



Presentation from  
**2015 World Water  
Week in Stockholm**

[www.worldwaterweek.org](http://www.worldwaterweek.org)

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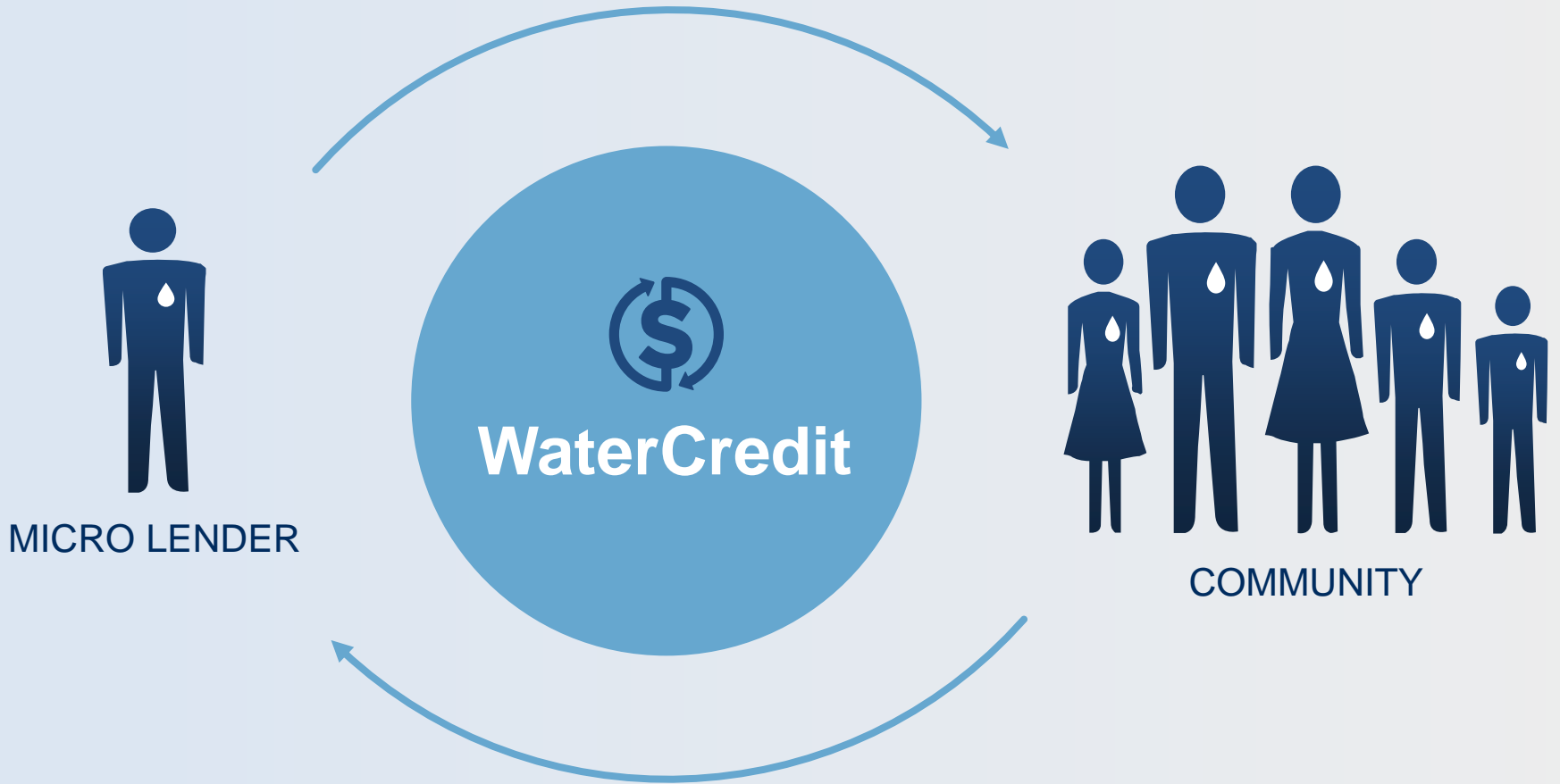
# Economic gains from safe water and sanitation

August 26, 2015



# The global water + sanitation crisis

- 780 million people are without water
- 2.5 billion are without proper sanitation
- US\$260B = annual global economic losses
- 200 million hours wasted each day by women and girls collecting water
- 3.4 million people die each year from water-related illness



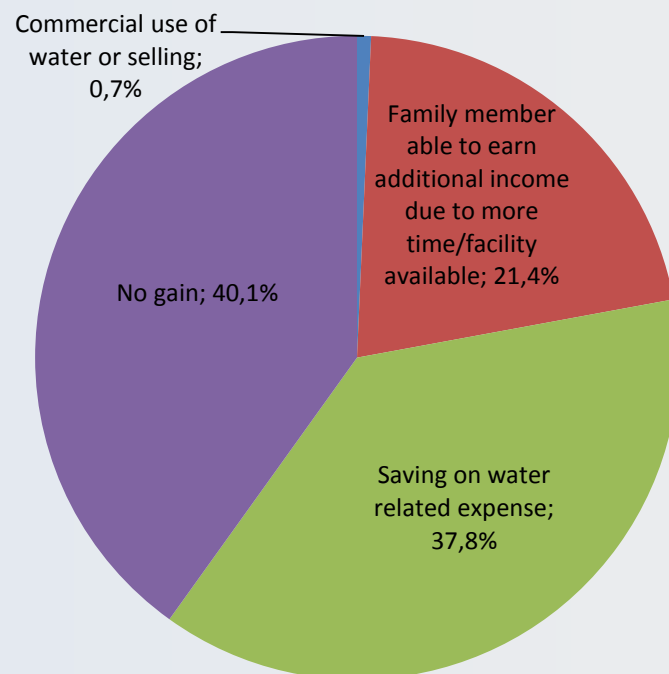




# Endline surveys of 3 partners – key findings – water

- Total time invested in collecting water declined 53%: from an average of 13.4 hours to 7.1 hours per week
- 58.5% respondents (out of 294) reported that household access to water has led to economic benefits for the family
- Where observed, economic gains are mostly attributed to savings on water-related expenses and re-direction of time formerly dedicated to water collection now towards income-generating activities
  - 6.1% women entered the workforce for the first time
  - 17.4% women were able to work more with the extra time

## What is the main reason for economic gain after having a water facility ? (n=294)





# Lakshmi (Vivekanadanagara village, Karnataka)

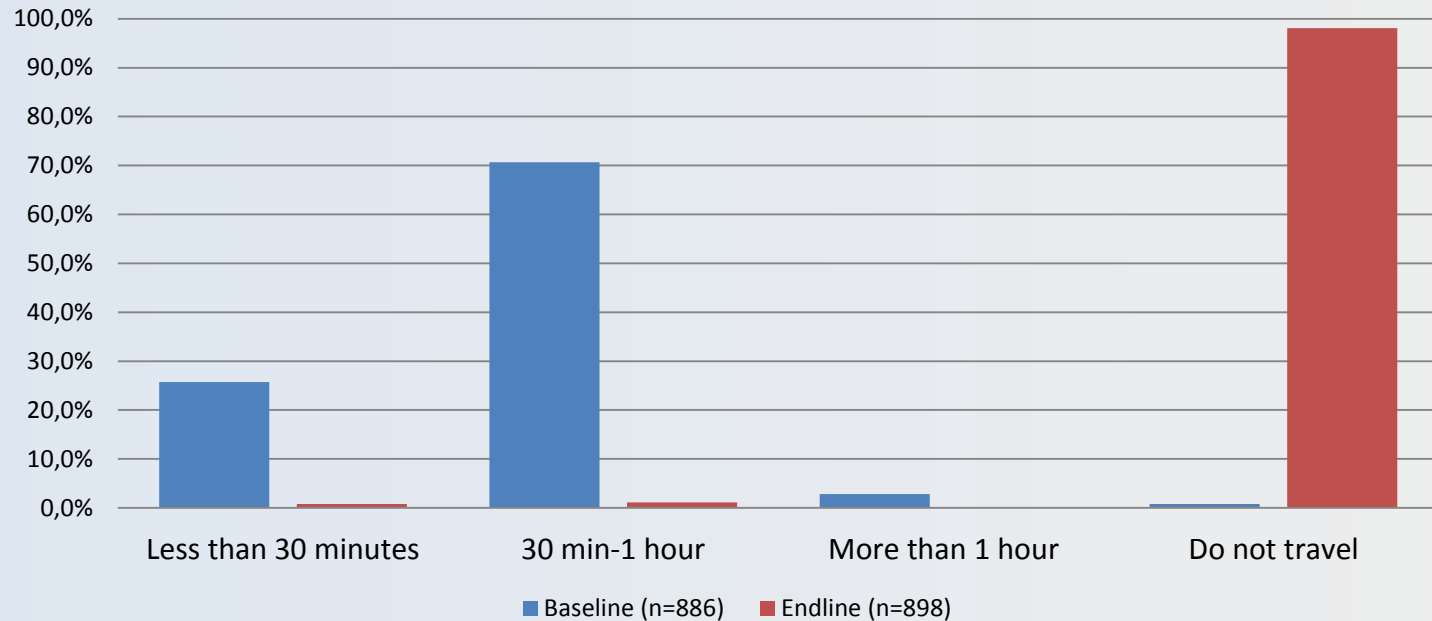
- Had to leave job in a garment factory
- Run food cart, husband washes cars
  - ~20 INR (\$0.30) per wash; ~100 INR (\$1.60) / day
- Average earnings = 300-400 INR (\$5-6.5) / day combined
- Took loan of 3000 INR (\$49)
- Monthly payments of 275 INR (\$4)
- New income = 300-400 INR (\$5-6.5) / day just from food cart
  - Focus on saving money to build a new, bigger home for family
  - Husband inspired to stop drinking
    - Reduced expense (additional)
  - Hopes daughter will return to school



# Endline surveys of 3 partners – key findings – sanitation

- Where borrowers constructed a household sanitation facility, total travel time for defecation reduced substantially

How long do you take to travel to and from for defecation?



- 54.3% respondents (out of 897) reported that household access to sanitation has led to economic benefits for the family
- Where observed, the reason for economic gains was reported to be from income earned as a result of additional available time (58.4%, n=898)
  - 9.4% women entered the workforce for the first time
  - 50.3% women were able to work more with the extra time



# Manjula (Marasandra village, Karnataka)



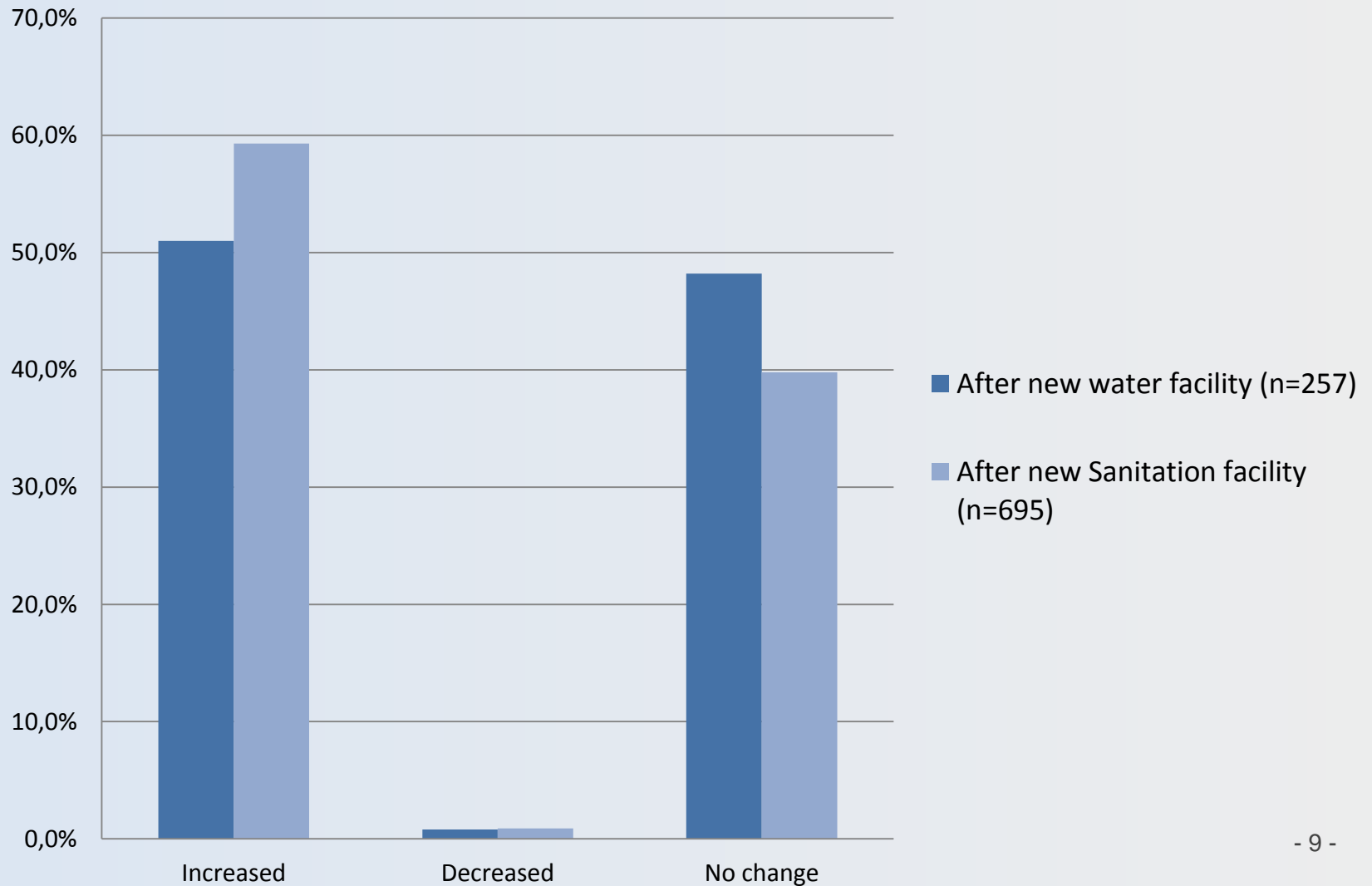
- Day started at 5am
- 5 trips to the local water tap
- Travel 1.5km for defecation
- Opened shop ~ 11am
- Average income = 400-600 INR (6-9 USD) / day

- *Took loan for 10,000 INR (\$164)*

- Opens shop an hour earlier
- Earns an extra ~500 INR (\$8) / day (essentially double)
  - School supplies for her 2 children plus saving

# Endline surveys of 3 partners – key findings – children

Hours in a day school-going children devote to study





# Boddamma, Ooha and Harita (urban Hyderabad)

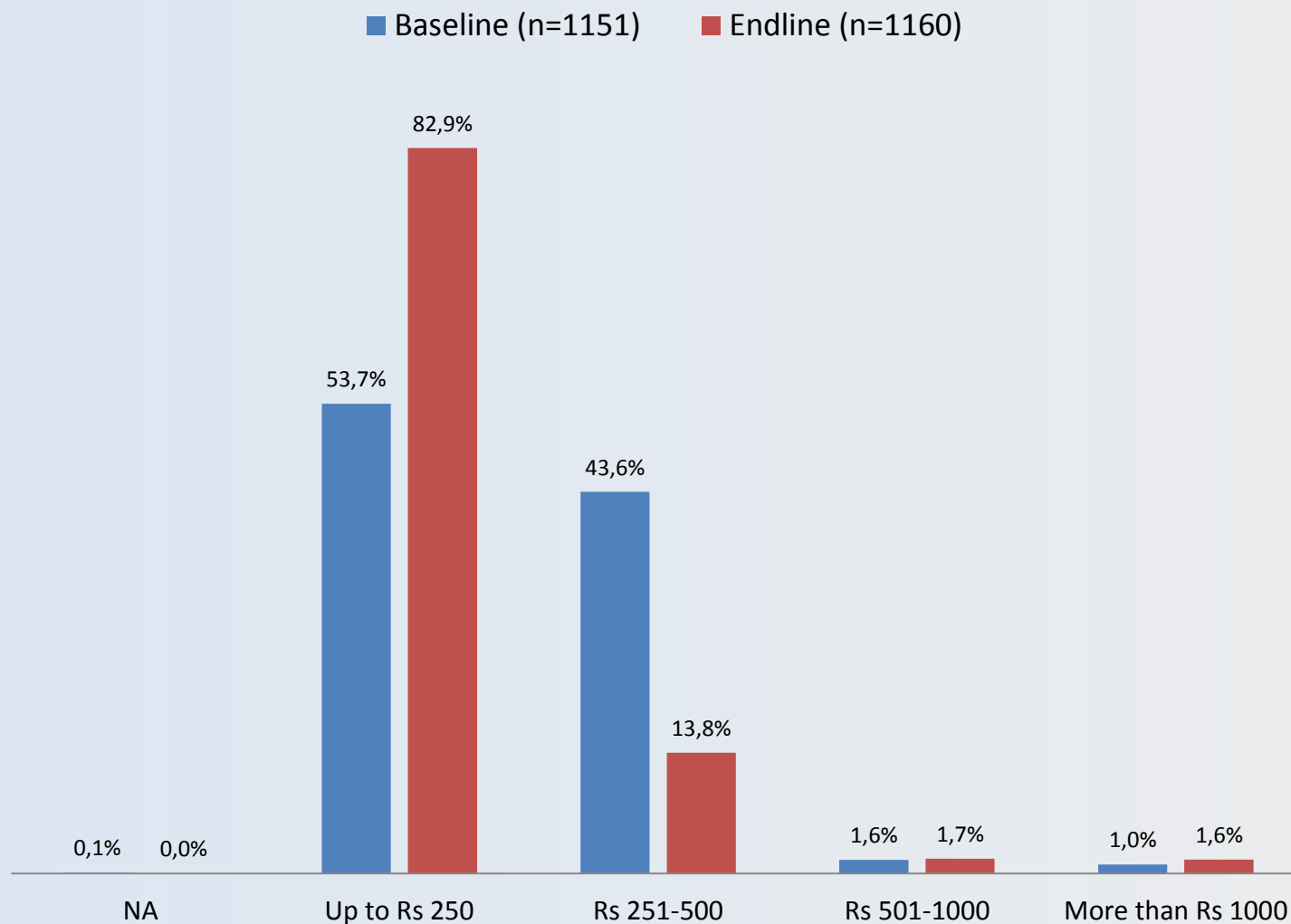
- Boddamma is a daily laborer, earning ~6,000 INR (\$100) / month
  - ~300 INR (\$5) / day
- Husband is a carpenter earning ~15,000 INR (\$250) / month
- Water collection (mother, daughters):
  - Rotated staying at home: 2 days a week for each female:
    - Lost wages = \$10 / week (\$40 / month)
    - Lost time in school – performance suffered
- Loan for 10,000 INR (~167 USD)
  - 900 INR (~\$15) / month payment
  - Completely paid from Boddamma's income
  - Extra 8 days income per month
    - Reduced physical pain, important in manual labor





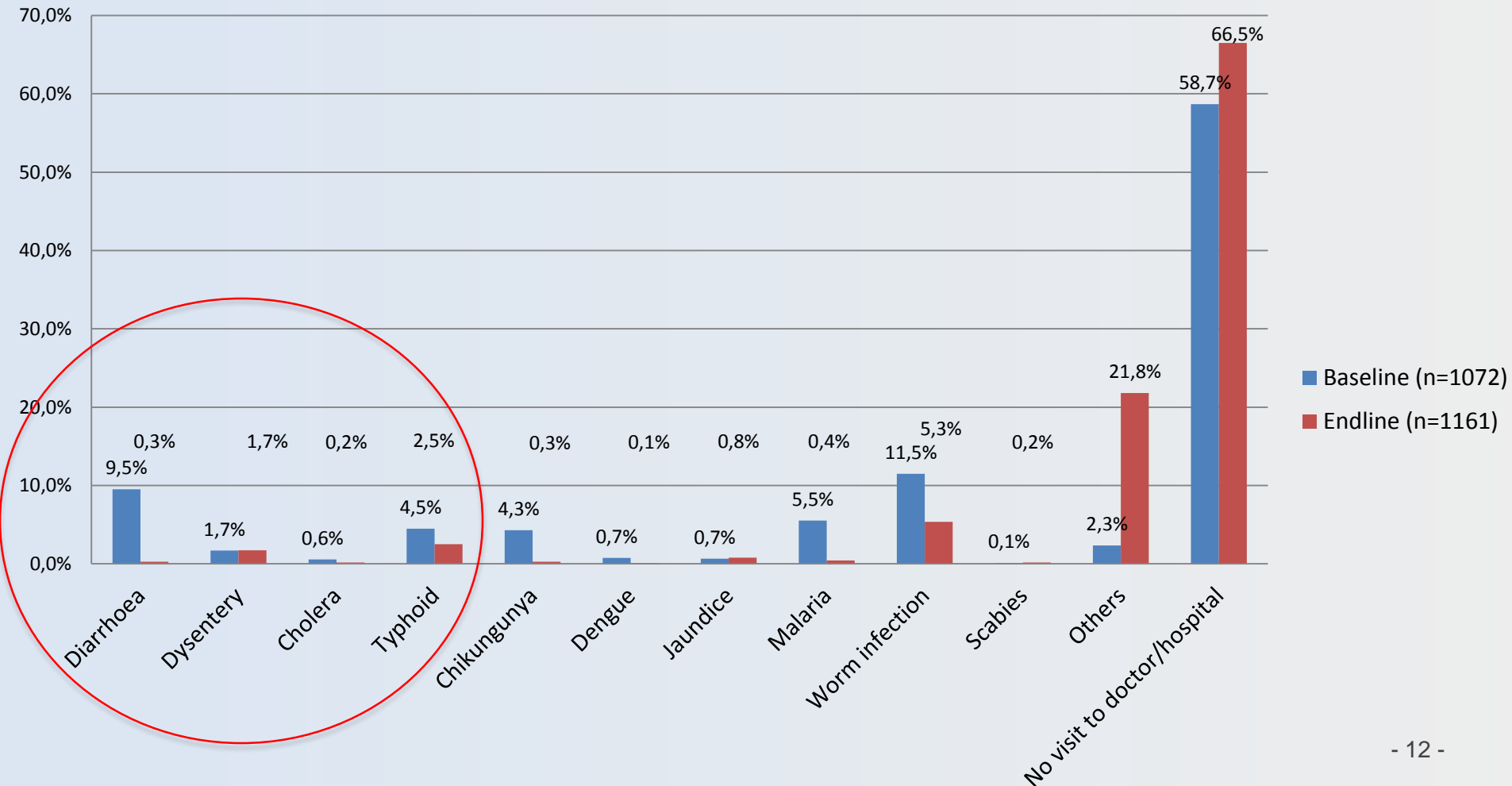
# Endline surveys of 3 partners – key findings – health expenditures

## Approximate monthly medical expenses



# Endline surveys of 3 partners – key findings – health expenditures / medical visits

## Reason for any family member to have visited the doctor/hospital in the past 6 months



A close-up photograph of a red plastic tap on a white plastic container. Water is flowing from the tap into a smaller white plastic container. The background shows other similar containers, some with orange stains. The image is overlaid with a semi-transparent red box containing text.

# Thank you

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ENTERPRISE IN  
WASH

# Perspectives of small-scale water enterprises: Motivations, drivers and barriers

Stockholm, 2015

**UTS:ISF**  
INSTITUTE FOR SUSTAINABLE FUTURES



**UTS**  
UNIVERSITY OF TECHNOLOGY, SYDNEY

## Key messages



1. Small-scale enterprises offer one pathway to support sustainable, inclusive rural piped-water services
2. Motivations of enterprises extend beyond profit, and often include social goals, taking us into the emerging field of 'social enterprise'
3. Careful design of instruments and incentives combined with clear regulatory processes is needed to support the most effective service provider types and to achieve access to all



# ENTERPRISE IN WASH



<http://enterpriseinwash.info/>



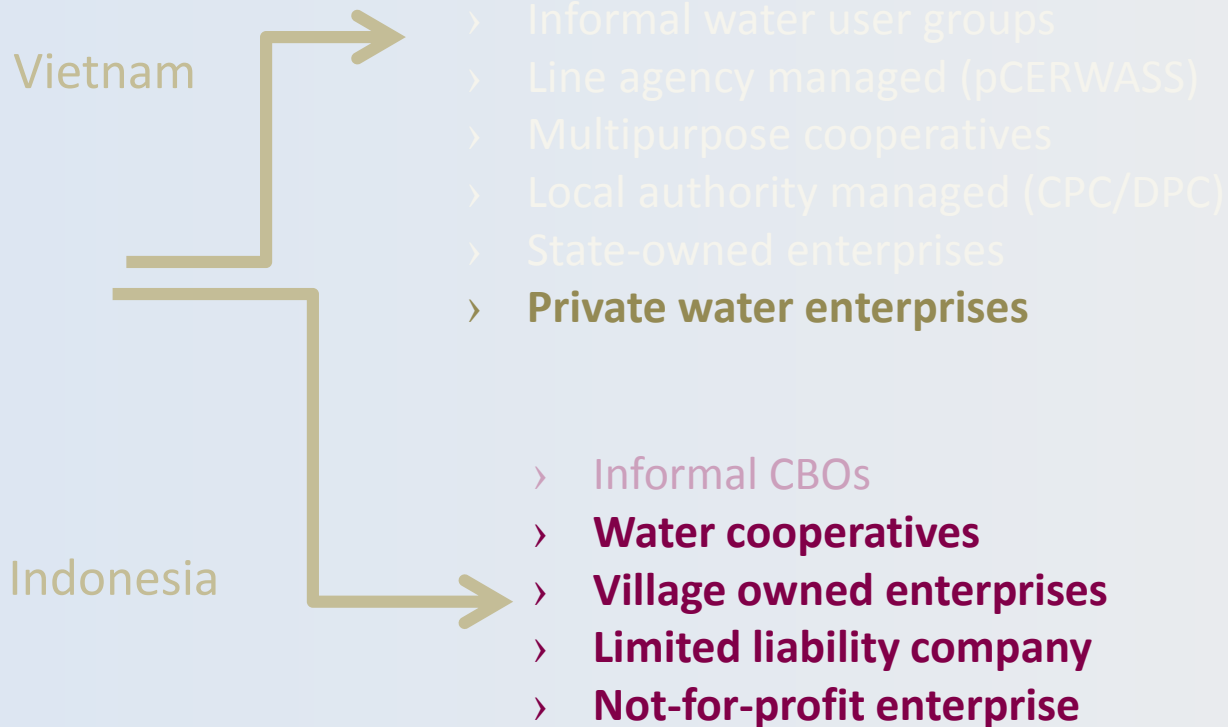


Literature since the late 1990's suggested the need to move beyond solely community management of rural water services...



*“continued delivery and uptake of services, is threatened by numerous attitudinal, institutional and economic factors, and community participation approaches alone are no guarantee of success” (Carter, 1999)*

## Small-scale enterprises have emerged amongst other types of service provider...



# Small-scale enterprises in Vietnam and Indonesia



What dynamics shape their role? What are their motivations and drivers? What challenges do they face?

Vietnam (n = 20): male and female led, serving 130-3000 households, 2-10 employees,

Indonesia (n = 21): male-led, serving 180-2800 households, mostly 6-10 employees



# Motivations included a sense of social responsibility...



*“I have compassion for local people who haven't got enough clean water to use.”*

*“I feel happy when I'm doing something good for the community.”*



*“I get a good feeling from serving the society”*

*“Because they need help, the very poor families will be given the service free”*

*“the salary for this business is low so I do not do it because of financial concerns”.*

85% 76%

demonstrated medium or strong pro-social traits

# And (some) actions to include the poor followed...



70% offer payment by instalments

Higher levels of pro-social traits



Higher percentages of low-income customers



69% reported that they served the poor  
38% offer payment by instalments, and of these, one-third reported that more than half of their customers paid in instalments.

# In both countries, amongst diverse challenges, operational challenges (particularly cost recovery) dominated...

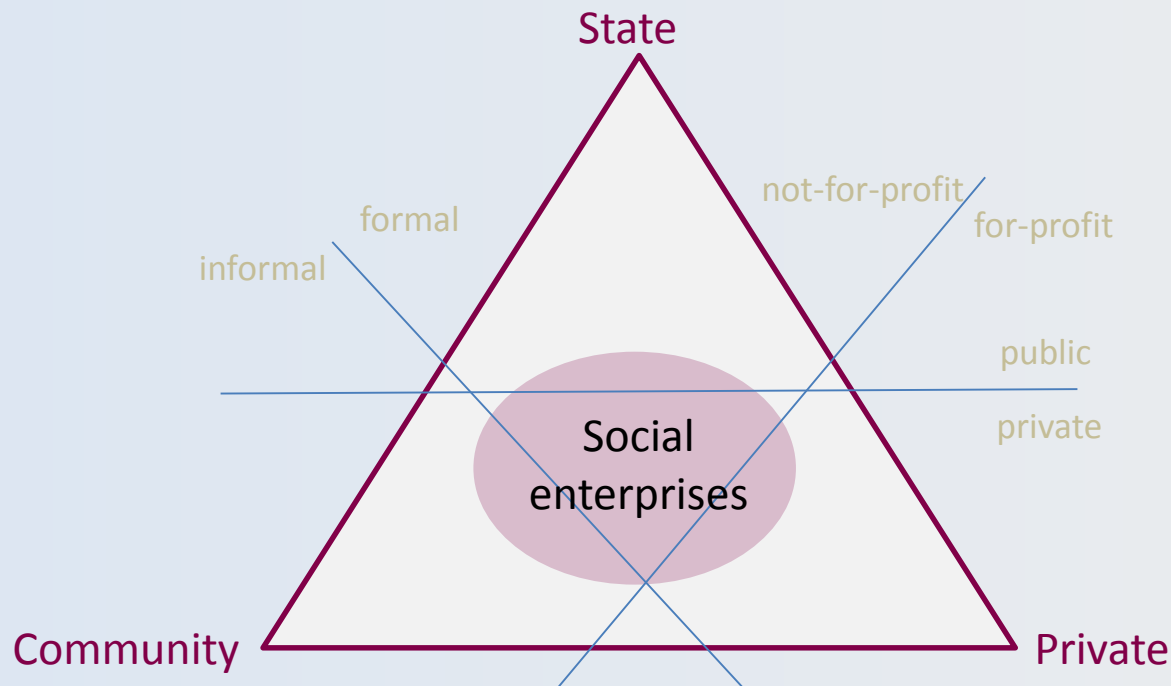
- high cost of materials and equipment
- high fixed expenses (e.g. high-energy costs, high maintenance and repair costs, and management of water storage)

*“The piping system is relatively old, this causes high repair and operating costs, and leads to huge water losses” [Vietnam water enterprise]*



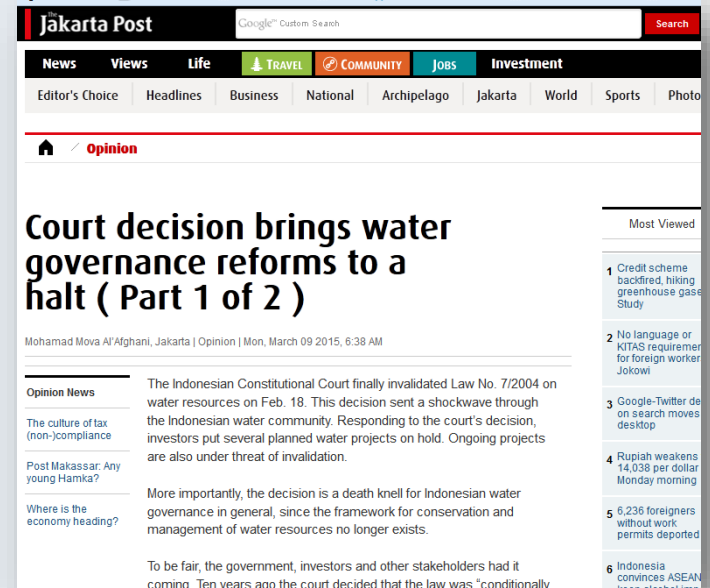
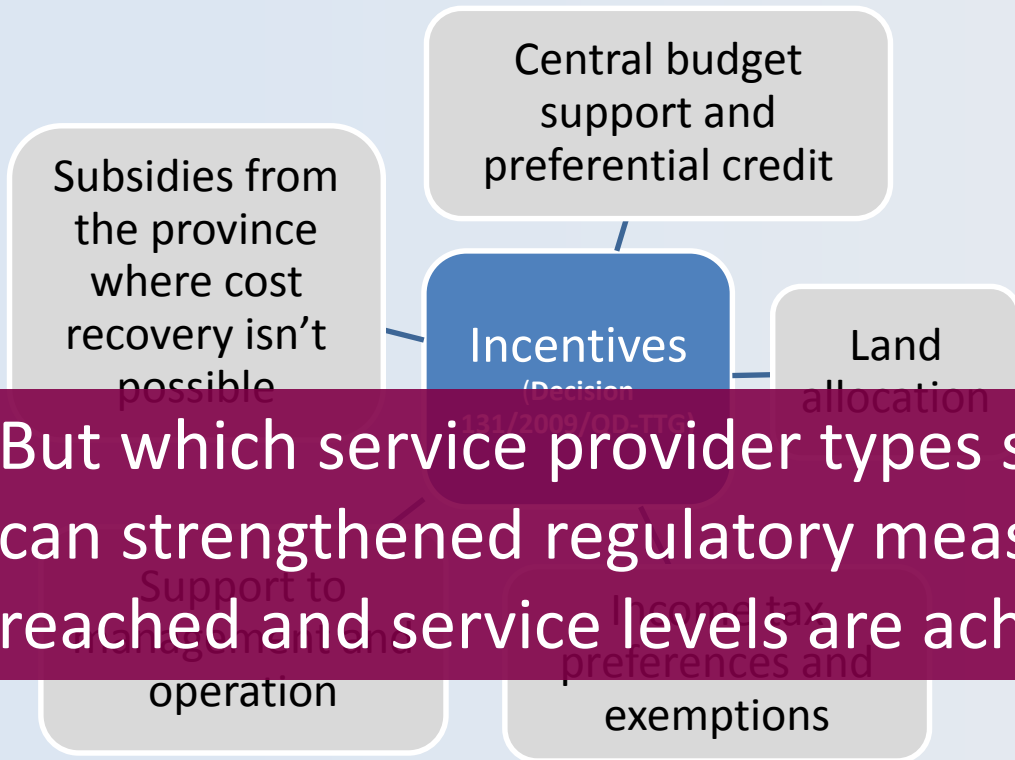


# Entering the complex territory of social enterprise...



Adapted from Defourny and Nyssens, 2012

# Incentives for private sector participation in Vietnam



But which service provider types should be preferred? How can strengthened regulatory measures ensure the poor are reached and service levels are achieved?

Emerging focus on village-level water enterprises in Indonesia

## Key messages



1. Small-scale enterprises offer one pathway to support sustainable, inclusive rural piped-water services
2. Motivations of enterprises extend beyond profit, and often include social goals, taking us into the emerging field of 'social enterprise'
3. Careful design of instruments and incentives combined with clear regulatory processes is needed to support the most effective service provider types and to achieve access to all





# Thank you!



<http://enterpriseinwash.info/>

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References: Carter, R. 1999. Impact and sustainability of community water supply and sanitation programmes in developing countries. Journal of the Chartered Institution of Water and Environmental Management, Vol 13, pp 292-296, August 1999  
Defourny, J and Nyssens, M. 2012 The EMES approach of social enterprise in a comparative perspective WP no. 12/03  
Gero, A. and Willetts, J. (2014) Incentives shaping enterprise engagement in Vietnam, Private and social enterprise in water and sanitation services for the poor- Working Paper 2b, Institute for Sustainable Futures, University of Technology Sydney [www.enterpriseinwash.info](http://www.enterpriseinwash.info)  
Murta, J., Gero, A., Willetts, J. (2015) Motivators and barriers for water enterprises in Vietnam, Enterprise in WASH - Research Report 4, Institute for Sustainable Futures, University of Technology Sydney [www.enterpriseinwash.info](http://www.enterpriseinwash.info) [available September 2015]