

Blue Carbon Solutions in Kenya's Climate Actions

A Policy Brief for Kenyan Stakeholders

Blue Carbon Solutions in Kenya's Updated Nationally Determined Contributions

Blue carbon (BC) ecosystems (mangroves, salt marshes and seagrass meadows) are able to bury carbon up to 50% faster than forests on land; as such they are highly efficient carbon sinks and have the potential to make an important contribution to the mitigation of climate change. Kenya has around 612 and 317 km² of mangroves and seagrass respectively^{1,2}; incorporating these habitats into national climate actions has the potential of accelerating the low carbon development pathway, while providing job opportunities, enhancing food security, improving livelihoods of coastal communities and contributing to the economy.

With the increased awareness of the potential blue carbon ecosystems play in climate mitigation and adaptation, Kenya has incorporated a range of conditional and unconditional commitments relevant to BC ecosystems into the updated Nationally Determined Contribution's (NDC³) that was submitted to UNFCCC in December 2020. The purpose of this briefing is to help inform stakeholders within Kenya of these developments and to indicate some of the possible implications for national action.



Edinburgh Napier
UNIVERSITY



LOCAL ROOTS AND GLOBAL BRANCHES



Nationally Determined Contributions
from Blue Carbon

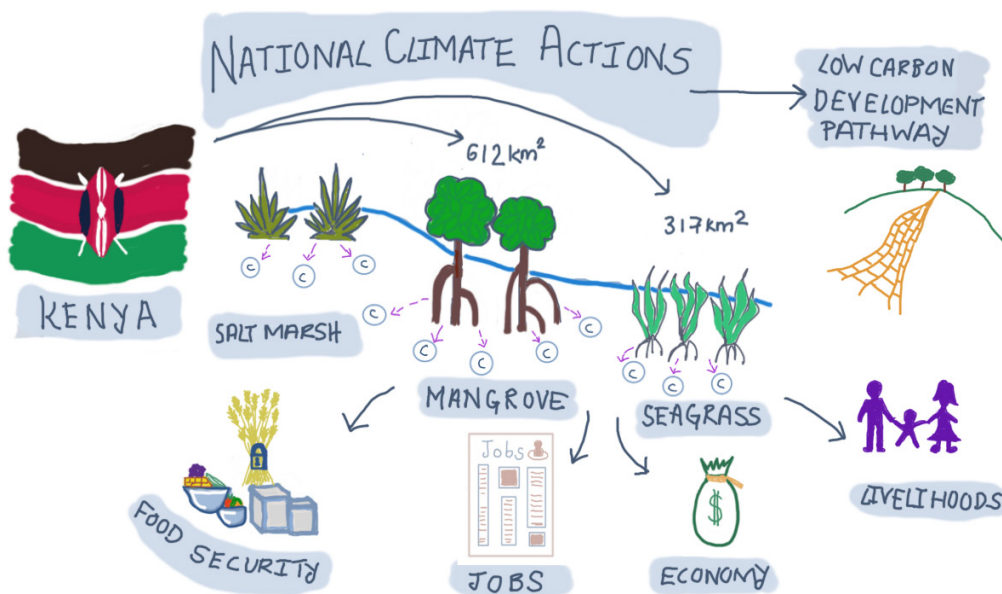


Figure 1:
Kenya's
blue carbon
ecosystems

¹ [National Mangrove Management Plan Summary For Policy makers Final 170628.pdf \(kenyaforestservice.org\)](#)

² Harcourt WD, Briers RA, Huxham M. 2018 The thin(ning) green line? Investigating changes in Kenya's seagrass coverage. *Biol. Lett.* 14: 20180227 <http://dx.doi.org/10.1098/rsbl.2018.0227>

³ [Kenya's First NDC \(updated version\).pdf \(unfccc.int\)](#)

The revision and updating of the 2020 NDC was achieved through a broad consultation that provided an opportunity to re-consider the potential for national actions in the light of new research and policy and increase national ambition. Kenya's target for GHG emission abatement has advanced from 30% to 32% by 2030, relative to the business as usual (BAU) scenario of 143 MtCO_{2e}, and the country now commits to meet 13% of the cost of implementing the priority climate actions stipulated in the commitments (with the other 87% conditional on external funding).

In addition, the new NDC document now includes a range of challenging ocean climate actions, such as the conservation and management of Blue Carbon ecosystems. To help relevant stakeholders understand the commitments that have been made, all those relevant to Blue Carbon are summarised in Table 1 (see overleaf), along with key stakeholders who need to engage with these commitments and some suggested actions that are implied by them.

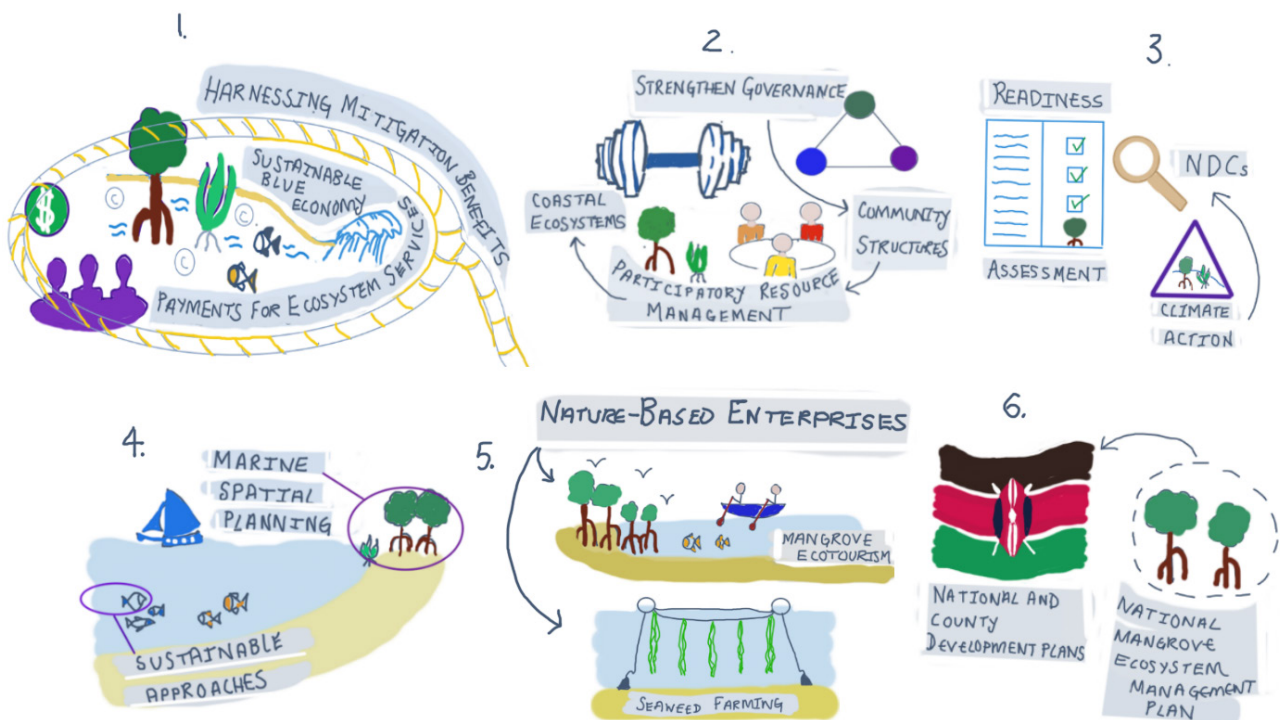


Figure 2:
Ocean climate headline commitments for Kenya

Table 1:
Ocean climate commitments incorporated into updated Kenya's NDC, with some actions that are implied by these commitments and the likely stakeholders involved in their implementation

CCD = Climate Change Directorate
 CDA = Coast Development Authority
 CGs = County Governments
 JKP = Jumuiya ya Kaunti za Pwani (Coastal Counties Economic Block)
 KFS = Kenya Forest Service
 KMFRI = Kenya Marine and Fisheries Research Institute
 KWS = Kenya Wildlife Service
 NEMA = National Environment Management Authority
 SDF&BE = State Department of Fisheries, Aquaculture and Blue Economy

Headline commitments	Suggested actions to achieve commitments	Key actors
Harness the mitigation benefits of the sustainable blue economy, including Payment for Ecosystem Services (PES) programmes for coastal carbon	<ul style="list-style-type: none"> i) Facilitate incorporation of seagrass into existing blue carbon offset projects; Mikoko Pamoja (MP; Gazi) and Vanga Blue Forest (VBF; Vanga) ii) Conduct BC PES feasibility assessment to identify other investible areas and initiate BC offset projects in these areas iii) Build capacities of key actors to access domestic and international climate funding opportunities 	<ul style="list-style-type: none"> i) Government agencies: KFS, NEMA, SDF&BE, KWS, KMFRI ii) Coastal County Governments/ Coastal Counties Economic Block (Jumuiya ya Kaunti za Pwani) iii) Local communities iv) Partners (non-state actors, private sector, international partners)
Enhance/strengthen governance of community structures in participatory resource management of coastal ecosystems	<ul style="list-style-type: none"> i) Identify existing community structures such as community based organisations (CBOs) involved in BC conservation activities ii) Facilitate the process of formalizing community engagement in management of BC ecosystems; e.g. community-managed marine areas (or locally-managed marine areas; LMMAs), the formations of community forest associations (CFAs), and strengthening of beach management units (BMUs) iii) Assess the capacity needs of the existing CBOs to formulate strategies for improvement and facilitate the formation of new CBOs in areas where they do not exist 	<ul style="list-style-type: none"> i) Government agencies/ departments: KFS, SDF&BE, KMFRI, Department of Gender and Social Services ii) Coastal CGs & Coastal Counties Economic Block (JKP) iii) Local communities iv) Partners (non-state actors, private sector, international partners)
Conduct blue carbon readiness assessment for full integration of blue carbon/ocean climate actions into NDCs	<ul style="list-style-type: none"> i) Conduct blue carbon scoping – review and collate available data on the status of blue carbon ecosystems; extent, carbon stocks, emission levels ii) Identify gaps in BC data iii) Develop a BC GHG reporting framework iv) Review the context of BC in the existing policy and legislative framework v) Strengthen research, communication and technology transfer to enhance data generation, monitoring and transparency 	<ul style="list-style-type: none"> i) Government agencies/ departments: CCD, NEMA, KFS, KMFRI, KWS ii) Coastal CGs & Coastal Counties Economic Block (JKP) iii) Academia iv) Local communities v) Partners (non-state actors, private sector, international partners)

Headline commitments	Suggested actions to achieve commitments	Key actors
Develop marine spatial planning and outline sustainable approaches	<ul style="list-style-type: none"> i) Collate data required for integration of BC into the Marine Spatial Planning process 	<ul style="list-style-type: none"> i) Government agencies/ departments: KFS, SDF&BE, KMFRI, KWS, CDA ii) Coastal CGs & Coastal Counties Economic Block (JKP) iii) Local communities iv) Partners (non-state actors, private sector, international partners)
Promote and expand opportunities for nature-based enterprises, including seaweed farming and mangrove ecotourism	<ul style="list-style-type: none"> i) Identify nature-based enterprise opportunities relevant for each conservation area (CA) as defined in the NMEMP ii) Identify existing initiatives in each conservation area iii) Assess the challenges facing existing initiatives iv) Develop mechanisms for initiating nature-based enterprises in potential CAs 	<ul style="list-style-type: none"> i) Government agencies/ departments: KFS, SDF&BE, KMFRI, KWS, CDA ii) Coastal CGs & Coastal Counties Economic Block (JKP) iii) Local communities iv) Partners (non-state actors, private sector, international partners)
Integrate the use of nature-based solutions, including implementation of the national mangrove ecosystem management plan (NMEMP), into national and county development plans	<ul style="list-style-type: none"> i) Identify opportunities for mainstreaming NbS into development plans at both levels of government ii) Customise and integrate NMEMP programs in to County Integrated Development Plans (CIDPs) and relevant sectoral plans 	<ul style="list-style-type: none"> i) Government agencies/ departments: KFS, SDF&BE, KMFRI, KWS, CDA ii) Coastal CGs & Coastal Counties Economic Block (JKP) iii) Local communities iv) Partners (non-state actors, private sector, international partners)

Conclusion

The incorporation of these ocean climate actions into Kenya's updated NDCs 2020 is a significant milestone in the recognition of the role of the ocean sector in climate change intervention measures. More importantly, it provides opportunities to:

- i) Mainstream ocean climate actions into the key policy documents and strategic and sectoral plans through which the NDC targets are achieved.
- ii) Enhance the development of techniques and tools to assess BC ecosystems to generate and update data to help the progressive and full integration of ocean solutions into the climate change agenda.
- iii) Improve BC GHG estimations to help their incorporation into national GHG accounting and reporting.
- iv) Help communicate the value of BC ecosystems, at local and national levels, to raise awareness of their importance.

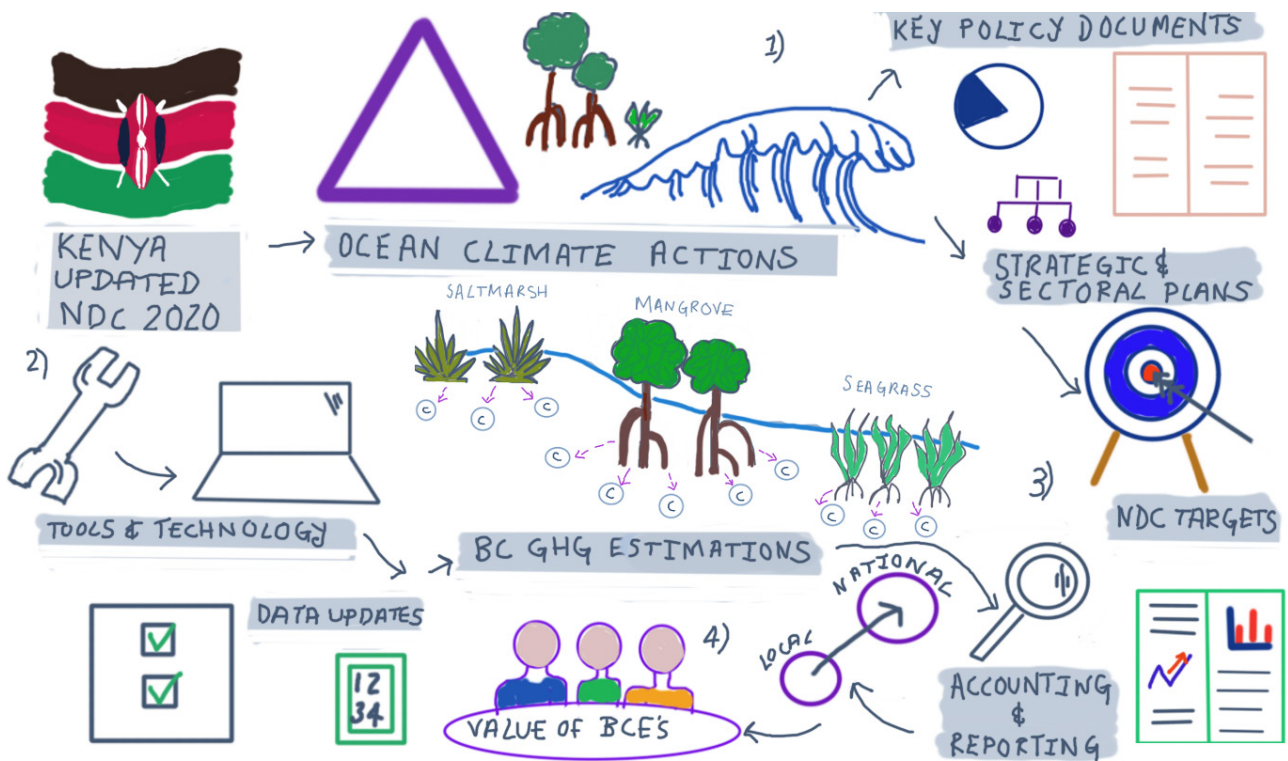


Figure 3:
Opportunities for incorporating ocean climate actions

Acknowledgements

This work was funded by grants from the UK Natural Environment Research Council Grant Ref: NE/S014128/1, The Nature Conservancy's Contract No. F104765 -KMFRI MANGROVE-09122019 as well as the Canadian International Development Research Centre Grant No. 109238-001. All illustrations by Amrit Dencer-Brown.

For further information please contact m.huxham@napier.ac.uk

Citation

Lang'at, J.K.S., Shilland, R., Dencer-Brown, A., Huxham, M., Kairo, J.G., Maina, G.W., Wanjiru, C., Owuor, M., Mungai, F., Nguu, J., Landis, E., Granziera, B. and Zganjar, C. (2021) Blue Carbon Solutions in Kenya's Climate Actions.