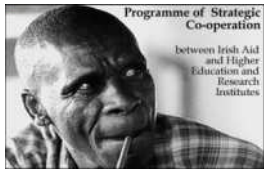


Water is Life  
*Amazzi Bulamu*



Water is Life



**HEA**

Higher Education Authority  
An tÚdarás um Ard-Oideachas



# A Case of Life or Death: *Finding water in Uganda*

Dr Suzanne Linnane  
Dundalk Institute of Technology

**“There is enough water for everyone. The problem we face today is largely one of governance: equitably sharing this water while ensuring the sustainability of natural ecosystems. At this point in time, we have not yet achieved this balance.” *WWDR2, UNESCO, 2006***

**7<sup>th</sup> March 2012**



**Below poverty line: 44%**

**Life expectancy: Male: 51  
Female: 53**

**Mortality of under 5's per 1000: 137  
(17% diarrhoeal)  
(17% malaria)**

**UNICEF**

**Only 50% of population  
with access to safe water**

**UNEP**

**40 billion working hours are spent  
carrying water each year in Africa**

**Households in rural Africa spend an  
average of 26% of their time fetching  
water – high female burden**

**WaterAid**

**At any one time, half of the  
developing world's hospital beds  
are occupied by patients suffering  
from water-related diseases**

**UN**

**443 million school days are lost  
each year due to water-related  
diseases**

**UNESCO**

# Water is Life Amazzi Bulamu

- 1 Introduction
- 2 Where is Uganda
- 3 Uganda up close
- 4 Fact file on Uganda
- 5 Millennium Development Goals
- 6 Water, health & development
- 7 Water is Life
- 8 How I got here



# Water is Life *Amazzi Bulamu*

- 1 Introduction
- 2 Where is Uganda
- 3 Uganda up close
- 4 Fact file on Uganda
- 5 Millennium Development Goals
- 6 Water, health & development
- 7 Water is Life
- 8 How I got here



- 1 Introduction
- 2 Where is Uganda
- 3 Uganda up close
- 4 Fact file on Uganda**
- 5 Millennium Development Goals
- 6 Water, health & development
- 7 Water is Life
- 8 How I got here

# Fact file on Uganda

- Full name: Republic of Uganda
- Population: 35.6 million approx. (2011)
- Young population: median age 15
- Capital: Kampala
- Major languages: English (official), Swahili (official) various others including Luganda
- Current president: Yoweri Kaguta Museveni
- Life expectancy: 51 years (men), 53 years (women) (UN)
- Main exports: Coffee, fish and fish products, tea; tobacco, cotton, corn, beans, sesame

*Water is Life  
Amazzi Bulamu*

- 1 Introduction
- 2 Where is Uganda
- 3 Uganda up close
- 4 Fact file on Uganda
- 5 Millennium Development Goals**
- 6 Water, health & development
- 7 Water is Life
- 8 How I got here

# Millennium Development Goals (MDGs)

## The 8 Millennium Development Goals

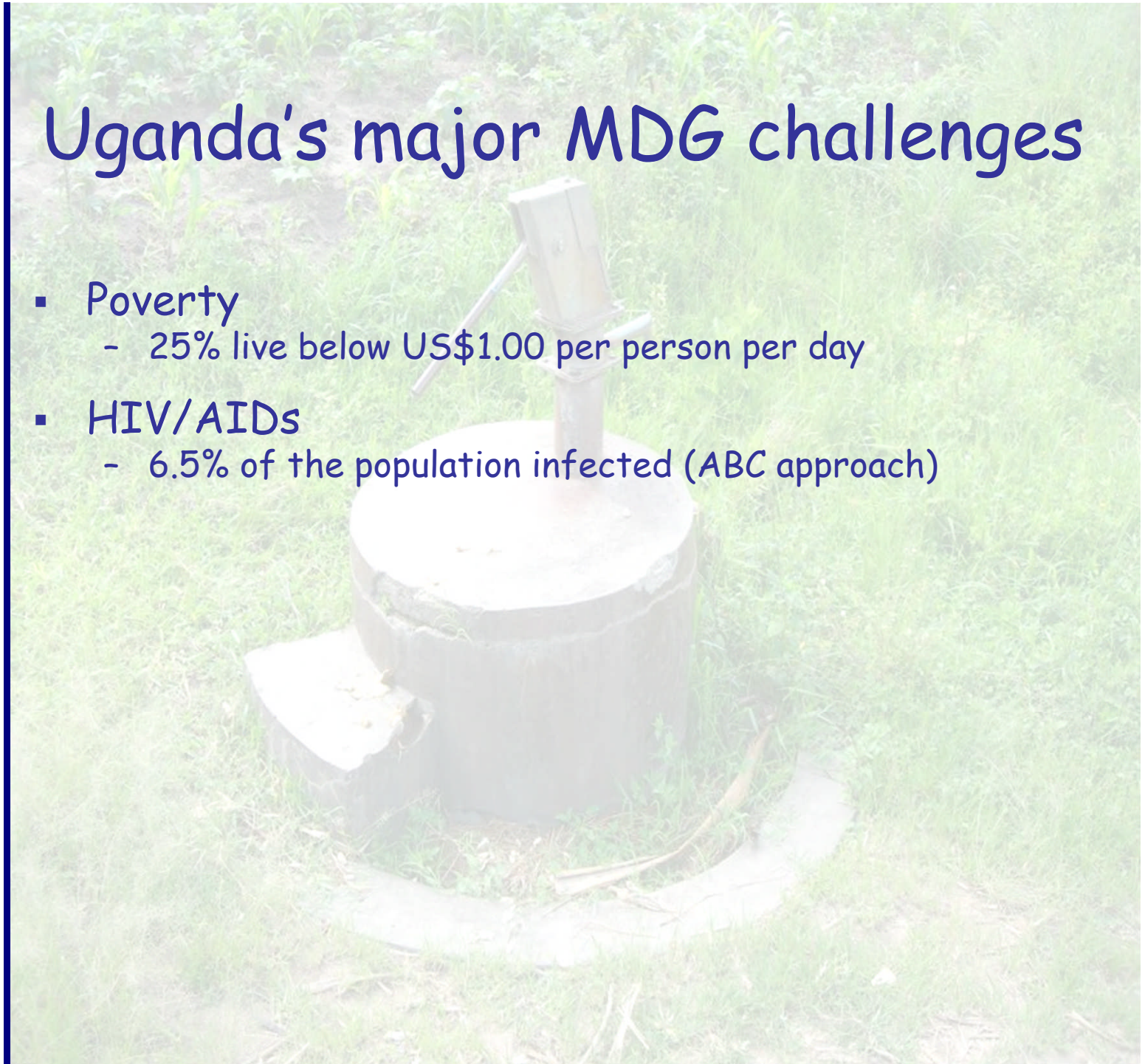
- 1 Eradicate extreme poverty and hunger
- 2 Achieve universal primary education
- 3 Promote gender equality and empower women
- 4 Reduce child mortality
- 5 Improve maternal health
- 6 Combat HIV/AIDS, malaria and other diseases
- 7 Ensure environmental sustainability
- 8 Develop a global partnership for development

**Water is Life**  
*Amazzi Bulamu*

- 1 Introduction
- 2 Where is Uganda
- 3 Uganda up close
- 4 Fact file on Uganda
- 5 Millennium Development Goals**
- 6 Water, health & development
- 7 Water is Life
- 8 How I got here

# Uganda's major MDG challenges

- **Poverty**
  - 25% live below US\$1.00 per person per day
- **HIV/AIDS**
  - 6.5% of the population infected (ABC approach)





AVOID EARLY  
PREGNANCY

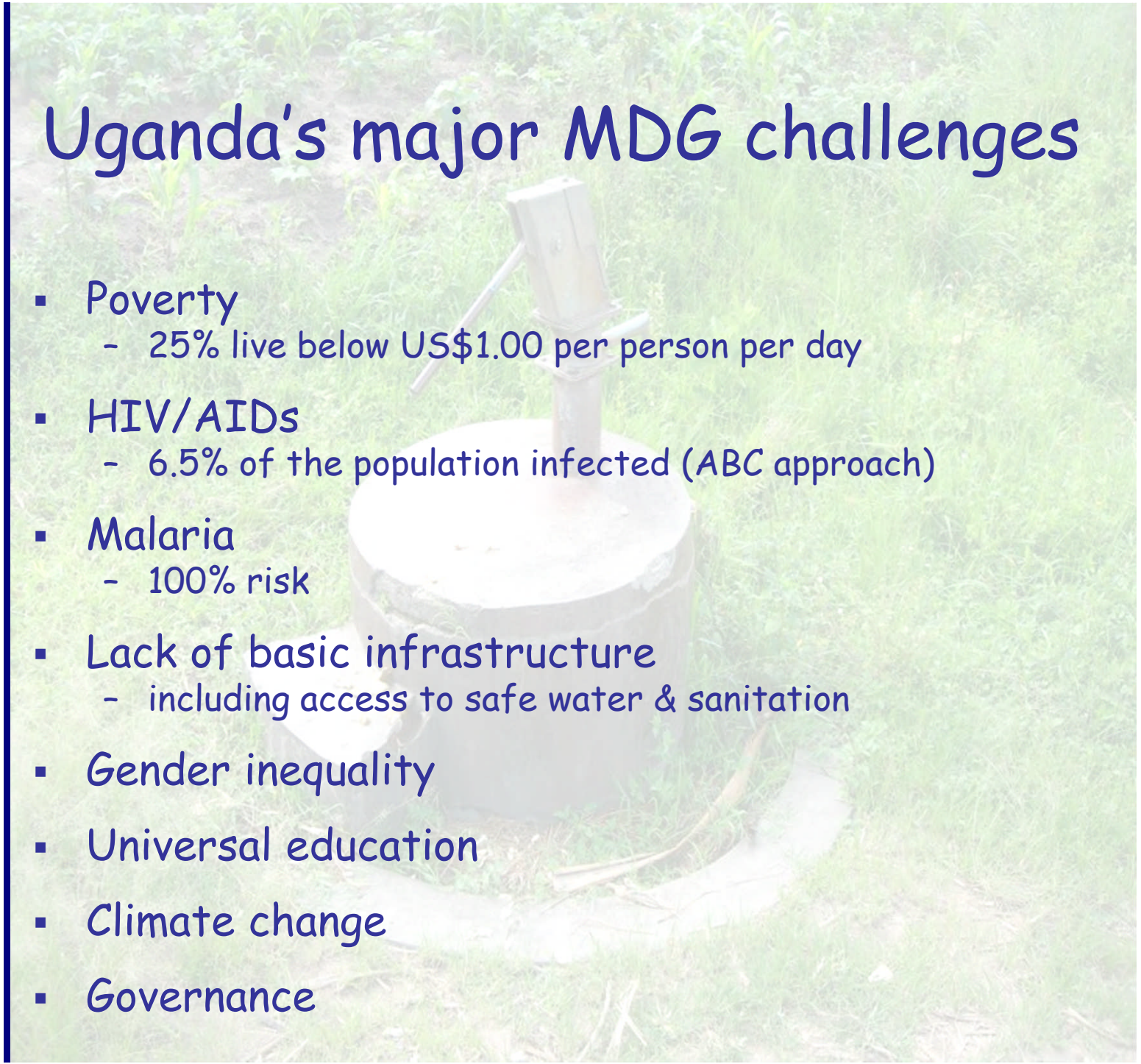


**Water is Life**  
*Amazzi Bulamu*

- 1 Introduction
- 2 Where is Uganda
- 3 Uganda up close
- 4 Fact file on Uganda
- 5 Millennium Development Goals**
- 6 Water, health & development
- 7 Water is Life
- 8 How I got here

# Uganda's major MDG challenges

- **Poverty**
  - 25% live below US\$1.00 per person per day
- **HIV/AIDSs**
  - 6.5% of the population infected (ABC approach)
- **Malaria**
  - 100% risk
- **Lack of basic infrastructure**
  - including access to safe water & sanitation
- **Gender inequality**
- **Universal education**
- **Climate change**
- **Governance**



Water is Life  
Amazzi Bulamu

- 1 Introduction
- 2 Where is Uganda
- 3 Uganda up close
- 4 Fact file on Uganda
- 5 Millennium Development Goals**
- 6 Water, health & development
- 7 Water is Life
- 8 How I got here

# Millennium Development Goal 7

This goal aims to...

- ensure environmental sustainability
- halve the population without safe drinking water
  - 440 children in Uganda die every week from waterborne diseases.
  - 90 percent of wastewater in Africa is untreated, 'further degrading the environment and endangering peoples' lives.'

While some argue that MDG7 is the least important, it is in fact one of the keys to achieving the other MDGs

The MDGs recognise that environmental sustainability is an important part of improving our world and forms the basis for successful living and self-sustenance

**Water is Life**  
*Amazzi Bulamu*

- 1 Introduction
- 2 Where is Uganda
- 3 Uganda up close
- 4 Fact file on Uganda
- 5 Millennium Development Goals
- 6 Water, health & development**
- 7 Water is Life
- 8 How I got here

# Water, health & development

Water, health and development spans....

- Water supply
- Water quality
- Sanitation
- Hygiene
- Health
- Food production
- Future impacts of climate change



**Water is Life**  
*Amazzi Bulamu*

- 1 Introduction
- 2 Where is Uganda
- 3 Uganda up close
- 4 Fact file on Uganda
- 5 Millennium Development Goals
- 6 Water, health & development
- 7 Water is Life**
- 8 How I got here

# Water is Life

- Funded by Irish Aid/HEA Programme for Strategic Co-operation
- Multi-disciplinary project
- Goal of this programme - to build research capacity in Ireland and Africa in relation to safe and sustainable water provision in Africa
- Water is Life - 5 year programme - 2008 to 2014
- Large numbers of partners - both Southern and Northern



## Water is Life *Amazzi Bulamu*

- 1 Introduction
- 2 Where is Uganda
- 3 Uganda up close
- 4 Fact file on Uganda
- 5 Millennium Development Goals
- 6 Water, health & development
- 7 **Water is Life**
- 8 How I got here

# Context

## Distance

- Women and children commonly spend 2-3 hours, and sometimes 6 hours or more daily fetching water
- This is an issue of time, energy, lost opportunity, and physical injury



## Water is Life *Amazzi Bulamu*

- 1 Introduction
- 2 Where is Uganda
- 3 Uganda up close
- 4 Fact file on Uganda
- 5 Millennium Development Goals
- 6 Water, health & development
- 7 **Water is Life**
- 8 How I got here

# Context

## Quality

- Water quality at unimproved surface water sources is usually unacceptable
- The main issue is faecal contamination
- Groundwater chemistry may be problematic



**Water is Life**  
*Amazzi Bulamu*

- 1 Introduction
- 2 Where is Uganda
- 3 Uganda up close
- 4 Fact file on Uganda
- 5 Millennium Development Goals
- 6 Water, health & development
- 7 **Water is Life**
- 8 How I got here

# Context

## Reliability

Traditional sources are unreliable, often drying up before the end of the dry season



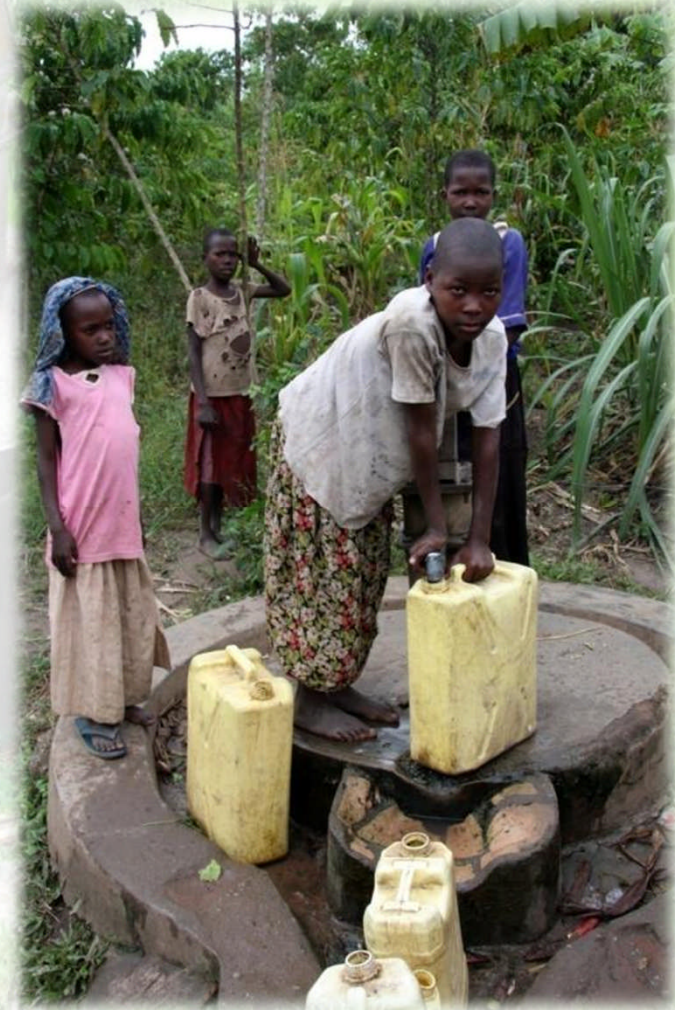
**Water is Life**  
*Amazzi Bulamu*

- 1 Introduction
- 2 Where is Uganda
- 3 Uganda up close
- 4 Fact file on Uganda
- 5 Millennium Development Goals
- 6 Water, health & development
- 7 **Water is Life**
- 8 How I got here

# Context

## Consumption is low

- If the water source is distant and/or there is little (child) labour for water hauling, one round-trip of 20 litres may supply the household for a day - maybe as little as 3-4 litres per head, for all purposes
- Compare Ireland/UK - approx. daily per capita water consumption 150 litres





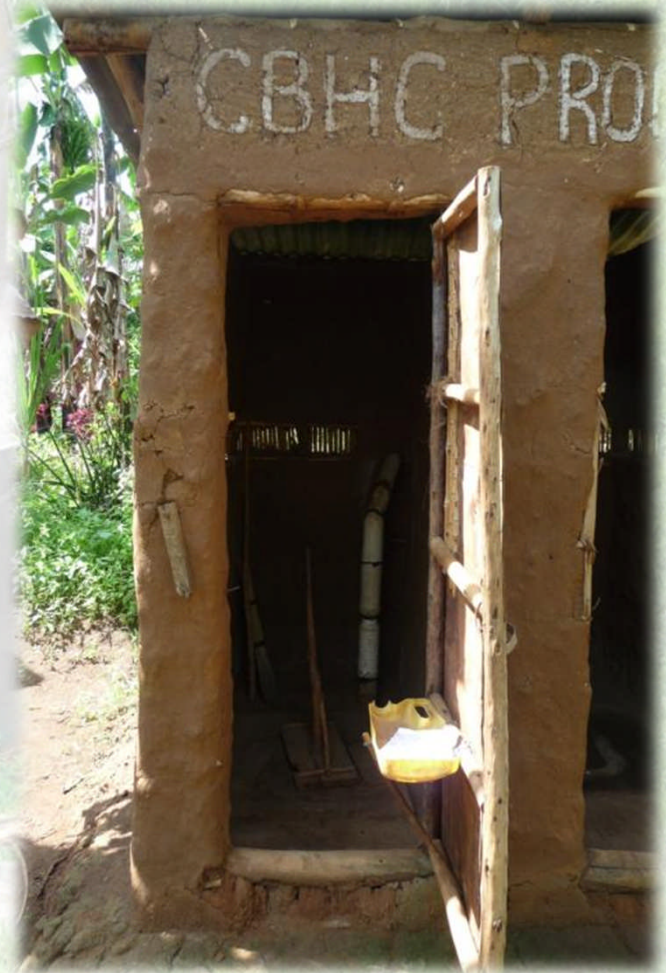
**Water is Life**  
*Amazzi Bulamu*

- 1 Introduction
- 2 Where is Uganda
- 3 Uganda up close
- 4 Fact file on Uganda
- 5 Millennium Development Goals
- 6 Water, health & development
- 7 **Water is Life**
- 8 How I got here

# Context

## Sanitation

- Priority is safe excreta disposal
- 2.5 billion people do not have access to safe excreta disposal facilities - and so have to defecate in the open
- This is an issue for:
  - environmental pollution,
  - dignity, privacy and safety (especially for women)



**Water is Life**  
*Amazzi Bulamu*

- 1 Introduction
- 2 Where is Uganda
- 3 Uganda up close
- 4 Fact file on Uganda
- 5 Millennium Development Goals
- 6 Water, health & development
- 7 **Water is Life**
- 8 How I got here

# Context

A special emphasis on women

Extra challenge - women's hygiene needs

- Bathing
- Excreta disposal
- Menstruation
- Home hygiene
- Pregnancy/child-care



**Water is Life**  
*Amazzi Bulamu*

- 1 Introduction
- 2 Where is Uganda
- 3 Uganda up close
- 4 Fact file on Uganda
- 5 Millennium Development Goals
- 6 Water, health & development
- 7 **Water is Life**
- 8 How I got here

# Context

## Disease & health

### Direct transmission:

- **Water-borne/based**
  - trachoma
  - intestinal worms
  - schistosomiasis
  - cholera
- **Water-related insect vectors**
  - e.g. malaria

### Secondary transmission:

- **mother to child**



**Water is Life**  
*Amazzi Bulamu*

- 1 Introduction
- 2 Where is Uganda
- 3 Uganda up close
- 4 Fact file on Uganda
- 5 Millennium Development Goals
- 6 Water, health & development
- 7 **Water is Life**
- 8 How I got here

# Context

## Building blocks

- water supply, sanitation, hygiene promotion
- community capacity building
- women's empowerment
- multiple layers of engagement
- education
- sustainability/support



**Water is Life**  
*Amazzi Bulamu*

- 1 Introduction
- 2 Where is Uganda
- 3 Uganda up close
- 4 Fact file on Uganda
- 5 Millennium Development Goals
- 6 Water, health & development
- 7 Water is Life
- 8 **How I got here**

# How I got here

- UCD BSc (Hons) Zoology
- PhD Zoology - Paleolimnology
- Summer internships
  - Pheonix park -deer rut
  - Sea and lake surveys
  - Laboratory assistant
- Volunteer trips - Ireland and overseas
- J1 summer visa
- P/T lecturing while studying
- Industry experience - Inland Fisheries Ireland
- DkIT - lecturing position
- Research centre - 1 MSc student (€20k)
- 5 years later - 14 research students (€5 million)

**Water is Life**  
*Amazzi Bulamu*

1 Introduction

2 Where is  
Uganda

3 Uganda up  
close

4 Fact file on  
Uganda

5 Millennium  
Development  
Goals

6 Water, health  
& development

7 Water is Life

8 **How I got here**

# Useful attributes to develop along the way

- Ability to carry out detailed & accurate work
- Ability to think logically & analytically
- Flexibility & ability to work in a team
- Good powers of observation
- Initiative & perseverance
- Interest in & aptitude for scientific research
- Well-developed communication skills
- Tolerance for outdoor work
- Network, network, network.....

A stone wall with a blue plaque containing text about the Nile river's journey. The wall is made of rough, grey stones with a pattern of recessed lines. The plaque is rectangular and has white text on a blue background. The background of the image shows a lush green landscape with trees and a small building on the left.

**THIS AREA  
MARKS THE PLACE FROM WHERE  
THE NILE STARTS ITS LONG JOURNEY  
TO THE MEDITERRANEAN SEA THROUGH  
CENTRAL AND NORTHERN UGANDA  
SUDAN AND EGYPT**























































































Thank you