

Regeneration & Decline of British Trade & Shipping Interests in West Africa

Factors That Influenced the Operation & Design of Ships in the West African Trade between 1960 & 1985.

by
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The West African Trade

West Africa comprises of a total of sixteen independent African States making up the recognised ECOWAS¹ area; the majority having their own coastline. Their individual geographical features, ethnic origins and economic values differ greatly making them strange partners in terms of being a collective trading group. Even harder to comprehend is the fact that exploitation of the agricultural and mineral wealth of these countries is largely dependent upon the migration of labour between these West African States².

The export of cargoes from West Africa, with the exception of mineral bulk, has always traditionally been made up of small consignments insufficient to facilitate loading solely at any single port. Consequently a specialised tramp and liner trade developed over the years that naturally embraced the whole region from the south of the Sahara down to the Cameroons³. By 1960 the trade was dominated by three shipping companies, Elder Dempster Lines, Palm Line and the Woermann Line⁴. Although providing liner sailing schedules, the nature of the trade engaged upon by these companies was more closely related to that of the tramp trade practised elsewhere in the world. Much of the uniqueness of the West African shipping business until the late 1960's was the direct product of a difficult geographical terrain and poor port facilities.

Development & Change

The 1960's West African shipping trade as it then stood had steadily developed over a period of approximately 110 years. West Africa's nineteenth century European reputation as the undeveloped "White Mans' Graveyard" had since grown into that of a recognised major world source of agricultural and mineral raw material products, malaria had been largely tamed, but tsetse fly was still a problem in the north. Mineral exports for the region in 1960 included iron ore, bauxite, phosphates, manganese and coal and deep-water facilities only catered for these trades. Gold from Ghana and diamonds from Sierra Leone were and continue as major exports but have little relevance to shipping. (Appendix 'A')

For the first half of the twentieth century the design of the ships involved in the West African general-cargo trade changed little, suiting the demands of the time. Between 1960 and 1980 competition and variations in trade stimulated the building of specialised vessels to maximise loading capacity in the older and undeveloped ports. Political unrest, economic upheaval and discovery of new resources such as oil and uranium would by 1985 drastically alter the nature of the trade. Those established trading partners and shipping companies involved in the West African trade would change out of all recognition and beyond all reasonable expectation. Shipowners' loyal to the route would try to adapt to change in new trading patterns, but the ability to adapt would prove overwhelming and require drastic measures: Some companies would survive, others would decide to forgo the trade and the shipping industry forever. The West African Trade would in time be judged with having as much risk as it had once had been judged with so much certainty and opportunity in the past.

Statistics

The bulk of all ECOWAS foreign trade is conducted by the three largest West African States, namely Ivory Coast, Ghana and Nigeria. Between them they have the largest population totalling 70% of the region and accounting for 70% of exports in 1960, which rose with the aid of Nigerian oil to 90% in 1979.⁵ It is generally acknowledged that economic statistics from the region are unreliable and do not provide accurate or suitable data for comparison between individual countries or time periods⁶. For the

purposes of this essay it is sufficient and reasonable to examine overall trend. Examination of the port facilities operated by these three major countries mentioned serves for the purposes of illustrating the unique nature of the West African trade and the restraints put upon ship and port development.

The West African Coastline and Port Development (Appendix 'B')

West African coastal waters benefit from a low tidal range, but frequent line-squalls and persistent heavy sea swell make it necessary to provide shelter by way of artificial harbours particularly when discharging high value fragile goods. Historically the shipping interest in the West African region was encouraged and centred on the slave trade. This trade which lasted for several centuries was carried out with slave ships anchored off the coast being supplied by very large rowing boats designed to negotiate the rough surf. Because the human cargo was mobile there was little need for fixed jetties and slave and stores would be transported directly off the beach. The only form of port development on this type of coast consisted of numerous forts designed mainly for defence and warehousing of stores. The only measures to establish any form of port facilities were at Fort Elmina where the Portuguese built a jetty and cargo derrick. The concentration upon loading and shipping slaves delivered directly to the coast offered little incentive to develop facilities inland. The use of 'surf boats' as the main means of working cargo along the Gold Coast persisted until the early 1960's and the development of the port of Tema.

No one trading area in the world has such a mixed and hostile terrain in respect of prospective port development. It is this factor that has been a major deterrent to port development and been responsible for shaping the general-cargo trade. The terrain is complex, from Dakar in the north to Douala in the south the coastline experiences eight changes through a variety of three different coastal types.

Dahomey Type Coast - Smooth low lying shoreline with extensive sand dunes, sand spits and some lagoons. Provides few inlets and little shelter for ships. Where lagoons have sufficient depth for shipping, they suffer from problems with access. The natural break in the coastal sand bar at Lagos (Nigeria) is an exception, but even so access had to be deepened and preserved with the aid of a training mole and continuous dredging.

Elmina Type Coast - Rocky, small headlands and shallow bays providing little shelter, little deep water or options for dredging. At Takoradi (Ghana) the indentation in the coastline provides some shelter and the rocky headland a root for breakwater construction. The new port of Tema (Ghana) is also dependent on a man-made breakwater forming an artificial harbour.

Estuarine/Mangrove Coast - The coasts of Gambia, Guinea, Sierra Leone and the Niger Delta are synonymous with mangrove vegetation and swamp interlaced with numerous rivers formed by heavy seasonal rainfall. These areas are not conducive to the establishment of port facilities. The foreign sea trade with Gambia and Guinea is small and relates to status as low producers; cargo is worked by means of small jetties and often lighters. Sierra Leone's trading interests have been diamonds and iron ore. A purpose built ore facility exists upriver of Freetown at Pepel, but costly continuous dredging is necessary to provide access for visiting ore carriers.⁷

The Niger Delta is probably the most challenging for it provides a large area of mangrove swamp, which acts as a barrier between the producing areas of Eastern Nigeria and the sea. The cargoes involved require ocean-going ships to penetrate great distances inland to facilitate their export. It is this particular terrain that dictates the main nature of the West African Trade. (Appendix 'D')

The Cameroun banana port of Tiko is also deep set in mangrove terrain and was the hardest to navigate⁸. However when possible lighters would be used to bring cargo down river to the nearby anchorage at Victoria.⁹

The Hinterland and Transport (Appendix 'C')

Much of West Africa's producing land areas are not well served by either roads or trains.¹⁰ In fact by the end of the twentieth century Nigeria's railway system was to become bankrupt and almost obsolete. Most of the region's rail systems have major arterial track leading to the main inland dry areas producing such exports as groundnuts. In the wetter areas along the coast numerous rivers and swamp

areas have restricted the building of a lateral transport system running parallel to the coast. Even in Ghana with its preferred Elmina Type terrain the utilisation of numerous small coastal ports/anchorages along the coast has been the easiest transshipment option. The concept of building large artificial ports is alone an expensive proposition, however with it must be counted the cost of penetrating the hinterland with a properly conceived and managed transport system.

Full and successful development of the major ports of Abidjan, Takoradi, Tema and Lagos/Apapa has not come to fruition for the reasons given. Likewise the adoption of containerisation and bulk cargoes has been similarly thwarted. Without massive investment in transport on land, the traditional lateral transportation coastwise by sea continued to be the best and only solution throughout the 1960's. Likewise it was seen as fruitless to over-modernise ships committed to the West African Trade until new techniques could be absorbed ashore, hence West Africa trailed behind in terms of port development and cargo carrying techniques. The design of ships of the period 1960 – 1980 for the West Africa run therefore were built to adapt to the unique antiquity of West African ports.

Old Skills in a Modern Age

In 1982 Captain Munroe, an Elder Dempster master retired after 30 years with the company; his reflections are those of every officer that worked cargo in West African ports before the 1970's.¹¹

“But now I was entering a completely different world where ships' officers had to work long hours overseeing the discharge and loading of cargo on the West African coast. This required actual physical supervision; knowledge was not enough.”

Stevedoring companies, jetties and cranes were considered a luxury even into the late 1960's, much of the cargo handling was done using the ships own derricks and even the ship's own 'Kroo Boys', the ship's officers had a hands-on supervisory role. In the Nigerian creeks this often meant physically shackling on wires to logs and directing their loading. 'Kroo Boys' would be used to assist in all manner of tasks where shore labour was unavailable. The 'Kroo Boys' named after their native Kroo tribe from Sierra Leone and descended from the original African slaves repatriated to Freetown, would be taken on board upon the ships arrival at Freetown outward bound and they would remain with the ship until it sailed for the U.K. Their purpose was to serve as cheap labour particularly in preparation of the vessel's 'Deep Tanks'. Whilst on board they would live and sleep in a modified cargo tent suspended usually above number 4 hatch. Because of the short distances between ports and the time lost in stowing derricks it was usual to leave derricks flying for the whole period on the coast. This practice allowed for the rigging of the Kroo Boy tent and on occasion additional tents for 'Deck Passengers'. Migration of African labour by ship including whole families was a common occurrence.

The construction of 'Deep Tanks' was a particular requirement of ships serving the West African trade. Palm Oil, Groundnut Oil and Latex, were three valuable bulk liquid commodities with specific carriage requirements. Although the Palm Line had a specialised tanker for carrying palm oil¹²; the bulk was carried by other general-cargo vessels. The peculiarities of these cargoes required that steam heating coils were fitted to the tanks when carrying oil and when carrying latex rubber they were removed and the tanks lined with wax. In fact when not carrying bulk cargo in these tanks the heating coils had to be removed so that they could then be used for water ballast or general cargo. Preparation of these tanks was highly labour intensive, hence the carriage of the 'Kroo Boy' labour. Tanks had to be immaculate and ready on time. As all three cargoes were seasonal, cargoes would be prepared for shipment on a specific date. Loss of the freight on a Latex cargo from Monrovia (Liberia) to Fall River (USA) would be the equivalent of the running costs of the ship for a five month voyage to West Africa and USA.¹³

In 1946 following WWII shipping losses and an increase in the Nigerian 'Creek Trade', the first ships appeared that were adapted for the West African general-cargo trade. They were still of the Shelter Deck type but fitted with more deep tank capacity and designed to negotiate the sandbars and creeks of the Niger Delta. They also had the deck space carry logs, surf boats and even navigation buoys when required. The ship's ordinary derricks also had a greater lifting capacity than normal vessels (Appendix 'E' fig.1.), being of 10 tons SWL to enable doubling gear to be used for lifting heavy logs.¹⁴ The stability of the ship also had to take into account that the ship sailed between ports with derricks flying and would carry heavy log cargoes on deck in rough seas on the homeward passage. The carrying of logs on deck required that sufficient lashing points were available on deck, also deck-eyes necessary

for securing blocks and wires for 'Bulling' the logs into position; thus numerous additional fittings were accommodated.

Prior to building special ships for the 'Creeks' and 'Surf Ports', ships would be severely limited in the size of consignment that they could load from the creek ports. Firstly there was no dredging of the shallow sand bars at the entrance of the rivers, so with enlarged rudders and strengthened framing it became the practice to iron-out the bumps keeping the channel clear by the ship bouncing its way through these shallows. Likewise the depth at bends in the rivers were similarly kept navigable by clipping the corners. (Appendix 'D') It was also necessary to inform the hydrographic authorities of any changes in depth of water. Echo sounders are of little use when aground or bouncing over the bottom, it was therefore left to the age-old practice of casting the lead line to ascertain the depth of water.¹⁵ Because of the shallowness of the creeks it was important to ensure that the ship had the minimum draught, ensuring that no surplus fuel or water was carried whose space could be better used for cargo. Ships therefore entered the creeks with just sufficient water and bunkers for the time spent loading there.

Every effort was made to load all of the consignments booked on the ship; however two problems existed that had to be taken into account a) heavy seasonal tropical rain and b) inaccurate declaration of weights. Heavy rain would change the density of the creek water reducing the lifting capacity of the ship. It also caused delays in loading and in particular prevented loading of talcum covered bales of rubber. Just as soon as it rained the hatches would have to be 'tented-over' until it was safe to work again. Logs were delivered to the ship by floating them down river; as a result many became saturated if left for long periods in the water. The waterlogged logs were known as 'sinkers' and their weight would exceed that declared on the manifest; not only would this increase the draught of the ship but also lengthened loading times if heavier lifting gear had to be rigged. One of the deck Officer's duties was to estimate the weights of the logs before loading to ensure that the derricks were adequately rigged.¹⁶ Derricks would be routinely rigged with a single whip with a safe working load of 4 tons. Many of the delays in rigging 10 ton doubling gear were in later years overcome with new designs of slewing derricks. (Appendix 'E') These slewing derricks also facilitated self-discharge of containers.¹⁷

Palletisation and Containerisation

The adoption of containerisation in West Africa did not come about until the late 1970's and then not as successfully as in countries with a strong manufacturing base. Although the import of fine and manufactured goods is suited to containerisation, the agricultural exports of the region are not suited to the system resulting in the export of non-earning empty containers. More relevant was the fact that up until the late 1970's the majority of the region's roads were not capable of taking the axle weights associated with container road traffic. There was also the inconvenience that ports in the region were not equipped with suitable cranes or straddle carriers, and discharge was often undertaken using ship's derricks and forklift trucks. (Appendix 'E' figs. 2 & 3.)

Aware of the need to modernise cargo handling methods, but hampered by existing port facilities it was decided by Elder Dempster Lines in 1965 to introduce palletisation.¹⁸ Although many export cargoes were not suited to palletisation mainly because of the broken stowage factor, it was an alternative compromise, the returned empty pallets taking up little space. In fact it was an option to dispose of them at the port of discharge.

Political Unrest and Instability

Companies such as Elder Dempster reached their peak carrying capacity in 1965. Oil had been discovered in Nigeria in 1957 and oil exports had started to flow. What followed was the start of political unrest and instability for most of the region. The Nigerian Civil War fought between September 1966 and January 1970, not only disrupted trade but set in motion an ethic of corruption and fraud, which would continue into the next millennium. In 1975 a major fraud involving the import of cement resulted in some 500 ships at anchor in Lagos Roads waiting to be discharged. Law and order disappeared with ships' crews being murdered whilst acts of piracy were committed by Nigerian nationals. Military coupes meanwhile occurred in other West African countries including Ghana.¹⁹

The Trade Disappears

By 1975 oil production and export had taken priority in Nigeria as the top export earner, forests were no longer properly managed and existing agricultural exports started to decline. New conference line agreements were drawn up with WALCON superseded by UKWAL and COWAC. Furthermore export of Nigerian agricultural produce was now controlled through a government agency favouring the Nigerian National Line. With an increase in the number of shipowners take a share in a diminishing trade, port and ship development slowed. Examination of two homeward cargo plans for similar Elder Dempster vessels is indicative of the decline. In 1965 The 'Dumbaia' loaded at 13 ports a total of 7,5602 tons, in 1977 the 'Degema' loaded at 5 ports a total of 4,325. The noticeable difference between these representative voyages is the loss of Nigerian tonnage from the 'Creek Ports'. In fact many of the traditional small ports in the West African region as a whole and associated with agricultural produce had been phased out. With them went the need for specialised ships.

The Economies of West Africa

Table 15 Composition of exports: Nigeria, 1960, 1970 and 1980

	1960	1970	1980
	Value of exports (million naira)		
	339	877	14,077
	Percentages of total export value		
Cocoa beans	21.7	15.2	2.2
Cocoa products	-	1.8	0.2
Groundnuts	13.5	5.0	-
Groundnut oil	3.1	2.6	-
Groundnut cake	-	1.3	-
Palm oil	8.2	0.1	..
Palm kernels	15.4	2.5	0.1
Cotton	3.7	1.5	..
Hides and skins	2.5	0.6	..
Rubber	8.4	2.0	0.1
Timber, logs and sawn	4.1	0.7	..
Tin metal	3.6*	3.9	0.1
Crude petroleum	2.6	58.2	96.3
Other domestic products	13.2	4.8	1.0
	100.0	100.0	100.0

Rimmer D., *The Economies of West Africa*, (London, 1984), p.112.

Table 28 Quantities of some West African exports, 1960–2 and 1979–81

	<i>(Annual averages in thousands of metric tons)</i>	
	<i>1960–2</i>	<i>1979–81</i>
Ghana: cocoa beans	383	202
Nigeria: cocoa beans	178	189
groundnut products	576	—
palm kernels	399	53
palm oil	155	1
Senegal: groundnut products	557	265
Sierra Leone: palm kernels	58	31
Ivory Coast: coffee beans	149	232
cocoa beans	84	298
logs	763	2,144

Notes: Nigerian, Senegalese and Sierra Leonean figures are for 1960–2 and 1978–80. Sierra Leonean figures are of purchases by the Marketing Board, not exports.

Rimmer D., *The Economies of West Africa*, (London, 1984), p.242

Summary

At the time of writing (2000) Elder Dempster, Palm Line and Woermann Line no longer continue to trade on the West African Coast. The terrain and hinterland of West Africa which had historically proved difficult for port development, had in actuality offered opportunities for shipowners wishing to specialise in the trade. Prof. Peter Davies rightfully titled his book about Elder Dempster Lines 'The Trade Makers' for indeed it was they that contributed the most to West African trade and early development.²⁰

By 1965 the established West African traders were reaping the rewards of their investments and were looking ahead to further ship and port development. However the discovery of Nigerian oil in 1957 was about to have a drastic influence on political, social and shipping stability. The Civil War and corruption that followed had the effect of destroying reason and with it in particular the Nigerian 'Creek' and agricultural export trade. Without the exploration of oil there would have been a dependency of maintaining existing trade; even with the economic benefit of oil revenues it was still in the regions' own interest to continue the trade. Unfortunately the Nigerian problem was to sow the seeds of future political unrest across the ECOWAS region.

Those West African countries that were to remain successful, namely Ivory Coast and Cameroun were those which retained political stability. They also maintained a full export trade in agricultural produce and timber. The Ivory Coast in particular would not forsake these exports for the high revenues she obtained after 1980 from the exploration of oil. The nature of the West African export trade from 1980 onward denied any future need for truly specialised general-cargo vessels: It also failed to provide the liner trade with the opportunities it so profitably offered in the past. The West African specialised trade was dead, slaughtered by those it faithfully served; along with it died the need for purpose built ships. No shipowner could have ever have predicted that so many countries could find the will to self-destruct.

Further Essay Critique and Summary Update:

As part of the Elder Dempster Heritage Project ('Homeward Bound' website) the essay was submitted to Patrick Toosey for comment. Having served with Elder Dempster Lines (1957-1982) from the lowly position of a management trainee to that of Managing Director, he worked both in the Liverpool HQ as well as in West Africa with the Company's shipping agencies. The following is his informed emailed response:

Having read the essay I find it really is a great summary of the West African Trade as so many of us knew it. The summary tables are a marvellous indication of the corrupting factor of the discovery of oil. Ivory Coast Ghana and Cameroun have continued with their agricultural exports but especially for Nigeria oil has destroyed the Country - corruption on a giant scale has produced:

1. 'Boko Haram'
2. Oil smuggling through pipe line tapping
3. 'Dash' culture everywhere (Defn. 'DASH' – read Gift or Bribe)

The fate of Inland Containers Nigeria really is a Nigerian Classic. Nigerian Railways were rescued from complete collapse by Indian Railways. Hence ICNL was suggested by me with the support of a very well respected Nigerian Banker. We set up a depot in Kano and later Kaduna, and the containers went by rail from Apapa.

After the Indians left the Nigerians managed to collapse the railway within a very short time but we persevered for some while by sending containers up by road with an armed escort. Even that soon had to be abandoned and so R.I.P. to ICNL.

Now today nothing changes and even now they will close Abuja airport because of potholes on the runway. Airlines are invited to redirect their flights to Kaduna 107 miles away, connecting back to Abuja by a road that is known locally as Murder Alley. WAWA – 'West Africa Wins Again'!

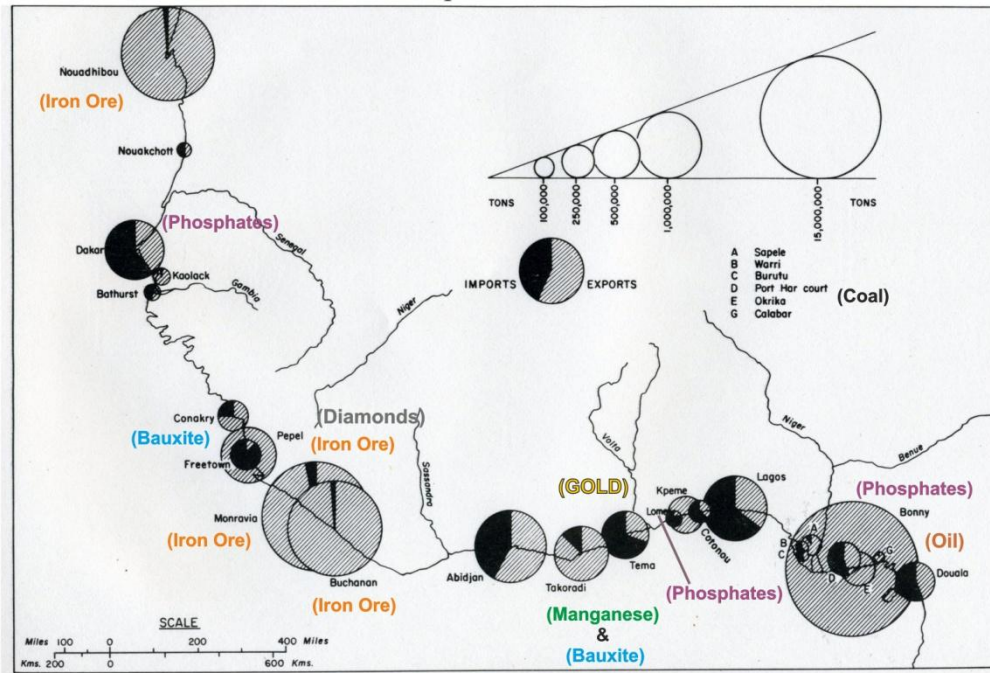
*Patrick Toosey
Ex EDL Managing Director
1st. March 2017*

The End

SCROLL-ON TO VIEW - 'APPENDICES', 'BIBLIOGRAPHY' & 'FOOTNOTES'

Annual Port Traffic & Mineral Exports circa 1960 ?

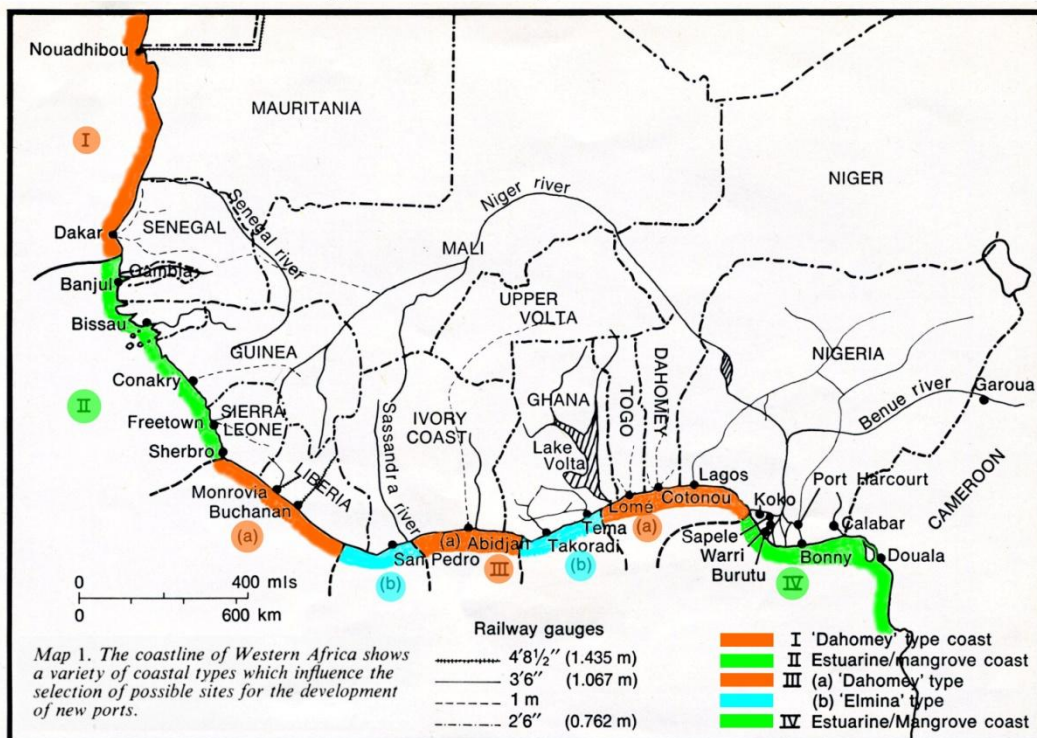
APPENDIX 'A'



Hilling D. 'The Evolution of the Major Ports of West Africa', *(The Geographical Journal Vol.135 Part3, Sept 1969)*

West African Coastal Types & Railways Links

APPENDIX 'B'

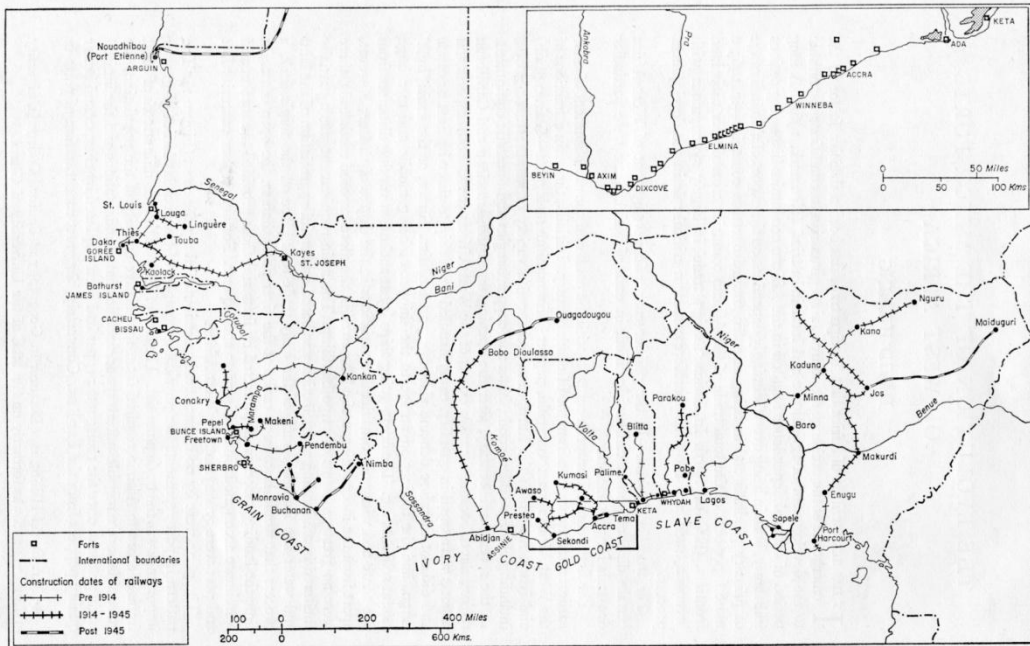


Map 1. The coastline of Western Africa shows a variety of coastal types which influence the selection of possible sites for the development of new ports.

Hilling D., 'Ports for Development in West Africa', Elder Dempster 'Sea' Magazine, 1975.

The Evolution of the Railways & Main Ports of West Africa

APPENDIX 'C'



Hilling D., 'The Evolution of the Major Ports of West Africa', *The Geographical Journal*. Vol. 135 Part 3 Sept 1969

Navigating the Tight Bends & Shallows of the Nigerian Creeks

APPENDIX 'D'



From an Elder Dempster commissioned painting by John Stobart - circa 1963

APPENDIX 'E'

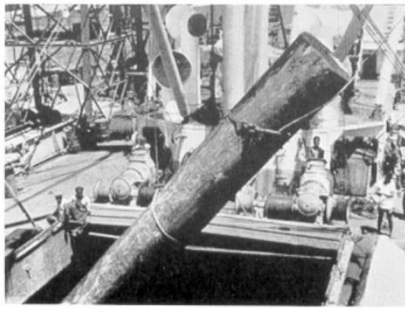


Fig.1. Mv 'Tamele' loading Nigerian Logs



Fig.2. Loading mv 'Fourah Bay' at Apapa in 1975



Fig.3. The container berth at Apapa (Lagos) in 1969



1979- The last class of vessel purpose built for the West African Trade

Bibliography

- Cowden J.E. & Duffy J.O.C., *The Elder Dempster Fleet History 1852-1985*, (Coltishall, 1986)
- Davies P.N., *The Trade Makers – Elder Dempster in West Africa 1852-1972*, (London, 1973)
- Hilling D., 'Container Potential of West African Ports', *The Dock & Harbour Authority*, May 1969.
- Hilling D., 'Ports for Development in West Africa', *Elder Dempster 'Sea' Magazine*, 1975.
- Hilling D., 'Problems of Port Expansion in Less Developed Countries – The Case of West Africa', *International Symposium on Development of Ports*, Bergen, Oct.1970.
- Hilling D., *Report and Recommendations by Special Mission – West African Port Management Conference*, (United Nations, 1971)
- Hilling D., *Tema – The Geography of a New Port* (No publication details available)
- Hilling D., 'The Evolution of the Major Ports of West Africa', *The Geographical Journal*, Vol. 135 Part 3, Sept 1969
- Hollet D., *The Conquest of the Niger by Land and Sea*, (Abergavenny, 1995)
- New S.R., *Author's Personal Experiences in the 1960's West African Trade*, (Unpublished, 2000)
- Rimmer D., *The Economies of West Africa*, (London, 1984)
- Seidman A., *An Economics Textbook for Africa*, (London, 1980)
- U.S.A. Government., *Library of Congress – Country Studies*, (Internet, 2000)
- Unascribed, 'Containers and Palletisation', *Elder Dempster 'Sea' Magazine*, Autumn 1965.
- Unascribed, 'Fleet Improvements', *Elder Dempster 'Sea' Magazine*, Autumn 1965.

Endnotes

- ¹ ECOWAS - Economic Community Of West African States
- ² Rimmer D., *The Economies of West Africa*, (London, 1984), p.12-15.
- ³ The region was serviced by WALCON (West African Conference Lines) and later its successors UKWAL and COWAC.
- ⁴ Shares in WALCON for 1964:
Elder Dempster Lines 30% Woermann 18.6% Palm Line 15.1%
from: Davies P.N., *The Trade Makers – Elder Dempster in West Africa 1852-1972*, (London, 1973), p.371.
- ⁵ Rimmer D., *The Economies of West Africa*, (London, 1984), Preface & p.8 & 116.
- ⁶ Rimmer D., *The Economies of West Africa*, (London, 1984), preface.
- ⁷ At the time of writing (8/5/200) British troops were flying out to nearby Senegal in readiness to evacuate British subjects from Freetown and assist the established UN forces. Terrorists with an eye on the country's diamond wealth had driven Sierra Leone from prosperity to poverty and fear.
- ⁸ Tiko Creek was not wide enough for the ship to turn to enable it to depart from the creek. It was therefore the practice to deliberately ram the bow into the opposite bank to give the stern enough clearance to swing clear. Stories abound of monkeys descending onto the foc'sle from the overhanging foliage.
- ⁹ Victoria - Sometimes upon arrival at Victoria the ship would have to negotiate a sea of bananas and plantains dumped by lighters, which had taken too long to make the journey, and missed the 'Banana Boat'.
- ¹⁰ Unascribed, 'Containers and Palletisation', *Elder Dempster 'Sea' Magazine*, Autumn 1965. p.12.
- ¹¹ Cowden J.E. and Duffy J.O.C., *The Elder Dempster Fleet History 1852-1985*, (Coltishall, 1986), p. 13.
"I joined Elder Dempster's s.s.'Cabano' in London docks on a dull winter's day in October, 1952, an apprehensive young officer since my previous sea-going career had been spent mostly in the Far East or, just prior to joining Elders, on the Australian and New Zealand services of another shipping company.

On those services stevedoring and cargo handling had been the business of shore establishments, ships' officers having purely a watching and supervising brief. The ports were sophisticated and there was plenty of spare time and opportunity for a young man to make the most of the visits.

But now I was entering a completely different world where ships' officers had to work long hours overseeing the discharge and loading of cargo on the West African coast. This required actual physical supervision; knowledge was not enough. A young officer personally had to sling heavy or awkward lifts as well as ensuring that cargo was not damaged or overcarried. It was also his personal, responsibility to rig the derricks and prepare his section for cargo working - the Third Officer on the fore-deck and the Second Officer on the after-deck. An officer was on duty throughout the time his section was working, quite possibly from daylight to late at night. This could then be followed by an overnight run to the next discharging port. So the work continued from the time a ship arrived on the West African coast until she left the last port on the homeward voyage."
- ¹² Palm Line was owned by Lever Brothers, the well known soap manufacturers, who used palm oil as an important ingredient in their product. i.e. 'Palmolive' soap.
- ¹³ New S.R., *Author's Personal Experiences in the 1960's West African Trade*, (Unpublished, 2000)

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- ¹⁴ The 150 ton Heavy Lift derrick fitted to mv 'Onitsha' was the largest fitted at the time to any British cargo vessel: Davies P.N., *The Trade Makers – Elder Dempster in West Africa 1852-1972*, (London, 1973), p.353.
- ¹⁵ New S.R., Author's Personal Experiences in the 1960's West African Trade, (Unpublished, 2000)
- ¹⁶ New S.R., *Author's Personal Experiences in the 1960's West African Trade*, (Unpublished, 2000)
- ¹⁷ Unascribed, 'Fleet Improvements', *Elder Dempster 'Sea' Magazine*, Autumn 1965. P.8.
- ¹⁸ Unascribed, 'Containers and Palletisation', *Elder Dempster 'Sea' Magazine*, Autumn 1965. P. 9-11.
- ¹⁹ U.S.A. Government., Library of Congress – Country Studies, (Internet, 2000)
- ²⁰ Davies P.N., *The Trade Makers – Elder Dempster in West Africa 1852-1972*, (London, 1973)