SECOND TRANSPORT AND ECONOMIC CORRIDOR

Lamu Port – South Sudan – Ethiopia Transport (LAPSSET) Corridor
Lamu Port and The Great Equatorial Land Bridge

Map showing the location of Lamu Port and the Great Equatorial Land Bridge with key locations such as Suez Canal, Panama Canal, and The Cape.
Lamu Port and the Great Equatorial Land Bridge
Lamu Port and The Great Equatorial Land Bridge
Lapsset and Regional Impact
LAPSSET Corridor Route

LEGEND
- LAPSSET Railway
- LAPSSET Highway
- Oil Pipeline
- Northern Corridor

100km
NEED FOR SECOND CORRIDOR

• Development constraints at Mombasa e.g. marine access and land availability.

• Gap between haulage capacity and traffic availability and the shift of traffic from rail to roads due to low rail capacity which has resulted in high cost of road maintenance and rehabilitation of roads
NEED FOR SECOND CORRIDOR

• Current railway system cannot cope with the current and future demands since it is a metre gauge line, of limited capacity, dilapidated and over 100 years old.

• Desire for an alternative port serving Kenya and the EA region, providing a competitive environment and improved transport and trade flexibility given that Ports which serve captive markets tend to price on a cost plus basis, because many customers have no alternative.

• A desire to provide a development incentive for an underdeveloped and sparsely populated region of Northern Kenya.
NEED FOR SECOND CORRIDOR

- Increase in vessel size
- Shortage of berths
- Inadequate yard capacity
- Shortage of equipment
Potential of Northern Kenya & other Arid Lands

- Home to more than 10 million people
- Contains 70% of our livestock
- Covers 80% of our land
- Generates 90% of our tourist revenue
• Significant untapped potential:
• A regional footprint of >130 million consumers
• Rising demand for meat & milk
• Renewable energy sources
• Natural resources
• Skills & resilience of its people

.... Potential (contd)
Economic and Industrial Activities along LAPSSET Corridor

**SOUTH SUDAN**
- **POTENTIAL CROP EXPORT**
  - Cotton, Sorghum
  - Peanuts, Gum Arabic
- **POTENTIAL LIVESTOCK EXPORT**
  - Cattle, Goats, Sheep
- **FOREST PRODUCTS**

**ETHIOPIA**
- **CROPS**
  - Coffee
  - Tea
  - Spices
  - Cereals
- **MEAT PRODUCTION**
  - Livestock
  - Cattle
  - Sheep
  - Goats
  - Camel

**NAKODOK**
- **ANIMALS**
  - Cattle, Goats
- **INDUSTRIES**
  - Free Trade Zone
  - Warehousing

**MOYALE**
- **ANIMALS**
  - Camels
  - Cattle, Goats
- **INDUSTRIES**
  - Free Trade Zone
  - Warehousing

**L.TURKANA & LODWAR**
- **ANIMALS**
  - Fish e.g. Nile Perch
  - Cattle, Goats
- **INDUSTRIES**
  - Fish Processing
  - Boat making
  - Meat Processing

**GARISSA & WAJIR**
- **CROPS**
  - Fruits
  - Vegetables
  - Horticulture
- **ANIMALS**
  - Camels
  - Cattle, Goats
- **INDUSTRIES**
  - Food Processing
  - Meat Processing
  - Packaging

**UPPER RIFT VALLEY**
- **CROPS**
  - Wheat
  - Maize
  - Sorghum
- **ANIMALS**
  - Cattle, Goats
  - Dairy Cows
- **INDUSTRIES**
  - Packaging
  - Food Processing
  - Meat Processing

**ISIOLU**
- **CROPS**
  - Wheat
  - Coffee
  - Maize
  - Sorghum
  - Miraa
- **ANIMALS**
  - Cattle
  - Camels
  - Dairy Cows
  - Goats
- **INDUSTRIES**
  - Meat Processing
  - Food Processing
  - Milk Processing
  - Packaging

**TANZANIA**

**LAMU**
- **CROPS**
  - Sugar
  - Horticulture
- **ANIMALS**
  - Fish
  - Cattle, Goats
- **INDUSTRIES**
  - Fish Processing
  - Food Processing
  - Meat Processing
Second Transport and Economic Corridor - Objectives

• Facilitating trade and interconnectivity between Kenya – Uganda - South Sudan - Ethiopia - Sudan – Somalia - Central African Republic and Camerooon

• Promote regional social-economic development and integration within the Horn of Africa

• Locally in Kenya, it will open up our Northern, Eastern, North-Eastern and Coastal parts of Kenya.
<table>
<thead>
<tr>
<th>Items</th>
<th>Scale in 2030</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Lamu Port</td>
<td>20 berths</td>
<td>5,950 meters long</td>
</tr>
<tr>
<td>2 Railway Line</td>
<td>1,360 km</td>
<td>Lamu to Nakodok</td>
</tr>
<tr>
<td>3 Highway</td>
<td>1,360 km</td>
<td>Lamu to Nakodok</td>
</tr>
<tr>
<td>4 Crude Oil Pipeline</td>
<td>1,360 km</td>
<td>Lamu – Nakodok</td>
</tr>
<tr>
<td>Product Pipeline</td>
<td>980 km</td>
<td>Lamu – Isiolo – Moyale</td>
</tr>
<tr>
<td>5 Oil Refinery</td>
<td>120,000 bpd</td>
<td>At Lamu</td>
</tr>
<tr>
<td>6 Resort Cities</td>
<td></td>
<td>Lamu, Isiolo (Kipsing Gap), Lake Turkana (Eliye Springs)</td>
</tr>
<tr>
<td>7 Airports</td>
<td></td>
<td>Lamu, Isiolo and Lokichoggio</td>
</tr>
<tr>
<td>--- Associated Infrastructures</td>
<td></td>
<td>Power, Water, Communications, etc.</td>
</tr>
<tr>
<td>--- Lamu Metropolis population</td>
<td>0.45-0.50 million</td>
<td>1.25 million by 2050</td>
</tr>
<tr>
<td>Item</td>
<td>Quantity</td>
<td>Cost (M$)</td>
</tr>
<tr>
<td>------</td>
<td>----------</td>
<td>-----------</td>
</tr>
<tr>
<td><strong>A</strong></td>
<td>LAPSSET Corridor</td>
<td></td>
</tr>
<tr>
<td><strong>1)</strong> Railway (Lamu – Nakodok + Moyale Branch Line)</td>
<td>1,810 km</td>
<td>7,099</td>
</tr>
<tr>
<td>Lamu - Isiolo</td>
<td>530 km</td>
<td>1,541</td>
</tr>
<tr>
<td>Isiolo - Moyale</td>
<td>450 km</td>
<td>1,639</td>
</tr>
<tr>
<td>Isiolo - Nakodok</td>
<td>830 km</td>
<td>3,919</td>
</tr>
<tr>
<td><strong>2)</strong> Highway</td>
<td>880 km</td>
<td>2,276</td>
</tr>
<tr>
<td>Lamu - Isiolo</td>
<td>530 km</td>
<td>752</td>
</tr>
<tr>
<td>Isiolo - Lokichar</td>
<td>350 km</td>
<td>644</td>
</tr>
<tr>
<td>Lokichar - Nakodok</td>
<td>480 km</td>
<td>880</td>
</tr>
<tr>
<td><strong>3)</strong> Pipeline</td>
<td>2,340 km</td>
<td>3,949</td>
</tr>
<tr>
<td>Crude Oil – (Lamu-Nakodok)</td>
<td>1,360 km</td>
<td>3,064</td>
</tr>
<tr>
<td>Product Oil – (Lamu-Moyale)</td>
<td>980 km</td>
<td>885</td>
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</table>
## Construction Cost Estimate continued

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
<th>Cost (M$)</th>
<th>Completion Date</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>4) Oil Refinery</strong></td>
<td>120,000b pd</td>
<td>2,800</td>
<td>Private Sec.</td>
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<tr>
<td><strong>5) Resort City</strong></td>
<td>3 Lots</td>
<td>1,214</td>
<td>2020</td>
</tr>
<tr>
<td>Lamu</td>
<td>1 Lot</td>
<td>974</td>
<td></td>
</tr>
<tr>
<td>Isiolo</td>
<td>1 Lot</td>
<td>198</td>
<td></td>
</tr>
<tr>
<td>L. Turkana</td>
<td>1 Lot</td>
<td>42</td>
<td></td>
</tr>
<tr>
<td><strong>6) Airport</strong></td>
<td>3 Lots</td>
<td>507</td>
<td>2020</td>
</tr>
<tr>
<td>Lamu</td>
<td>1 Lot</td>
<td>188</td>
<td></td>
</tr>
<tr>
<td>Isiolo</td>
<td>1 Lot</td>
<td>175</td>
<td></td>
</tr>
<tr>
<td>Lokichoggio</td>
<td>1 Lot</td>
<td>144</td>
<td></td>
</tr>
<tr>
<td><strong>B Associated Infrastructure</strong></td>
<td></td>
<td>2,500</td>
<td></td>
</tr>
<tr>
<td><strong>1) Electricity</strong></td>
<td>1,100 MW</td>
<td>2,200</td>
<td>2030</td>
</tr>
<tr>
<td><strong>2) Water Supply</strong></td>
<td>185 km</td>
<td>300</td>
<td>2030</td>
</tr>
<tr>
<td><strong>TOTAL COST (A+B)</strong></td>
<td></td>
<td><strong>20,345</strong></td>
<td></td>
</tr>
<tr>
<td>Component</td>
<td>Investment Cost at Market Price (Million US$)</td>
<td>EIRR (%)</td>
<td>B/C</td>
</tr>
<tr>
<td>-------------------------</td>
<td>-----------------------------------------------</td>
<td>----------</td>
<td>-----</td>
</tr>
<tr>
<td>Lamu Port</td>
<td>3,095</td>
<td>23.4</td>
<td>1.73</td>
</tr>
<tr>
<td>LAPSSET Railway</td>
<td>7,099</td>
<td>17.8</td>
<td>1.51</td>
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<tr>
<td>Highway</td>
<td>1,398</td>
<td>12.9</td>
<td>1.09</td>
</tr>
<tr>
<td>Oil Pipeline</td>
<td>3,063</td>
<td>21.6</td>
<td>1.71</td>
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<tr>
<td>Product Pipeline</td>
<td>860</td>
<td>13.9</td>
<td>1.10</td>
</tr>
<tr>
<td>Resort Cities</td>
<td>779</td>
<td>20.8</td>
<td>2.14</td>
</tr>
<tr>
<td>Lamu Airport</td>
<td>187</td>
<td>20.7</td>
<td>1.60</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>16,481</strong></td>
<td><strong>20.0</strong></td>
<td><strong>1.65</strong></td>
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## Financing Options

<table>
<thead>
<tr>
<th>Component</th>
<th>FULLY PUBLIC</th>
<th>PUBLIC-PRIVATE-PARTNERSHIP (PPP) SCHEME</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Financing Method</td>
<td>Procurement Method</td>
</tr>
<tr>
<td>Port (1st 3 berths)</td>
<td>GOK</td>
<td>ICB, LCB</td>
</tr>
<tr>
<td>Port (Others)</td>
<td>Public Finance</td>
<td>ICB, LCB</td>
</tr>
<tr>
<td>Railway</td>
<td>GOK/PF</td>
<td>ICB, LCB</td>
</tr>
<tr>
<td>Highway</td>
<td>GOK/PF</td>
<td>ICB, LCB</td>
</tr>
<tr>
<td>Pipeline</td>
<td>FTK</td>
<td></td>
</tr>
<tr>
<td>Refinery</td>
<td>FTK</td>
<td></td>
</tr>
<tr>
<td>Resort</td>
<td>GOK/PF</td>
<td>LCB</td>
</tr>
<tr>
<td>Airport</td>
<td>GOK/PF</td>
<td>ICB, LCB</td>
</tr>
</tbody>
</table>
Bird’s-eye View of First Three Berths of Lamu Port
LAMU PORT PHASE 1 CAPACITY

• 3 No. Berths at Manda Bay
  • Container Cargo 100,000 DWT
  • General Cargo 30,000 DWT
  • Bulk Cargo 100,000 DWT

• Dredging & Reclamations works

• Operational infrastructure – access roads, railway sidings, warehouses, Offices, etc.)
Future Infrastructure
Convention Centres in Lamu, Isiolo, Lake Turkana
Resort Cities in Lamu, Isiolo, Lake Turkana
International Trade in Livestock
Lapsset Launched on 2nd March 2012
Ground Breaking Ceremony, 2\textsuperscript{nd} March 2012

- Ground Breaking Ceremony conducted by His Excellency Hon. Mwai Kibaki, C.G.H., M.P., President And Commander-In-Chief of the Defence Forces of the Republic of Kenya together with His Excellency Salva Kiir, President of South Sudan, and His Excellency Meles Zenawi, Prime Minister of the Federal Democratic Republic of Ethiopia, on Friday 2\textsuperscript{nd} March 2012.
Bilateral Agreements:

- Kenya - Ethiopia Joint Ministerial Commission has concluded ten instruments for cooperation in different sectors including trade, infrastructure, cooperative development, agriculture and defence.

- Kenya – South Sudan Joint Ministerial Commission to begin operations
Transport Corridor MOU with Ethiopia

- MOU signed with Ethiopia on 7th November 2011 by Minister for transport Hon. Amos Kimunya and his Ethiopian counterpart Hon. Diriba Kuma.
- MOU incorporated transport, communications and trade facilitation infrastructure (roads, railways, pipelines, electrical power lines, communication facilities, maritime port facilities among others).
Road Specific Agreement with Ethiopia

- Road Transport Services Agreement signed by Minister for transport Hon. Amos Kimunya and his Ethiopian counterpart Hon. Diriba Kuma
Railway Line Specific Agreement with Ethiopia

• Specific agreement on development of a standard gauge railway signed by Kenya’s Minister for transport Hon. Amos Kimunya and his Ethiopian counterpart Hon. Diriba Kuma - witnessed by the President of Kenya and Ethiopian Premier.

• The line will begin from Lamu in Kenya through Isiolo to Moyale. Each country will develop its portion.
Pipeline MOU with South Sudan

• MOU for construction of crude oil pipeline signed with South Sudan on 24th January 2012 by Minister for Energy Hon. Kiraitu Murungi and South Sudan Minister for Petroleum & Mining Hon. Stephen Dhieu Dau.

• To develop and operate an oil pipeline, fibre optic connections and the use of free trade zone at Lamu Port.

• Specific agreements to be signed shortly.
Current Status at Government Zone

- Survey work completed
- Access roads opened up
- Fencing in progress
- Water supply underway
- Electrical Power on site
- Construction of Administration Building Annex has started
Access Roads Opened Up
Gravel Works in progress
Access Roads:

• The Ministry of roads through KeNHA is undertaking the following:
  • Opening up of a new road to the Lamu Port Site and gravelling it.
  • Rehabilitating the road from the Lamu Port site to Mokowe Jetty to facilitate boat travel to Lamu and Manda Islands.
Access Roads (… cont):

- Rehabilitation of the road from Mokowe – Hindi – Garsen to all weather gravel standard. This road will in future be upgraded to bitumen standard (C112).
- Repair of Garsen – Malindi Road (B8)
Fencing of the Site:

- The Ministry of Youth & Sports through NYS constructed a temporary hoarding fence made of chain-link on timber poles around the Government Zone.
- Construction of the 2.5 Kilometer permanent masonry wall, gates and gate houses ongoing. Additional 1.0 Kilometer Area on either side of Government Zone to be incorporated.
Water on site (Tanker Transported)
Provision of Water

• Ministry of Water & Irrigation installed 4 UPVC water tanks each with a capacity of 16 cubic meters (Total 64M³).
• They were placed on two meter high embankments to provide some gravity flow to stand pipes.
Provision of Water …..

- Hydro geological surveys have established 10 new sites as suitable for boreholes:
  - 4 at New Chomo Swamps which is 20 Kilometers from site
  - 4 at Hindi Aquifer (Bele Bele Swamp) which is 18 Kilometers from site
  - 4 at Bargoni Swamp which is 28 Kilometers from site
- Drilling of the first 5 boreholes has started
Provision of Water ……

• Spanish Government Aid to develop a desalination plant to provide 20 million lpd.
• For the long term, a multi-purpose dam (Grand Falls Dam) will be constructed at Mutonga with an intake barrage at Nanighi (180KM from Lamu) along the Tana River.
Electrical Power on site
Provision of Electrical Power

• Ministry of Energy through KPLC will deliver power in bulk. Internal distribution within the Port to be done by MOPW.

• KPLC has provided two generators - 75 KVA and a 500 KVA that will ultimately be retained to provide standby power.

• Kenya signed with Ethiopia a Power Purchase Agreement for 400 megawatts yearly
Administration Building Annex
Foundation Stones Laid
Foundation Stones Laid

• Foundation Stones for Port Headquarters Building laid by His Excellency Hon. Mwai Kibaki, C.G.H., M.P., President And Commander-In-Chief of the Defence Forces of the Republic of Kenya together with His Excellency Salva Kiir, President of South Sudan, and His Excellency Meles Zenawi, Prime Minister of the Federal Democratic Republic of Ethiopia, on Friday 2\textsuperscript{nd} March 2012.
Annex Building by Ministry of Public Works:

- Main Contract has been awarded
- Nominated Sub-Contracts for services will follow shortly
Other structures:

- Police Post at Port Headquarters
- Police Station at Hindi
- Accommodation for Port Officers
- Clubhouse – to be leased to private sector
- Dispensary – MOH to take over upon completion
Access to Manda Bay
Environmental Considerations

- Wildlife
- World Heritage
- Sand Dunes
- Fishing
- Mangroves
- Sea Turtles
Environmental issues:

• Project Environmental Analysis undertaken and forwarded to NEMA for review.
• Stakeholder participation using Licensed Expert to follow shortly.
Relocation / Compensation of PAPs:

• Provincial Administration will facilitate identification, compensation and/or relocation of project affected persons (PAPs).
Land Issues

• Physical Planning Department
  – Lapsset master-plan is under review to include Lamu Metropolis and Corridor

• Survey Department
  – Preparation of PDPs and titles, port area, etc. ongoing. To be allocated to KPA

• Lands Department
  – 1,200 titles recently issued. Others to follow.
Next steps:

• Conclusion of necessary Tripartite and/or Bilateral Agreements for joint investments in the corridor

• Detailed Survey and Physical Planning of entire Corridor
Thank you

For more information, please contact us at

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Ministry of Transport
P.O. Box: 52692 – 00200,
Tel: +254 20 2729200
Nairobi
Email: ps@transport.go.ke

TRANSPORT FOR PROSPERITY