



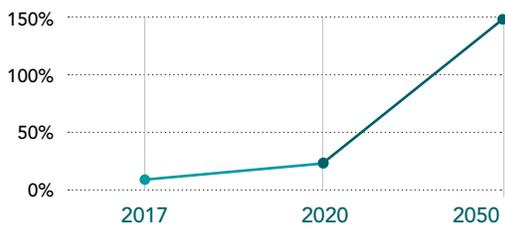
West Africa Coastal Areas Management Program

KNOWLEDGE SHEET 9C | POLITICAL

Preserving the Coasts of West Africa: What can Governments Do?

Engaging Public Institutions on Coastal Preservation

The potential increase in Coastal Flooding Fatalities (IPPC, 2014)



12 Million People in Coastal Regions in West Africa are at risk of hunger due to falling crop yields (UNPD, 2004)

Temperatures in West Africa set to rise above the global averages to 3°-6° per year



Cardiovascular disease in Coastal Regions will increase by 0-1.1% due to external heat (McMichael et. al., 2003)

Environmental Degradation estimated to USD 9 billion/year in West Africa



West Africa Marine Ecoregion is the most economically productive in the world (WWF, 2017)

- Temperatures in West Africa will continue to increase between 3°C and 6°C by 2100.
- Increased temperatures will increase the risk to droughts resulting in 321 million people in the 2050s and 391 million in the 2080s exposed to hunger due to falling crop yields (FAO, 2000)
- Without preservation of the West African marine and coastal environment, deaths attributed to coastal flooding will be between 9-20% by 2020 and by 144% by 2050 (IPPC, 2014) (PACJA. 2009. page 22).
- Apart from deaths attributed to extreme storms, cardiovascular disease will increase by 0 - 1.1% in coastal regions of West Africa due to extreme heat (PACJA. 2009. page 22).

The West African coastal region is rich in natural land resources. However, increased pressure on these resources from the rapidly growing coastal population has degraded these reserves. The effects are compounded by the region's vulnerability to climate shocks. Well-established natural resource management and improved territorial and regional governance are paramount to economic development, food

security, environmental preservation and the sustainable development of the region. Governments need to ensure that environmental integrity is secured, international and national commitments are met and the susceptibility of the environment is reduced so that vulnerable groups are fully supported. The introduction, implementation and the renewal of coastal ecology policies, laws, governance frameworks, and risk reduction programs, will ensure environmental integrity aimed at improving citizens' livelihood that directly preserves the coastal environment and positively affects climate resilience.

Challenges

The governments of West Africa are challenged to prepare, adapt and mitigate the climate change effects in the coastal areas. For example, in Ghana there has been a 10% reduction in rainfall, coupled with an increase in the average temperature of at least 1 degree across all six ecological zones (Sudan Savannah, Guinea Savannah, Forest Savannah Transition, Semi-Deciduous Rainforest, High Rainforest and Coastal Savannah) which has affected the ecological range of cash crops such as cocoa with increased failure of temperature sensitive staples such as maize. Coastal erosion and saltwater intrusion have continued to threaten the agricultural communities of Totopé and Fuvemeh through saltwater intrusion along the eastern coast of Ghana.

These impacts are further compounded by a number of institutional needs; West African countries suffer from insufficient institutional development. This results in a lack of technical knowledge and the absence of adequate legislation to contribute to preserving coastal environments. For example in Togo, mangrove deforestation has resulted from unregulated and unsustainable harvesting of timber products from the mangrove forests (Johnson et al., 2001, page 84). In Benin, Cote d'Ivoire, Ghana and Togo there has been an intensification of uncontrolled marine and coastal activities such as illegal fishing and sand mining, which has not been controlled through legislation or the enforcement of laws.

When national legislation is introduced there is fragmentation between actions taken by different government agencies and departments, there is little policy integration across sectors, with departments operating independently and often in conflict with one another, resulting in maladaptive or overlapping practices across the country.

For instance, in the construction sector, uncoordinated and fragmented actions and poorly regulated construction practices, coupled with inadequate land planning and impact assessments has accentuated the vulnerability and hindered preservation of the local coastal ecosystems. For example, the construction of the hydroelectric Nangbeto Dam on the River Mono in Togo has had an impact on the regime of the river flood patterns and sediment transportation, which has affected the supply of sediment to the coast of Togo and Benin causing increased erosion of the sandy coast line.



Mono Transboundary Biosphere Reserve (Benin/Togo), UNESCO/GIZ

Potential Solutions

Local, national and regional governments are the driving force to bring about preservation of the coastal and marine environments. Governments can take action through some of the following means:

- **Incorporate** water resources management into the overall management and coordination of the coastal zones. To prevent cases such as the impacts of the Nangbeto Dam.
- **Set-up** awareness campaigns to prevent mangrove forest destruction and start initiatives to plant endemic species adapted to local conditions to aid in the preservation of the coastal and marine environments.

For example in the coastal region of Sèmè-Podji in Benin the local government has organized a National Tree Day and Communal Reforestation Campaigns (UNDEF 2011, page 21).

- **Response** to coastal climate disasters through mobilizing coordinated units such as that from the National Disaster Management Organization (NADMO) in Ghana which is the national body mandated to identify, monitor, assess, prevent and respond to disasters. These relief items are usually distributed
- **Share** and update coastal observation and data collection mechanisms across countries and the region to manage and monitor any action related to coastal land reforms and the setting of protected land and marine protected areas. For example, the construction of a sea defense structure at Keta along the coast of Ada by the Ministry of Water Resources Works and Housing in Ghana is information that can be shared with other West African countries.
- **Develop** a micro credit system for Marine Protected Areas and for other environmental preservation activities (example can be taken from Senegal). Micro credit unions generate income while reducing pressure on the environment.
- **Build** capacity of coastal and marine park managers based on business planning, ecotourism development, engagement of local communities and assessment of management effectiveness.
- **Expand** the Regional Program for Coastal and Marine Conservation (PRCM) to include other West African countries and international conservation organizations and international financing partners (WWF, 2013) to help introduce regional agreements, legislation and conservation mechanisms.
- **Bring-in and scale up** tools and analyses such as Natural Capital Accounting (examples from Benin, Togo and Mauritania), Impact Evaluation Analysis, Project Economic Analysis, Environmental Degradation Cost Analysis, Environmental Impact Assessments, and Ecosystem Services valuation. These tools will aid in monitoring; projections and policy analysis of coastal ecosystems to help countries implement and use policy relevant accounts. They are also used to take stock and flows of physical natural resources and to understand the causal effects between programs/

policies and outcomes to assess the sustainability of investment projects and the optimal allocation of resources.

West African governments are also challenged to achieve their national policies, roadmaps and action plans which will impact on coastal communities. For example Ghana has the National Climate Change Master Plan Action Program for Implementation between 2015–2020 or Benin with the Agenda 21; Benin 2025; the Agreement on Sustainable Development, and several reforestation programs, as well as an Initial and Second National Communication document on climate change that are currently under implementation (MER, 2015, page 4). The Ivory Coast is challenged with implementing the Coastal Protection Action Plan and the National Adaptation Plan (NAP) for Climate Change. The governments across West African can share these national documents to drive further coordinated West African coastal preservation.



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BEST PRACTICE

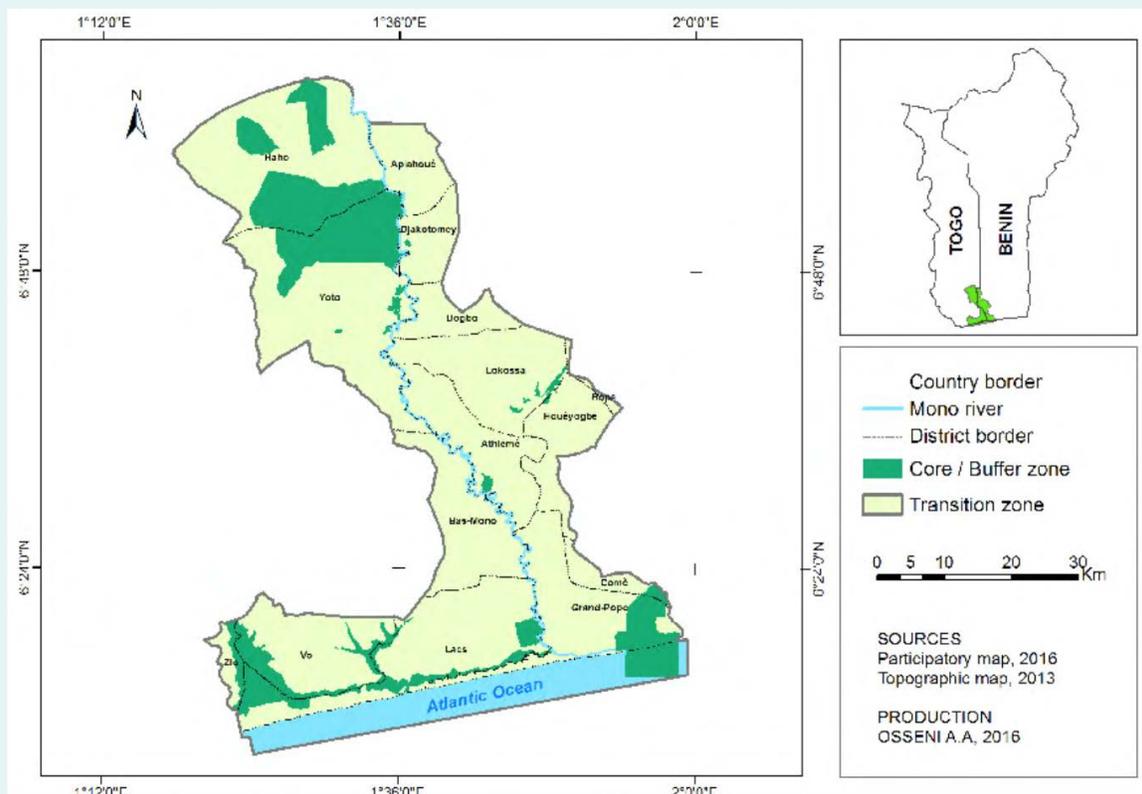
How the Mono Transboundary Biosphere Reserve (MTBR) is promoting sustainable natural resources management in Togo and Benin

Due to the unsustainable use of natural resources, many ecosystems in the Mono basin (Togo and Benin) were on the brink of destruction. The local populations are totally reliant on the ecosystem for their livelihoods (fishing, farming and hunting), and therefore the basin had to be preserved. The MTBR was set up (see figure) to conserve, restore and sustainably manage natural resources and ecosystem services of the region through a participatory manner and thus, to contribute to the well-being of local communities (GIZ, 2016). The following actions were undertaken to set-up and manage the MTBR:

- A bottom up approach to conservation was initiated
- Participation was sought for local and regional decision makers in mainstreaming ecosystem services
- An integrated management approach was set up for the recovery of fish populations and local endemic species
- Legal status was given to culturally important forests and lands
- A transboundary coordination group was created

Through the MTBR implementation, biodiversity loss has been halted, ecosystems are being restored and safeguarded, people are becoming aware of the values of biodiversity and the steps they can take to conserve and use it sustainably and governments are implementing plans for sustainable consumption and production.

The MTBR shows that the success of preservation depends mainly upon good analysis, spatial planning and collaboration alongside flexible decision-making processes coupled with governmental and community participation to determine the best environmental preservation policies and interventions.



Map outline showing the area of the MTBR (GIZ, 2016).

REFERENCES

- GIZ. 2016. *Mono Transboundary Biosphere Reserve (MTBR) A new protected area in the West African Dahomey Gap*. Retrieved April 2017. <https://www.cbd.int/cepa/cepafair/2016/presentations/poster-tool/bj-tg-giz-print.pdf>
- Hussein, MA (2007). *Cost of Environmental degradation. Analysis of the Middle East and North African Region*. Management of Environmental Quality. 19-3. <http://earthmind.org/files/coed/03-COED-Middle-East-North-Africa.pdf>
- Intergovernmental Panel on Climate Change (IPCC), 2014. *Climate Change 2014—Impacts, Adaptation and Vulnerability: Regional Aspects*. Cambridge University Press. Page 84.
- Johnson, D., Bliivi, A., Houedakor, K., Kwassi, A., Sena, N. 2001. *Le littoral du Togo: données et gestion intégrée*. Centre de Gestion Intégrée du Littoral et de l'Environnement. Université de Lomé, Togo, Guinea. <http://www.coastgis.org/01pdfs/johnson.pdf>
- McMichael AJ et al. *Climate change and human health: risks and responses*. Geneva, World Health Organization, 2003. <http://whqlibdoc.who.int/publications/2003/9241590815.pdf>
- MER (2015). *Climate Change Profile Benin*. Page 4. https://ees.kuleuven.be/klimos/toolkit/documents/684_CC_benin.pdf
- Pan African Climate Justice Alliance (PACJA). 2009. *The Economic Cost of Climate Change in Africa*. Retrieved (<http://www.christianaid.org.uk/images/economic-cost-of-climate-change-in-africa.pdf>).
- UNDEF. 2011. *Synthèse de la feuille de route communale*. Page 21. <http://www.mdscbenin.org/IMG/pdf/semepodji.pdf>
- UNDP; 2004; *Adaptation to Climate Change- Responding to Coastline Change in its human dimensions in West Africa through Integrated Coastal Area Management (ACCC)*
- WWF, 2013, *The West Africa Marine Ecoregion*. http://wwf.panda.org/what_we_do/how_we_work/protected_areas/pa4lp/wamer/

The West Africa Coastal Areas Management Program (WACA) is a convening platform that aims to assist West African countries to sustainably manage their coastal areas and enhance socio-economic resilience to the effects of climate change. The program also seeks to facilitate access to technical expertise and financial resources for participating countries.



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