Intermodal Africa 2024

Port of Banjul Approach to Climate Resilience

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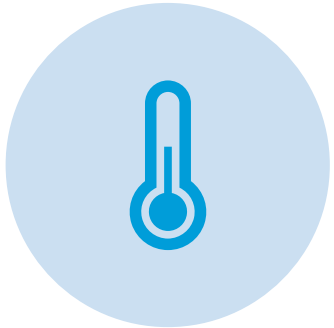
Theme



ENHANCING REGIONAL CLIMATE ACTION THROUGH THE 2030 CLIMATE SOLUTIONS IN SUPPORT FOR STRONGER NDCS 3.0

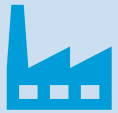
FINANCING CLIMATE ADAPTATION AND RESILIENCE IN AFRICA

CASE STUDY OF THE GAMBIA PORTS AUTHORITY

Introduction

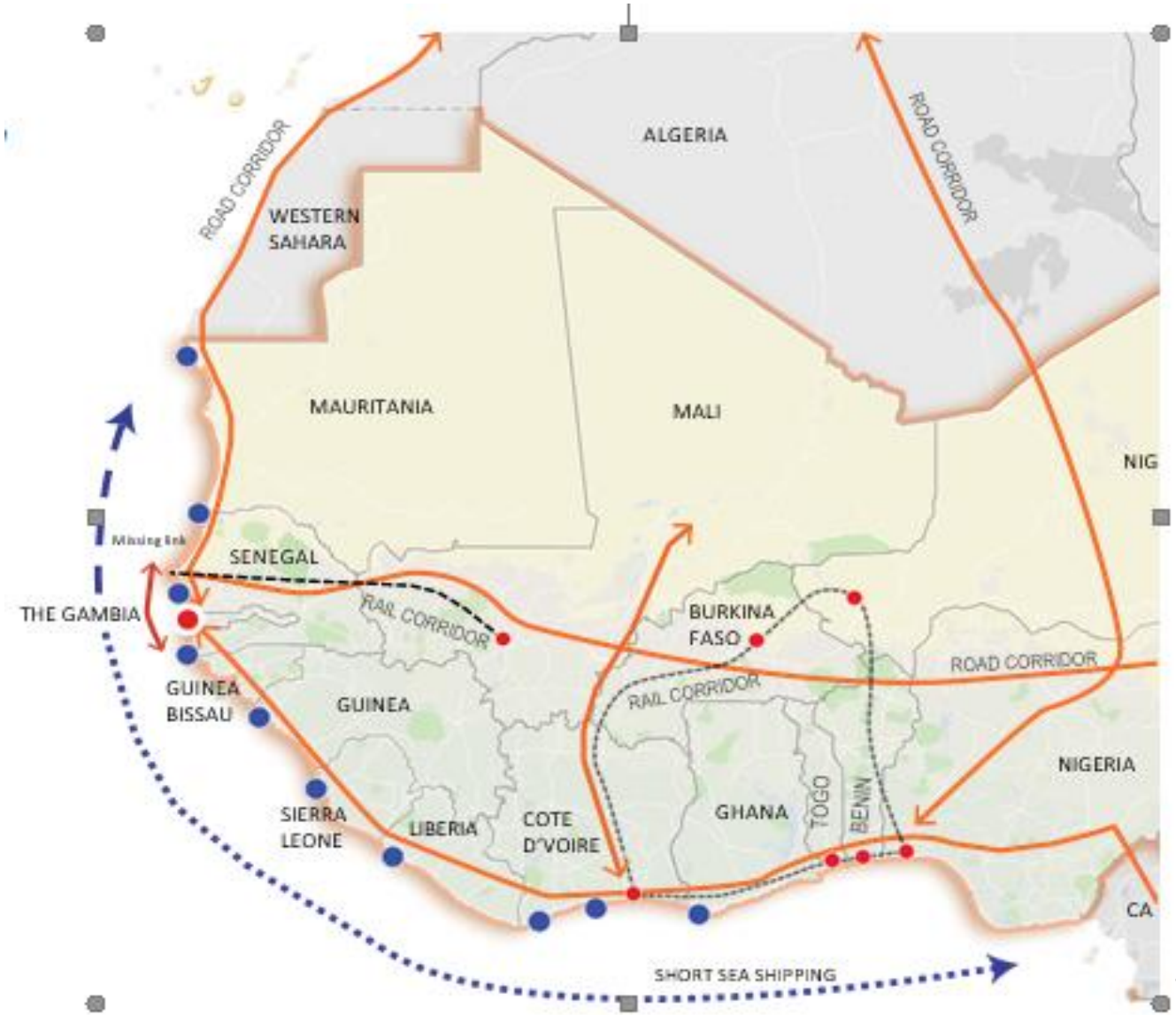
It remains incontrovertible that maritime transport accounts for more than 80% of trade and the exchange of goods between countries globally.

Global maritime transport also continues to experience unprecedented changes, which poses increasing demands for ports and logistics services providers to improve performance and lower overall costs along the whole value chain.



These challenges are becoming more prevalent with evolving circumstances globally such as slowdown in production capacity in the main markets (China and the US), access to capital for infrastructure development, population growth, environmental impact and climate resilience, safety and security, digitalization, increasing freight rates, industrial relations and port community relationships.

Positioning Banjul In The West Africa Region



Port of Banjul Climate Resilience Experience

- The Port of Banjul realized that climate change-related impacts could potentially pose significant challenges for the Port to maintain its relevance as an important logistics platform for both domestic and sub regional trade. This is also true if the country could leverage the advantages of the River Gambia, navigable up to 360 km inland to enhance its attractiveness for connectivity to third countries such as southern Senegal, Guinea, Guinea Bissau and land-locked Mal and beyond.
- Adjacent to the Port area are the mangroves of the Tanbi Wetland Complex, protected under the RAMSAR Convention, and which play an important role in flood mitigation for the capital City Banjul, and its infrastructure systems, particularly the Bund road providing access to the Port.
- In addition, the wetlands with their natural ability to store carbon in their vegetation and soils, are known as blue carbon ecosystems, which help reduce carbon dioxide concentrations in the atmosphere, hence contributing to climate change mitigation.

cont…

- It is with a view to mitigating these risks that the GPA took the decision to mainstream climate resilience in the current Port of Banjul Expansion Project. The Port Expansion Project, which aims to increase the capacity of the Port to cater for increased demand posed on the port facility, envisages key infrastructure components, which are as well climate resilience conscious:
- **Extension of an existing jetty** for increased ships accommodation
- **Complete and widen the Bund Road** main access road leading to the Port area
- **Construction of a new Head Office** away from the main operational zone and that of a more climate resilience and smart structure.
- Acquire Residential Property for Construction of a **new Container Terminal, with a greener port ecosystem in mind.**
- **Relocate the Banjul Ferry Terminal** for a more climate freely terminal.
- **Digitalisation of Port and Terminal Operations** for service efficiency and a modern port with technologies to contributes towards IMO Port Decarbonisation initiatives and NDCs.

Climate Resilience Actions

Certain Development Finance Institutions (DFIs) such as AfDB, World Bank and EIB expressed willingness to finance some components of the Port expansion project. It was therefore in compliance with AfDB Climate Safeguards System (CSS) that the climate change risks to the project needed to be evaluated and adaptation measures developed to address the potential impacts of physical climate risks the project is exposed to.

The assessment was extended to include the Tanbi Wetland Complex due to its flood mitigation benefits, which are threatened by climate change.

Through the Africa Adaptation Acceleration Program (AAAP), the Global Center on Adaptation (GCA) provided technical assistance to mainstream climate adaptation to the Port of Banjul 4th Expansion Project.

This resulted in the appointment of an international consulting firm to deliver: 1) High Resolution Climate Risks Assessment and 2) Develop Adaptation and Resilience Options and a corresponding Investment Plan.

As an Authority, we are committed to making sure that our future strategies has climate resilience in the forefront. This includes investing in smart infrasture for a greener port and adopt a working culture that a climate change conscious.

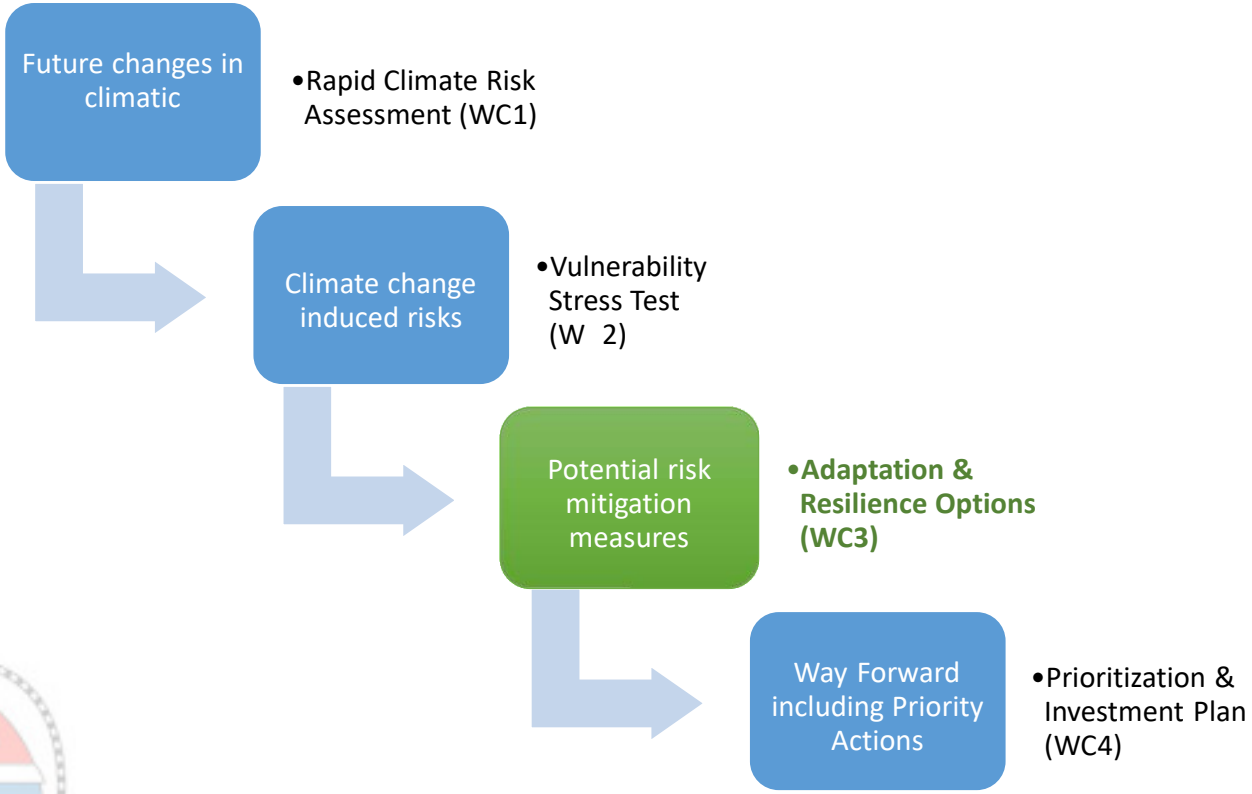
Port Infrastructure Expansion Scope

Consultancy Approach

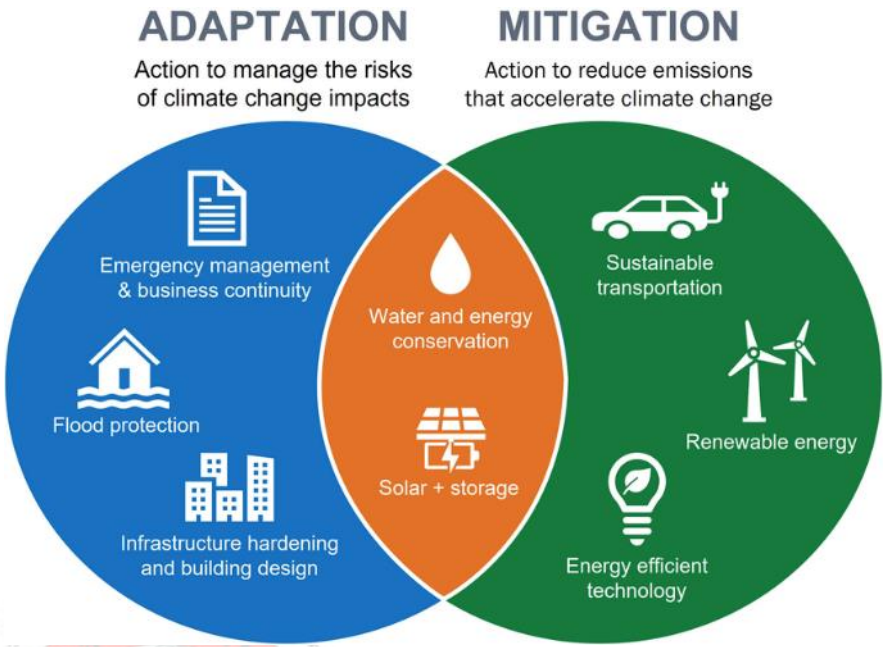
The approach to the consultancy exercise involved the identification and appraisal of climate adaptation and resilience options for the Port of Banjul and the Tanbi Wetland Complex, as well as the associated investment planning.

This was conducted with a methodology that resulted in a Rapid Climate Risk Assessment and Vulnerability Stress Test to determine the key climate hazards for the area, and quantified the risks to the port and wetland, respectively.

Consultancy Methodology



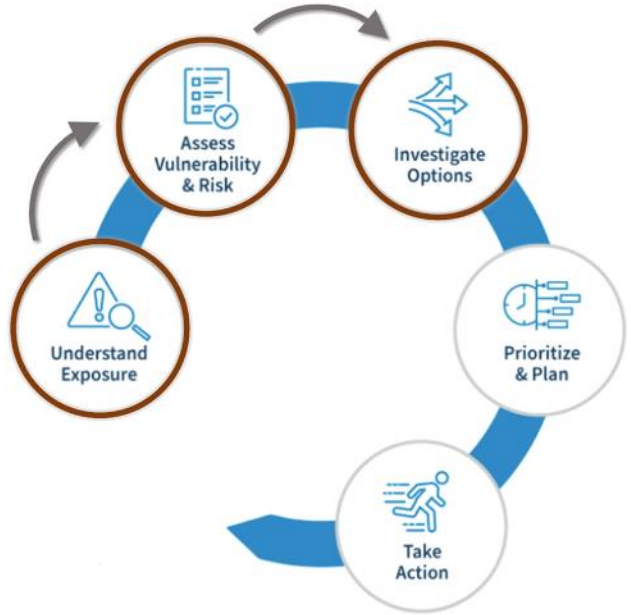
Identified Climate Risks



- Economic risks were identified and quantified as being the physical climate risk on the assets or operations in terms of economic damage and/or downtime to the port.
- The majority of economic risks to the Port were associated with land-side and marine operations, largely due to increased downtime occurrences.
- Physical risks were also identified that may result in structural damage to assets, although relatively minor if proper maintenance is carried out to ensure that the assets continue to remain in good condition throughout their useful life.
- Hazards that count for the largest percentage of total economic risk value to the Port include sea level rise (SLR), extreme temperature, and extreme precipitation.

Climate Resilience Steps

Climate Hazards → Risks to Port & Wetland → Adaptation Options → Investment Plan



Our Climate Adaptation Measures

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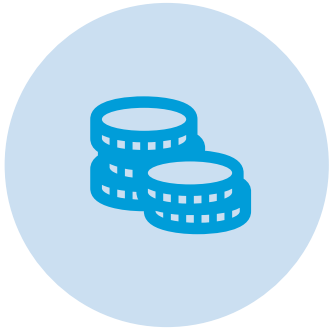


SOCIAL AND ECONOMIC ASPECTS

INSTITUTIONAL ARRANGEMENTS

Our Climate Adaptation Measures…

A set of prioritized and complementary adaptation measures is proposed that together provide an integral and broad package to improve climate resilience of the Port of Banjul The appraisal and economic modelling show the importance and viability of these measures with significant benefits in terms of the prevention of downtime and subsequent improvement of port revenues.

The capital investment marine structures involves a cost overrun of 15% to ensure that the facilities to be constructed remain resilient to the identified climate risks.

These increase in the cost estimates of the infrastructure works relate to physical measures such as the raising height of the jetties and container terminals with proper storm water drains to a level to prevent flooding and the installation of a monitoring system.

Impact of the Climate Resilience Measures

The adaptation measures reduce the total climate risk by about 50%. This is a very significant reduction, albeit considerable residual risk remains. This is normal in port operations where climatic conditions from time to time impact operations by its nature.

The following key takeaways for project implementation are noted for each of the elements in the Port of Banjul expansion Project:

- **Bund Access Road:** To ensure a reliable connection between the Port and hinterland the effects of extreme temperatures, precipitation and flooding on the Bund Road need to be reduced.
- **Land Terminal:** To prevent damage and continue normal operations the Land Terminal must be resilient to flooding and equipment need to be upgraded to handle extreme temperatures.
- **Marine Terminal:** While the asset design is climate resilient, extra care needs to be taken in the maintenance and operation of the assets and equipment.
- **Tanbi Wetland Complex:** The restoration of the Tanbi Wetland Complex is necessary, not only for its flood protection role for the Bund Road, but also for its important socio-economic role in the Greater Banjul Area.
- **General**: To ensure efficient operations, monitoring, maintenance, staff wellbeing and education and collaboration between key stakeholders is critical

ESMP and RAP for New Projects

The Port Envisages the construction of a new deep seaport in the southern coastline of the country, which will be guided by standard practice in terms of the relocation of residents and restoration of climate affected areas.

Thus, ESMP and RAP will be prepared to include the following tasks.

Socio Economic Survey Census - of all the businesses, families, affected properties, public infrastructure, and economic trees in the project influence zones. Provide the results of census, asset inventories, natural resource assessments and the socio-economic profile of the PAPs.

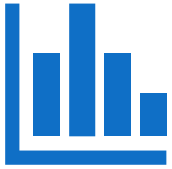
Review of the Legal Framework - describe the relevant National laws and operational safeguard policies that apply to resettlement. Describe entitlement policies for each category of impact and specify that the resettlement implementation will be based on specific provisions of agreed RAP. Describe method of valuation used for affected structures, economic trees, land and other assets and prepare an entitlement matrix.

ESMP and RAP for New Projects…

Identify Resettlement Sites: Assess whether the displaced PAPs will require community relocation sites and if yes involve the PAPs in identifying sites and determining the relocation process and indicate their acceptance. Demonstrate how the area is adequate for relocation in terms of capability and potential. Describe the mechanisms for procuring, developing and allotting resettlement sites including awarding of title or use rights. If they will be resettled outside, provide consultation with host communities, identify likely impacts and appropriate mitigation and benefit measures.

Develop a Livelihoods Restoration Plan: Assess impacts on income and livelihoods and determine the compensation entitlements sufficient to restore income streams for each category of impact and PAPs. Spell out the restoration strategies for each category of impact and describe the institutional, financial and technical aspects of the restoration plan. Explain how these vary with the area of impact. Describe the process for monitoring the effectiveness of the income restoration.

ESIA



CONDUCT A SOCIO ECONOMIC SURVEY AND CENSUS

APPROVED AND PUBLISHED ESIA REQUIRED AS CONDITION PRECENT FOR FUNDING APPLICATION

EPC CONTRACTORS ALSO REQUIE RESULTS OF ESIA TO ASSIST IN ENGINEERING DESIGN OPTIONS

Environment and Climate Resilience

- Sustainability and environmental concerns are becoming more important. With the Paris Agreement and the 2030 Agenda for Sustainable Development, ports are being forced to reduce carbon use and care more for the environment. Nowadays, ports cannot be focused only on economic goals but also environment and social responsibilities must be integrated into business plans.
- Cargo handling operations at ports exposes personnel to risks of injury as it involves working onboard ships, operating large equipment, being around heavy machinery and within environments that are prone to emissions.
- A large part of becoming a Smart Port is not only the aspect of going digital, but it also incorporates going green. With the use of advanced technologies, ports are adopting new forms of energy. Strategies can include developing green energy sources that can even provide green energy to entire Smart Port city complexes, for example, offshore wind farms.
- As the world is concerned with adopting healthy environmental policy for ports, the shipping industry is also going green and adopting new technology to lower emissions from ships.
- IMO revision of MARPOL Treaty Annex VI to enter into force on 1st November 2022 requires sis to reduce carbon emissions and this will be reviewed for efficiency in 2026.
- Port infrastructure projects, particularly in Africa, should be preceded by the preparation of ESIAs to ensure climate risk assessment and adaptation measures. The identification of risks associated with sea level rise and increased precipitation should be followed by mitigation measures incorporated in the design of new facilities.

The Introduction of the Declaration

- This was a statement made by the then President Sir Dawda Kairaba Jawara (DK) in 1977, aimed at calling attention for the need to protect The Gambia's quickly vanishing flora and fauna.

"It is a sobering reflection that in a relatively short period of our history most of our larger wildlife species have disappeared together with much of the original forest cover. The survival of the wildlife still remaining with us and the setting aside of protected natural habitats for them is the concern of all of us.

It would be tragic if this priceless natural heritage, the product of millions of years of evolution, should be further endangered or lost for want of proper concern.
This concern is a duty we owe to ourselves, to our great African heritage and to the world.

Thus I solemnly declare that my Government pledges its untiring efforts to conserve for now and posterity as wide a spectrum as possible of our remaining fauna and flora”

Conclusion

Ports are faced with emerging challenges in an ever-changing world. Developing countries generally perform worse, with higher costs and lower connectivity – a consequence of diseconomies of scale, greater distances from overseas markets, and lower levels of digitalization. Smaller and most vulnerable economies may need support to mitigate the increased costs and lower connectivity.