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Priority projects identified at the 2nd EAC Heads of State retreat on infrastructure development and financing

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THE 2ND EAC HEADS OF STATE RETREAT ON INFRASTRUCTURE DEVELOPMENT AND FINANCING

Kenyatta International Conference Centre
NAIROBI, KENYA

29TH NOVEMBER, 2012

THEME: DEEPENING EAC INTEGRATION PROCESS THROUGH THE DEVELOPMENT OF EFFICIENT INFRASTRUCTURE SYSTEMS TO SUPPORT TRADE AND INDUSTRIALIZATION.

PRIORITY PROJECTS UPTO 2020 IN RAILWAYS, PORTS AND ENERGY SECTORS

One People . One Destiny
PrioritY Projects Identified at the 2nd
EAC Heads of State retreat
On Infrastructure Development and
Financing

“Deepening the EAC Integration Process
through Development of Efficient Infrastruc-
ture Systems to Support Industrialization and
Trade”

KenYatta International Conference Centre
Nairobi, Kenya
29th November, 2012
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1.0 Introduction

The EAC Heads of State held their 2nd Retreat dedicated to the development and financing of infrastructure on 29th November 2012 in Nairobi, Kenya. During the Retreat, the Heads of State among others prioritized the following projects for coordination and implementation at the regional level in the next 8 years up to 2020:

1.1 Railways sub-sector

Rehabilitation of the Central Line; Dar es Salaam-Tabora-Mwanza/Kigoma, Kaliua - Mpanda railway line with a spur to Kasanga

- Crucial for linking Dar-es Salaam port with the landlocked countries of Rwanda, Uganda and Burundi.
- Detailed technical studies ongoing financed by the African Development Bank (Initial study also financed by the United States Trade Development Agency (USTDA)).
- Cost estimate is US$ 1.425 billion
- Partner States could raise financing through Eurobond or blended financing

Construction of the Uvinza - Musongati railway line

- Expected to connect Musongati in Burundi to the Kigoma-Tabora railway line in Tanzania (via a maritime component) as identified in the EAC railway Master Plan.
- It is recommended that the Partner States utilize the Fund for African Private Sector Assistance through AfDB for technical assistance with the feasibility study. Other development partners can also be approached for partnership in the initial feasibility and design.

Construction of the standard gauge Dar es Salaam–Isaka - Kigali/Keza-Gitega-Musongati railway line.

- Linking Dar-es-Salaam port to Rwanda and Burundi.
- Feasibility studies carried out indicate project economically viable. Detailed technical studies and PPP packaging to be completed by June 2013.
- Estimated cost is US$ 5.1 billion.
- Partner States can issue a regional infrastructure bond through their Ministries of Finance and Central Banks in addition to PPP packaging, proposals to Sovereign Wealth Funds such as the Norwegian Sovereign Wealth Fund and the Abu Dhabi Investment Authority.

Completion of detailed designs and the construction of the Lamu - Isiolo-Moyale- Addis Ababa Standard Gauge Railway, Lamu-Isiolo-Nadapal/Nakodok-Juba standard gauge railway line, Nairobi-Isiolo-Moyale - Addis Ababa standard gauge railway line under the LAPSSET Corridor Project

- Opening up the LAPSSET corridor linking EAC to Ethiopia and South Sudan through Lamu Port.
- Pre-feasibility studies are complete. Mobilization of resources for detailed designs is ongoing.
- The Lamu - Isiolo-Moyale- Addis Ababa section is estimated to cost US$ 3.7 billion while the Lamu-Isiolo-Nadapal/Nakodok section is estimated to cost US$ 4.4 billion.
- It is recommended that the actual construction of the railway line be funded through public sources and development partners. Public Private Partnership (PPP) participation is recommended for rolling stock.
Fast tracking of the joint rehabilitation of the Kenya - Uganda railway: Mombasa – Nairobi – Malaba – Kampala with a branch line to Kisumu & Tororo - Pakwach

- The project is crucial for increasing capacity and efficiency of bulk cargo transportation along the Northern Corridor and adjoining spur from Tororo to Packwach.
- Feasibility study and preliminary design already undertaken jointly by Kenya Railways Corporation (KRC) and the China Road and Bridge Corporation. Feasibility studies for the Tororo - Packwach line is complete.
- Cost estimate is US$ 1.6 billion
- To be a publicly funded and owned by the Partner states who will thus construct the railway

Rehabilitation of the Voi-Taveta Branch to link Kenya and Tanzania railway networks.

- Important line to link Kenya-Uganda railway and Tanzanian railway systems.
- Mobilization of funds for feasibility studies and detailed designs is ongoing from the Indian Trust Fund and the African Development Bank;
- The cost estimate is US$ 200 million;
- Government-to-Government financing recommended.

Upgrading to standard gauge of the Mombasa - Nairobi - Malaba-Kampala-Kasese line and construction to standard gauge of the Kasese - Bihanga-Kigali-Bujumbura line and Kasese-Kisangani line.

- These lines are important in linking Rwanda, Burundi and Eastern DRC to Mombasa port through Uganda.
- Feasibility studies for the Kampala - Kasese section were completed in March 2012. A consultant has been procured to carry out preliminary designs for the Malaba - Kampala section. For the Kenyan component, discussions are at an advanced stage with the Chinese Government for design and construction.
- Estimated cost for the construction of a standard gauge line is USD 4.0 billion.
- It is recommended that financing be mobilized through development partners such as Arab Bank for Economic Development in Africa (BADEA); South Korea through the Economic Development Cooperation Fund (EDCF) that seeks successful PPP projects.

Upgrading to standard gauge of the Tororo-Pakwach line and construction to standard gauge of the Pakwach-Gulu-Atiak-Nimule-Juba line.

- This project is vital in linking Kenya, Uganda and South Sudan.
- Feasibility studies have been completed on the rehabilitation exercise, while those for the standard gauge are underway.
- The cost estimate is US$ 2.5 billion
- It is recommended that mobilization of funds target the African Development Fund; World Bank concessional loans under IDA; European Union EDF, Trademark East Africa grants and Government to Government financing.
Upgrading and Construction of the Tanga (Mwambani) – Arusha– Musoma with Spurs to Minjingu and Lake Natron line, linking to New Kampala Port at Bukasa via Lake Victoria,

- This is an important project linking Uganda to Tanzania through Musoma, Arusha and Tanga.
- Feasibility study financing could be sought from the AfDB and the Indian Trust Fund;
- The estimated cost is US$ 2.1 billion
- Partner States could raise development finance from Government to Government financing or through engaging sovereign wealth funds to invest in the rail project such as the Norwegian Sovereign Wealth Fund.

Development of Mtwara - Mbamba Bay railway with spurs to Liganga, Mlimba and Mchuchuma;

- The railway will connect EAC to Malawi and Zambia through Mbamba Bay and linking Mtwara port to Liganga iron ore and Mchuchuma coal fields.
- Feasibility studies are planned for 2013/2014.
- Estimated cost is US$ 2.5 billion.
- Partner States could raise development finance from Government to Government financing or through engaging sovereign wealth funds to invest in the rail project such as the Norwegian Sovereign Wealth Fund and Diaspora funds.

1.2 Ports sub-sector

Development of the Lamu Port starting with the first three berths and associated facilities for the Port.

- This is a key project for opening up the new LAPSSET corridor which consists of a number of projects.
- The construction of the first three berths has commenced.
- Estimated cost is US$ 400 million
- The construction of the three berths is funded by the Government of Kenya.
Completion of the ongoing expansion and modernization of Mombasa port (2nd Container Terminal and re-development of Berths 12 - 14 into container terminals) and Dongo Kundu Free Port

- Improvement of capacity and efficiency at the port
- The project is already underway. Phase 1 of the dredging involving the port channel has been completed and the development of the second container terminal funded by JIBC has started, as well as the development of berths 12-14.
- The cost estimate is US$ 800 million.
- The major financing source mainly for operational infrastructure will be a PPP arrangement structured as a concession, either Build Own Transfer (BOT)/Build Own Operate (BOO) or Build Own Operate and Transfer (BOOT) schemes and divestiture/privatization where the private sector assumes the entire operation and maintenance, capital investment and commercial risk. The private sector or the relevant state-owned enterprises such as maritime authority or ports authority, could issue a regional bond.

Modernization of the Dar es Salaam Port including construction of a 2nd modern container terminal (berths 13 and 14), deepening and strengthening of berth 1 - 7 (including Ro-Ro berth), development of Kiswaere Cargo Freight Station

- This is a key project for increasing the capacity and efficiency of the Dar-es-Salaam port and the entire Central Corridor transport network. The project also entails development of port connectivity roads.
- Feasibility studies for construction of the 2nd container terminal have been completed. Feasibility studies on the other components are ongoing.
- Estimated cost is USD 1.2 billion.
- The major financing source mainly for operational infrastructure will be a PPP arrangement structured as a concession, either Build Own Transfer (BOT) or Build Own Operate and Transfer (BOOT) schemes and divestiture/privatization where the private sector assumes the entire operation and maintenance, capital investment and commercial risk.

Development of Maruhubi Hub Port in Zanzibar;

- This port is a strategic hub for East and Central Africa due to its deep waters. It is part of the implementation of Zanzibar’s Vision 2020 and Zanzibar Strategy for Growth and Reduction of Poverty (ZSGRP).
- Feasibility studies and preliminary designs are complete. A detailed engineering study for the Port is required.
- The estimated cost is US$ 400 million
- Possible development partners for investments could be Trade mark EA, JICA, World Bank, AfDB and Government to Government.

Development of Mwambani port in Tanga, Musoma Port and New Kampala Port at Bukasa.

- The project is intended to provide a multi modal link to the Great Lakes Region and a link between Uganda and the port of Tanga in Tanzania. Components will include the provision of roll on - roll off facilities at Bukasa to link with those in Tanga.
- Feasibility study and detailed engineering design have commenced and are expected to be finalized before end of 2012.
- Estimated cost is US$ 825 million.
- Development Partners could be AfDB, Trademark EA, or South Korea’s Economic Development Cooperation Fund (EDCF) that seeks successful PPP projects.

Implementation of the construction/rehabilitation and expansion programmes for inland ports, including Bujumbura, Rumonge, Rusizi, Karongi, Rubavu, Kisoma, Kisumu, Homa Bay, Port Bell, Mwanza, Itungi, Kasanga, and Jinja.

- To increase capacities and efficiency of the above key inland ports in the region, on lakes Tanganyika, Kivu and Victoria.
- Protection of inland waterways from environmental degradation, siltation and invasive weeds.
A number of feasibility studies have been carried in some of the above ports.

- The estimated cost is US$ 1.1 billion
- Utilize public funding through EAC infrastructure Fund, EAC Development Fund or EAC Diaspora Fund

Roll on - Roll off facilities between Dar es Salaam, Zanzibar, Pemba, Tanga and Mombasa

- To increase capacities and efficiency of the linked ports by providing roll on - roll off services.
- Feasibility studies are ongoing for some of the above ports.
- The estimated cost is US$ 500 million.
- Utilize public funding through EAC infrastructure Fund, EAC Development Fund or EAC Diaspora Fund

Development of the navigability of the Akagera River;

- To link Rwanda, Burundi, Uganda and Tanzania through Lake Victoria
- Pre-feasibility studies have been undertaken
- The estimated cost is US$ 2.0 billion

1.3 Regional Road Projects
Supporting Ports Development

a) The following projects have been prioritized as key road infrastructure needed to support the ports operations and enhance the railways efficiency in the region:

(I) Road projects to decongest access to Dar es Salaam Port (Dar es Salaam - Chalinze - Morogoro road capacity upgrading, Tangi Bovu - Banana Bypass, Junction improvements/interchanges in Dar es Salaam city, Southern Bypass (Dar es Salaam Port - Kisoro - Mbandi - Bagamoyo (Mb u g a n i Port) and Bunju - Victoria - Pugu road)

(II) Rehabilitation and construction of Garsen - Lamu - Malindi road

(III) Rehabilitation and construction of Malindi - Mombasa - Lunga Lunga/Horo Horo & Tanga - Pangani - Bagamoyo road

(IV) Development of Lamu-Isiolo-Nadapal/ Nkodok-Juba Road;


(VI) Rehabilitation of Ngoma - Bugesera - Nyanza road linking to Dar es Salaam-Isaka Kigali Railway;

(VII) Rehabilitation of Ntungamo - Kagitumba - Kayonza - Rusumo - Lusahunga road
(VIII) Rehabilitation of Ruhwa-Bujumbura-Rumonge-Mugina road;

(IX) Rehabilitation of Nyakasanza - Kobero - Muyinga - Gitega - Nyakararo - Jenda - Bujumbura road;

(X) Upgrading from gravel to bitumen the Nyakanazi - Kasulu – Kidahwe - Mpanda road;


(XII) Dualling of Jinja - Kampala and Kampala - Mpigi Highways as sections of the Northern corridor

(XIII) Construction of the Kampala Southern Bypass

b) It is recommended that the financing of these roads be sought from the World Bank, AfDB, BADEA, EU EDF 13, Bilaterals such as China, United States, and Japan.

1.4 Regional Projects in the Energy Sector

Power Generation Projects

Uganda: Construction of the Karuma Power Plant, 600MW, using own funds.

Burundi – Rwanda – Tanzania: Construction of Regional Rusumo Falls 80 MW Hydro Power Plant

- The 80 MW power is to be developed for Burundi, Rwanda and Tanzania;
- Detailed Feasibility, Final Design, Resettlement Action Plan (RAP) and Local Area development Plan (LADP) studies have been completed.
- The estimated cost is US$ 428.2 million
- The project will be public financed, public owned but private operated. Financial closure is expected by 2013 and estimated project completion time is 2017.

Rwanda: Geothermal Exploration and drilling in Kinigi, Rubavu and Bugarama for 300 MW

The geothermal project consists on drilling three exploratory wells in each site to prove the existence of the resource and thereafter design and construct a 10 MWe power plant in each site. The target is to develop over 310 MWe in collaboration with private sector.

- Feasibility studies and atlas map are available. Geo-scientific survey has been carried out drilling area was located and additional geophysical measurement to be carried out after procurement of geophysical equipment by the Geothermal Development Unit (GDU)/ EWSA.
Cost estimate is US$ 50 million per site for exploration drillings, infrastructure and power plant and the estimated completion time is 2015/2016 for Kinigi and Rubavu; and 2018 for Bugarama.

Burundi – Rwanda – DRC: Construction of 145MW Rusizi III HPP
- After Rusizi I (29.8MW) and Rusizi II (43.8MW) upstream of the river, Rusizi III HPP will be constructed with an installed capacity of 145 MW;
- Detailed Feasibility Studies are completed, Sithe Global and IPS as EPC Contractor is in negotiation with EGL (CEPGL).
- The cost estimation is US$ 605 million and estimated completion time is 2017.

Burundi – Rwanda – DRC: Construction of 285 MWe Rusizi IV Hydropower Plant
- The prefeasibility study has been completed. The full feasibility study and mobilization of the necessary financing are yet to be undertaken.
- The project cost is estimated at US$ 1 billion.
- Estimated period of completion is 2022.

Rwanda – DRC: Development of 200 MWe from Methane Gas between Rwanda and DRC
- Methane Gas, a resource shared by Rwanda and DRC, has a potential to produce 700MW. Rwanda and DRC have decided to develop 200 MW together.
- Estimated cost for the 200 MW is US$ 900 million.

Uganda: 180 MW Isimba HPP and 132 kV Isimba interconnection line project
- Detailed Feasibility study and RAP have been completed. Preliminary engineering designs and Tender Documents expected at the end November 2012.
- The estimated cost is US$ 600 million.
- The required financing is yet to be sourced and the IPP is proposed as an option. Estimated completion time is 2014-16

Tanzania – Uganda: 16 MW Kikagati - Murongo HPP
- The studies have been completed. MoU signed by Uganda and Tanzania on 9th September 2011; negotiating bilateral agreements with the Government of Tanzania ongoing;
- Proposed as IPP. Shareholders of Tronder and lending institutions will raise the financing. A roadmap for concluding the PPA has been agreed upon. The time frame: 2013 – 2016.

Tanzania – Uganda: 32 MW Nsongezi HPP
- Feasibility studies in progress; proposed as IPP. Shareholders of Tronder and lending institutions will raise the financing. The project time frame is 2014 – 2016

Uganda: 600 MW Ayago HPP and 400 kV Ayago interconnection line
- Feasibility study and engineering designs are in progress.
- Estimated cost is around US$ 2.1 billion and the project time frame is 2014 – 2020.
- The Project will be a PPP.
Tanzania: 53 MW Kakono Hydropower Plant;

Tanzania: 240MW Kinyerezi II Gas fired Power Plant; 300 MW Kinyerezi IV gas fired Power Plant; and 300 MW Kinyerezi III Gas fired Power Project.

These are Gas Fired Power Plants located at Kinyerezi where the Gas Pipeline ends. The cheap power generated will be used regionally through the interconnectors between Tanzania and Kenya, Rwanda, Burundi and Uganda. Further the power will be supplied to other counties interconnected with the above mentioned through their respective Grids.

There is need to update the feasibility studies.

Tanzania: 200 MW Kiwira Coal fired Power Plant; 400 MW Mchuchuma Coal Fired Power Plant

Coal Fired Power Plant utilizing our vast coal reserves. The cheap generated power will be fed to the National Grid and be transmitted to other EAC Partner States through interconnectors between Tanzania and Kenya, Uganda, Rwanda and Burundi.

For the Kiwira projects, Feasibility study financed by JICA, IPP Procurement of Developer to commence in 2012/2013. For Mchuchuma, feasibility studies are in place.

1.5 Power Transmission Lines


Rwanda: Construction of a 220kV link between Kigoma- Bugesera (60km).

Burundi – Rwanda – DRC: Transmission Lines Associated with Rusumo Falls Power Plant:

- Burundi: Construction of 108.3 km 220kV Rusumo-Gitega Transmission Line
- Feasibility study including final RAP has been completed and draft tender document for the power lines. The cost estimated at US$ 33 million; Time Frame: 2015

- Rwanda: Construction of 114.7 km 220 kV Rusumo – Bugesera - Kigali Transmission Line and associated substations; Feasibility study including final RAP completed (Apr12) and draft tender document for the power lines; cost estimated US$ 30.25 million; Time Frame: 2015

- Tanzania: Construction of 148.9 km 220 kV Rusumo – Nyakanazi; Feasibility study including final RAP completed (Apr12) and draft tender document for the power lines; cost estimated US$ 26.8 million;
Transmission Lines Associated to Rusizi III and IV:

- **DRC – Burundi**: 220 kV Kamanyola (DRC)-Bujumbura (BDI), 125 km;
- **DRC – Burundi**: 110 kV Rusiziii-Bujumbura (BDI)-Killiba (DRC);
- **DRC – Burundi**: 110 kV Bendera-Kalemi-Fizi-Uvira-Kiliba-Kamanyola-Bujumbura.
- **DRC – Rwanda**: 220kV Kamanyola (Rusizi III) - Kibuye Transmission Line (142km);

110 kV Gitega (Burundi)-Kigoma (Tanzania); 110 kV TL Negotiations will be conducted between REGIDESO (BI) and TANESCO (TZ).

220 kV Kigoma (Rwanda) - Huye-Ngozi-Gitega; RW: 62 km and BU: 81 km. Feasibility and detailed studies have been completed.

Uganda – DRC: 220 kV: Nkenda-Mpwonde-Bunia-Beni (70km) line.

70 km, Final Inception reports for the both ESIA and Feasibility study were submitted and detailed studies are on-going; Time Frame: 2014 -2016.

Uganda - South Sudan: 400 kV Karuma (Uganda) - Nimule - Juba (South Sudan) (190km) line.

Uganda: 400 kV Karuma - Kawanda transmission line, 260 km. Estimated cost is US$ 270 million. Feasibility studies are completed.


(Dedicated Transmission Line to connect Zanzibar to National Grid through the 2nd marine cable which is on completion stage).

Tanzania – Kenya: 400 kV Singida – Arusha – Nairobi (Isinya) (Kenya: 93.1 km, Tanzania: 414.4 km);
- Detailed feasibility study has been completed in June 2012.
- Implementation will take estimate 24 months since contract signing; Total cost: US$ 239,923,203; Tanzania: US$ 190,768,203, Kenya: US$ 49,155.
- Studies were financed by Government of Norway for US$ 3.4 million
- Recommended: PPP, the challenge is that no funds are committed yet. Time frame: 2012 – 2015

Tanzania: 220 kV Nyakanazi  – Geita – Bulyankulu (To connect Endpoint of Rusumo 220 kV TL with Tanzania Grid end point);

Tanzania: 400 kV Mbeya – Tunduma, 100km (ZTK);
Uganda – Tanzania: 220 kV Masaka – Mwanza, (UG: 85km, TZ; 250 km)

1.6 Cross Border Electrification Lines:

Kobero (Burundi)-Ngara (Tanzania)
- Ngara (TZ) has supply and may be used to electrify Kobero (BI). The two towns are 40 km apart. Cross-border electrification will develop rural electrification in the two sides and the cross-border one post of Kobero.

Gisuru (Burundi)-Kibondo (Tanzania)
- Gisuru has grid power that may be used to supply Kibondo. Diesel generators with a capacity of 3 MW have been installed at Kibondo.

Mugina (Burundi)-Manyovu (Tanzania)
- There are plans to electrify Mugina from Mabanda after which Manyovu can be electrified.

Kanyar (Burundi)-Butare (Rwanda):
- Butare (RW) has supply and may be used to electrify Kanyaru (BI).

Kikagati (Uganda) - Murongo (Tanzania)
- Kikagati (Uganda) has power supply and may be used to electrify Murongo (Tanzania) even before the construction of the Kikagati/Murongo Power Station.

Mutukula (Uganda/Tanzania)
- Mutukula (Uganda) has power supply and may be used to electrify Mutukula (Tanzania)

1.7 Oil and Gas Pipelines

Kenya – South Sudan

Kenya – Ethiopia

Kenya
- Upgrading of the Mombasa-Eldoret Oil pipeline to increase capacity and efficiency.
Kenya – Uganda – Rwanda – Burundi

Construction of Eldoret – Kampala – Kigali - Bujumbura with a spur from Mbarara to Mwanza - Isaka - Dar es Salaam oil pipeline. Pre-feasibility report available for Kigali – Bujumbura section. Feasibility study for Kigali – Bujumbura section was funded by AfDB but its implementation is awaiting approval of funding for the section between Kampala and Kigali. The Eldoret-Kampala product pipeline project is being repackaged to include reserve flow concept to cater for developments in the Albertine region where oil and gas discoveries have been made. This project is to be developed under PPP arrangements with two Governments (Kenya and Uganda) being parties. Re-packaged project to be tendered and implement RAP. Estimated total cost: US$ 720 million.

Uganda has carried out studies for both crude pipelines from the oil fields to the proposed Refinery and products pipeline and related infrastructure from the Refinery to the market. Plans are underway to start engaging the key stakeholders in taking forward their implementation.

The United Republic of Tanzania: is developing a Natural Gas master plan for the sustainability local gas needs and surplus for export. Substantial financing is required in order to drill additional and/or multiple appraisal wells in the deep waters where discoveries have been made and also putting in place the necessary infrastructure (processing plants, pipeline etc.). In a bid to meet the growing demand for natural gas, a new natural gas pipeline is to be constructed from Mtwara to Dar es Salaam. A feasibility study has been done.

1.8 Refineries

- This study made conclusions / recommendations in regard to its capacity (60,000 barrels of oil per day expandable to 120,000 barrels per day) to meet a growing regional market, Refinery configuration (Hydrocracker/ Coker), the refinery location and financing options (Public Private Partnership with the Private being 60% and the Public share 40%).
- The Government of Uganda has extended the East African Community Partner States to participate in the public share of the investment. The commissioning of the 60,000 barrels per day refinery is expected to be during the first half of 2017.
Contact for further details:

Detailed information on the above projects is available at the EAC Headquarters at e-mail: eac@eachq.org; attention Secretary General with a copy to Director Infrastructure or Corporate Communications.