

Access to Water in Refugee Situations

Survival, Health and Dignity for Refugees



Technical Support Section
Division of Operational Support

Water cross-cuts so many vital sectors!

Food & Nutrition

- Water is a food in its own right!
- Cooking
- Kitchen gardening
- Loss of calories during water collection
- Diarrhoea compounds malnutrition

Health

- Quantity is the most important aspect for hygiene at personal, domestic, community levels
- Quality is very important, especially for infants
- Environmental degradation and hence health impact from pollution if water is mismanaged
- Refugees living with HIV/AIDS require adequate quality water with improved access

Water

Education

- Children fetching water impacts on schooling
- Water-borne disease = time off school
- Proper water & sanitation facilities must be provided in schools (separate for girls/boys)
- Curriculum can include hygiene promotion and environment issues
- Education is an empowering tool to maintain water and hygiene awareness for returnees

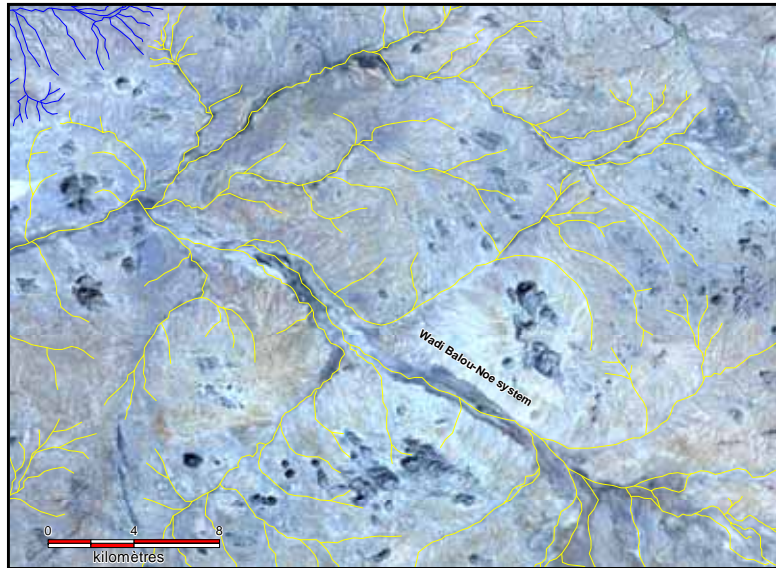
Sanitation

- Adequate excreta disposal and control is essential to break disease transmission cycle
- Drainage & vector control to combat malaria
- Hand washing & other hygiene activities
- Environment: Groundwater pollution and land degradation if poor sanitation system in place

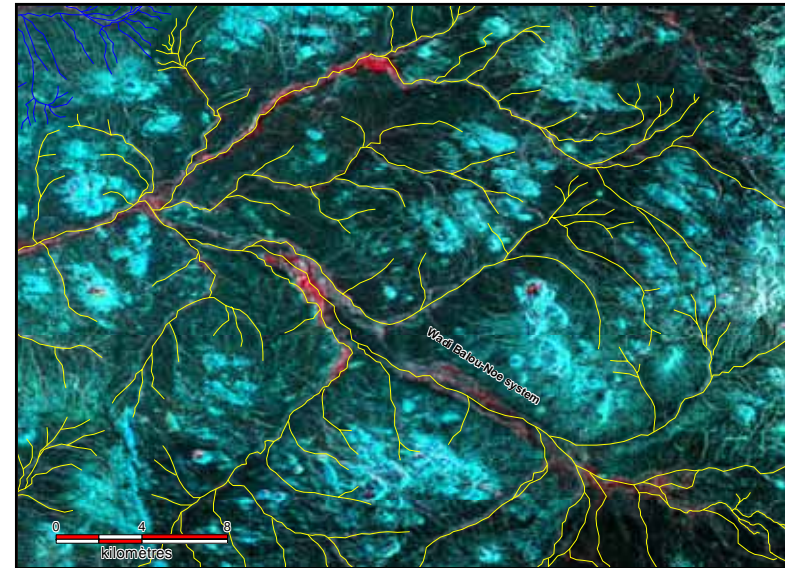
Camp Planning & Shelter

- Water is a governing factor for site selection
- Water points promote community ownership
- Make special provisions for groups with special needs
- Appropriate design to prevent Gender Based Violence (provide facilities in safe areas near dwellings)
- Proper use of local water resource to prevent conflict with the host community
- Camp design with proper drainage to mitigate flood risk

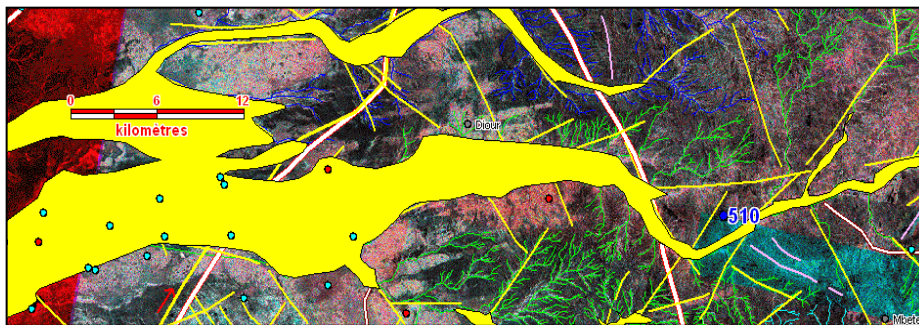
The Search for Water in Chad



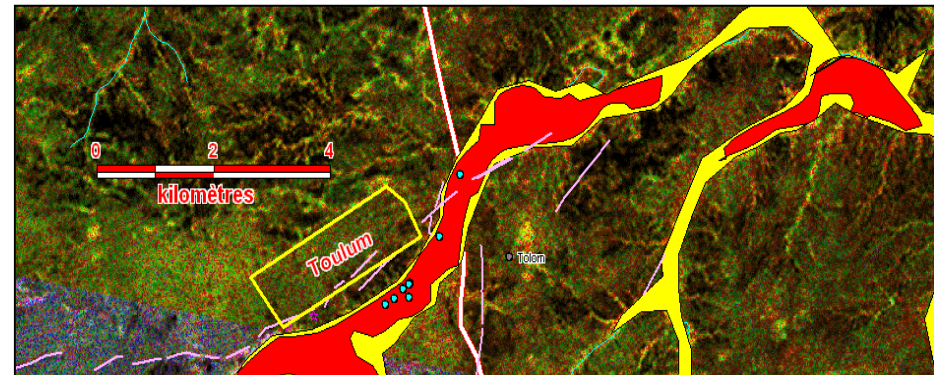
Land Sat optical imagery shows no traces of water



Radar Satellite Image shows traces of moisture (red)



Yellow area has medium radar signal: 71.5% of wells are positive.



Red area has a strong signal: 89% of wells are positive

Water is extremely scarce, therefore advanced technology is needed to yield rapid results

Access to Clean Water

In a refugee camp, **Access to Clean Water** is not just "**what**" but also "**how**" we provide this life sustaining resource. This is as important as the availability of water itself.

1. **Adequacy and equity of water distributed:** Sufficient supply for basic needs for each and every person throughout the camp, including in school and health units.
2. **Acceptability and safety of water supplied:** Potable and palatable in terms of appearance, taste and odour. Water quality is monitored regularly for faecal contamination and water safety plans are in place
3. **Social costs (burden) on the users:** Facilities located centrally and not too far from the dwellings, with minimum waiting time, and safe and user-friendly designs.
4. **Physical safety of the users:** Facilities located in a secure physical environment; water distribution time and duration planned according to users convenience and cultural habits, and limited to day-light hours.
5. **Reliability of supply:** There needs to be continuous maintenance of the water supply system as well as adequate water storage at the family and community level in case of interruptions.
6. **Environmental concerns/hazards:** Sustainable exploitation of water sources, waste water management, improved drainage for storm water to avoid water-induced hazards etc.
7. **Efficiency of supply:** Avoiding water wastage during fetching from tapstands and other system losses.
8. **Participation of stakeholders:** Refugees and other sectors (health, physical planner, sanitation) involved in water system development and operation as well as maintaining a good rapport with the host community

Food, Nutrition & Water



Water to cook

Water is one of the main nutrients, along with fat, protein, carbohydrates and micronutrients, that the human body needs on daily basis



Safe water to drink



Water is used to prepare supplementary feed

Diarrhea, often the product of the consumption of poor quality water, is one of the main causes of morbidity that results in malnutrition. Malnutrition contributes to almost 60% of deaths of under five year olds in developing countries and has been a major concern in refugee situations



Water and cooking receptacles in the home

Guidelines Relating to Water in a Refugee Camp

1 hygiene
facilitator per 500
refugees

Well located > 30 m
from latrines and other
contaminant sources

Required Water at Feeding Centres
20 - 30 litres per person

Minimum of 1 water quality test per
5000 beneficiaries per month and
sanitary survey indicates low risk

Water Containers per
Household of 5
1 X 20 litres
2 X 10 litres
2 X 5 litres

Required Water
at Schools
= 3 litres per
student

Primary schools < 100 m
from water sources



Required Water at Out-Patient
Health Centres
5 litres per visitor

Required Water
at Camp
Administration
5 litres per visitor

Water Quantity Required
for Domestic Use
> 20 litres per person

Ensure Gender
Balance in Water
Committees

One Communal Well
or Hand pump per
200 refugees

Water Points < 200 m walking distance
from dwellings in a safe/secure location

Required Water at In-Patient Health Centres
> 40 - 60 litres per patient

Permissible Faecal Coliform Content
0 / 100 ml Treated Water

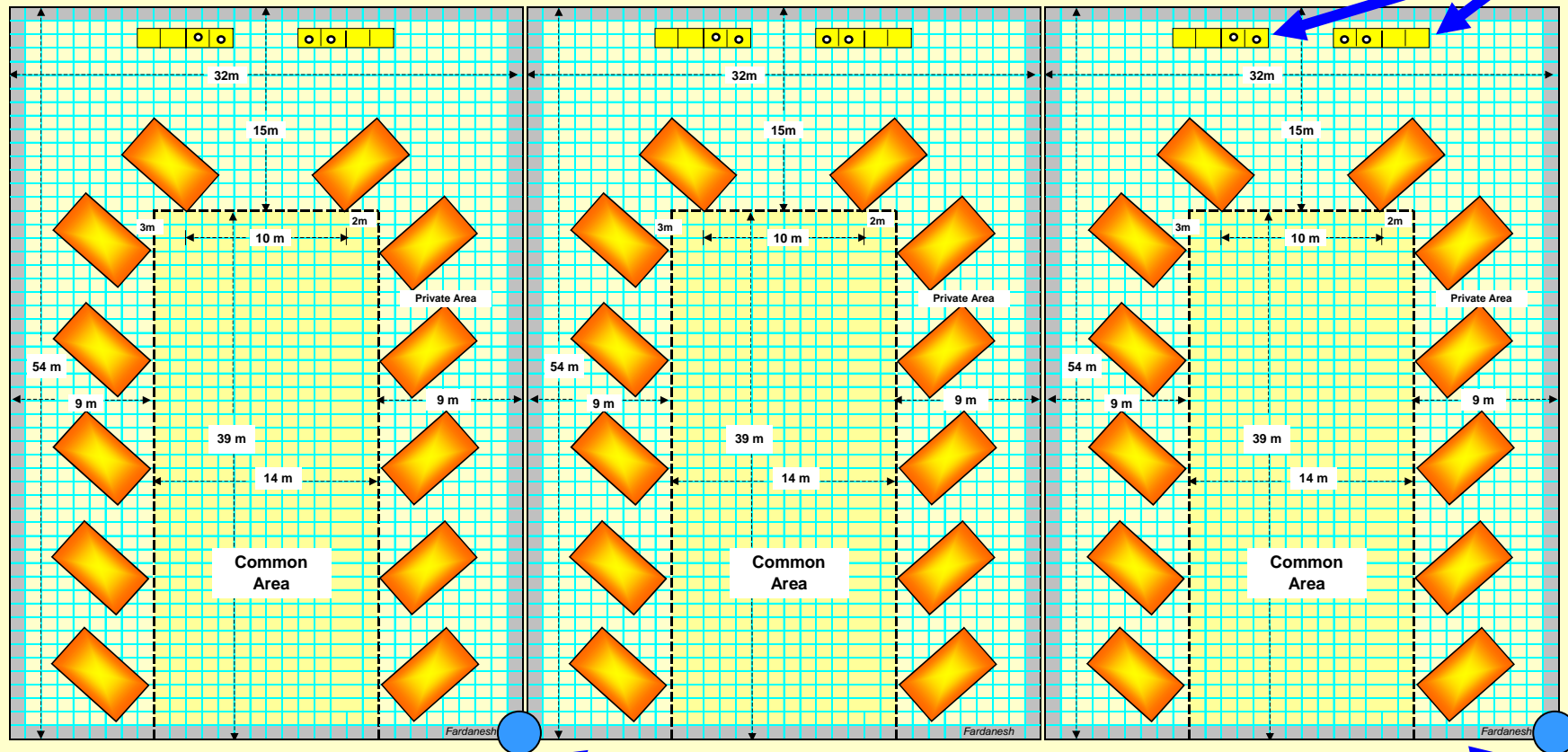
Residual Chlorine in Disinfected
Water = 0.2 to 0.5 mg/litre

1 water tap per
80 to 100 refugees

Promoting community ownership via camp design

- No front door faces directly into neighbour
- Common area to cook, meet etc. & trees left to grow
- High visibility for families and aid workers
- Easy access of water points and latrines within community blocks

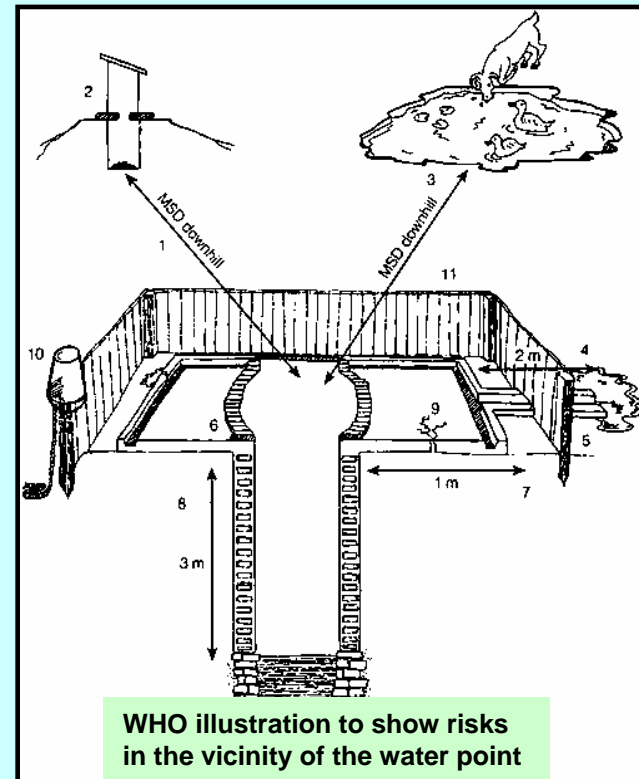
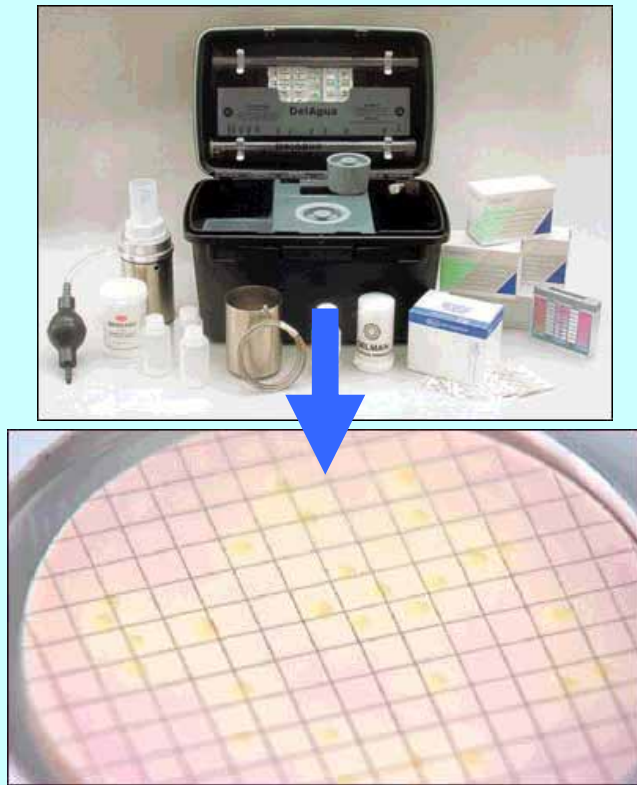
Latrines



Water Tap stand

Water quality surveillance is central to adequate water provision

= REGULAR TESTING + VISUAL RISK ASSESSMENT



- Carrying out a visual assessment of risk is an integral part of quality analysis.
- Such training is important also for refugees who will resettle.
- Regular visiting of all water sources (>1 sample/5000 beneficiaries/month)
- Feedback mechanism in place so have an effective warning system.

Points to ponder...



Social Burden of water collection

42% of school-going children in one Ugandan refugee camp had their schooling interrupted by water collection.

Women who spend their time collecting water could participate in more productive activities



Environmental Burden of water collection

Long term pumping of high volumes of water in refugee camps can result in deterioration of water levels and quality and deprives downstream water needs

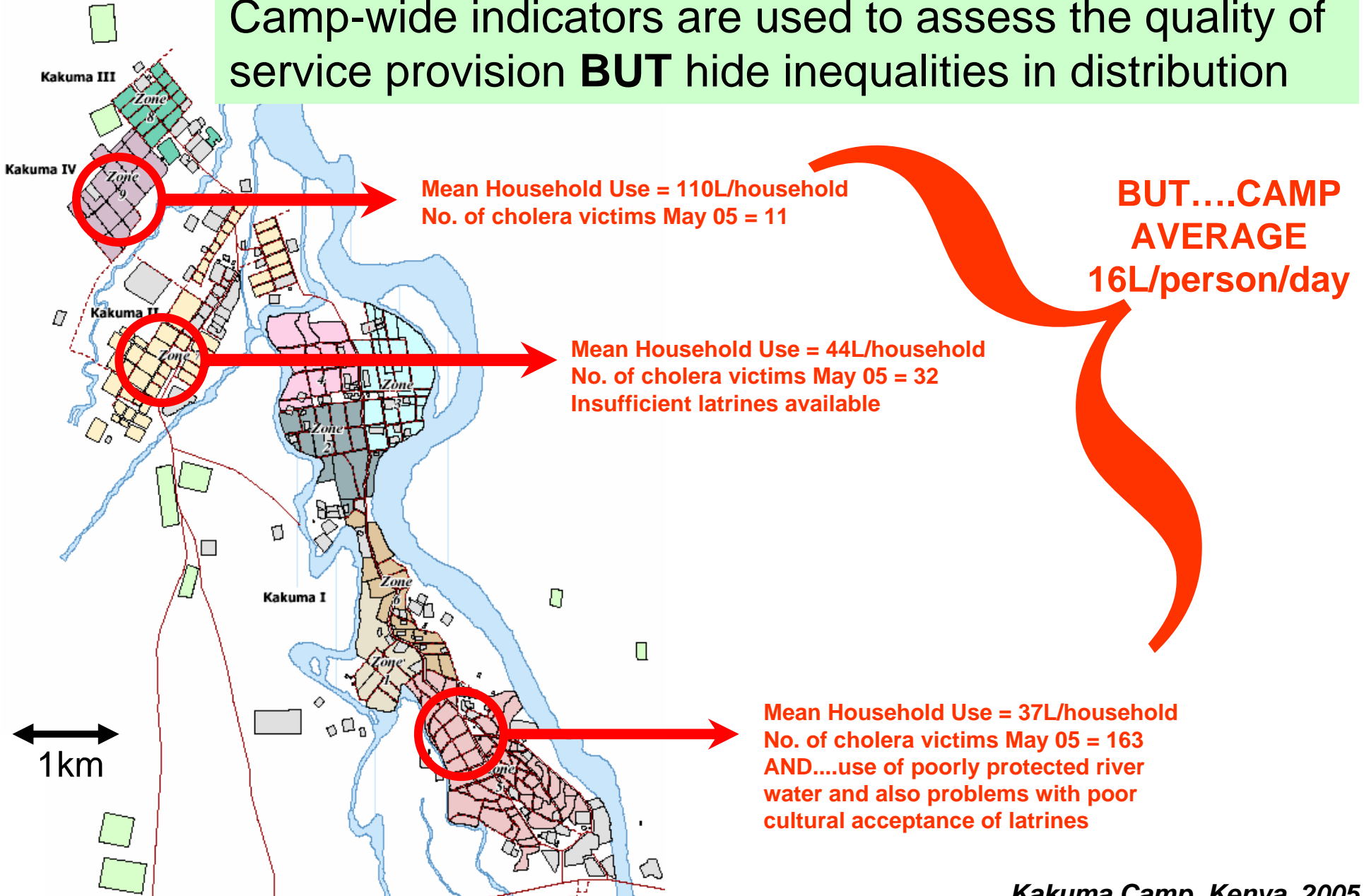
Physical Burden of water collection

A person drawing 80L of water from a well back to their home 200m away (often uphill from well) for all the family needs may use up to one sixth of their standard ration of 2,100 Kcal/day only on this task!

Chemical loadings to the ground from pit latrines

10,000 refugees using pit latrines will deposit ~20 Metric Tons of Chloride and over 25 Metric Tons of Nitrogen to the ground per annum, which may cause long-term groundwater contamination

Camp-wide indicators are used to assess the quality of service provision **BUT** hide inequalities in distribution



Kakuma Camp, Kenya, 2005

Technical Support Section - DOS

Let us look at the water guidelines!

Please bear in mind that UNHCR's standards are adapted for refugee situations

Table Showing Some of the Water Supply Guidelines/Standards in Stable Situations – UNHCR vs. Sphere Project

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 faecal 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 - 0.5 mg per litre	0.5 mg per litre

Social Costs - Shouldn't the Children be Elsewhere?



Note: Comments on these posters are very welcome. Please send to Technical Support Section: HQTS01@UNHCR.CH