



**Factory Farming
The Paradox between Increasing
Productivity and Animal Welfare; which
Way Forward?**

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**Theme: Animal Welfare, Wildlife and Environmental
Conservation for Sustainable Development in Africa:
Enhancing Nature-Based Solutions**



Preamble

Why is it a paradox?

- Generally, increased productivity based on technological innovations
- Technological innovations often deviate from nature
- Nature resists the deviation from natural phenomena
- Nature is Omnipotent [all powerful] and Omnificent [unlimited creative power]
- The resistance by Nature often causes suffering [e.g. AW violated, leading to a cascade effect that causes negative impacts on HW]
- So the paradox: how do we enhance productivity without attracting the wrath of Nature
- **FACT: To safely enhance productivity, we must use Nature-Based Approaches**

Preamble

“Large-scale deforestation, habitat degradation & fragmentation, agriculture intensification, **our food systems, trade in animal species and plants**, and anthropogenic climate change are drivers of **biodiversity loss & new diseases**” - Elizabeth Mrema, ag Executive Secretary General of the UN Convention on Biodiversity, April, 2020

In recognition of the current Covid-19 Pandemic, I propose our rallying call for this conference to be:

“Say no to another Covid 19 Experience!”

WORLD
ANIMAL
PROTECTION





Preamble

“We know the overwhelming **cost - benefit of nature-based solutions.**

Governments need to allocate public funds to fish stock management and

ecosystem restoration,

instead of fueling overcapacity,

overexploitation,

inequalities, human and

wildlife trafficking” -

Mukhisa Kituyi [UNCTAD

SG] & Dona Bertarelli

[UNCTAD Special Adviser

for the Blue Economy

What happens in the
Oceans affects what
happens on land –
Climate Change &
disrupted ecosystems

mm

The Role of Animal Welfare in Sustainable Ecosystems



- Ecosystems = **Environment** + **diverse** organisms[**biological beings**] in it
- The **functional diversity** of the biological beings in the ecosystem designed to contribute to the **welfare** of other organisms within the ecosystem, including enrichment of the environment [e.g. soil fertility, water retention, etc.]
- **Sentience** enables animals to make adjustments within the ecosystem to secure their survival - **Pain** - threat to survival - evade it; **Pleasure** - no threat - **exploit opportunity [enhance their survival]** - hence functionality within the ecosystem
- Animals in good welfare able to play their role efficiently in their contribution to the welfare of the entire ecosystem [e.g. productivity – i.e. meat, eggs, milk, manure, etc. and ultimately to be a carbon sink]

A threat to the welfare of animals is a threat to the welfare of an ecosystem - This means a threat to humanity!



Presentation outline

- Factory Farming versus sustainable ecosystems, public health, & sustainable development in Africa
- Animal Welfare as a Nature based solution
- The importance of Animal Welfare Strategy for Africa
- The importance of the global ban on wildlife trade
- The importance of the Regional Economic Communities and African Union Member States to support the ban
- The proposed way forward
Evidence - **Separating fact from fiction, science from speculation, and rational choices from emotional ones**



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—
Animals are Sentient – they can experience physical and emotional sensations – suffering or pleasure

Suffering pigs!

Farming systems that neglect sentience are unacceptable from a moral and technical point of view - they are hazardous to Public Health; and they are costly to the environment, and to the economics of production .. mm



Factory Livestock Farms

- **Stress:** Increase susceptibility to pathogens; need for prophylactic use of **drugs** [**Residues & AMR**]
- **Nitrates** - soil & water pollution
- **Heavy duty feeds:** vegetation loss; competition for grain with human – **Global inequality**
- **Losses:** downgraded products, mortality, rejection of products
- **Intervention:** Natural solutions - space, enrichment, smaller scale production based on rationalized utilization of natural resources



Suffering chicken!



Suffering pigs!

“Factory farming may increase productivity, but at an unacceptably high cost to the welfare of society, animals and all other creatures“ mm



Factory Farming is Grievously Disrupting Ecosystems and hence causing a “Bleak Future”

Farming depends on freely available environmental goods and services – water, soil, air, wildlife, microbes, ambience

- **Agricultural pollution, land clearances to make way for feeds and factory farms, and biodiversity loss driven climate change are severely damaging these vital services**

FAO 2015

- Research on 40 countries – focusing on 4 commodity crops and 4 livestock commodities
- **Findings – a Bleak future and COSTLY-** industrialized farming costs the environment the equivalent of about **US\$3tn/yr**

Cost Drivers

Livestock farming: \$1.81tn/yr

- Beef in Brazil **\$596m**
- Pork in China **\$327m**

**Crop production: -\$1.15
tn/yr:**

- Maize in **China \$130m** & in **USA \$90m**
- Wheat in **Germany \$62m**

Total Cost US\$ 3 trillion/year

Aid to Africa about
US\$134bn/yr, but about
US\$218bn/yr extracted as
debt repayment & includes
losses through illegal W trade



Agroforestry? 'As swatches of exotic trees invade native woodlands, grasslands, farmlands & pastures, the results, in country after country, have been impoverishment, environmental degradation, and rural strife.'- R Carrere & L Lohmann in *"Pulping the South"*

"Nations around the globe have pledged to increase their forest cover by planting millions of trees. But new research shows much of this growth would be in monoculture plantations that would be quickly cut down and do little to tackle climate change or preserve biodiversity" - Fred Pearce 2019

Outcomes:

- Indigenous animal populations disrupted [fatal suffering]
- Indigenous agriculture destabilized [natural cycles disrupted]
- Indigenous communities' livelihoods disrupted...mm

Nature created biodiversity, For the enrichment of life; Man made monoculture stands, Which slowly but surely suffocate life out of this earth... mm





Nature based Solutions for Economic Prosperity

- **Holistic grazing** - cattle penned in smaller paddocks to allow grassland to **recover** elsewhere – done in Brazil
- Switching to **organic agricultural practices** - **crop rotation, cover crops and manure**
- FAO - profit margins for farms using organic techniques are higher, while the environmental costs are significantly lower



Wildlife Trade: Biodiversity Destruction

According to research:

- Africa is a major source of exported wildlife, and this:
 - Hurts and damages Africa's biodiversity
 - Risks future pandemic calamities out f Africa
- SA is a leading exporter of live wild animals and their products
- From 2011- 2015, more than 1.5 million live animals; 1.2 million animal skins were legally exported - **+ equal illegal [i.e. 2.7m [1.5+1.2m] animals plus 2.7m illegally exported]**
- **Globally, wildlife trade worth about \$30.6 - 42.8bn/yr; about \$22.8bn is legal, & \$7.8–20bn illegal [TRAFFIC 2007]**

\$23B

The global illegal wildlife trade generates between \$7 billion and \$23 billion in illicit revenue annually.* The trade can involve a range of criminal activities, from trafficking and forgery to bribes and use of shell companies.¹

9,246%

In 2007, South Africa lost 13 rhinos. In 2014, it lost 1,215—an increase of more than 9,000%.²



\$60,000

Increasing demand for rhino horn in Asia has fueled black market prices. Rhino horn is said to go for \$60,000 per kg (\$132,000/lb).³

Destruction of the gardeners of the forests of Africa: elephants spread forest tree seeds 57km away from the parent tree! A significant sink at death mm



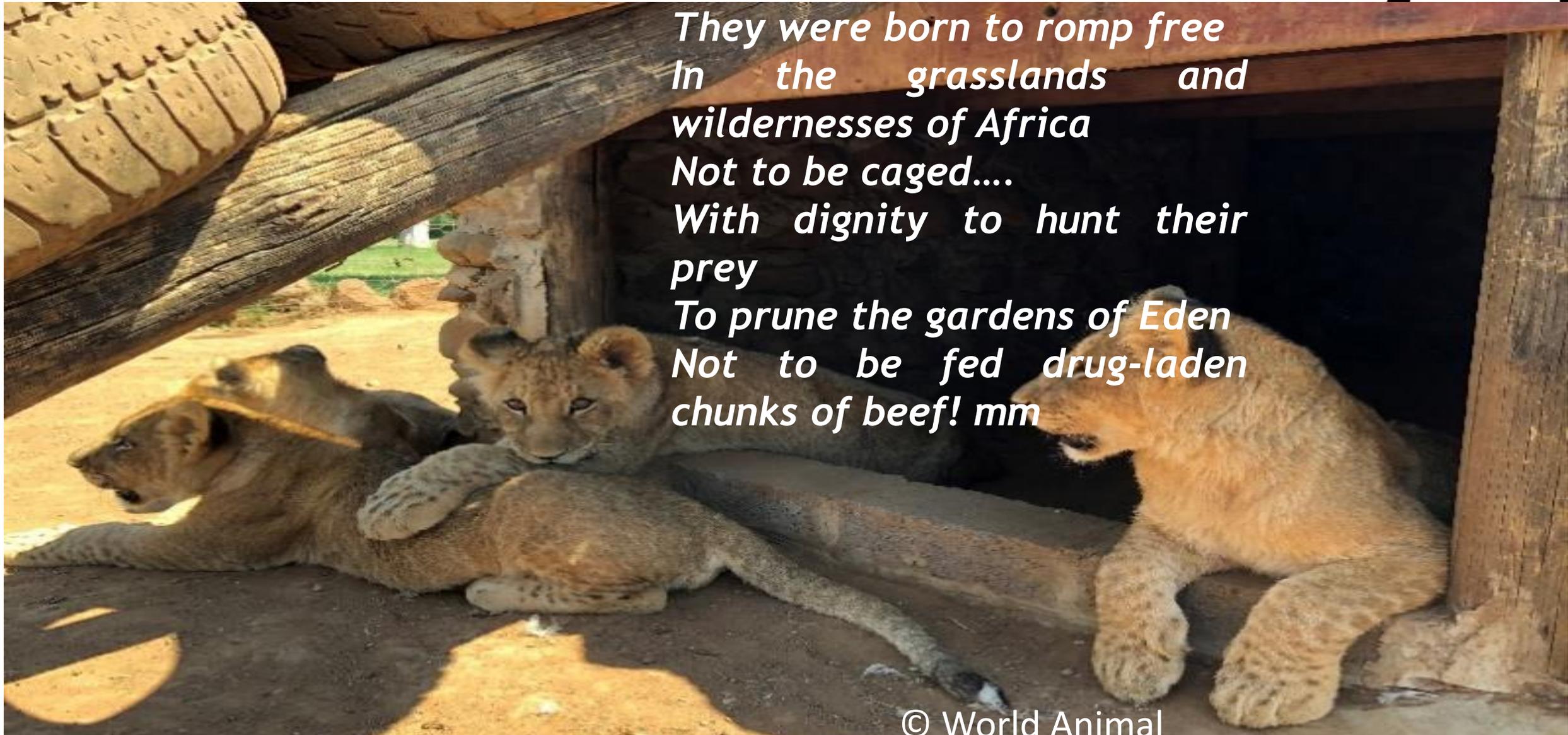
100,000

As many as 100,000 African elephants—33,000 per year—were killed between the years 2010 and 2012. More than 65% of Central Africa's forest elephant population has been wiped out in the last decade.⁵

This is not the wilderness, and it cannot provide adequate welfare mm

WORLD

*They were born to romp free
In the grasslands and
wildernesses of Africa
Not to be caged....
With dignity to hunt their
prey
To prune the gardens of Eden
Not to be fed drug-laden
chunks of beef! mm*



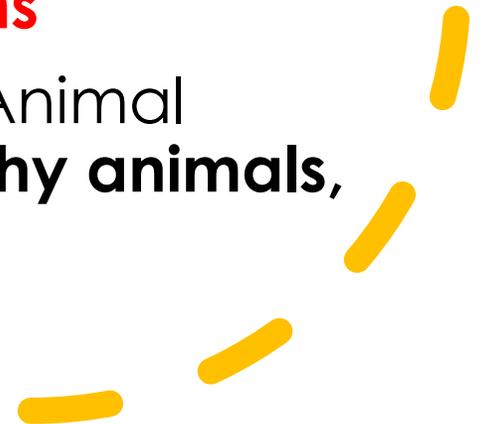
© World Animal

Stress under such conditions predisposes to pathogen proliferation



Prevention of Future Zoonotic Pandemics

- **Wildlife Trade** root cause of COVID-19
- **Sept 2 2020: Cases > 26m & deaths > 800k; Entire global community affected!**
- As of July 2020, Covid 19 cost to **global economy was \$11tn**; projected to **grow to 21.8tn by end of 2020** [Australian National University]
- Wildlife zoonotic outbreaks linked to **wildlife trade & environmental destruction**
- Sustainable way into the future is to use nature-based solutions – **protect ecosystems**
- **Sustainable ecosystems** for holistic Animal Welfare - **healthy ecosystems, healthy animals, healthy wealthy people**



“Retrogressive superstitions continue to hinder the benefits of progressive science & technology” mm

- 75% of zoonotic diseases are from wildlife
- 50% of Global Wildlife Trade is **illegal trade**:
 - No safety measures - Exposure of handlers [majority are poor]
 - Over-extraction [disrupted ecosystems]
 - Food insecurity
 - Poverty increase
 - Risk of future pandemics



Risks from “modern” Food Systems in Africa:

- Destruction of Tropical Rain Forests & other arable land
- Vulnerability due to Poverty &/or ignorance in Africa

Outcomes:

- Disruption of ecosystems
- Poor Animal Welfare
- Zoonotic disease hazards
- Food insecurity and poverty



Illegal logging costs governments in developing countries an estimated US\$11.8–17.8bn every year in lost revenue. [TRAFFIC] – Environmental cost???

WHALE - Animal Welfare as a Nature based solution to Productivity Challenges

WORLD
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A great whale when alive is worth about \$2m - carbon sequestration [33T at death] + other economic contributions [fishery, phytoplankton production & ecotourism]; but just \$80,000 once dead – IMF, 2019

“Increasing phytoplankton productivity by just 1% would have the same effect as the sudden appearance of 2bn mature trees” Ralph Chami et al 2019

“Phytoplankton contribute at least 50% of all atmospheric O₂ & captures as much CO₂ as 1.7tn trees, or 4 Amazon forests” R Chami et al 2019

Thus beginning with whale welfare – cascade of natural events that enhance **Productivity**: same principle in general AW

Whale carbon and oxygen flux

Solar energy



Atmospheric carbon

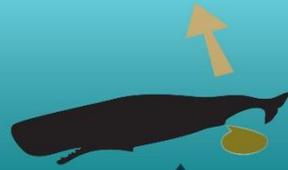
Atmospheric oxygen



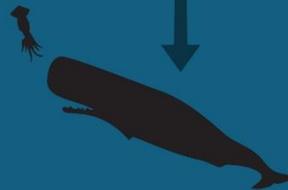
Phytoplankton

Whale Pump

All whales dive underwater to feed and return to the surface to breathe. At the surface, they release buoyant fecal plumes that are rich in nutrients that phytoplankton need to grow.



Movement



- Nutrient Flux
- Carbon Flux
- Waste Products
- Oxygen Flux



Great Whale Conveyor Belt

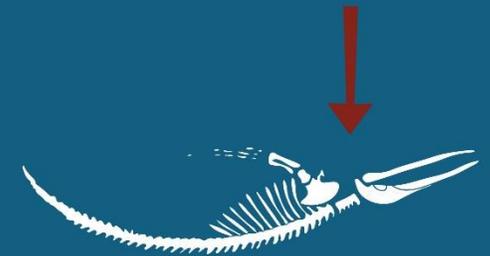
Many whales migrate from nutrient-rich feeding grounds to nutrient-poor breeding grounds. On the breeding grounds, whales release nitrogen-rich urea that can stimulate phytoplankton growth.

Biomass Carbon

All living things are made of carbon and thus serve as carbon reservoirs throughout their lifespans. The larger and more long-lived the animal, the more carbon is stored.

Deadfall Carbon

When large marine vertebrates die, their carcasses sink to the seafloor. There, the carbon inside their carcass can support deep-sea ecosystems and be incorporated into marine sediments.



Deep Ocean Floor

The importance of AWSA in Public Health, Food Security, Sustainable Ecosystems & Sustainable Development in Africa

- Animal Welfare is about protecting the survival of animals
- Animals naturally provide nature-based solutions to the needs of humans and other creatures
- Fundamentally, the AWSA is designed to enhance / promote AW
- It is a critical resource for PH, FSe, Fsa, SE & SD in Africa

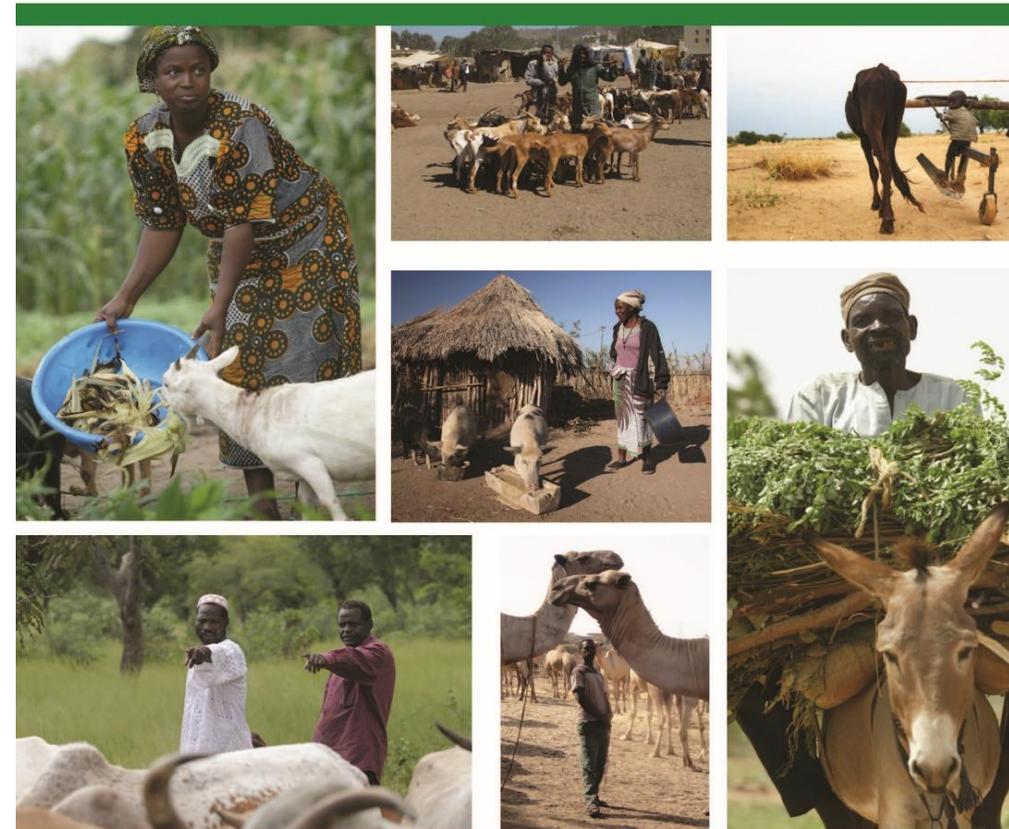


AFRICAN UNION
INTERAFRICAN BUREAU
FOR ANIMAL RESOURCES



ANIMAL WELFARE STRATEGY FOR AFRICA (AWSA)

EXECUTIVE SUMMARY



Integrating the Welfare Interests of Human and Animals in Af

Why Africa Should Resist Factory Food Systems FFS

- **FFFS** are associated with extractive destruction of biodiversity and destruction of ecosystems
 - Most of Africa relies on an agro-economy & tourism – **most other resources lost to illegal or unfair trade**
 - FFS costs to environment and society surpass the benefits realized by the few value chain actors
 - Biodiversity loss increases the risk of wildlife-based pandemics in this **vulnerable continent**

Africa cannot afford to adopt FFS

The typical small-scale nature-based production systems in Africa should perhaps be promoted mm





The global trade of wild animals is cruel and puts our health and the world economy at risk from pandemics like COVID-19. Join us in calling on African Governments to support and champion a global ban on the wildlife trade.

Act now

Call for a Global ban on Wildlife Trade - Why Africa should support the call/action:

- Extractive destruction of biodiversity and destruction of ecosystems due to Wildlife Trade poses a serious threat to Africa's future
- WT's environmental costs surpass the benefits by the few value chain actors in WT - Biodiversity loss, and risk of zoonotic pandemics in a vulnerable continent
- Risk of future epicenter of the next zoonotic pandemic

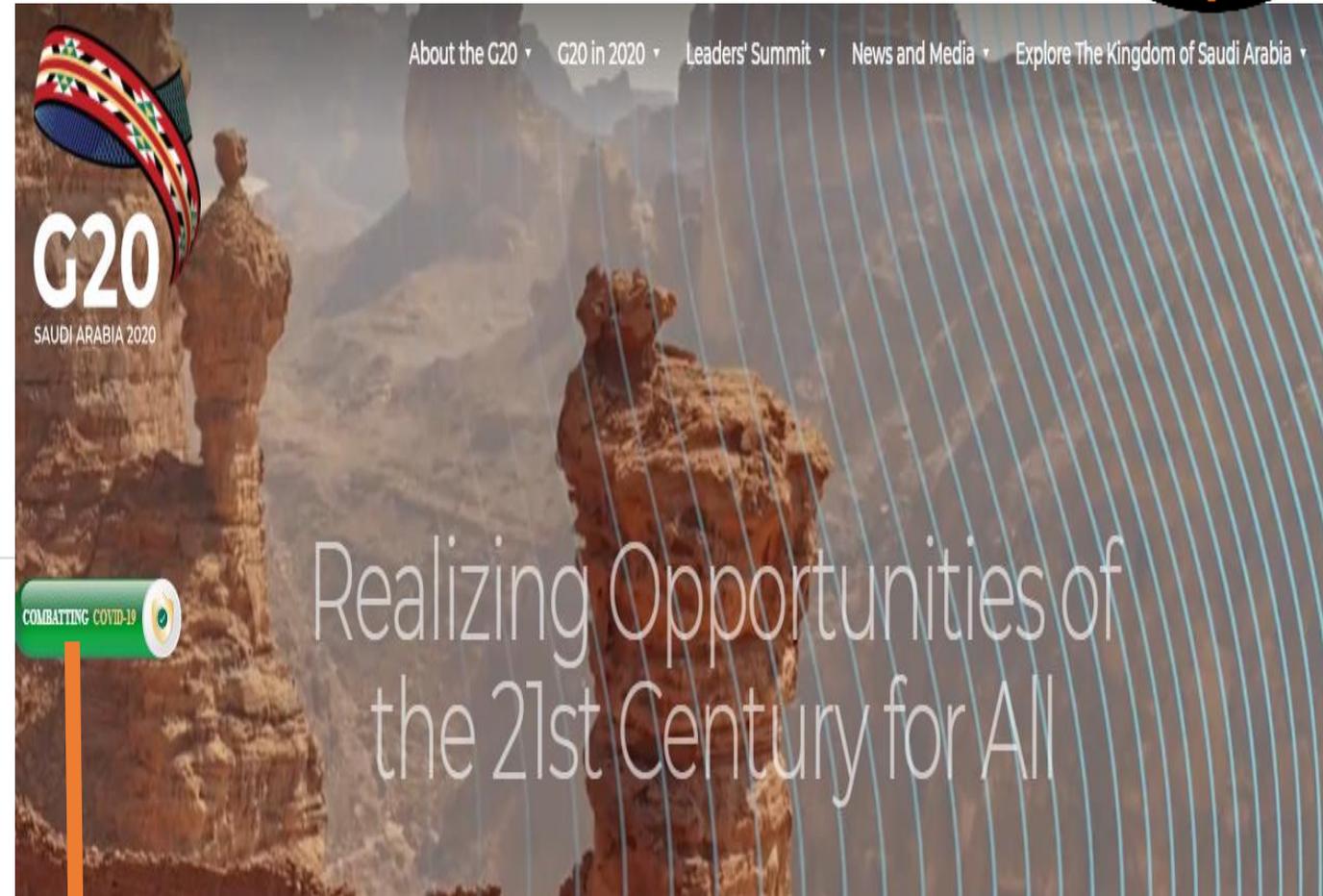


Why G20?

- Past role in the recent global economic depression
- Major donor for development/relief programs
- Major economic driver of global economics

What is the role of SA?

- G20 member, AU Chairmanship
- Global leader as source of wildlife trade merchandise
- Worst hit culprit of Covid 19 in Africa, to-date
- As Chairman of AU should take lead to prevent future pandemics – **wildlife trade poses a serious risk**





Why RECs and MS should support the call

Possess the Technical Expertise

- Role of ecosystems in nature-based solutions to Africa's food, health and wealth issues
- Vulnerability of Africa's posterity
- Knowledge of the legal, political and scientific grounds for Africa's self defense from **global invasiveness**

Has the Moral Obligation

- Sustainable trade; Sustainable food security; Public health – **linked to sustainable ecosystems**

Sustainable Ecosystems are the key to the survival of Africa's
Posterity mm

Which Way Forward?



Support the Universal Declaration on Animal Welfare

- Universal Recognition of Sentience in animals – Susceptible to Stress
- Outcomes of stress counterproductive to the purpose of keeping animals
- **Way forward – all AU MS encouraged to endorse UDAW**

Implement the Animal Welfare Strategy for Africa

- Through AWSA, AU recognizes that AW is about the wellness of animals, so as to ensure sustainable development
- **AUIBAR** spearheading the establishment of **RAWNs** to facilitate the implementation of AWSA
- **Way Forward – All AU MS encouraged to actively participate in RAWNs and to invest in the implementation of AWSA**



Recognize the Animal Protection Index [API]

- Sustainable protection of animals should be anchored in policies and legislations, and enforced
- **Way forward** – All AU MS encouraged to seek an API evaluation and to implement the recommendations in the API [WAP available for support the process]

Support a Global Ban on Wildlife Trade

- Globally, governments are **unable to control wildlife trade**
- Excessive extractive wildlife trade serious threat to Africa's fragile ecosystems, and vulnerability to future pandemics
- **Way forward** – all AU MS encouraged to support a Total Ban on Wildlife Trade [WAP available for support the process]

Conclusions



1. Africans need change narratives that project pragmatic personal benefits
2. The intellectual disconnect [**ignorance**] between the destructive actions against ecosystems & outcomes are a major cause of the destruction of the ecosystem in Africa - **There is no room for FFS in Africa**
3. Majority Africans “mine” the environment for survival - **vulnerability**
4. Powerlessness creates general apathy: **vulnerable Africa [not negligent!]**
5. Global society needs to exercise high levels of responsibility & discipline in trade – **nature based solutions need patience**
6. Globally, governments are evidently unable to control wildlife trade and so a **total ban crucial for the survival of humanity**
7. **South Africa has a moral & political obligation to represent Africa's interests at the G20 Summit**



The interaction by diverse organisms within natural systems have enabled evolution to happen – a disruption of the natural balance is a catastrophic threat to future generations

Let the King sing his song
In the Wildernesses of Africa!
Let him run free and wild
In the wildernesses of Africa
Let the music from his majestic lungs
Thrill the hearts of every animal
Large and small
In the wildernesses of Africa
O yes! Let the King of the jungle sing his
song
In the wildernesses of Africa!mm
Poem M. Mbaka

Thank you!

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