Southern African Wildlife Management Association (SAWMA)

Conservation in Africa in the face of unprecedented global change
My perspective on the future

13 September 2017 John Hanks
Kafue National Park

Covers an area of 22,480 km² comprising about 36% of the country’s national park estate.

Nine adjacent GMAs cover 45,406 km².
Components of global change impacting on conservation in Africa

1. Human population growth and its environmental and social impacts, linked to increasing poverty, declining food security, and unemployment.
2. Loss of biodiversity (the 6th mass extinction).
3. Accelerating land transformation (soil erosion, degradation of catchments, desertification, deforestation).
4. Unprecedented threats to the security of Protected Areas.
5. Impact of Invasive Alien Species.
6. Lack of awareness of the vital importance of developing a sustainable wildlife economy.
1. Human population growth and its environmental and social impacts, linked to increasing poverty, declining food security, and unemployment.

<table>
<thead>
<tr>
<th>REGION</th>
<th>2017</th>
<th>2050</th>
<th>2100</th>
</tr>
</thead>
<tbody>
<tr>
<td>World</td>
<td>7,550</td>
<td>8,551</td>
<td>11,184</td>
</tr>
<tr>
<td>Asia</td>
<td>4,504</td>
<td>5,257</td>
<td>4,780</td>
</tr>
<tr>
<td>Europe</td>
<td>742</td>
<td>716</td>
<td>653</td>
</tr>
<tr>
<td>Latin America</td>
<td>646</td>
<td>780</td>
<td>712</td>
</tr>
<tr>
<td>Oceania</td>
<td>41</td>
<td>57</td>
<td>72</td>
</tr>
<tr>
<td>Northern America</td>
<td>361</td>
<td>435</td>
<td>499</td>
</tr>
<tr>
<td>AFRICA</td>
<td>1,256</td>
<td>2,528</td>
<td>4,468</td>
</tr>
</tbody>
</table>
More than half of the expected global population growth between now and 2100 will occur in Africa.

Populations of Tanzania and Zambia are projected to be at least five times as large in 2100 as they are today.

The population of Nigeria is projected to surpass that of the United States shortly before 2050, at which point it would become the third largest country in the world.

The concentration of population growth in the poorest countries will make it harder for those governments to eradicate poverty, and allocate funds for environmental conservation activities.
Further consequences of high rates of population growth

- Nearly 80% of African people live on less than US$2 per day.
- Millions are forced to survive on subsistence agriculture.
- The number of undernourished people in Africa continues to increase, with an estimated 217.8 million in 2014-16.
“Family planning has been proven to be a “win-win” for human and environmental health. “

“We want to encourage the conservation and climate change sectors to understand that supporting reproductive health and rights is not only the right thing to do, but it will also strengthen conservation programmes.”

Mission: To promote biodiversity conservation by enabling people, gorillas and livestock to coexist through improving their health and livelihoods in and around Africa’s protected areas.

PSN facilitated and brokered links to organizations that enabled EWT to integrate family planning interventions into programs where communities expressed a need for reproductive health.
2. Loss of biodiversity (the sixth mass extinction)

Ceballos, G. et al. (2017). Biological annihilation via the ongoing sixth mass extinction signalled by vertebrate population losses and declines. http://www.pnas.org/content/early/2017/07/05/1704949114.full

Dwindling population sizes and range shrinkages amount to a massive anthropogenic erosion of biodiversity and of the ecosystem services essential to civilization, which will have negative cascading consequences on ecosystem functioning and services vital to sustaining civilization.
Serious decline of pollinators

There are several hundred thousand species of pollinators and tracking all of them is not possible. Recent surveys have documented disturbing population declines and even local extinctions of select pollinator species.

http://ento.psu.edu/pollinators/resources-and-outreach/globally-pollinators-are-in-decline

Worldwide, bees pollinate human food valued at more than $350 billion.

3. Land transformation
Generating 3 cm of top soil takes 1,000 years, and if current rates of degradation continue all of the world's top soil could be gone within 60 years.

www.scientificamerican.com/article/only-60-years-of-farming-left-if-soil-degradation-continues/
Desertification and deforestation
70% Zambian households rely on charcoal for heating and cooking, with 85% of households in Lusaka depending on charcoal.

4. Threats to designated protected areas

- Increasing isolation of each PA, exacerbated by accelerating land transformation in surrounding areas and an increase in people living in poverty and facing food insecurity.

- These should be the crown jewels of the global commitment to biodiversity conservation – vital areas where natural evolutionary and ecological processes can operate with minimal human disturbance.

At least 400,000 head of cattle invaded the Tsavo West National Park in September 2015, depriving wildlife of pasture and water.

http://allafrica.com/stories/201509280104.html
Escalating Human / Wildlife Conflict throughout Africa. HWC mitigating strategies of great importance. Opportunities here for new lines for research.
Issues involving PAs requiring attention

- Major shortfalls in financial support for virtually every PA in Africa, impacting on number and quality of staff, development and maintenance (roads, buildings, vehicles, fences), and research and monitoring.

- Throughout the continent, the majority of conservation staff do not receive adequate remuneration for the life-threatening situations they face in combatting wildlife crime.

- Continued alienation of adjacent rural communities by punitive measures to protect wildlife, which in too many cases make little or no attempt to help these people develop alternative sustainable livelihoods.

- Give more recognition and support to the major contributions that are being made to biodiversity conservation in some of the areas outside of the PAs, such as the private land owners (particularly in South Africa), and the communal areas (as demonstrated with the Conservancies in Namibia).
Importance of community-led solutions


‘We must act now to ensure that our wild places are protected for all generations to come.

But, I see no place for protected areas unless they take the needs of local communities into consideration.’

5. Invasive alien species


- Invasive alien species (IAS) threaten human livelihoods and biodiversity globally.
- One-sixth of the global land surface is highly vulnerable to invasion, including substantial areas in developing economies and biodiversity hotspots.
- Most countries have limited capacity to act against invasions.
- Given the enormous number of known IAS and the unknown number of IAS yet to emerge, rapid evaluation schemes to prioritize responses are crucial.

South Africa is a water-stressed country (we are the 30th driest country in the world). Working for Water staff estimate that invading plants nationwide are currently consuming 3.3 billion cubic meters of water per year.
Increased fire risks

Invasive aliens present significant hot fire hazards, threatening residential areas, arable land, livestock and protected areas.
Wildlife trade is any sale or exchange of wild animal and plant resources by people.

The illegal trade in wildlife and wildlife products is soaring, and is today a black market worth an estimated $10 billion a year.

Wildlife is also traded legally for food, fuel, building materials, clothing, sport, healthcare, religion and collections.

http://www.traffic.org/trade/

The use of wildlife is vital to millions of people around the world.

6. Vital importance of developing a sustainable wildlife economy
The well-meaning campaigns to eliminate consumptive use of wildlife ignore, (i) the realities of poverty in Africa, (ii) the extent and impact of human-wildlife conflict, (iii) the underfunding of protected areas.

Unless local people and their national governments want to conserve wildlife, it will not survive.

Initiatives to promote the sustainable use of wildlife include Collaborative Partnership on Sustainable Wildlife Management (CPW), a voluntary partnership of 14 international organizations.


See also http://www.n-c-e.org/sites/default/files/2017-04/Hunting_tourism_key_partners_April-2017.pdf

We must promote a much wider recognition and acceptance that African wildlife is a major asset and engine for sustainable economic growth with many ecological advantages.
Ivory poaching is one of the most immediate threats to Africa’s elephants, but equally serious is the increasing competition elephants face from human encroachment.

With rising human numbers, many large terrestrial mammals will find it difficult to survive. The economic opportunity costs of the space they require to survive may be too high.
Additional key areas for focussed research and development

1. Landscape scale planning and the importance of connectivity between protected areas.

The well-established theory of island biogeography indicates that when an area loses a large proportion of its original habitat and especially when the remaining habitat is fragmented, it will eventually lose some of its species.

It is thus clearly in the interest of species conservation to join together fragmented habitat patches into a continuum, and to manage large natural systems at the water catchment level rather than fragmented components created by artificial political boundaries.
Major river catchments in Southern Africa fragmented by International borders.
2. Support for conservation triage

3. Lobbying and advocacy

Existing mitigating strategies to halt Africa’s loss of habitats, species and ecosystems are urgently in need of some radical interventions and new approaches.

Ellison, A.M. (2016) It’s time to get real about conservation. Nature 538, 141. doi:10.1038/538141a

“More scientists must get actively involved in the political process. Calling, e-mailing and writing to political leaders is a small but necessary first step. Volunteering for local, regional, national or international groups directly involved in conservation decisions is a bigger commitment.”

“But if not us, who? If not now, when?”