

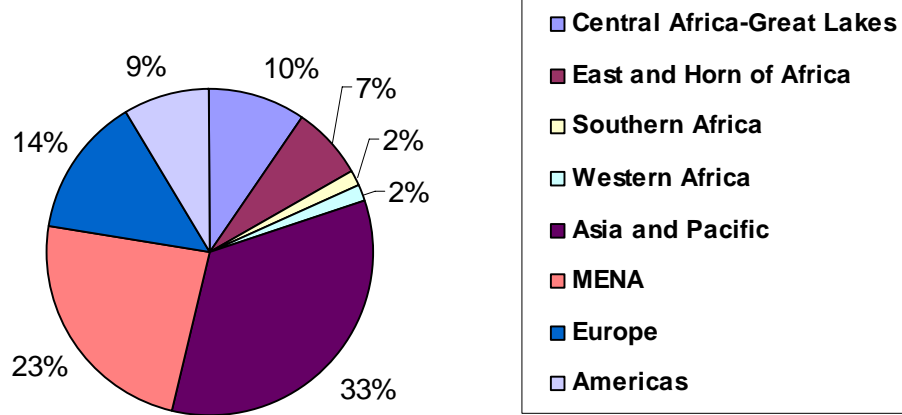
Access to and Quality of WatSan Services in Refugee Settings



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ASTMH Symposium, Dec 8, New Orleans



Refugees and Similar Cases (11.3 million)



UNHCR Assistance Programs

- Emergency (EM)
 - Care and Maintenance (CM)
- Durable Solutions {
- Local Settlement (LS)
 - Repatriation (RP)
 - Resettlement (RS)

Five most urgent survival needs



Food & Nutrition



Water



Shelter



Health Care



Sanitation



Are We Doing Enough?



Unprotected water source



Collecting water from drainage channel



Poor medical waste management



Long waiting time at taps, inadequate services.

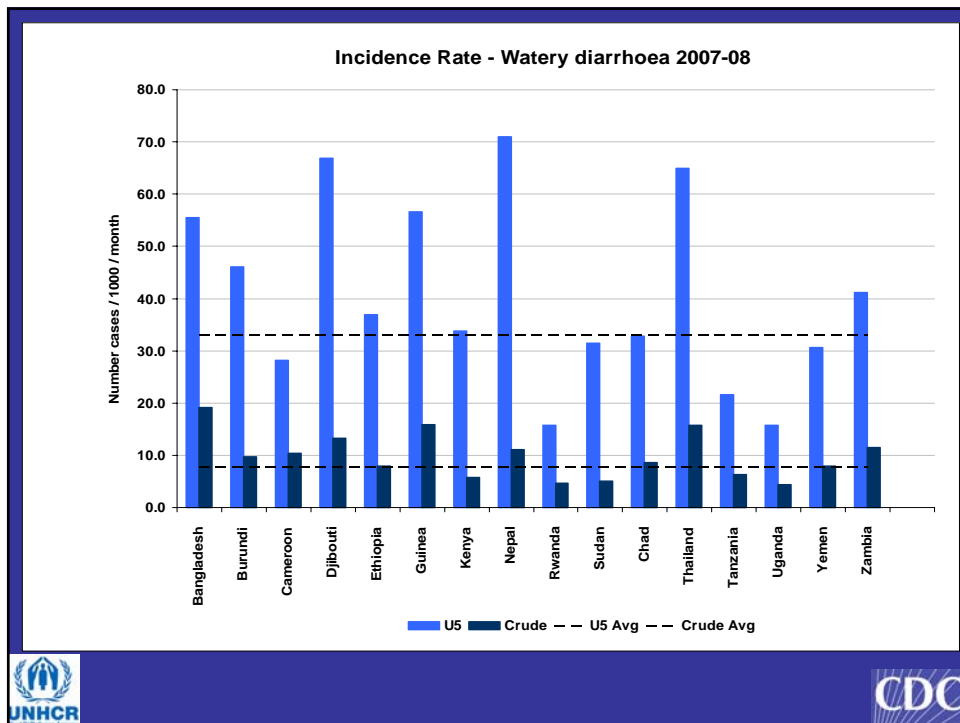
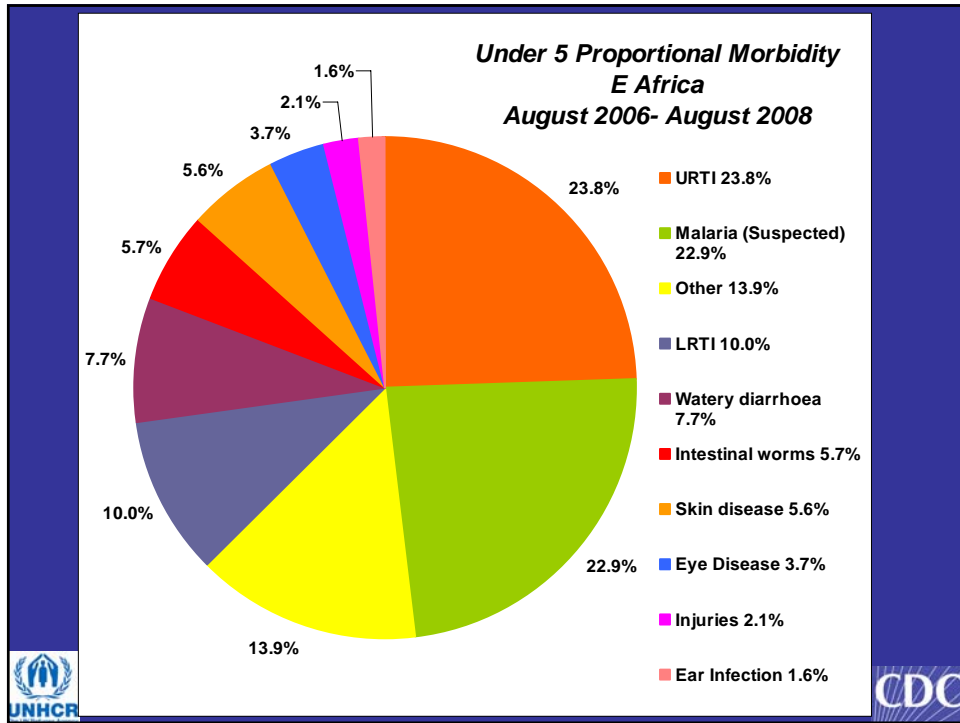


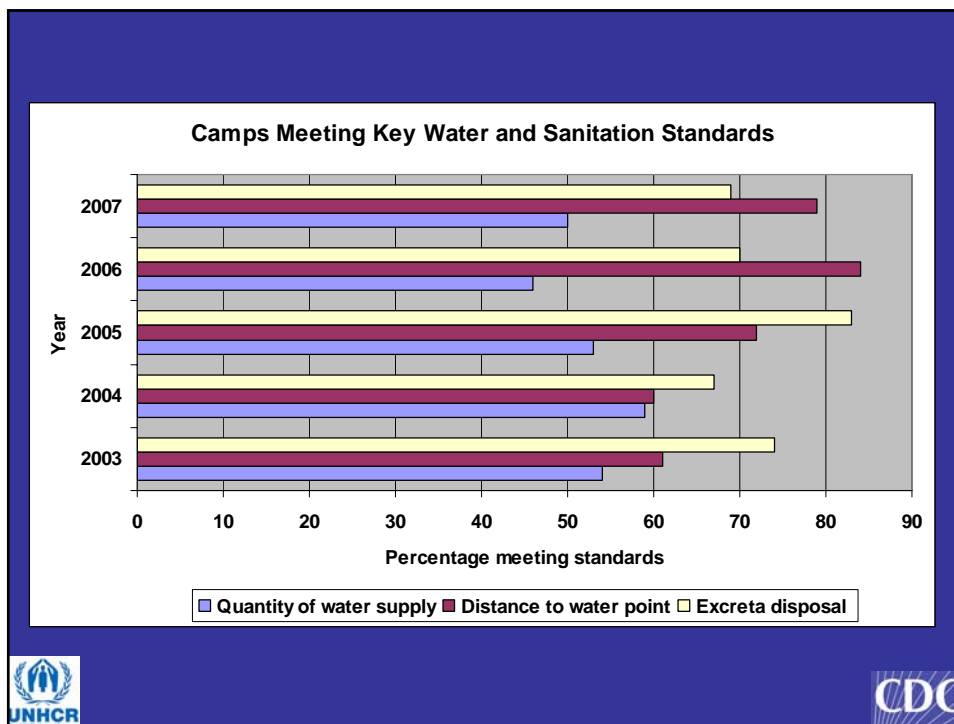
Stagnant water near taps: potential mosquito breeding point



Latrine for out-patients

AIM: Identify ways forward to address the gaps on the ground





Water and Sanitation (WatSan) Issues in Protracted Camps

- Old, failing water supply infrastructure (pumps, generators, distribution network)
- New refugee influxes into existing camps
- WatSan needs of local communities near camps
- Unequal settlement patterns impact water distribution
- Donor fatigue, hence fewer funds
- Sense of complacency among staff

Recognized need for improved monitoring of water and sanitation services in these settings



Methods for Household Surveys

Population-based household surveys

- Sampling frame from UNHCR and WFP
- Systematic random sample of households
- Standardized questionnaire
 - Demographics
 - Access to watsan
 - Hygiene practices
 - Diarrheal prevalence
 - Impact on school attendance



Results from 5 Household Surveys

	Budumburam Ghana	Dadaab Kenya	Nakivale Uganda	Kebribeya Ethiopia	Dzaleka Malawi
Population	10,000	50,000	23,000	17,000	9,000
# HH interviewed	840	285	395	412	300
# persons per well (200-300)	----	----	329	383	580
Access to 'safe' water (100%)	----	100%	62.8%	100%	100%
Access to latrine (≥90%)	11%	95%	88.5%	97.6%	100%



Access to Drinking Water Supplies

	Ghana (n=840)	Kenya (n=285)	Uganda (n=395)
Avg. minutes spent on water collection/day (10-15)	35	99	67
Avg. meters to source of water (<200)	153	163	1825
% HH with interruptions in water supply (≥1/month)	55%	79%	90%
Avg. water usage (≥20L/person/day)	40	20.5	15.2



Availability of Hygiene and Water Collection Practices

	Uganda	Ethiopia	Malawi
Water storage vessels per HH (≥4 or 50L)	5.9	2.7	4.2
Soap available	67.1%	2.0%	80.7%
Hand-washing with soap following defecation	52.6%	2.0%	83.7%
Late school arrival due to water collection	60%	91%	38%
HH where school-going children collect water	72%	51%	86%



Gaps – Water

- Unequal water point distribution leading to use of unsafe sources
 - Households collecting from ponds, lakes and unprotected springs
- Long distance to water points or long waiting times due to insufficient number of points
- Minimal HH water treatment options
 - Difficulties collecting firewood
 - Disinfection tablets, filters unavailable
- Minimal water quality monitoring of treated or protected water supplies



Gaps – Sanitation and Hygiene

- Unequal access to sanitary latrines
 - From 1 to 20 families per latrine
 - Poor maintenance of latrines
- Irregular distributions of soap to households (UNHCR standards: 250g/per/month)
- Lack of hand-washing facilities at key locations
- Lack of adequate hygiene promotion activities



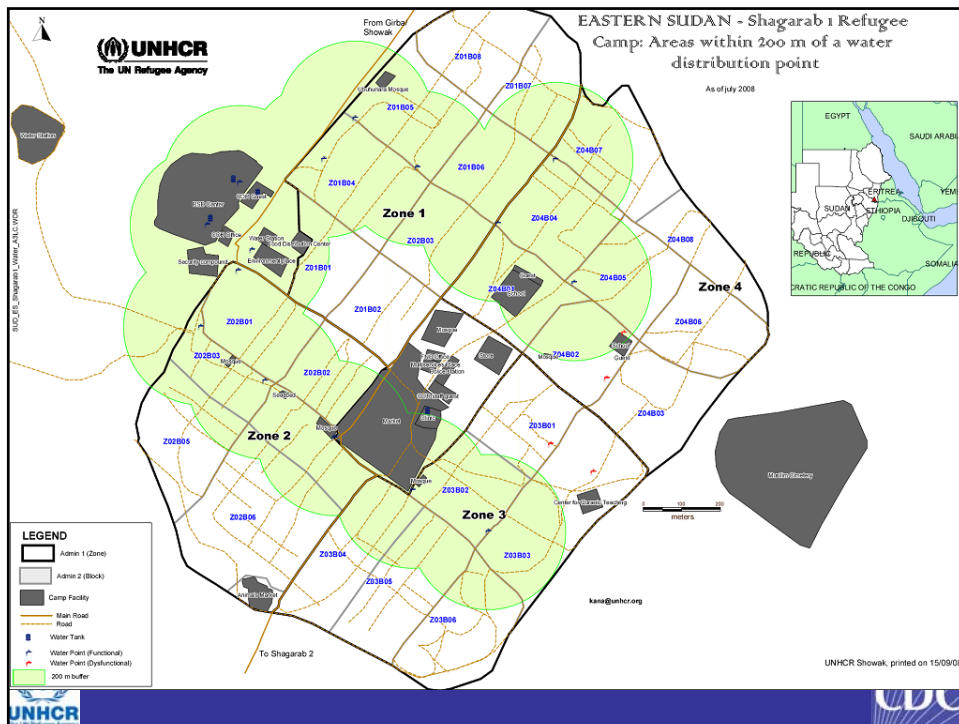
Next Steps to Improve Monitoring and Evaluation of WatSan Provisions

- Improve data collection system
 - Using standards and indicators
 - Using HIS data
- Use annual or bi-annual household surveys and sanitary inspections
 - Quantifying access to key WatSan provisions
 - Assessing equity of access
 - Identifying improved KAP
- Strengthen link between HIS and WatSan monitoring
- Use GIS mapping and analytic tools



Thank You





WatSan systems in Refugee Situations

Access to Clean Water and Sanitation Services entails not just "what" we provide, but "how" we provide is as important as the availability of services themselves.

- Adequacy and equity
- Acceptability and safety
- Social costs (burden) on the users
- Physical Safety of the users
- Reliability of services
- Environmental concerns/hazards
- Efficiency of supply system
- Participation of stakeholders & coordination



Standards on Water (for refugee camps)

S. N	Parameters	Description of Standard	UNHCR	Sphere Project
1.	Basic needs for health and well-being	Average quantity of water available per person/day	> 20 liters	> 15 litres
2.		Water containers per household (average of five members)	1x20 litres, 2x10 litres, 2x5 litres	Two 10-20 litres, and enough storage container at household
3.	Mitigate social burden; ensure equity, provide security of users; and avoid conflicts	Distance from farthest dwelling to water point	< 200 m	< 500 m
4.		Number of persons in each water point	80 to 100 per tap 200 to 300 per hand pump/well	250 per tap 500 per hand pump 400 per well
5.		Required water distribution hours in a day to supply 15 litres/person/day (calculated based on related data)	3.75 hours	9.3 hours
6.		Queuing time at a water source	Not specific, as it is impractical to monitor. Other standards indirectly control it.	< 15 minutes
7.	Prevention of health risk, reliable quality	Number of total coliform organisms at distribution point	0 per 100 ml treated water	0 per 100 ml treated water
8.		Free chlorine residual concentration in disinfected water	0.2 to 0.5 mg per litre	0.5 mg per litre

Access to drinking water supplies

	Kebribeya	Nakivale	Dzaleka
Mean liters/pers/day (potable)	3.2	7.2	16.0
Mean liters/pers/day (total)**	6.0	15.2	16.0
2 week diarrhoea prev.	0.9%	21.8%	15.4%



** Includes use of lake and pond water



Not just water quality but water quantity.....

<i>Parameter</i>	<i>Ghana</i>	<i>Uganda</i>	<i>Kenya</i>
% of all HH ¹ reporting a case of diarrhoea (min. 3 watery stools) within the previous 24 hours	15	19	17
Avg no. of cases of diarrhoea per HH in those reporting diarrhoea in last 24 hours	1.3	1.3	1.4
Avg per capita water usage (litres) in HH reporting no cases of diarrhoea	41.8	16.4	21.5
#HH used to calculate this value	716	317	236
Avg per capita water usage (litres) in HH reporting cases of diarrhoea	30.9	11.9	15.9
#of HH used to calculate this value	123	76	47



Impact of water collection on school attendance

	Dadaab	Kebribeya	Nakivale	Dzaleka
% of HH where school-going children collect water	59%	51%	72%	86%
% of those attending who arrive late to school due to water collection responsibilities	39%	91%	60%	38%



Association between WatSan indicators and 2 week diarrhea prevalence among children under 5 in Nakivale Camp

Variable	# children	No. (%) ill	OR (95% CI)
Treated tap	305	54 (17.7%)	1.84 (1.17, 2.89)
Untreated surface	194	55 (28.4%)	
Treat water at HH level			1.38 (0.88, 2.19)
Always/sometimes	322	64 (19.9%)	
Never	176	45 (25.6%)	
Soap present in HH			0.89 (0.56, 1.41)
Yes	329	71 (21.6%)	
No	165	37 (22.4%)	
Access to sanitary latrine			1.20 (0.52, 2.94)
Yes	457	101 (22.1%)	
No	42	8 (19.0%)	



Conclusions from Surveys

- Access to safe water supplies and sanitary facilities varies widely within and between camps
- Distance to water point and waiting time important determinates in choosing water source
- Capacity for HH level treatment of water is low
- Water collection adversely impacts on school attendance
- Hygiene promotion, including hand-washing practices, initiatives lack systematic and coordinated approach and therefore are weak

