Inclusion of the agricultural poor through mobile

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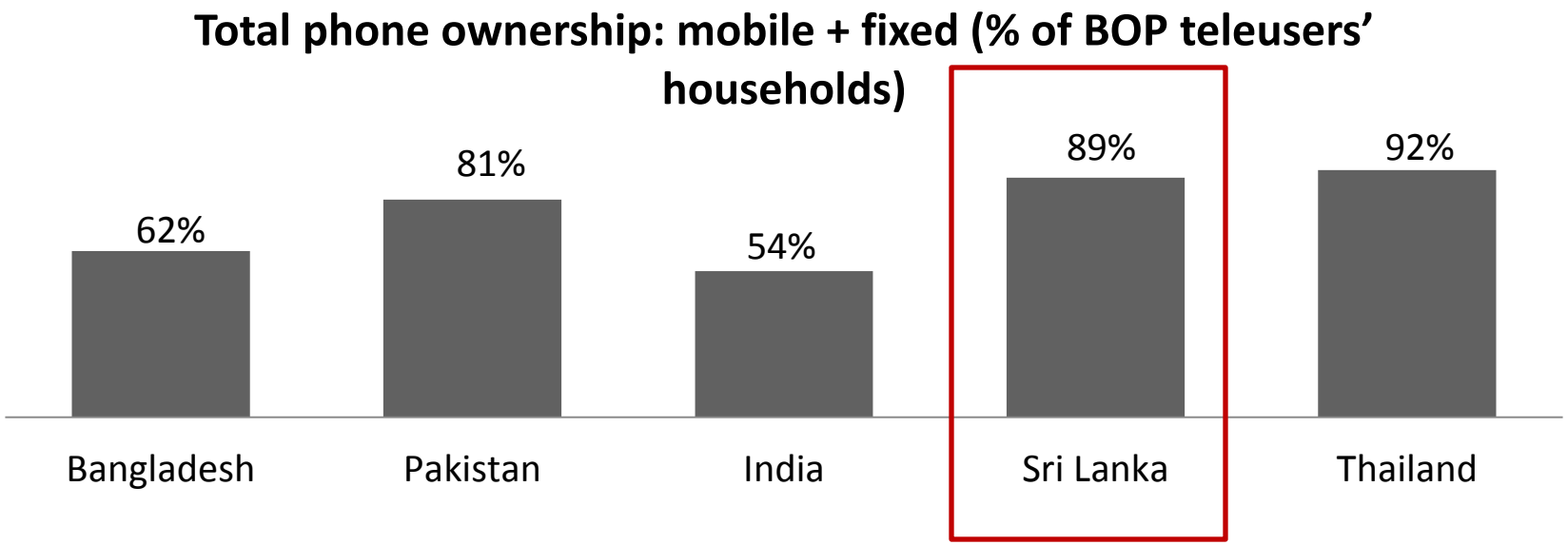
IDRC CRDI

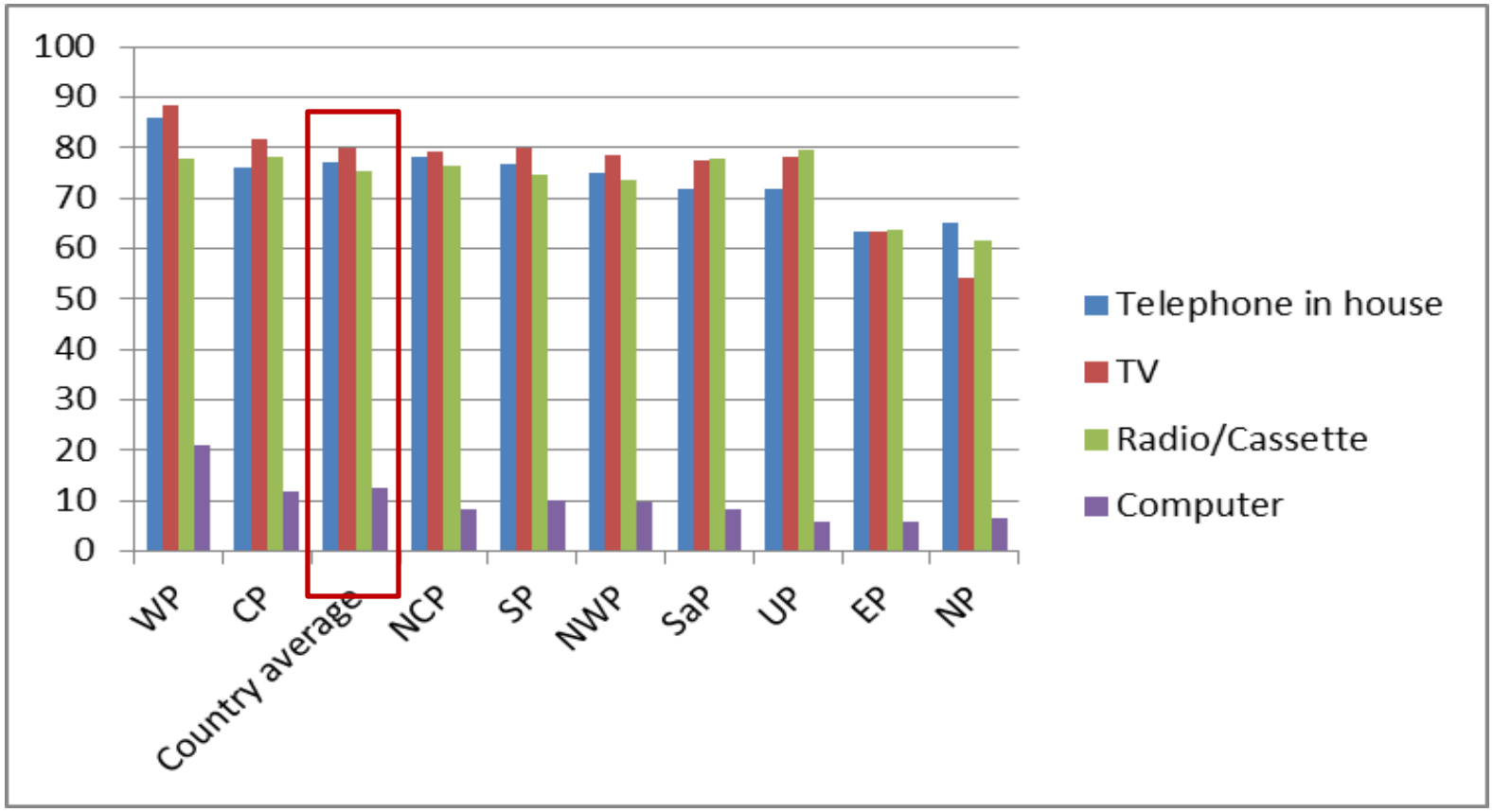
UKaid from the Department for International Development

Canada

Almost all of LK Bottom of the Pyramid (BOP) households use phones; 89% own one, acc. to LIRNE*asia*'s 2011 representative-sample survey

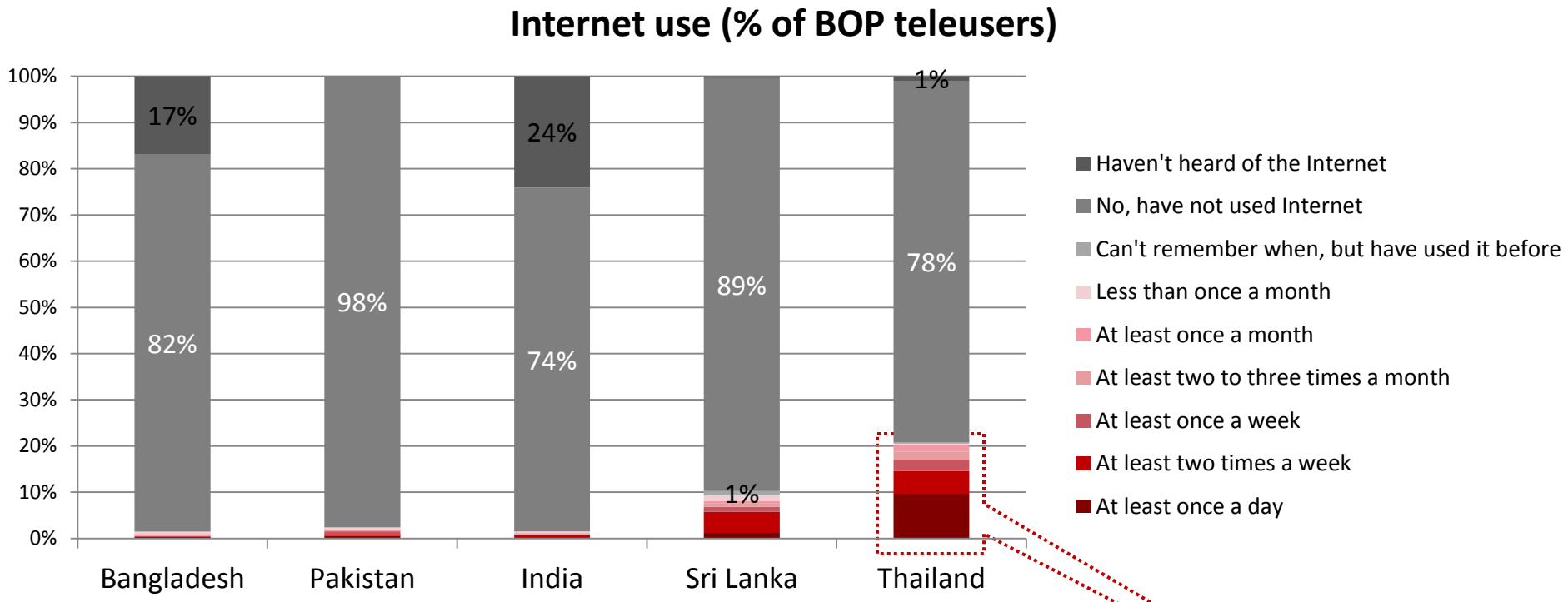


Regional disparities low with phones; significant with computers



Household Income & Expenditure Survey 2009-10

Internet use at BOP is low



	Bangladesh	Pakistan	India	Sri Lanka	Thailand
Use the Internet (% of BOP teleusers)	1%	2%	2%	10%	21%

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Among BOP teleusers

Conclusions for delivering services to citizens

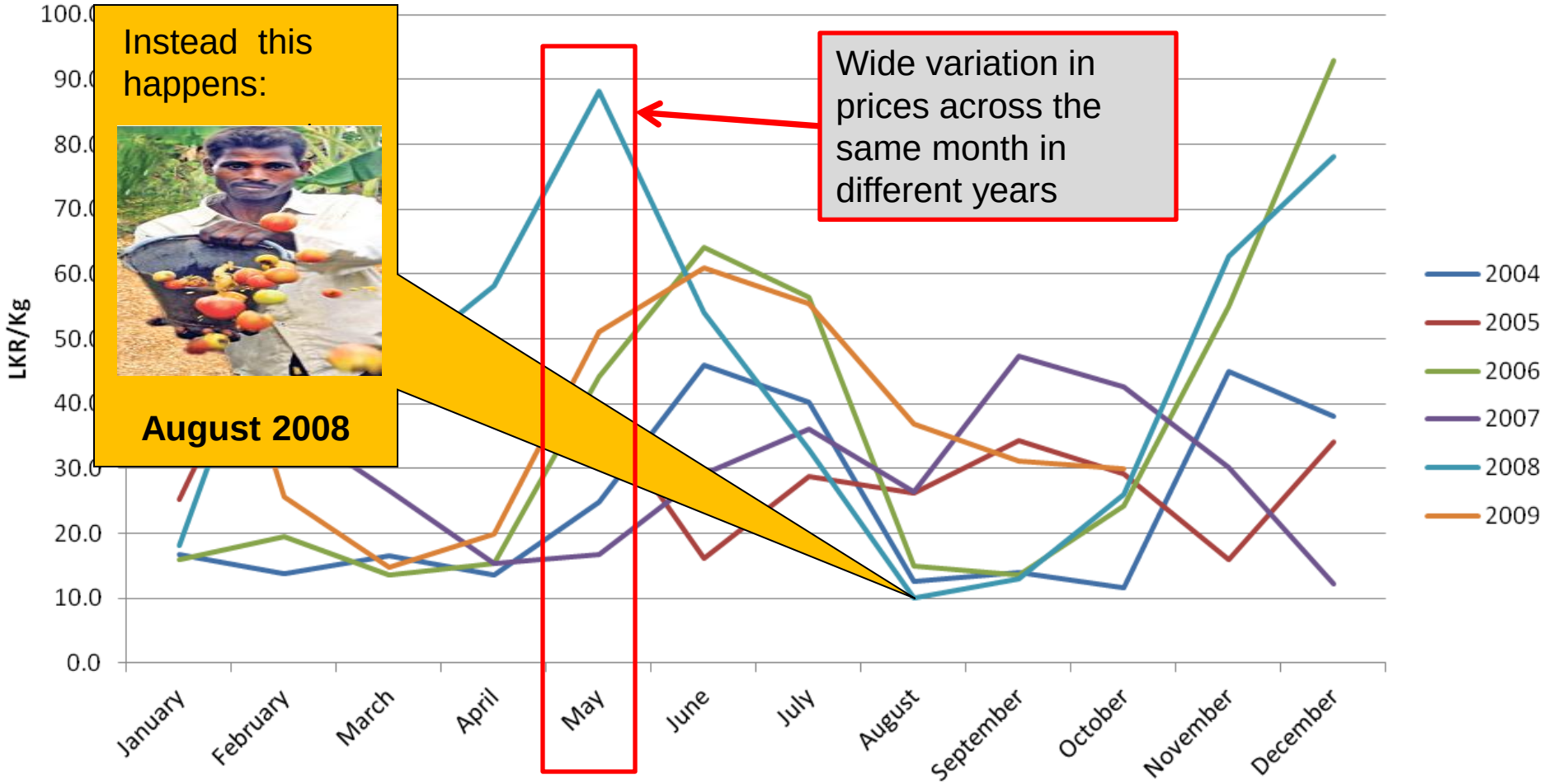
- Voice connectivity is almost ubiquitous → safe to anchor delivery of government services on voice
- Data connectivity is better than in South Asia, but much remains to be done → start on more-than-voice services while creating conditions for extending voice success to broadband

Meet H.M.M.G. Dissanayake Banda, smallholder

- Owns and cultivates 0.6 hectares
- Farmland is 10-15 km from main market
- Knows how to grow onions, cabbage, eggplant, rice, sweet potato and tomato
- Has a bank account, yet depends on cash to pay for inputs as well as other livelihood costs. Obtains credit from time to time from family as well as the main trader that he sells his produce to

A tomato farmer's market environment

Tomato prices at DDEC (2004 - 2009)



DDEC = Dambulla Dedicated Economic Center is the largest wholesale market in Sri Lanka

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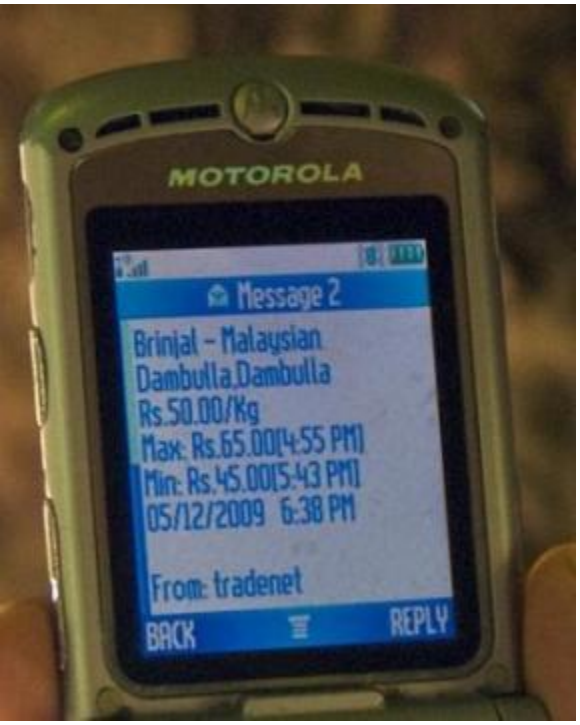
There are many AgInfo solutions in the region

	IKSL, India	RML, India	Tradenet , Sri Lanka
Services Provided	•Market price information •Crop advisory service •Weather forecasts	•Market price information •Crop advisory service •Weather forecasts	•Market price information •Trading platform matching buyers and sellers
Partners	Bharti Airtel + Indian Farmers Fertilizer Cooperative Limited (IFFCO)	None	Dialog Axiata PLC + GGS
Languages	~10 regional languages including Hindi	Multiple local languages	All three languages (English, Sinhalese, Tamil)
Mode of delivery	Voice message, IVR	SMS	SMS, USSD, Internet/WAP, Call Center
Price	Free Voice messages Helpline service: INR 1/ min	Maharashtra: INR 175 for 3 months INR 350 for 6 months INR 650 for 12 months	Free for the moment except for Call Center (LKR 3+Taxes per min)
Subscriber numbers	1.08 million (Mar 2011)	~1 million (2012)	~10,000 (includes non-agricultural subscribers)
How is data collected	Through the auctioneers in the mandis	Price through RML data collectors; other data (weather, crop advisory) through partnerships with Govt/NGO/ Private stakeholders	Through dedicated price collectors employed by GGS at the markets they cover

Livelihood impacts of Tradenet: Market price information used mostly to time market entry rather than for bargaining



- Farmers are figuring out right time to enter the market
  - Study group on average obtained a premium of 6.4% on daily average market prices when selling their crops; control group had a loss of 2.3%
  - Works when there is high intra- and inter-day volatility and farmer can get to market quickly
- Farmers' trust in traders is improving
- Farmers are improving their hedging strategies
  - Tracking price trends to figure out high value crops
  - Looking for knowledge in crops outside their forte
- Trading in agricultural produce on the system is minimal
  - Buyers unwilling to quote prices

Mr. H.M.M.G. Dissanayake Banda after starting to use Tradenet

Video: http://www.youtube.com/watch?v=JAsvP2avdc8

- One day when his cabbage crop was ready for harvesting, he noticed prices at DDEC had risen from USD 0.18/Kg in the morning to USD 0.32/Kg by the late afternoon.
- Realizing the upward trend, he used friends and family to quickly harvest his crop
- By the time he sold his cabbage crop at the market he was able to obtain USD 0.41/Kg - *a premium of USD 0.11/Kg (35.2%) on the average market price* for his variety of cabbage that day
- Has been tracking green chili prices and is interested in growing
- Has tried calling 1920 to get information on chili cultivation but kept getting a busy tone and gave up

How best to deliver crop advisory information?

- RML (India) employs an editorial team to sift through information obtained from multiple sources
  - Could this cause problems?
- Government (Department of Agriculture) 1920 service in Sri Lanka employs call center operators
  - Is this scalable and sustainable?

Why not open up government data on agriculture?

- A large amount of agricultural information and knowledge resides within government agencies
- Opening up this knowledge means:
  - Codifying the knowledge: packaging the knowledge appropriately and making them computer readable
  - Allowing open access: creating APIs that service providers can easily plug into
- What are the policy issues?

1. Make Open Data, Content, and Web APIs the New Default

To lay the foundation for opening data and content efficiently, effectively and ac
work with representatives from across government to develop and publish an open
web API policy for the Federal Government. This policy will leverage central coordination and leadership to develop guidelines, standards, and best practices for improved interoperability. To establish a "new default," the policy will require that newly developed IT systems are architected for openness and expose high-value[22] data and content as web APIs at a discrete and digestible level of granularity with metadata tags[23]. Under a presumption of openness, agencies must evaluate the information contained within these systems for release to other agencies and the public, publish it in a timely manner, make it easily accessible for external use as applicable, and post it at agency.gov/developer in a machine-readable format.

Fueling the App

The City of San Francisco r
public transportation data
schedules, and to-the-min
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Key take-aways

- When it comes to mobile AgInfo services
  - Farmers want actionable information (timely, accurate & relevant)
  - Best way to deliver is through mobiles, not computers
- Government need not do it all
  - Private sector is already playing a key role
  - Even when government is active, scalability needs to be kept in mind
- Government can facilitate an enabling environment, especially in the context of smartphone proliferation
  - Open access to information residing within government
    - Computer readable
    - Published APIs
- AgInfo is not a silver bullet: must be complemented by other actions

More information:

http://lirneasia.net/projects/agriculture/