



The Household Water Insecurity Experiences (HWISE) Scale

Dr. Sera L. Young

Associate Professor
Northwestern University

www.serayoung.org

hwise.org

@profserayoung, @hwise_rcn





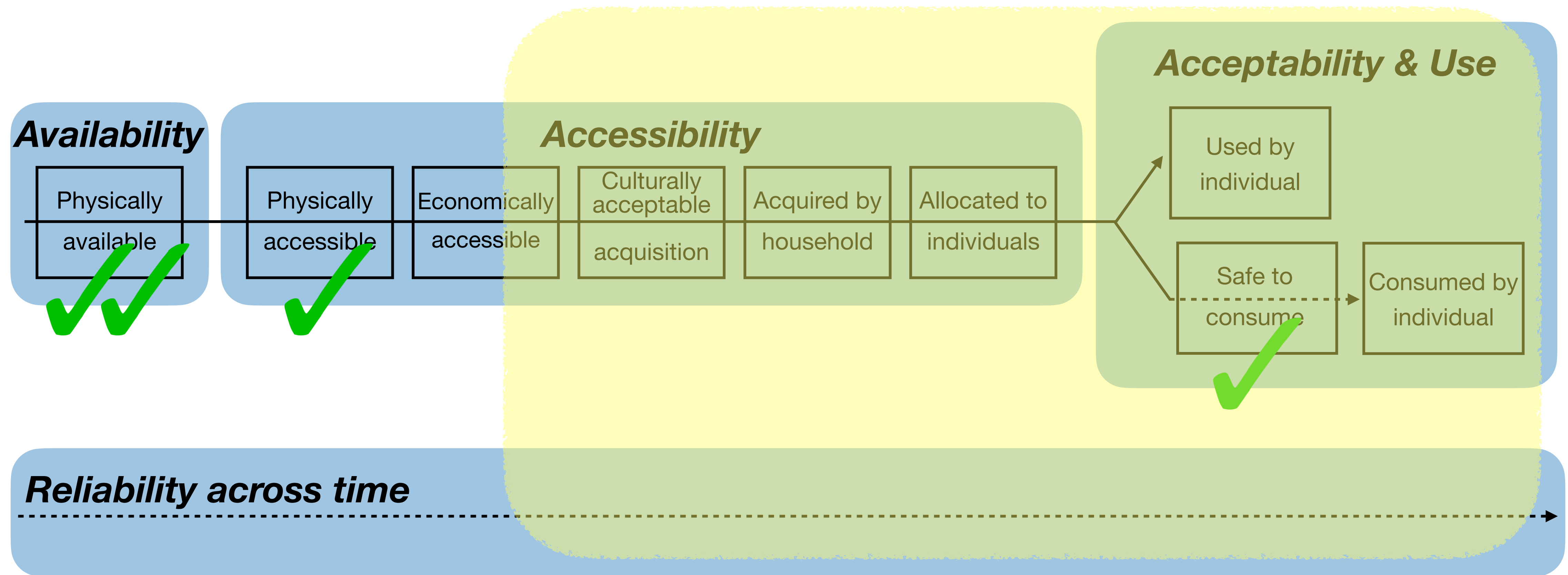
Overview

- 1. What is the HWISE Scale?**
2. What has the HWISE Scale told us already?
3. How can we use the HWISE Scale in metropolitan settings?

Formative work for nutrition study in Kenya: *“What shapes how you feed your infant?”*



Water security experiences have not typically been measured



2018 UN panel call for higher-resolution data



WATER ACTION DECADE

"This is an opportunity to raise awareness, define

a r

Antón

1

Understand Water

The adage "you can't manage what you

“‘You can’t manage what you can’t measure’ is particularly true for water... Yet major gaps exist.”

- United Nations High Level Panel on Water

for water.

, quality,

is essential

ether by

a process,

ell or basin

major gaps

g systems

ailure to

orological

(‘hydromet’) equipment and other water

[HOME](#)[SCALE MATERIALS](#)[BACKSTORY](#)[PUBLICATIONS](#)[COLLABORATORS](#)[HWISE NETWORK](#)

Household Water Insecurity Experiences (HWISE) Scale

a cross-culturally validated scale to measure water insecurity at the household level

www.hwise.org



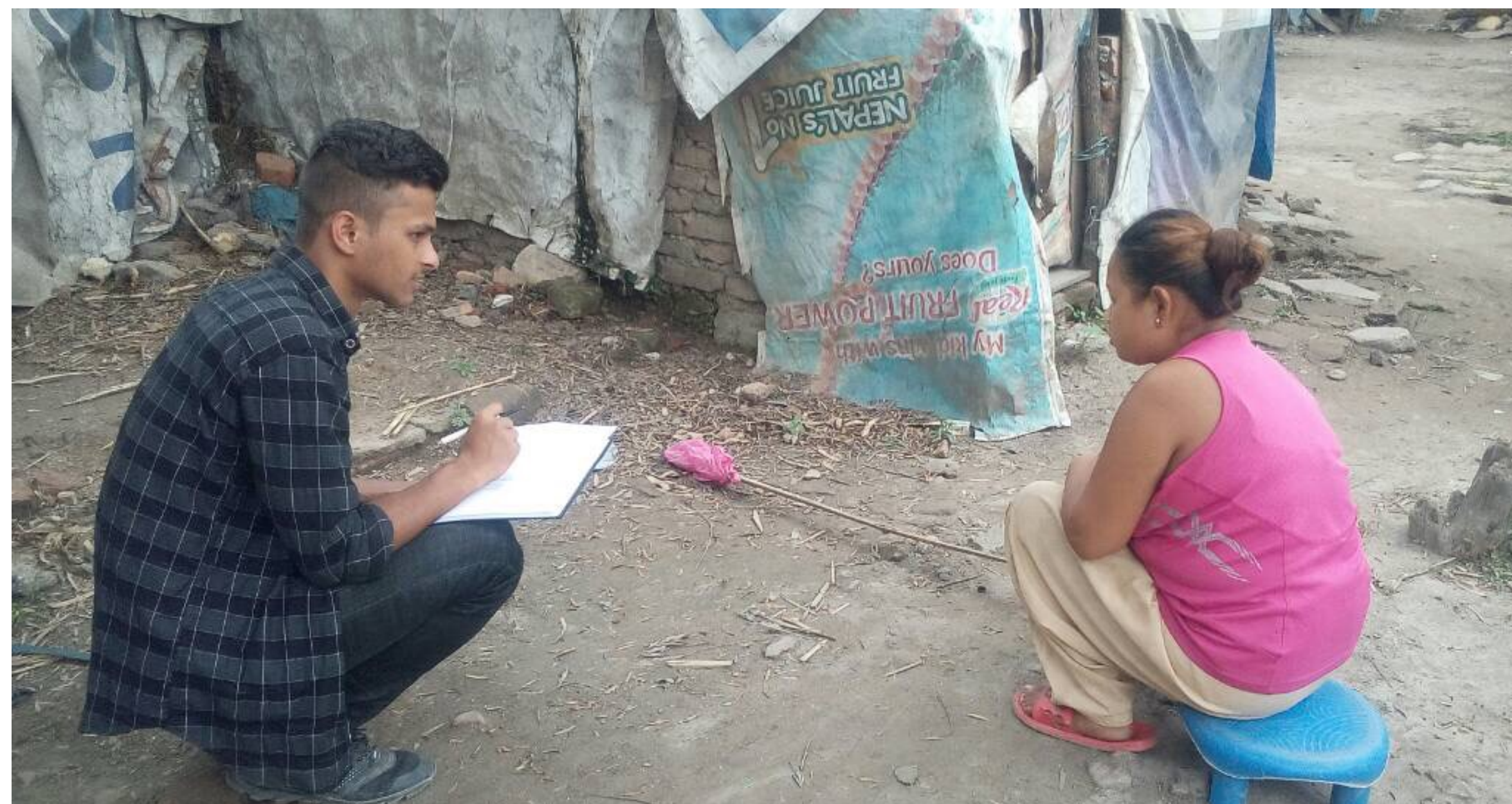
Household
Water
InSecurity
Experiences



Assimilated items from site-specific WI scales + ethnography



Colombia

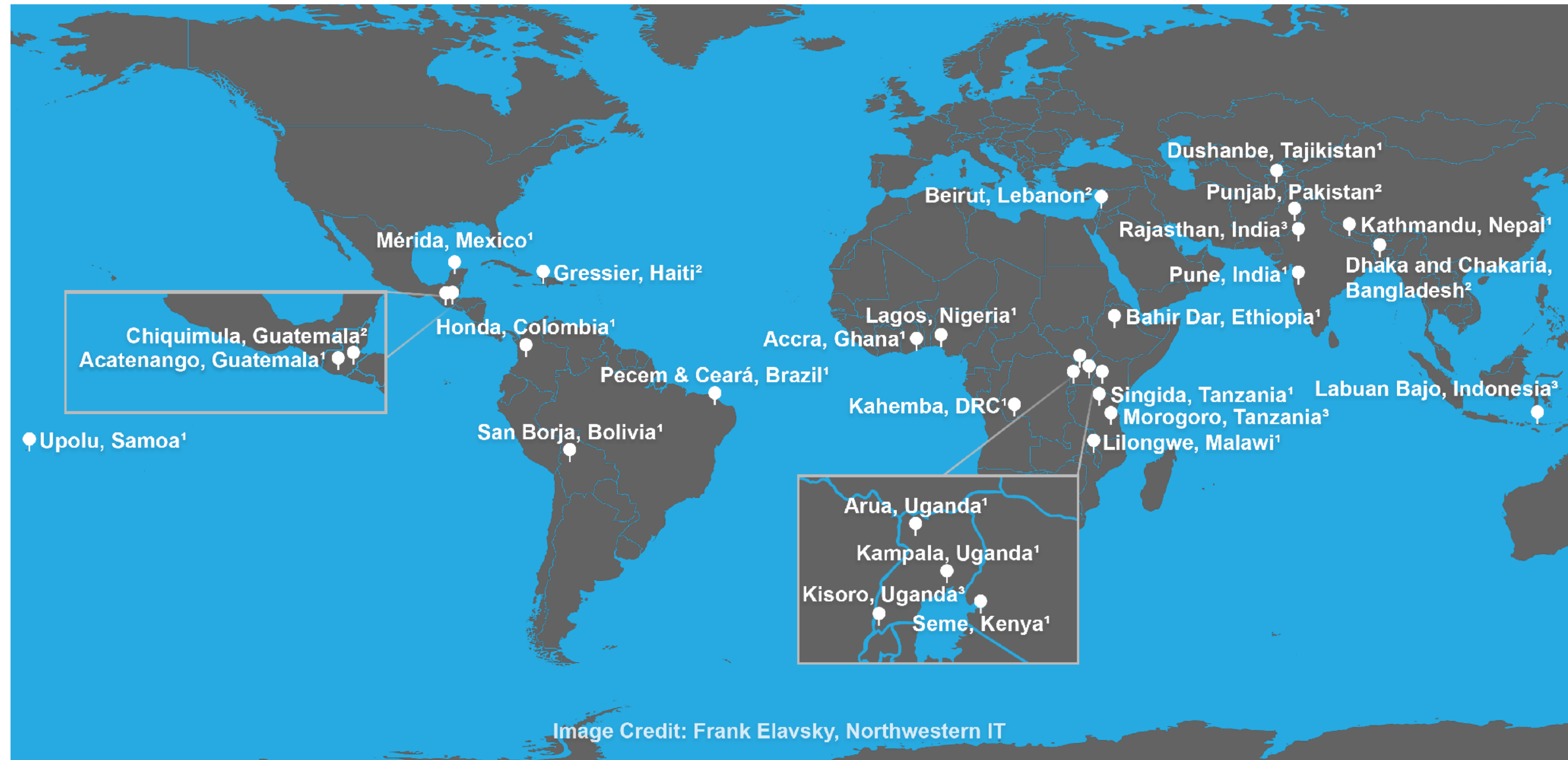


Nepal



Nigeria

Survey implemented in 28 sites, across 8,127 households



*HWISE **sites** were selected for maximal heterogeneity in **region** of the world, **infrastructure**, and **problems with water***

Progress in household water insecurity metrics: a cross-disciplinary approach

Wendy E. Jepson,^{1*} Amber Wutich,² Shalean M. Collins,³ Godfred O. Boateng³ and Sera L. Young⁴

Despite the central importance of water for human wellbeing and development, researchers and practitioners have few tools to quantitatively measure, assess, and compare the scope and scale of household and individual water insecurity across cultural and climatic variations. There are multiple definitions of water insecurity, and the analytical tools for measuring household-level water insecurity are in their infancy. This paper provides an overview and systematic evaluation of current household and individual water insecurity metrics for human development. We seek to advance micro-level metrics—attending to the considerations of dimensionality, temporality, unit of analysis, and comparability—because they will provide the research community with necessary tools to untangle the complex determinants and outcomes of water insecurity. Moreover, such metrics will support the translation of research outcomes into meaningful and useful products and results for stakeholders, communities, and decision-makers. © 2017 Wiley Periodicals, Inc.

How to cite this article:
WIREs Water 2017, 4:e1214. doi: 10.1002/wat2.1214



BMJ Global Health

The Household Water InSecurity Experiences (HWISE) Scale: development and validation of a household water insecurity measure for low-income and middle-income countries

Sera L Young ,¹ Godfred O Boateng ,^{1,2} Zeina Jamaluddine ,³ Joshua D Miller ,¹ Edward A Frongillo ,⁴ Torsten B Neilands ,⁵ Shalean M Collins ,¹ Amber Wutich,⁶ Wendy E Jepson ,⁷ Justin Stoler,⁸ On behalf of the HWISE Research Coordination Network



Best Practices for Developing and Validating Scales for Health, Social, and Behavioral Research: A Primer

Godfred O. Boateng^{1*}, Torsten B. Neilands², Edward A. Frongillo³, Hugo R. Melgar-Quinonez⁴ and Sera L. Young^{1,5}

Protocol

Development and validation protocol for an instrument to measure household water insecurity across cultures and ecologies: the Household Water InSecurity Experiences (HWISE) Scale

Sera L Young,¹ Shalean M Collins,² Godfred O Boateng,² Torsten B Neilands,³ Zeina Jamaluddine,⁴ Joshua D Miller,² Alexandra A Brewis,⁵ Edward A Frongillo,⁶ Wendy E Jepson,⁷ Hugo Melgar-Quinonez,⁸ Roseanne C Schuster,⁵ Justin B Stoler,⁹ Amber Wutich,⁵ on behalf of the HWISE Research Coordination Network



From 32 items...

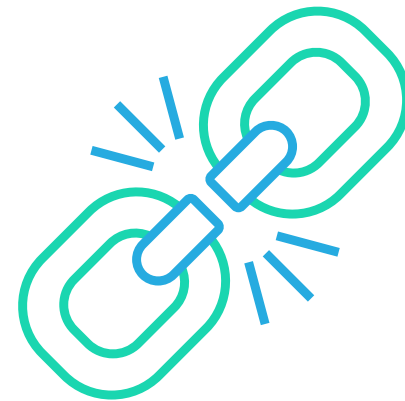


12 HWISE Scale items

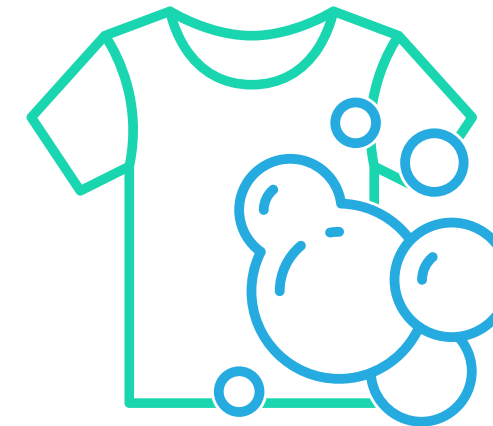
How often in the last 4 weeks have you...



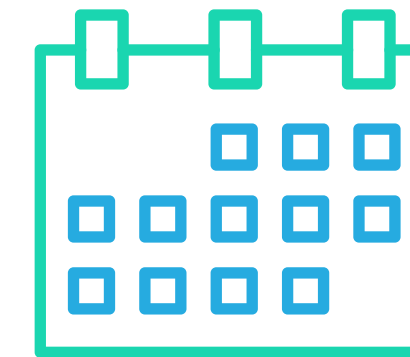
WORRY



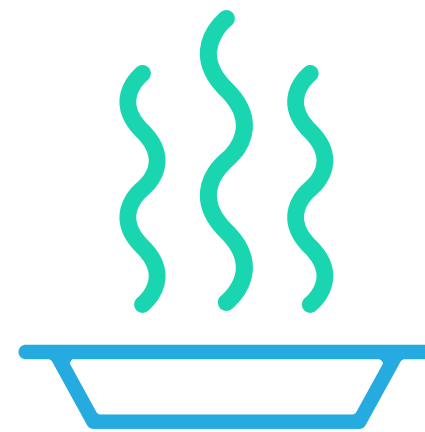
INTERRUPT



CLOTHES



PLANS



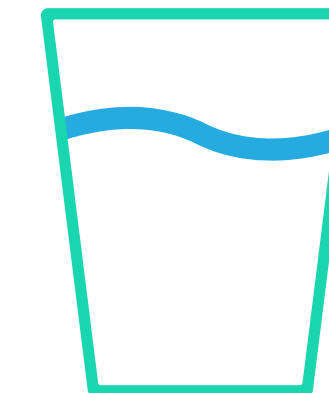
FOOD



HANDS



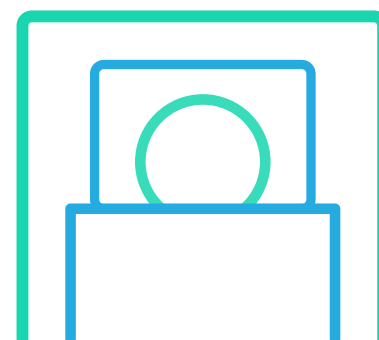
BODY



DRINK



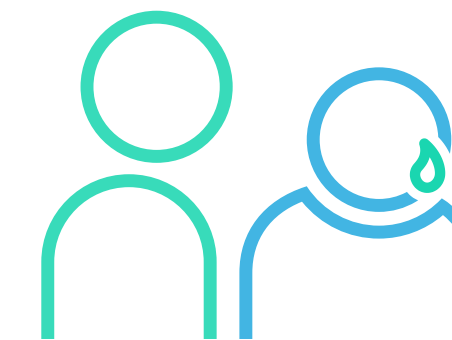
ANGRY



SLEEP



NONE



SHAME

3 minutes to administer

Response options

0	= never
1	= rarely
2	= sometimes
3	= often/always

Sample response

3	1	2	0
WORRY	INTERRUPT	CLOTHES	PLANS
0	0	2	2
FOOD	HANDS	BODY	DRINK
3	0	0	1
ANGRY	SLEEP	NONE	SHAME

Simple sum to score



Household
Water
InSecurity
Experiences

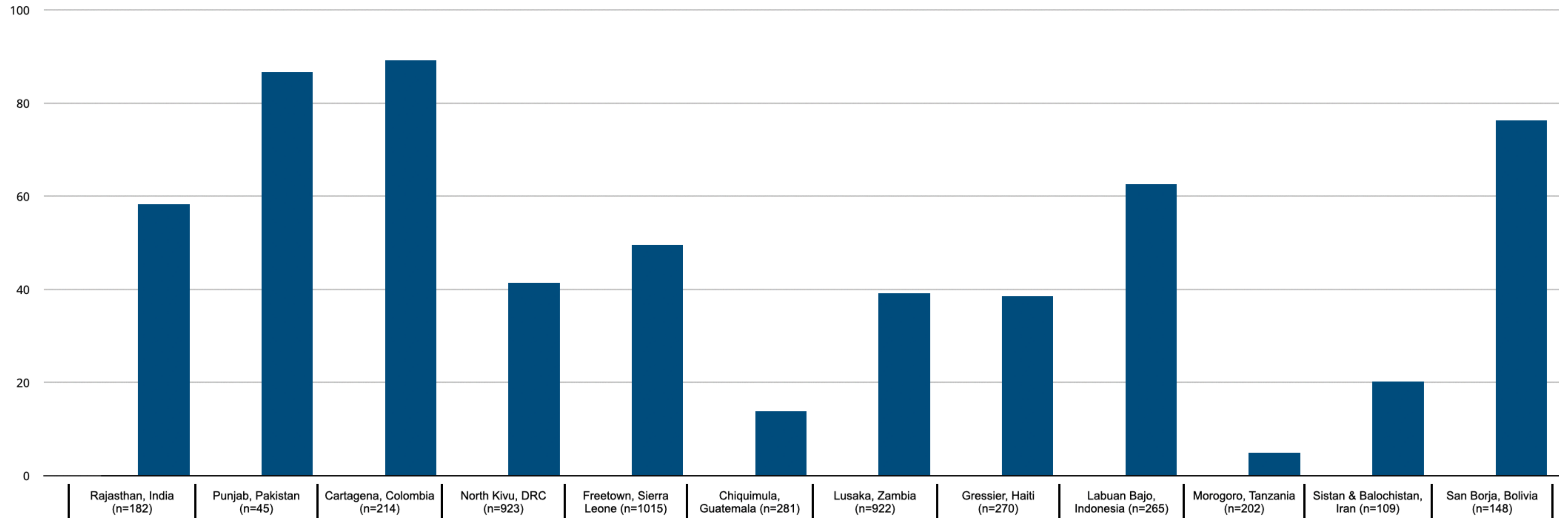
score = 14

HWISE Scale scores range from 0-36

Number of households with
HWISE scores ≥ 12

Total number of households

= Proportion of
water-insecure
households

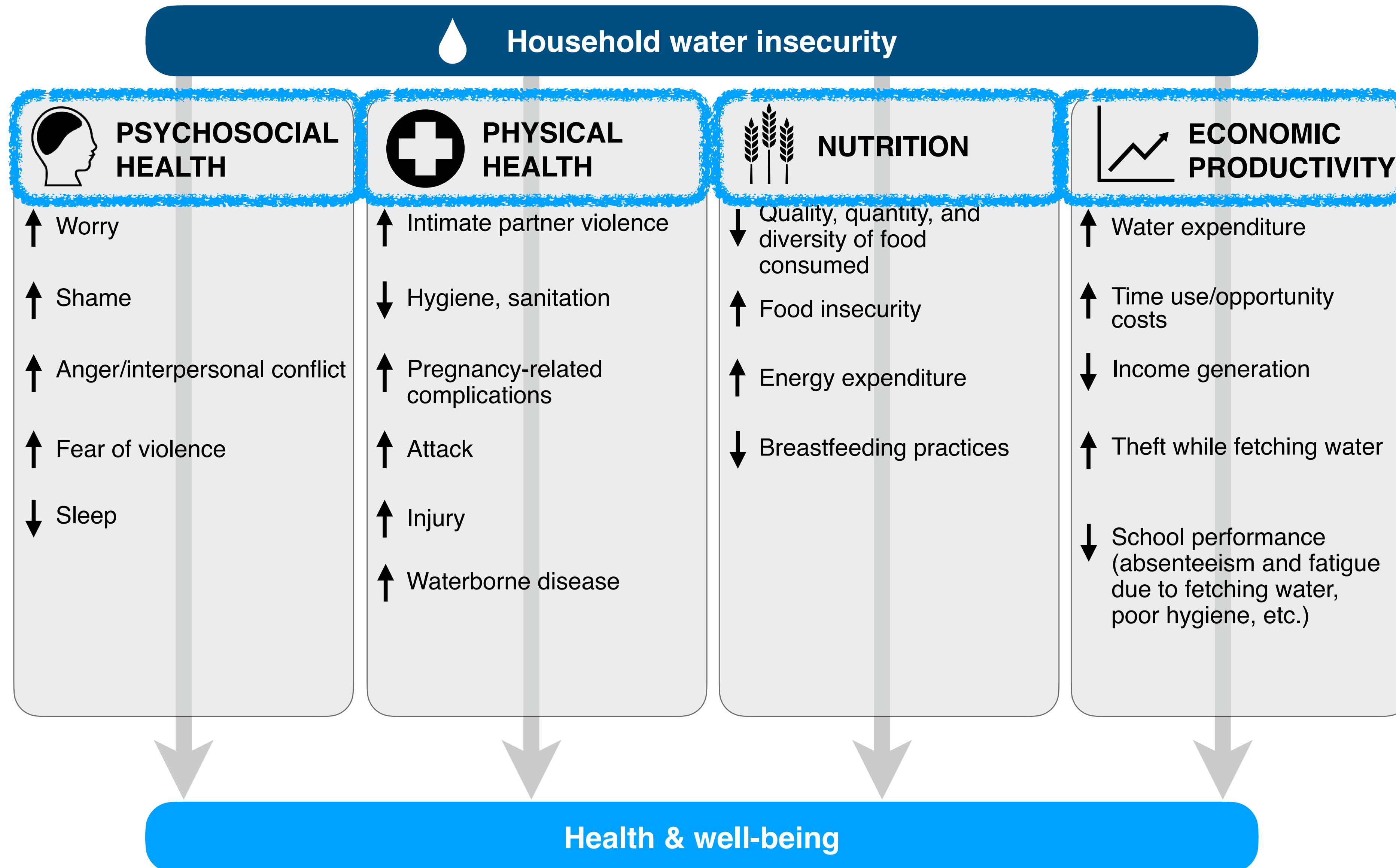




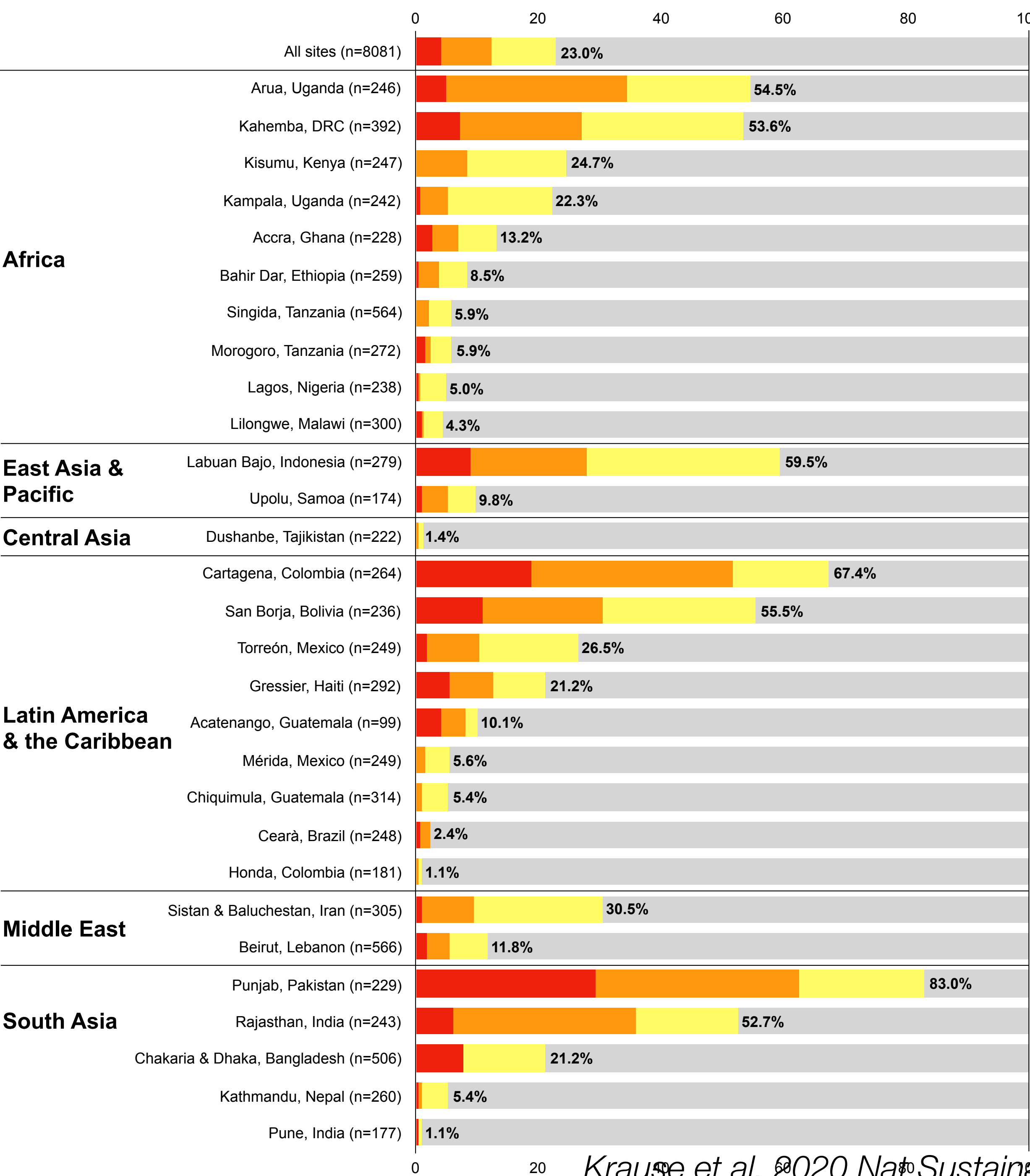
Overview

1. What is the HWISE Scale?
- 2. What has the HWISE Scale told us already?**
3. How can we use the HWISE Scale in metropolitan settings?

Household Water Insecurity shapes many aspects of life



Germane to COVID-19: 1/4 households unable to wash hands due to problems with water





Overview

1. What is the HWISE Scale?
2. What has the HWISE Scale told us already?
- 3. How can we use the HWISE Scale in metropolitan settings?**

The HWISE Scale can be used at multiple levels



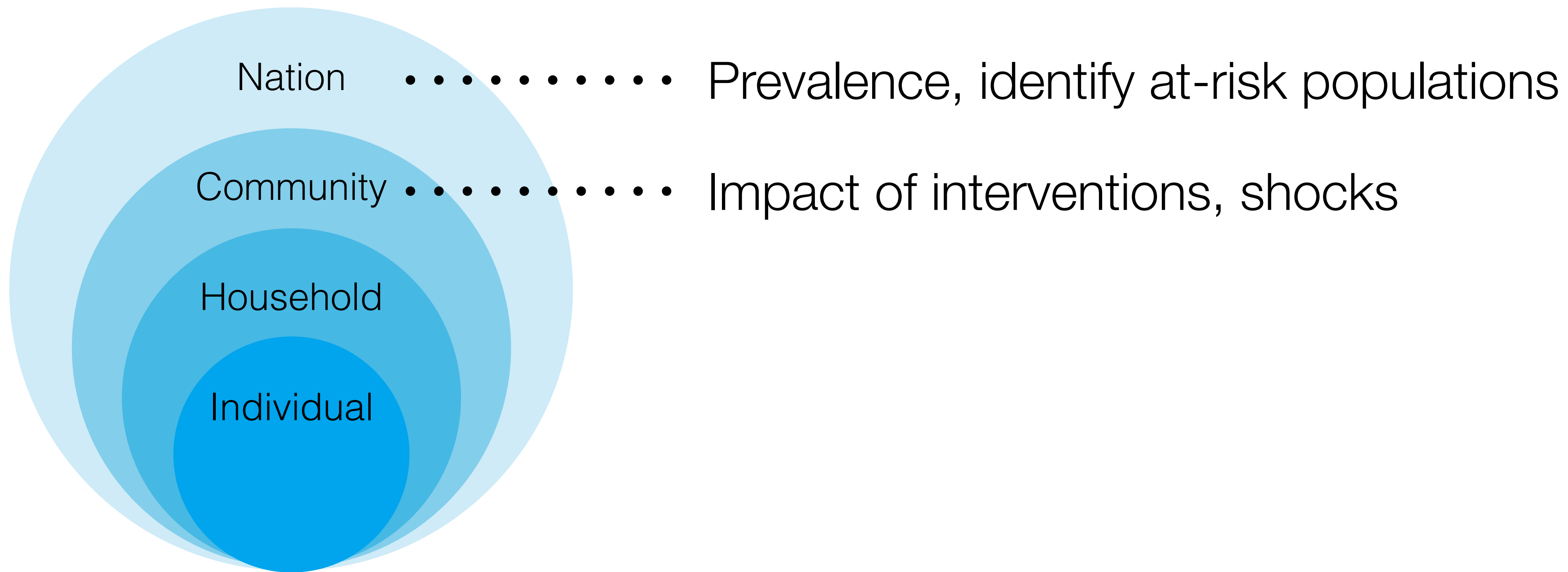
Benchmarking Household Water Insecurity in Africa and India ... and China, Brazil, Bangladesh

BY ANDREW RZEPA, SERA L. YOUNG AND ALEXANDROS MAKARIGAKIS



GALLUP POLL
World Poll

HWISE Scale can be used at multiple levels



OXFAM

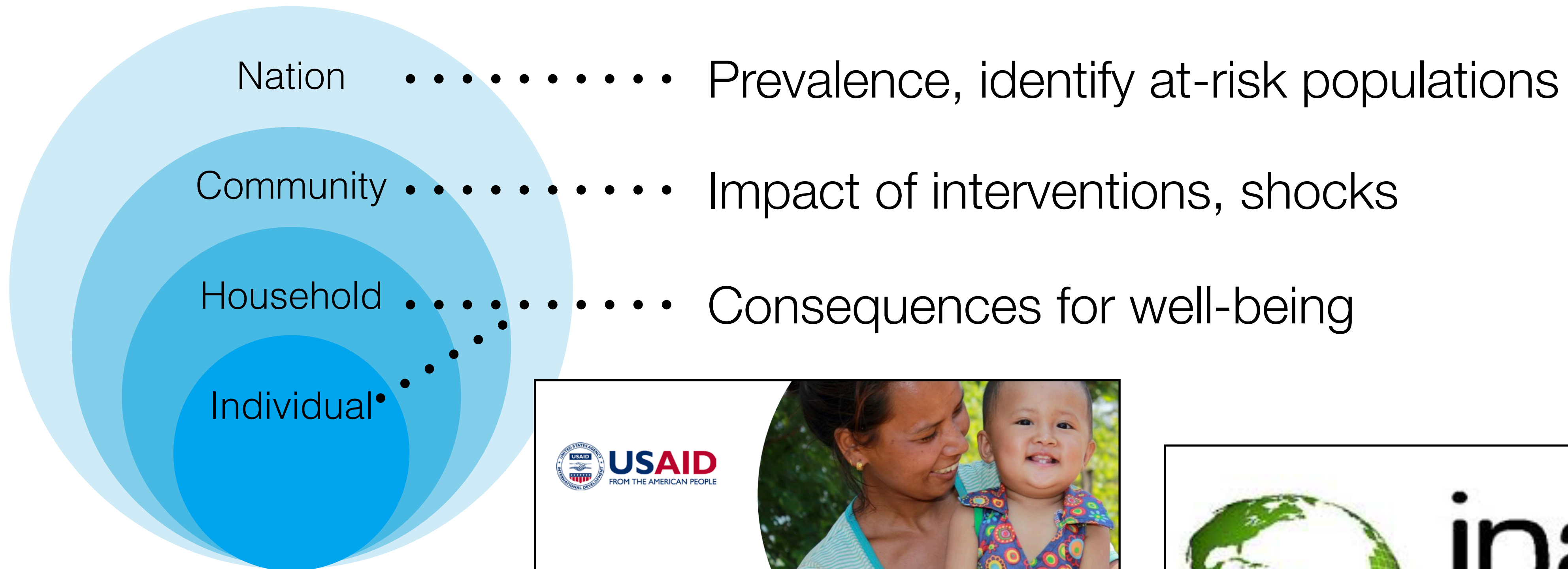
LAST
MILE
HEALTH

WATER
WITNESS
INTERNATIONAL



WaterAid

HWISE Scale can be used at multiple levels

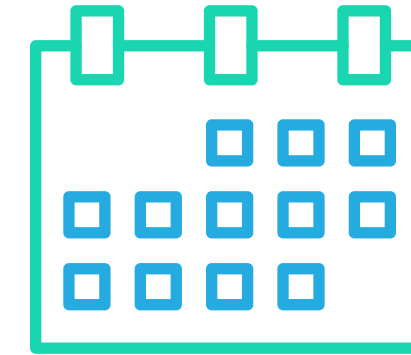


4-item HWISE Short Form developed

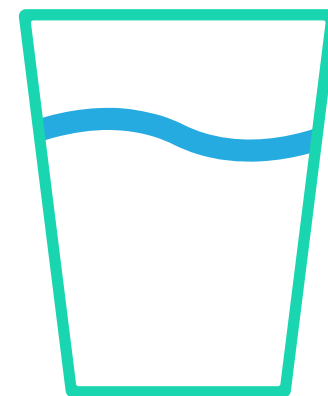
How often in the last 4 weeks have you...



WORRY



PLANS



DRINK



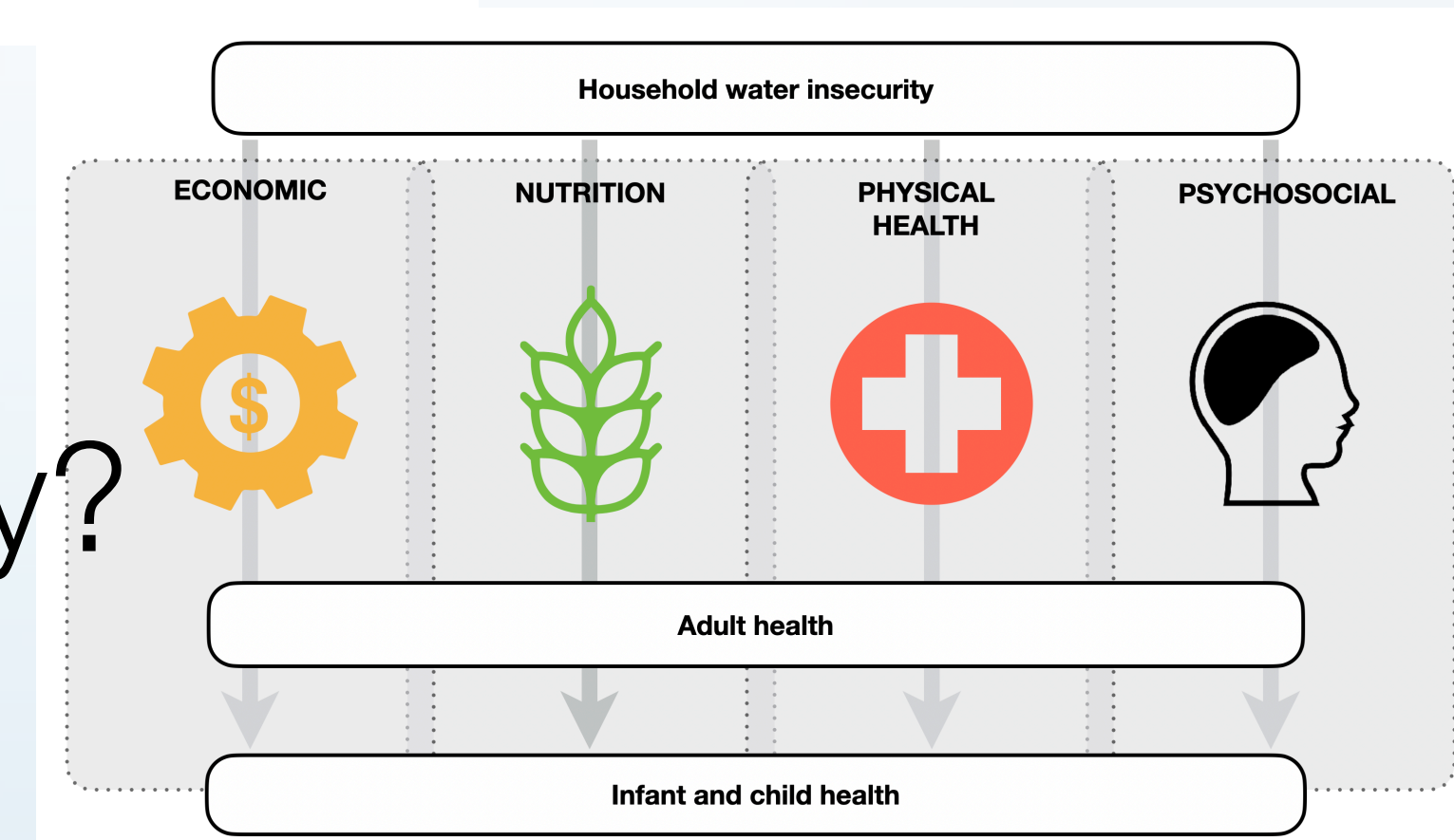
HANDS



1. What is the HWISE Scale?



2. What has HWISE told us already?



3. Possible uses?



Funders & Collaborators



Innovative Methods and Metrics for
Agriculture and Nutrition Actions





The Household Water Insecurity Experiences (HWISE) Scale

Dr. Sera L. Young

Associate Professor
Northwestern University

www.serayoung.org

hwise.org

@profserayoung, @hwise_rcn

