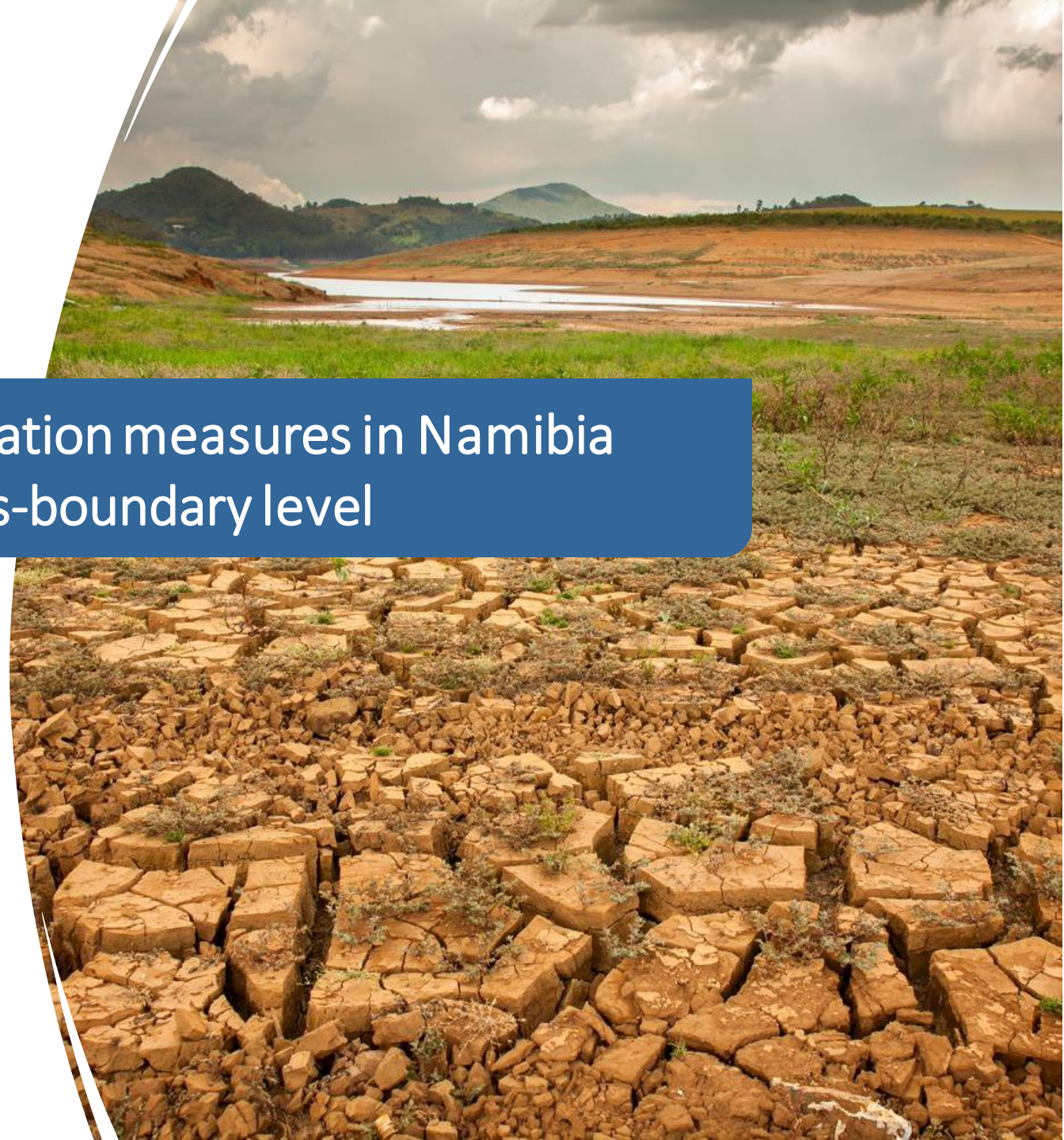
WATER CONVENTION

Global Workshop on
Water, Agriculture and Climate Change

17-18 October 2022, Geneva and online



Climate change adaptation measures in Namibia and at trans-boundary level

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Ufficio federale dell'ambiente UFAM
Uffizi federal d'ambient UFAM

ADAPTATION FUND

FAO FIAT PANIS

INTERNATIONAL NETWORK OF BASIN ORGANIZATIONS

IWMI International Water Management Institute

Namibia climatic conditions

Rainfall

- **Highly variable (and unreliable)**
- **Seasonal** convective thundershowers in rainy season from **October** to **April**
- **Low** with average range from virtually **zero** at coast to over **700** mm / year in far northeast

Evaporation

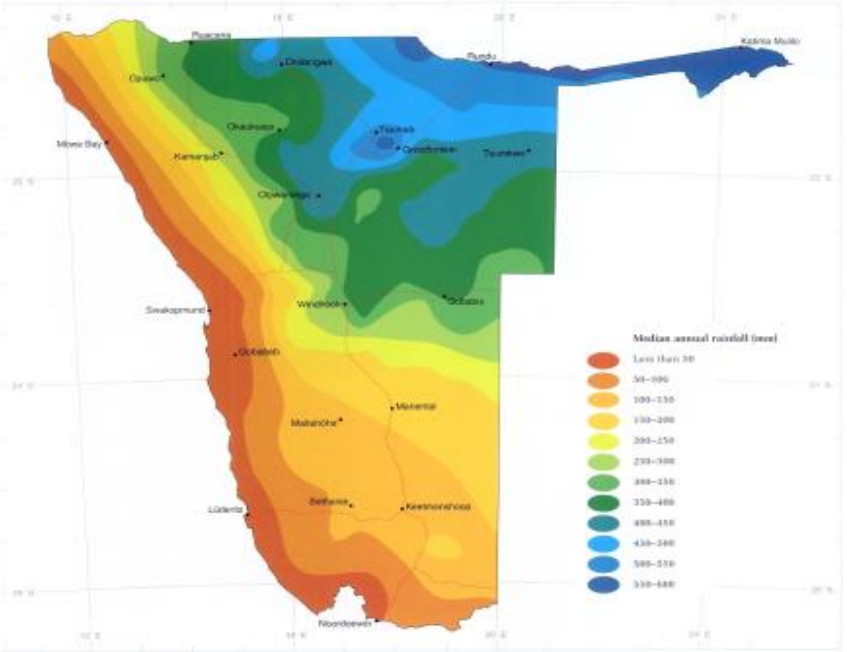
- High with average range from less than 2,000 mm / year at coast to over 3,400 mm / year in southeast
- Potential evapotranspiration exceeds rainfall by far -> **arid to semi-arid conditions**

Crop

- Crop production provides the basic sustenance for the majority of people living in Namibia
- Over the years, farmers in Namibia struggle to produce local staple crops due to effects of climate change

Climate change predictions

- Increased maximum temperatures
- A longer dry season
- Increased humidity and convection, and
- More intense rainfall with a possible increase in flooding.
- ***CLIMATE CHANGE IMPACTS <u>WATER, FOOD AND ENERGY SECURITY</u>***



Water Resources

- Namibia's water resources is extremely variable and scarce
  - Monitoring, forecasting and early warning systems
  - Conjunctive use of surface and groundwater policy
  - Water conservation and demand management strategies

- All perennial rivers are shared with neighbouring countries
  - transboundary water governance – 1997 UN Watercourse Convention 2000 Revised SADC Protocol on Water, accession to the 1992 Water Convention
- Namibia highly depend on groundwater
  - Abstraction control – permit system
  - Water pollution control

National Water Policy, Legislation and Regulation

- Water Act No 54 of 1956 - regulates the conservation and use of water for domestic, agricultural, urban and industrial purposes
- Water Resources Management Act no 11 of 2013 - to promote, develop, manage and utilize agriculture, water and land resources sustainably
- National Water Policy White Paper of 2000 – provides policy Framework for equitable, efficient, and sustainable water resources management and water services to support integrated water resources in Namibia
- National Integrated Water Resources Management Plan of 2010 – provides holistic and integrated framework for water resources management and services
- Water Supply and Sanitation Policy 0f 2008 – provides a framework for developing reliable and accessible sources of safe water supplies for improved drinking water sources with sufficient capacity on a sustainable basis to serve all Namibians at affordable cost
- Namibia Water Corporation Act No.12 of 1997 – provides national bulk water supply in an environmentally, sustainable and cost-effective way and ensure sufficient quantities and quality water for customers.
- Water research Act No 34 of 1971- plays a vital role in implementation process of the National Water Policy (NWP) as it provides for a water research commission and fund

Regional and International Legal Frameworks

- Permanent Okavango River Basin Water Commission (OKACOM) Agreement
- Revised SADC Protocol on Shared Watercourses Systems of 2000
- UN Convention on the Law of the Non-Navigational Uses of International Watercourses of 1997
- The Convention on Wetlands of International Importance (RAMSAR)

Programmes

Comprehensive Conservation Agriculture

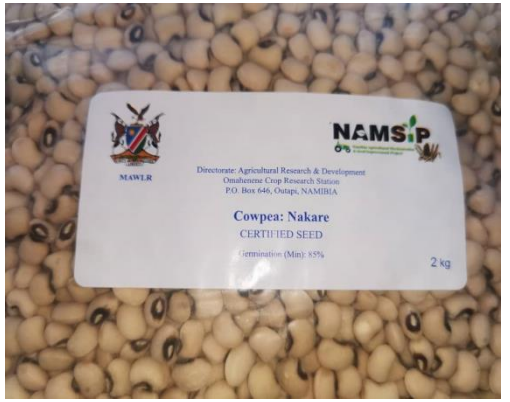
- To reduce and reverse land degradation
- Mitigate the impact of climate change through the adoption of Conservation Agriculture (CA) practices
- Basis for sustainable crop production and improved food security at national and household level
- CA implemented with support of cooperating partners in all crop producing region

Climate Resilient Agriculture in three of the Vulnerable Extreme Northern Crop-growing regions (CRAVE)

- CRAVE implemented in Zambezi, Kavango East and Kavango West
- Funded through a grant by the Environmental Investment Fund (EIF)
- Complementing the Comprehensive Conservation Agriculture Programme
- Capacitates beneficiaries to acquire skills and knowledge to adopt conservation agriculture and climate-resilient agricultural practices such as drip irrigation

Namibia Agriculture Mechanisation and Seed Improvement Programme (NAMSIP)

- 5 year project
- To improve household food security, nutrition, job creation, household income and livelihoods of rural people
- Aims to increase agricultural production and productivity
- Supports agricultural production through mechanization and certified seed systems
- Agricultural scheme will be implemented across Namibia
- Seed systems development scheme will be implemented in Kavango East, Kavango West, Oshana, Omusati, Oshikoto and Zambezi region.



Programmes

Horticulture Value Chain Scheme

- Basis for sustainable crop production and improved food security at national and household level
- Assist farmers with drip irrigation system to reserved scare water resource

Plant Protection

- Climate change accelerates the introduction and spread of plant pest's species
- Increasing in plant pests and diseases may negatively impact food security and safe trade
- This is attributed by the rising temperatures, changes in the precipitation patterns, reduction in water availability which may results in reduction in agricultural production and productivity
- The development of agricultural systems that are more resilient to climate change will help to minimise the negative effects on climate change. For example in areas of plant protection, optimising plant production systems reduce their susceptibility to new potential pests
- Therefore it is imperative resources are mobilise for funding programme and funding mechanisms for adaptation strategies and develop agricultural systems that are resilient to climate change

Future plans

Katima Mulilo/Liselo Green Scheme and Zone

- Development of 4000 ha (2000ha each) of irrigation area for production of cereal e.g. maize, wheat and vegetables. This project is aimed at increasing food security, import substitution and create employment for Namibia
- Implementation of various value chains

Conclusion

- Climate change impact on water security and agriculture production
- Need for coordinated management across sectors (water-food-energy)
- Funding is needed for adaptation measures and food system transformation measures
- Increase Namibia’s resilience to floods and drought – ecosystem based adaptation

Thank you

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