



nemus

Demarcation CMA BW Inception Report P2| V1




Study on Demarcation of Catchment Management Areas

Inception Report Workshop

Benchmarking of different Catchment Management Approaches



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- 1. Introduction**
 - 2. Case study of Brazil**
 - 3. Final Considerations**

I. INTRODUCTION

CATCHMENT MANAGEMENT IN THE WORLD

- The governance system implemented world wide depends on each country's geographic, regional and political reality (decentralized vs centralized approach).
- Benchmarking study: different management models and their feasibility within Botswana context.
- Brazil case represents an introduction to benchmarking. Further assessments will be conducted throughout the assignment.
- 4 cases under review: South Africa, Namibia, Portugal and Brazil.

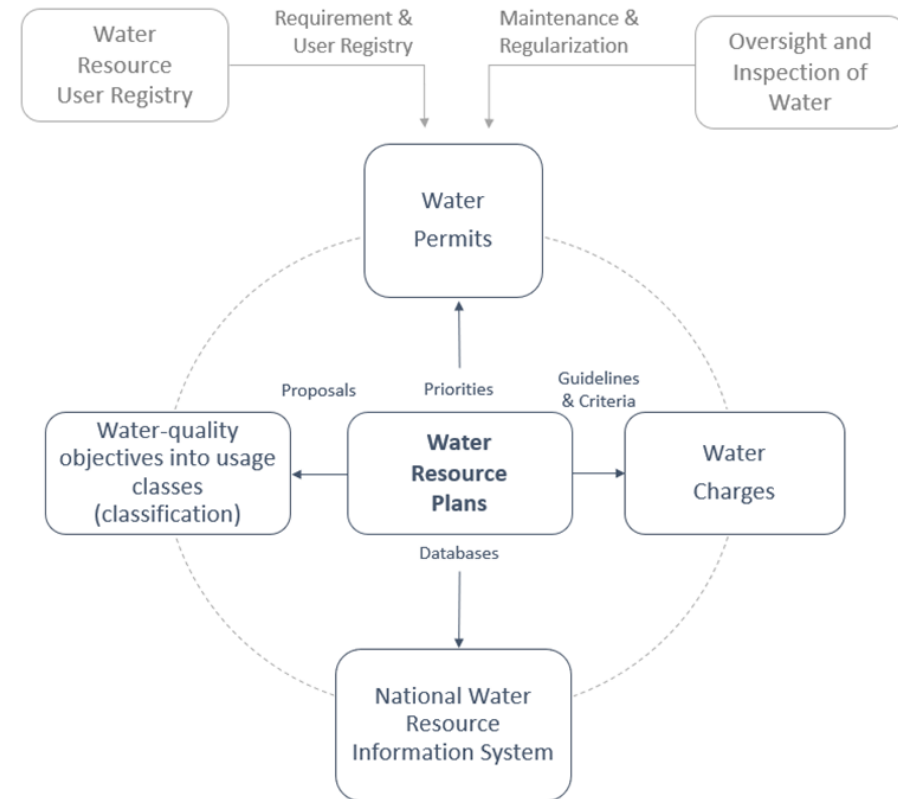
CASE STUDY



4. CASE STUDY OF BRAZIL

WATER GOVERNANCE IN BRAZIL

- Water planning is carried out at a federal and state level, in liaison with the National Council for Water Resources.
- National Water Resources Policy defines 5 management instruments.
- National Water Agency ensures the implementation of the management tools.
- Water policy states that water governance should be decentralized, participatory and integrated.
- Planning is done at the watershed level.



(ANA, 2018)

RIVER BASINS AND CATCHMENT MANAGEMENT REGIONS

- 8 river basins regions
- 12 catchment management regions
 - guide water management at the sub-basin level

Bacias Hidrográficas do Brasil



Regiões Hidrográficas do Brasil

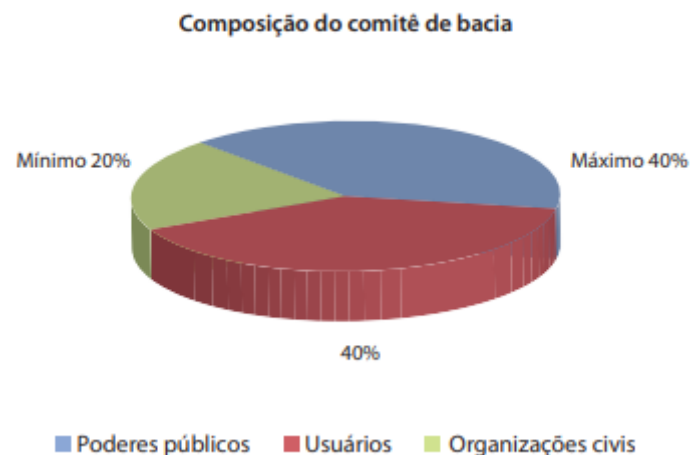


RIVER BASINS AND CATCHMENT MANAGEMENT REGIONS



CATCHMENT MANAGEMENT COMMITTEES (CMCs)

- Composed by representatives of: Federal Government; States and Municipalities; water users, including agriculture, industry, urban, energy, transports and ecology; and representatives of civil society, ethnic and minority groups, NGOs and academia.
- Representatives are chosen in electoral regional circles with quotas for each group; public officers, sector representatives and civil society.
- CMCs are organized in a plenary assembly, with 40 to 70 representatives; an executive board, with 5 to 10 members; and technical boards (planning, permits and juridical).



CATCHMENT MANAGEMENT COMMITTEES (CMCs)



CATCHMENT MANAGEMENT COMMITTEES (CMCs)

- Oversight by the National Council for Water Resources and financed by the National Water Agency.
- Financing linked to water permits, water services, rehabilitation and conservation projects financed by several entities.
- When possible and necessary, the Committees are technically supported by “Water Agencies” composed of technical and administrative consultants selected through public bid for a period of 5 to 10 years.
- CMCs are required to do a 10 year Water Resources Management Plan – guides the use of water resources within the catchment area.



6. FINAL CONSIDERATIONS

CONCLUDING REMARKS

- Water governance is a critical factor for development.
- Benchmarking highlights different management systems that depend on political and geographic settings.
- Water resources management based on catchment management areas, which are usually aligned with river basins or sub-basins, is the most common model.



CONCLUDING REMARKS

- For catchment management areas climate change is a major challenge. Significant changes in water balances are foreseen at global and regional scale.
- Groundwater has an important role in resilience for climate change effects.
- Catchment management areas requires the integration of groundwater and surface water (and also estuarine and coastal water when applicable).



NEXT STEPS

From our perspective the main questions are:

- Which models are applicable to Botswana?
- Which model will be suitable for Botswana?
- Which governance aspects are most valuable?
 - community empowerment,
 - inclusion of indigenous and minorities,
 - financial sustainability,
 - management efficiency,
 - simplicity/complexity of the model,
 - technical support.



Thank you

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ACRONYMS

CMA	Catchment Management Area
DWS	Department of Water and Sanitation
IWRM-WE	Integrated Water Resources Management and Water Efficiency
MLWS	Ministry of Land Management, Water and Sanitation Services
WUC	Water Utilities Corporation