

Lessons in Engaging in Energy Issues in Kenya

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NatureKenya
The East Africa Natural History Society

ABOUT NATURE KENYA

- **Nature Kenya** - the East Africa Natural History Society (EANHS) - is Africa's oldest environmental Society
- It was established in 1909 to promote the study and conservation of nature in eastern Africa
- We are a membership organization and derive our strength from the support of members (individual, family, corporate and institutional)



NatureKenya

THE EAST AFRICA NATURAL HISTORY SOCIETY

- Kenya is a biodiverse country with many species that are potentially susceptible to energy infrastructure.
- We have **67** designated Key Biodiversity Areas
- Careful planning is needed to reconcile wind energy expansion whilst safeguarding the country's important natural heritage.



ELECTRICITY GENERATION IN KENYA

- Kenya's objective is to increase the country's installed electricity capacity to c. 7,200 MW by 2030 from the current capacity of c. 2,200 MW, with wind and solar increasingly prominent in this new generation mix.



Kenya is diversifying energy production from traditional HEP, to Geothermal, Thermal and Wind Energy

For example; there are plans to build Mega Multipurpose Dam-High Grand Falls along the Tana River

Increasing Geothermal Exploration within the Rift Valley

Incentives provided for Wind Farms establishment mainly along the Rift Valley- Largest Wind Farm in Africa- Turkana Wind Farm with over 300 turbines; and other smaller ones coming up. Including off-grid turbines to serve remote rural areas

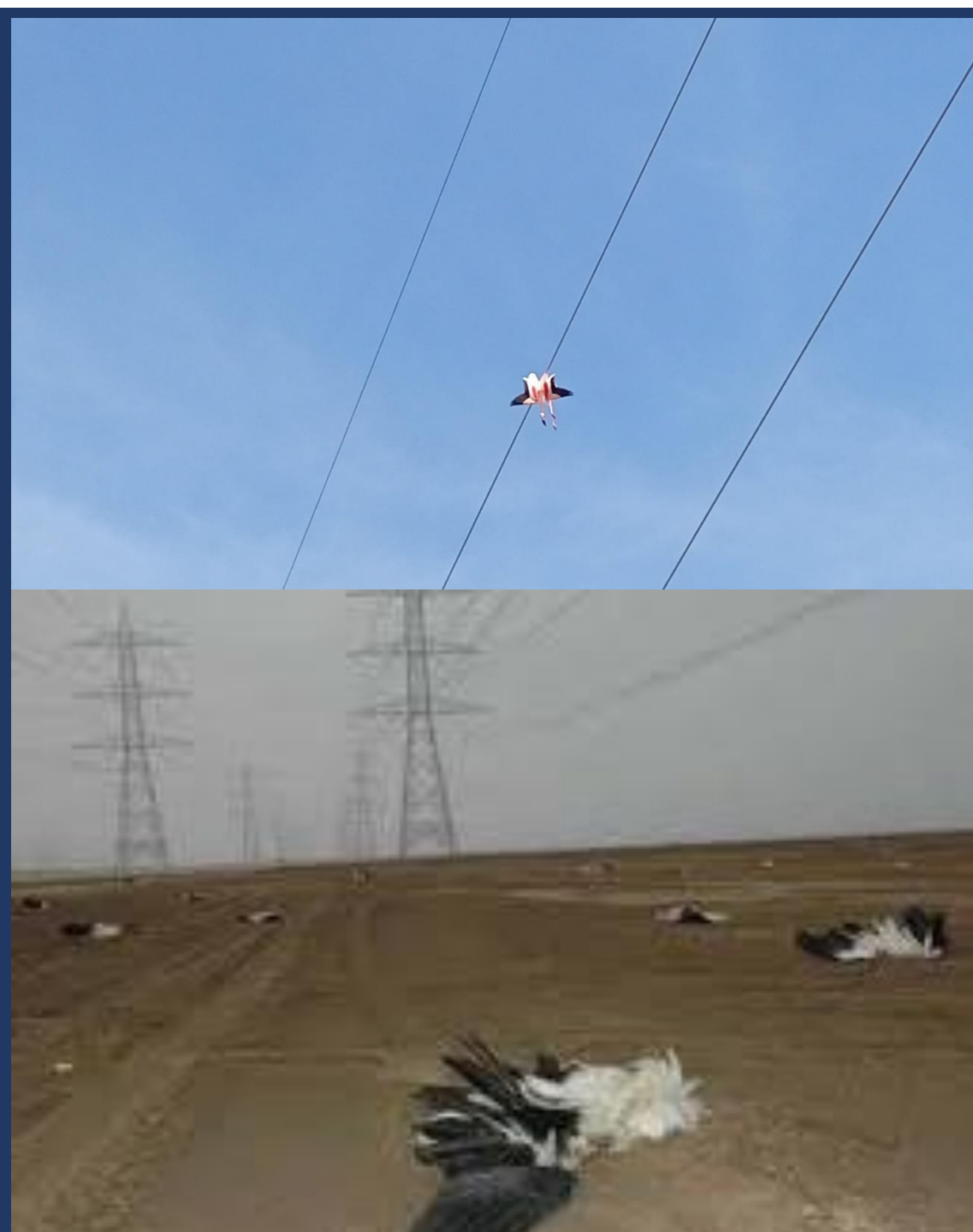


- Energy need to be evacuated- This brings the mix of increased transmission lines.
- We have a big challenge in **Kenya-To Balance Development Demands and Biodiversity Conservation.**



ENERGY INFRASTRUCTURE IMPACTS ON AVIAN BIODIVERSITY

- Impacts on the ground (footprint) vs impacts in air (volant species)
- Habitat loss and degradation – vegetation clearance
- Displacement and barrier effects
- Collision with wind turbine blades, transmission lines



- The Kihansi spray toad-discovered in 1996 living in a five-acre micro-habitat created by the spray of nearby waterfalls in the Kihansi Gorge.
In 1999, the construction of a hydroelectric dam in the gorge dramatically changed the Kihansi spray toad's habitat.
- 2009 the toad was declared to be extinct in the wild IUCN
- The World Bank, which helped finance the Tanzanian hydroelectric dam, is considering loaning Tanzania \$6,000,000 to help it start its own breeding program.



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NOT EVALUATED	DATA DEFICIENT	LEAST CONCERN	NEAR THREATENED	VULNERABLE	ENDANGERED	CRITICALLY ENDANGERED	EXTINCT
NE	DD	LC	NT	VU	EN	CR	EX

**EXTINCT
IN THE WILD**

EW

More than 40 power deals face review after taskforce report

They include about 22 existing contracts and more than 20 planned projects

MARTIN MWITA

@MwitaMartin



Forty seven contracts and projects face a review as Kenya Power moves to implement recommendations on Power Purchase Agreements (PPAs) announced last week.

They include about 22 existing contracts where some are running up to 2037, and more than 20 planned projects which were to commence between next year and 2024.

This after the task force set by President Uhuru Kenyatta in late March, to scrutinise PPAs between Kenya Power and Independent Power Producers (IPPs), presented its report last week. It has advised for a "review and renegotiation with IPPs to secure immediate reduction in power purchase agreements tariffs within existing contractual arrangements", as the government targets to cut power costs by up to 34 per cent.



Wind turbines at the Lake Turkana Wind Power project (LTWP) in Loiyangalani, Marsabit county, Northern Kenya/FILE

**THE ENERGY ACT
(No. 1 of 2019)
(DEVKI STEEL MILLS LIMITED)**

APPLICATION FOR ELECTRIC POWER (GENERATION LICENSE)

NOTICE is hereby given that **(DEVKI STEEL MILLS LIMITED)**, a limited liability Company having its registered office at **(RUIRU, ALONG KAMITI ROAD OF P.O.BOX 33319-00600)** in the Republic of Kenya, ("the Applicant"), pursuant to the provisions of Section 117 of the Energy Act, 2019, will on **(17/08/2022)**, make an application to the Energy Regulatory Commission for the Electric Power (**GENERATION LICENSE**).

(Devki Steel Mills Limited of P.O.BOX 33319-00600 would like to develop 60 Megawatts Wind power Plant In Samburu, Kwale County, Kinango Sub County on plot no. South Samburu Group Ranch/88. The power generated will be used for their own consumption in their Devki Samburu Plant in Kwale County. The grant of the licence will not have adverse effect on any Public or Local Authorities, Companies, persons, or bodies of persons within the areas of the undertaking.

A copy of the application (subject to confidentiality considerations) will be available (once lodged) for inspection by the public at the registered office of the applicant.

Any public or local authority, company, person or body of persons desirous of making any representation on or objection to the application must do so by a letter addressed to the Energy and Petroleum Regulatory Authority and marked on the outside of the cover enclosing it "Energy Act", on or before the expiration of Thirty (30) days from the date of application and a copy of such representation or objection must be forwarded to the registered office of the applicant.

Dated the 17/08/2022
Mr. Lokesh Kumar (Commercial Director)



NATIONAL LAND COMMISSION

NOTICE OF INTENTION TO ALLOCATE LAND

To The General Public and Any Other Interested Parties

16th March, 2022

Notice is hereby given that at the expiry of 30 days from the date of publication of this notice the National Land Commission on behalf of the County Government of Lamu intends to allocate 1707 Ha of land in Lamu County to Cordisons International (K) Limited for Industrial purposes (power generation) subject to terms, covenants, conditions and reservations which shall be included in the conveyance document in accordance with section 14 of the Land Act 2012.

Anybody wishing to raise any comments may do so to the Chairman, National Land Commission within 30 days from the date of publication of this notice.

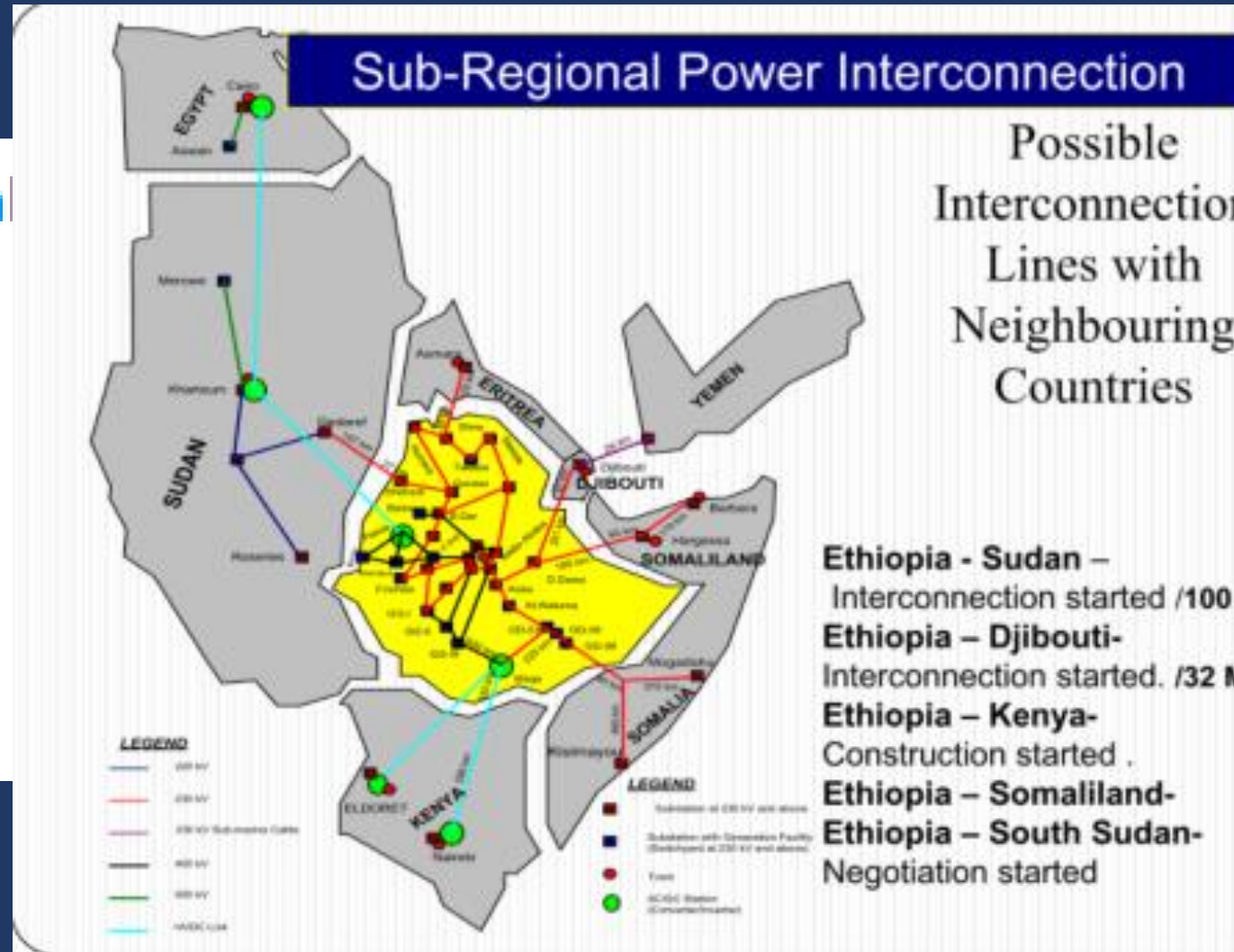
In the absence of any valid objections, the allocation shall take place at the Commission's offices in Nairobi 316 Upperhill Chambers at 2.30 pm on the next working day following the expiry of this notice.

The terms of allocation are available at the Commission's offices in Nairobi and the office of the Coordinator, National Land Commission, Lamu.

The land intended for allocation to Cordisons International (K) Limited is reflected in Part Development Plan No. LMU/1281/01/16 and may be inspected at the offices of the County Government of Lamu and the National Land Commission's Offices in Nairobi.

**GERSHOM OTACHI BW'OMANWA
CHAIRMAN, NATIONAL LAND COMMISSION**

- Power outages can result in substantial economic costs:
 - USA: cost USD 25–180B per year and wildlife represents an important causal factor of power outages in electricity systems.
 - Portugal - White Storks in cause half of the outages along the electricity distribution grid
 - South Africa: an estimated USD 65M losses are due to Vultures interacting with powerlines



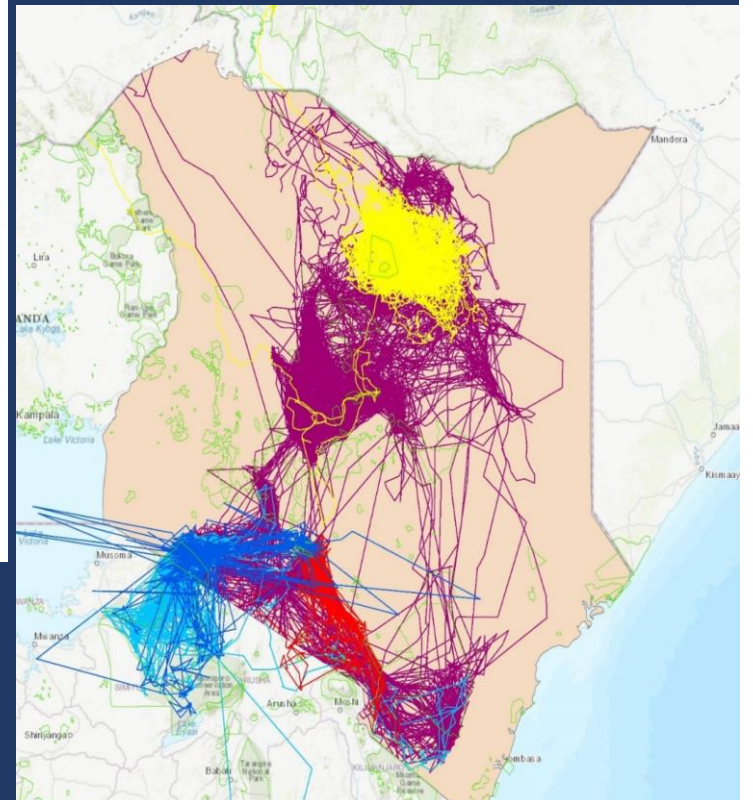
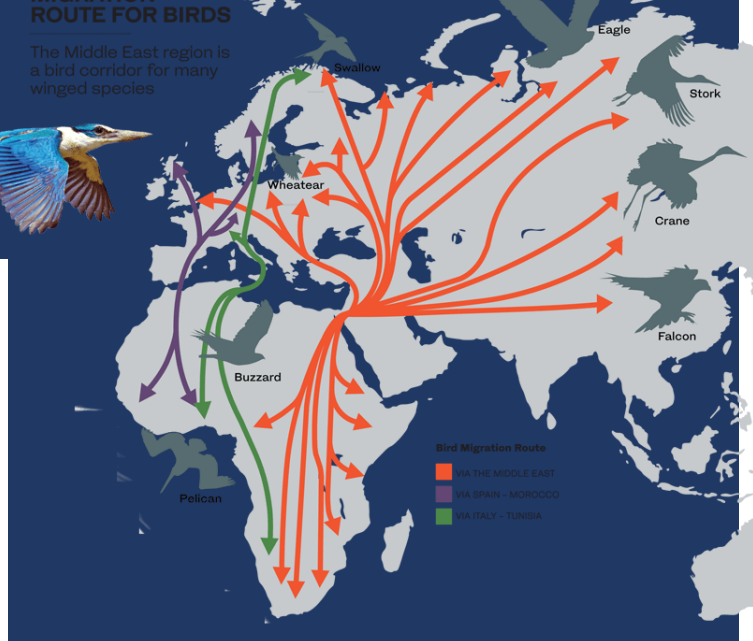




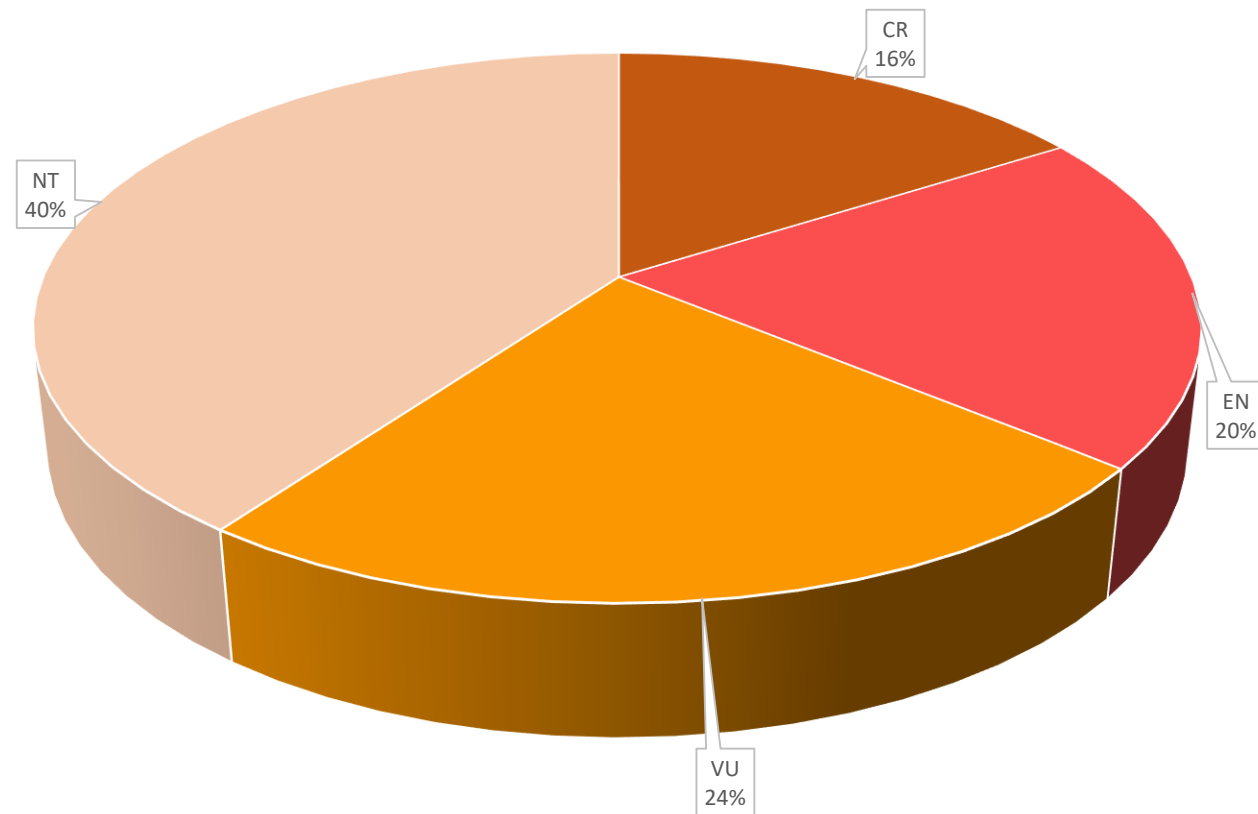
SPECIES DATA

- Kenya has approx. 300 migratory Birds In Kenya
- Kenya is part of the Global Bird Migratory Routes- Red Sea-Rift Valley Flyway the country.

This white stork (Cheptalamiat) was electrocuted yesterday at dusk as it glided down for probably it's evening rest. Upon its inspection by the guys who found it ,they saw tags on its legs labeled Poland with some other numbers.We want to believe the bird must have been tagged in



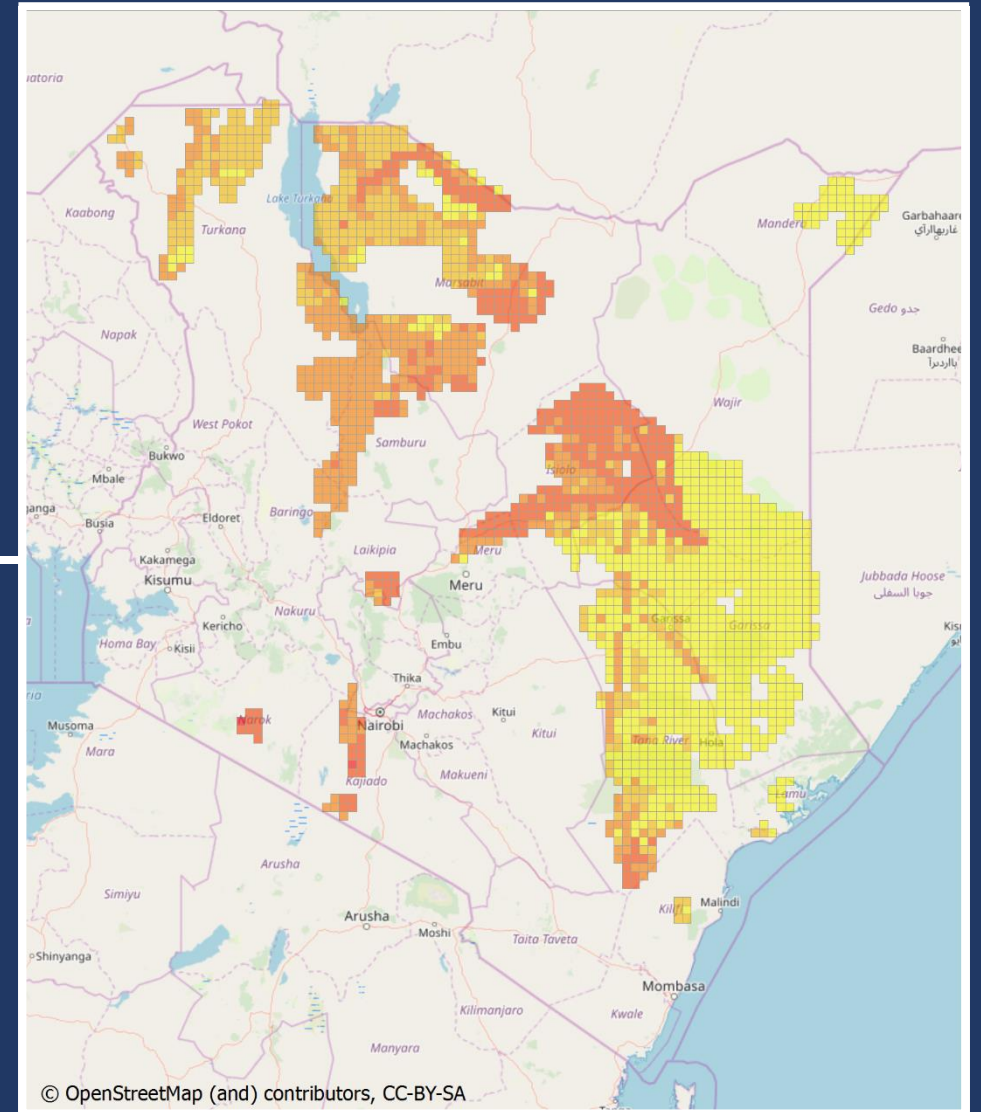
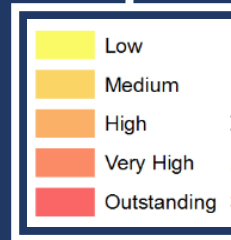
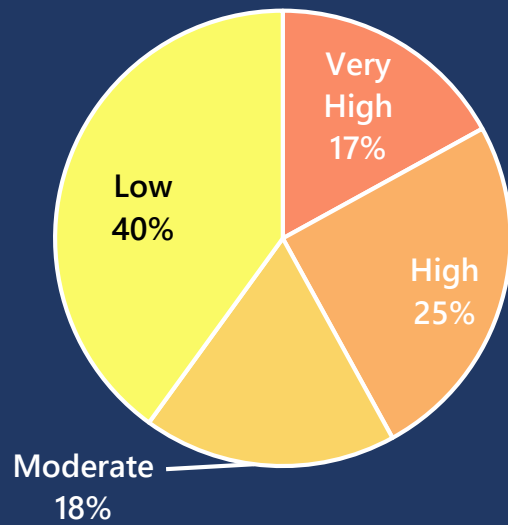
25 Red-listed Kenyan species in the 'top 10%' of global collision risk



Analysis based on Thaxter *et al.* 2017

ANALYSIS WITHIN ECONOMIC WIND AREA

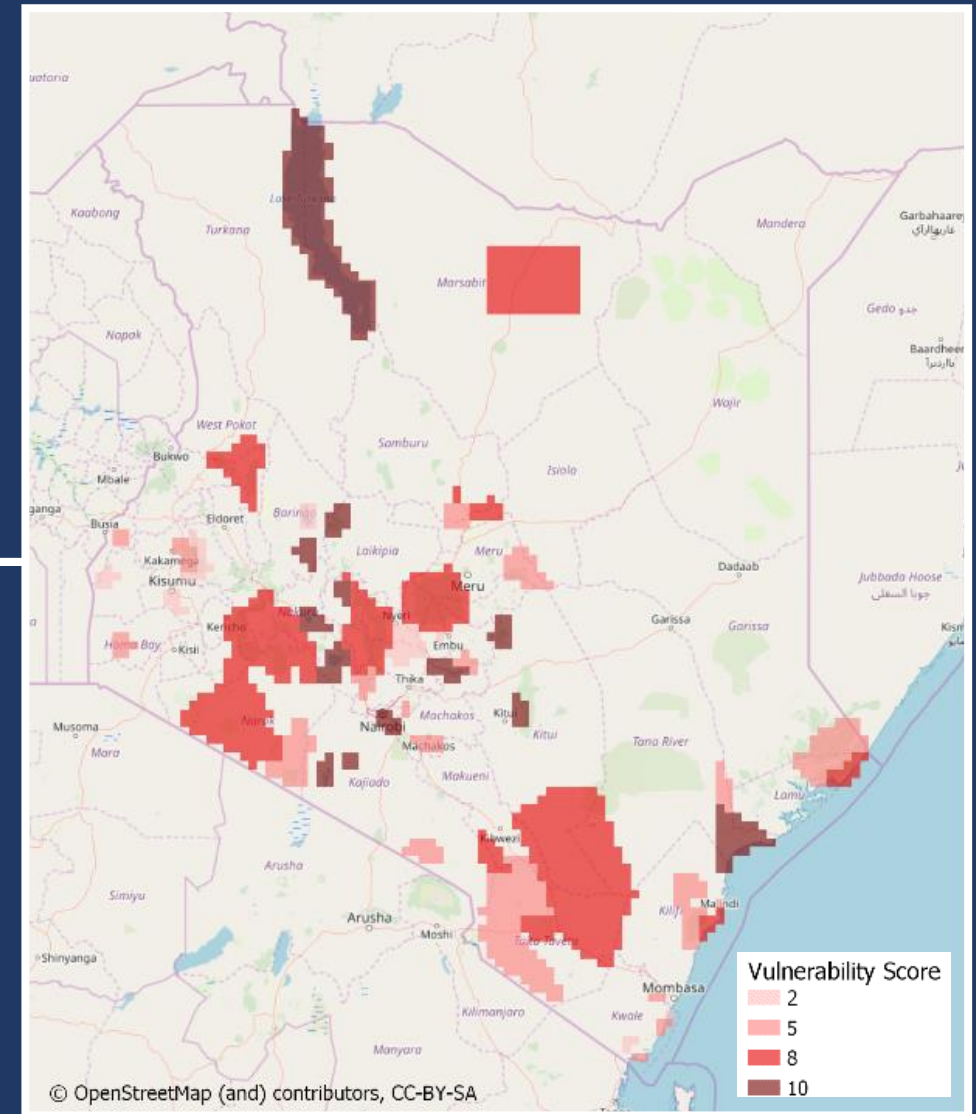
- Overlay the species heatmap with economically viable wind area and planned and potential wind energy developments.



SPATIAL ANALYSIS - SITES

- Sites were also mapped to pentads and weighted (IBAs, protected areas, wetlands and ridgelines).
- Then combined into an overall site heatmap of biodiversity risk for wind power in Kenya.

Vulnerability Category		Weighting
IBA with a Very High scoring species or with Congregatory bird triggers	Very High	10
IBA with more than one Low, Moderate or High Species trigger	High	8
IBAs with one Low, Moderate or High Species trigger	Medium	5
Other IBA	Low	2
Ridgelines	Potential	1
Wetlands	Potential	1
Protected Areas	Potential	1



BirdLife Migratory Soaring Birds-Sensitivity mapping tool

BirdLife INTERNATIONAL **UNDP** **gef**

Soaring Bird Sensitivity Mapping Tool:

A planning aid for wind energy and other sectors

[Instructions](#) • [Guidance](#) • [Project](#)
[Flyway](#) • [Contact](#) • [Acknowledgments](#)

- Important Bird Areas supporting soaring birds
- Important Bird Areas for non-soaring bird species
- Soaring bird observation locations
- Soaring bird satellite tracks
- Scope of tool
- Ridgelines (prominence)
 - Low prominence
 - Medium prominence
 - High prominence
- Protected Areas

SENSITIVITY SEARCH

Buffer (km): 20

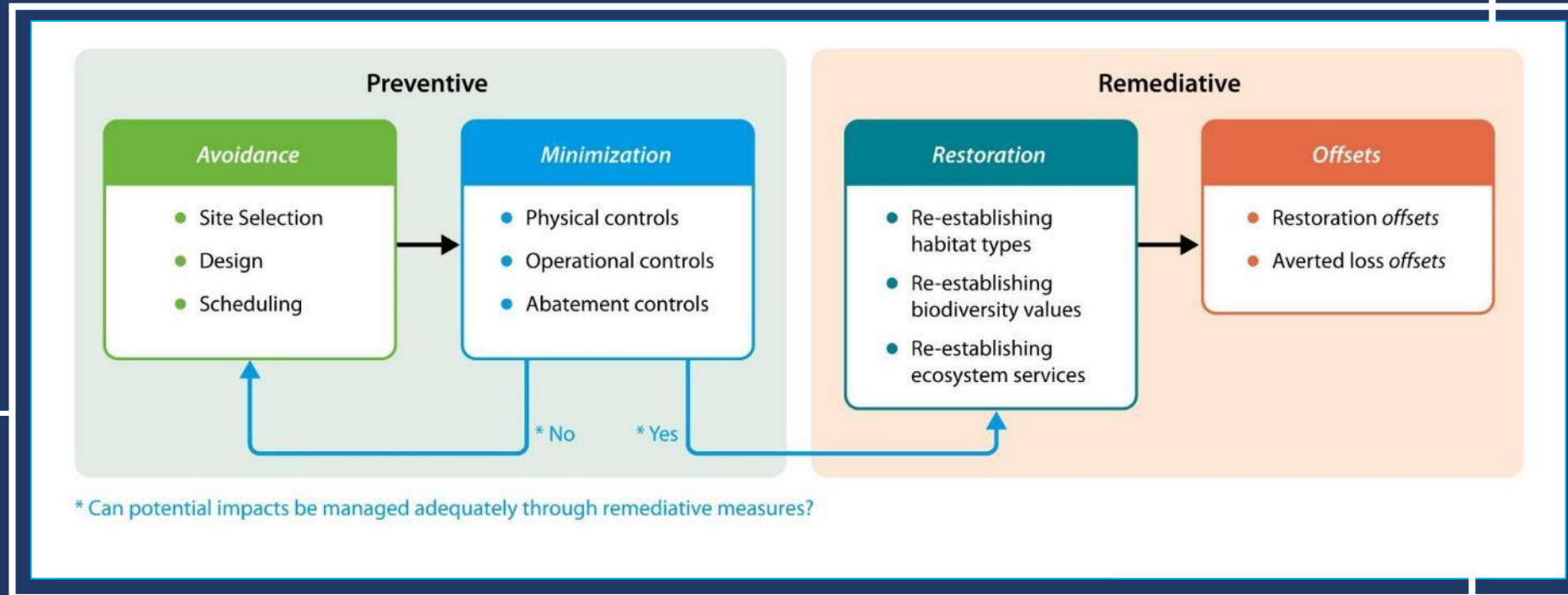
Draw geometry

Enter coordinates
Select country
Import shapefile...
cancel

4000 km
2000 mi

habitat INFO IND. POWERED BY esri

THE MITIGATION HIERARCHY



CSBI 2015

Moving Forward

- Need to adopt the Draft **SEA Wind Power and Biodiversity**
- Need to collect electrocution and collision data systematically to inform power line design best practices
- Plenty of scope for energy infrastructure expansion in areas of low wildlife impact
- Information gaps remain – both for sensitivity mapping (eg NE Kenya and coast) and for impacts and mitigation effectiveness
- Scope for a Partnership across the sector for filling information gaps, good practice mitigation,





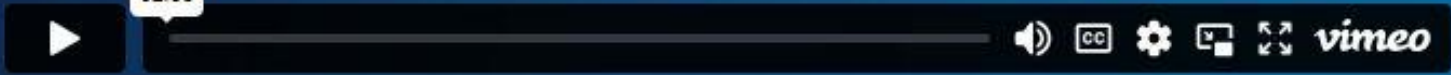
AVISTEP

BirdLife International

MILLIONS OF HECTARES



02:53



AVISTEP



<https://vimeo.com/733569195/ebb63dd585>

THE
BIODIVERSITY
CONSULTANCY



NatureKenya
THE EAST AFRICAN NATURAL HISTORY SOCIETY



THE
PEREGRINE
FUND


BirdLife
INTERNATIONAL

THANK YOU



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office@naturekenya.org