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Bridging the Science-Policy Gap:

Mainstreaming blue carbon stock assessments into national development plans; example of Lamu, Kenya

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An initiative by:



Federal Ministry
for Economic Cooperation
and Development

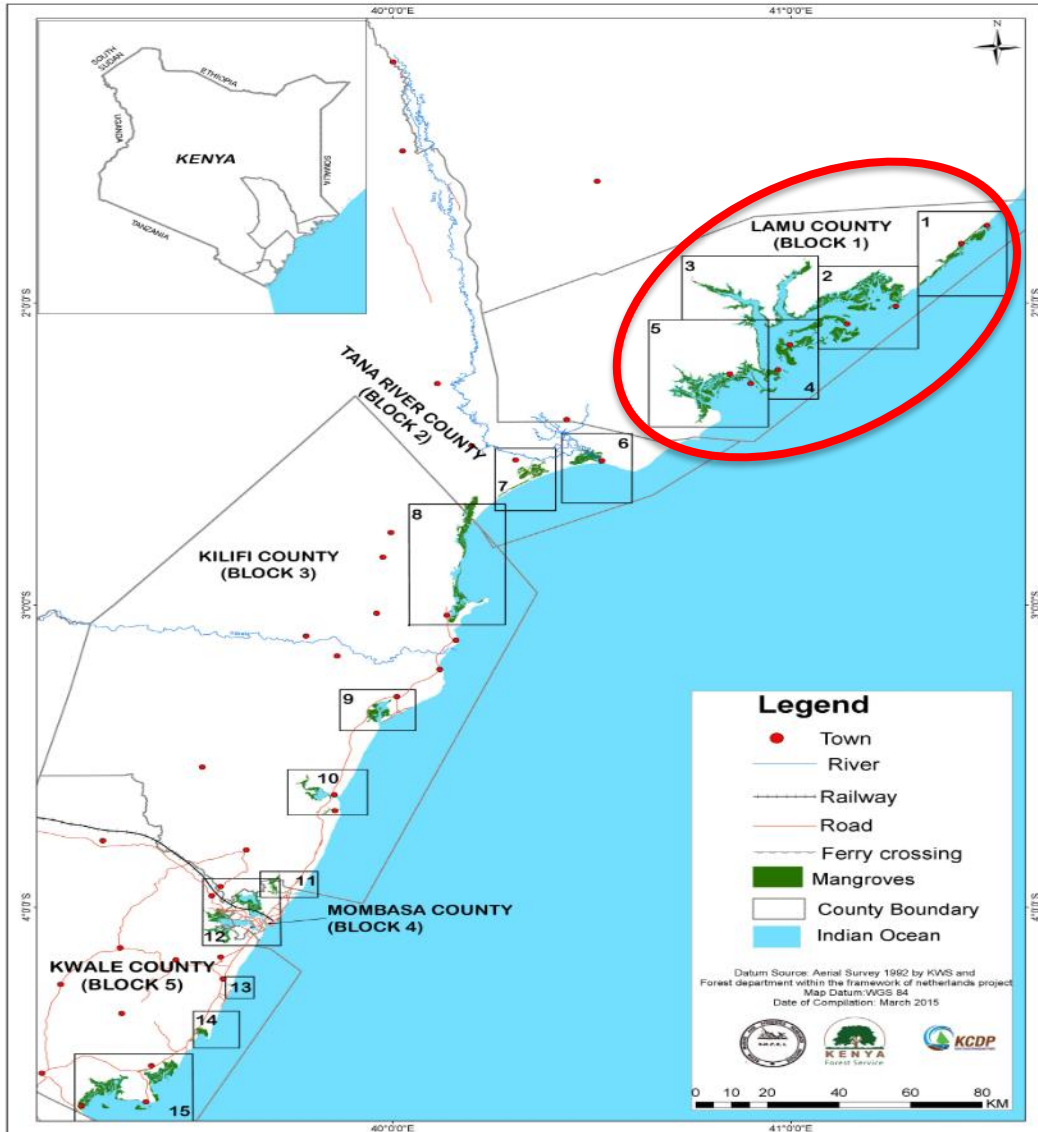




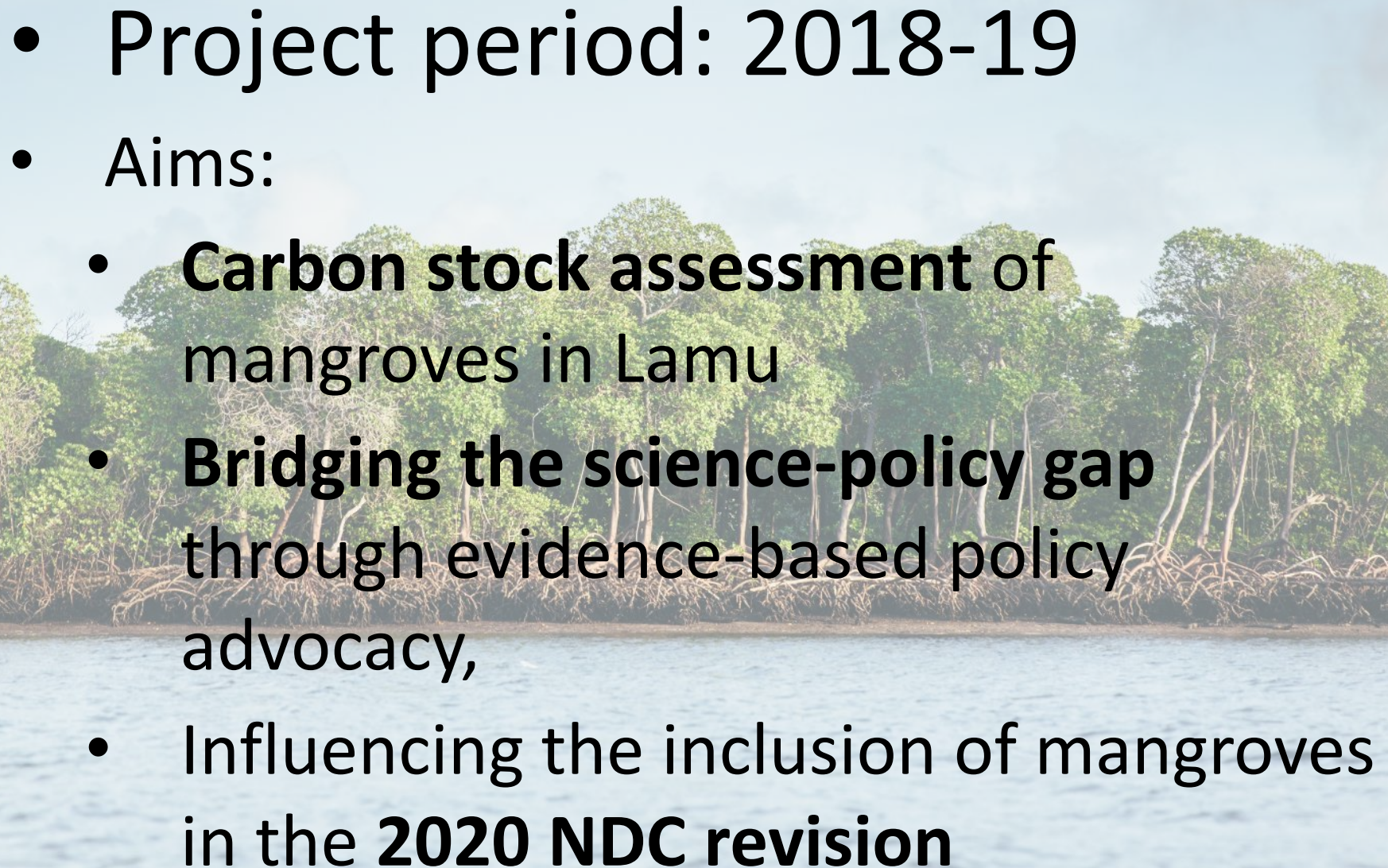
Mangroves and associated blue carbon ecosystem are one of the most climate resilient, productive and biodiverse ecosystems.

They provide multiple goods and services; including the storage of significant amounts of carbon

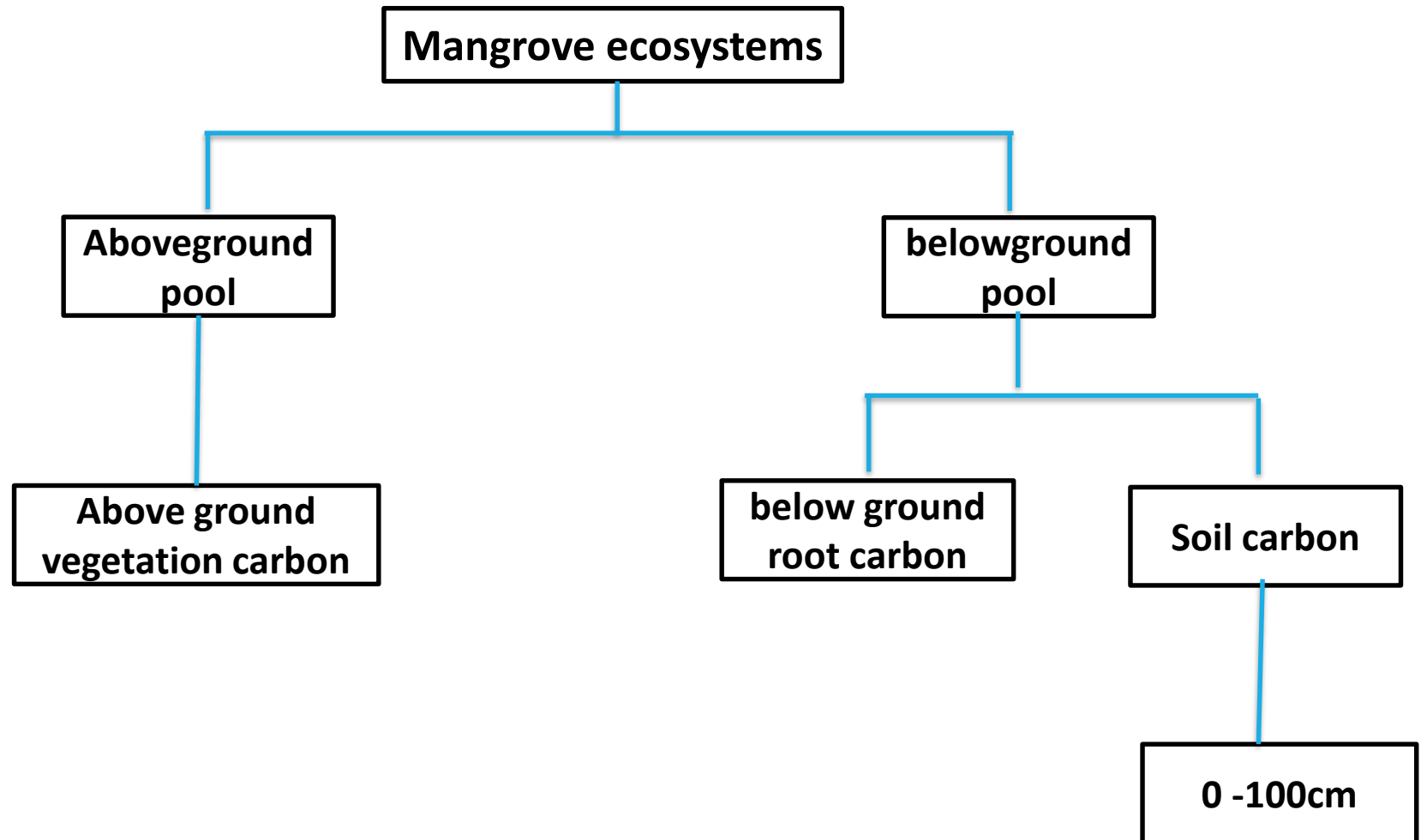
Mangroves in Kenya



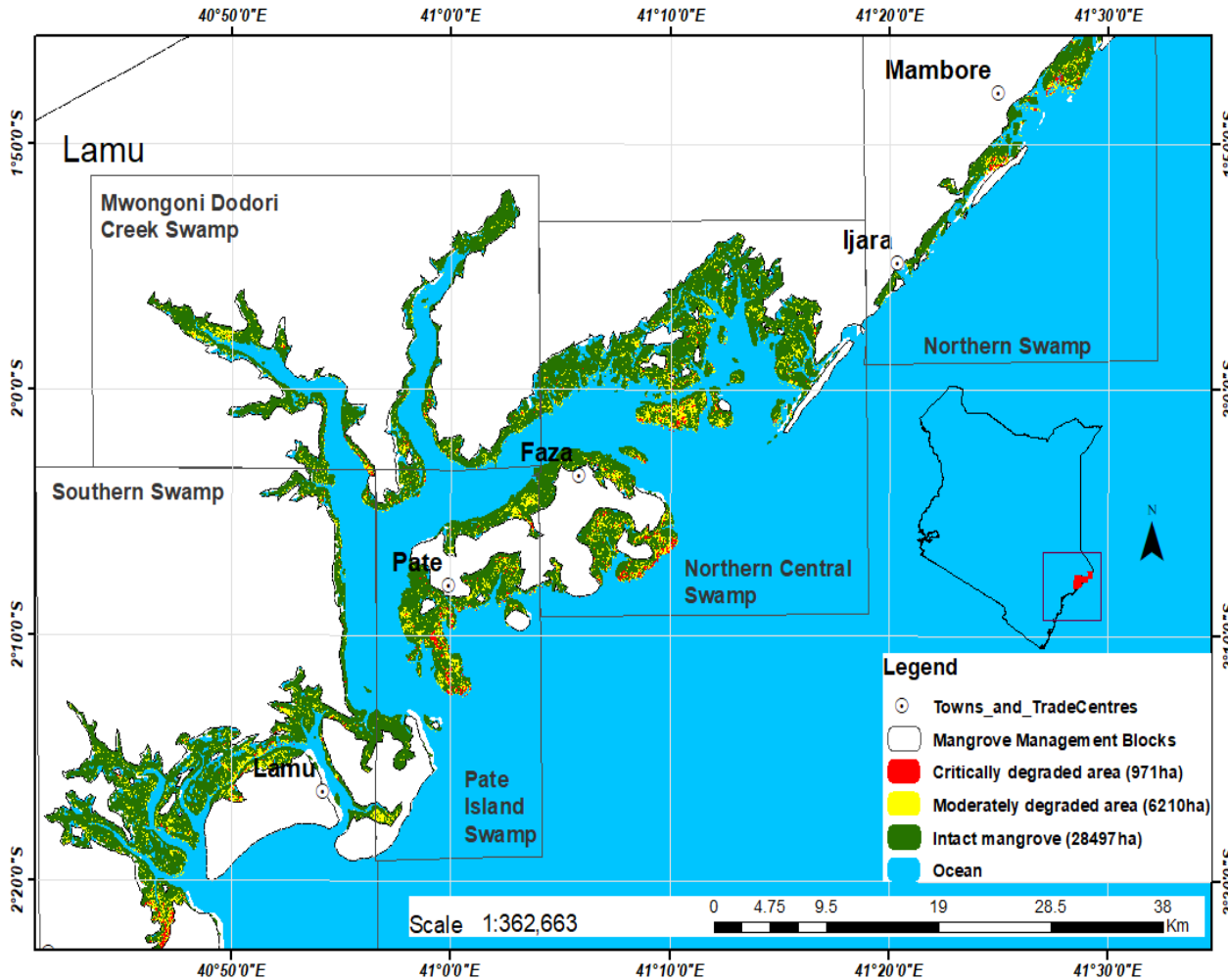
- 60,000 ha
 - 9 species
 - 62% of mangrove forests in Lamu
- Major drivers of loss
 - Over-harvesting
 - Conversion
 - Pollution
 - Climate change

- 
- Project period: 2018-19
 - Aims:
 - **Carbon stock assessment of mangroves in Lamu**
 - **Bridging the science-policy gap through evidence-based policy advocacy,**
 - Influencing the inclusion of mangroves in the **2020 NDC revision**

Carbon Stock Assessment



Hotspots of loss and degradation of mangroves in Lamu



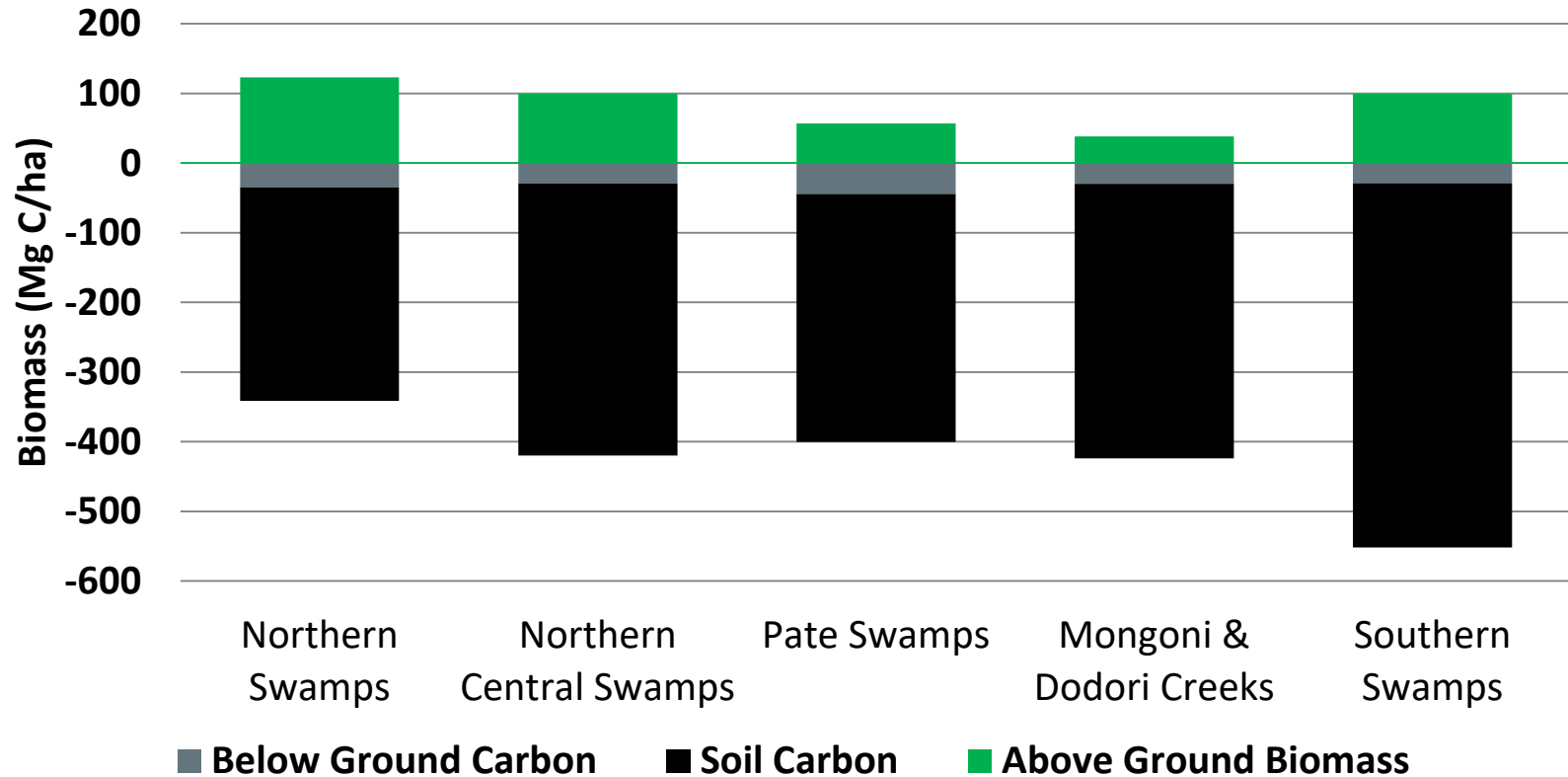
**Total Mangrove loss
in Lamu from 1990 –
2019-**

✓ 1,739 ha

Rate of loss

✓ 60ha/yr.

Total ecosystem carbon-Lamu



Mean TEC = $510.26 \pm 115.41 \text{ Mg C ha}^{-1}$

Range = $457.07 - 651.23 \text{ Mg C ha}^{-1}$

Economic costs of avoided mangrove deforestation in Lamu



40% of degraded 36000 ha of mangroves in Lamu = **14,000 ha**



Using IPCC's emission factor of **9 tCO₂/ha/yr** for deforestation activities, avoided carbon emissions from Lamu is estimated at a high of $9 \times 14000 =$ **126,000 tCO₂/yr**



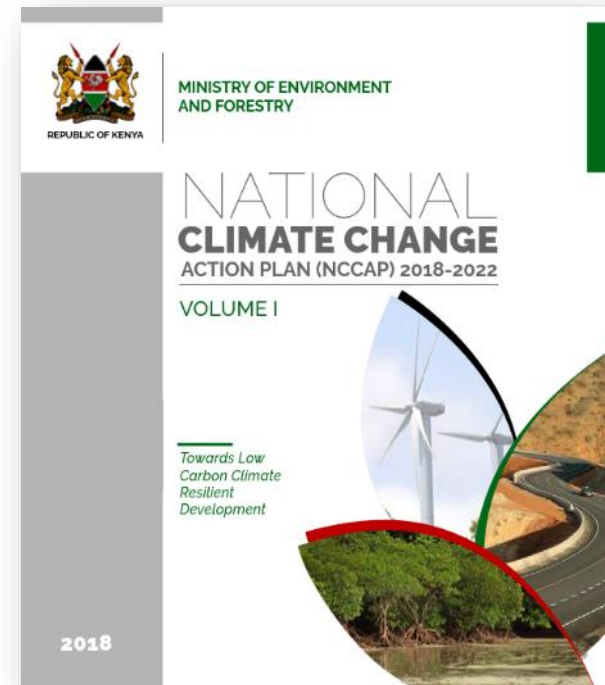
Assuming an offset price of **US\$10/ton CO₂** the estimate cost of avoided emission in Lamu is **US\$1.3m/yr**; plus other co-benefits such as fishery functions and shoreline protection



Opportunities to incorporate mangroves in NDC

Achievements

- Mangroves in Kenya are valued and incorporated into Kenya's national-level strategies for climate change adaptation and mitigation
- Blueprint for future efforts to bridge the science-policy gap





Asante
(Thanks)



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