



Policy Brief

Summary: This brief aims to draw the attention of leaders and policy-makers in West African coastal countries and regional institutions to the importance of mainstreaming climate change adaptation (responses to actual or expected climate and its effects to reduce harm or take advantage of opportunities) into coastal development planning. It highlights short- and long-term benefits of mainstreaming and provides recommendations for taking advantage of the National Adaptation Planning (NAP) process to mainstream adaptation effectively. Technical-level actors from coastal countries of the Economic Community of West African States (ECOWAS), including national focal points for the United Nations Framework Convention on Climate Change (UNFCCC), participated in a workshop to discuss these issues. This brief communicates workshop conclusions and recommendations in a focused and actionable format to leadership. Although the policy recommendations are based on the opportunity of the NAP in the context of the West African coastal zone, they may also be relevant for coastal countries in other regions.

THE IMPORTANCE OF WEST AFRICA'S COASTAL ZONES

Coastal development is critically important locally, nationally and regionally

The majority of the population (85%) and economic activity (93%) in ECOWAS member states is concentrated in the 12 coastal countries with only 49% of the area. ECOWAS coastal countries are at varying stages of development, with per capita GDP ranging from \$141 in Liberia to \$3,695 in Cape Verde.¹ Despite their differences, these countries share common development priorities such as ensuring effective transportation and communications systems as well as a reliable supply of energy. Coastal zones are critically important in these countries and are home to:

- 25-80% of each country's population, totaling more than 88 million people.²
- Each country's largest city, including four of the sub-region's largest cities: Lagos, Abidjan, Dakar and Accra.

- Major ports and industrial facilities, the main trade gateways to and from West Africa, accounting for more than \$150 billion annually in trade.³
- Agriculture value added ranging from 9-67% of GDP and tourism accounting for an average 2% of GDP, valued respectively at up to \$130 and \$7.3 billion annually.⁴
- Fisheries, with an annual catch of over 1.85 million metric tons accounting for more than \$600 million in exports and contributing to food security.⁵
- Ecosystem services provided by 48% of all mangrove areas in Africa and 45 Ramsar sites covering 7.5 million hectares.

In Senegal fishing provides 30% of total export revenue.⁶

- ⊕ Protecting shorelines and coastal infrastructure by absorbing wave energy
- ⊕ Slowing runoff, trapping sediment and filtering contaminants coming from inland
- ⊕ Acting as nurseries for a number of commercial fisheries.⁷

An estimated 5 million people in West Africa live between 0 meter and 3 meters above sea level. Major cities such as Banjul, Abidjan, Tabou, Grand Bassam, Sassandra, San Pedro, Lagos, and Port Harcourt are all situated at sea level and are highly vulnerable.⁸



THE COASTAL ZONES ARE HIGHLY VULNERABLE TO CLIMATE CHANGE

Climate change impacts are already being felt and are projected to intensify across the region. These impacts will cut across sectors in combination with existing non-climate stressors, like pollution or poorly planned development. See below for examples of possible impacts in West Africa.

Given these impacts, the need to consider climate change adaptation when planning coastal development is compelling. Mainstreaming requires a comprehensive and concerted effort involving stakeholders at all levels and from multiple sectors. In West Africa, it also involves trans-boundary and regional efforts to address common and shared priorities. Why make this effort, and how?

SEA LEVEL RISE

Sea level is expected to rise an average of 48 cm by 2100⁹ and, in West Africa, to result in:

- Accelerated coastal erosion
- Flooding of low-lying areas
- Increased elevation of storm surge as frequency and intensity of storms increases
- Salinization of soil and water
- Degradation and modification of ecosystems
- Changes in groundwater levels
- Infrastructure losses
- Involuntary migration
- Reduced economic activity
- Increased health risks

The average rate of erosion in Ghana is already 1.58 meters/year¹⁰

OCEAN PH AND TEMPERATURE CHANGES

Ocean surface pH and temperature changes are expected to increase acidity by .06 to .32 and surface temperatures by 0.6 to 2°C by 2100 and result in:¹¹

- Changes in the marine and estuarine habitat causing altered plant and animal species distribution and survival
- Contribution to increased frequency and intensity of storms and flooding

In Senegal, sardinella, the most important economic and food security species, is already adjusting its range northward due to warming water temperatures¹²

RAINFALL CHANGES AND INCREASED TEMPERATURE

More intense and frequent extreme rainfall, increased mean temperature of > 2°C and more frequent hot extremes by 2100¹³ in both coastal and inland zones can result in changes in ground- and surface-water resources and lead to:

- Water scarcity
- Land and wetlands degradation
- Decreased agricultural and aquaculture production
- Population displacement (including accelerated migration to coastal cities)
- Conflicts between humans, sectors, and countries
- Adverse effects on economic competitiveness

WHY MAINSTREAM?

Benefits of mainstreaming or integrating adaptation into coastal development planning

- Promotes strategic investment of limited development resources to implement effective, pro-active, preventive measures, and avoid “maladaptation” and less effective, reactive measures. For example, zoning new infrastructure away from areas vulnerable to sea level rise can help to reduce the need for costly, less effective measures such as sea defense walls in the future.
- Ensures adaptation efforts support and are not separate from broader coastal development goals.
- Encourages cross-sectoral dialogue and engagement to understand linkages across sectors and respond to shared climate change concerns. For instance, water resources are a necessity for most coastal sectors, such as tourism, agriculture, and aquaculture. An integrated approach facilitates understanding of how impacts on the water sector may affect these other sectors, as well as potential cross-sectoral benefits of adaptation actions.
- Enables early and strategic institutional capacity strengthening and public awareness for national adaptation planning. Regional efforts in West Africa could provide an example of effective climate-resilient development planning for the global community:
 - ⊕ Advising and learning from others
 - ⊕ Leveraging available external resources for support
 - ⊕ Improving national and regional negotiating capacities and positions on transboundary and global issues.

THE NATIONAL ADAPTATION PLANNING (NAP) PROCESS AS AN OPPORTUNITY

The NAP process was established under the UNFCCC to facilitate the identification of longer term adaptation needs and development and implementation of strategies to address these needs.

- Rooted in national development priorities and integrated within institutional frameworks and budgets, can move forward fully supported and institutionally integrated within the country development agenda.
- More than a plan, an iterative and adaptive process owned by the country that requires a clear and ongoing commitment. The process is an effective way to build institutional capacity and improve enabling environments.
- Enables countries to address short-term risks even as they consider medium- and long-term adaptation needs (20-25 years). Influences ongoing development planning, to ensure decisions made today promote short- and long-term resilience, and do not increase future vulnerability. An example is choosing crops that are resilient to current climate variability as well as longer-term climate change.
- Draw on the lessons learned through the process of developing National Adaptation Programs of Action

(NAPAs), which focused on identifying immediate adaptation needs and short-term responses.

- Provides an opportunity to integrate adaptation into sectoral planning, thereby addressing climate risks in development plans and ensuring development in the face of climate change. Also helps to promote multi-/cross-sectoral planning.
- Support for the NAP process is available through a number of multilateral and bilateral donors.

MAINSTREAMING ADAPTATION INTO COASTAL ZONE DEVELOPMENT

Below are recommendations for West Africa based on results from the June 2013 workshop as well as lessons learned through NAP processes in other regions and various efforts to address and integrate climate considerations.

Policy recommendations at the country level

- Mainstream climate change into coastal planning and policymaking
 - ⊕ The NAP process presents an opportunity to integrate climate considerations into coastal development and sectoral planning at national and subnational levels. Mainstreaming enables a more coherent, systematic approach to climate-resilient coastal planning, rather than a fragmented approach that centers on a collection of siloed adaptation activities. This helps to ensure that adaptation efforts support countries' broader long-term development goals.
 - ⊕ By integrating climate considerations into the mandates of a wider set of institutions that work on coastal issues, mainstreaming also helps to illuminate cross-sectoral impacts of and responses to climate change, both within coastal zones as well as between coastal zones and inland areas.
- Leverage existing processes and resources
 - ⊕ Rather than developing a separate parallel process, a mainstreamed approach allows countries to build on, leverage, and improve existing coastal planning and policy processes and resources.
- Involve diverse stakeholders
 - ⊕ Because the NAP is about mainstreaming climate change, it is important that diverse stakeholders are involved throughout the process, and that the NAP process is not confined to one ministry or agency. This will entail bringing together different sectors as well as different groups, such as national planning commissions, finance ministers, researchers, technicians, local community members, and the private sector.
- Build ownership of the process
 - ⊕ A successful NAP process requires the support and buy-in of stakeholders. Integral to this is cultivating a

sense of ownership among stakeholders, particularly decision-makers and sector experts. To facilitate engagement and ownership, stakeholder inputs need to be collected and integrated into the process, and stakeholders' roles to be clearly defined and relevant to their mandates.

- Ensure continuity of the process
 - ⊕ Institutionalizing the NAP process through a decree or law may help to ensure that the process, which is long-term and ongoing, is not set back due to political change.
 - ⊕ Developing systems that enable continuity at the leadership level can help to ensure that information is shared, accessible, maintained within the process, and not lost as individuals leave. This can help to promote linkages between past and future activities, and ensure that the NAP process continues uninterrupted.
- Link strategy to implementation
 - ⊕ In order for a NAP to move beyond the strategy stage, it is necessary to consider implementation from the outset. An important aspect of this is identifying needed resources (e.g., funding, capacity) and means to secure them. Another critical aspect is developing a transparent and accountable monitoring and reporting platform to gauge progress, and inform policy and make program adjustments based on new information and conditions.

Policy recommendations at the regional level

- Map existing regional capacity
 - ⊕ A number of regional institutions have the capacity to support specific aspects of the NAP process. Tapping into this capacity requires that countries understand what capacity exists and how it can help them in their NAP processes. A mapping of regional capacity and initiatives that is current and periodically updated is needed for countries to identify regional organizations that can help them meet their NAP needs.



Quai Palmarin Ngallou, a village on Senegal's "Petite Cote," in 2011. Photo by Jim Tobey

- Promote dialogue between countries and regional institutions
 - ⊕ Regular dialogue between the coastal countries and the regional institutions enables countries to articulate their needs directly to regional institutions. With this understanding, regional institutions can develop products and services that more effectively meet countries' needs.
- Coordinate regionally
 - ⊕ Many coastal countries face similar climate change impacts. In some cases, the same impacts can have transboundary consequences. Regional coordination of high-level leadership (e.g., Ministries of Finance) and harmonization of policies can help to avoid maladaptation and promote coordinated adaptation actions that support a shared vision of long-term regional development.
- Share data and information
 - ⊕ Coordinating research and sharing data and information among the coastal countries can facilitate identifying and filling of regional gaps in understanding transboundary impacts as well as country-to-country learning in addressing similar climate change impacts. This can also help to promote more targeted use of limited resources regionally. However, this may require establishing regionally applicable protocols for data collection, distribution, and maintenance.



Lagos, Nigeria

LEG. 2012. National adaptation plans – Technical guidelines for the national adaptation plan process. LEG. Bonn, Germany. (http://unfccc.int/essential_background/library/items/3599.php?such=j&symbol=FMCC/GEN/288%20E#beg)

USAID. 2014. Climate-resilient development: a guide to understanding and addressing climate change. USAID. Washington, DC. (www.usaid.gov/climate/adaptation/guidance-and-resources)

USAID. 2013. West Africa Coastal Climate Change National Adaptation Planning Workshop Proceedings. USAID. Washington, DC.

LDC. 2012. Best practices and lessons learned in addressing adaptation in the least developed countries through the national adaptation programme of action process. Volume 1. LDC. Bonn, Germany. (http://unfccc.int/essential_background/library/items/3599.php?such=j&symbol=FMCC/GEN/263%20E#beg)

LDC. 2012. Best practices and lessons learned in addressing adaptation in the least developed countries through the national adaptation programme of action process. Volume 2. LDC. Bonn, Germany. (http://unfccc.int/essential_background/library/items/3599.php?such=j&symbol=FMCC/GEN/278%20E#beg)

Policy recommendations at the country and regional levels

- Adopt an approach to adaptation that looks beyond individual sectors and geographies
 - ⊕ Development priorities are multi-sectoral, and coastal and other economic sectors are closely linked. For instance, in West Africa there are strong interdependencies among key sectors such as agriculture, fisheries, water, energy, tourism, and integrated coastal management. Taking an approach that considers impacts across sectors and geographies will help to avoid sectoral adaptation actions that have unintended consequences in other sectors as well as adaptation actions in one location that may have adverse effects in a different or broader geography.

RESOURCES

LDC Expert Group (LEG). 2013. The national adaptation plan process – A brief overview. LEG. Bonn, Germany. (http://unfccc.int/essential_background/library/items/3599.php?such=j&symbol=FMCC/GEN/283%20E#beg)

LEG. 2013. NAP poster. LEG. Bonn, Germany. (http://unfccc.int/adaptation/workstreams/national_adaptation_programmes_of_action/items/7279.php)

NOTES

- 1 World Bank. (2012). Available at: <http://data.worldbank.org/indicator>.
- 2 World Bank. (2012) and Country Fact Sheets prepared for this workshop.
- 3 The World Bank (2012) using a conservative estimate of 50% import/export value through ports.
- 4 United Nations Economic Commission for Africa (UNECA). (2012). *Harnessing Agricultural Potential for Growth and Development in West Africa*. United Nations Economic Commission for Africa.
- 5 Tall, Dr. Amadou. (2007). *Global Fish Trade Overview and Fish Marketing in ECOWAS*.
- 6 United Nations Environment Programme (UNEP). (2013). *Green Economy and Trade: Fisheries and Aquaculture*. United Nations Environment Programme.
- 7 The Ramsar Convention on Wetlands at http://www.ramsar.org/cda/en/ramsar-home/main/ramsar/1_4000_0_
- 8 USAID/ARCC. (2013). *Background Paper for The ARCC West Africa Regional Climate Change Vulnerability Assessment*. African and Latin American Resilience to Climate Change Project. Tetra Tech, ARD.
- 9 By the 2081-2100 period relative to the 1850-1900 period. IPCC. (2013). *Working Group 1 Contribution to the 5th Assessment Report of the Intergovernmental Panel on Climate Change, Summary for Policymakers*.
- 10 Wiafe, George. (2013). Workshop presentation.
- 11 By the 2081-2100 period relative to the 1850-1900 period. IPCC. (2013). *Working Group 1 Contribution to the 5th Assessment Report of the Intergovernmental Panel on Climate Change, Summary for Policymakers*.
- 12 Deme, M., Thiao, D., Fambaye, N.S., Sarre, A. and H.D. Diadhiou. 2012. *Dynamique des Populations de Sardinelles en Afrique du Nord-Ouest: Contraintes Environnementales, Biologiques et Socio Economiques*. USAID/COMFISH Project, Senegal, University of Rhode Island, Narragansett, RI 125pp.
- 13 IPCC. (2013).