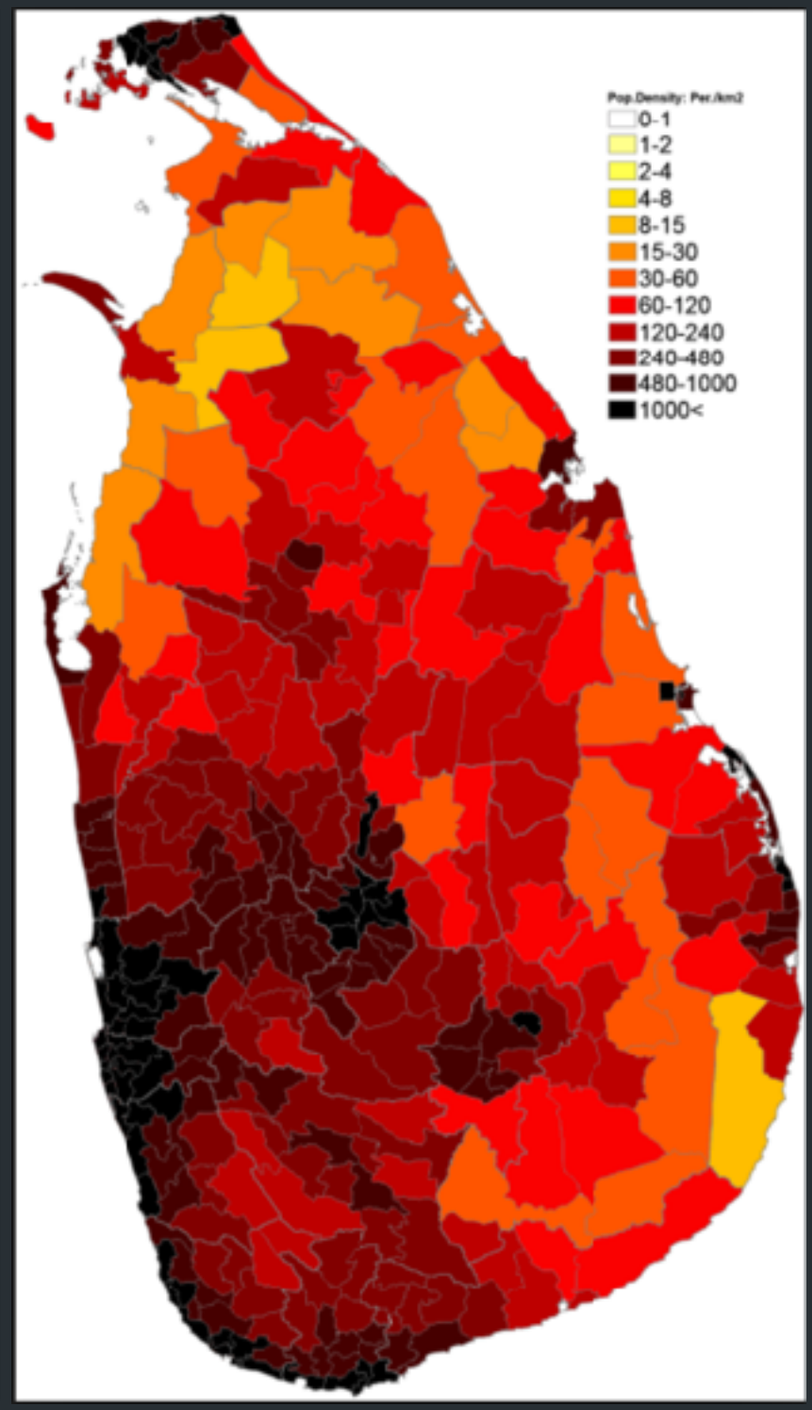


Fig. 1: Risk map of Sri Lanka based on risk-based mobility model for week 32 of year 2013

Population density



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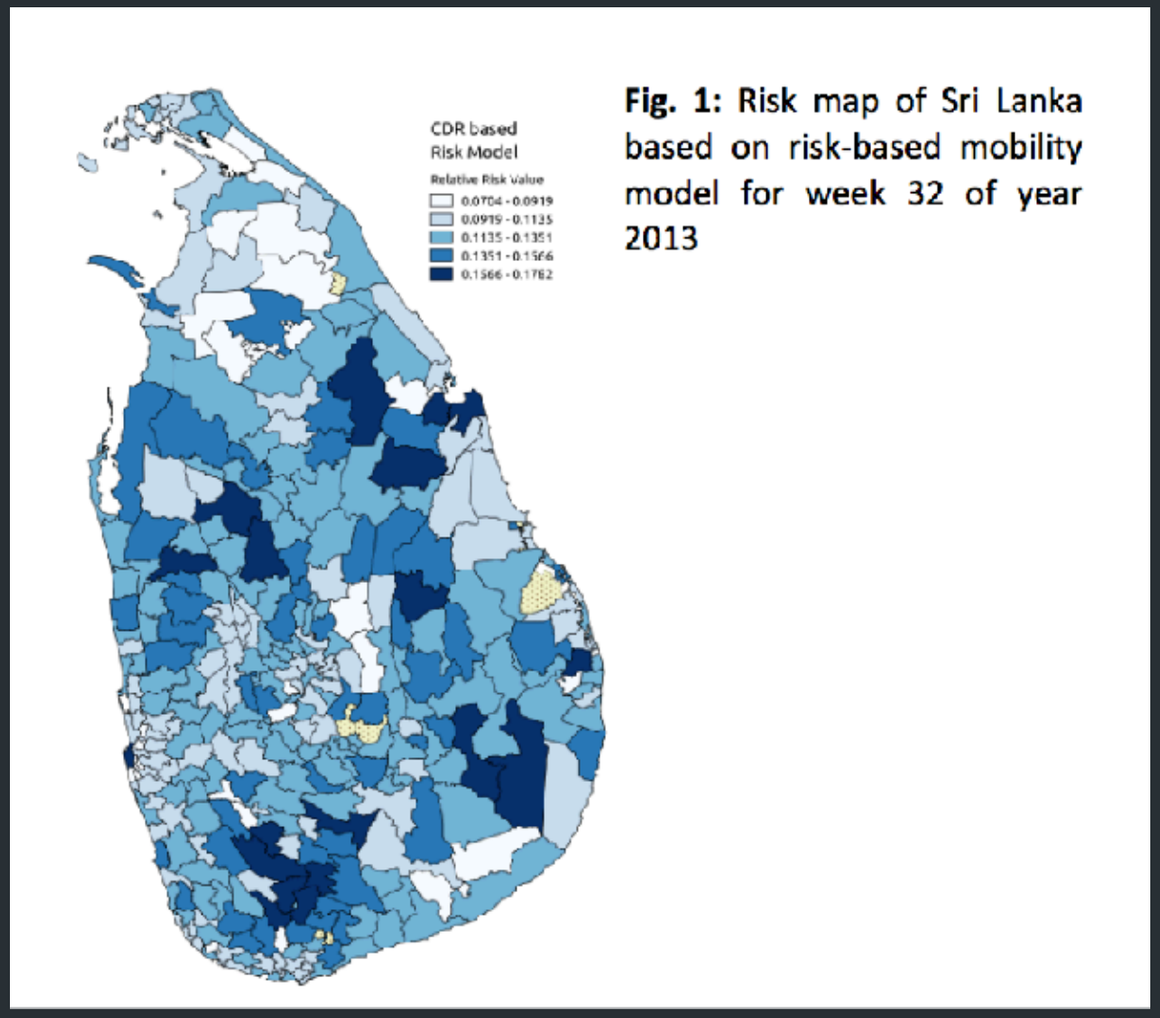
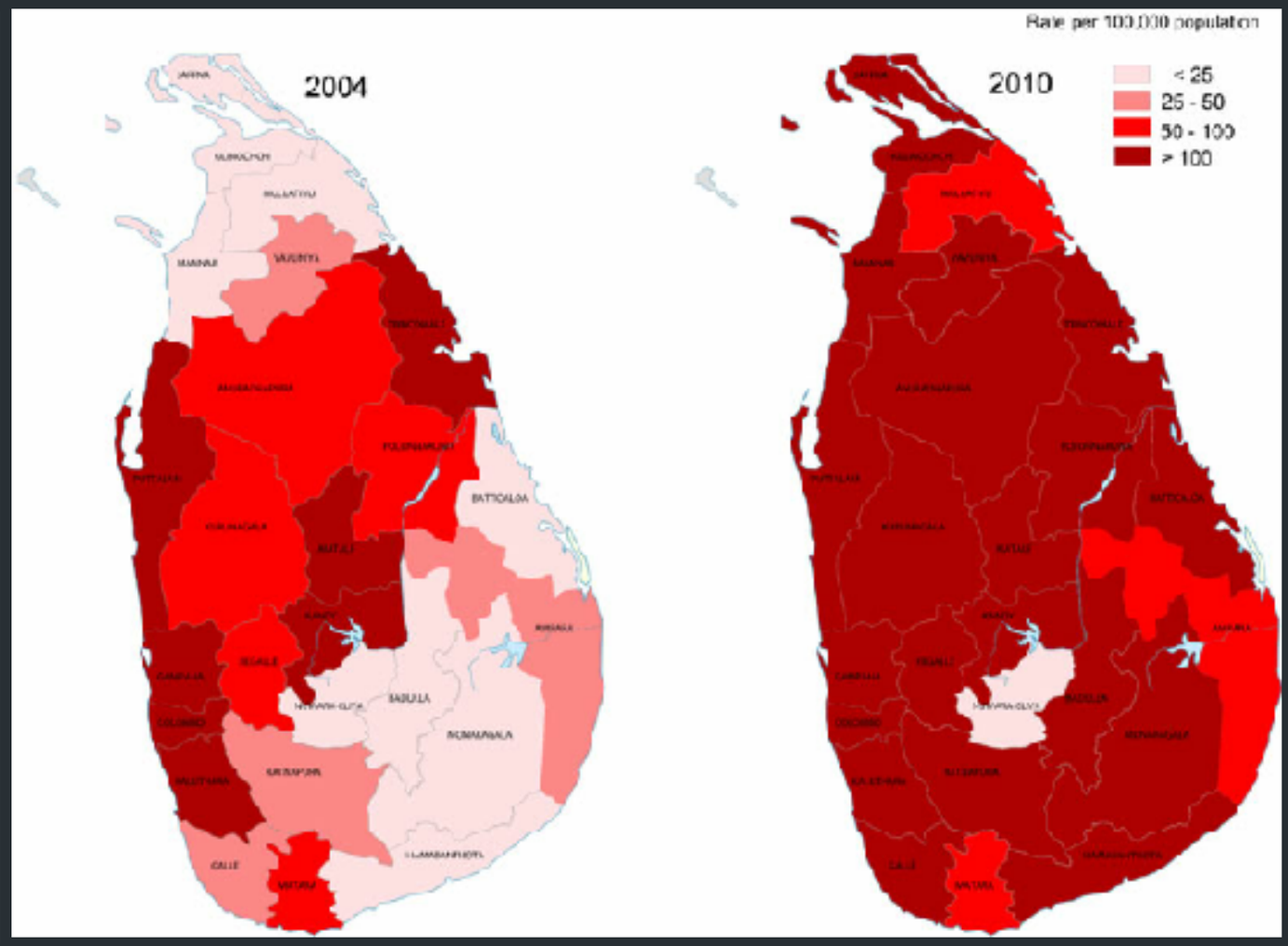


Fig. 1: Risk map of Sri Lanka based on risk-based mobility model for week 32 of year 2013

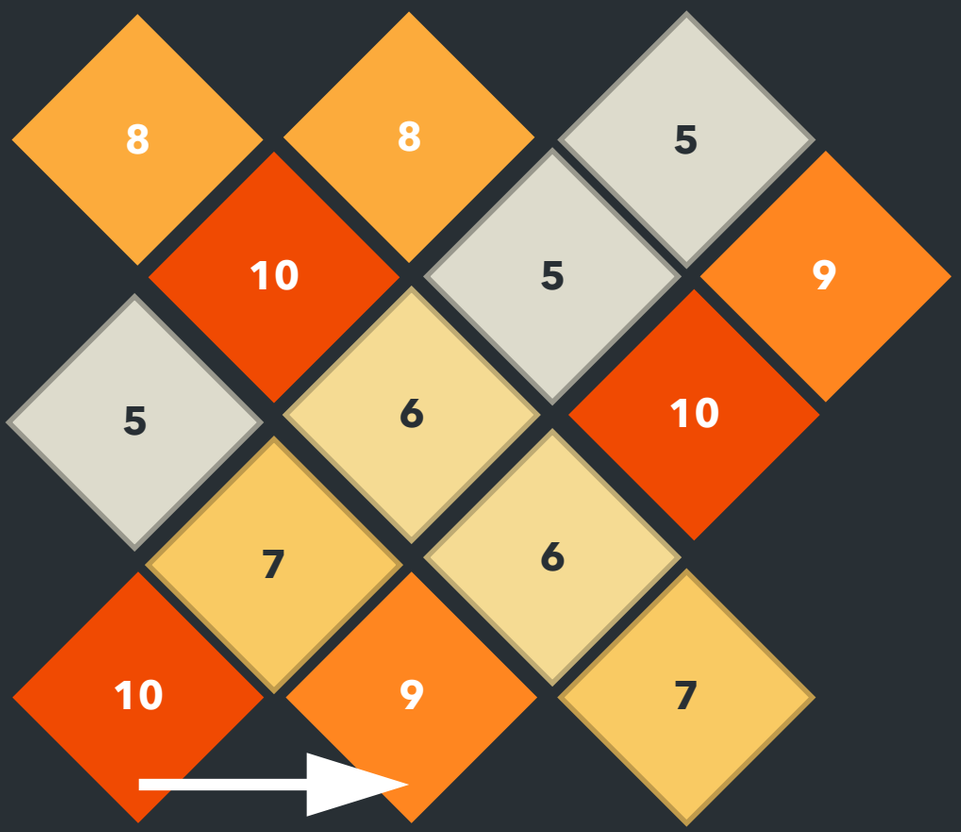
Actual Dengue Fever Outbreaks



Evidence was in the paper

Figure 2. Dengue Incidence (Predicted vs. Actual) using GA optimization

WAY FORWARD: MOBILITY INDICATORS



- Ministries are unlikely to have the skills and computing power to process CDRs
- Mobility indicators for districts could be calculated for them and regularly be updated
- Could include direction of mobility
- Dengue, Malaria, TB, Food & Mouth ….

Improving Disease Outbreak Forecasting Models for efficient targeting of Public Health Resources

Which policy maker am I addressing	Minister of Health
What is the decision scope of policy maker	Request CDRs from mobile operators
What do I hope to change	Collaborate on utilisation of CDRs
What evidence do I need to affect that change	How it helps improve disease outbreak forecasts and preventative planning
How do I need to communicate that evidence	X% better forecasting Y less fatalities Z US$ saved by increased efficiencies

UNDERSTANDING COMPLEX SOCIAL NETWORK OF GOVERNMENT OFFICIALS IN DECISION MAKING

Moinul Zaber, Dipankar Chaki, A.T.M Shakil Ahamed

I could not join
but I could LIKE

/DISCUSSION

- Impressive web scraping and network analysis skills
- …..does not have a policy focus
- Authors could make the paper and policy brief policy relevant:
    - Is the closed FB a good approach to discuss public service innovation?
    - Will people want to use private FB account for work purposes?
    - How can interactivity and contributors increased?
        - Moderated blog?
        - Separate m-app?

Understanding Complex Social Network of Government Officials in Decision Making	
Which policy maker am I addressing	Office of the Prime Minister
What is the decision scope of policy maker	Create a Facebook alternative that removes hierarchy and promotes innovation
What do I hope to change	Platform that spurs public service innovation, that is widely used
What evidence do I need to affect that change	Content analysis of FB group, in addition to the network analysis. Have any innovations come from it?
How do I need to communicate that evidence	Translate your findings so that the person you are addressing can understand

LEVERAGING BIG DATA SOURCES TO SUPPORT THE MEASUREMENT OF THE SDGS

Thavisha Perera-Gomez, Sriganesh Lokanathan

/DISCUSSION

- Paper alludes to how Big data may be used but does not actually demonstrate any application.
  - Apps for dispersing drought relieve may provide poverty indicators
  - Health app if used widely may provide alternative health stats

/WAY FORWARD: ADD EMPIRE ANALYSIS

- Satellite image of village in Indonesia where Lirne Asia conducts HH surveys
- Classify HH as poor based on machine learning and compare that with survey data

Leveraging Big Data Sources to Support the Measurement of the SDGs

Which policy maker am I addressing	National Statistical Offices
What is the decision scope of policy maker	Utilise CDRs, satellites and machine learning to monitor SDGs
What do I hope to change	Collaboration with LirneAsia in use of CDRs, satellites and machine learning
What evidence do I need to affect that change	Demonstrate that CDRs can help to make projections more accurate
How do I need to communicate that evidence	Practical examples Empirical evidence

PREDICTING POPULATION-LEVEL SOCIO-ECONOMIC CHARACTERISTICS USING CALL DETAIL RECORDS (CDRS) IN SRI LANKA

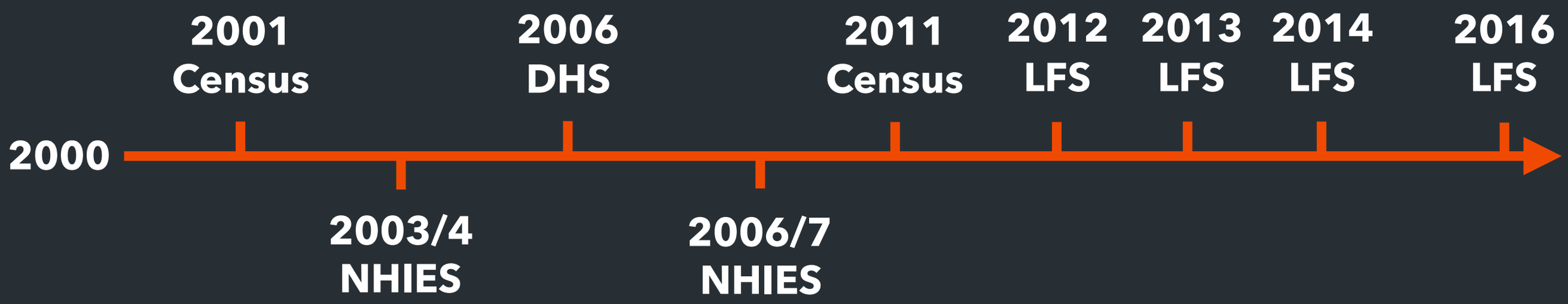
Aparna Surendra, Sriganesh Lokanathan,
Thavisha Perera-Gomez

/DISCUSSION

- Key Message: Use CDRs + survey data for better data
- From Paper: “CDR features are, ultimately, behavioural features, and these are not constant across time and space.”
- A problem with large data sets is that everything is correlated
- We need to understand whether changes in CDRs based on changes in social economic characteristics? (not necessarily causality)

SURVEYS ARE SNAP SHOTS - BIG DATA IS A MOVIE

Example of Namibia surveys



Can Big Data be used to:

- Fill gaps (interpolate key statistics)?
- Reduce frequency of surveys?
- Make statistics more accurate?
- Reduce sample size (census 4% of population)?

We need to understand links better

/WAY FORWARD

- Case study to establish links to socio-economic indicators:
    1. Census data for 1 EA
    2. Lirne Asia Survey Data for 1 EA (collect mobile numbers in EA and consent forms)
    3. CDRs for the EA
    4. QoS measurements for the EA while the survey was done
- Empirical analysis how CDRs can be used to interfere and project socio economic indicators

Predicting population-level socio-economic characteristics using Call Detail Records (CDRs) in Sri Lanka

Which policy maker am I addressing	National Statistical Offices
What is the decision scope of policy maker	Requesting CDRs from MNOS
What do I hope to change	Collaboration with LirneAsia in use of CDRs
What evidence do I need to affect that change	Demonstrate that CDRs can help to make projections more accurate
How do I need to communicate that evidence	Practical examples Empirical evidence

CONVERTING GOOD RESEARCH INTO GOOD POLICY ADVICE