



EU 6th Framework

# The NETSSAF Initiative

## Background and future perspectives

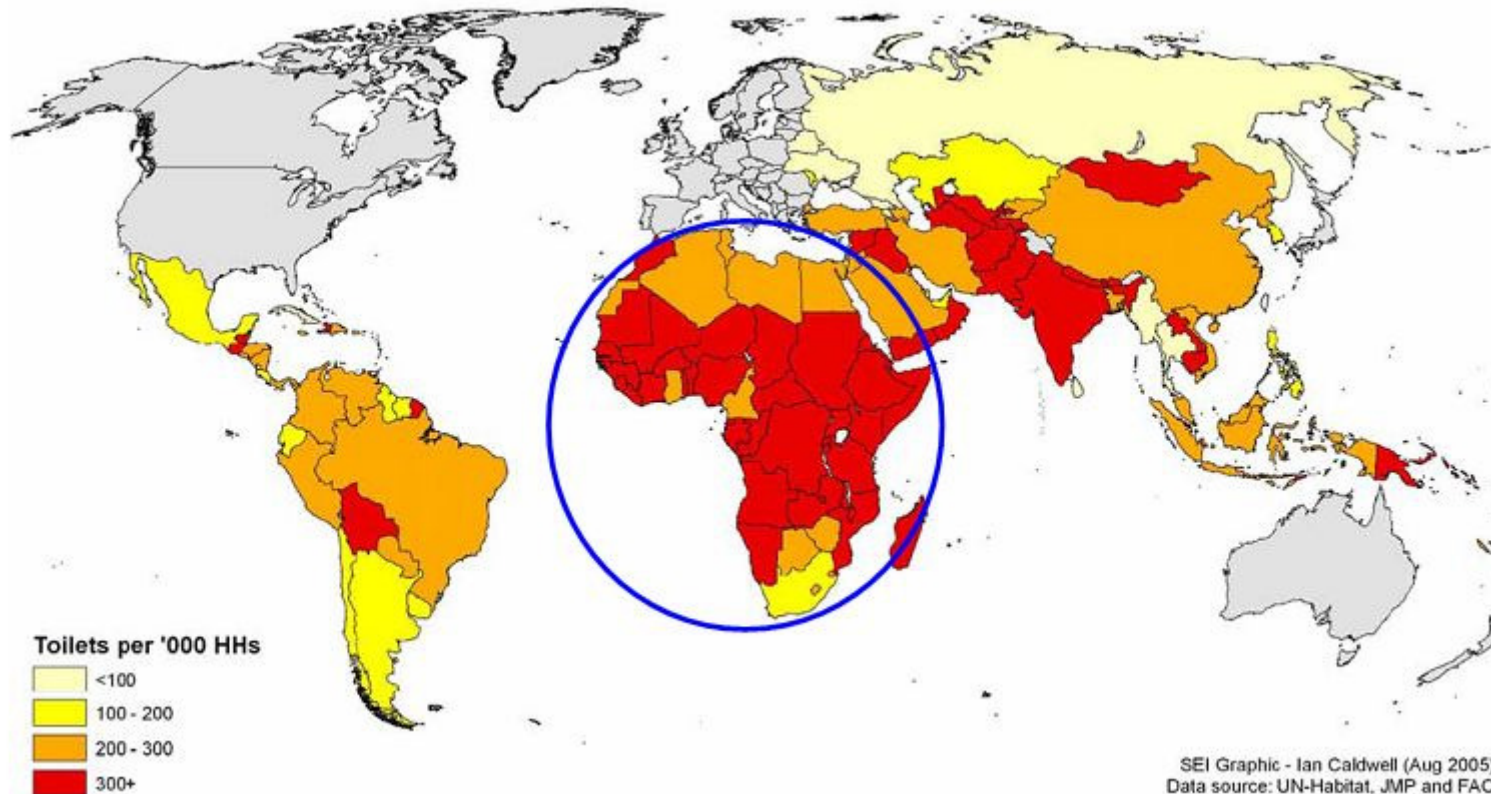
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**Germany**  
**Chair, IWA SG ,Resources oriented Sanitation**

**A Coordination Action supported by the European Commission under the Sixth Framework Programme within the " GLOBAL CHANGE AND ECOSYSTEMS " Programme Starting Date: 1st June 2006**

***Final Conference: 24 September 2008***

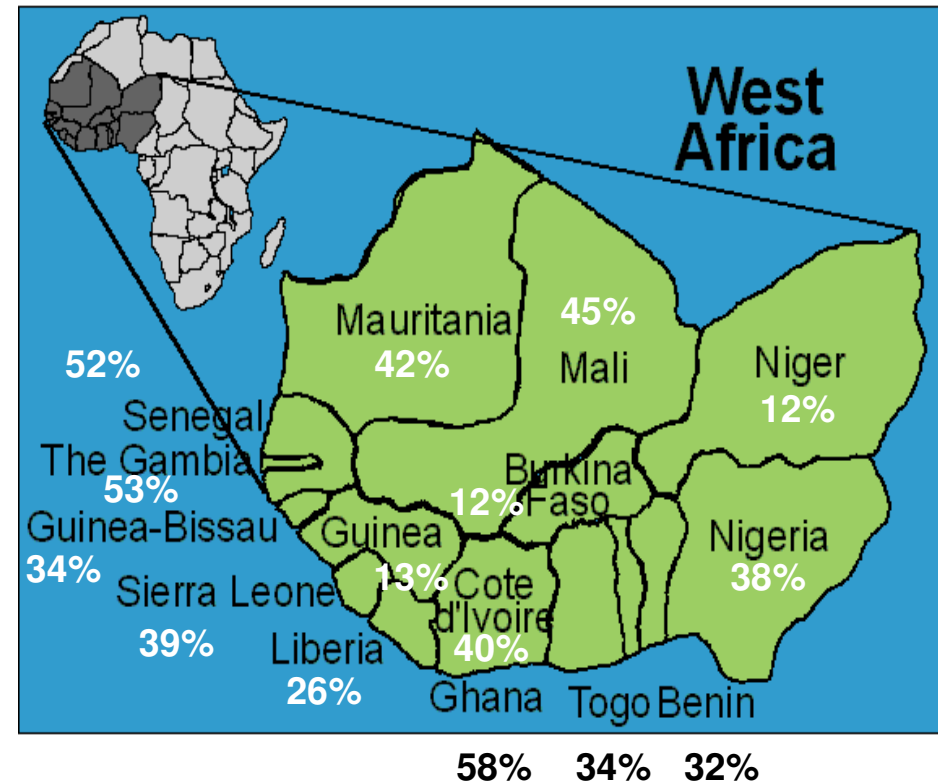
# Introduction

To achieve the year 2015 goal for water supply and sanitation coverage in Sub-Saharan Africa– halving the percentage of those without access – an additional **210 million people over the next 15 years** will have to be provided with service.



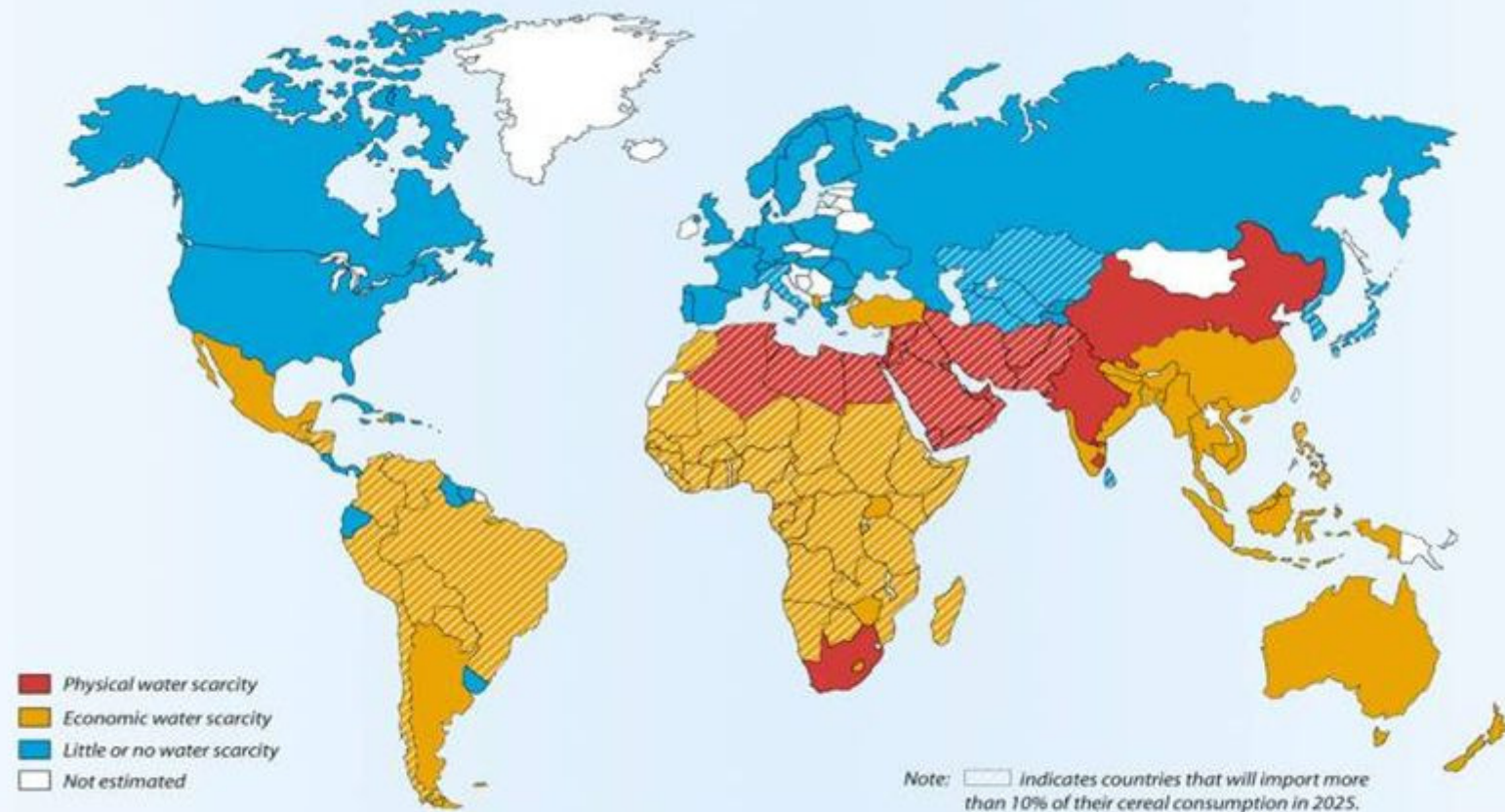
# Introduction

NETSSAF focused on Proposing sanitation options based on the needs of the **West African countries**, where the sanitation coverage reaches 58% in the best of the cases (Ghana) and 12% in Niger and Burkina Faso

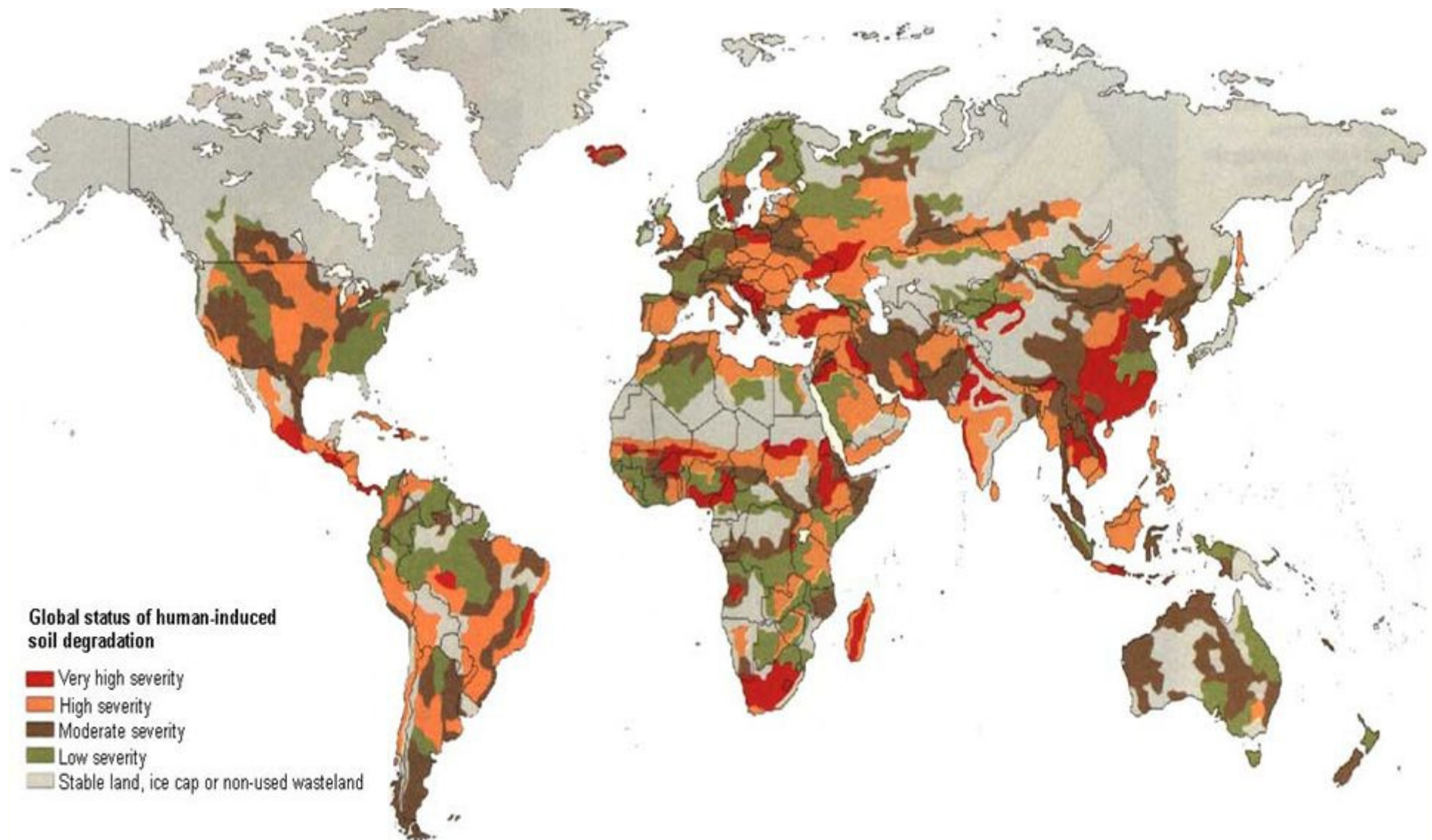


**Sanitation Coverage in the West African region (WHO-UNICEF, 2002)**

## Projected Water Scarcity in 2025



**Major problems related to Wastewater (Miss)Management:  
Pollution of Rivers, Lakes and the Seas  
Scarcity is often a consequence of inefficient Water Usage**



**Loss of Soil Fertility (slow but dramatic, global scale)**  
**counteraction by returning treated biowaste and faecals**

(Map from [WWW.FAO.ORG](http://WWW.FAO.ORG))

# **Modern Water Management**

- **Orientation towards resources recovery: Source Separation = Local Economy**
- **Integrated solutions with Rainwater Harvesting and Urban Agriculture**
- **Decentral Systems are often a lot cheaper in rural and peri-urban areas**
- **Proper planning with stakeholder involvement, capacity building**
- **Proper Operation and Maintenance needed = JOBS!**

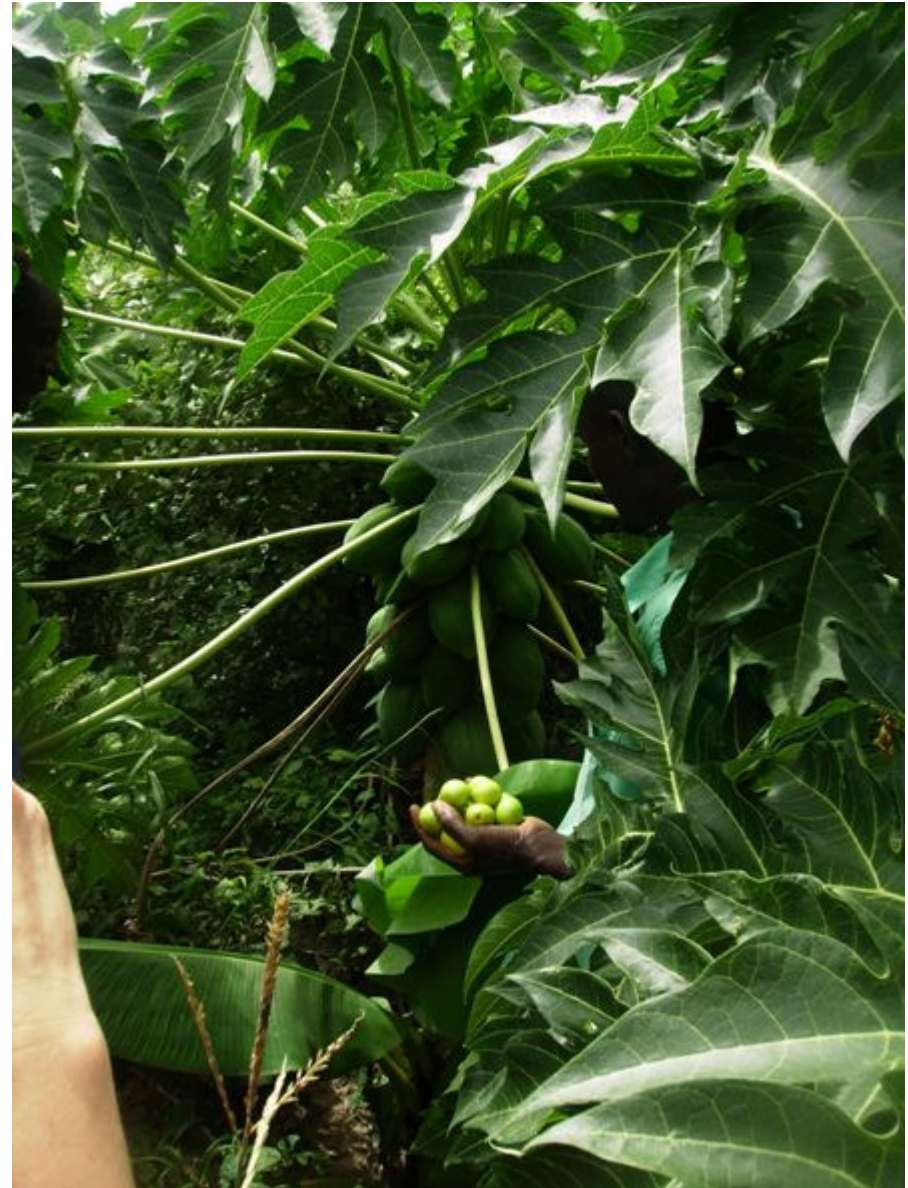
# Value Added Through Sanitation

**Improved public health  
(Increased productivity)**

**Production of liquid  
fertilizer (increased food  
security)**

**Improved soil quality**

**Business opportunities in  
sanitation  
(Implementation and O  
& M)**



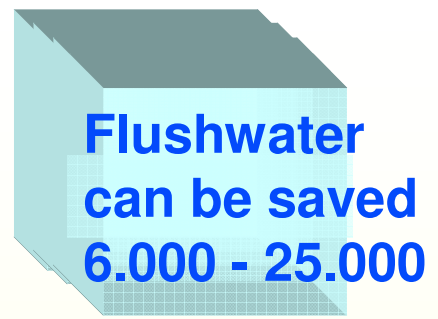
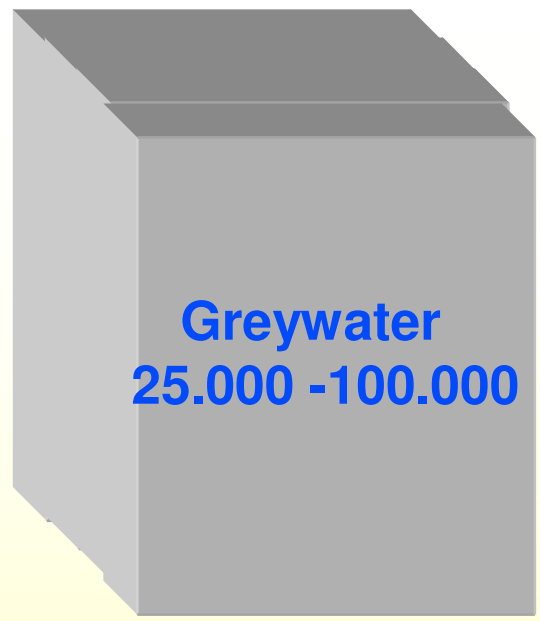


**Water misused: Brussels, 2004**  
raw wastewater discharge, exception in Europe,  
but the most common „method“ worldwide



**Volume**  
l/(P\*year)

**Yearly Loads**  
kg/(P\*year)



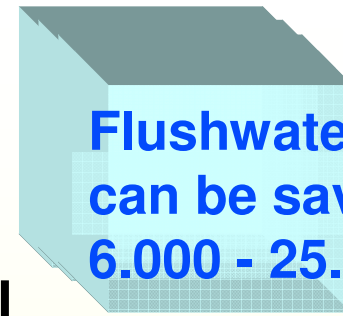
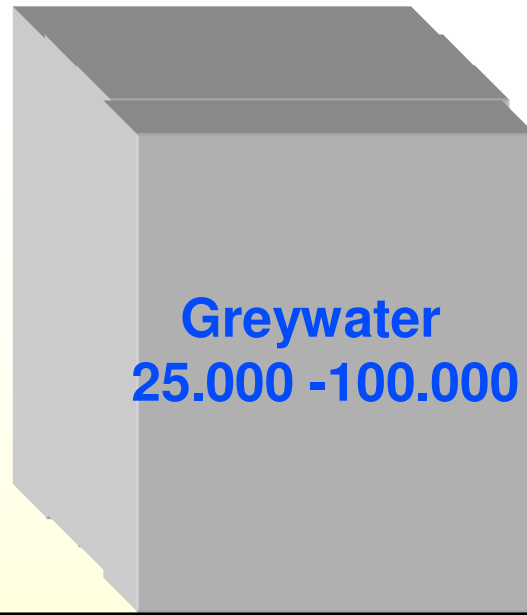
**Urine**  
~ 500



**Feaces**  
~ 50  
(option: add  
biowaste)



Volume  
l/(P\*year)



**Urine**  
~ 500



**Feaces**

~ 50

(option: add  
biowaste)



**Yearly Loads**  
kg/(P\*year)

<b>N</b>	~ 4-5	~ 3 %	~ 87 %	~ 10 %
<b>P</b>	~ 0,75	~ 10 %	~ 50 %	~ 40 %
<b>K</b>	~ 1,8	~ 34 %	~ 54 %	~ 12 %
<b>COD</b>	~ 30	~ 41 %	~ 12 %	~ 47 %

S, Ca, Mg and trace  
elements

Treatment



Reuse / Water Cycle

Treatment



Fertiliser

Biogas-Plant  
Composting



Soil-Conditioner

# Ecological Settlement Lübeck-Flintenbreite



**Double-Houses**



**Terraced Houses**

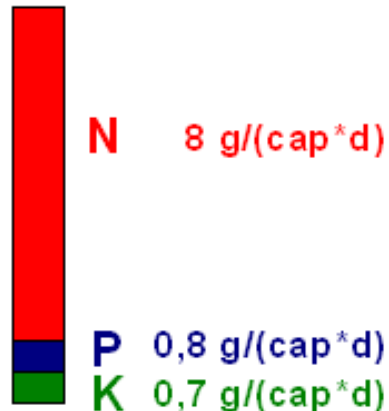
# Nutrient loads in blackwater and greywater: measured values

more phosphate than  
expected, from  
dishwasher tablets

Blackwater



4,8 l/(cap\*d)



Greywater



56 l/(cap\*d)



Loads applied to  
66 inhabitants = 100%

## Settlement „Palsternackan“, Sweden

Urine-Sorting Toilets and Yellow Water collection in urban social housing. The urine is stored and transported by vacuum-truck to agriculture



# Neue Schultoilette, Ukraine (TUHH/WECEF)



**TUHH**

*Hamburg University of Technology*



**Sawdust or ashes are  
used to ,flush‘  
squat-urine-  
diversion-toilet by  
Lin Jiang, China**

**WECF: Women in  
Europe for a Common  
Future (Holland)  
in co-operation with  
TUHH  
[www.wecf.org](http://www.wecf.org)**

# Rainwater Harvesting: INDIA



- water runs off fast
- checkdams stop it and allow recharge of aquifers

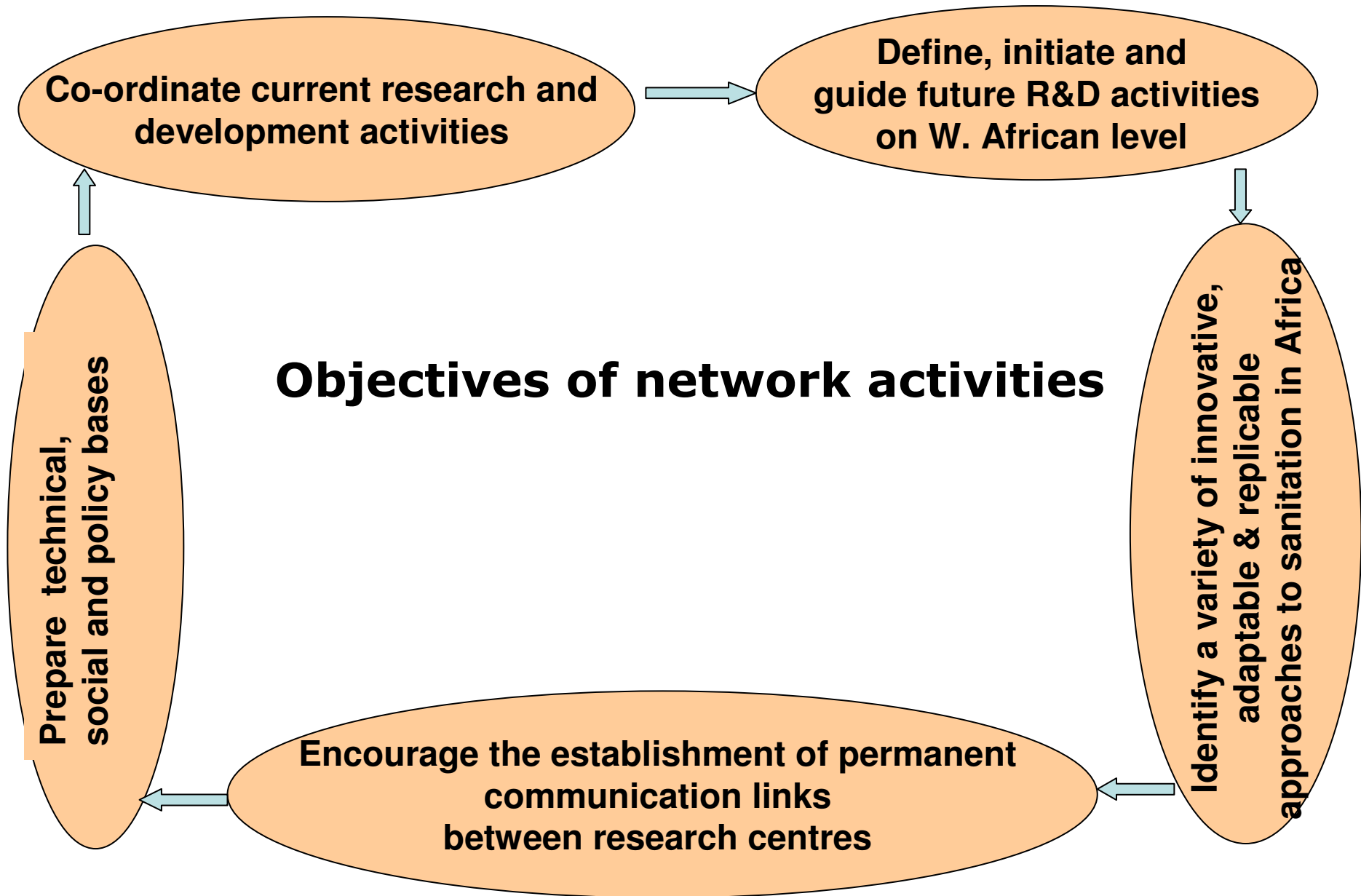


urban RWH in Delhi at CSE





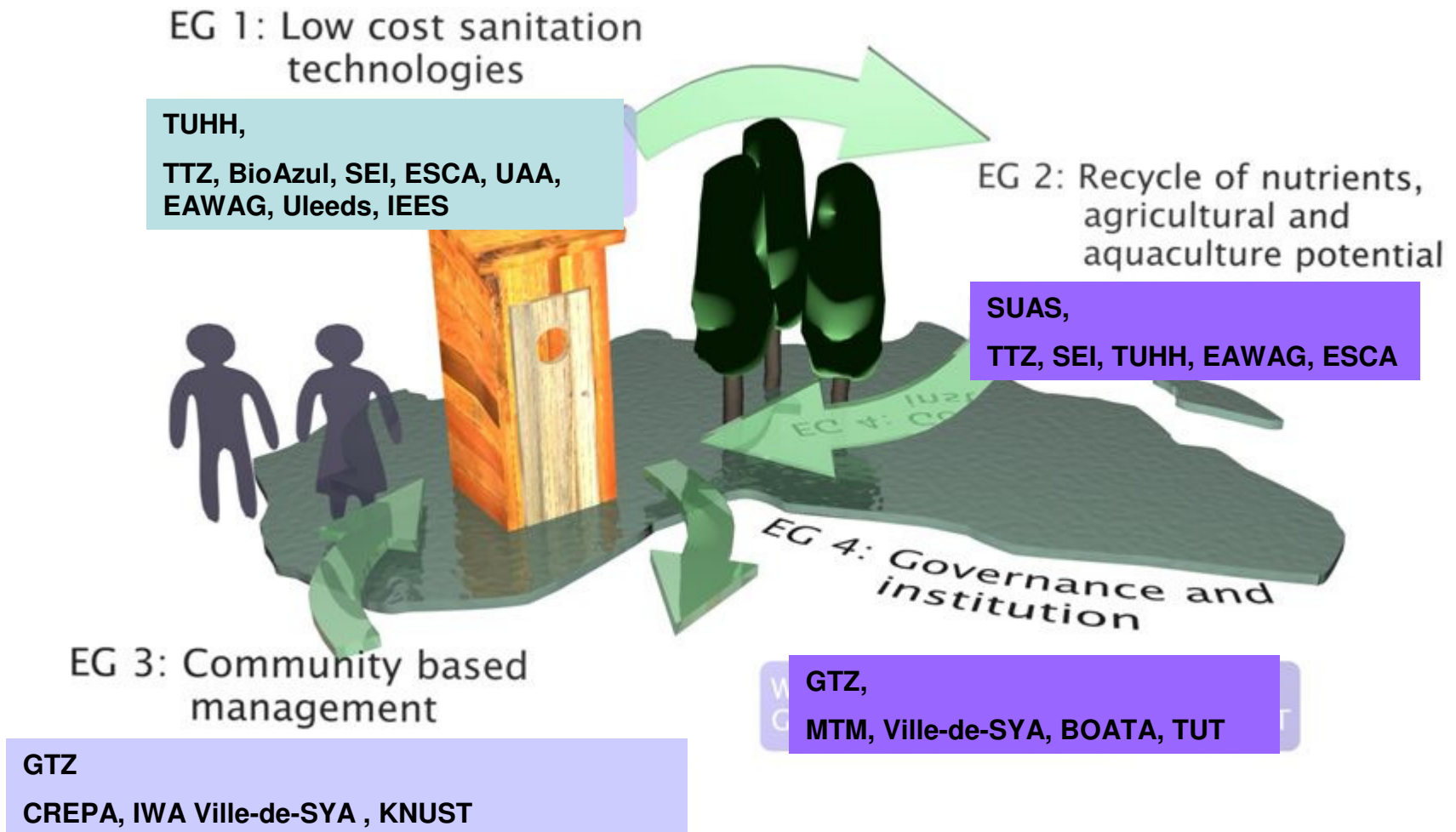
# BRIEF DESCRIPTION OF NETWORK ACTIVITIES AND CONSORTIUM



# Consortium

- A South-North consortium
- 19 partners from 12 countries
- 5 Universities:
  - Kwame Nkrumah University of Science and Technology
  - Swedish Agricultural University
  - University of Ouagadougou
  - Hamburg University of Technology (Germany), and
  - University of Abobo Ajame (Ivory Coast).
- Research Institutions e.g. CREPA, BOATA, etc.
- NGOs

# Contributions expected from partners



# Some key events leading up to the final conference

Uppsala kick-off meeting: June 2006



# Some key events leading up to the final conference

Bamako Mid-term meeting: June 2007



Working Group sessions

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Working Group sessions

# Main Outputs

Four important tools developed by the Netssaf Initiative:

A West African database of sanitation supply

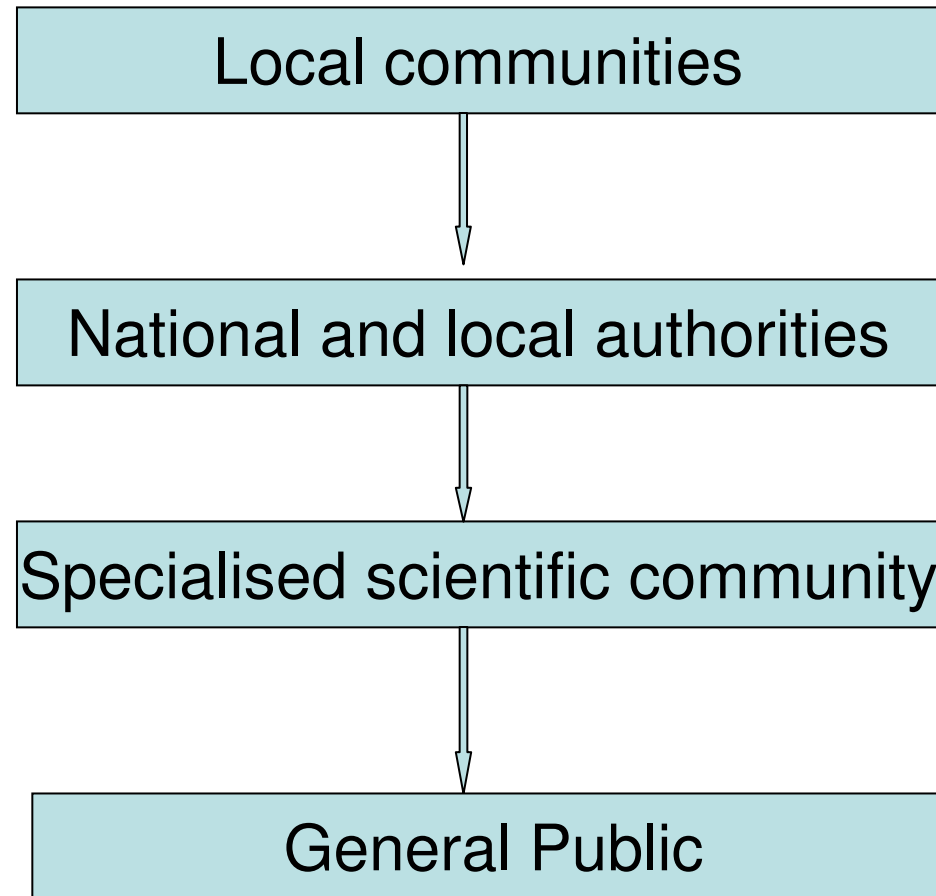
A West African database of potential technology transfer and capacity building associations

An adapted sustainable sanitation management system

A Guideline:  
“Implementing low cost sustainable sanitation approaches in West Africa”

# Target Audience

**Netssaf's tools target the following groups:**





# Potential Impact and Future Perspectives

## **Impact:**

Environmental Impact

Impact on Food Production

Social Impact

Economic Impact

Institutional Impact

RTD Impact

# Potential Impact and Future Perspectives

## Future Perspectives

- Opportunities for implementation (NETSSAF II)
- Maintenance of established links
- Promotion of institutional collaboration
- Further Capacity building??
- Field work (further pilot schemes)??
- Further dissemination and awareness building?
- .....where to go from here??



**THANK You For  
Your attention...**

**Merci Bien!**

26 4 2005