Status of ES management in East and Southern Africa

Sara Namirembe

<table>
<thead>
<tr>
<th>Year</th>
<th>Forestry (million US$)</th>
<th>Wildlife (million US$)</th>
<th>Fisheries (million US$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1998</td>
<td>0.6</td>
<td>70</td>
<td>40</td>
</tr>
<tr>
<td>1999</td>
<td></td>
<td>65</td>
<td>26</td>
</tr>
<tr>
<td>2000</td>
<td>0.7</td>
<td>92</td>
<td>34</td>
</tr>
<tr>
<td>2001</td>
<td></td>
<td>164</td>
<td>130</td>
</tr>
<tr>
<td>2002</td>
<td>0.7</td>
<td>252</td>
<td>88</td>
</tr>
<tr>
<td>2003</td>
<td></td>
<td>181</td>
<td>220</td>
</tr>
<tr>
<td>2004</td>
<td>0.6</td>
<td>317</td>
<td>103</td>
</tr>
<tr>
<td>2005</td>
<td>2.5</td>
<td></td>
<td>143</td>
</tr>
</tbody>
</table>
### COST OF NATURAL RESOURCE MANAGEMENT

<table>
<thead>
<tr>
<th>Country</th>
<th>Local currency</th>
<th>USD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uganda:</td>
<td>UGX 1,000,000</td>
<td>423</td>
</tr>
<tr>
<td>Tanzania:</td>
<td>Tsh 600,000</td>
<td>397</td>
</tr>
<tr>
<td>Kenya:</td>
<td>KES 54,000</td>
<td>630</td>
</tr>
</tbody>
</table>

**Cost of natural resource management**

**Example:** costs of forest patrolling of one kilometer in one year:

- Assisted by community participation
- Insufficient logistical support e.g. mobility, communication equipment.
## STATUS OF NATURAL RESOURCES

### Forest cover (km²)

<table>
<thead>
<tr>
<th>Country</th>
<th>1992</th>
<th>2007</th>
<th>% Reduction per year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uganda</td>
<td>46,645</td>
<td>34,542</td>
<td>-1.73</td>
</tr>
<tr>
<td>Tanzania</td>
<td>402,041</td>
<td>344,326</td>
<td>-0.96</td>
</tr>
<tr>
<td>Kenya</td>
<td>36,828</td>
<td>34,940</td>
<td>-0.34</td>
</tr>
<tr>
<td>Malawi</td>
<td>37,973</td>
<td>33,360</td>
<td>-0.81</td>
</tr>
<tr>
<td>Mozambique</td>
<td>198,620</td>
<td>191,620</td>
<td>-0.23</td>
</tr>
<tr>
<td>South Africa</td>
<td>92,030</td>
<td>92,030</td>
<td>0.00</td>
</tr>
<tr>
<td>Zambia</td>
<td>477,896</td>
<td>415,624</td>
<td>-0.87</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>146,913</td>
<td>127,180</td>
<td>-0.90</td>
</tr>
</tbody>
</table>

Source: Trading economics 2010
http://www.tradingeconomics.com/
### Arable land (ha per capita)

<table>
<thead>
<tr>
<th>Country</th>
<th>1993</th>
<th>2007</th>
<th>% Reduction per year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uganda</td>
<td>0.26</td>
<td>0.18</td>
<td>-2.20</td>
</tr>
<tr>
<td>Tanzania</td>
<td>0.32</td>
<td>0.22</td>
<td>-2.23</td>
</tr>
<tr>
<td>Kenya</td>
<td>0.2</td>
<td>0.14</td>
<td>-2.14</td>
</tr>
<tr>
<td>Malawi</td>
<td>0.23</td>
<td>0.21</td>
<td>-0.62</td>
</tr>
<tr>
<td>Mozambique</td>
<td>0.24</td>
<td>0.2</td>
<td>-1.19</td>
</tr>
<tr>
<td>South Africa</td>
<td>0.38</td>
<td>0.3</td>
<td>-1.50</td>
</tr>
<tr>
<td>Zambia</td>
<td>0.61</td>
<td>0.43</td>
<td>-2.11</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>0.19</td>
<td>0.18</td>
<td>-0.38</td>
</tr>
</tbody>
</table>

Source: Trading economics 2010  
http://www.tradingeconomics.com/

### Fresh water availability  
(m³ per capita)

<table>
<thead>
<tr>
<th>Country</th>
<th>2002</th>
<th>2007</th>
<th>% Reduction per year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uganda</td>
<td>1,498</td>
<td>1,232</td>
<td>-3.55</td>
</tr>
<tr>
<td>Tanzania</td>
<td>2,336</td>
<td>1,977</td>
<td>-3.07</td>
</tr>
<tr>
<td>Kenya</td>
<td>625</td>
<td>534</td>
<td>-2.91</td>
</tr>
<tr>
<td>Malawi</td>
<td>1,286</td>
<td>1,087</td>
<td>-3.09</td>
</tr>
<tr>
<td>Mozambique</td>
<td>5,207</td>
<td>4,489</td>
<td>-2.76</td>
</tr>
<tr>
<td>South Africa</td>
<td>990</td>
<td>920</td>
<td>-1.41</td>
</tr>
<tr>
<td>Zambia</td>
<td>7,309</td>
<td>6,355</td>
<td>-2.61</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>1,767</td>
<td>1,512</td>
<td>-2.89</td>
</tr>
</tbody>
</table>

Source: Trading economics 2010  
http://www.tradingeconomics.com/
PARTICIPATORY APPROACHES TO NATURAL RESOURCE MANAGEMENT

Natural resource legislation (Tanzania, Uganda, Malawi and Kenya)

Increased recognition of co-ownership

- Fisheries: Beach management units
- Land: Local government land commissions
- Water: Water user groups or associations
- Forestry: collaborative/participatory forest management; community forests; private forests
1990s: Increased local stakeholder participation in NRM

**Decentralisation:**
- Tanzania: 22% of forest area; 12.8% (about 4.1 million ha) under PFM
- Uganda: Less than 0.1% forest area;
  - Vermin control;
  - Environment management
- Malawi: Fisheries resource management
- Kenya: zero decentralisation

**Challenges:**
- Limited financial and human capacity
- Limited willingness

Increased opportunity for private sector participation

- Sawlog production scheme
- Tendering of fee collection from fisheries
- Ecotourism – Budongo Kaniyo Pabidi
- Uganda: Bwindi Impenetrable trust fund
- Kenya: Kitengela Maasai land lease; Shompole community trust – 62000 ha
- Carbon, Water and Biodiversity PES markets being developed
Challenges

- Diminishing incentive as the cost burden is felt more than the benefits
- Politicisation of decentralisation – e.g., water management in Malawi
- New donor-driven structures
- Lack of human, institutional and financial capacity
- Strong control from center which supports most of LG budget (over 90% in Uganda)
- Private sector involvement still very limited – and sometimes confusing – concessions are sometimes not honoured
- Decentralisation leading to fragmentation – LGs from ministries; among LGs

PES IN NATURAL RESOURCE MANAGEMENT

Learning by doing
To be formalised in curricula and Policy
Market responses

- Increased private sector investment in natural resource management
- Social cooperate responsibility: mainly local
- Valuation of environmental services
- Buying of credits and off-sets: mainly international
- Linkages with banks and mobile money transfers
- Certification or eco-labeling of forest products and agricultural commodities

Actors

Sellers:
- Communities
- Governments
- Industry
- Large-scale investors

Intermediaries:
- Regulators
- Brokers
- Project developers e.g., NGOs
- Researchers

Buyers:
- Local and international companies
- Airlines and courier companies
- Coca cola – Uluguru
- Mining companies
- Water bottling companies
- Flower farms – irrigation
- Banks
- World Bank – Uganda Malawi, Zambia, Tanzania
- Governments: Norway, US
- Government tax: South Africa, Zambia
- CHOGM
- World cup
- Celebrities in music and film
**Forest carbon**

- **Ethiopia**
  - Natural regeneration project

- **Malawi**
  - Tree planting – 20,000 ha
  - Plan Vivo

- **Madagascar**
  - REDD in Makira forest – WCS

- **Mozambique**
  - Carbon trust – Envirotode
  - Zambezi Delta
  - Sofala community carbon project CCB
  - Green Resources aorestation – 126,000 ha

- **Kenya**
  - REDD Kasigau corridor, 8000 ha, CCB
  - Aorestation in Karura forest UNEP

- **Tanzania**
  - REDD by TFCG, WWF and JGI
  - TIST

- **Uganda**
  - FACE Foundation;
  - Nile Basin aorestation – World Bank
  - REDD by JGI and WCS
  - Ecotrust aorestation
  - Global Woods – Kikonda
  - TIST

- **Rwanda**
  - Aorestation

- **Zambia**
  - REDD

**Water**

- **Kenya**
  - Lake Naivasha, WWF-CARE program

- **Tanzania**
  - Uluguru Mountains EPWS – WWF-CARE-IIED project

- **South Africa**
  - Working for water through removal of invasive species
  - Drakenberg mountain
Biodiversity

- **Uganda:** Bwindi Impenetrable trust fund
- **Kenya:**
  - Kitengela Maasai land lease
  - Shompole community trust – 62000 ha

Other

**Uganda**
- Landfill project – World Bank $3000
- Urban stove improvement
- Hydro-dams

**Kenya**
- Ken Gen 9 CDM projects
  - Efficient cookstoves – cell phone-based micro-credit

**South Africa:** Landfill project

Challenges and risks

- Information – generation, access
- Complex
- Scale – aggregation
- Brokering gap
- Financing the initial investment in PES structuring
- Elite capture
- New laws and institutions – MRV, enforcement
- Fears of loss of sovereignty
- Determining boundaries
- Governance; funds and contract management
Thank you

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