HUMAN WILDLIFE CONFLICT IN UGANDA: A note of Elephant and Crocodile cases

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www.ugandawildlife.org
Presentation Outline

• Introduction
• Current Situation
• Causes and
• Key issues / Mitigation measures
• challenges
• Future
Uganda At A Glance

- Land Locked and located in the Great Lakes Region of Africa
- Surface area: 241,038Km² (91,135 sq. miles)
- Population: 43 million
- Land – 84.6%
- Water – 15.4%
- Endowed with a diversity wildlife including:
  - 53.9% of world’s population of Mountain Gorilla
  - 11% of world’s recorded bird species
  - 7.8% of the Global Mammal diversity
  - 19% of Africa’s amphibian species
  - 14% of Africa’s reptiles
  - 34 Important Bird Areas (IBAs)

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Uganda: A biodiversity hot spot

www.uganda-wildlife.org
Uganda’s biodiversity cont.
The 1995 constitution provides for protection of Natural Resources including wildlife. Wildlife is one of the key natural resources in Uganda specifically protected under Uganda Wildlife Act Cap 200 of 2000.

The wildlife is managed within 10 National Parks, 12 wildlife reserves, 5 Community wildlife areas and various sanctuaries. An estimated 50% of Uganda’s Wildlife is outside the gazette Wildlife protected Area.
Management Wildlife in Uganda

The Wildlife Act cap 200 establishes UWA to manage all wildlife in the country within and outside protected Areas.

Gives UWA trusteeship of all Wildlife in Uganda on behalf of citizens.

50% of all Wildlife in Uganda is estimated to live outside protected Areas.

- UWA manages Wildlife PAs established under the law
- The wildlife is managed within 10 National Parks, 12 wildlife reserves, 5 Community wildlife areas and various sanctuaries.

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Current status

- HWC occurs throughout the country in varying intensities
- Nature of conflict include crop and property damage; human and livestock injury, human and livestock death
Districts with human-crocodile in Uganda
Status Crocodiles and elephants in Uganda  Trend of HWC cases in Uganda

- Average annual number of cases are 1605 (about 4 cases per day)
- Annual increase is about 22%
- Elephant raids comprise the highest reported HWC cases

- 1996-2009 300 croc attacks were noted 79.7% were deaths
- 2014-2017 120 crocs were translocated.

Increase in cases may be due to:
- Increased human wildlife interface
- Climate change
- Changing land use patterns
- Improved communication
Table 2: Annual reported elephant cases 2009 - 2017

<table>
<thead>
<tr>
<th>Year</th>
<th>QEPA</th>
<th>KNP</th>
<th>KVNP</th>
<th>BINP</th>
<th>Total</th>
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<td>97</td>
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<td>4</td>
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<td>67</td>
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<td>2011</td>
<td>12</td>
<td>143</td>
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<td>11</td>
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<td>2012</td>
<td>36</td>
<td>239</td>
<td>15</td>
<td>47</td>
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<td>2014</td>
<td>39</td>
<td>166</td>
<td>17</td>
<td>72</td>
<td>294</td>
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<tr>
<td>2015</td>
<td>106</td>
<td>285</td>
<td>-</td>
<td>56</td>
<td>447</td>
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<tr>
<td>2016</td>
<td>189</td>
<td>147</td>
<td>124</td>
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<td>2017</td>
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<td>282</td>
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<td>Total</td>
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<td>4,686</td>
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Population Estimates of selected large mammal species

Table 1: Population estimates of selected Medium to large mammals in Uganda

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<tr>
<td>Buffalo</td>
<td>60,000</td>
<td>25,000</td>
<td>18,000</td>
<td>17,800</td>
<td>30,308</td>
<td>21,565</td>
<td>36,953</td>
<td>37,054</td>
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<td>Burchell’s Zebra</td>
<td>10,000</td>
<td>5,500</td>
<td>3,200</td>
<td>2,800</td>
<td>6,062</td>
<td>11,814</td>
<td>11,888</td>
<td>11,897</td>
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<td>Elephant</td>
<td>30,000</td>
<td>2,000</td>
<td>1,900</td>
<td>2,400</td>
<td>4,322</td>
<td>4,393</td>
<td>5,739</td>
<td>5,808</td>
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<tr>
<td>Rothschild’s Giraffe</td>
<td>2,500</td>
<td>350</td>
<td>250</td>
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<td>Hartebeest</td>
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<td>2,600</td>
<td>3,400</td>
<td>4,439</td>
<td>4,099</td>
<td>9,667</td>
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<td>Hippopotamus</td>
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<td>13,000</td>
<td>4,500</td>
<td>5,300</td>
<td>7,542</td>
<td>6,580</td>
<td>5,838</td>
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<td>Impala</td>
<td>12,000</td>
<td>19,000</td>
<td>6,000</td>
<td>3,000</td>
<td>4,705</td>
<td>33,565</td>
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<td>Topi</td>
<td>15,000</td>
<td>6,000</td>
<td>600</td>
<td>450</td>
<td>1,669</td>
<td>845</td>
<td>2,222</td>
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<tr>
<td>Ugandan Kob</td>
<td>70,000</td>
<td>40,000</td>
<td>30,000</td>
<td>44,000</td>
<td>34,461</td>
<td>54,861</td>
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<td>Waterbuck</td>
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<td>8,000</td>
<td>3,500</td>
<td>6,000</td>
<td>6,493</td>
<td>12,925</td>
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<td>Common Eland</td>
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<td>450</td>
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<td>1996</td>
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<td>2002</td>
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<td></td>
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<tr>
<td>2009</td>
<td>1,221</td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>2013</td>
<td>497</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Trend of crocodile population in Uganda 1969 - 2013

[Graph showing the trend of crocodile population from 1969 to 2013]

[Photo of crocodiles and people in uniform]

[Website: www.ugandawhiteshark.org]
# Crocodile Population Estimates by locality

<table>
<thead>
<tr>
<th>River / Swamp</th>
<th>Habitat Location</th>
<th>Survey period</th>
<th>Estimated population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Victoria Nile</td>
<td>MFNP</td>
<td>April 2016</td>
<td>871</td>
</tr>
<tr>
<td>Victoria Nile</td>
<td>MFNP</td>
<td>April 2014</td>
<td>651</td>
</tr>
<tr>
<td>Lake Mburo</td>
<td>LMNP</td>
<td>January 2010</td>
<td>100</td>
</tr>
<tr>
<td>Lake George</td>
<td>QENP</td>
<td>January 2010</td>
<td>50</td>
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<td>Kazinga Channel</td>
<td>QENP</td>
<td>January 2010</td>
<td>100</td>
</tr>
<tr>
<td>Lake Edward</td>
<td>QENP</td>
<td>January 2010</td>
<td>200</td>
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<tr>
<td>Lake Victoria</td>
<td>Districts of Mayuge, Bugiri, Busia, Jinja and Mukono surveyed.</td>
<td>March-April 2009</td>
<td>250</td>
</tr>
</tbody>
</table>
Food habits of Crocodiles and elephants

**Crocodiles**
- Diet changes with age
- Diet ranges from insects, small aquatic invertebrates to large mammals
- Increase in human population has led crocodiles to change diet to livestock and humans
- Are opportunistic feeders and detect prey with their sensory pits along the side jaws
- Use surprise attacks to kill prey

**Elephants**
- Generalist browsers and grazers that spend 70 – 90% of their time foraging
- Consume plant species, including forbs, grasses, sedges, shrubs, and tree – these vary seasonally
- Eat bulbs, fruits, plant bases, and roots
Human activities that induce conflict

**Crocodile cases**
- Rudimentary fishing methods that make fishermen to stand in water
- Use of natural water bodies for domestic water, washing clothes and bathing
- Introduction of crocodile in dams with belief that the dams will not dry
- People taking no precautions

**Elephant cases**
- Habitat degradation
- Proximity to community land
- Settlement along former elephant corridors
- Increased elephant population in a shrinking habitat
- Scattered farms and settlements

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Elephant Habitation 1929, 1959, 2016

Habitat loss, corridors no more
MANAGING HWC in Uganda: cases of HCC and HEC
Managing the Human Crocodile conflict

- The use of Crocodile Exclusion Enclosures (CEE) at identified problem sites – 15 CEEs constructed
  - May involve packing of thorny branches in areas used for bathing, washing clothes and house utensils
  - Danger warning signs, showing safe places, should be shown on entry points
- Problem crocodile control
  - Translocation (in-situ to ex-situ) or “wild to wild”
  - Killing or shooting
- Awareness for Tourist and communities staying within crocodile habitats
- Construction of safe water points away from lakes and rivers
- Construction of dams for safe water crossing

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We understand the impact of this on the ecology of the crocodiles (feeding, reproduction, habitat use).
Number of crocodiles translocated per month 2014-2017
Seasonal variation of crocodiles captured and translocated

No captured and translocated

- 2 4 6 8 10 12 14 16
Jan Feb Mar Apr May Jun July Aug Sept Oct Nov Dec

2004 2005 2006 2007 2008 2009 2010

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Recommended management strategies for crocodiles

- Use of Problematic/Rogue crocodiles as breeding stock as an innovative means of control as opposed to elimination for managing human-crocodile conflicts
- Regular rapid population assessments for purposes of monitoring change in the species dynamics
- Engage communities to collect eggs as a source of income and mechanism for crocodile population monitoring.
- Previously translocated crocodiles should be carefully monitored to mitigate against possible attacks in their new environment.
- Construct crocodile improved cages
- Relocate captured individuals to licensed and certified crocodile farms
- Increasing sensitisation and awareness about the dangers, ranching opportunities and economic benefits.
Crocodile Exclusion Enclosures
Managing Human Elephant conflict

- establishment of barriers (trenches (255 km), beehives – 8,850, electric fence, board walk)
- supporting community livelihoods – chilli and other high value crops
- Building community capacity – 879 community scouts
- Awareness
- Scare shooting

UWA needs to know reasons for the increasing cases despite the mitigation measures
Trench construction around Karuma WR

- Community participation is preferred especially the Community Scouts who then get employment
Electric fence being constructed at QEPA to control elephants
Mitigation measures

Trench and bee hive line for Elephant control

Training farmers in use of chill in Elephant control
Challenges of Mitigation implementation

Fragile soils, vandalism, high maintenance costs all affect HWC effectiveness interventions.
Issues of research interest

• Impact of management regimes of crocodiles on the crocodile population in Uganda
• Impact of ecology of the receiving waters ie Victoria Nile
• Socio-economic conditions pertaining to communities who frequently get crocodile attacks
• The relationship between the fishery resource and incidences of human-crocodile conflict
• Socio-economic incentives for harmonious existence with crocodiles
issues of research interest

• The effectiveness of barriers in controlling HEC and factors that contribute to its access
• Impact of establishing barriers of the distribution and foraging behavior of elephants
• Feasible alternative livelihoods to promote among communities in areas of high HEC
Conclusion and Future

- Human Wildlife Conflict is one of the key challenges in Uganda
  - It has political and social economic costs to individuals and the nation
  - It requires a multidisciplinary approaches
  - It is currently increasing due to many factors including human population increase
  - Innovative approaches are encouraged including electric fencing and other collaborative arrangements
  - HWC information, research and monitoring and increased stake holder participation, coordination and engagement are all important to reduce HWC in Uganda
THANK YOU

THE END

THANK YOU