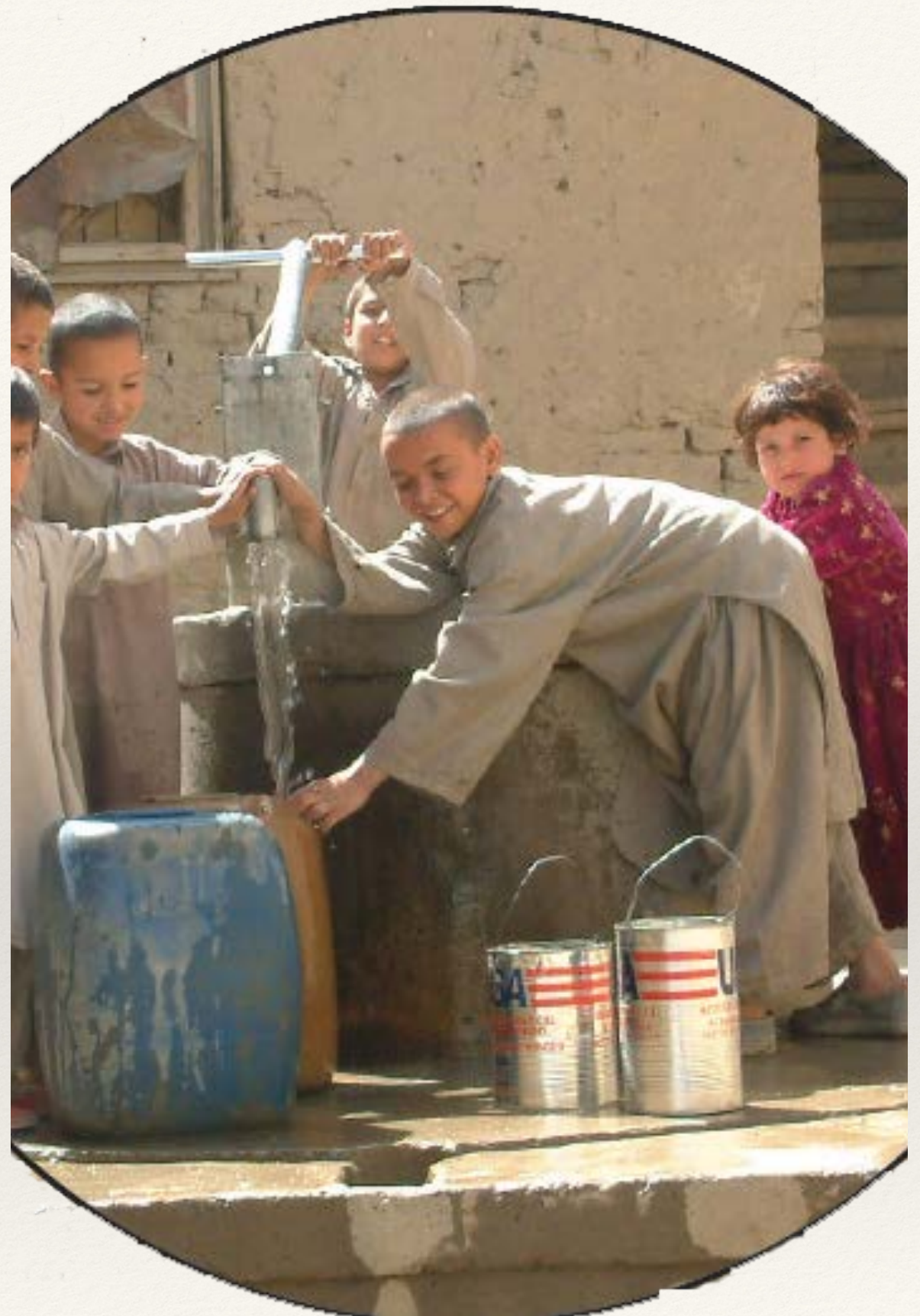

Water supply and sanitation

Sustainable services for all?

Dr. Svein Stoveland



Content-

- ❖ Need for development review?
- ❖ Rural water supply progress
- ❖ Are we closing service gap for? Computer model
- ❖ Urban areas: Survey tools to investigate way for service coverage for all? (test case from sister city)
- ❖ We need to find solutions to include all - not easy but possible. New approach needed?

What are the issues:

- ❖ Over last 10- 15 years development has been given much support and government has tried to speed up development. Have we succeeded?
- ❖ For water supply and sanitation:
 - ❖ Services for all?
 - ❖ When / or will all Afghans receive service?
 - ❖ Need to rethink or review?

Brief presentation: tools for review or reflection?

- ❖ **Rural** Water supply and sanitation: 39% coverage. - or 61% not covered - **15 millions still waiting** for basic service?
- ❖ **Urban** areas: in 2005 , 15% was connected to water with 30,000 connections, Now 60,000 connections. if 20 persons per connection: **1,2 million of 5 million people?**
- ❖ Some estimates indicate use of 100,000 private wells. (varying quality, probably unsafe..?)

Lorem Ipsum Dolor

Are we making progress?

Lets have a quick look:

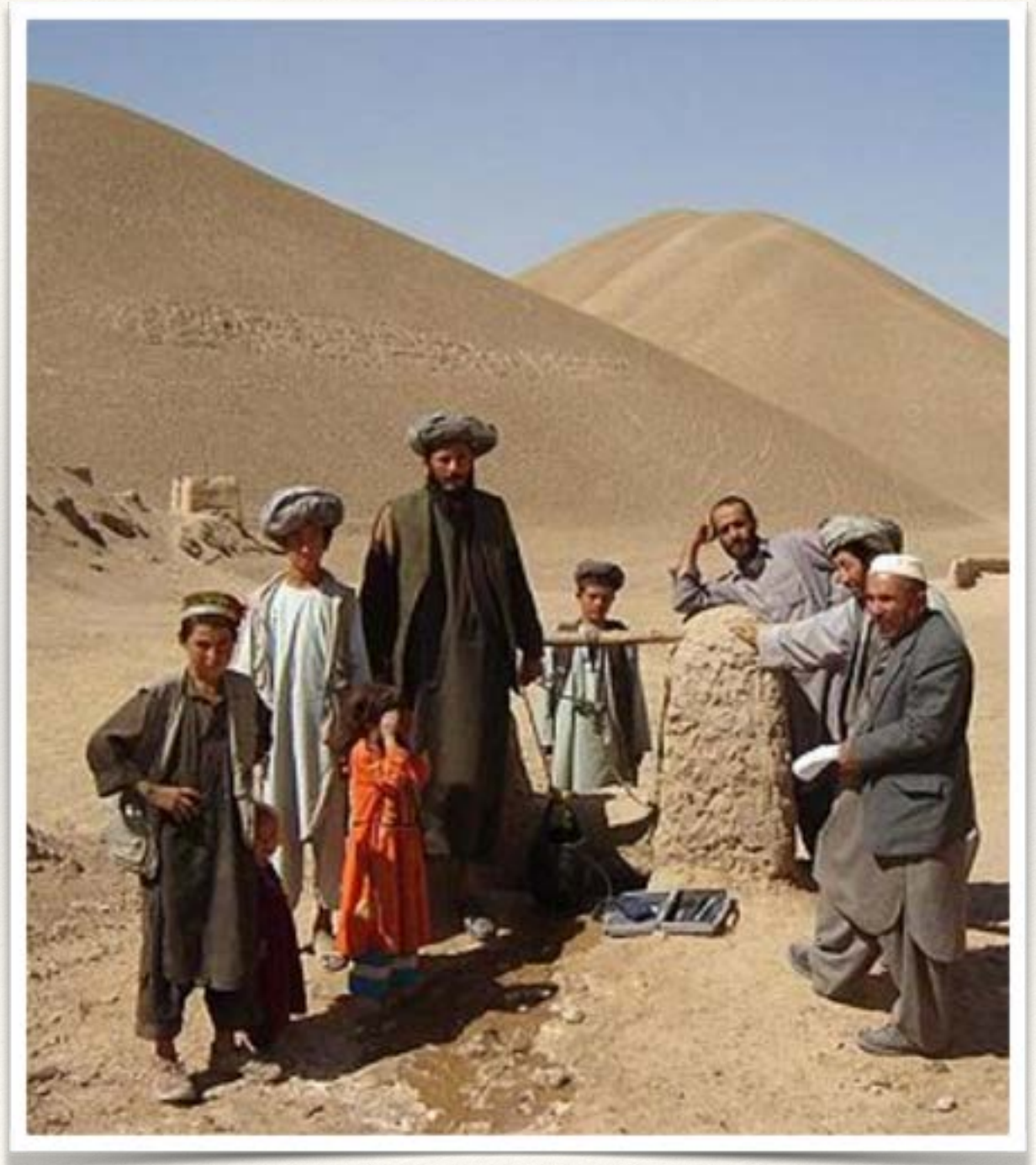


What does people want?

- ❖ **Regular and sustainable services**

-

- ❖ What do “we” engineers of planners provide?
 - ❖ Projects?
 - ❖ Dreams?



Look at Rural?

- ❖ 15 million people waiting for safe water.
- ❖ NSP build 100,000 water supplies
 - ❖ If each water point covers 200 persons then : 20 million people should have water - **problem solved??**
- ❖ Others are also building rural water supplies so what could be the problem?

-
-
- ❖ Video removed.... Making file too big. Video showing rural well operated by children...

Example for consideration:

Affordable Services: Technology Mix?

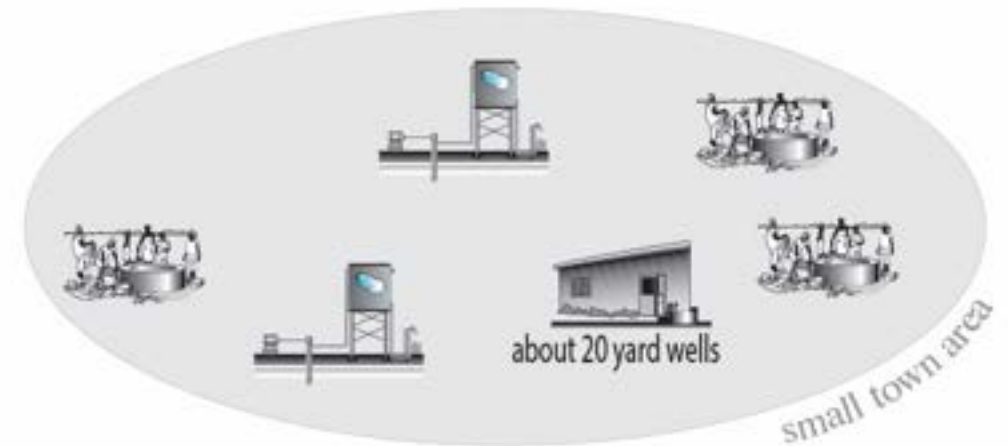
Different combinations can be considered and assessed what is affordable and sustainable for:

“Some for all “

NOT

“All for Some”

ns:
and 25



:

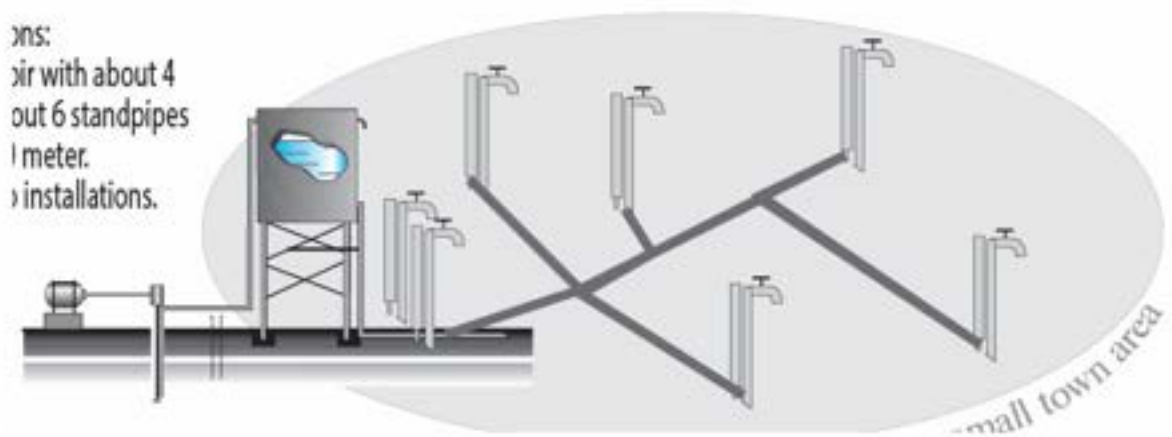
MOTORISED PUMPS + HANDPUMPS

ns:
boreholes



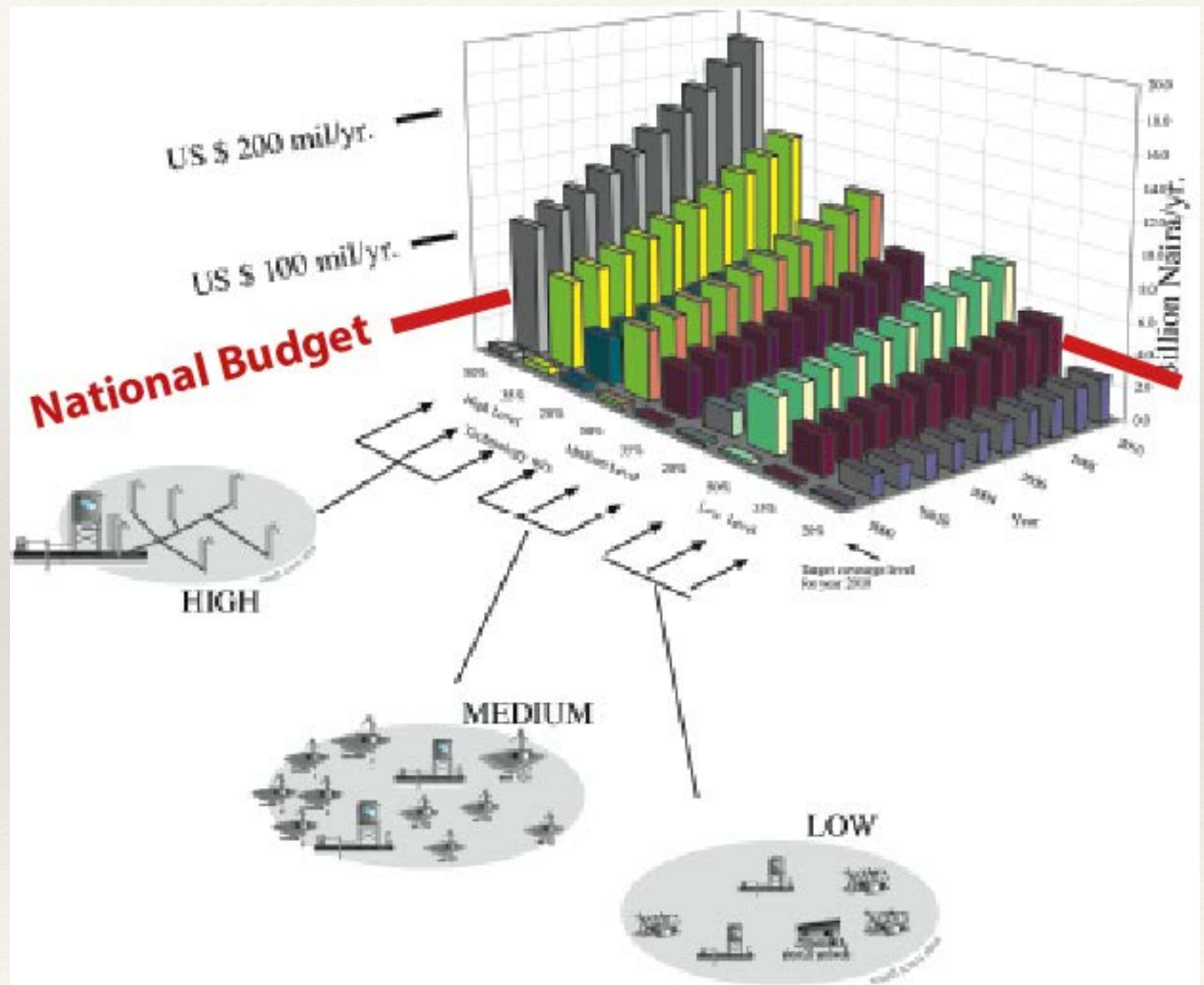
MOTORISED PUMP + STREET STANDPIPES

ns:
pump with about 4
out 6 standpipes
1 meter.
installations.



Are solutions fundable?

- ❖ Example showing where national budget give a clear indication what may be possible if services are for ALL



WHO Rural Water Costs / example

Table 1: Information to calculate unit costs for rural water supply systems

	Capital investment (\$ per person)	Recurrent (% annual cost)	System lifetime (years)	Water demand (Lppd)
House connection	92-144	20-40	30-50	80-120
Standpost	31-64	0-10	10-30	50-80
Handpump on drill well	17-55	0-10	10-30	20-30
Dug well	21-48	0-10	10-30	20-30
Rainwater	34-49	5-15	10-30	20-30

at a computer model med first let look at

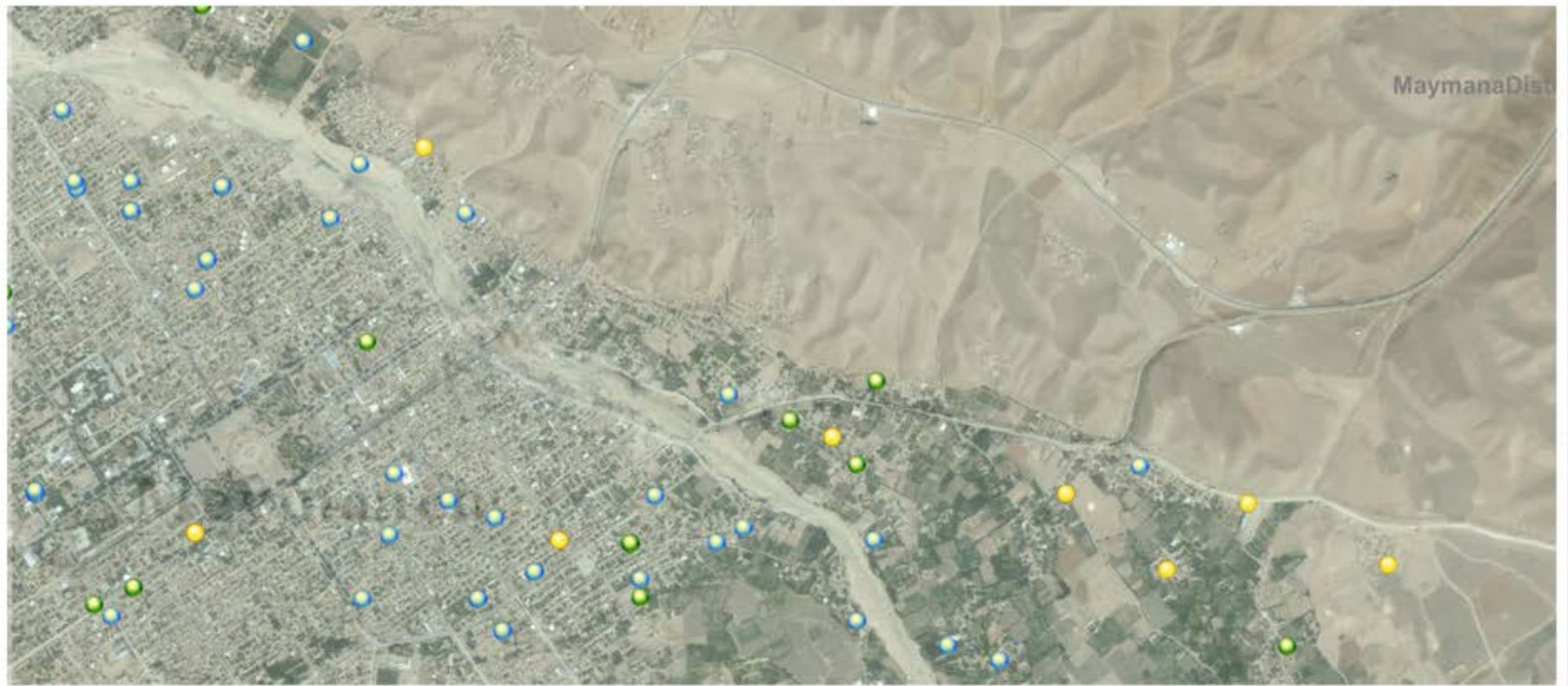


Who decides?

- ❖ Engineers?
- ❖ Economists?
- ❖ Sociologists?
- ❖ Users?

Time to rethink?

- ❖ We cannot just construct and build new schemes to cover the service gaps...
- ❖ Perhaps good to learn **what works in Afghanistan** and expend what works in sustainable manner.

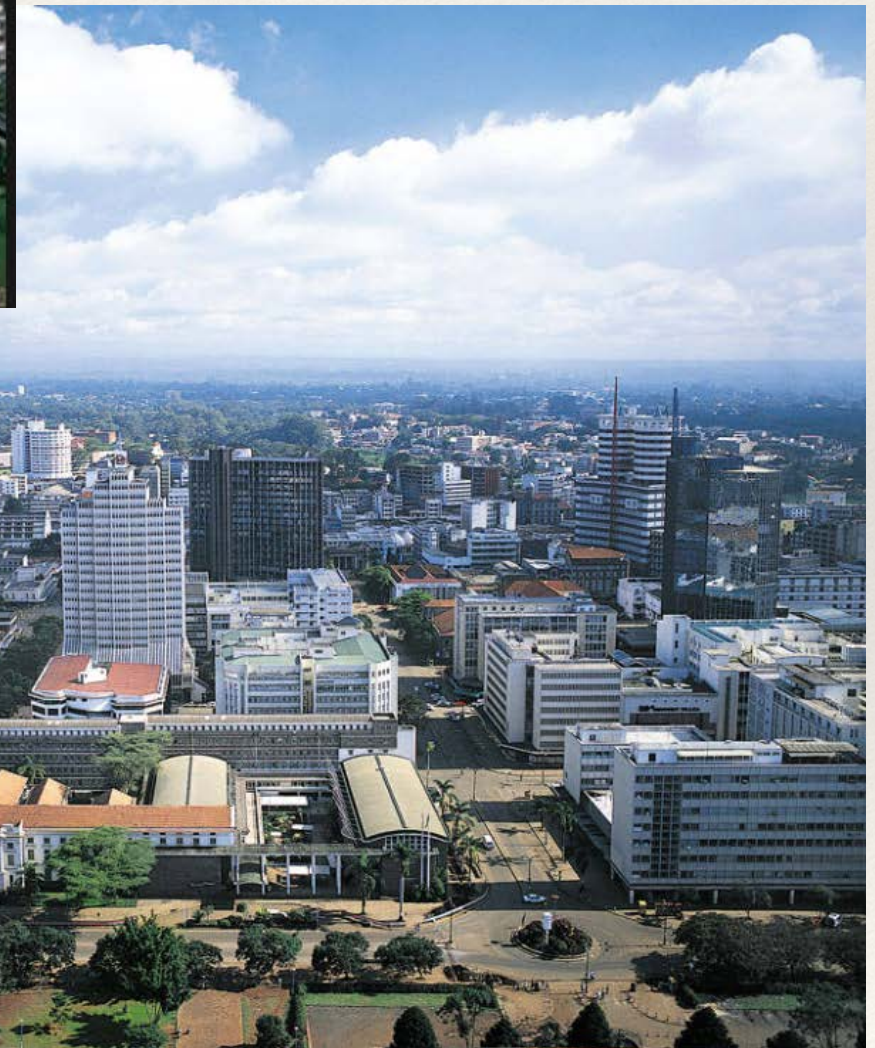


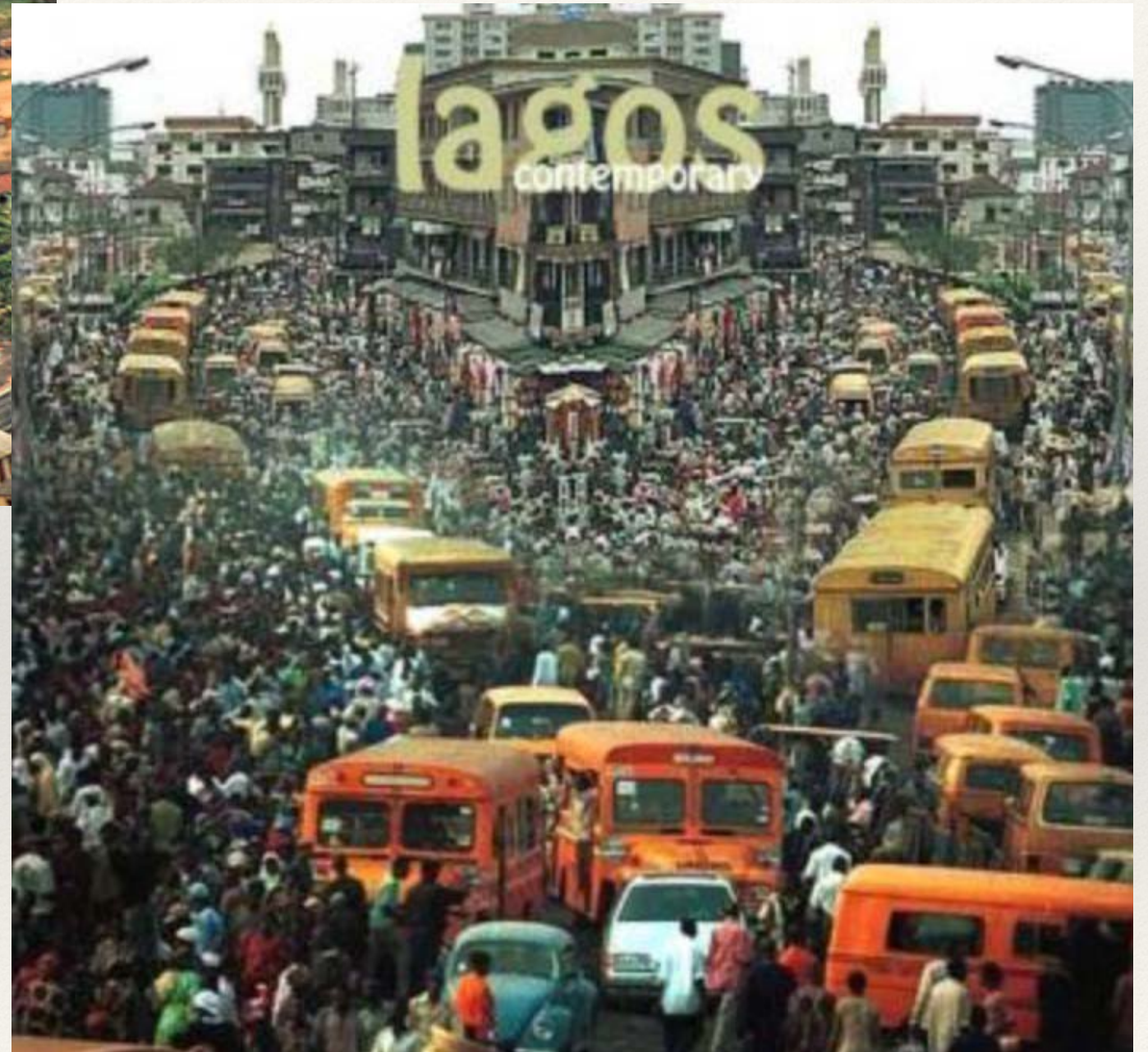
Online ArcGIS Maps?

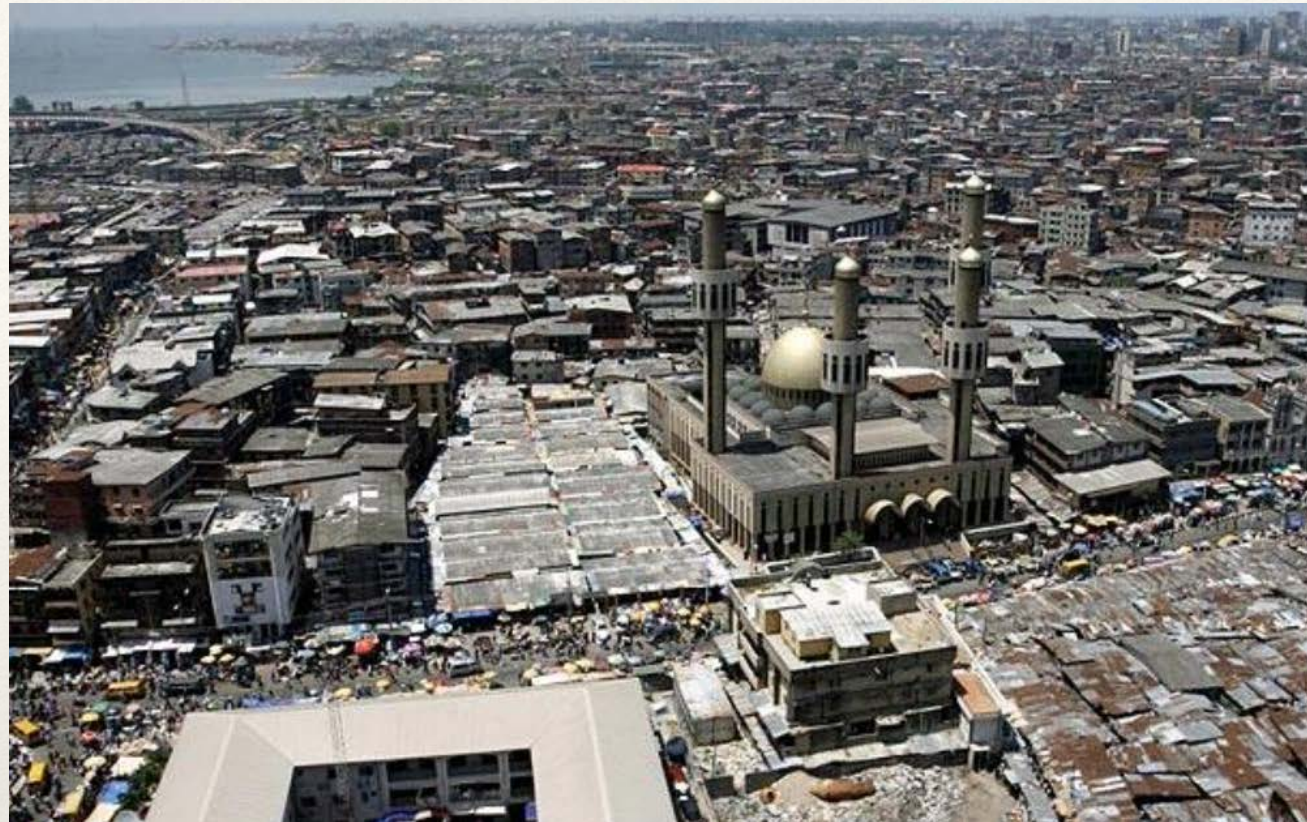
Time to use online monitoring of progress
to follow closely improved service gap?

A quick look at Urban Areas

- ❖ Tool which could be used?
 - ❖ Socio economic surveys, water use studies, willingness and ability to pay studies:
 - ❖ Example from sister city: Lagos.







Water supply?





Kabul









Lorem Ipsum Dolor

Settlements:

Category R2: Medium Density, Upper Medium Income Areas.

Similar to R1 except that there are usually 2 families per building. Plot size 0.13 hectares..



Aerial and ground photos from Victoria Island, (R2)

Category R3: Lower Density, Lower Medium Income Areas

Categories include Government Housing Estates and similar developments. Blocks of Flats accommodating 4 to 6 households per block. Usually no gardens. Household size is 6 to 7 persons. Hygiene level considered reasonable.



Category R5: Higher Density, Low Income Areas.

Houses consist of roomy apartments with families sharing all sanitary facilities. Sanitation level is poor. No Gardens.



Map



Sub-consultancy Services
in connection with Private Sector Participation Proposals (PSP Project)
for the Lagos State Water Corporation (LSWC)

March - March 2000



Talking to Urban Users - what can we learn?

- ❖ Example : Survey
- ❖ Focus groups discussion
- ❖ User surveys / households

LAGOS DRAINAGE AND SANITATION PROJECT

QUESTIONNAIRE FOR WILLINGNESS TO PAY FOR URBAN SERVICE IMPROVEMENT

Husband or wife or senior member of household should be interviewed

Questionnaire and enumeration data:

FORM II

Questionnaire no. (to be filled in by data entry person):

Enumeration area code (to be filled in by enumeration supervisors):

Local Government Authority (to be filled in by enumeration supervisors):

Enumerator's name: Number:

Supervisor's name: Number:

Date:

Time start:

Time finish:

Opening Statement:

My name is _____, and I am working for the Lagos Urban Service Improvement Programme doing a study on water supply and sanitation in Metropolitan Lagos. This neighbourhood has been randomly selected as one of the study areas. We would like to ask you some questions about the water and sanitation situation for this household.

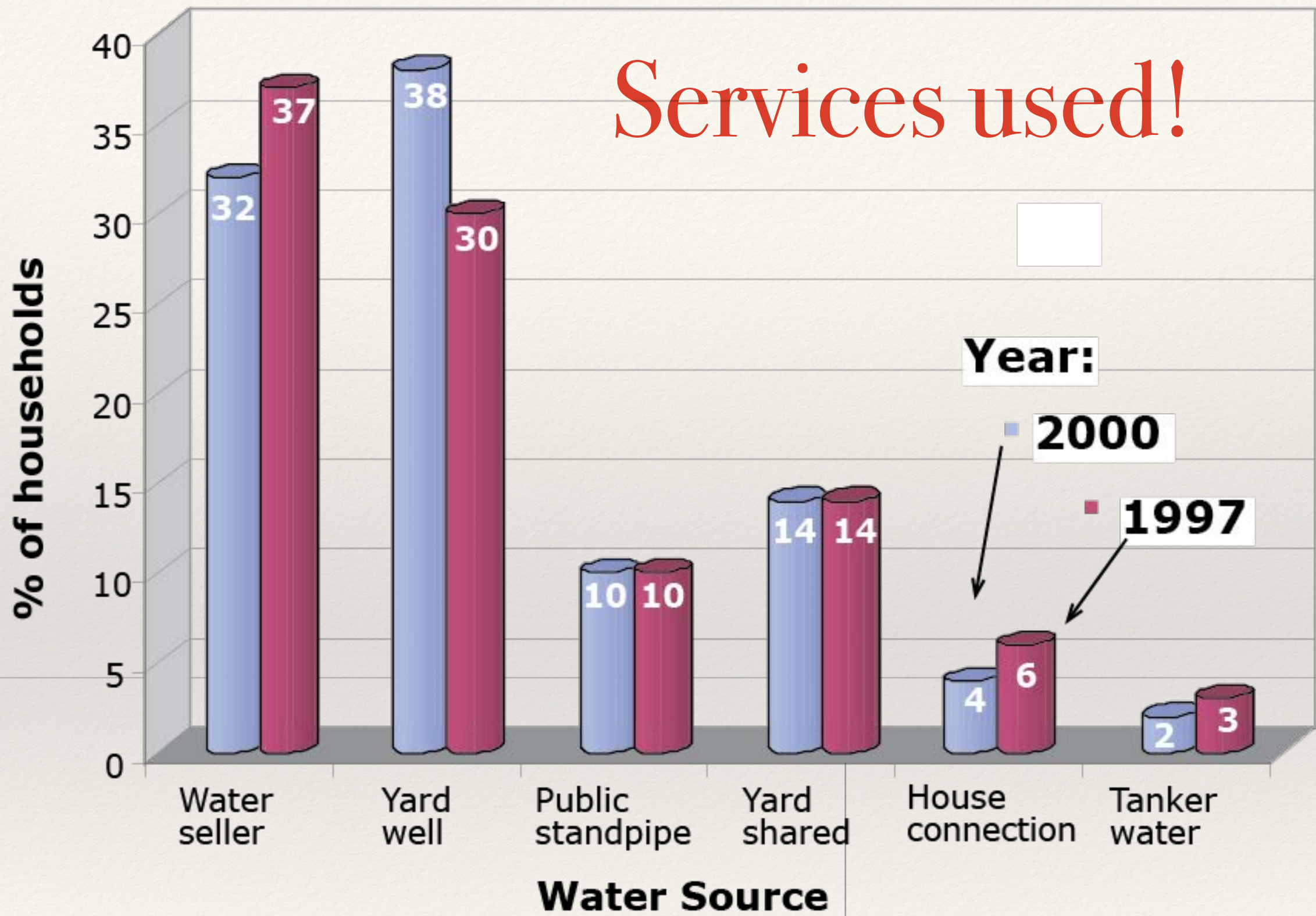
We have received permission from the Lagos State Government to conduct this study. The interview will take less than an hour. Your response will assist the programme. It will improve our understanding of your needs for improved water supply and sanitation services. Your answers will be completely confidential. Only summary information will be used, and no individual questionnaire will be made available to any authority. If there is any particular question that you don't like to answer, that will of course be accepted.

1. Are you willing to be interviewed? Yes: ☐ No: ☐

2. (Enumerator to fill) Person interviewed in household:
Husband ☐ Wife ☐ Senior member of household ☐

3. Language used for the interview:
English: ☐ Pidgin English: ☐ Yoruba: ☐ Hausa: ☐

Services used!



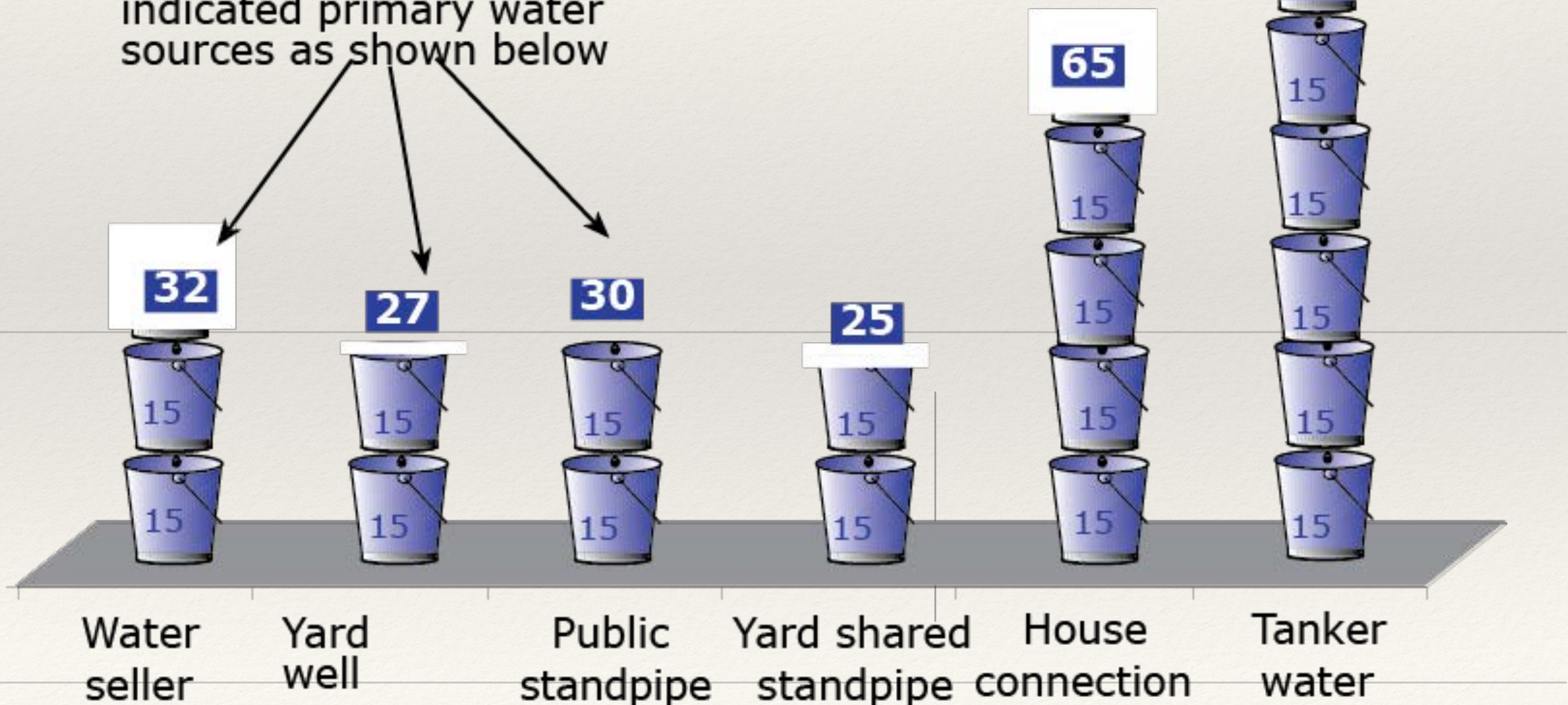
Water consumption

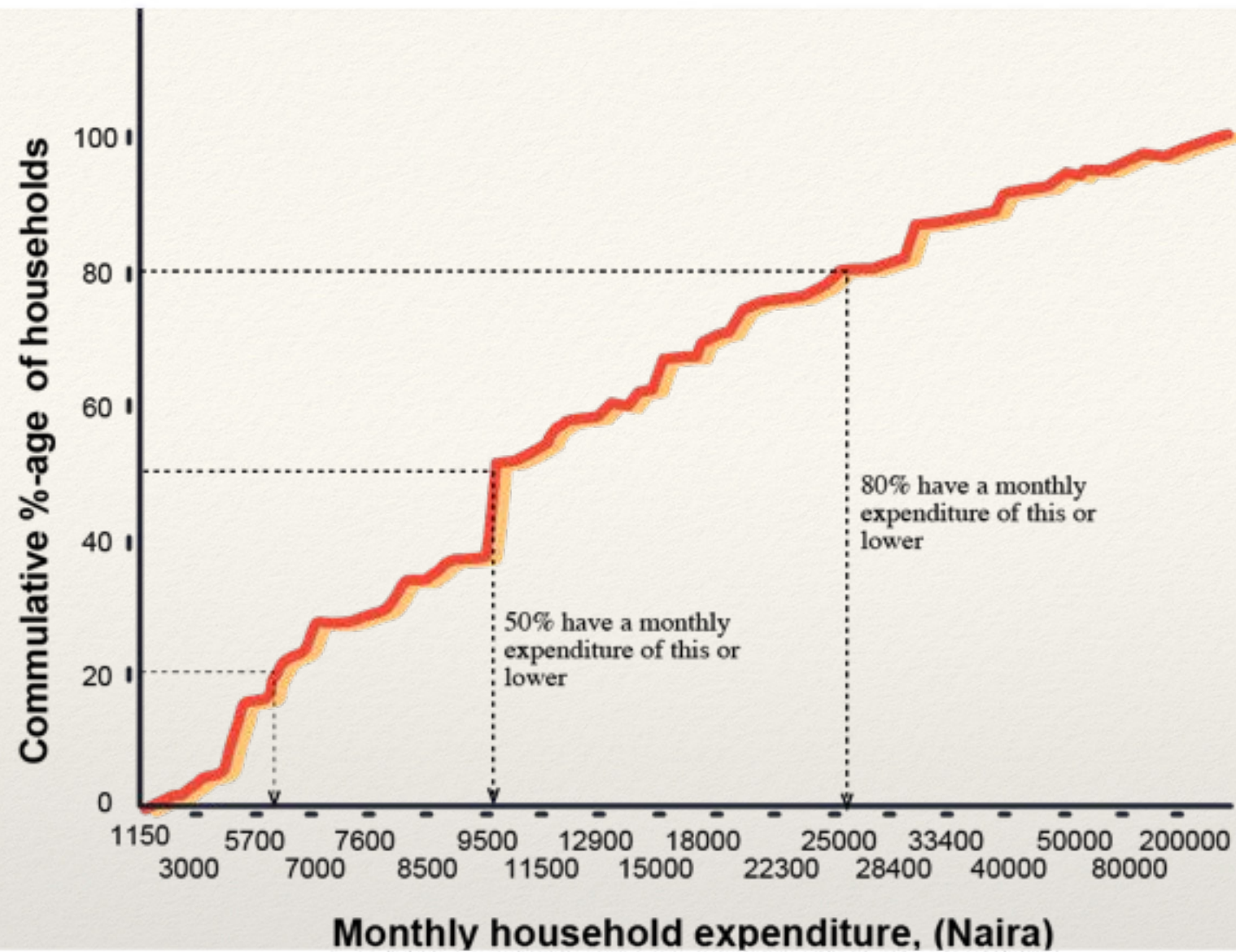


= 15 litres

Estimated median consumption for households saying they used the indicated primary water sources as shown below

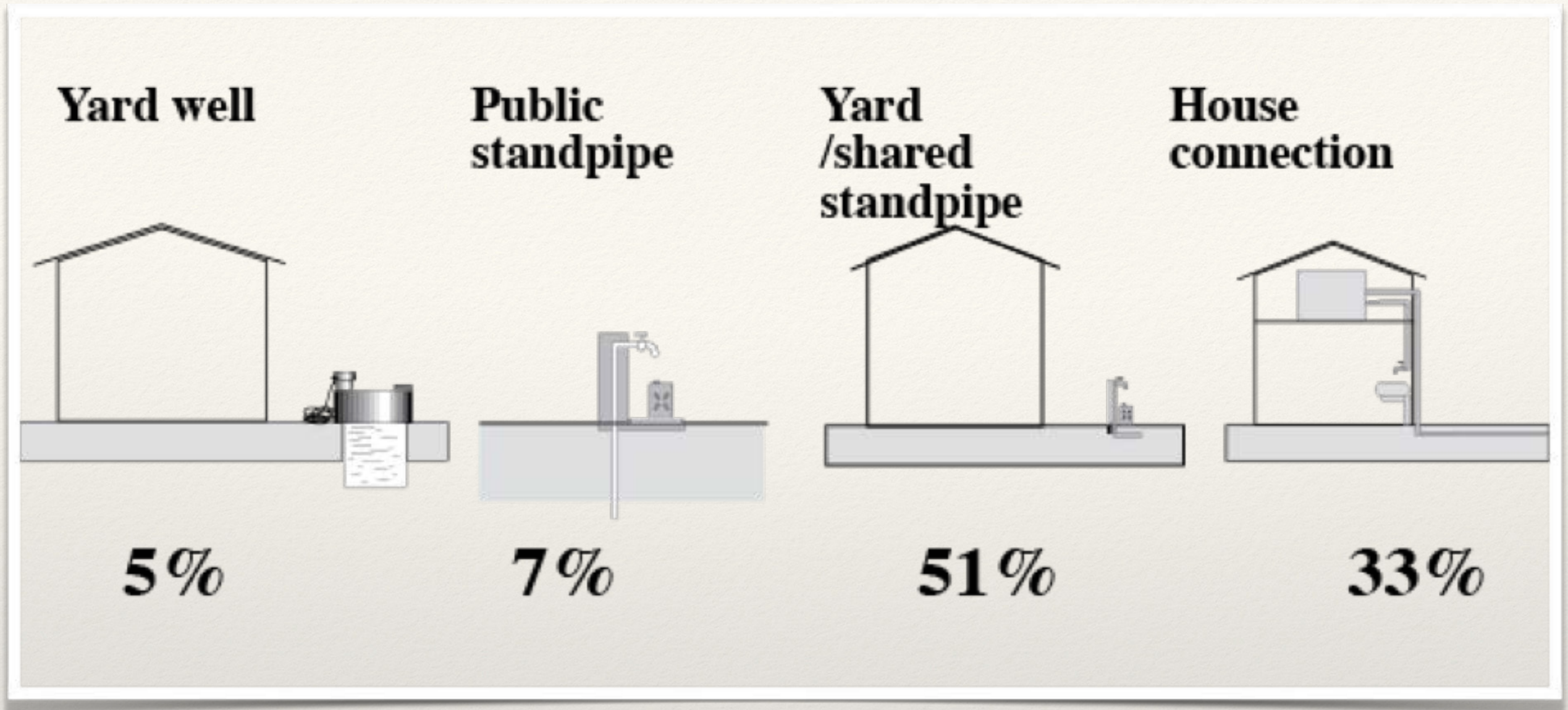
* Note: tanker sample very small. Inadequate cases in this category to have statistical significant results



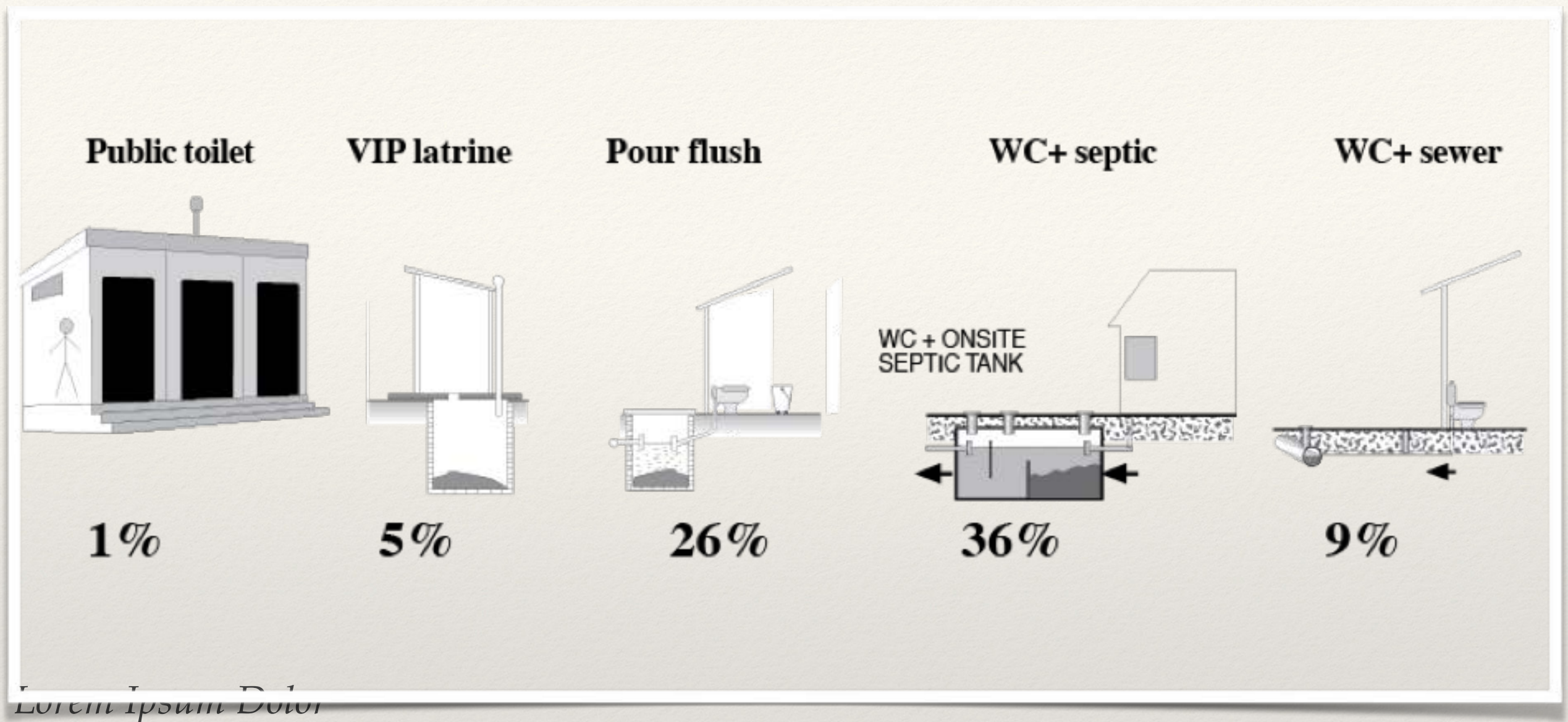


Lorem Ipsum Dolor

Household expenditure

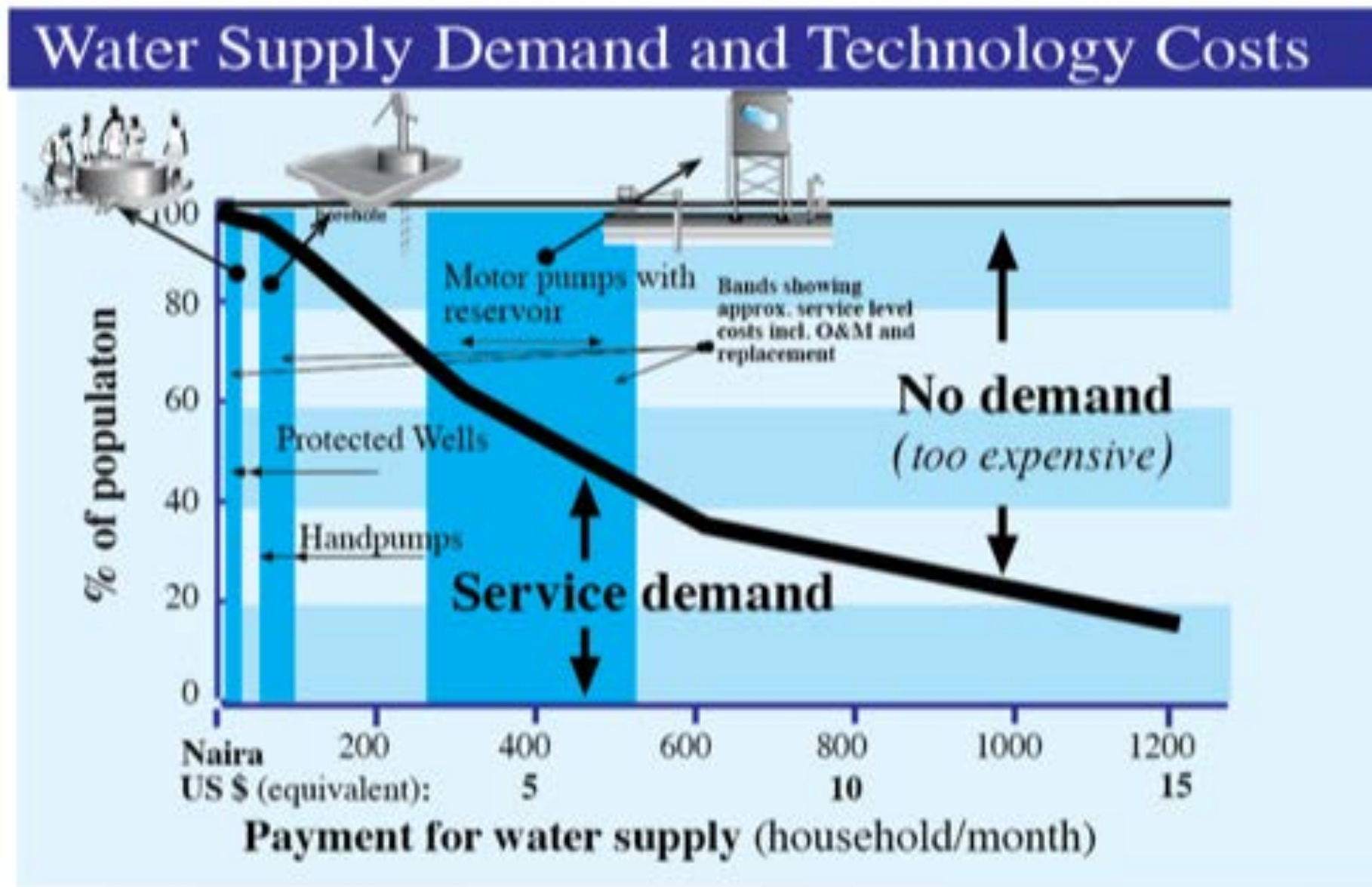


Preferred water
service







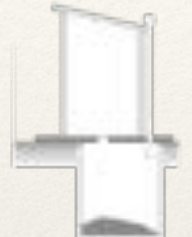


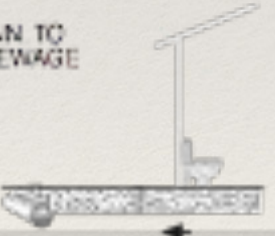
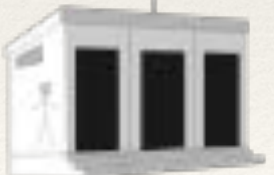
Preferred sanitation

Services for all??



Technology Options and Combinations

Water supply & Sanitation

	YARD WELL 	PUBLIC STANDPIPE 	YARD/SHARED 	HOUSE CONNECTION 
Typical water use (lhd) →	20 - 30	30	30-80	100 - 150
VENTILATED IMPROVED PIT/LATRINE 	Main Option Low Income		POSSIBLE	NOT POSSIBLE
POUR FLUSH TOILET 			POSSIBLE	POSSIBLE
WC + ONSITE SEPTIC TANK 	NOT POSSIBLE	NOT POSSIBLE	POSSIBLE ONLY AT HIGHER WATER CONSUMPTION	Main Choice High Income
WC + CONN TO PUBLIC SEWAGE LINE 	NOT POSSIBLE	NOT POSSIBLE	NOT POSSIBLE	
PUBLIC TOILET 	Supplementary Services		POSSIBLE	NOT POSSIBLE
			POSSIBLE	NOT POSSIBLE

KEY LESSONS

- ❖ **LOW INCOME GROUPS ARE VERY MODEST IN THEIR SERVICE DEMANDS..**
- ❖ **THE SERVICE LEVEL DEMAND IS LINKED TO HOUSEHOLD STANDARD AND INCOME.**
- ❖ **PEOPLE ARE OFTEN ABLE TO PAY FOR THE SERVICE LEVEL THEY DEMAND**

SUSTAINABILITY

- ❖ SERVICE LEVEL SHOULD BE PLANNED BASED ON ACTUAL DEMAND FOR SERVICES -
- ❖ WILLINGNESS AND ABLE TO PAY AND SUSTAIN SERVICES

Will their future be better?



Thank you
for listening