Decentralizing forest management in Zambia: The challenge of capacity building

Victor Kawanga, International Fellow, World Forest Institute, Portland, OR 97221

Coordinator, Commonwealth Forestry Association (CFA), Zambian Branch

www.cfa-international.org/zambia/index.htm
The Republic of Zambia

- Sub-tropical Country
- Landlocked
- Surrounded by eight countries namely, Angola, Botswana, Democratic Republic of Congo, Malawi, Mozambique, Namibia, Tanzania and Zimbabwe.
Political History

- **Independence**: 24 October 1964 (from UK)
- **Government type**: Republic; democratic elections
- President elected by popular vote for a five-year term, re-elected once
- **Capital**: City of Lusaka
Economic fundamentals

- **Economic growth rate:** Modest about 5-6% per year, with single digit inflation.
- **Currency:** Kwacha, which is relatively stable
- **GDP (Purchasing power parity):** $16.1 billion (2007 est.)
- **GDP (Per Capita):** $1,400 (2007 est.)
- **GDP Composition by sector:**
  - **Agriculture:** 17.4%
    (Maize corn, wheat, sorghum, rice, peanuts, sunflower seed, vegetables, flowers, tobacco, cotton, sugarcane, cassava, tea, coffee; cattle, sheep, goats, pigs, poultry, milk, eggs, hides + Non wood forest products (NWFP) such as honey, bees wax, mushrooms etc.
  - **Industry:** 26.1%
  - **Services:** 56.5% (2007 est.)
- **Exports:** 64% is Copper/cobalt/Gemstones
- **Labour force:** 4.989 million (2007 est.)
Demographic data

- **Population**: 11.7 million (approximately)
- Population growth rate: 1.65% (2008 est.)
  - Age structure:
    - 0-14 years: 45.4%
    - 15-64 years: 52.3%
    - 65 years and over: 2.4% (2008 est.)
- Migration rate: -2.63 migrant(s)/1,000 population (2008 est.)
- HIV and AIDS Adult prevalence rate: 16.5% (920,000 people) (2003 est.)
- Literacy rate: 80.6%
  - Age 15 and over can read and write English
- Educational expenditure: 2% of GDP (2005)
Natural resources

- **Total Area:** 752,614 sq km (slightly bigger than Texas)
  - **Land:** 740,724 sq km
  - **Water:** 11,890 sq km
- Land use:
  - Arable land: 6.99%
  - Permanent crops: 0.04%
  - Other: 92.97% (2005)
- Copper, cobalt, zinc, lead, coal, emeralds, gold, silver, uranium, hydropower and recently discovered oil and natural gas
- Natural hazards: Periodic drought, tropical storms (November to April)
Current environment issues

- Air pollution and resulting acid rain in the mineral extraction and refining region
- Chemical runoff into watersheds
- Poaching seriously threatens rhinoceros, elephant, antelope, and large cat populations
- Deforestation
- Soil erosion
- Desertification
Tropical and sub-Tropical

Zambia is divided into three agro-ecological zones of Regions I, II and III.

Various characteristics for each of the regions are described in rates of annual precipitation.

<table>
<thead>
<tr>
<th>Region</th>
<th>Annual rainfall</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Less than 700mm</td>
</tr>
<tr>
<td>IIa</td>
<td>800mm to 1000mm</td>
</tr>
<tr>
<td>IIb</td>
<td>800mm to 1000mm</td>
</tr>
<tr>
<td>III</td>
<td>1000mm to 1500mm</td>
</tr>
<tr>
<td>Vegetation types</td>
<td>Area, 1000 ha</td>
</tr>
<tr>
<td>---------------------------</td>
<td>---------------</td>
</tr>
<tr>
<td><strong>1. Closed Forests</strong></td>
<td></td>
</tr>
<tr>
<td>Parinari</td>
<td>420</td>
</tr>
<tr>
<td>Marquesia</td>
<td>430</td>
</tr>
<tr>
<td>Lake Basin</td>
<td>15,560</td>
</tr>
<tr>
<td>Cryptoseplum</td>
<td>15,210</td>
</tr>
<tr>
<td>Baikiaea</td>
<td>6,830</td>
</tr>
<tr>
<td>Itigi</td>
<td>1,900</td>
</tr>
<tr>
<td>Montane</td>
<td>40</td>
</tr>
<tr>
<td>Swamp</td>
<td>1,530</td>
</tr>
<tr>
<td>Riparian</td>
<td>810</td>
</tr>
<tr>
<td><strong>2. Woodland (Open Forest)</strong></td>
<td></td>
</tr>
<tr>
<td>Miombo</td>
<td>311,460</td>
</tr>
<tr>
<td>Kalahari</td>
<td>85,460</td>
</tr>
<tr>
<td>Mopane</td>
<td>38,700</td>
</tr>
<tr>
<td>Munga</td>
<td>32,600</td>
</tr>
<tr>
<td>Termitaria</td>
<td>24,260</td>
</tr>
<tr>
<td><strong>3. Grassland</strong></td>
<td>206,350</td>
</tr>
<tr>
<td><strong>4. Open Water</strong></td>
<td>10,500</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>752,060</td>
</tr>
</tbody>
</table>

Source: GRZ, 1998
Vegetation Types

- Closed Forests: 6%
- Woodland (Open Forest): 66%
- Grassland: 27%
- Open Water: 1%

World Forest Institute  http://wfi.worldforestry.org
Biodiversity

• About 598 species of micro-organisms that have been identified to exist.
• 12 species of bacteria,
• 446 of fungi,
• 4 of protozoa and 35 of viruses (MTENR, 1999).
• Rainfall affects micro-organisms distribution e.g. Habitats with high rainfall have a higher variability of species and greater numbers of individuals per species.
Key Challenges

A. Outdated management plans
B. Narrow definition of forestry (e.g. timber and charcoal) leads to desertification
C. Poverty/instincts of survival driving deforestation
D. Need for educational outreach programmes
B: Desertification causes
Corporate encroachment into green areas for timber extraction

Figure 5 - Extent of Desertification in Zambia

- Provinces - High desertification effect
- Provinces - Less desertification effect
Endangered species
No action will mean:

- Clear cut, destruction of the forest cover and floor, (consider that hard woods take long to grow!) In the recent past, this area was a mixture of mature, young and old trees.
C: Poverty: “Why care since I need the money now?"

Because some people like this young person are dependent on these same resources using creativity and common sense.
D: Environmental awareness

- Primary Schools
  - What is so special about young people?
  - Why young people?
- Secondary Schools
- Universities and Colleges
- The public
In contrast:
- People like these are defacing our beautiful lands
That is why we use popular participation methods like these ones:
Right in the field using methods that are socially appetising and scientifically enriching
The end result is where we can all stand to look at an environmentally friendly future.
With hope of a rising sun in the horizons
Where humans will interact with the various constituents of nature
We all have a responsibility

To be guardians of these fragile resources
And aspire to leave this world
“A better place than we found it”!

Zikomo Kwambiri
(Thank you very much)