

ANNEXE I

FEASIBILITY STUDY FOR ONE STOP BORDER POSTS, DETAILED ENGINEERING DESIGN AND LEGAL FRAMEWORK FOR OPERATION OF ONE-STOP BORDER POSTS AT MCHINJI/MWAMI AND CHIPONDE/MANDIMBA ON THE NACALA CORRIDOR.

LEGAL FRAMEWORK: DRAFT A POSITION PAPER AND DRAFT LEGISLATION ON MUTUAL RECOGNITION OF WEIGHBRIDGE CERTIFICATES AND ACCEPTANCE OF ELECTRONIC WEIGHBRIDGE RESULTS BY RESPECTIVE AGENCIES IN THE CORRIDOR MEMBER STATES.

1 WHAT IS A WEIGHBRIDGE?

A weighbridge is a large set of scales usually mounted permanently on a concrete foundation that is used to weigh entire rail or road vehicles and their contents. By weighing the vehicle both empty and when loaded, the load carried by the vehicle can be calculated. The key component that uses a weighbridge in order to make the weigh measurement is load cells.

Weighbridges play a vital role in today's economic activities providing valuable weight data for incoming and outgoing vehicles along transport corridors and bulk loading activities. For a long time weighbridges have been mechanically operated but now thanks to a blend of versatile instrumentation, user friendly software and communication technology is rapidly increasing the scope of weighbridges, thereby expanding their operational and data collection capabilities.

Traditionally the weighing process in many weighbridge applications has been relatively slow and data collection has been confined to local print outs of tickets and daily tally rolls. Now more emphasis is being placed on developing key peripheral areas. This is aimed at speeding up through put of vehicles improving security and extending weighbridge operational periods together with improving and simplifying data collection and distribution.

Technologies employed include Ethernet communication for remote access, automatic vehicle recognition systems, smart card or key readers, wireless interfacing, the world wide web and GSM. Configurable software can now be tailored for specific applications and are designed for the seamless integration with existing management systems.

1.1 Types of weighbridges

Weighbridges range from mechanical scales which give a mechanical read-out of measured weight and cannot provide an electronic reading to Digital load cell scales which automatically record weights and provide an electronic reading. Although widely used in the region,

mechanical scales are increasingly being replaced by newer generation electronic scales as their weighing process is manual, cumbersome and potentially fraught with fraud.

1.2 Electronic weighbridges play their role in management of inventories, distribution and sales of the products by accurately measuring their weight in minimal time. A fully loaded truck is driven on the weighing platform and weight of the loaded goods is displayed on the screen. The rapid developments in electronics and IT during the past two decades have resulted in the widespread use of electronic scales for heavy vehicle weighing as well as computerized weighing systems. These developments have made the collection and analysis of large amounts of vehicle weighing data easily possible and cost effective. The majority of weighbridges constructed during the past 15 years in Sub-Saharan Africa are of the electronic/computerized type. When a Road Authority decides to upgrade an existing weighbridge facility, serious consideration should be given to installing an electronic scale and computerized weighing system. Among the countries along the NACALA corridor, Zambia commissioned the first ever electronic weighbridge at Kapiri Mposhi in Central Province on 7th February, 2007. During the commissioning of the weighbridge, the Zambian Minister for Works and Supply announced the passing of legislation that would manage the axle load control in the country. He also announced the construction of eight electronic weighbridges spread throughout the country. In October 2013, tenders were invited for the construction of a fixed electronic weighbridge at Chongwe.

Types of electronic weighbridges;

- **The pit weighbridge.**
- **Pit less weighbridge.**
- **Mobile weighbridge** provides a great alternative because such a weighbridge can be easily shifted to a new place in a matter of hours.

In a study undertaken by PADECO Co. Ltd a recommendation was made to the effect that only electronic weighbridges should be used for overload control along the East Africa Community(EAC) road corridors.

2.1 The necessity of installing weighbridges along transport corridors and weighing axle loads.

Heavy goods vehicle overloading is a serious problem across much of Sub-Saharan Africa. Such overloading not only significantly accelerates the rate of deterioration of roads but also contributes to high transport costs. Unless the problem is tackled, it will negate the expected benefits from the huge amounts of resources that countries and donors are investing into improved road infrastructure across the continent. The cost associated with vehicle over loading can be avoided through effective control measures by using weighbridges.

2.2 Some of the Initiatives taken and instruments in place to control vehicle overloading in East and Southern Africa Region.

2.3 The COMESA, SADC and the Southern Africa Office of the United Nations Economic Commission for Africa (UNECA) working under the Regional Economic Communities Transport Coordinating Committee established under Sub-Saharan Africa Transport Policy Programme (SSATP) identified vehicle overload control as one of the priority areas to be addressed in their 2006-2007 work programme. In that regard a project was proposed to prepare a report on constraints, issues and prevailing best practices in overload control in the SADC and COMESA regions.

Notable constraints to the effective operations of the SADC corridors that have often led to significant transport delays and increased transport costs hinge around differing regulations in each of the countries the corridors pass through. These include complicated and non-harmonized customs border procedures and documents, inefficient border infrastructure and services (i.e unharmonised weighbridge equipment, weighing procedures, acceptable tolerance limits, overload control certificates, management of weighbridges) differing axle load limits and vehicle dimensions between countries and vehicle licensing among others.

As already stated, the challenges that arise from the absence of harmonized framework for overload control management are most apparent along regional transport corridors. The challenges manifest themselves at two levels; firstly in lack of regional harmonizing of axle load limits which makes management difficult and secondly in lack of faith in the systems used in different countries such that vehicles are sometimes weighed frequently including at weighbridges a few kilometers apart but on different sides of a common border. Differences in the infrastructure used contribute to varying perceptions of the integrity of the overload control systems crossed by the regional transport corridors so that each country has to weigh vehicles again as such as they enter its territory.

2.4 SADC PROTOCOL ON TRANSPORT, COMMUNICATIONS AND METEOROLOGY.

Article 6.5 –Dimensions of Vehicles and Vehicle Combinations

1. Member States shall develop and implement harmonized standards in respect of vehicle dimensions and vehicle combinations.
2. Vehicles or vehicle combinations which exceed the harmonized standards referred to in paragraph 1 may only be authorized to circulate on the basis of special permits issued by authorities designated by each Member State for that purpose.

Article 6.6-Loads on Vehicles

1. Member States shall implement harmonized permissible axle mass loads and gross vehicle mass and gross combination mass limitations with due consideration of the need to balance financial needs and interests of preserving the Regions road infrastructure, optimizing road transport operations and enhancing road traffic safety.
2. In order to attain the objectives stated in paragraph 1, Member States shall develop a sustainable strategy which shall include;
 - a. An action programme for the incremental or phased in implementation of harmonized maximum axle mass loads by member States which are not in a position to implement such loads immediately.
 - b. Cooperation with regard to the sharing of weighing station facilities and equipment in the region.
 - c. A coordinated approach in respect to maintenance and calibration practices, procedures and management of information.
 - d. Harmonised penalties or administrative fees for vehicle overloading offences which take into account of factors such as pavement damage and travel distance.
 - e. Effective enforcement procedures.
 - f. The introduction of common training standards and joint training.
 - g. The possibility of involving the private sector as a form of self-regulation in order to promote voluntary compliance.
 - h. Administrative control measures in respect of habitual offenders
 - i. Public awareness campaigns.
3. Member States shall adopt a harmonized position with regard to application of a bridge formula.

2.5 COMESA TRADE AND TRANSIT TRANSPORT FACILITATION INSTRUMENTS

COMESA introduced trade and transit transport facilitation instruments several years ago which are currently in operation to address the issues SADC is trying to address. Such instruments are Harmonised Road Transit charges, COMESA Carriers Licence, Harmonised Axle Loading and Maximum Vehicle Dimension among others. SADC as a regional grouping has not adopted the same instruments to address the challenges it currently faces bearing in mind that;

1. Most of the SADC Member States are also members of COMESA, the Ag. Director for the SADC infrastructure and Services Directorate indicated at the fifth Intermodal Africa conference in 2007 that SADC agreed with COMESA and EAC to jointly implement transport programmes and instruments so as to have harmonized regulations and services across the three sub-regions. To date few SADC countries have adopted and are using the

COMESA trade and transport facilitation instruments, eg the COMESA harmonized axle load limits are being implemented in only five SADC countries including Malawi and Zambia.

2.The COMESA carrier's Licence which harmonises licensing requirements and thus enables a carrier to operate throughout the region thus enabling more efficient use of the region's transportation fleets and reducing transport costs is currently operational in only four SADC countries including Malawi and Zambia.

2.6 SADC MOU ON VEHICLE LOADING (SADC 1999)

The SADC MOU on Vehicle Loading (SADC 1999) requires Member States to ensure the effectiveness of overloading control through harmonized approaches to the development of a regional network of appropriately selected, installed and operated weighing stations. The same MOU encourages exchange of information on weighbridge data by requiring Member States to promote a common understanding of the vehicle loading system and its enforcement in the region through on-going exchange of information and the conducting of public awareness campaigns.

2.7 SADC MODEL LEGISLATIVE PROVISIONS ON MANAGEMENT OF VEHICLE LOADING(March 2009)

Together with the SADC MOU on Vehicle Loading they take into account international best practices on various aspects of overload control and include a number of trend-setting initiatives that represent a fundamental shift in approach to overload control and in so doing, respond to the most glaring shortcomings of traditional approaches to overload control. Unfortunately there is a lack of awareness of the existence of this document in many countries in the region. The two documents provide a framework for a new approach to vehicle loading management which consolidates reform effort carried out in recent years.

2.8 CROSS BORDER OVERLOAD CONTROL GUIDELINES

The guidelines were prepared by InfraAfrica (2008) and were meant to provide information and guidance on how to implement a cross border overload control systems (CBOCS) by adopting a more collaborative, streamlined and professional approach between the roads authorities, customs and transport agencies in dealing with commercial vehicles that wish to cross a border from one country to another. The CBOCS initiative is in accordance with the SADC MOU on Vehicle Loading (SADC 1999)which requires that Member States agree that in locating weighbridge stations, preference shall be given to their establishment in common control areas at border posts. Thus ideally when new border facilities are being planned, provision should be made for not only locating the

weighbridge within the customs area but also for sharing the weighbridge facility between the adjacent countries in a one stop border post arrangement.

2.9 COMESA- EAC-SADC TRIPARTITE-TRADE AND TRANSPORT FACILITATION (Greater regional harmonisation and cooperation)

The high cost of doing business across borders in the COMESA-EAC-SADC region is a major constraint to economic development. The high cost of transport, especially road transport, is directly related to the time taken from the port to the inland destination, or vice versa. The longer the journey the more expensive production becomes-rendering Member States less competitive.

COMESA-EAC-SADC all have programmes aimed at facilitating trade across the region. Although some of these programmes are already harmonized between the countries between the Regional Economic Communities (RECs), many remain fragmented and some do not cover the entire Tripartite region.

In order to harmonise current programmes and facilitate trade across the region, the Tripartite intends to develop a common Trade and Transit Facilitation programme that will be implemented across the three RECs and along corridors. This common programme will have customs harmonization as well as transport harmonization elements. Among them is;

Harmonising and Enforcing Axle Load and Vehicle Dimension Limits.

It cannot be over emphasized that unless the problem of over loaded axles and gross vehicle masses is positively addressed and resolved the current initiative to improve the efficiency of the region's road transport systems will not be sustainable. The proposed list of activities under this initiative includes:

- Design and promote a model law on axle loads and vehicle dimensions including guideline for permission to use heavy vehicles on the region's trunk roads, regulations for weighbridge devices and their use, weighbridge staff and authorization, calculation of load and procedures and legal consequences and payment and guidelines for abnormal loads, that can be used as guidelines by each country in the Tripartite region.
- Define "strategic" weighbridges along corridors and link these weighbridges electronically so that a system can be designed to allow tracking of trucks as they move along the corridor using radio-frequency identifiers(RFIDs) or similar technology so as to reduce the level of overloading as well as reduce the level of unrecorded trade.
- Design and implementation of a regional road transport management systems based on self regulation. Many of the region's transport delays can be attributed to bureaucratic delays caused by the need to check on compliance (such as customs inspections, weighing trucks, document checks at police road blocks, etc). One way to reduce these

delays would be to introduce a transporter accreditation system in which a transporter undertakes to comply with a specified package of regulations. In doing so the transporter will then be exempt from the regular compliance checks. A spot check system with severe penalties and loss of accreditation status could be implemented.

- Development of corridor management institutions; A number of the Tripartite region's corridors have their own management structures that are usually established through a Memorandum of Understanding between the countries the corridor transits through. However, not all corridors have their own management structures; the functions and responsibilities differ and there are no formal linkages between the corridor management structures and the Secretariats of the Regional Organisations. The Tripartite will assist to establish new corridor management structures by clustering corridors geographically.(the clustering has already been done)
- Implementation of corridor monitoring system for selected borders: The Tripartite will develop and implement a corridor monitoring system that will where appropriate, be based on existing monitoring systems. The monitoring will primarily monitor the time taken to travel along a corridor and will record reasons for delays.

2.10 Steps taken by East Africa Community (EAC) to address vehicle overloading

In 2011 a study* to review approaches to vehicle overload controls and make recommendations on how to harmonise the approaches in all EAC Partner States based on research and analysis of initiatives by Partner states, COMESA and SADC. In particular to formulate a draft regional agreement or EAC Act to harmonize vehicle overload control laws and regulations. The Study was completed in September 2011 and forms the basis of the EAC Vehicle Load Control Act. The study established that all the five Member States of EAC have different laws and regulations governing vehicle overloading, lack of weighbridges to enforce them in some countries, delays at weighbridges and governance issues among other challenges. The study looked into the current permissible maximum axle load limits in the EAC, COMESA and SADC countries.

**The study was for Harmonisation of Vehicle Overload Control in the EAC undertaken under the East African Trade and Transport Facilitation Project by PADECO CO., Ltd through funding from JICA.*

The following recommendations were made by the Partners States to improve the management of weighbridges as result of the study.

1. The private sector should be involved in some aspects of management of the weighbridges as per regulations to be stated in the regional legal framework.
2. Standardized categories of traffic control centres (TCCs) should be agreed upon.
3. Appropriate types of weighing devices should be selected based on traffic volumes.
4. Portable/Mobile weighing scales to be used for enforcement subject to accreditation using harmonized standards.

5. Operation of a regional database of data management system for purposes of sharing information
6. Development of a regionally coordinated strategy for the control of overloading by the judicious deployment of weighbridges along EAC RTRN in accordance with a regionally agreed network of weighing stations.
7. Development and use harmonized operation manuals, weighbridge certificates networking and auditing.
8. All weighing personnel should be trained using a regional curriculum.

Some of the above recommendations among others have been incorporated into The East African Community Vehicle Load Control Act. The East African Legislative Assembly passed the Act in Kampala Uganda in May 29,2013.(A copy is annexed hereto for reference)

Section 10(2)(d) provides for issuance of regional weighbridge certificates acceptable to all national road authorities. In the Working Paper 5 (WP5) on the Preparation of the EA Transport Facilitation Strategy a recommendation was made with regard the **Mutual Recognition of Print Out Certificates** in the following terms:

3. Print out Certificates.

Section.....

- 1. An authorized officer operating a scale shall issue and provide the driver with a print out certificate as shall be prescribed in the.....Schedule.**
- 2. The driver of a vehicle to whom a print out certificate has been issued shall keep the certificate in the vehicle throughout the entire transport operation and shall present such certificate upon demand to an authorized officer of any national road authority.**
- 3. A print out certificate issued by an accredited weighing station in any Partner State shall be recognized as valid for the purpose of carriage between and in transiting the Partner States, but such recognition shall not exempt a carrier from the obligation to weigh the vehicle if directed by an authorized officer appointed by a national road authority under section.....of the Act.**
- 4. Nothing in this section shall be deemed to prohibit an authorized officer appointed by a national road authority under section..... from requiring a vehicle carrying a print out certificate contemplated in subsection (1) from being weighed in terms of this section if there are reasonable grounds to do so.**

The above proposed/recommended provisions were mainly based on Section 34 of SADC Model Legislative Provisions (1999) and the style of drafting influenced by Regulation 16 of the Botswana Road Traffic (Vehicle Load) Regulations. The provision is intended to exempt the motor vehicle drivers from acquiring additional print out certificates in subsequent weigh stations of Partner States which may be a time consuming exercise.

SADC as a Regional Economic Community (REC) does not have regional legislative assembly as the EAC Partner States have. Any legal instrument to control vehicle overloading between Member States along a corridor will have to be by way of a Bilateral or Multilateral agreement(s) Protocol or Act. At a workshop organized by COMESA on Harmonisation of Key Elements and Implementation of Best Practice in Overload Control in Eastern and Southern African Region in Nairobi, Kenya on 10th and 11th July, 2008 the resolutions made were inter alia that;

- The RECs to adopt the SADC MOU and Model Legislative Provisions (MLP) on Vehicle Loading and Member States to review their overload Control regulations and ensure compliance with the MOU and MLP.
- Members States should select appropriate weighbridge types based on traffic volumes
- The Three RECs to introduce harmonized regional Weighbridge Clearance Certificates.

3.Current Vehicle Overload Regulations in Zambia, Malawi and Mozambique.

3.1 Zambia; Vehicle Overloading Control is enforced in terms of the Road Traffic Act Cap 464. There are 8 weighbridge Stations in the country including one at Mwami.

3.2 Malawi; Vehicle Overloading control is enforced in terms of the Road Traffic Act, 1997 through the Road Traffic (Construction Equipment and Use) Regulations 2000. This legislation incorporates some of the provisions of the SADC Model Legislative Provisions on Control of Vehicle Loading.

There are four weighbridges in the country including one at Mchinji.

3.3 Mozambique; The National Road Administration of Mozambique (ANE) is responsible for the maintenance and rehabilitation of main roads of Mozambique. This responsibility includes the protection of their existing roads and bridges network against the excessive damage caused by overloading of heavy vehicles. Under ANE there are 11 existing weighbridges spread over the entire country and three new ones proposed.

CONCLUSION

The selection, installation and operation of weighbridges constitute important elements of any country's overload control activities. In this regard, the SADC MOU on Vehicle Loading (SADC 1999) requires Member States to ensure the effectiveness of overloading control through harmonized approaches to the development of a regional network of appropriately selected, installed and operated weighing stations. The importance of having a national or regional overload control strategy which guides the selection and location of weighbridge facilities is stressed. The selection of a weighbridge is largely determined by the purpose it will serve. The purpose will in turn be determined by the strategy adopted by the relevant institution. Any national strategy dealing with the selection and location of weighbridges should be set within the

parameters agreed to in the SADC Model Legislative Provisions on Management of Vehicle Loading and the MOU on Vehicle Loading (SADC 1999).