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"Sustainable freight transport in support of the 2030 Agenda for Sustainable Development"

The Northern Corridor Green Freight Transport Programme (NCGFTP)

by

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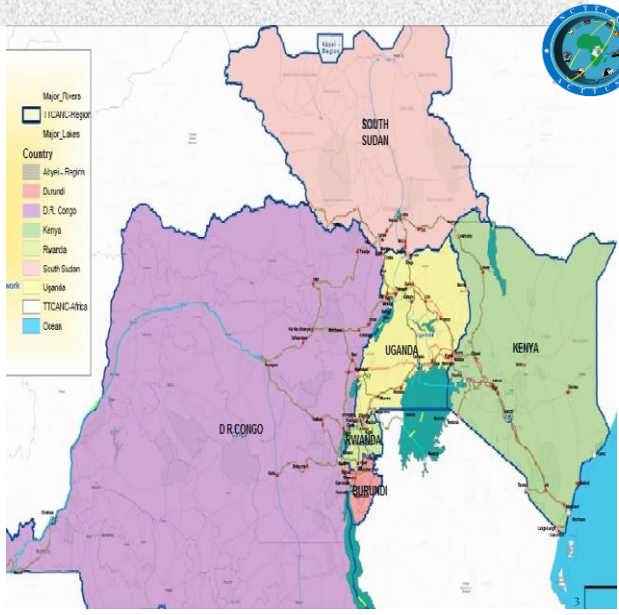
1. The Northern Corridor (NC) Network

- The Northern Corridor is a multimodal transport corridor encompassing: road, rail, pipeline and inland waterways transport
- It is the busiest Corridor in East & Central Africa with an annual growth cargo throughput of about 10%.
- In 2017, Mombasa Port handled 30.3 million tons of cargo, compared to 27.3 million tons handled in 2016.
- The NC Vision is to be a seamless, economic, smart, safe and Green Freight Transport Corridor.



2. Rationale and Strategic areas of the Program.

- ✓ As the Freight Transport sector continues to grow, its logistics costs and environmental impacts also increases in parallel.
- ✓ Subsequent to UNCTAD workshop held in 2016, the NCTTCA developed a customized Green Freight Transport programme with the following specific goals:
  - ❖ Stimulate the socio-economic development and contribute to poverty reduction;
  - ❖ Offer a competitive transport and transit services;
  - ❖ Stimulate investments and implementing strategies for safe, fast, competitive transport and
  - ❖ Ensuring environmental sustainability.

3. Objective of the NC Green Freight Transport :

The Objective of the programme is to reduce emissions by:

- **Raising awareness** of pollutant impacts and mitigation strategies; such as improved quality of fuel, vehicles, and infrastructure.
- **Advocating for the shift of traffic** to more sustainable freight transport systems and modes.
- **Streamlining transport activities** by actions such as optimizing routes, consolidating loads & reducing empty runs.
- **Identifying areas of action** and overcoming barriers to enhancing capacity and mobilizing support.
- **Improving scientific understanding** of **climate** pollutant impacts and **promoting best practices** and showcasing successful efforts.

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4. Expected outcomes of the Green Freight Program

Expected outcomes are grouped under the following 7 thematic areas :

Thematic area 1: Advocacy and Sensitization

- Advocacy and awareness : to better understand the green freight transport scheme & the necessity of a sustainable freight transport.
- Develop Partnership programs and close collaboration between logistics players (Ports, Transporters, Shippers, Cargo handlers, Roads Authorities, Railways operators, manufacturers, etc.) to better measure emissions nationally and regionally.
- Identify and Disseminate Best practices on green freight transport in all NC Member States.

4. Expected outcomes of the Green Freight Program (cont'd)

Thematic area 2: Vehicle Technology

- Technology assessment component: to identify existing processes to ensure performance and effectiveness of investments in fuel savings and emission reduction technologies.

Thematic area 3: Vehicle Operations

- Training package/curriculum: to reduce negative impacts of freight transport on the environment.

Thematic area 4: Vehicle Inspection

- Vehicle Inspection Centers (VICs) to ensure regional standards are established & roll out for behavior change .

4. Expected outcomes of the Green Freight Program (cont'd)

Thematic area 5: Freight Assessment and Analysis

- Tests are conducted to come up with the level of pollution.
- Road Side Stations (RSS) facilities are utilized as control points for truck pollution.
- Comparisons are made in terms of emissions between road, rail and inland waterways for freight transportation.
- Periodical Surveys are conducted on major roads sections/highways to define negative impacts of the current freight transport on the environment and projection/trends for the 10 or 20 forthcoming years.

4. Expected outcomes of the Green Freight Program (cont'd)

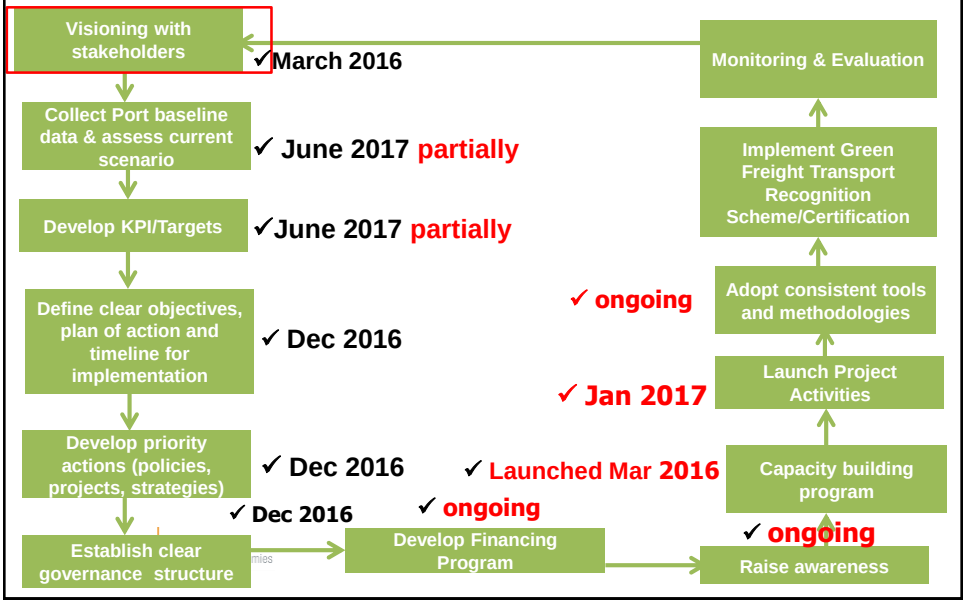
Thematic area 6: Performance Monitoring

- To include Green Freight Transport Indicators in the Northern Corridor Transport Observatory.
- Ensure that impacts of multimodal freight transport are monitored and documented.

Thematic area 7: Financing

- To identify potential sources of financing and innovative mechanisms to help freight transport companies to invest in installing fuel-saving and emissions-reducing technologies is established.

5. Key Milestones



6. Key Achievements so far (highlights)

- **In March 2016**, with support from UNCTAD, a capacity building workshop was organized in Nairobi/Kenya for Northern & Central Corridor Stakeholders.
- **From May – Dec 2016**, the NCTTCA developed its Green Freight Transport Program (NCGFTP) with 8 thematic areas together with an implementation and action plan for the period 2017-2021.
- **From 2016**, various other technical assistance is received on need basis in order to increase in house capacity (of the NCTTCA staff).
- **On 16th January 2017**, the NCGFTP was officially launched by the 42nd NC Policy Organs in line with the Article (3d) of the NC Agreement (NCTTA) on environmental sustainable Development.
- From **April – June 2017**, in partnership with KPA & KMA, a baseline study was undertaken at the Port of Mombasa in order to estimate port emissions.

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7. The Mombasa Port Baseline Emissions

The study was made possible through the UNCTAD & UNEP support. Total emissions at the Port were estimated through emissions factors from the following sources:

(i) Emissions from the ship on manoeuvring,

(ii) Emissions by the ship at the port and on anchorage,

(iii) Emissions by equipments;

(iv) Vehicles and trucks accessing the port;

(v) Rail locomotives accessing the port and

(vi) Electricity usage at the port of Mombasa;

Findings included the following:

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7. Mombasa Port Emissions (cont'd):

1. Ocean-going vessels account for about 94.7% (522,698,400) of CO_2Emissions while at the port of Mombasa and anchoring.
2. Heavy Machinery and Electricity use accounts for 2.2% (12,402,730) and 0.1% (7,876 tons) respectively.
3. About 0.8% of the CO_2 Emissions at the port is from Trucks and Commuter vehicles.
4. Container vessels are the most prevalent vessel type (28%) that calls at the port of Mombasa and therefore represent the greatest share of fuel use and emissions.
5. Three-quarters of the time that ocean-going vessels spend in the port area is at berth, which is where the greatest amount of fuel consumption and emission of greenhouse gases occurs.

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7. Mombasa Port Emissions (cont'd):

6. Most of the trucks accessing the port are new trucks with good emission control specifications.
7. Outside the port, older trucks are common for movement of cargo from yard to yard mostly grains and fertilizers.
8. Rail accounts for an estimated 0.05% (288,262kg) of the CO_2 at the port of Mombasa. The low % figure is due to ratio of cargo transported by rail from the port of Mombasa before launching the SGR in January 2018.
9. Over 95% of the equipment (mostly forklifts) in the port area has a 5 year and below age of which some may contribute significantly to the emissions at the Port.

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7. Mombasa Port Emissions (cont'd):

Summary of Port Emissions by Sources

Source	CO_2 (Kg)	NO_X	$PM_{2.5}$
1. Rail	288,262	4,380	118
2. Electricity use	7,876,095		--
3. Tug and mooring boats	400,205	8,474	--
4. Heavy Machinery	12,402,730	44,258	--
5. Trucks	4,178,958	14,904	--
6. Employees Personal cars	4,230,000	--	--
7. Commuter Buses	117,500	--	--
8. Emissions at the Port and anchoring	479,302,320	9,544,920	328,865
9. Emission for Maneuvering	43,396,080	774,360	107,221

Source : NCTTCA Emissions Baseline Survey 2017

CO2 (Kg); Nox and PM2.5 are new some of the quantitative performance indicators to be included in the NC transport Observatory monitoring system.

8. Key Recommendations

(i) Based on the Emissions Inventory Baseline Report, a detailed follow up study need to be commissioned with sufficient time to incorporate all parameters.

(ii) There is a need for a regional database to accommodate all emissions related information for easy access, reference and follow ups.

(iii) There should be deliberated efforts to acquire all the necessary tools and equipment for emissions monitoring in the region.

(iv) The emissions boundary for the port need to be clearly demarcated and defined for future comparisons and references.

(v) The methodology for emissions monitoring and measurement need to be standardized and harmonized in the region.

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THANK YOU

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