Improving regional maritime connectivity and reviewing implemented initiatives’

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State of Global Maritime

Global Maritime – Overview

Global Maritime – What's happening

Size of container vessels continuing to grow – cascading the once largest vessels to secondary markets – increase in t/s opportunities

IMO sulphur cap and LNG implications for bunkering and trade routing

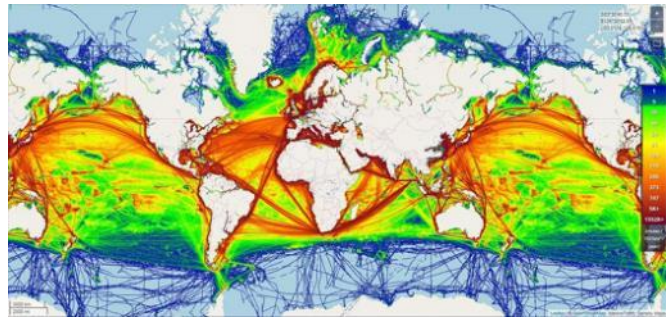
Regulations on fuel and vessel technology changing

Tonnage oversupply and cascading, reshaping of alliances

Port authorities reshaping less competitive infrastructure

Pressure on terminal operators to upgrade facilities and provide high service levels

Trade tariffs creating uncertainty



Global Shipping Traffic

Global Maritime – Container “Cascade” Effect

Ability to handle larger vessels now required by Baltic Sea ports due to cascading

1 The increase in the size of vessels deployed on the main arterial lanes has resulted in a displacement of former largest vessels to secondary trade lanes. OOCL Hong Kong of 21,413 TEU has since been replaced by the MSC Gülsün, with 23,756 TEU as largest vessel.

2 Vessels that were deployed on the main arterial trade lanes have now been “cascaded” to secondary trade lanes, ahead of the “actual” demand.

3 Smaller ports are no longer able to handle main trade lane vessels and instead must rely on secondary trade vessels and feeder/short-sea services. Increase in amount of t/s and competing t/as hubs.

4 Displacement of <500TEU vessels by <2,500TEU vessels on feeder/short-sea services as a result of an increase in incidence of transshipment in the region.

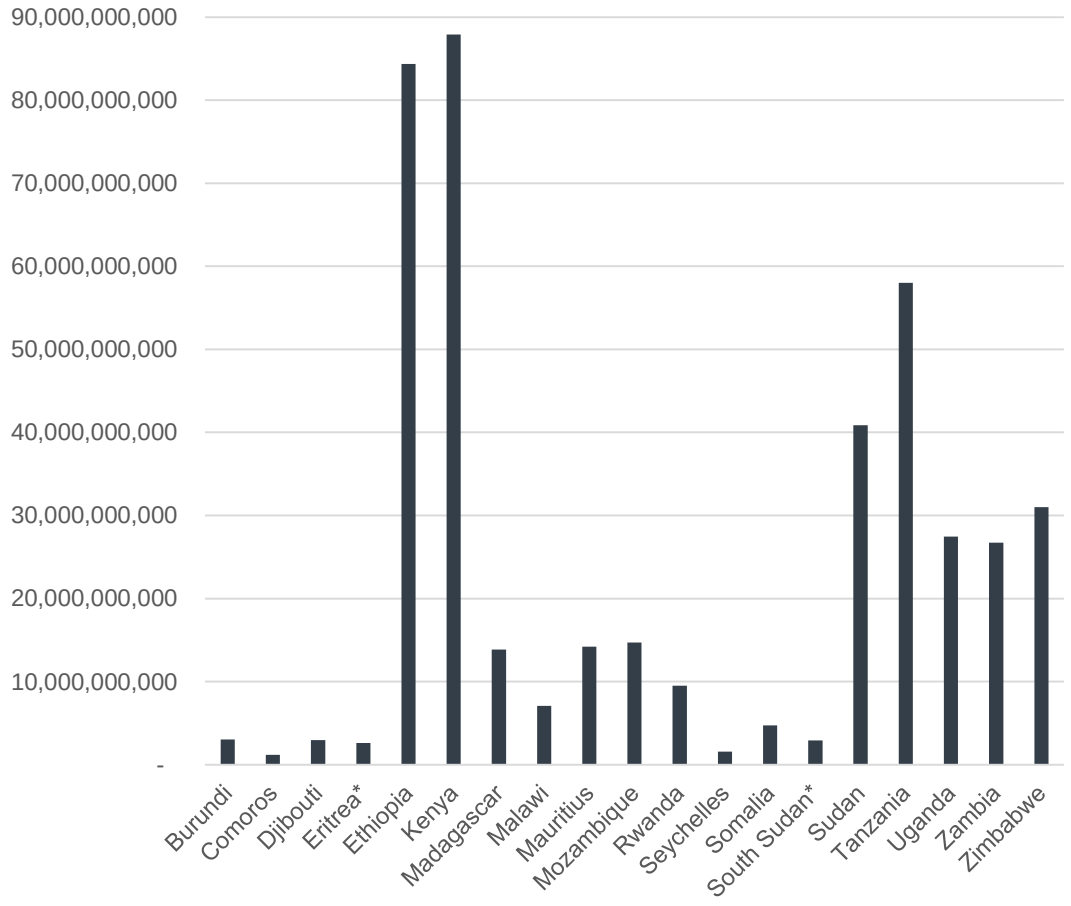
5 With the formation of the new alliance structure, there will be a reduced number of service alternatives available to each shipper. **East Africa ports must be able to handle larger vessels efficiently to avoid losing volumes, or settle with handling feeder services.**

East Africa Region Overview

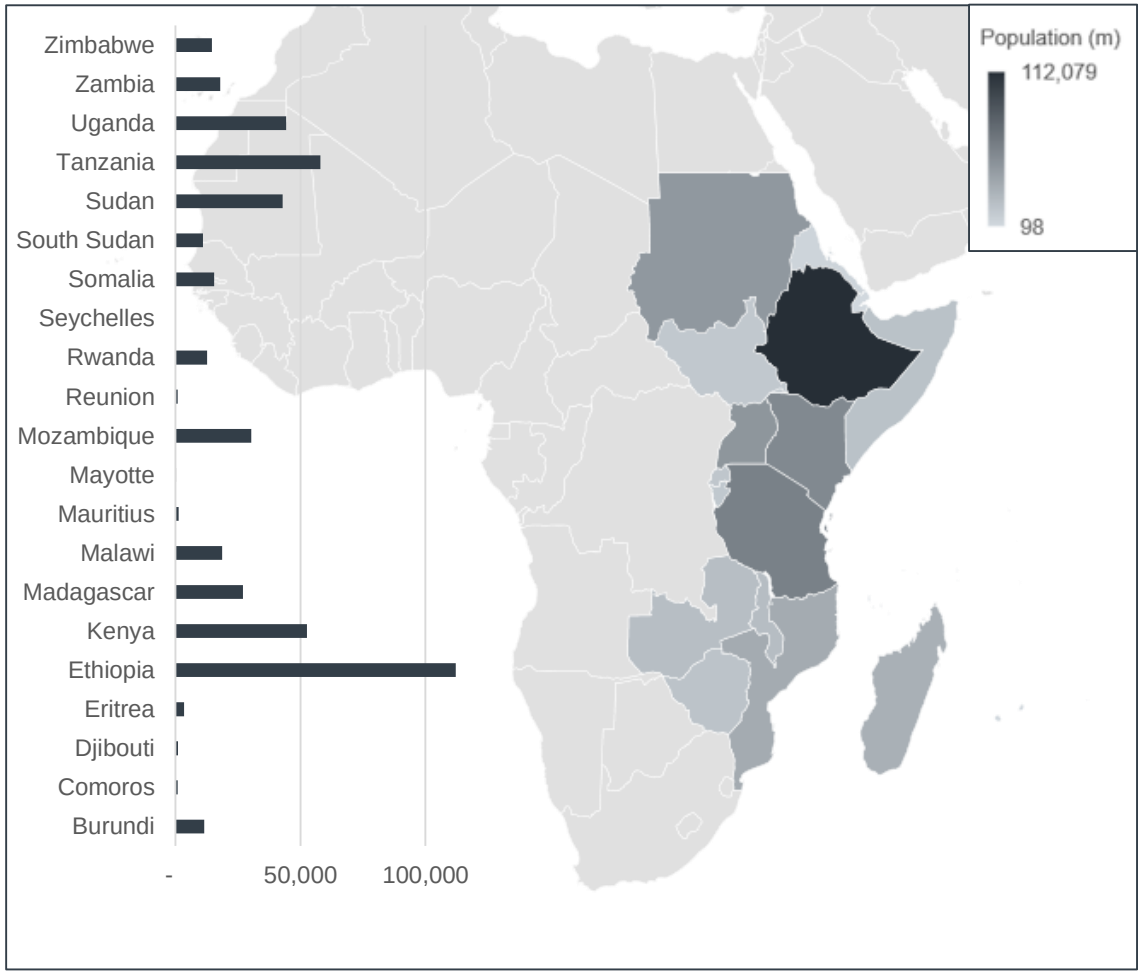
East Africa GDP and Population

East Africa GDP forecasted to grow at 6% in 2020, population at 6.2%

GDP 2018 (Current USD)

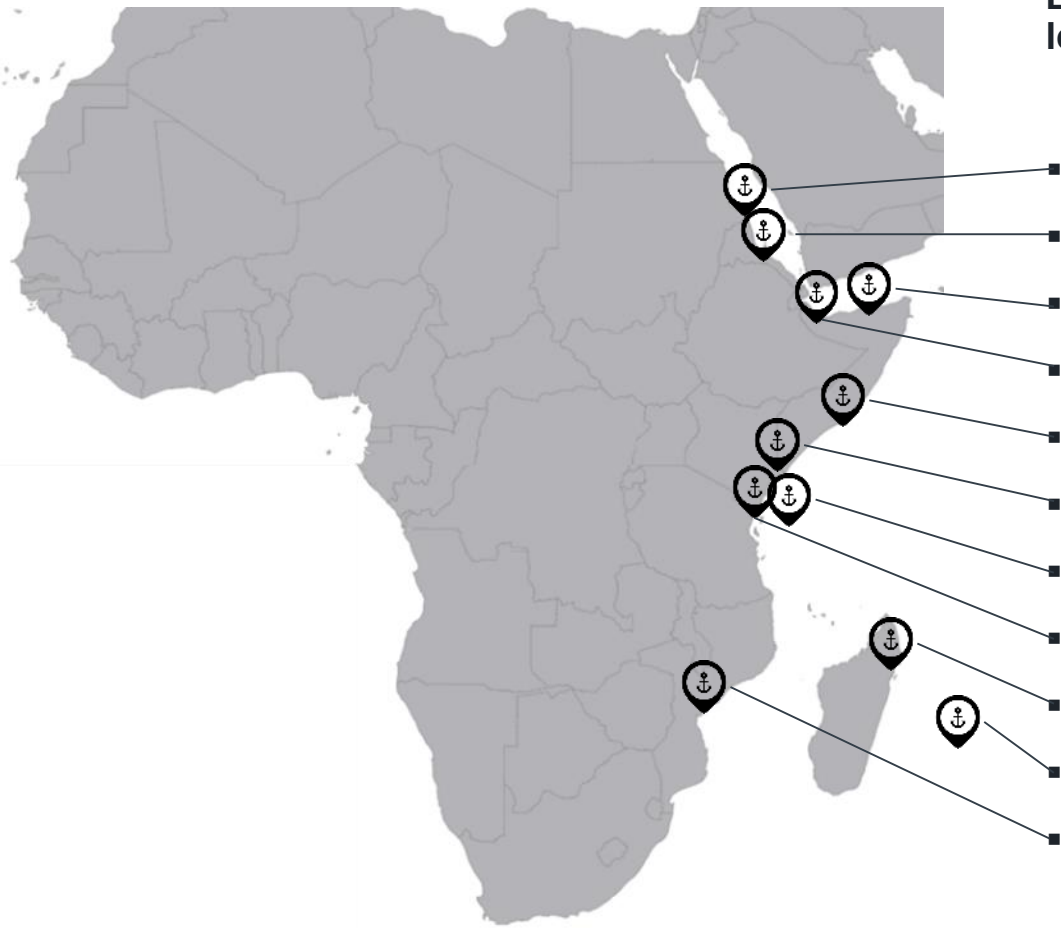


Population



Source: IMF
*latest result from 2011

East Africa Region – Major Ports

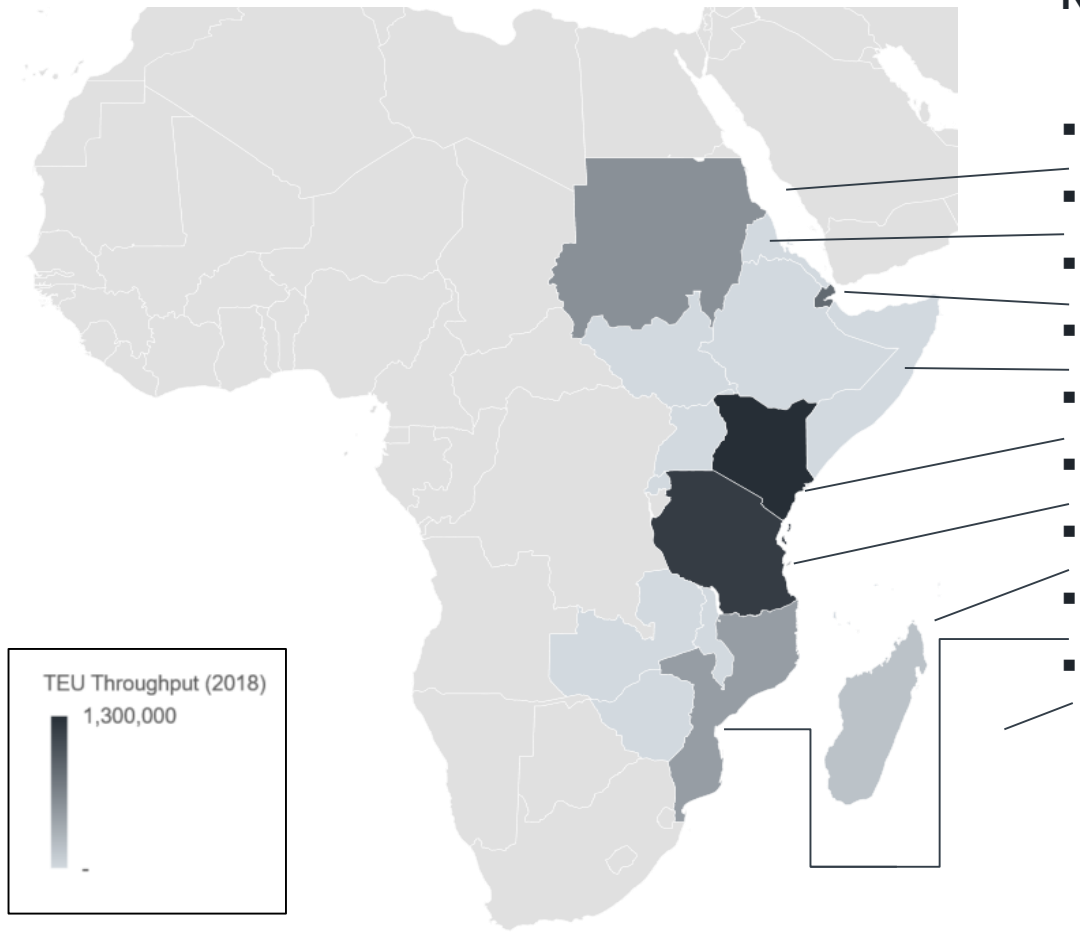


Leading Regional Container Ports (max channel depth ; longest single quayside)

- **Port of Sudan,** 23m, 750m
- **Massawa,** 10m, 600m
- **Berbera Port,** 12.2m, 640m
- **Djibouti (Port of),** 18.2m, 1,200m
- **Port of Mogadishu,** 12.2m, 500m
- **Mombasa,** 15.2m, 800m
- **Zanzibar,** 12.2m, 240m
- **Dar Es Salaam,** 10m, 1,300m
- **Toamasina,** 10m, 300m
- **Mauritius,** 12.2m, 800m
- **Maputo,** 10m, 1,670m

Source: World Port Index : ArcGIS : WSP

East Africa Region – Container Volumes



Regional Container TEU Throughput (2018)

- **Sudan:** 551,900 + 22% since 2010
- **Eritrea:** < 150,000 n.a.
- **Djibouti:** 847,000 + 29% since 2010
- **Somalia:** < 150,000 n.a.
- **Kenya:** 1,300,000 + 46% since 2010
- **Tanzania:** 1,190,000 + 42% since 2010
- **Madagascar:** 173,706 +19% since 2010
- **Mozambique:** 454,300 +36% since 2010
- **Mauritius:** 451,446 +26% since 2010

Source: IMF: WSP

East Africa Region – Direct Global Services

East Africa Sea ports attract 48 services and consisting of 160 vessels

Europe & Baltic:
Services: 2
TEU p/w : 6,990

North America:
Services: Only through T/S by Durban

East Asia
Services: 7
TEU p/w: 19,279

Middle East/ South Asia
Services: 15
TEU p/w : 29,532

South America:
Services: 1
TEU p/w: 2,460

Intra-Africa
Services: 23
TEU p/w: 5,294

Oceania:
Services: 1 through Singapore T/S

East Africa – Global Services

The East African ports are primarily served from the Asian, African, Middle East and European Markets

- There are 2 services operating from the North Europe/Baltic region with sizes ranging from 8,000– 9,500 TEU operated by MSC and CMA-CGM, with an average of 6,990TEU. These are vessels that have been “cascaded” from main trade lanes.
- There are a combined total of 22 services on a weekly basis from Asia (7 x East and 15 x South East) with vessels ranging from 1,400TEU to 4,500TEU.
- A number of vessels from South East Asia also call at ports in The Middle East to provide “double dipping” opportunities.
- Most services (23) calling at ports in Tanzania are feeder services or Intra-Regional services, operated by vessels increasing from 270TEU to 2,500TEU capacity.
- The majority of services calling at East Africa ports also call at ports in South Africa.
- 4 types of services offered are “relay” and “hub and spoke” transshipment as well as short sea “intra-regional” cargo and deepsea service to hinterland via road/rail “gateway” service.
- Most vessels calling at East Africa ports are operated by the major lines: Maersk Line, MSC and CMA-CGM

East Africa Region – Port Developments

Expansion of infrastructure and creation of deep-water opportunities

Main developments:

- Intermodal and road links to land-locked countries to increase terminal offering to differentiate from competition.
- Development of more ICD's
- Increase in capacity, depth of water, length of quay and number of STS cranes in attempt to compete as t/s hub alternative, e.g.

I. Djibouti
II. Bagamoyo
III. Mombasa and Lamu
IV. Port Sudan
V. Port Louis and other islands
VI. Alternative Middle East options

- More involvement in ports by international operators, such as HPH and ICTSI.

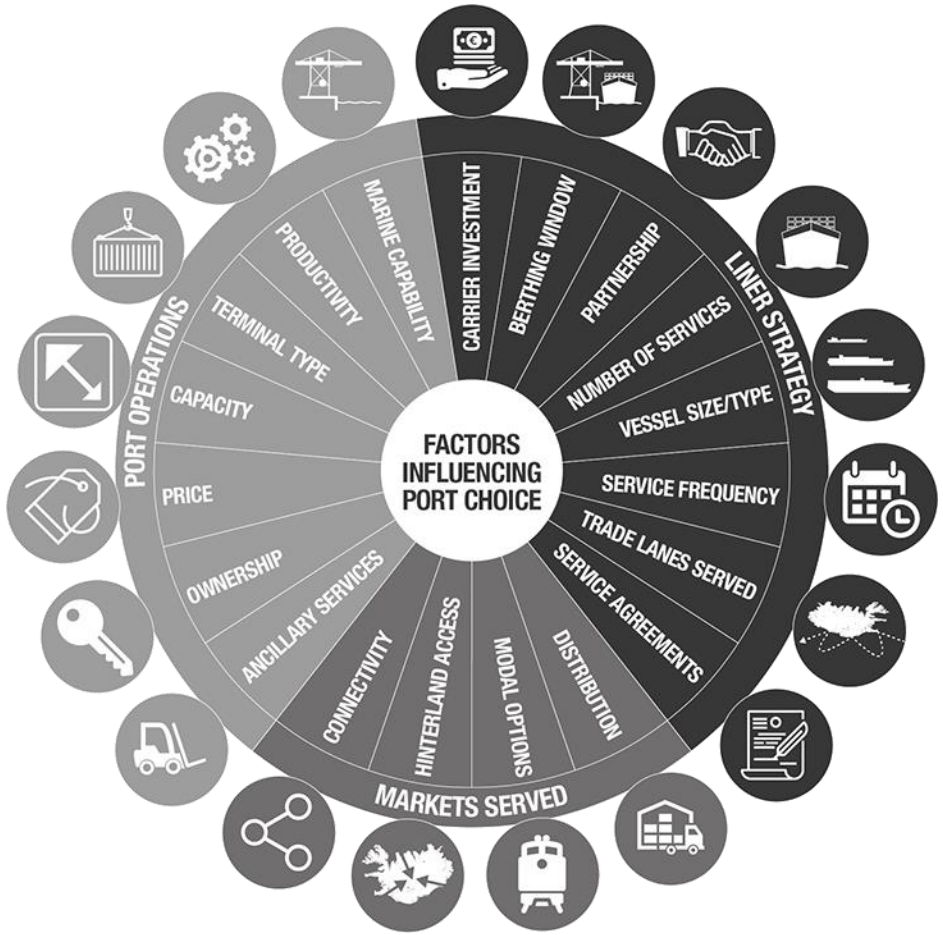
Developments

- Bagamayo Port – deepwater tml 75km north of Dar – indefinite delay due to impasse on terms between interested parties.
- Maputo – restructure of berths 6-9 in H2 2019.
- Mombasa targets 1.6m TEU capacity by 2022 due increase inefficiency and modernise 4 berths.
- Tanzania International (TICT) – HPH handled 0.59m TEU due operational improvements (+18%)
- ICTSI take concession of Port Sudan in March 2019.
- Future dredge of Port Louis to 18m.
- Reconstruction of berth at Dar to 191m can handle 6,000TEU vsls.
- Berbera expansion upgrade anticipated by 2026.
- Tanga entrance and alongside dredge from 5m to 12m.
- Develop Mtwara (Tz) by March 2020: 13.5m depth and 300m quay.

Transshipment & Hinterland Competitivity for East Africa

Transshipment Competition – Choice of Port

Typical influencing factors for the choice of port in any region



- Location and Facilities (e.g. physical accessibility, water depth, cranes etc.) and availability of capacity
- Tariff levels (cargo handling and ship dues) and operating costs
- Performance and service levels (e.g. speed of container handling, flexibility, IT systems etc. labour arrangements, avoidance of congestion
- Potential for dedicated facilities/terminal areas
- Support services and value-added services – functions – i.e. container maintenance and repair, bunkering/fuel, ships stores Free Zone credentials etc
- For transshipment ports, access to a local market in addition to providing good hub facilities is also of strong appeal to shipping lines

Transshipment competitivity

Port strategic competitive updates

Increase in capacity, depth of water, length of quay and number of STS cranes in attempt to compete as t/s hub alternative, e.g.

I. Djibouti
II. Bagamoyo
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Reviewing Implemented Initiatives

Initiatives Available to East Africa Ports

Terminals need to be able to handle bigger vessels if they are to compete as direct mainline calls on main arterial trade lanes.

Pay to expand an existing facility or to develop a new one?

- *Alliances service demand plays an integral role in expanding and development planning.*

- Pay to develop automation capabilities
  - *Attractive for shippers as costs and efficiency should be increasingly favourable – CAPEX handled by port*

- Pay to dredge the channel or turning circle to allow access for bigger vessels requiring deeper water.
  - *Critical for attracting the largest of all types of vessels*

- Pay for new and bigger STS gantry cranes with wider reach.
  - *Can directly capture the largest Container vessels*

- Pay to increase the terminal area to provide more stacking spaces for an increase in the number of units handled.
  - *Capacity and storage expanse to accommodate for increase hinterland demand*

Initiative Review

Examples

Partnership with rail providers and/or hauliers;

- *Mutual benefit of container volumes being moved by rail with a partner that provides the necessary rail links and services. Similar partnerships could work with forwarding agents / hauliers to move units by truck – important to provide direct access to land-locked countries.*

Widening of and improvement of the quality of access roads;

- *More difficult to get anyone to improve roads – should it be a Government / State responsibility, or Port Authority responsibility? Potential opportunity for investment in toll roads in key areas to speed up vessel movements and provide incentive for investment.*

Links with ICDs to consolidate cargo volumes for further on carriage

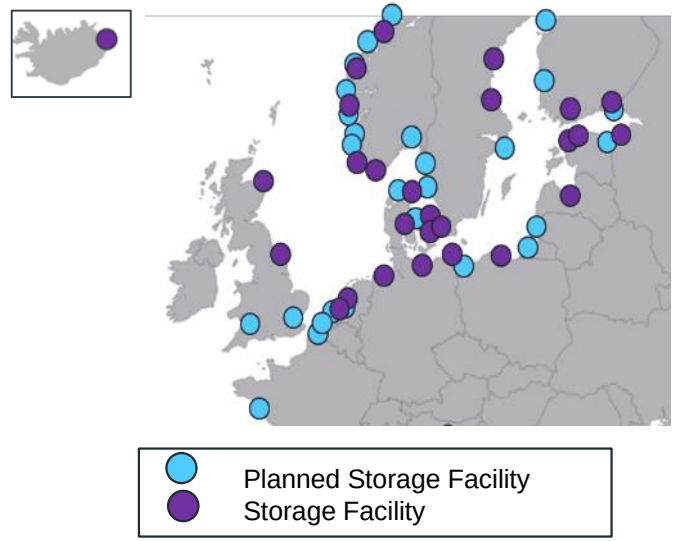
- *Desire to move units out of the container terminal as soon as possible could result in the possible need to consolidate volumes in a few strategic places. ICD's can be profitable and may be of interest to the terminal operators.*

Initiative Review

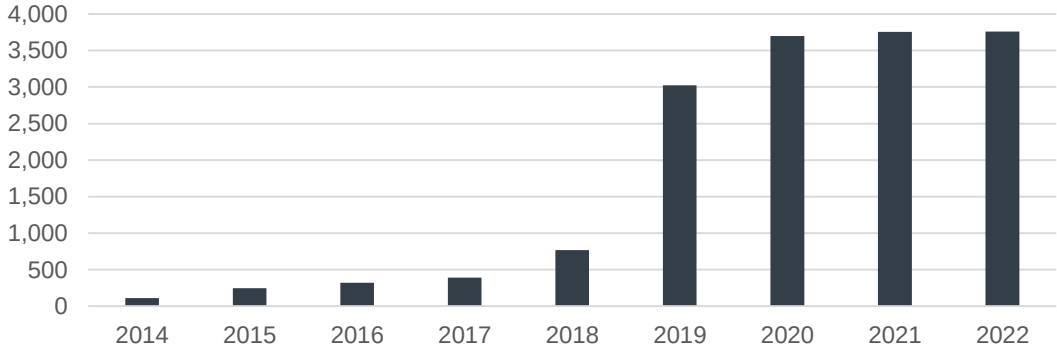
LNG bunkering / storage facilities

- SECA regulations have required vessels in Scan-Balt and Europe to limit sulphur emissions – this has increased LNG powered vessels in the region (since 2015). Will become global.
- Many ports have created storage facilities for LNG and bunkering vessels to service LNG fuelled vessels.
- Global IMO 2020 will expand sulphur emissions worldwide – LNG fuelled vessels becoming increasingly popular globally.
- Cost of low sulphur fuels ~$560 (Q3 2018 - Q2 2019) compared with the lower price of High sulphur fuels ~$340 (Q3 2018 - Q2 2019).
- CMA CGM have taken the initiative to launch a fleet of nine LNG powered 23,000 TEU container vessels, whilst many other lines are fitting scrubbers or investigating new fuel opportunities.
- Planned and proposed storage facilities populate the region, indicating growing market demand.
- Retrofitted scrubber vessels to adapt to IMO 2020, have different requirements for ship maintenance and repair.

European LNG Storage Facilities



Number of scrubber fitted vessels



Conclusion

Regional Connectivity – Conclusions

Market summary

- Fleet expansion has given opportunity for East Africa ports to attract direct calls and compete with ports in Indian Ocean and Arabian Gulf as t/s hubs
- The active developing ports will lead the less organised / developed ports behind.
- Ports are showing initiatives to attract volumes, breeding healthy competition
- LNG powered vessels also showing increasing demand
- Demand for LNG likely to continue as LNG becomes the more attractive ‘clean’ fuel source in the future
- Low interest rate environment encouraging investment will not be around indefinitely, prime time for firms to invest

COMMERCIAL & OPERATIONAL EXPERIENCE IN >250 CONTAINER TERMINALS GLOBALLY

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