

SUSTAINABLE DEVELOPMENT STRATEGIES FOR SUB-SAHARA AFRICAN PORTS

Chinedum Onyemechi

*Department of Maritime Management Technology
Federal University of Technology Owerri, Imo State, Nigeria
E-mail: conyemechi@yahoo.com*

ABSTRACT

This study adopted literature review to evaluate sustainable development strategy that regulates the distributive flow of freight in an allocative manner across the road, rail and short sea shipping sector. It was revealed that a planned freight distributive strategy will ensure the sustainable development of the entire transport sector. Suggested sustainable development options for the sub-Saharan African port hinterland include the Pan African land bridge linking Mombasa in Kenya and Dakar in Senegal West Africa to be funded by the governments of West, Central and East Africa, the development of short sea shipping along the coastal waters among others.

Keywords: *Sustainable development, port, Africa, Intermodal, short sea shipping.*

INTRODUCTION

Sub-Saharan African ports have adopted several strategies to meet up with other world ports in the journey of development. The foremost among these strategies has been the concessioning of this operational arm of most of these ports to the private sector. It is believed that through such concessioning the highest level of efficiency will be incorporated into the sector in the coming years. However, the post concessioning experience of most sub-Saharan African ports have shown that a lot more is still required from the government in terms of regulation and control. Excessive congestion, pollution resulting from idling of trucks outside the port gates and other non-sustainable development practices has been the order in sub-Saharan African ports. A sustainable road-map of development is seriously required at this point to enhance an orderly development of sub-Saharan African ports.

At present, the ports of this region, the port authority is still retained side by side with the concessioned ports. Having concessioned the operational role to the private sector, the port Authority in this zone ought to elongate its knowledge base such that it can exercise some level of control over the concessioned ports especially at the planning level. The distribution of import goods across the hinterland in the sub-Saharan region will affect the competitiveness of ports in this region. Most of the big ports of the region like Douala, Lagos, Port-Harcourt, Djibouti and Mombasa lack interconnectivity across the hinterland. The dry port/inland depot innovation to date is still very inefficient owing to the inefficiency of the rail system. Rail connectivity across sub-Saharan African hinterland will open up the region to trade

and will reduce the cost of goods in the sub-region. To achieve this, there must be an economic cooperation between West Africa, Central Africa and East Africa towards the achievement of a land bridge across the African continent. This will create a common market across sub-Saharan Africa and will expose the rich hinterland of Africa to serve one common market comparable to the European Union.

Sub-Sahara African ports constitute ports in the range of Cape Verde, off Senegal, down through Dakar, Senegal across West Africa and down to Central African ports of Lobito, Namibe in Angola on the West and Central African side; and East African ports in the range of Djibouti, Mombasa in Kenya, and Dar es Salaam in Tanzania. Together, the two port ranges cut across the African continent connecting the entire sub-Saharan African sub-region to the Atlantic and Indian Ocean. A trans-African highway linking the port of Mombasa in Kenya and the port of Dakar in Senegal have for long been used as a pointer to intercontinental hinterland development. However, road transport development is grossly insufficient for any meaningful freight transport inclusive of sea freight. Only a land bridge that will link the two port cities with rail connectivity can meaningfully affect trade development within the sub-region. Besides, a United African continent is required to maximize trade in the sub-Saharan African sub-region.

SUSTAINABLE TRANSPORT DEVELOPMENT

Sustainable transport development has been defined as one that:-

- (a) Allows the basic needs of individuals and societies to be met safely and in a manner consistent with human and ecosystem health, and with equity within and between generations.
 - (b) Is affordable, operates efficiently, offers choice of transport mode and supports a vibrant economy; and.
 - (c) Limits emissions and waste within the planets' ability to absorb them, minimizes consumption of non-renewable resources, limits the consumption of renewable resources to the sustainable yield level, reuses and recycles its components and minimizes the use of land and the production of noise.
- Macbeth (2004)

The above definition was propounded by Centre for Sustainable Transportation in Canada. Several other definition of sustainable transport exists, but foremost among them is the definition given by the World Commission on Environment and Development (Brundtland Commission, 1987). The commission defines sustainable development as the development that meets the needs of the present without compromising the ability of future generations to meet their own needs. In this sense, then, sustainable transport development can be seen as the transport system that meets the needs of the present without compromising the ability of future generations to meet their own transport needs.

To date, development strategies adopted by sub-Saharan African ports have to a great extent neglected the elements derivable from sustainable transportation systems. The most current development strategy that just recently got adopted by

major sub-Saharan African ports is that of concessioning. It is note worthy to say at this point that the concessioning of port complexes to such corporations as Hutchingson Port Holdings (HPH) and A.P. Moeller etc have lunched these sub-Saharan African ports into what may be rightly described as fourth generation ports. The UNCTAD definition for fourth generation ports accommodates ports that are physically separated, but linked through common operators, or through a common administration as fourth generation ports. UNCTAD (1999) International terminal operators like the ones mentioned above link world ports together being common operators. Through better communications and advances in information technology, these ports increase their efficiency and productivity through better planning.

HINTERLAND DEVELOPMENT

The port hinterland has been found to display a continuously shifting position where road, rail and good short sea shipping infrastructure exists (Kendal, 1986). This means that where the government provides infrastructures in the hinterland, importers, would have the leverage to patronize ports where the transport cost minimizes his total expense. It is in this view that the land bridge concept has risen to become an attractive force in international trade. The land bridge concept has been successfully applied in both the United States and Europe with great trip cost reduction benefits. A sustainable development strategy for the transport sector has been defined as one that offers intermodalism. An intermodal transport option is thus necessary in sustainable transport system's development. The port, the road network, rail linkages and short sea shipping should be viewed as a loop along which international freight flow must be optimized. It is only when these are viewed as a loop, that an efficient and sustainable freight traffic flow can be derived. The search for the efficient and sustainable operation of the road transport infrastructure has led to the use of the term 'sea highways' in the United States. The use of the seas as an option for possible transfer of highway freights is made possible using short sea shipping services. The provision of alternative transport services to the road transport system often viewed as multimodal transport options will lead to a conservation of the road system for future generations. Ahlberg (2004) has outlined four aspects of sustainable development namely:

- (i) Ecological based sustainable development
- (ii) Social based sustainable development
- (iii) Cultural based sustainable development and
- (iv) Economical based sustainable development.

Another aspect of sustainable development is environmentally based sustainable development (Macbeth, 2004). Based on the above, the major purpose of this study is to create a development strategy that is sustainable to the advancement of the competitive edge of sub-Saharan African ports.

METHODOLOGY

The study adopted literature review to appraise sustainable transport strategies to fashion inter-port development options for sub-Saharan Africa. The road population of Sub Saharan Africa exceeds two million kilometers. Estimated replacement cost of the roads is 170 billion dollars. A research methodology that provides an alternative transport option thus should attract a premium. Sub saharan road freight costs have been found to be 200% higher than the rest of the world. Based on the above the suggested rail option becomes both costs minimizing and attractive. The method applied in this work aims at reducing transit cost of freight across the sub-Saharan African region.

DISCUSSION

Sub-Saharan African ports consist of ports of West Africa, Central Africa and East Africa. These three regions form the hub along which developmental strategies ought to be built. Port growth along these regions has led to the formation of industrial cities along the West and Central African coastlines some of which include, Dakar (Senegal), Abidjan (Cote D' Ivoire), Accra (Ghana), Cotonou (Benin) Lagos (Nigeria), Port Harcourt (Nigeria), Douala (Cameroun) among others. Hinterland cities however exist northwards of the coastline states, leading to the development of railway lines northwards, away from these port cities. Port-to-port rail linkage across the coastline is absent in this region, thus there is no rail line linking the rising coastal industrial zone of West and Central Africa. The result has been overloaded road traffic system with no supporting short sea traffic system.

The rich coastal hinterland of the West and Central African sub-region has created situations where importers freely make use of ports outside their country for imports due to lower customer tariff. A situation thus exists where Nigerian importers ship their goods via most West Africa ports, subsequently transferring them via the road system. The traffic congestion along the Dakar-Mombasa-Pan African highway has come to a point of non-sustainability. The Lagos-Benin- Onitsha section of this highway appear to be the worst section of the entire network. While the cry for relief along the road is a continuous one, only temporary relief measures are adopted. The permanent relief will only come when the sustainable option of creating alternative multimodal routes is adopted. Two options are readily possible. These are the pan African land bridge concept that will link Dakar and Mombasa covering the entire sub-Saharan African region with railway line, and the possible creation of a sea shipping sector.

The Trans African Land Bridge

Container port traffic into the coastal states of West and Central Africa is postulated at roughly 1.3 million TEUs per annum. Number of ports served in the region is about 33 ports. The ratio of import to export is about 61:39 World Bank (1998). This does not include traffic to East African ports. The option of the trans-African land bridge is a sustainable development transport project that will if adopted;

develop the sub-Saharan African port hinterland in a sustainable way. In line with our definition of sustainable transport, it is not only affordable and efficient, but it also offers choice of mode to the rich economy of West, Central and East Africa. In addition to the following it offers a technological angle to the economic integration of Africa in line with the African Unions vision 2030 set up in Abuja Nigeria. With respect to green house emissions, locomotives with appropriate technologies produce less CO₂ than automobiles put together. The use of the railway will thus lead to move conservation of the stratosphere and the earth environment for future generations.

Sustainable Port Environmental Development Strategies For The Region

The port environment constitutes of water and the immediate port gates together with the hinterland of the port. Excessive congestion at the port can affect activities in the entire port hinterland. For West East and Central African ports where the import/export ratio is more on the import side, a whole lot of congestions can be transferred to the hinterland where there are inefficient corridors for cargo transfer. This situation has produced excessive air pollution at the gate due to idling of trucks and congestion at hinterland roads coming from excessive use of the road system. For the immediate port environment, the implementation of IMO garbage regulations and MARPOL Annexes I-VI regulations are recommended for these ports. Regulatory bodies with technical know-how should operate in these port environments to ensure compliance of IMO rules.

The Sea Highway

To complement the congestion caused by excessive overload of the road network due to excessive import cargo, importers should be encouraged to patronize the short sea shipping sector as an alternative route to specific land destinations where possible. For such identified routes, government should invest in river port development and create subsidy for the identified proposed sea highway. River ports along the Niger in Nigeria, the Zaire/Congo River in Central Africa to mention but few should not only be developed, but be provided with sea-worthy ro-ro vessels and passenger traffic. This will create sustainable transport development in the sector.

CONCLUDING REMARK

The major purpose of this study is to create a development strategy that is sustainable to the advancement of the competitive edge of sub-Saharan African ports. It is the view of this paper, that a sustainably developed corridor for goods arriving at the port is certainly a sustainable development strategy for sub-Saharan African ports. Port hinterland development, is the development strategy that will improve the development of African ports. Apart from the above, port environmental development of the region is highly linked to strict compliance to MARPOL rules and the creation of a regulatory body with technical know how on sustainable development.

REFERENCES

- Ahlberg M.** (2004) Concept Mapping for Sustainable Development: Concept maps. Theory, Methodology, Technology. In A.J. Movak, J.D. Gonzales F.M; Pamplona Spain (eds) Proceedings of the First International Conference on Concept mapping Canas.
- Kendall D.** (1986) The Business of Shipping 5th Edition; Cornell Maritime Press Inc.
- Macbeth A. G.** (2004) Sustainable Transportation in New Zealand; IPENZ Presidential Task Committee on Sustainability.
- UNCTAD** (1999) Port News letter No 19, UNCTAD
- World Bank** (1998) Hub and Spoke vs. Multiple Ports of Call. Findings: Africa Region Number 116 August 1998.

