



1<sup>ST</sup> ANNUAL SEMINAR ON WATER, ENVIRONMENT AND  
SUSTAINABLE DEVELOPMENT FOR THE CUVELAI- ETOSHA  
BASIN

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1ST ANNUAL SEMINAR ON WATER, ENVIRONMENT AND  
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BASIN

Water, Environment and Sustainable  
Development

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## Presentation outline

- What is sustainable development
- What does water have to do with sustainable development
- The groupings and clusters of water
- Factors that contribute to water demand
- Water and the Millennium Development Goals (MDGs)
- Weaknesses of the MDGs
- Water within the Sustainable Development Goals (SDGs)
- Lessons Learned from MDGs
- Namibia's Position on SDGs
- Namibia water situation (Harambe prosperity plan)
- Characteristics of Namibia's water resources
- Some measures to address water scarcity in Namibia and region
- Conclusion



## What is Sustainable Development

- Development that meets the needs of the present without compromising the ability of future generations to meet their own needs. (The Brundtland Commission report Our Common Future 1987 )

# What does water have to do with Sustainable Development

Water is a finite resource that is fundamental to human well-being and only renewable if well managed. Water management is a pre-condition of sustainable development. Managed efficiently, water plays a vital role in strengthening the resilience of social, economic and environmental systems in the face of rapid and unpredictable changes (**SOURCE: UNU, 2013**).



# What does water have to do with sustainable development. Continued.

Water is fundamental to the three dimensions of sustainable development, including social needs, economic development and environmental limits, and a cross-cutting driver. Moving from a sectoral approach towards a holistic one, which captures interconnections between food, energy, health, trade, the environment and water is necessary

**(Source: (UN-WDPAC, 2015))**

# What does water have to do with sustainable development. Continued.


- Demand for water will increase by 55% by 2050
- Water shortages have been identified by industry, government, academia and civil society as one of the top three global risks of highest concern.
- Water-related disasters are the most economically and socially destructive of all natural disasters.
- It is estimated that over 80% of wastewater is discharged without treatment
- Two-thirds of the world's population will live in water-stressed countries by 2025 if current consumption patterns continue(**UN-WDPAC, 2015**)

# The groupings and clusters of water



- Water is a sector
- Water is a supporter
- Water is an enabler

**(source: UNU, Water, Environment and Health, 2013)**





# The groupings and clusters of water .

## Continued.

- **Water is a sector** and thus it water requires infrastructure development and operational funds,
- This cluster prioritizes water resources, management, waste water, water quality and/or preventing pollution,
- **Water is a sector** but it cuts across sectors and requires integrated approaches to management,
- Water sector is key to social development, environmental integrity and economic growth.

# The groupings and clusters of water. Continued.

- Water as a **supporter** focuses on development agenda and the principal transformational changes in global development. It set a wider enabling environment for poverty reduction, sustainable development and governance.
- Water issues should be embedded in other targets such health, energy and agriculture.
- Water is seen as a supporter to achieve overarching policy objectives for development

## The groupings and clusters of water. Continued.

- Water as an **enabler** unlocks economic growth potential and is tied to key processes of state such as national development and growth plans
- Water unlocks agricultural growth, energy production, industry and commerce as well as create employment.
- Water opens spaces for non-state actors such as the private sector, civil society, as well as interfaces with development partners through sector coordination groups

# Factors that contribute to water demand. Continued.

- **Increased water consumption:**
- by 2030 the shortfall between demand for, and supply of, water is projected to be 40%.
- Recent World Population Prospects shows an additional 3.7 billion people on the planet by 2100.
- Much of this growth will be in least developed and developing countries,
- The urban growth will also increase to 60% of world population by 2030.

# Factors that contribute to water demand. Continued.

- **Increased demand for and access to energy.**
- Forecasts suggest that world energy consumption will grow by approximately 50% between 2010 and 2040.
- A shifting in energy sources may also add pressure on water. For example, increasing demand for biofuels implies increased consumptive use of water to grow fuel crops, as compared to water use in hydropower, which can be used again downstream



## Factors that contribute to water demand. Continued.

- **Climate change impacts.**

Climate change will compound pressure on resources, as will policies to adapt to and mitigate.

Furthermore, these pressures will be unevenly distributed around the world with the greatest impacts occurring in populations and locations characterized by low resilience.

## Factors that contribute to water demand. Continued.

- **Increased food demand and changing diets.**
- Projections show that providing food supplies for a world population of 9.1 billion people in 2050 would require an overall increase in provision of “on-the-plate” food by some 70% by 2050.<sup>15</sup>
- Some of this demand can be met by reducing food (and water) wastage.

# Water and the Millennium Development Goals (MDGs)

- The MDGs partially addressed water under MDG 7: **Ensure environmental sustainability**
- It included target 7a that aims to “integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources” in part through the proportion of water resources used, and, target 7c that aims to “half the proportion of people without sustainable access to safe drinking water and basic sanitation by 2015”.



## Weaknesses of the MDGs

- Donor-led with little attention to local context
- Based on average progress at national level
- Focus only on developing economies
- Missed opportunity to discuss sustainability at the global level for all countries
- Missed the inclusion of climate change, quality of education, human rights, economic growth, infrastructure, good governance and security for all countries (**UNU Water, Environment and Health, 2013**)

# Water within the Sustainable Development Goals (SDGs)

- Open Working Group (OWG) of the UN General Assembly on Sustainable Development Goals.
- The OWG was established on 22 January, 2013, by decision 67/555 of the General Assembly
- The OWG was mandated to propose SDGs to the UN General Assembly at its 68th Session

## Water within the SDGs. Continued.

- The SDGs officially known as Transforming our world: the 2030 Agenda for Sustainable Development, are an intergovernmental set of aspiration Goals with 169 targets.
- They act as the Post 2015 Development Agenda
- Successor to the Millennium Development Goals,
- Comprises 17 SDGs, which will guide policy and funding for the next 15 years, beginning with a historic pledge to end poverty.

## Water within the SDGs. Continued.

- Goal 6: Water and sanitation
- “Ensure availability and sustainable water management and sanitation for all”

# Lessons learned from the MDGs

From	To
Development assistance	Universal global context
Top down decision making	Multi stakeholder decisions making process
Growth models that increase inequality and risk	Growth models that decrease inequality and risks
Meeting easy development targets	Tackling systematic barrier to progress
Damage control	Investing in resilience
Concepts and testing	Scaled up intervention
Multiple discreet actions	Cross- scale coordination

## Lessons Learned from the MDGs. Continued.

- Shifts that relate to water specifically include a move from stand alone goals towards integrated interventions and nexus thinking, embedding monitoring and evaluation within the process, and bringing water issues into political economy (**UNU Water, Environment and Health, 2013**)

# Namibia's position on SDGs

- As a people united by the common goal of sustainable development, let us not escape the responsibility of tomorrow, but face it head on, under the banner of a “Future We All Want” and ensure that no one is left behind in the quest to implement the SDG’s (President Hage Geingob)

# Namibian water situation

- 87 percent of Namibians had access to potable or safe water
- Less than 70 percent of households in rural areas have access to it.
- Due partly to outdated infrastructure and over-subtraction from ground water resources, many people in rural areas are forced to get supply from unsafe sources, especially in the dry season (Harambe Prosperity Plan, 2016)



# Characteristics of Namibia's water resources

- The only perennial rivers to which Namibia has access lie on its northern and southern borders and are shared with neighboring countries.
- Annual average rainfall is low. It ranges from virtually zero along the coast to a maximum of 700 mm in the extreme north-east
- Namibia relies heavily on the runoff generated in its internal river basins, all of which flow for only short periods of time following heavy rainfall. These are therefore described as ‘ephemeral’ rivers. (**Source: Namibia, MAWRD, 2000**)

## Characteristics of Namibia's water resources. Continued.

- Namibia's dependency on groundwater, in both shallow alluvial and deeper aquifers groundwater re-sources are providing the principal buffer against annual drought and in some instances are being progressively over utilized.
- Lack of effective control over pollution to groundwater, strategic aquifers are threatened with degradation
- Namibian groundwater is highly saline over large areas of the north where the majority of the population lives (**Source: Namibia, MAWRD, 2000**).

## Water situation in Namibia and the region



- Water scarcity is a recognised norm in a large parts of Namibia.
- One of the reasons for this situation is the arid conditions in the south-centre and south west of the continent of Africa, and the high climatic variability and unreliable rainfall regime which worsens the region's vulnerability to recurring droughts (Msangi, 2002).

# Water situation in Namibia and the region



- The Wild Wide Fund for Nature (n.d) maintains that fourteen countries in Africa are already experiencing water stress; another 11 countries are expected to join them by 2025 at which time nearly 50 per cent of Africa's predicted population of 1.45 billion people will face water stress or scarcity.
- Nearly 51 per cent (300 million people) in sub-Saharan countries lack access to a supply of safe water and 41 per cent lack adequate sanitation

## Measures to address water scarcity

- Educate to change water consumption and lifestyles. There is need to change forms of water consumption Education is important because it provides skills and understanding for water use
- Recycling of wastewater. There is need to develop cleansers for wastewater so that it can be used for other uses such as drinking (**Source: Kanyimba, In Press**)

## Measures to address water scarcity. Continued.

- Improve irrigation and agricultural practices. About 70 percent of the world's freshwater is used for agriculture. Improving irrigation can help close supply and demand gaps .
- Develop energy efficient desalination plants. Desalination can take salt from the sea water. Desalination plants are energy-intensive solution to water scarcity. There is need to build desalination plants that use solar-powered energy sources

**(Source: Kanyimba, In Press)**

## Measures to address water scarcity. Continued.

- Improve water catchment and harvesting. South Africa, Namibia and Botswana contend with some of the worst effects of climate change and need to intensify rainwater harvesting systems.
- Look at community-based governance and partnerships. There is need to ensure effective governance at the grassroots-level in order to give communities stature and lead to effective policy changes on a national scale.
- Develop and implement SADC policies and regulations. The water scarcity complicates food security and pollution.  
**(Source: Kanyimba, in Press)**

# Measures to address water scarcity. Continued.

- Holistic management of ecosystems. Holistic Management is a decision-making framework that ensures decisions are economically, environmentally and socially sound.
- Holistic management helps man to take account into other possible mediating factors in resource management. (**Kanyimba, In Press**)



## Measures to address water scarcity. Continued.

- Reduce the amount of water used in industries and mines. Industrial water use accounts for approximately 22 percent of global consumption.
- Build international frameworks and institutional cooperation
- There is need to develop and strengthen the international and regional agreements regarding transboundary water resources  
**(Kanyimba, In Press)**

# Conclusion

- Ours is the last generation which can head off the worst effects of climate change, and the first generation with the wealth and knowledge to eradicate poverty. For this, fearless leadership from us all is needed.
- If the global community collectively is prepared to step up to the challenge of achieving the Sustainable Development Goals, then there's a chance of achieving sustainable development – and with it better prospects for people and our planet (**Clarke, 2016**)



Thank You