



# CHALLENGES CAUSED BY RAPID URBANIZATION AND CLIMATE CHANGE

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Pequenos Libombos Dam  
reservoir, 2017 (Folha de Maputo)



Flooded plain surrounding Beira, 2019, after cyclone Idai.  
(AFP / Adrien Barbier)

## Living with the impact of Climate Change?



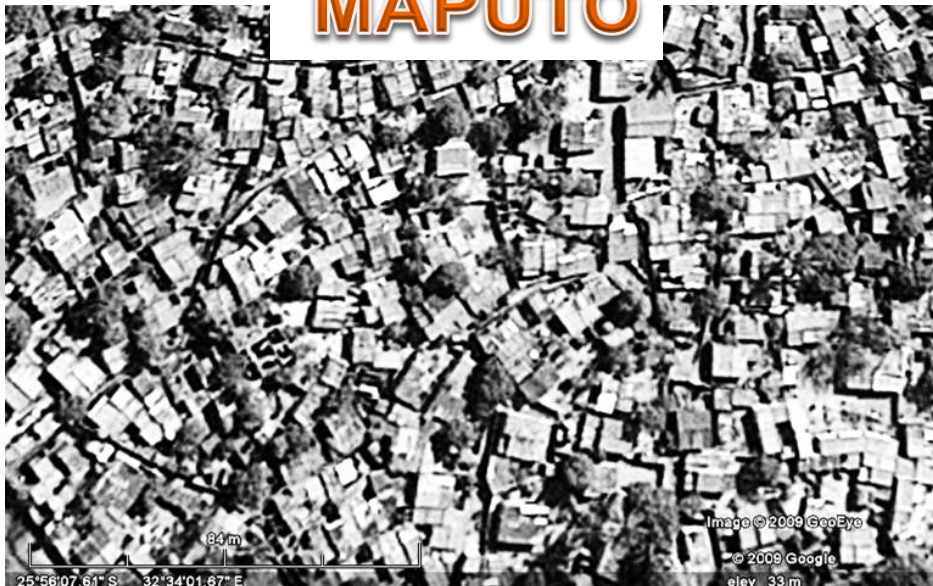
## The challenge of climate change

- **Weather patterns hardly predictable;**
- **Events more frequent and harsh;**
- **Vulnerable people suffers even more!**
  
- **Mozambique is among the world's top 10 nations to be the worst affected by climate change and the first in Africa!** (Global Climate Index 2021)





**MAPUTO**



84 m  
25°56'07.61" S 32°34'01.87" E  
Image © 2009 GeoEye  
© 2009 Google  
elev. 33 m  
Aug 30, 2009  
Google  
Eye alt. 340 m

## Urbanization or Slumization?



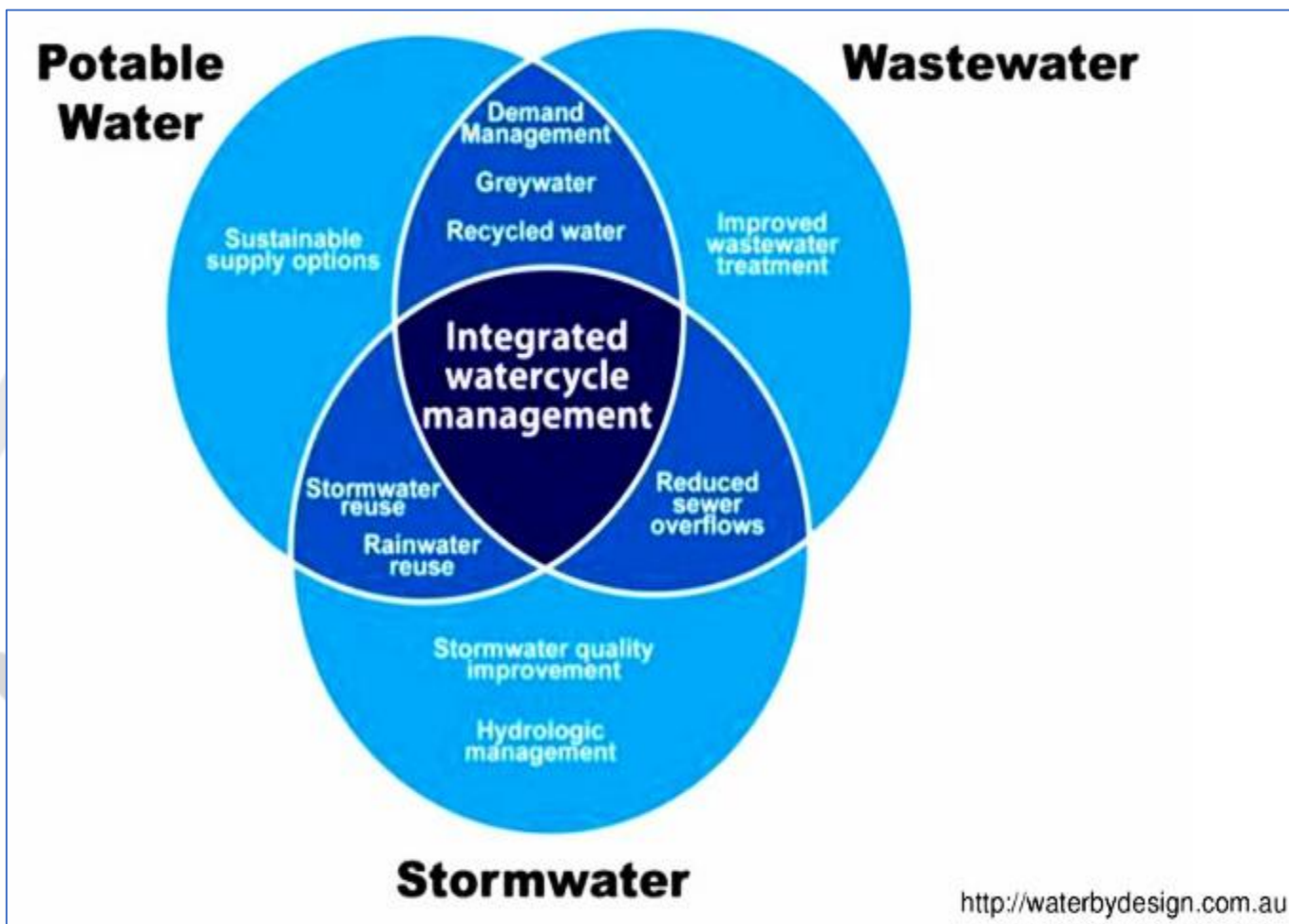
04/02/2011

## Urbanization

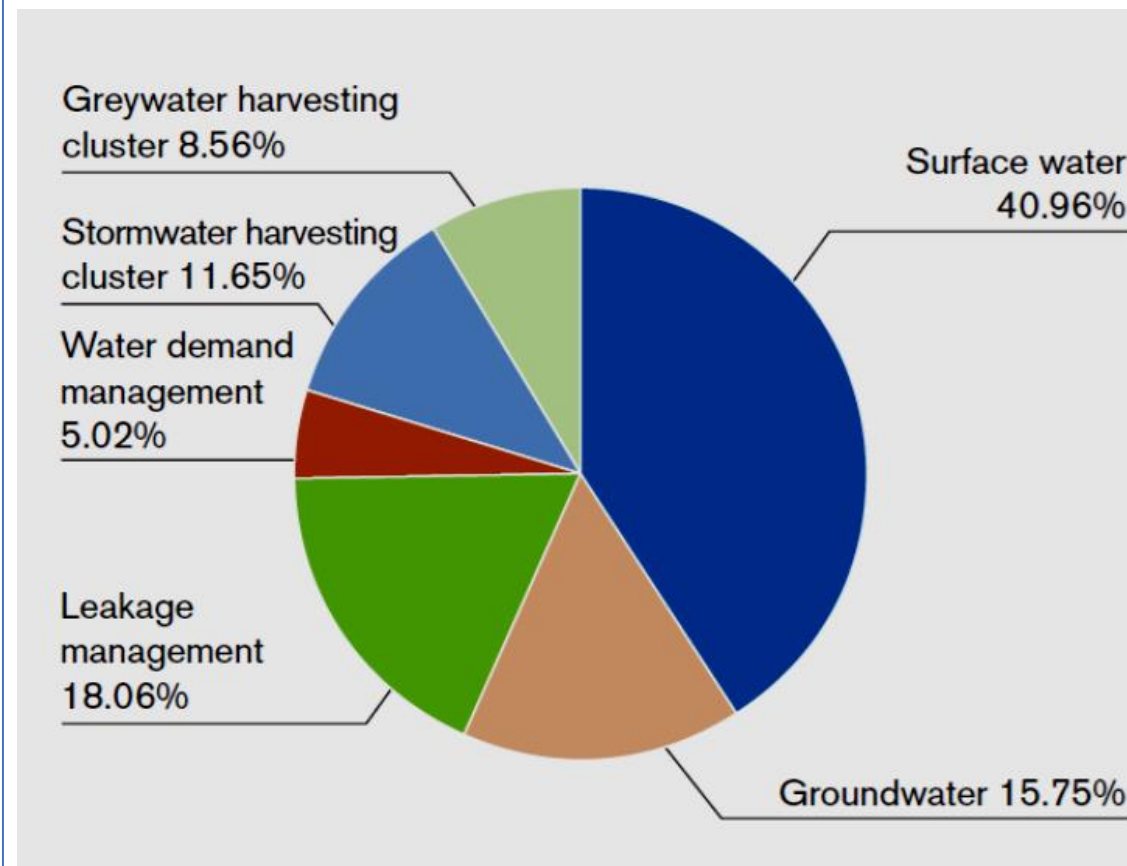
- **Population of Mozambique is growing at the rate of 2.9% per year;**
- **The Urban population is about 37% of the total and it's growing by 4.4 % per year;**
- **The informal settlements are growing!**
- **In about 20 years the urban population may represent 50% of total.**

## How to address the climate change challenge?

- **Mandatory gradual holistic planning – The Integrated Urban Water Management (IUWM);**
- **At utility level – Water Safety Plans integrating climate change risk assessment, enforced by the Regulator;**
- **A new approach to infrastructure: redundancy; flexibility; decentralized solutions; household/community based initiatives; technology for all!**
- **Capacitate institutions and technicians!**



## The IUWM



## How to address the urbanization challenge?

- **Accept the growth of slums and the limitations of the conventional approaches to service those areas;**
- **The slums are not a transitory situation;**
- **Planning of infrastructure and service provision should be “slum-centric” and inclusive;**
- **The model for service provision should follow the market segmentation and cope with the informal economy environment.**





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Research and **Planning for resilient water services** and to reach all, needs new approaches, continuity, skilled organization and staff – **A specific investment allocation is essential!**

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