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Challenges of researching showering routines

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Led by UWE Bristol University of the West of England

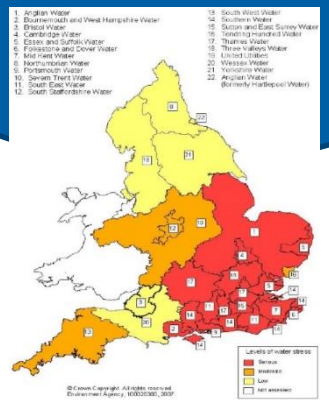
In partnership with MONASH SOUTH AFRICA

The University of Arizona. Udall Center for Studies in Public Policy

Water stress in the UK

Increasing population

Water stress



Climate change adaptation - weather extremes (floods & droughts)

Increasing demand - lifestyle & household size

Environmental needs

Climate change mitigation – energy efficiency

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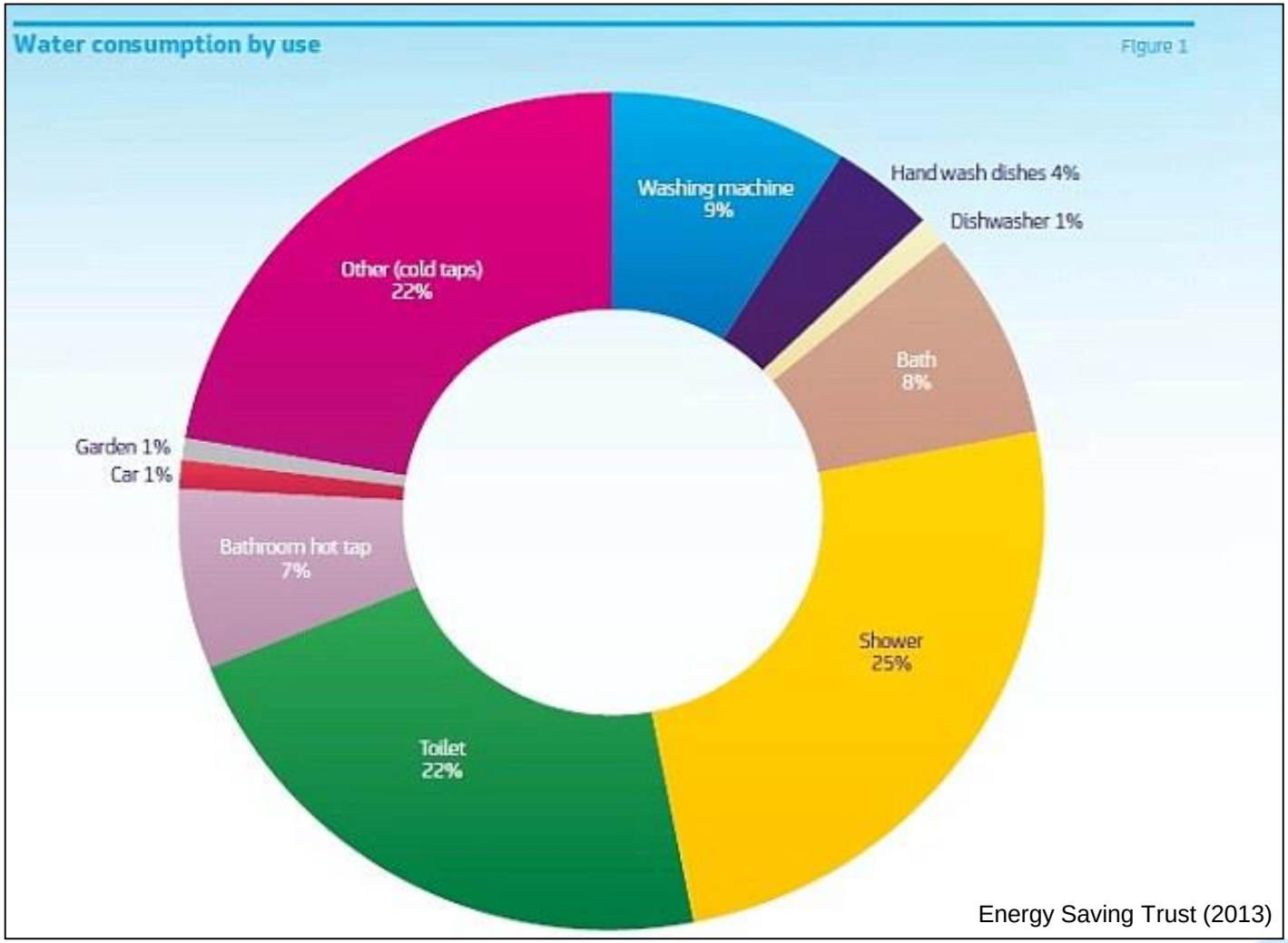
Showering = >25%



Energy Saving Trust (2013)

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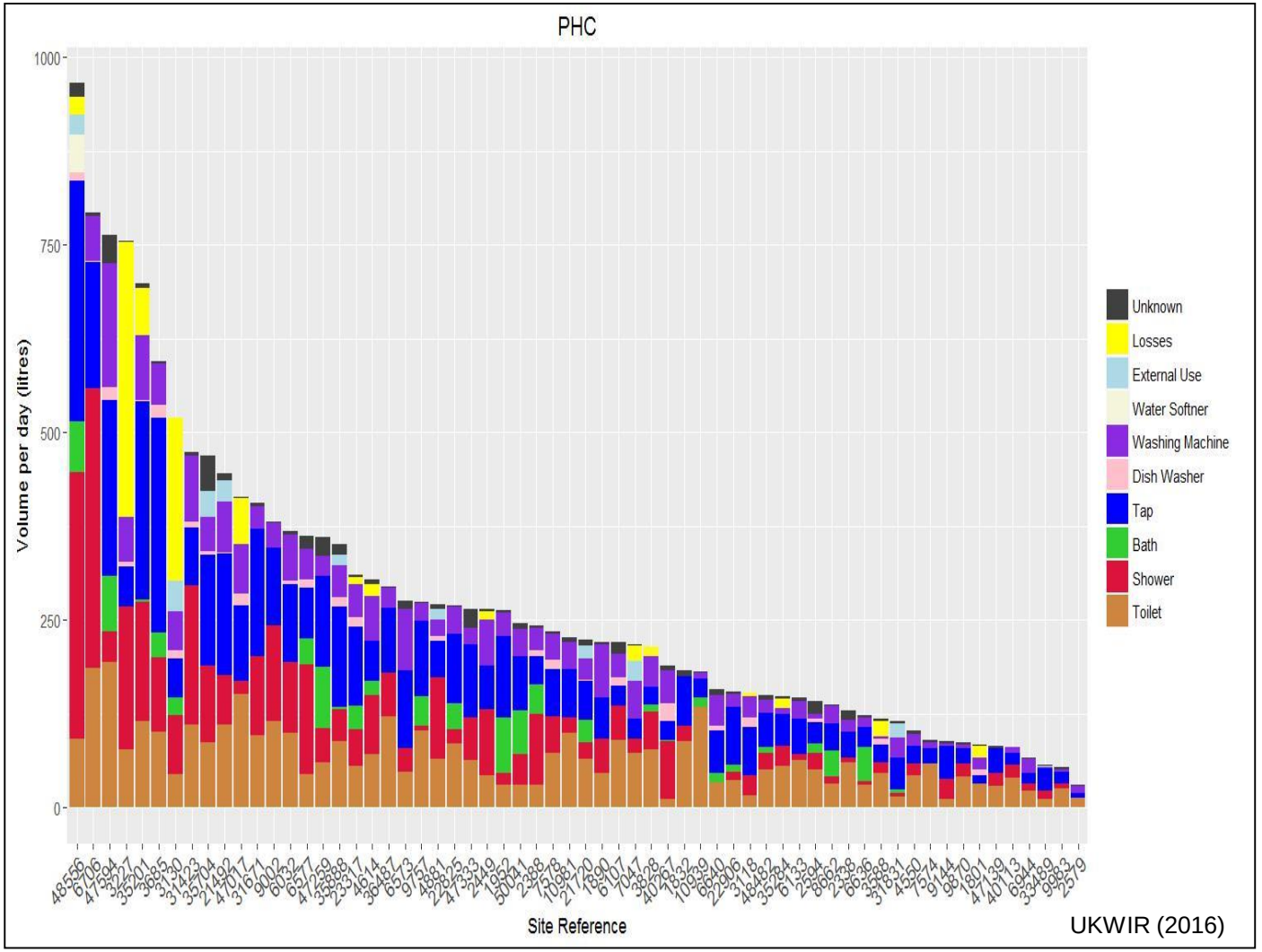
Averages mask complex variation



UKWIR (2016)

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Research aim

To explore

- the variation/complexity of showering routines of young adults, and
- the efficacy of water conservation interventions,

to inform future domestic water efficiency programmes

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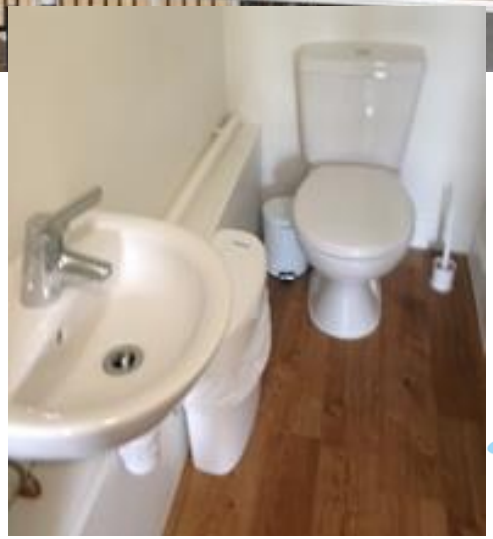
The laboratory - downstairs



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Upstairs - shower rooms

Occupancy – participant demographics

House	Beds (void)	Gender (F:M)	Nationality (UK, EU, non-EU)	Age (18-22, 22-29)	Gym
A	8	8:0	1, 0, 7	3, 5	5
B	8	4:4	7, 0, 1	8, 0	2
C	8	8:0	0, 0, 8	7, 1	4
D	10	5:5	5, 0, 5	6, 4	2
E	10 (2)	5:3	6, 0, 2	7, 1	4
F	8	8:0	5, 2, 1	8, 0	2
G	8	4:4	5, 2, 1	8, 0	2
H	10	3:7	8, 2, 0	9, 1	4
I	10	4:6	8, 2, 0	9, 1	7
J	8	4:4	7, 1, 0	7, 1	3
Total	**88 (80 bedrooms, 40 showers)**	**53:33 (62:38%)**	**52, 9, 25 (61, 11, 29%)**	**72, 14 (84, 16%)**	**35 (41%)**

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Conventional water-saving interventions

House A & B	House C & D	House E & F	House G & H	House I & J
Nil - control	Posters	Shower timers	Amphiro a1	Face-to-face

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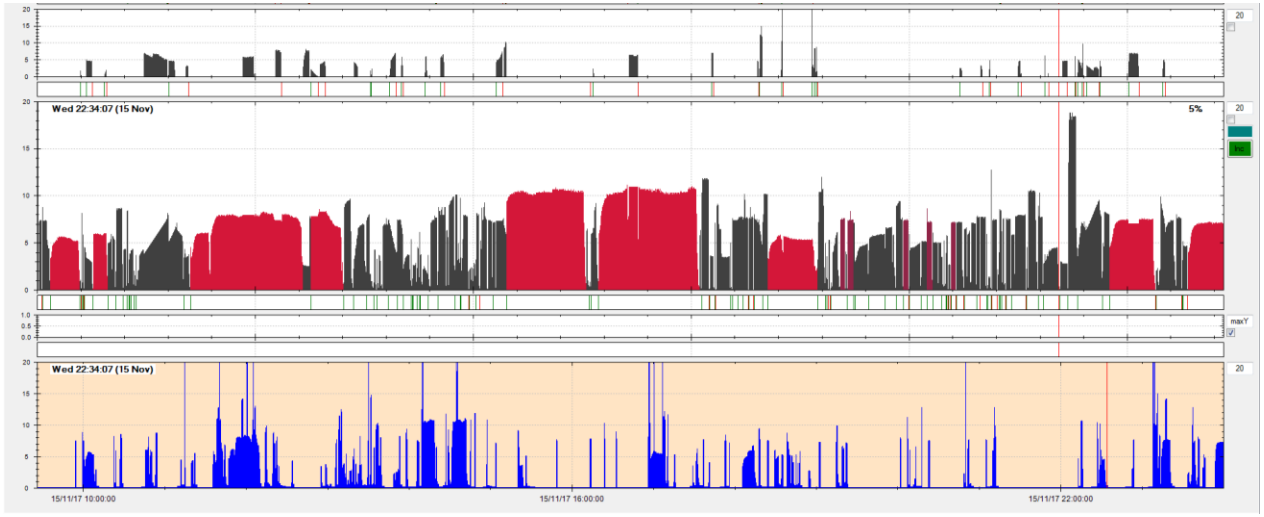
Quantitative data collection

- Fixtures audit summer 2017
- Quantitative data at different scales (Jan-Mar 2018)
  - per household consumption at 30 minute intervals (BMS meters)
  - shower events component via 500ml pulses (Siloette loggers)
- Occupancy/demographics data



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Qualitative data collection

- Survey (Oct 2017) on showering routines – 158 responses
- 2-week shower diaries (21 Feb – 07 Mar 2018) – 26 participants
- 5 focus groups (Mar 2018) – 22 participants
- Survey (Mar 2018) – 19 responses

Total = 34 individual participants (34% of target population)

Stakeholder workshop (May 2018) – 8 participants

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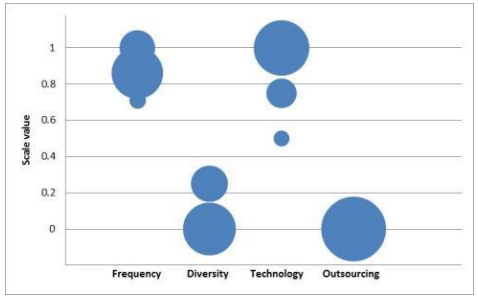
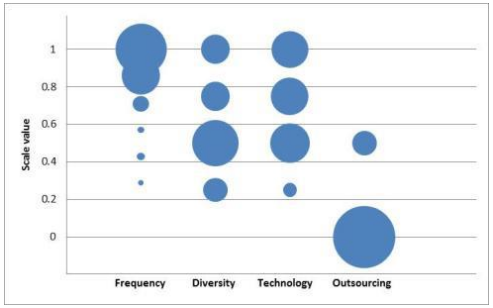
Browne et al (2013) Patterns of water

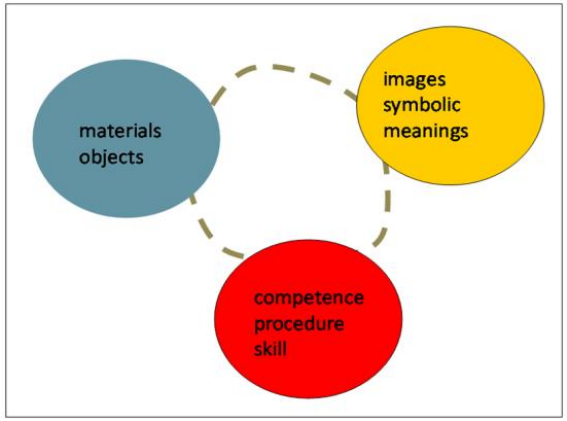
Showering ‘practice’ =
how THINGS are done

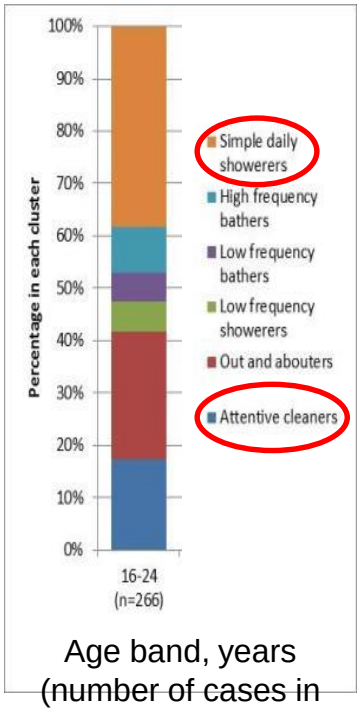
Simple daily showering



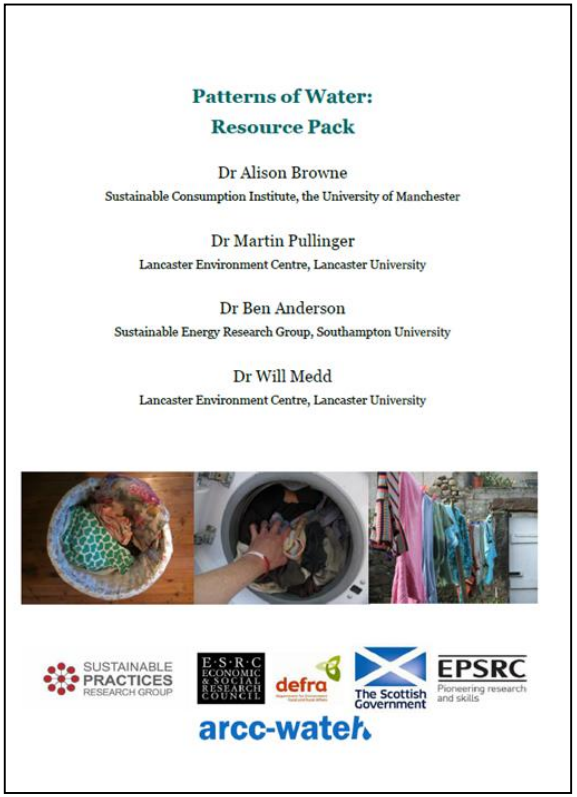
Attentive cleaning







Age band, years
(number of cases in
that age band)



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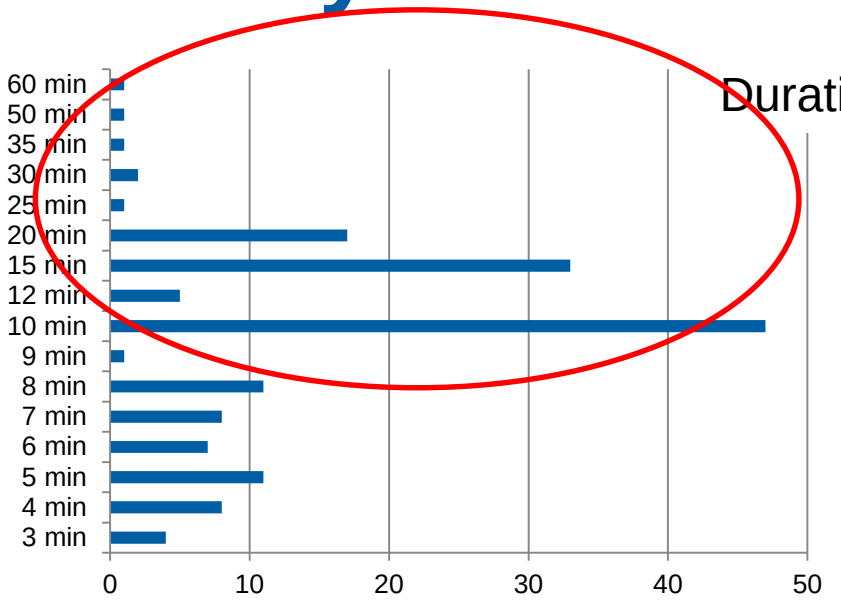
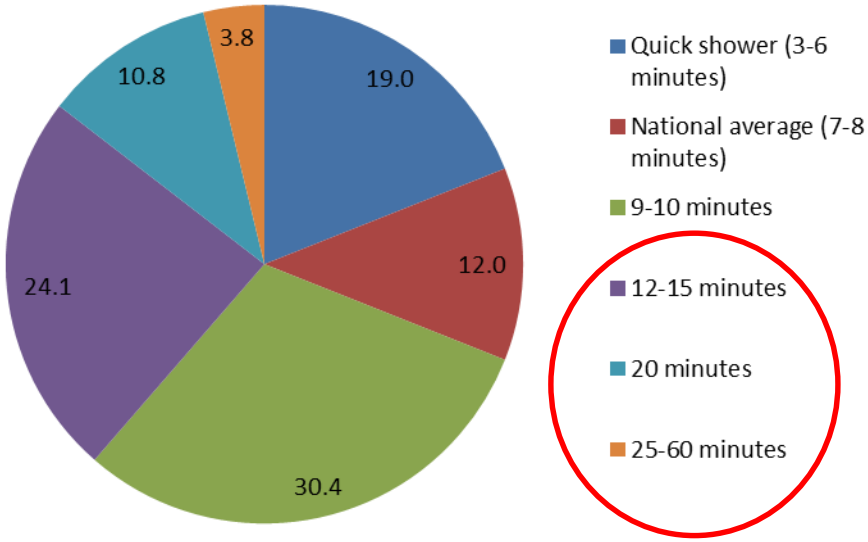
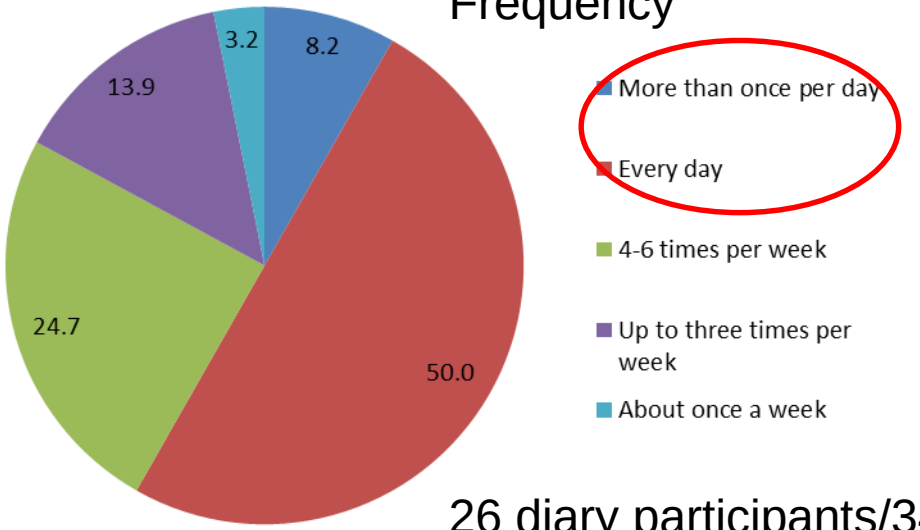
Survey results - clusters

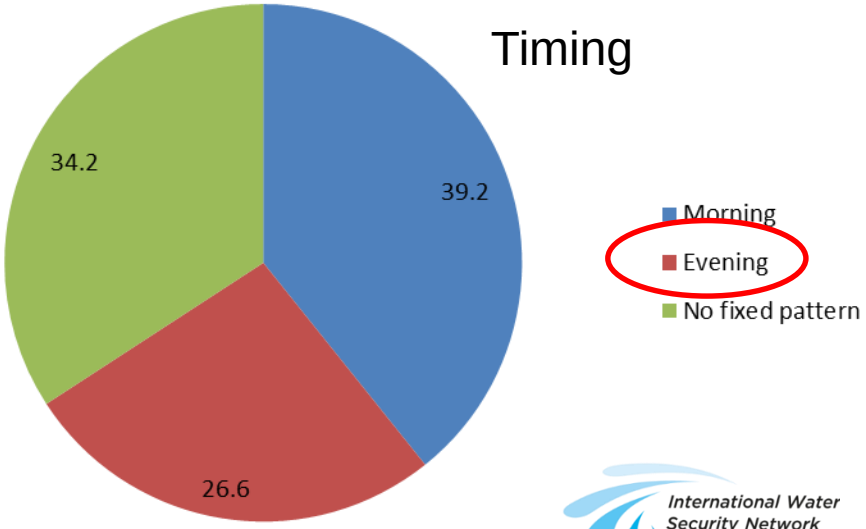




Frequency



Timing



26 diary participants/348 events confirm profiles

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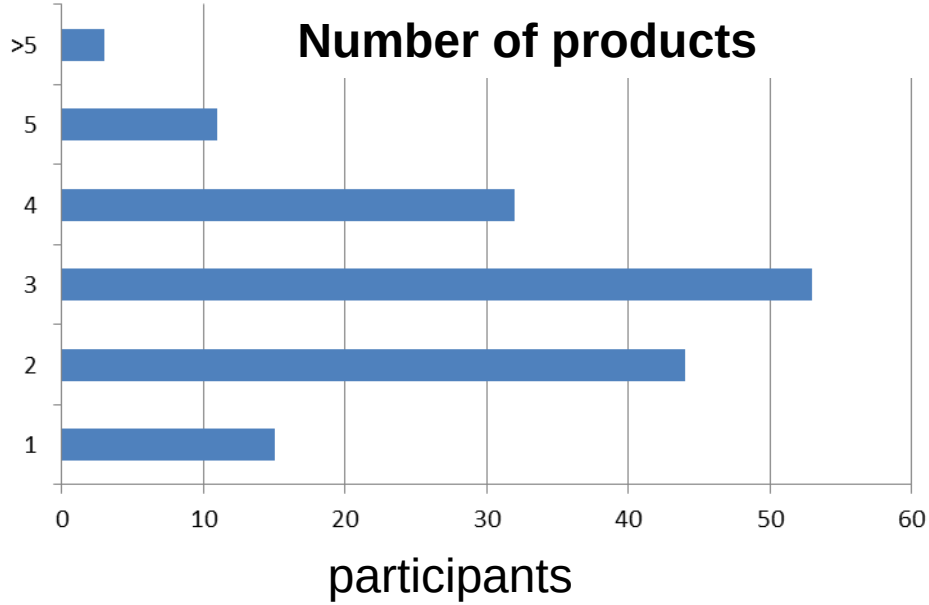
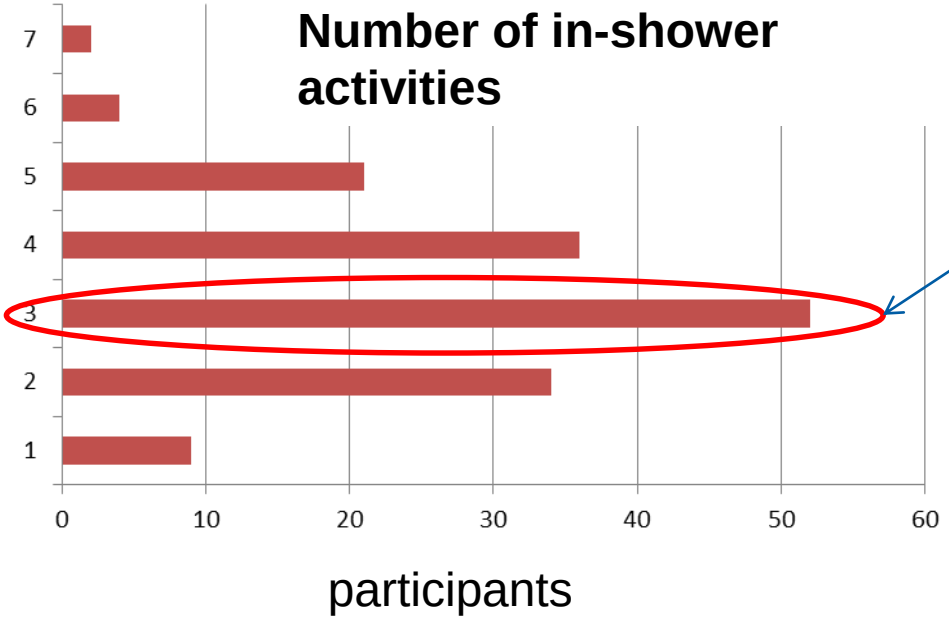


Oct 2017 survey



Most common combination:

1. x2 Shampoo once & wash body [28/34]
2. x3 Shampoo once, condition & wash body [25/52]
3. x4 Shampoo once, condition, wash body & shave [19/36]

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Diaries - time of day

‘Simple daily showering’

%	By participant	By event
Night-time 00:00 – 05:59 hrs	4	5
Morning 06:00 – 11:59 hrs	27	**36**
Afternoon 12:00 – 17:59 hrs	31	25
Evening 18:00 – 23:59 hrs	**38**	**34**

‘Attentive cleaners’

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Early results

Practice clusters

Posters – unlikely to reduce water consumption.

- Sharing a shower – risks changing the meaning/unlikely to be functional!
- Peeing in the shower – legitimise what already do!

Shower timers

- Only 3 participants across study recorded **average** durations of <5mins (none in houses E & F that had the shower timers)
- Participants with timers - 2/5 managed some (up to half) showers in <5 minutes (average 6-8 mins), but 1 participant spent between 18-43 mins!

Amphiro

- Liked by Focus Group (mostly male) participants
- Slightly shorter showers (despite reduced flow from device)

Face-to-face

- Shortest shower durations (self reported)

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The practical challenges of researching private routines in a messy world

- Multiple datasets to combine – messy social world
- Fixtures – change, timing of audits
- Business Management System meters – reliability/accuracy
- Siloette loggers/splitter cables – BMS *OR* components (not both)
- Gender balance between methods, Researcher bias
- Diaries – handwriting, time of day recording, participant fatigue
- Focus groups - recruitment, transcription, allocation of speech to individuals
- No water, no pizza, no audio!
- Timing – impact of student exam/assignment period

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Next steps

- Complete data analysis using ISM model

Individual	Social	Material
Factors held by individual that affect choices and behaviours. Includes values, attitudes & beliefs, and calculations or evaluations made before acting.	Factors beyond the individual in the social realm. Shared understandings, norms and meanings. Networks & relationships, and institutions that influence how groups of people act.	Factors 'out there', in the environment and wider-world, that constrain or shape actions. 'Hard' infrastructures, technologies and regulations. 'Soft' influences e.g. Times & schedules of everyday life.

- Fix meters & Siloette loggers
- Prepare programme of potential future interventions spanning ISM contexts
- Audit immediately before next round of fieldwork – things change!
- Test sub-set of interventions in Oct 2018

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Thank you

www.watersecuritynetwork.org
www.twitter.com/water_network

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