

EFA Case Story: Pangani Basin, Tanzania

IW:LEARN LAC Workshop

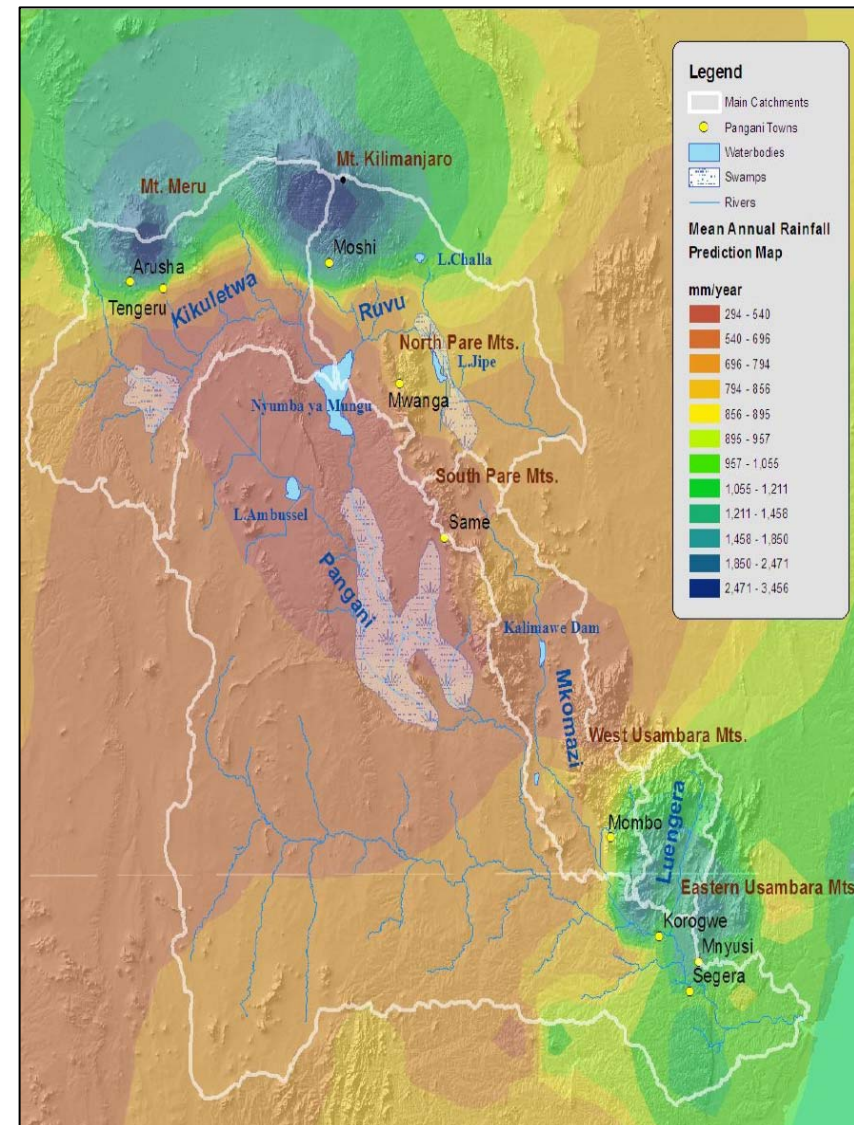
Foz do Iguaçu, Brasil

February 11-15, 2008



Situation Analysis - Location

- 43,650 km², ~3.4m people
- Rainfall: 2000mm – 500mm
- GDP per cap.: \$384-484 p.a.
- ~80% rely on agriculture
- 3 hydropower dams, 17 % supply
- coffee, flowers, fruit, vegetables for export
- urban water use

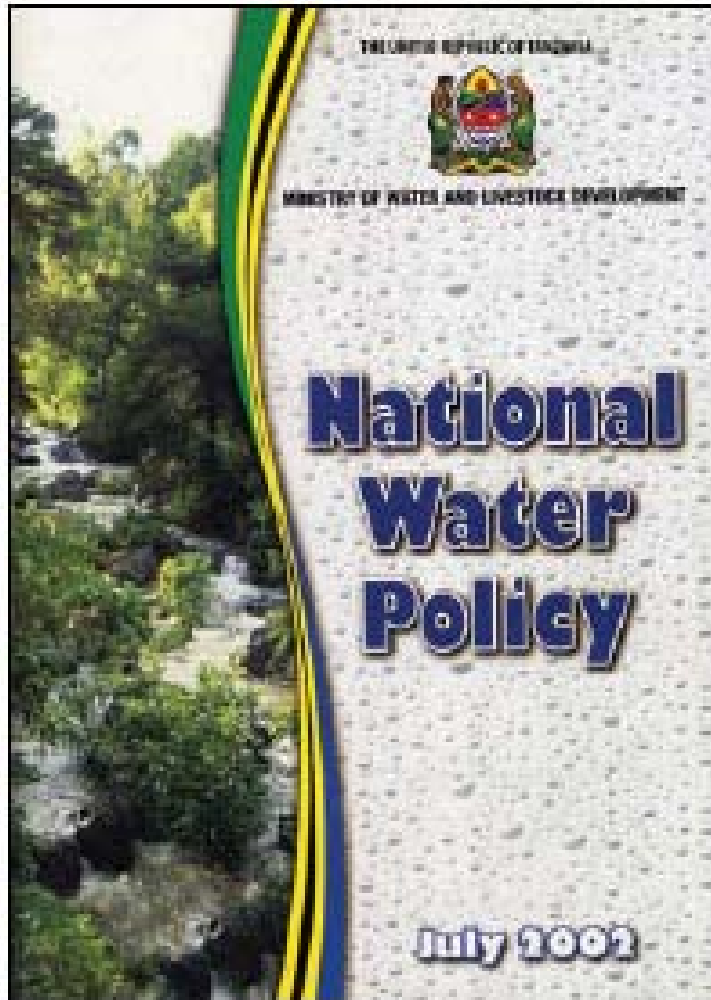


Situation Analysis – Water Scarcity

- Water demand to double from 1995-2015
 - small-scale irrigation
 - commercial farming
 - hydropower
- Downstream supply declining
 - population growth
 - land use intensification
 - climate change
- Perennial → seasonal flow
 - wetland dessication
- Community-level conflicts
- *livelihoods, export\$, GDP, ecosystems clash over water*



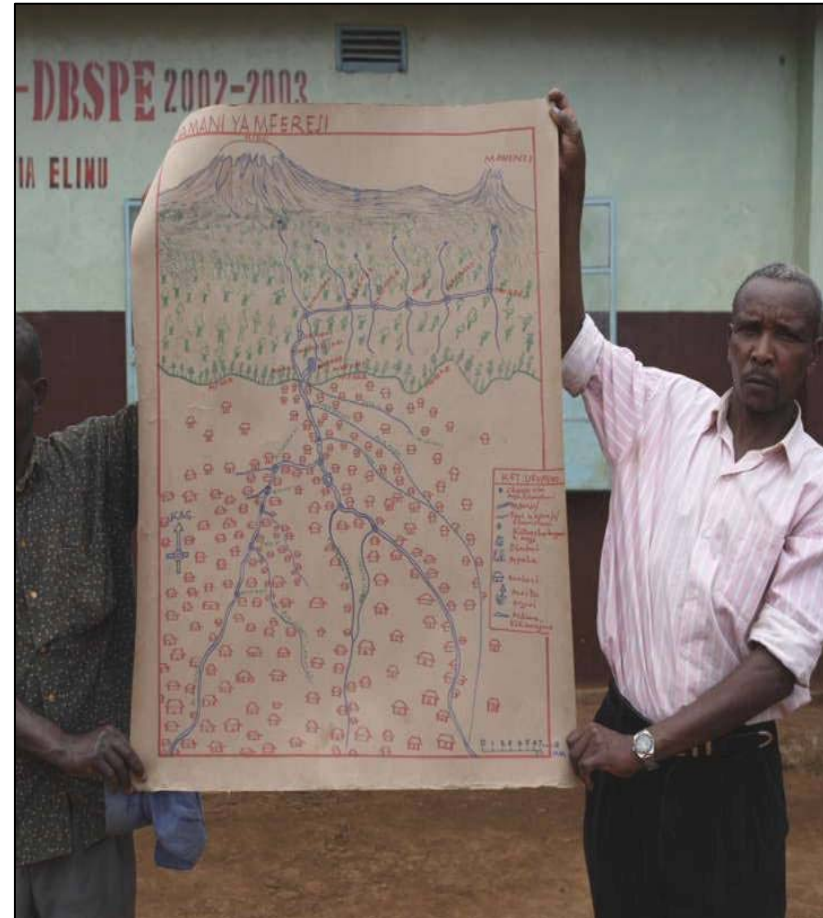
Situation Analysis – Policy Framework



- Tanzania National Water Policy, 2002:
 - water managed at the basin level
 - basic human needs top priority
 - next: ***water for ecosystems***
- Priority actions under National Water Sector Development Strategy 2005-2015:
 - mechanisms for water allocation
 - protection of water resources
 - planning and development
 - information, education & communication
- Multi-level institutional framework
- *Implementation?*

EFA Project

- Needs:
 - ↑ evidence-based decision making
 - ↑ 'water democracy'
- EF (or "IFM") identified as mechanism for integrating WRM and basin development
- But how?
 - multiple partners
 - long-term funding
 - mentors + capacity building
 - WANI 'demonstration'



Global learning guides the Pangani Project

- *Manage the whole flow regime*
- *Manage the whole ecosystem*
- *Include subsistence use*
- *Provide scenarios*
- *Include economics*
- *Show trade-offs*
- *Strong public participation*
- *Transparent equitable decisions*

1. Identify flow categories/seasons

2. Multidisciplinary team

3. Develop predictive tool

4. Include Stakeholders

5. Include Stakeholders

EFA Methodology

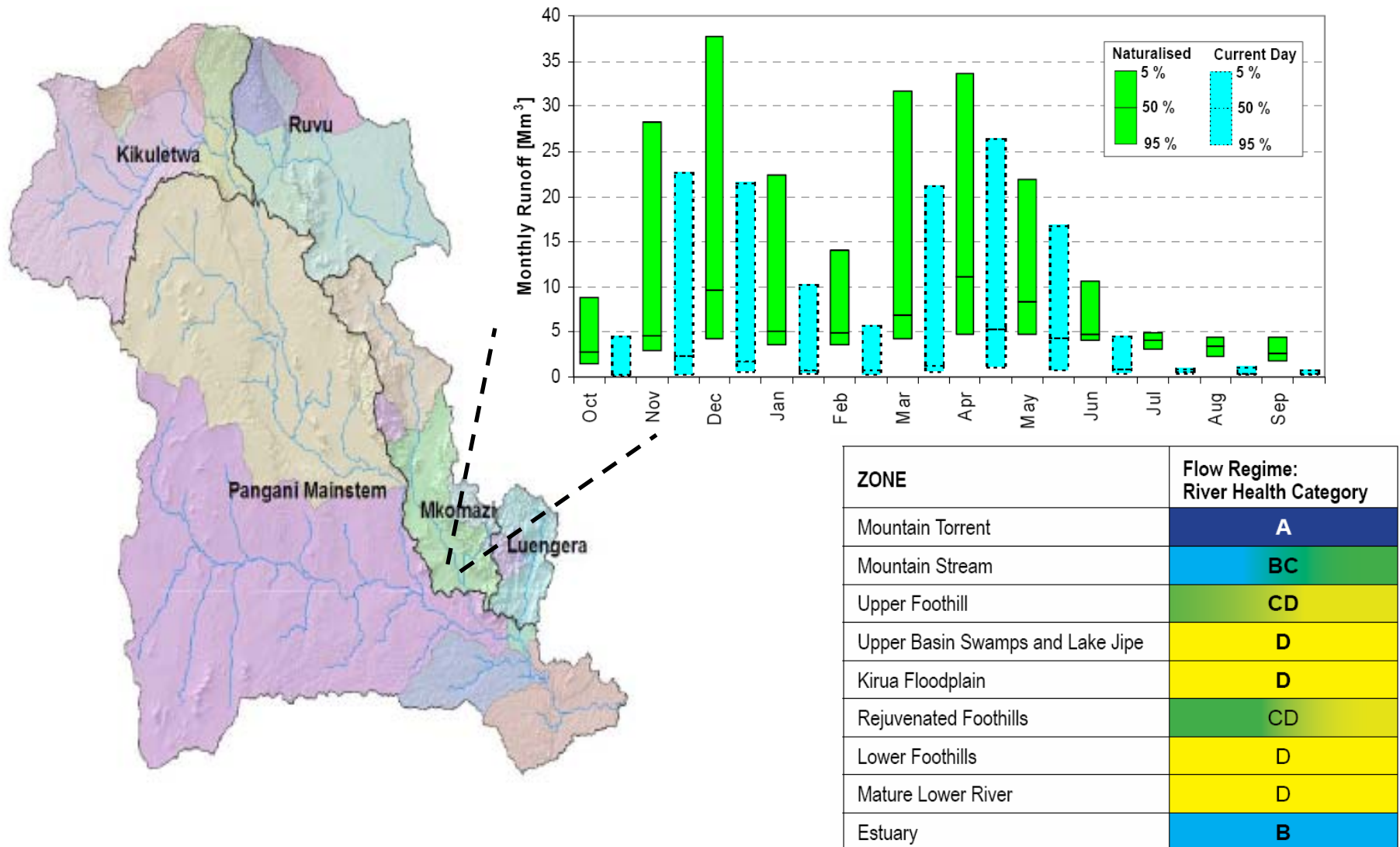
DRIFT modules:

1. Biophysical assessment
 - basin hydrology
 - river health
 - estuary health
2. Socio-economic assessment
 - livelihoods
 - macro-economic links
3. Scenario-building
 - alternate priorities
 - predictive tools
4. Basin development plan



River Health

1DB17 - Mkomazi at Gomba



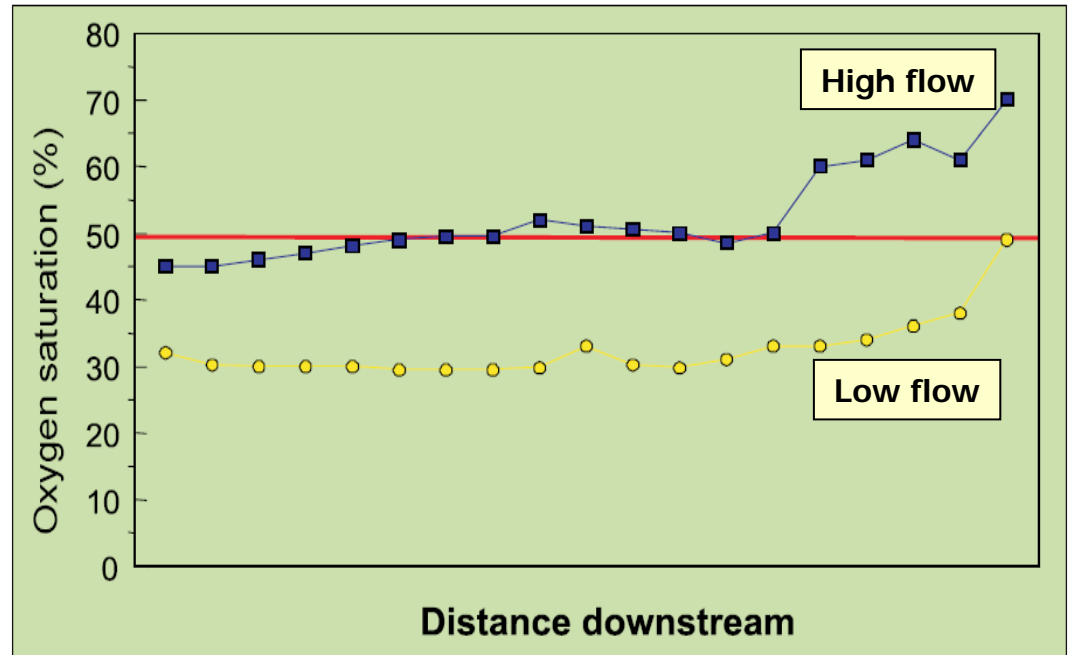
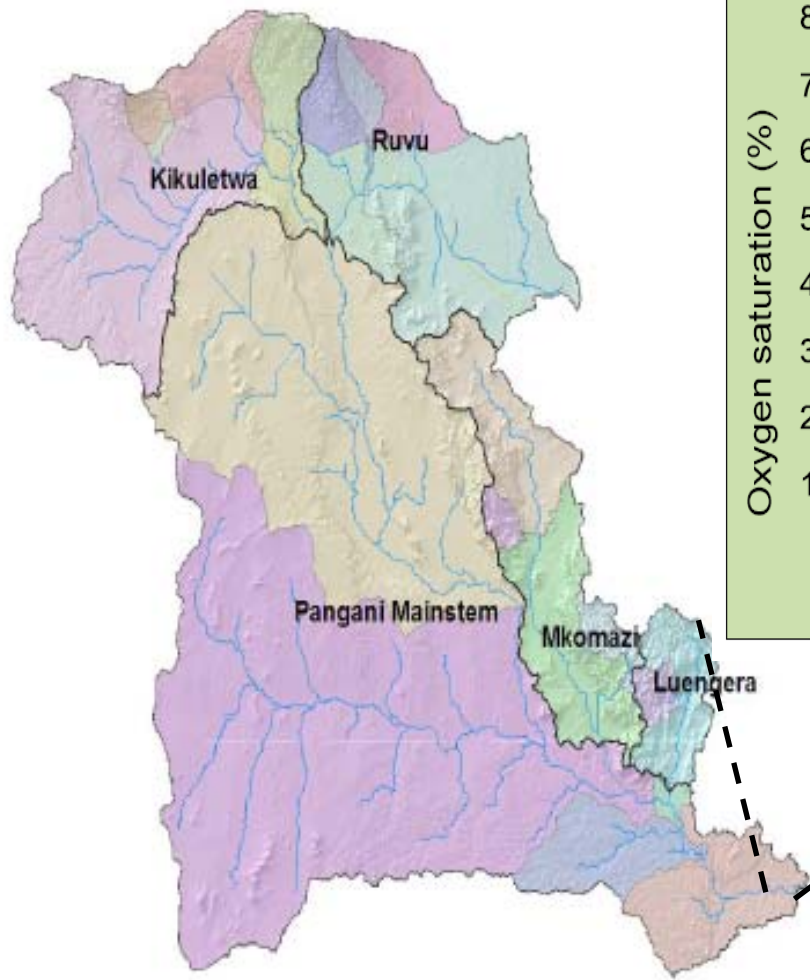
River Health



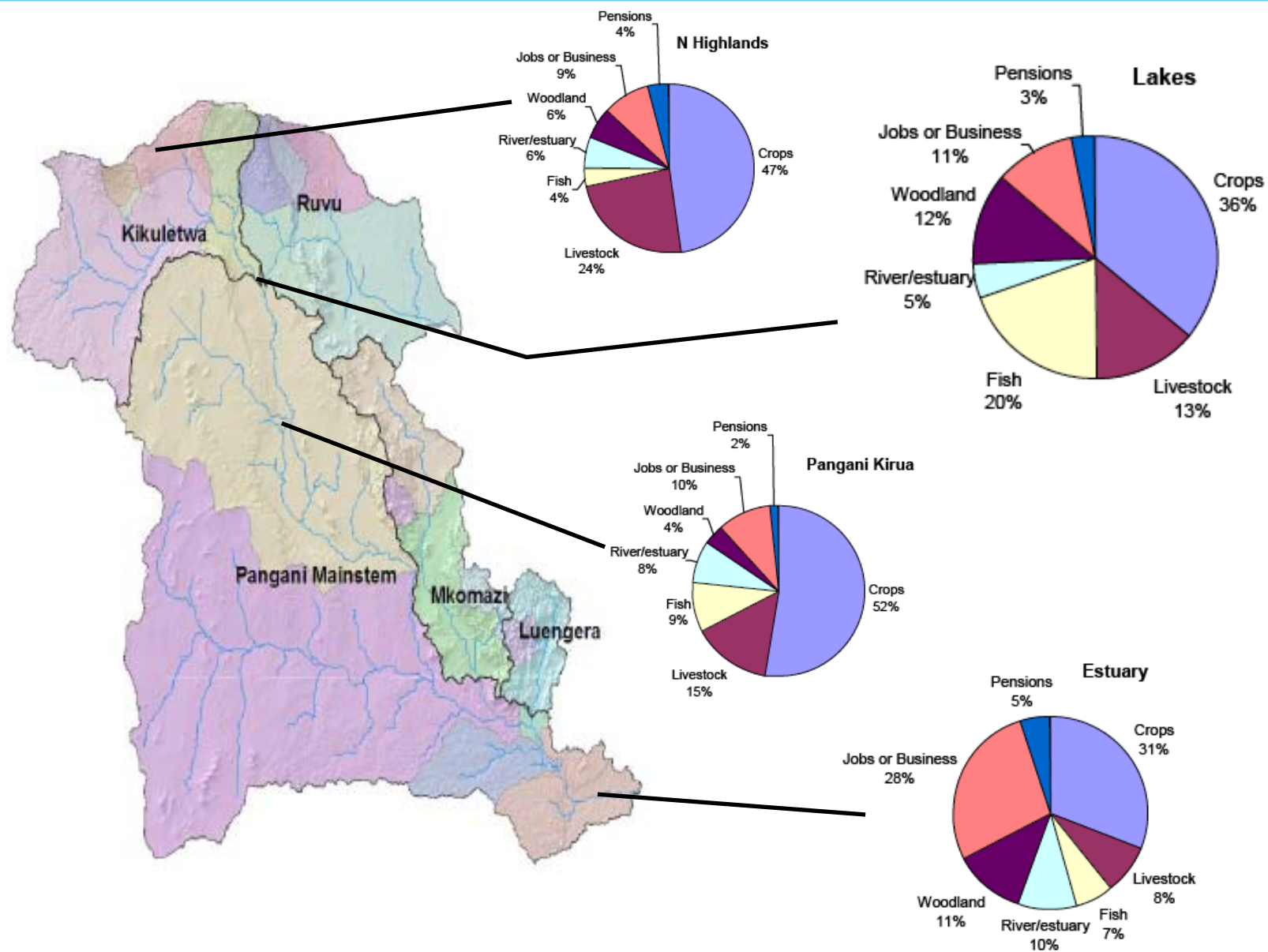
ZONE	Water Quality: River Health Category
ZONE	Invertebrates: River Health Category
Mountain Torrent	Estimated A/B
Mountain Stream	A/B
Upper foothill	B/C/D
Upper basin swamps and Lake Jipe	B
Kirua Floodplain	C
Rejuvenated foothills	D
Lower Foothills	B/C/D
matura Lower River	C
Estuary	D



Estuary Health

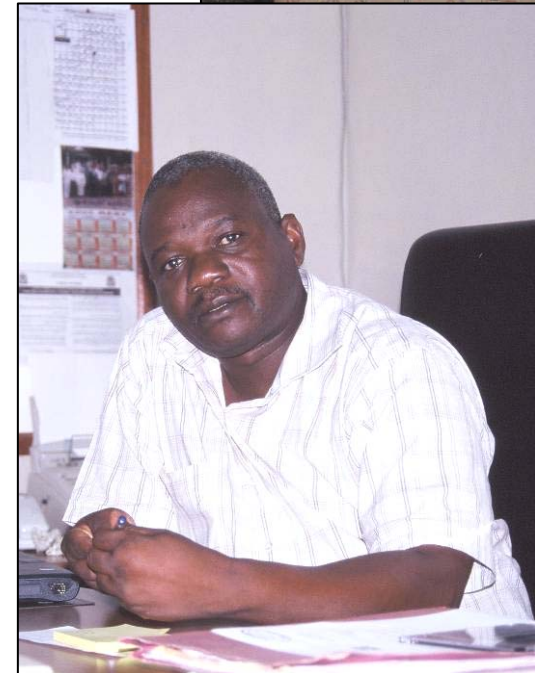
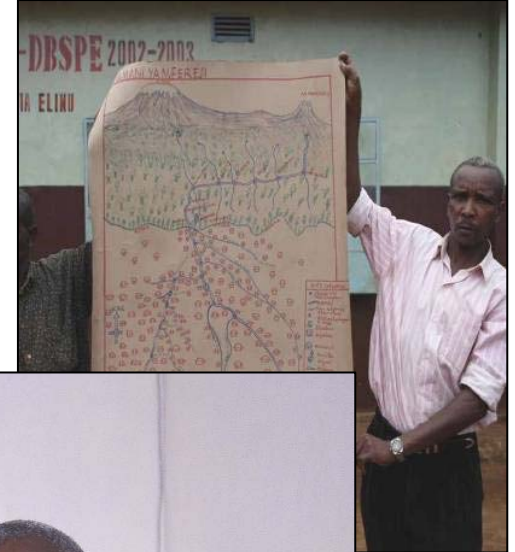


Socio-economic assessment

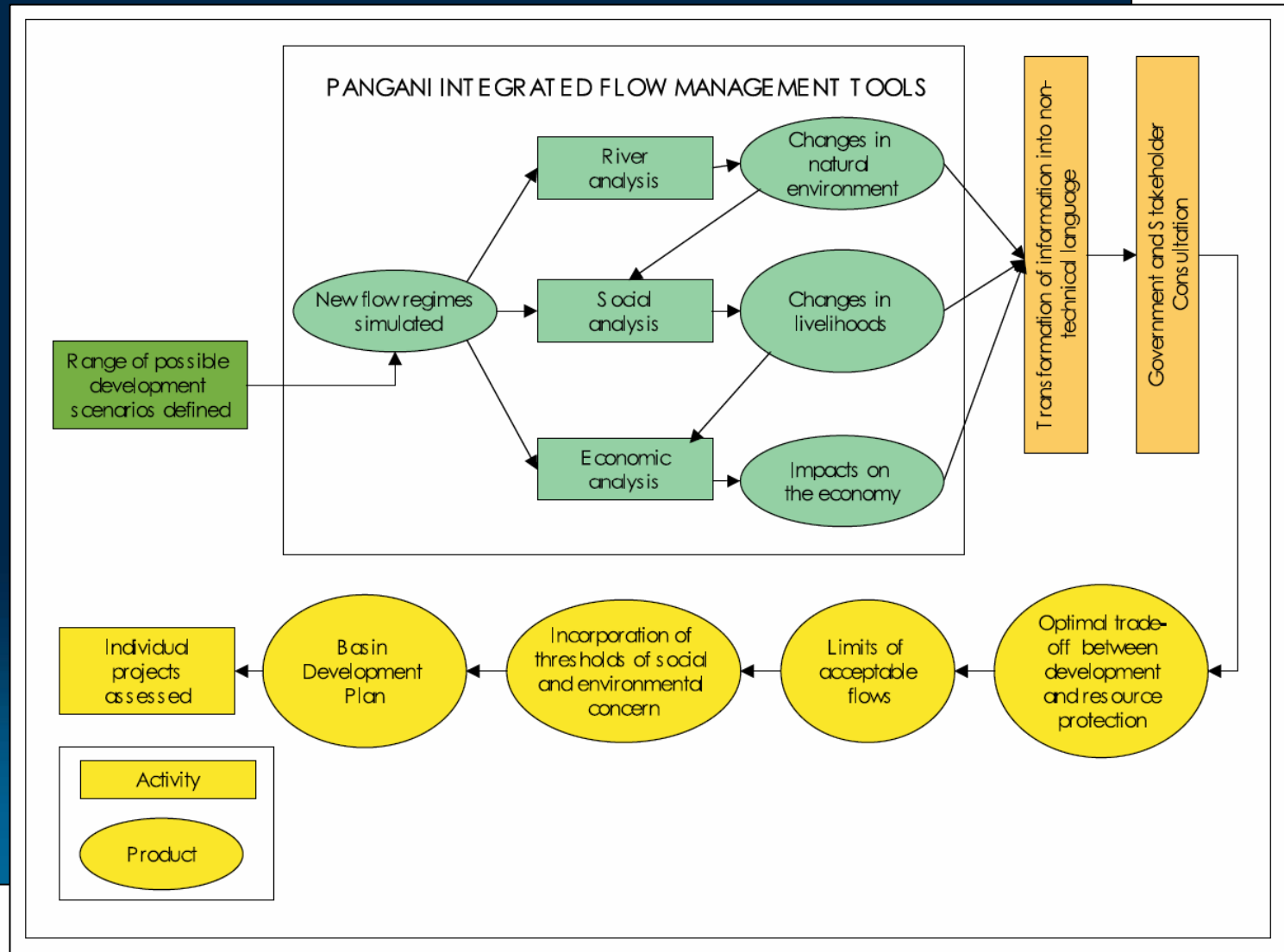


Governance Reform

- ... but, by itself, EFA achieves little
- 3 year process of negotiated steps & social learning
 - conflict resolution
 - capacity building
 - knowledge sharing
 - influencing strategies – connecting scales & sectors
- new governance arrangements
 - formation of WUAs
 - sub-catchment forum
 - [future] basin-wide forum
 - stakeholder submissions to PBWB
 - potential future election of the PBWB

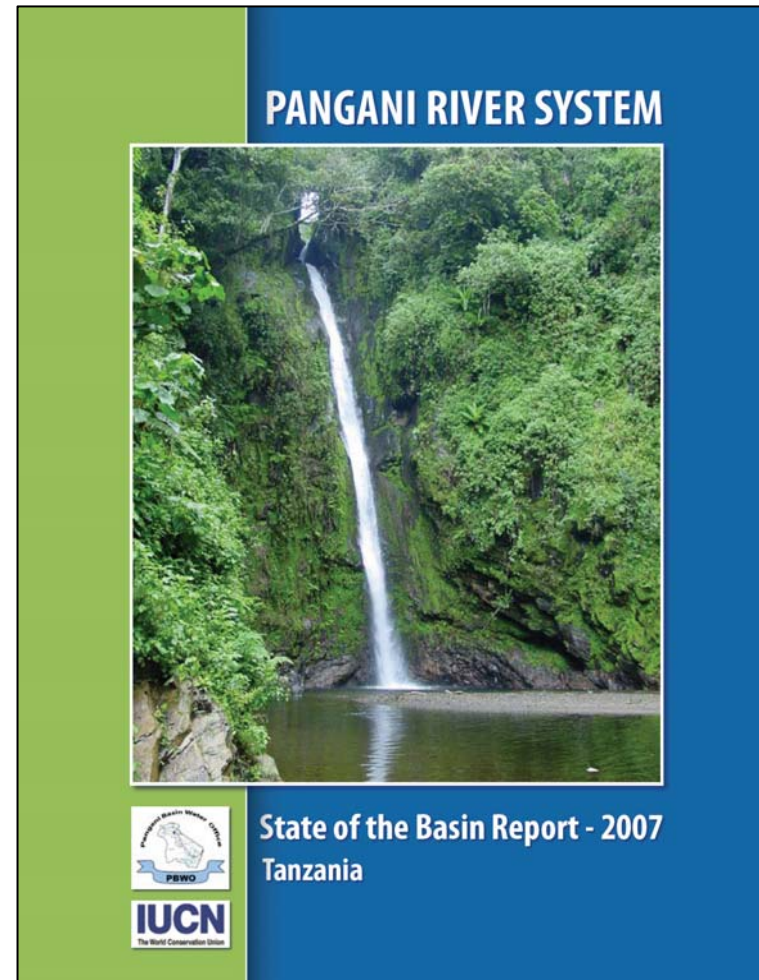


Basin Development Planning



Future Application & Replication

- Scenario workshops underway
- PBWB using data for allocation decisions
- Application of predictive tools by PBWB within 2 yrs
- Nationwide situation analysis in 2008
- Application to Wami-Ruvu basin
- National cadre of specialists
- Regional links to national water reforms



Acknowledgements

- Sylvand Kamugisha, IUCN
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Project



Partners

