

“Appropriate technology,  
targets and discourse:  
contested development in  
rural Bihar, India”

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IMPROVED  
DRINKING-WATER

## Use of the following sources:

- Piped water into dwelling, yard or plot
- Public tap or standpipe
- Tubewell or borehole
- Protected dug well
- Protected spring
- Rainwater collection

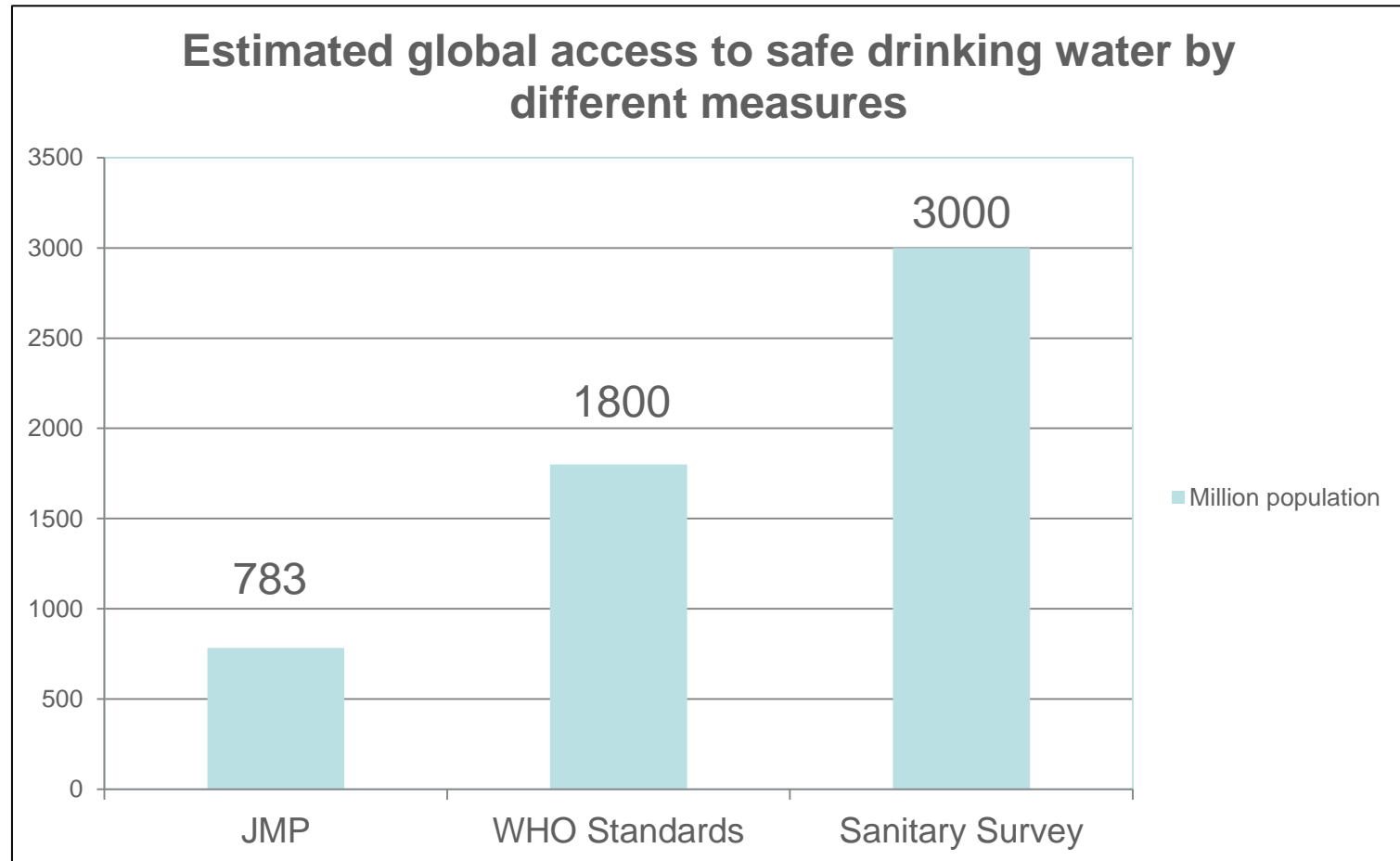
UNIMPROVED  
DRINKING-WATER

## Use of the following sources:

- Unprotected dug well
- Unprotected spring
- Cart with small tank or drum
- Tanker truck
- Surface water (river, dam, lake, pond, stream, canal, irrigation channel)
- Bottled water

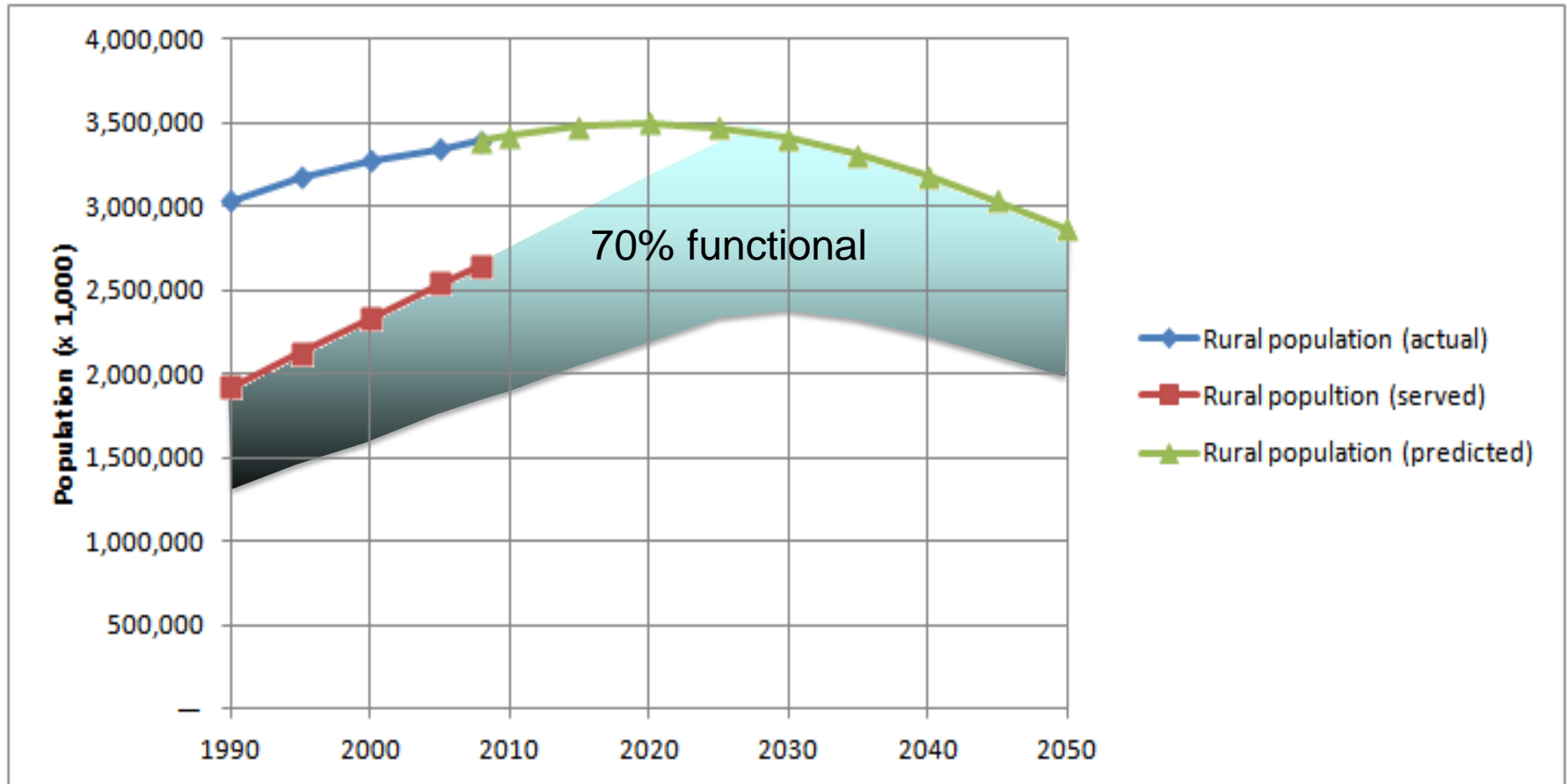
Types of drinking-water sources

# The power of indicators (1): The safety gap



Calculated using data from (Onda et al, 2012)

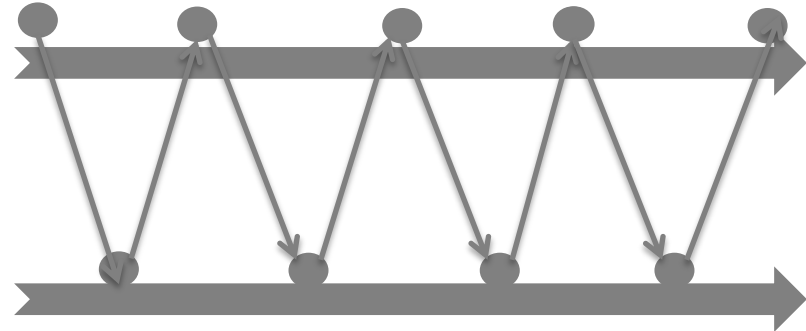
# The power of indicators (2): The functionality gap



*Moving from  
macro-statistics to  
micro-politics*

*How do technology-based  
targets shape water-  
development trajectories in  
an underserved region of  
rural India?*





***Intra-case comparative approach focusing on appropriate technology storylines***

**4 Rapid Rural Appraisals (Chambers, 1981; 2008)**

*Participant observation / group interviews with community members*

**15 in-depth interviews with sector professionals**

**Discourse Analysis (Hajer, 1995; Drzyzek, 2005)**

*National Water Policy 2012 / Jal Jan Jodo Abyian Manifesto 2013*

# West Champaran, Bihar, India





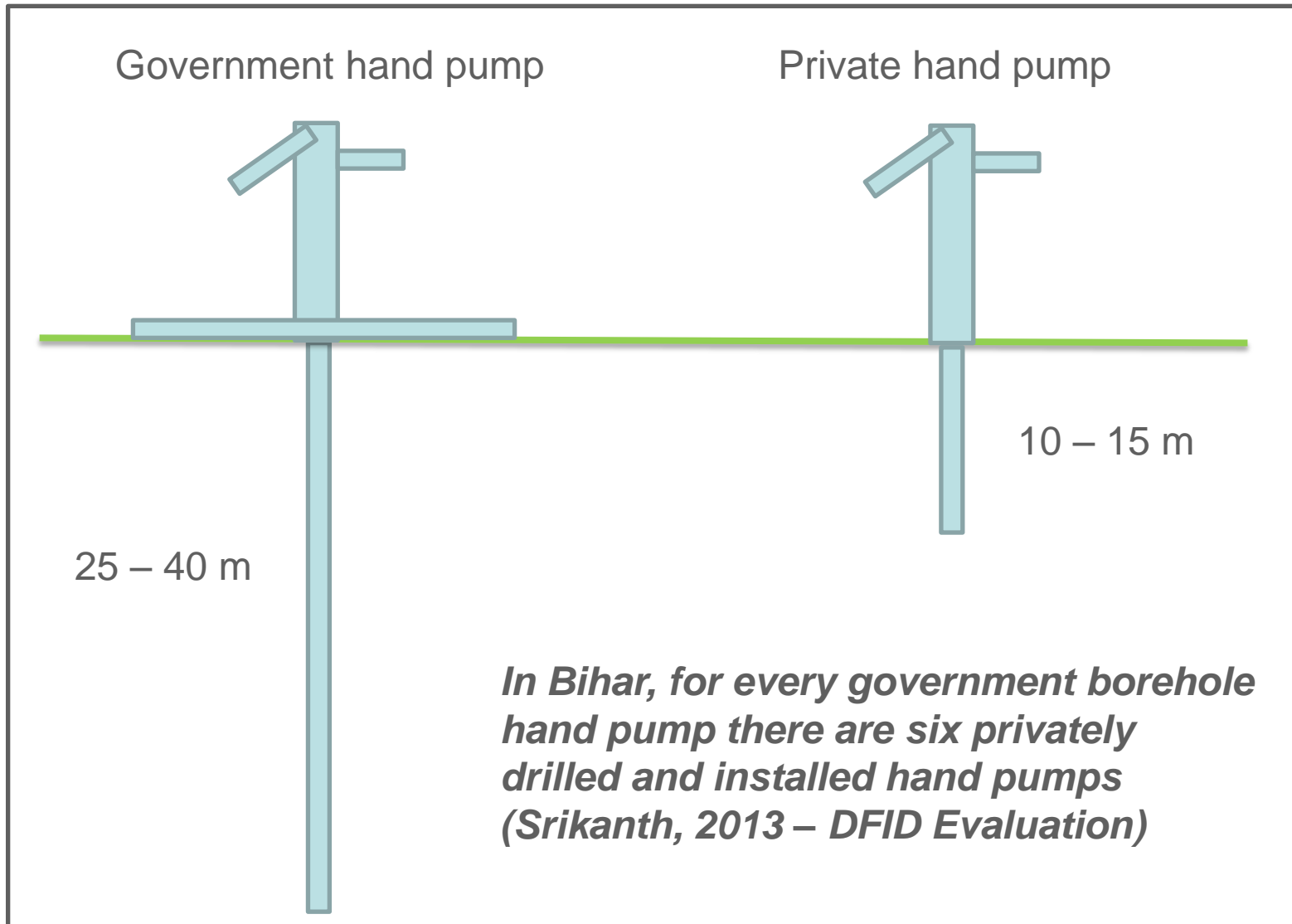
The traditional technology  
An open ring well, Tharu Tola





The 'improved' technology  
A borehole hand pump,  
Poorvi Tola

# Gap between normative aspiration of targets and the reality in Bihar



# Some theory to conceptualise this situation



Photo from: <http://devpolicy.org/confronting-capability-traps20110329/>

***Isomorphism (DiMaggio & Powell, 1983)***

***Isomorphic mimicry & development (Pritchett et al., 2010; Andrews et al., 2012)***

“The evolution of one species to look like another in order to derive benefits from its appearance (i.e. a non-venomous snake adopting the colours of a venomous snake so to deter predators)”

- Ecology & the complexity turn
- Institutional theory
- Best practice & capability traps
- Hold relevance for conceptualising the uncritical adoption of internationally recognised practices

# Capability traps & resistance



Has the government promotion of hand pumps “made people lazy” & “disconnected communities from the environment”?  
*Grassroots NGO worker*

# Confronting notions of appropriateness



# Reflections



Disjunction between simplistic binary targets and the messy reality of everyday life

The discourse of targets profoundly influence both the material provision of technology *and* associated behaviours in rural districts

Whether the fight against hand pumps is based on solid evidence is doubtful however the existence of this anti-hand pump discourse is resultant from perceived isomorphic mimicry

This drains precious human resources from the sector

Represents a specific incident of a wider emblematic dispute over the nature of rural development in India (Hajer, 1995)

## Concluding remarks



- Water targets useful and necessary macro-governance tools
- However, as we aspire to meet the universal human right to *safe and sustainable* water, technologically deterministic indicators appear limited
- Can we develop targets that validate positive development but do not become the drivers of it? How do we balance local determination with global accountability?