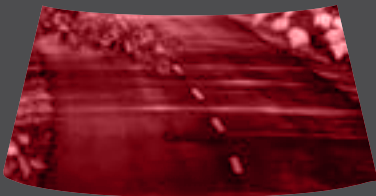
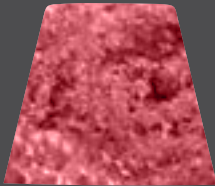


Road Safety

League of Arab States Truck Accident Causation Feasibility Study



FACILITATING ROAD TRANSPORT
FOR MORE GROWTH AND PROSPERITY
IN THE ARAB WORLD

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The IDB-AULT-IRU project aims to improve efficiency of road transport services in the pan-Arab region, by facilitating trade, enhancing road safety and increasing professionalism in road transport operations.

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Road Safety

League of Arab States Truck Accident Causation Feasibility Study

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1 Introduction

The issue of road safety has become of increasing concern to the civil societies and governments of the Arab world due to the high level of fatal accidents occurring every day. Because of the high physical and human costs associated with these accidents, road and driving authorities in Arab countries have put greater emphasis on promoting road safety in terms of road conditions, vehicle conditions, driving regulations and measurements and professional driver training.

There are many interlinked factors which contribute to an accident.



Only limited statistics are available regarding truck accidents and even less is known about the cause of these accidents. The European Truck Accident Causation (ETAC) study, a valuable and in-depth report on the subject, was conducted from 2004 to 2007. The European Commission (EC) and the International Road Transport Union (IRU) commissioned the ETAC study with the aim of identifying the main causes of accidents involving trucks. As already known, there are many interlinked factors which contribute to an accident. In line with requests of the World Health Organization's (WHO) "Global Status Report on Road Safety", the ETAC study has, in the meantime, not only become a standard in accident causation research but also a key document for road safety policy makers, industry representatives and the media.

The objective of this consultancy study was to investigate under which conditions it was feasible to develop a League of Arab States Truck Accident Causation Study (LASTAC) applying already existing ETAC tools, knowledge and background information.

2 Scope

Over a 6 month period the consultancy work was dedicated to investigate the:

- a. Technical feasibility of a LASTAC study
- b. Operational feasibility of a LASTAC study
- c. Legal feasibility of a LASTAC study
- d. Financial feasibility of a LASTAC study
- e. Schedule feasibility of a LASTAC study

3 Methodology

In order to implement the Terms of Reference of the LASTAC Study the following implementation plan has been followed:

a. The evaluation of the ETAC Methodology:

The ETAC Methodology will be used in the LASTAC study as much experience and know-how was accumulated through its application in Europe. To decide on the applicability conditions of this methodology in the Arab world, ETAC's development, application and evaluation steps were carefully evaluated.

b. The desk research:

In the second step, desk research was undertaken regarding the road safety situation in the League of Arab States. This desktop research included the analysis of available road safety statistics, available legislation and the identification of cooperation partners within the region.

c. Study trips:

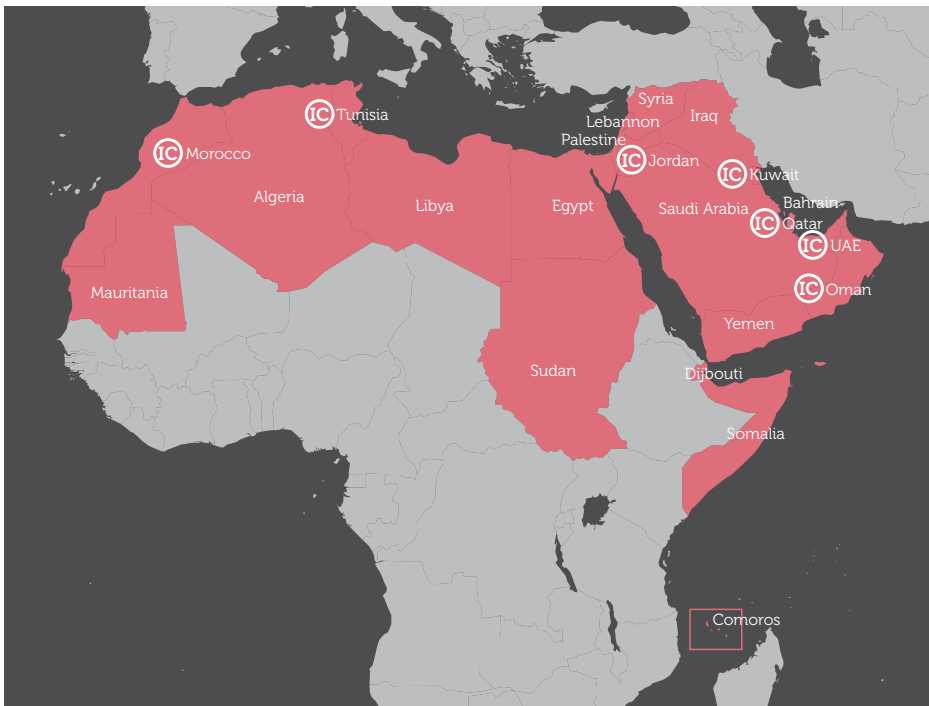
In the third step, study trips were designed and undertaken to the pre-selected LAS countries. These trips were arranged for United Arab Emirates and Qatar, for Tunisia and Morocco and for Jordan, Oman, and Kuwait.

d. Data and information collection:

From the visited countries, different road safety data and information was evaluated and consolidated.

e. Interim and Final Report Preparations:

An interim report together with a final report with conclusions and recommendations was prepared and submitted.



League of Arab States (LAS) countries and investigated countries (IC: Investigated Country).

4 Results

Limited road safety statistics are available and even less is known about the accident causes, especially when it comes to accidents involving trucks.

Quality of road safety data

Based on the assessment of the road safety data in the LAS it can be concluded that limited road safety statistics are available and even less is known about the accident causes, especially when it comes to accidents involving trucks. In case of available data, it can be concluded that the data are not harmonised (e.g. vehicle class and definition of truck, pick-up, weight) between countries and that in many cases the figures outdated. From the in-depth analysis it can also be noted that the most comprehensive statistical data were found in Jordan, Oman, Morocco and Tunisia with the reporting of crashes or injuries to and by authorities especially well established in these countries.

Technical feasibility

In order to implement the LASTAC study in the most efficient way, the following criteria have to be fulfilled:

- a. To implement the study efficiently, Arabic should be the basis for the LASTAC tools.
- b. During implementation, the data collection and data evaluation and quality control processes can be executed separately. After finalisation of the LASTAC study, the database shall be made available to all stakeholders for further decentralised usage.
- c. There may be a need for IT infrastructure and related standard computer software such as “PC – Crash” during training and implementation stages.



Operational feasibility

Although ongoing political instability commonly referred to as the ‘Arab Spring’, has affected the country selection, it can be mentioned that it would be feasible from an operational point of view to undertake the LASTAC study in the following countries: Jordan, Oman, Tunisia, Morocco, UAE, Qatar and Kuwait.

One reason why a LASTAC study is feasible in these countries is the fact that road safety has been institutionalised at authority level, in fact, it can be highlighted that generally, the Police Departments within the Ministry of Interior (MoI) have been responsible for road accident investigation and its reporting. The exceptions are Morocco and Kuwait. In Morocco, the Police Department is responsible for accident investigation, but this organisation is under the control of the Ministry of Transportation (MoT). The other exception is Kuwait, in which civil servants (investigators) have performed accident investigations under the umbrella of the MoI. In addition, there is an ongoing study on the road traffic strategy (Project) for the State of Kuwait and it was understood that trained police officers will take responsibility for accident investigation in the coming years.

	UAE	Qatar	Tunisia	Morocco	Jordan	Oman	Kuwait
Accident Investigation & Statistics	Police (MoI)	Police	Police (MoI)	MoT	Police	Police	GDI (MoI)
Accident Analysis & Statistics	Police (MoI)	Police	Observatory	CNPAC	Traffic Institute	Traffic Institute	MoI

Organisational situation for preparing harmonisation proposals.
MoI: Ministry of Interior / MoT: Ministry of Transport / National Statistics Governmental Body; Observatory (Tunisia), CNPAC (Morocco), Traffic Institute (Jordan and Oman). / CNPAC: Comite National de Prevantation des Accidents / GDI: General Directorate of Investigation

However, when it comes to detailed, scientific accident analysis and statistics knowledge it is clear that some countries are further developed than others.

Jordan and Oman: These two countries have a common situation regarding ongoing efforts for upgrading the present road safety data collection and evaluation. Both countries have independent “Traffic Institutes” which are existing road safety agencies in those countries.

Tunisia and Morocco: These two countries have a dedicated road safety statistical analysis government body; however they lack independent accident researchers.

UAE, Qatar and Kuwait: Although these countries have shown a very positive response to the LASTAC project participation from the authority level, they are lacking independent, institutionalised, scientific road accident investigation knowledge.

With respect to implementing the LASTAC study, the following assessment can be made:

"Most ready countries": Jordan and Oman.

"Ready Countries": Tunisia and Morocco.

"Ready after further preparations": UAE, Qatar and Kuwait.

Having carried out an in-depth investigation of the ETAC methodology it can be concluded that the original ETAC methodology is rather cumbersome and simplification of the ETAC approach is necessary ("ETAC Light").

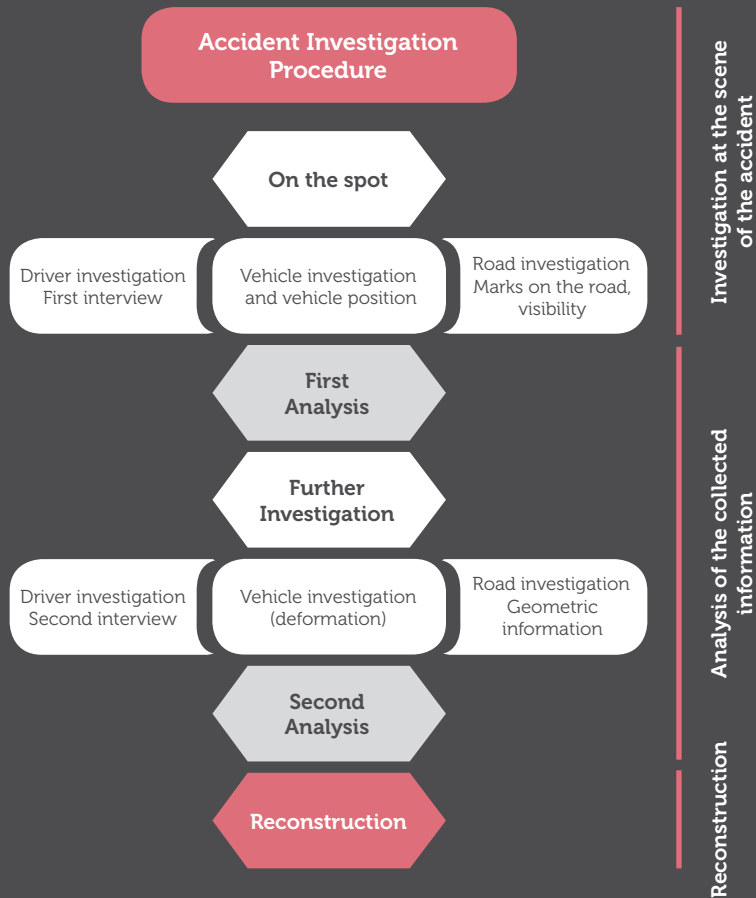
To identify the main causes of accidents involving trucks, it is crucial to collect:

- » Vehicle related data;
- » Road related data;
- » Person related data;
- » Crash related data;
- » Reconstruction of the accident related information data (pre- and post collision); and
- » Information regarding contributing factors to accidents.



Although ongoing political instability commonly known as the 'Arab Spring', has affected the country selection, the LASTAC study would be operationally feasible in Jordan, Oman, Tunisia, Morocco, UAE, Qatar and Kuwait.

To keep the general accident investigation approach of onsite investigation, the consolidation of the first findings, accident reconstruction and the casual analysis is shown in the figure below:



In-depth accident analysis flow-chart. Source ETAC study.

However, without compromising the general approach, and given the constraints in some LAS countries, it can be concluded that instead of collecting 3,000 different parameters, as was the case in the ETAC study, the amount can be reduced to a maximum of 300.

Lastly, to provide a sound statistical basis, and to use as a benchmark to the ETAC study, a minimum of 600 accidents need to be analysed.

Legal feasibility

To ensure the success of the study and to avoid legal difficulties it will be important to ensure the support and cooperation from traffic police and emergency services as the accident investigators have to cooperate closely with them.

The LASTAC study data have to be anonymised so that they cannot be used for legal disputes or criminal investigations.

Specific changes to national legislation prior to the LASTAC study will not be necessary. To the contrary, the LASTAC Project outputs will help to identify the main cause of an accident and, as such, will help to better target road safety legislation in the future.



Financial and schedule feasibility / Implementation Scenario

To judge the possible financial commitment, the schedule and implementation for a full fledged LASTAC study, it is important to consider the various necessary project implementation stages. They are:

- a. A simplification of the ETAC methodology and its adaptation to the Arab world is necessary. This step includes the simplification of the ETAC database, the ETAC questionnaire and the ETAC manual, the amendments to the ETAC software and their translation. This work should be headed by a LASTAC lead agency from one of the most ready countries (such as the Traffic Institute in Jordan), supported by the original ETAC lead expert (CEESAR, who developed the IT tools and coordinated the methodology development of the ETAC study) and the International Road Transport Union (IRU) as technical assistant partner.

Estimated duration: 1 year

Estimated costs: 250,000 USD

- b.** Training of representatives of the LASTAC lead agency will be held. These training workshops will focus on:
 - i) Training on methodology and coding
 - ii) Training on accident investigation (test area and/or onsite where necessary)
 - iii) Training on accident analysis and quality control

Estimated duration: 6 months
Estimated costs: 50,000 USD
- c.** The LASTAC lead agency will train other participating national stakeholders in national workshops. These training workshops will focus on:
 - i) Training on methodology and coding
 - ii) Training on accident investigation (test area and/or onsite where necessary)
 - iii) Training on accident analysis

These training sessions will include the LASTAC lead agency and authorised national stakeholders and experts

Estimated duration: 6 months
Estimated costs: 150,000 USD
- d.** The main part of the project will be data collection and quality control. This part will include the LASTAC lead agency, the IRU and national experts.

Estimated duration: 3 years
Estimated costs: 600,000 USD (1,000 USD per accident)
- e.** Dissemination and advocacy, including seminars, publications, etc. (1 year).

Estimated duration: 6 months
Estimated costs: 150,000 USD

Based on the above explanations, and benchmarked against the ETAC study and similar projects in the region, the overall costs of the full fledged LASTAC study is estimated at USD1.2 mio for the possible total project period of 5.5 years.

5 Conclusions and Recommendations

The main conclusions and recommendations of this LASTAC feasibility study are as follow:

- a. It will be possible to develop a League of Arab States Truck Accident Causation Study (LASTAC) applying already existing ETAC tools, knowledge and background information.
- b. It is technically, operationally and legally feasible to implement the LASTAC study. However, some adaptations such as simplification of the ETAC approach will be necessary ("ETAC Light").
- c. Based on a draft implementation plan, a LASTAC study could be implemented within a 5½ year period with an estimated budget of USD1.2 mio.
- d. Finally, to ensure that there will be the multiplier effect of the LASTAC study and a sustainable effect in the region, it will be necessary to use local knowledge, supported by international advice and to use adapted technology in the region.
- e. Some LAS countries are more ready than others to implement the LASTAC study. Jordan and Oman are the "most ready" countries, followed by Tunisia, Morocco, UAE, Qatar and Kuwait.
- f. The LASTAC study will help national governments to identify actions contributing to the reduction of truck accidents and/or their seriousness, to improve road safety and to develop effective national road safety legislation.



Effectively improving road safety requires implementing a three-step approach: 1. Identify the main cause of accidents 2. Promote and implement effective, harmonised standards for the training of road transport professionals as provided by the IRU Academy and 3. Foster efficient public-private partnerships to improve road safety.

NOTES:

Road Safety

For true road transport professionals, every road accident is one too many. The road transport industry has always been and will continue to be committed to reducing the number and severity of accidents involving heavy commercial road vehicles, by promoting a culture of road safety within the sector, and by supporting all road safety measures that effectively target the main cause of accidents involving commercial vehicles.

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