Balancing Development and Conservation of the Okavango River Basin

By:

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Sustainable Pathways Towards Increased Water Security

The Okavango Delta is the largest inland wetland in southern Africa

It is one of the world's largest Ramsar sites

It supports one of the world's largest concentrations of free-roaming large mammals

OKACOM

The Permanent Okavango River Basin Water Commission

Comissão Permanente das Águas da Bacia Hidrográfica do Rio Okavango

The basin's people are mostly poor, rural and scattered with a high dependence on the river

The countries wish to develop the river in a way that benefits the people whilst protecting its unique natural attributes

Transboundary Diagnostic Analysis (TDA)

The very first **OKACOM commissioned** project

Why?

- Objective understanding of status of basin resources
- Issues and trends
- TDA was a scientific **joint fact finding study** identifying key challenges facing the ORB,

For what?

- To assist framing of issue-responsive programmatic interventions to address challenges identified by TDA – Strategic Action Programme (SAP)

The plan

A situation assessment of the basin: *its people, natural environment, national and basin economies, governance, areas of concern*

An Integrated Flow Assessment: *predicting the ecological, social and economic consequences of three water-use development scenarios (Low, Medium, High)*

Three years of stakeholder consultations: *Government departments, academic and scientific institutions, civil society, private sector, community representatives*

Basin-wide, integrated, long-term planning and management framework: *livelihoods and economy; water resources management; land management; environment and diversity*

Transboundary Diagnostic Analysis (TDA): 2008-2010

Strategic Action Programme (SAP): 2010-2011

The team

Programme management and guidance:
OKACOM, Okavango Basin Steering Committee, FAO

Funders: *GEF, UNDP, basin governments*

A full multidisciplinary team in each country: *hydrology, hydraulics, geomorphology, geohydrology, water quality, vegetation, aquatic invertebrates, fish, birds, river-dependent mammals, resource economics and socio-cultural issues, irrigation*

International: *Process Management Team, basin economist, governance lawyer*

Angola

Namibia

Botswana

The scenarios

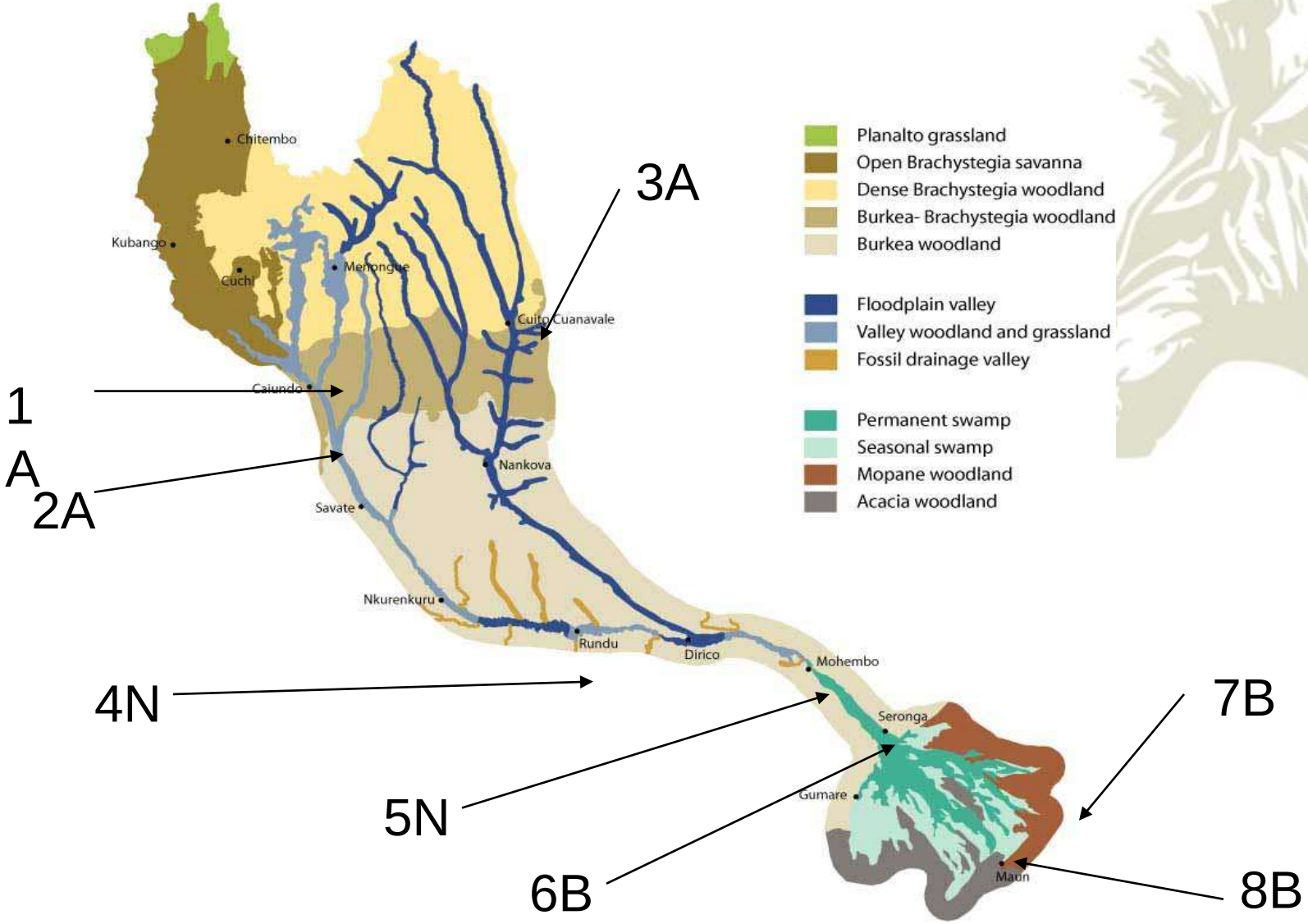
1. Low water use : 5-7 year national plans

2. Medium water use : 10-15 year planning horizon

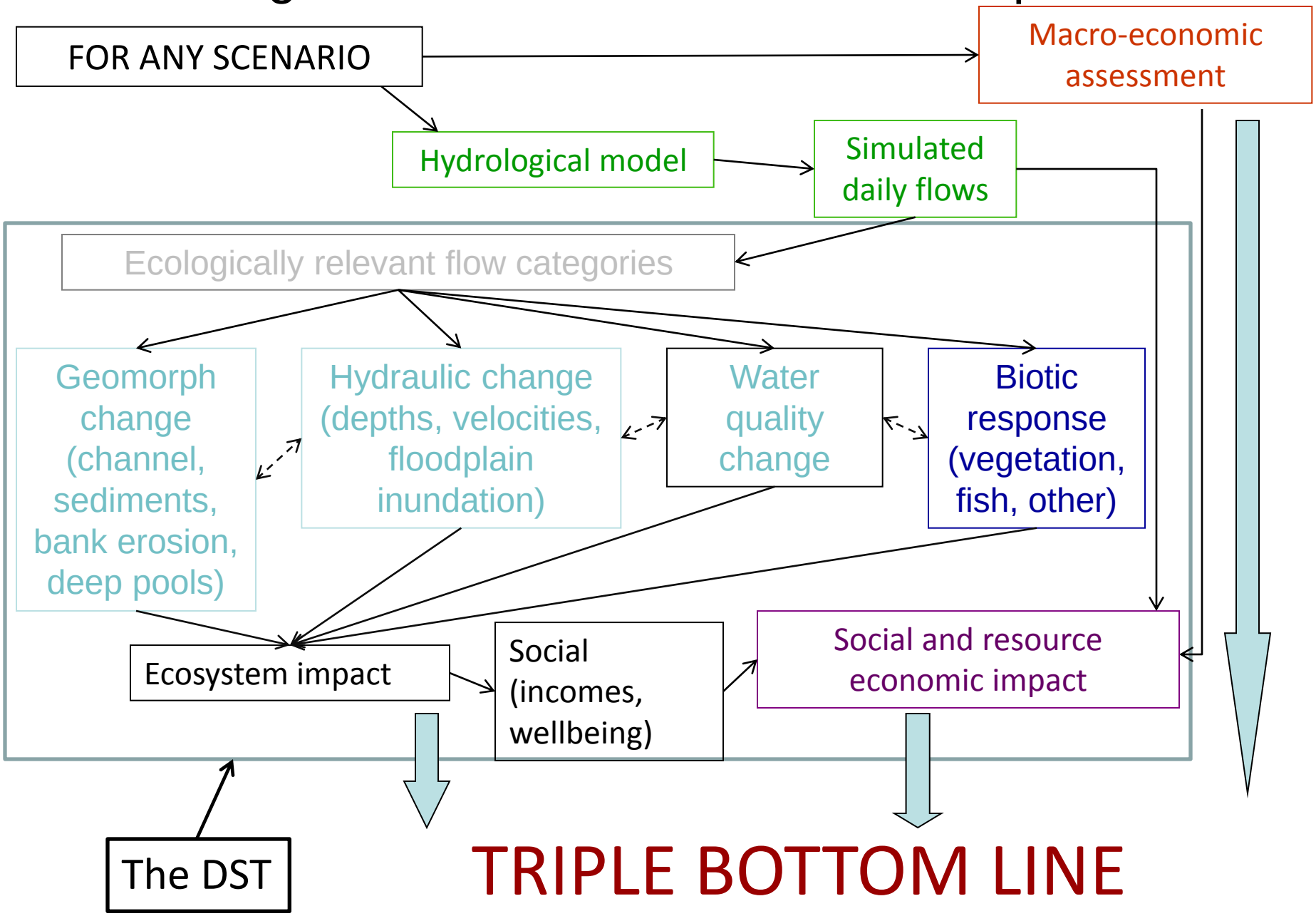
3. High water use : all possible/considered developments, to complete the picture of how much development the system could absorb without catastrophic change

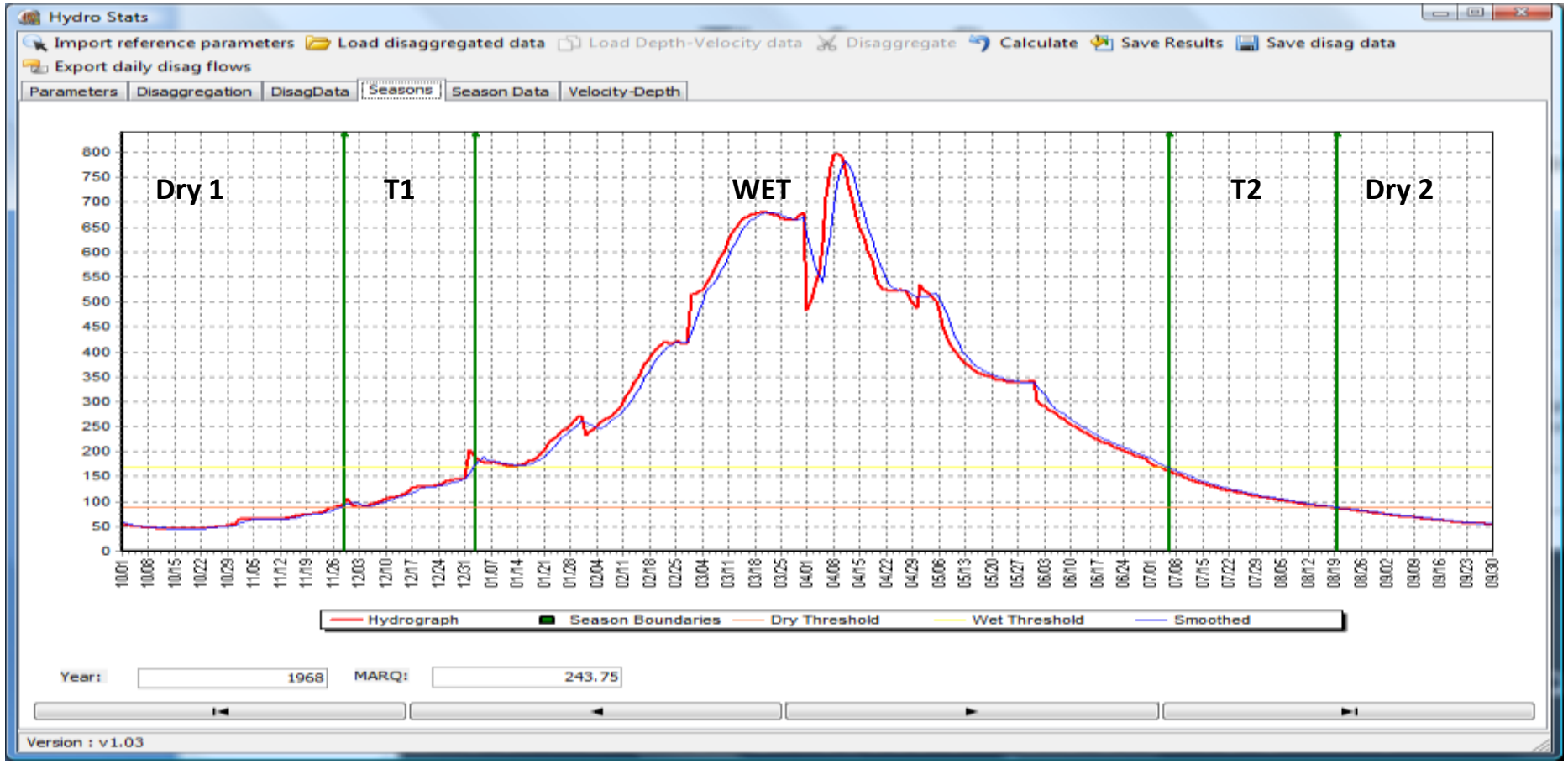
4. Climate change : (superimposed on Low and Medium scenarios)

Focused on eight sites along the river


Chitembo
Kubango
Cuchi
Menongue
Cuito Cuanavale
Caiundo
Nankova
Savate
Nkurenkuru
Rundu
Dirico
Mohembo
Seronga
Gumare
Maun
Planalto grassland
Open Brachystegia savanna
Dense Brachystegia woodland
Burkea- Brachystegia woodland
Burkea woodland
Floodplain valley
Valley woodland and grassland
Fossil drainage valley
Permanent swamp
Seasonal swamp
Mopane woodland
Acacia woodland
3A
1
A
2A
4N
5N
6B
7B
8B

The Integrated Basin Flow Assessment process





All flows averaged over 5 days

End of Dry Season: Perennial : 2 to 6 x minimum dry-season Q (site specific)

Ephemeral : 0.4 x mean annual Q

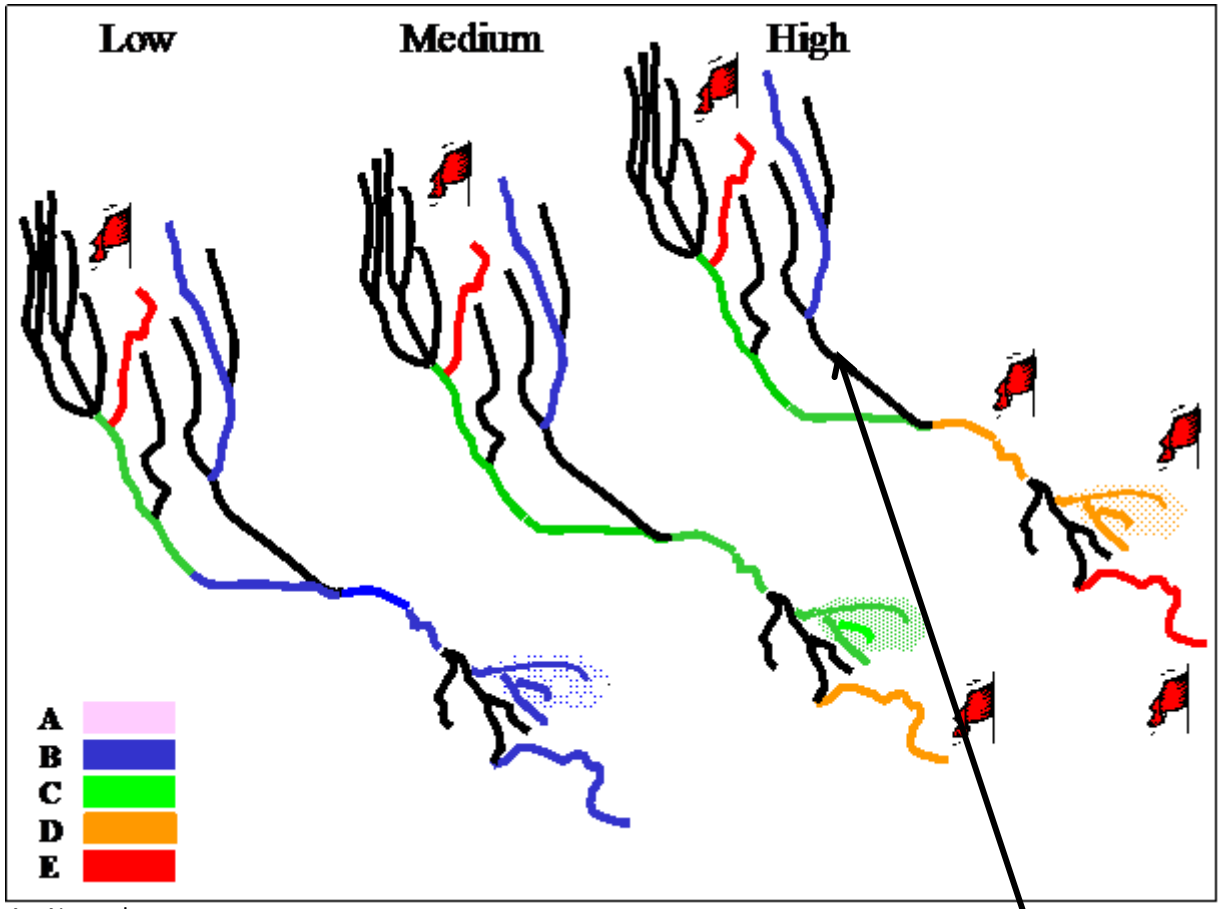
End of Transition 1: first upcrossing of mean annual Q

End of Flood Season: last downcrossing of mean annual Q

End of Transition 2: recession rate over 15 d < 1.0 to 1.2 $m^3/s/d$ (site specific)

OR downcrossing of Dry / T1 threshold

Response curves and flow stats brought together in the DSS: summary of predicted changes in ecosystem condition with flow change



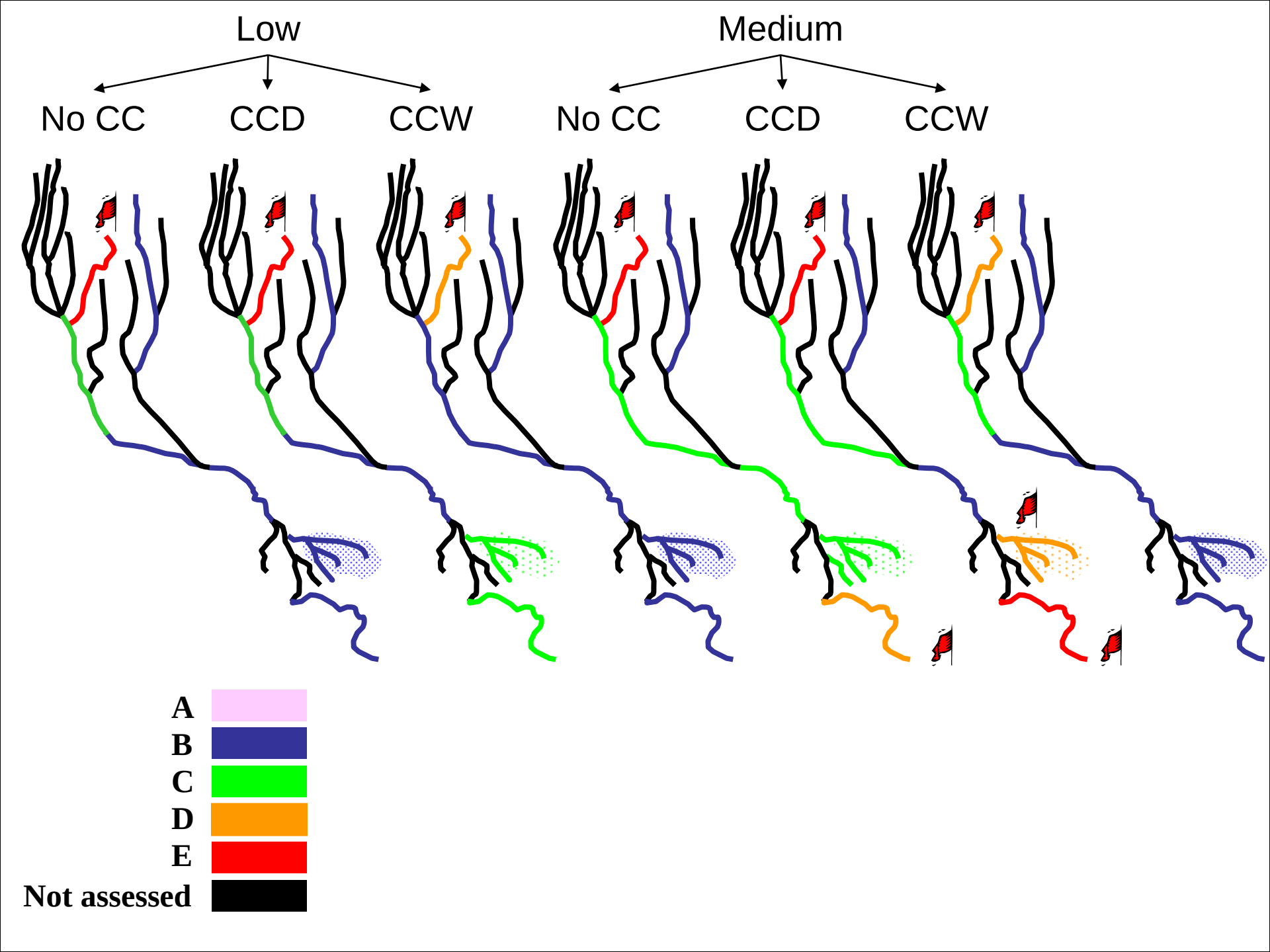
A Natural
B Largely natural
C Moderately modified
D Largely modified
E Critically modified

Cuito River is VERY important

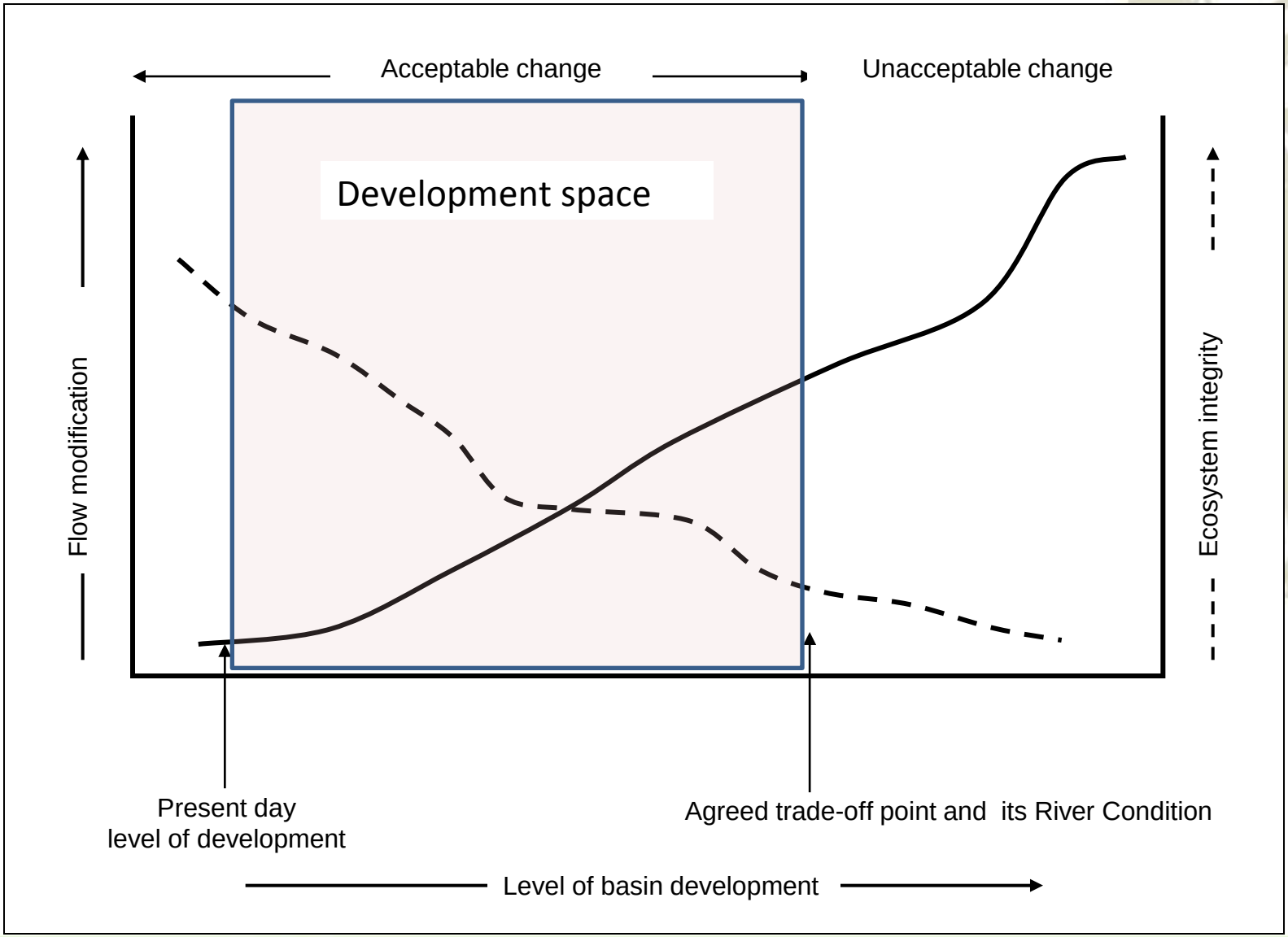
Progressive decline from Low to High scenarios

Impacts would become increasingly transboundary; felt most severely in lower basin

High scenario: large parts of the system would be unable to sustain present beneficial uses; significant terrestrialisation


Low
Medium
No CC
CCD
CCW
No CC
CCD
CCW
A
B
C
D
E
Not assessed

Using the findings to negotiate a basin vision



Defining and delivering on the OKACOM agenda

Full participatory process at National and basin Scales

Basins resources custodians also include:

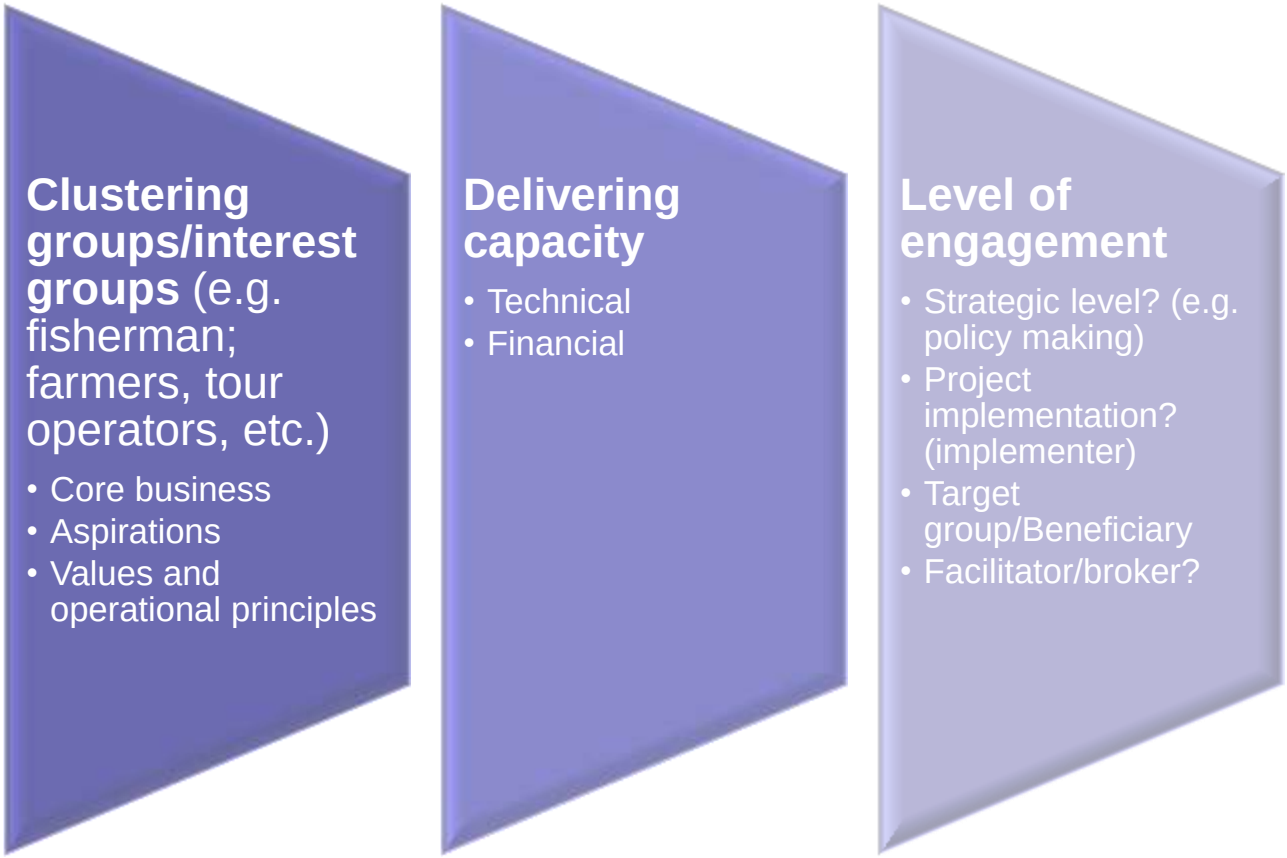
Local communities, reseachers, resource users, all ICPs

Challenges to Stakeholder Engagement

- **What institutional framework should be adopted for effective engagement?**
- **Who should be engaged?**
- **How the engagement process should take place?**
- **At what level and frequency?**
- **Who pays for the costs of the engagement process?**

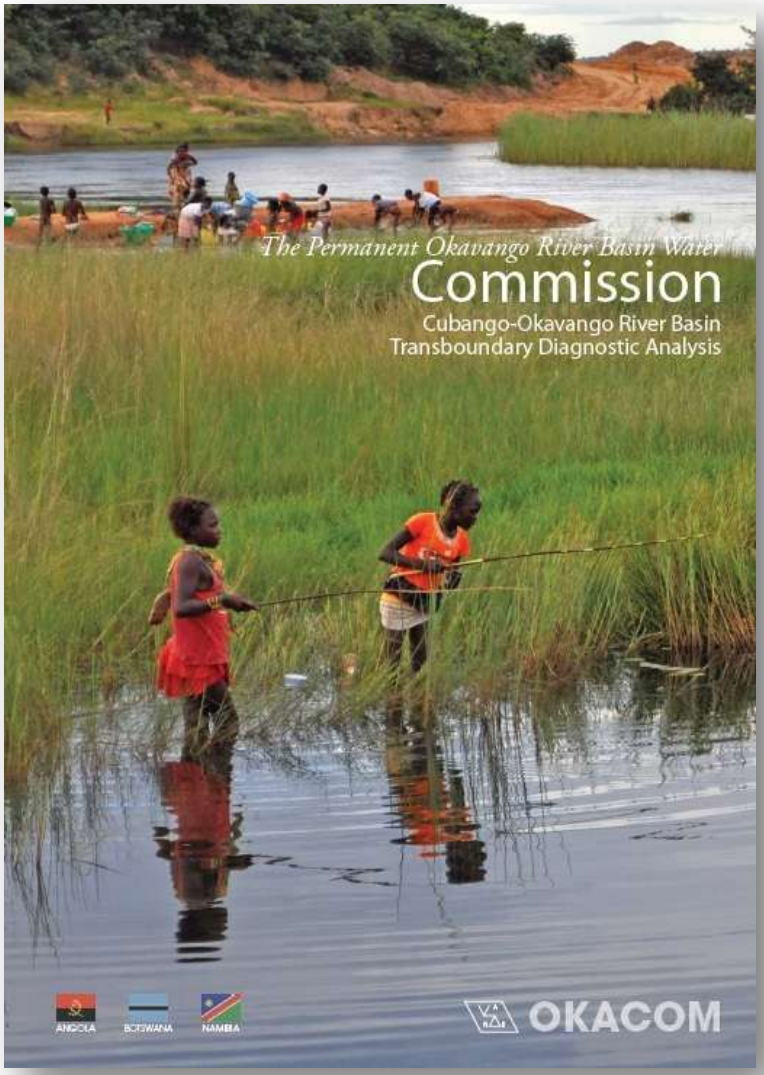
Profiling the Basin resources custodians

Who is who?



Key Outcomes

In all, more than 70 studies – specialist reports on status of basin condition



Baseline knowledge for SAP implementation - owned by the riparian states

Assisting OKACOM to become a knowledge base transboundary institution

Informing the SAP Thematic Areas

- Livelihoods – *prevailing levels of poverty currently observed in the basin*
- Water resources – *flow modification and changes in water quality critical to ecosystem integrity*
- Land Management – *land use practices that may negatively undermine ecosystem functions*
- Environment and Biodiversity – *need to optimize unique biodiversity richness of the ORB*

What the SAP DOES?

- A long-term integrated planning and management for the basin)
- Approved by OKACOM in May 2011
  - Ministerial endorsement by Botswana in April 2012
  - Ministerial Endorsement Namibia and Angola

Tri-country ministerial endorsement afterwards

Vision and future goals – first steps of the SAP

Launch an awareness campaign across the basin on the added value of lateral thinking regarding transboundary water governance as opposed to country or sector-specific planning

Vision and future goals – first steps of the SAP

Set a 20-year vision for the river system through basin-wide discussion and negotiation, using the scenarios and the concept of development space

Vision and future goals – first steps of the SAP

Benefit Sharing Models

- Is it about portioning equal parts of the cake to every body?
- Percentage of water volume to be allocated to each riparian state?

Sharing of beneficial uses

- Joint planning
- Selection of the best return on investment
- Joint investment initiative

Sustainable Funding Models

- Multi-sectoral investment opportunity analysis
- Payment for ecosystem services
- Okavango Biodiversity Conservation Trust Fund
- Transboundary business venture – private sector engagement

THANK YOU

www.okacom.org

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