



EAP WORKING GROUP 3

“Road Safety Engineering & Black Spot Management”

Meeting 4
(workshop meeting in Minsk)

October 19th, 2018

Summary

INTRODUCTION

The meeting of the Working Group 3 (WG 3) took place on October 19th in Minsk, Belarus. Representatives of all six EaP countries were present as well as local representatives of the EaP Civil Society Forum. Veronika Liskova, DG MOVE represented the European Commission.

The meeting was opened by introductory remarks by DG MOVE (Veronika Liskova), Ministry of Transport and Communications (Sergiy Leonchik, Head of Road Maintenance Department) and the World Bank (Ioannis Dimitropoulos, Senior Transport Specialist) highlighting the importance of road safety cooperation in the EaP region and focusing on some recent developments since last face-to-face meeting in March 2018.

Following the introductory remarks Veronika Liskova, DG MOVE has provided an update on the recent EU initiative in road safety focusing on the 3rd Mobility package. She also presented a useful web tool led by the European Commission - the European Road Safety Charter (<http://www.erscharter.eu/>), which is the largest civil society platform on road safety related initiatives.

The subsequent technical discussion of the WG 3 meeting was divided into several sessions as outlined below:

- Follow-up on the Ljubljana Declaration
- Follow-up on the Road Safety Cooperation Framework
- Benchmarking of EaP countries on EU 2008/96 Directive
- ToRs for priority project(s)
- Presentation of the Road Safety Screening and Appraisal Tool (RSSAT)
- Country road safety profiles
- EaP road safety website

FOLLOW-UP ON THE LJUBLJANA DECLARATION

At the 15th EaP Transport Panel meeting on 18 September 2018 the EaP countries shared an extensive list of actions they are undertaking on the follow up of the Ljubljana Declaration on Road Safety. For the ease of reference DG MOVE prepared a table mirroring the structure of the declaration and sent it to the EaP countries so they could outline their follow-up activities and share it with DG MOVE. Since not all EaP countries provided their response to the European Commission, the World Bank team asked the EaP countries' delegates to prepare relevant presentations for these WGs meetings in Minsk. The process of receiving the EaP countries' feedback is ongoing and is expected to be completed by mid-November 2018.

FOLLOW-UP ON THE ROAD SAFETY COOPERATION FRAMEWORK

The Road Safety Cooperation Framework for EaP Countries Cooperation in Road Safety has established the strategic objective for all the three WGs for the 2-year period (2018-2019) to achieve the 25% reduction target by 2020 compared with 2016. The Framework was adopted at the meeting of the three WGs in March 2018 in Tbilisi.

World Bank asked the EaP countries in advance of this meeting to present country-level activities related to progress achieved in the two focus areas per WG and relevant supporting measures as outlined in the Framework. The EaP countries were asked to give priority in their presentations to all the measures with a deadline set for end of 2018. The process of receiving the EaP countries' feedback is ongoing and is expected to be completed by mid-November 2018.

BENCHMARKING OF EAP COUNTRIES ON EU 2008/96 DIRECTIVE

The benchmarking survey on implementation of EU Road Safety Directive 2008/96 measures in each of the EaP countries was conducted by the EaP TP Secretariat in two rounds. Initially, a quantitative survey was conducted, where EaP countries self-reported the degree to which the introduction of individual measures from the EU 2008/96 Directive on road infrastructure safety has been achieved. Results of this survey were presented and discussed at the March 2018 meeting of WG3. Subsequently, an additional qualitative survey was prepared by the World Bank team, focusing on the four main tools: Road Safety Audit (RSA), Inspection (RSI), Impact Assessment (RSIA) and Blackspot Management (BSM) and aiming at a better understanding of the current situation in all EaP countries.

As regards **blackspot management**, Belarus (average 79%) & Armenia (78%) were reported as being the most advanced, while Moldova (19%) & Ukraine (16%) the least.

- Belarus mentioned existence of guideline (technical code) TCP 586-2016 defining a.o.t. “areas of concentration of traffic accidents”, including methodology and formula, performed by RUE Beldorcenter (under Ministry of Transport and Communications). Criteria include road class; 3-year no. of crashes; AADT; base length of 1 km. Road administrations are in possession of the data needed. There is no separate budget for road safety (maintenance budget is used); road managers plan remedial works annually (also consulting police).
- Ukraine mentioned the SOU 45.2-00018112-007:2008 (Standard) defining procedure for black spots identification. Methodology for definition specifies a minimum of 12 crashes over a “specified period”. Ukravtodor is in possession of the data needed. Road safety budget was introduced from 2018 (Road Fund). Remedial works are planned annually in coordination with police.
- Georgia stated that a method is under preparation but there is an ongoing remedial program worth 4.1 mn GEL for 18 road sections. Otherwise, there is no regular safety budget (it is included in maintenance/rehab/reconstruction budget). Nevertheless, the national road administration is in possession of data, which it receives from the Ministry of Internal Affairs.

As regards the key measures of the EU Directive, road safety inspection (RSI) was reported as the most familiar measure (average rating of 55%), followed by impact assessment (RSIA, 49%) and lastly audit (RSA, 46%).

On road safety inspection (RSI):

- Azerbaijan declares the highest familiarity with RSI (88%), followed by Belarus (70%). In contrast, Ukraine’s self-rating is extremely low (average under 1%).
- Belarus, Moldova and Ukraine perform seasonal inspections twice a year with participation of police; they include RSI elements, but there is no explicit procedure and no specified budget for such inspections).
- In Belarus, RSI is part of the seasonal routine inspection (twice/year), carried out under technical code 604-2017, with participation of police, environmental authorities and RUE Beldorcenter. There is no dedicated budget and no requirement for explicit follow-up.
- In Moldova, inspections are performed twice a year; RSI is performed based on the order of the Ministry of Economy and Infrastructure, by State Road Administration jointly with police. Administration solely decides on follow-up. There is no dedicated budget.
- In Ukraine, inspections are performed twice a year; no separate RSI exists, but road owners appoint inspection commissions involving police and “other bodies”. There is no separate budget. Follow-up is made by road owner in agreement with national police.

- In Georgia, there is an RSI manual and a dedicated budget (1.5 mn GEL in 2018) and it is required to perform RSI every 3-5 years. RSI is performed by the Road Safety and Organization Division of the Roads Department (for the two top classes of road).

On road safety impact assessment (RSIA):

- Azerbaijan declares the highest familiarity with RSIA (88%), followed by Armenia (73%).
- Ukraine has the lowest self-rating (zero), followed by Belarus (36%).
- Insufficient qualitative info was received to assess RSIA in more details.

On road safety audit (RSA):

- Azerbaijan declares the highest familiarity with RSA (76%), followed by Georgia (63%). Ukraine has the lowest self-rating (2%), followed by Moldova (28%).
- Georgia states that RSA is not mandatory but pre-opening audits (jointly with patrol police) and design audits are carried out based on the order of the Head of Road Department; guidelines exist, external auditors are used and there is regular follow-up.
- Moldova states that RSA is used only in IFI-financed road projects.
- Ukraine states that RSA is planned for introduction (draft amendment to roads law exists).

Benchmarking tables are presented in Annex E.

TORS FOR PRIORITY PROJECTS

At the meeting in June 2018 the World Bank team has presented four proposed project concepts for consideration by the WG 3 members. Countries' representatives in the WG were asked to indicate their preference (or strong preference, as relevant) among the four projects. **Table 1** lists the projects rated for WG 3.

Table 1 – Rating of projects for WG 3

| WG 3 | ARM | AZE | BEL | GEO | MDL | UKR |
|---|-----|-----|-----|-----|-----|-----|
| Project 1: Accessibility of non-confidential crash data to road administrations, for effective usage of analysis in road safety management. | + | | | + | | |
| Project 2: Identification of at least top ten blackspot locations in each EaP country and initiation of blackspot improvement programs. | | | + | + | | |
| Project 3: Identification and quantification of safety impacts for at least one priority road investment project in each EaP country. | | | ++ | | | |
| Project 4: Preparation for formal introduction of key EU Directive 2008/96 procedures in each EaP country - emphasis on Road Safety Inspection, Audit and Impact Assessment. | | | | | | |

For the identified priority project "Introduction of traffic calming measures to lower speed below 50 km/h limit near schools, hospitals or in residential areas" the World Bank team has developed the first draft of generic Terms of Reference (ToRs) and presented it during the meeting. The full text of the draft ToRs detailing key tasks as well as possible timelines and qualifications is included as **Annex C**. The WG

members are expected to tailor the generic ToRs to the individual EaP countries' needs before proposing them for financing by EC or other international donors.

PRESENTATION THE ROAD SAFETY SCREENING AND APPRAISAL TOOL (RSSAT)

The World Bank's Road Safety Global Solutions Group (GSG) presented the Road Safety Screening and Appraisal Tool (RSSAT) during the WG3 meeting. RSSAT is being developed as part of the Bank's approach to deliver better road safety results on the ground. The new tool is meant for screening road projects as early as possible during the preparation stage to evaluate the impacts of project designs to road safety outcomes and ensuring that the project meets certain quantifiable road safety requirements. The development of the tool serves four distinct objectives: (i) ensuring a systematic and consistent assessment process for all Bank-financed road projects; (ii) provision of direction, through an interactive process, on revisions of design which will improve safety outcomes; (iii) guidance to ex-ante analysis of net road safety impacts, for use into the economic cost/benefit analysis of transport projects; (iv) support to the implementation of the new requirement for assessment of road safety risks. The RSSAT is not meant to substitute any of the EU Directive's tools. Road safety audits and inspections are relevant for later stages of projects. It does bear similarities in approach and scope to Road Safety Impact Assessment (RSIA), a process applicable at a similarly early stage as the RSSAT; and therefore, in Bank-funded projects (for brownfield interurban projects only) it can be used as a demonstration of the merits of early identification of road safety impacts and risks.

COUNTRIES ROAD SAFETY PROFILES

The EaP countries have committed to improving quality of systematic and consolidated data collection and to share this data with the future Regional Road Safety Observatory by endorsing the EaP Declaration on Road Safety in April 2018.

The country profiles focusing on the regional dimension of road safety with comparative data for all six EaP countries should foster exchange of expertise and good practices between these countries. They are also meant to help provide a more solid evidence base for decision makers to: (i) develop better policies and to monitoring progress in road safety; (ii) ensure better coordination between the other IFI's and donors' activities; and (iii) help in better understanding of main road safety challenges in each country.

As of October 2018, the "pilot" structure of the Road Safety Country Profiles has been developed and presented to the EaP countries. Information collection by the Regional Working Groups and the World Bank team is underway. An inventory of all data collected is under preparation to spot any serious gaps. Subsequently, an optimal set of data for each of the EaP countries can be developed, so that first drafts of the Country Profiles can be produced in the near future.

The expected results include:

- A "go-to" source for experts, providing an overview of the road safety situation in the EaP region and in each of the EaP countries
- Comparative data for six EaP countries
- Visually impactful fact sheets with detailed information and data available divided into topical sections
- Simple on-line data-base with all key info and data, which can become the seed for the future EaP Road Safety Regional Observatory

EAP ROAD SAFETY WEBSITE

The process of the EaP road safety website modernization to better serve the needs of the users' community is ongoing.

As of October 2018, plans for its further development include:

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- Events: detailed information about all WG meetings will be accessible
 - Updating of “Documents” and “Featured Content” folders, to include RS Declaration, RS Cooperation Framework and other strategic documents
 - Discussion Forum enhancements including surveys and possibility for users to initiate their own discussions

You can visit new portal by clicking here: <https://bit.ly/2JKZFjD>.

CONCLUSIONS AND NEXT STEPS

The following points regarding scope and organization of WG 3 future work have been agreed as the results of the meeting.

Action priorities and next steps

- The WG 3 members have undertaken to provide a consolidated information for the follow-up actions on the EaP Road Safety Declaration and the EaP Road Safety Cooperation Framework by filling in the tables sent to the WGs members on October, 10th. Reminder sent on October, 26th (this applies to the EaP countries who have not provided their response yet). The feedback should be provided to the World Bank team by **November, 16th**.
- The members of the WG have undertaken to propose (i) overall modifications to the draft ToRs for the priority project that can be potentially useful to all six EaP countries and (ii) tailored country specific draft ToRs for the priority projects for each country that needs to implement them. The relevant country specific comments or modified TORs should be sent to the World Bank team by **November, 30th**.
- The WG 3 members will continue working with the World Bank team on data collection for the Road Safety Country Profiles in line with the agreed “pilot” structure.
- The World Bank team will continue working on Guidelines for road accident data collection in accordance with CADaS for all EaP countries as well on general model of road safety country reports and concept of the EaP Road Safety Observatory.
- The World Bank team will continue assisting all the EaP countries in preparation of the national level action plans for improving national data-base systems based on country specific Data System Country Reports recommendations.
- The World Bank team will continue working on preparation of RS status in EaP countries based on EaP declaration (Ljubljana 2018), as well as on collecting benchmarking data based on questionnaire circulated and VC meetings with all EaP countries.
- The EaP countries have undertaken to become authorized users of the EaP road safety web-platform by applying for registration at the link: <https://bit.ly/2SMELZ>.

Project organization and communication

- The next WG 3 virtual meeting is planned to take place in December 2018 or January 2019. The precise date will be confirmed by the World Bank Team.
- There is a certain thematic interrelation between the scope of each working group. For example, crash data is the object of WG 3 and at the same time it is central to all types of road safety interventions, thus is relevant to the other two WGs. The thematic interaction was reflected also in the composition of WGs, so some individuals represent countries in more than one group. It was agreed for the next workshop meeting to consider either (i) better composition of the EaP countries’ delegations to ensure that individuals with relevant backgrounds are represented in all WGs meetings (more than one) or (ii) increasing the number of sponsored delegates per country

to ensure their presence during all days of meetings. Both options are subject to further discussion and confirmation with the European Commission.

- Achieving the objectives of the EaP Road Safety Cooperation Framework requires coordination among different stakeholders at the country level and among member countries within the scope of each working group at the regional level. All the EaP countries have been invited by the World Bank Team to identify a national coordinator from among WG 3 members for each country and inform the World Bank team about such appointment. The regional coordinators for each of the three WGs were proposed to be considered at the next WGs meeting.

ANNEXES

List of Annexes:

Annex A - Meeting Agenda

Annex B - List of meeting participants

Annex C - ToRs for priority project “Identification of at least top ten blackspot locations in each EaP country and initiation of blackspot improvement programs”

Annex D - The materials of the meeting are available for download from the EaP road safety web-platform: <https://bit.ly/2OKjZ7W>.

Annex E - Benchmarking of EaP countries on EU 2008/96 Directive

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| Working Group 3: Road Infrastructure Safety and Blackspots |
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|--------------------------------------|
| October 19th, 2018 |
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Draft Agenda

09:00 - 09:15 Introductory presentations

- Welcoming speeches (*Host Government, EU DEL, EC, World Bank*)

09:15 - 10:45 EaP declaration on road safety – Progress on achievement of strategic targets

- Presentation on the EaP road safety declaration and the strategic targets, Veronika Liskova, EC, DG MOVE
- Presentation on the recent EU initiatives in the road safety (3rd Mobility package), Veronika Liskova, EC, DG MOVE
- Presentation of the national action plans on road infrastructure safety and their contribution to the declaration on road safety (all EaP countries)
- Update and next steps on the status of EaP Cooperation Framework / road infrastructure safety elements (WB team, EaP countries)

[10:45-11:00 Coffee break]

11:00 - 12:30 Benchmarking of EaP countries on EU 2008/96 Directive

- Requirements to the road safety inspection in Belarus (Sergiy Cabac, Head of Department of Road Safety and Maintenance «BelDorNII»)
- Updated benchmarking of EU 2008/96 implementation in EaP countries (Dejan Jovanov, WB team)
- Next steps – expected developments (Ioannis Dimitropoulos, WB team)

[12:30 - 13:30 Lunch break]

13:30 - 14:45 Priority projects and funding possibilities

- Presentation of the Terms of Reference for the priority project on blackspots (Dejan Jovanov, WB team)
- Available funding for technical assistance - Presentation of EU / EIB instruments of support to EaP, including contacts & info sources (EU / EC / EIB, tbc)

[14:45 – 15:00 Coffee break]

15:00 - 15:30 Interactive exercise: Demo of the World Bank's tool for Road Safety Impact Assessment

- Demo of RSSAT (WB team)

15:30 - 16:00 Developing closer cooperation on Road Safety

- Presentation of the Country road safety profiles
- EaP road safety website

16:00 – 16:30 Conclusions and next steps

16:30 – 17:00 Networking Event – End of Meeting

19/10/2018



Workshop of the Regional Working Groups on Road Safety under the EaP Transport Panel

16-19 October 2018

Minsk, Belarus

NEP_18_244_BY

Attendance List

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| EaP Countries | | | | | |
|---------------|------------|---------------|------------|---|-----------------------|
| Nr. | Country | Surname | First Name | Organisation | Signature |
| 1 | Armenia | KOSTANYAN | Kostantin | Road Police Service of the RA Police | Cancelled |
| 2 | Armenia | MURADOV | Mikayel | Road Police Service of the RA Police | Cancelled |
| 3 | Armenia | SHAHINYAN | Poghos | National Road Safety Council | [Signature] |
| 4 | Armenia | TADEVOSYAN | Gurgen | "Armenian roads directorate" SNCO of Ministry of Transport communication and information technologies | [Signature] |
| 5 | Azerbaijan | ABILOV | SUBHAN | The State Road Transport Service | DEPARTURE 18/10 16:30 |
| 6 | Azerbaijan | ALIYEV | KAMRAN | THE MINISTRY OF INTERNAL AFFAIRS OF AZERBAIJAN | DEPARTURE 18/10 07:10 |
| 7 | Azerbaijan | HUSEYZADE | ELVIN | THE MINISTRY OF INTERNAL AFFAIRS OF AZERBAIJAN | DEPARTURE 18/10 07:10 |
| 8 | Azerbaijan | SADIKHOV | Anar | State Agency of Azerbaijan Automobile Roads | [Signature] |
| 9 | Belarus | ASIPUK | Anatoli | Beldorcentr | [Signature] |
| 10 | Belarus | STALIARCHUK | Aliaksandr | Beldorcentr | [Signature] |
| 11 | Belarus | BURTYL | Yura | Beldorcentr | |
| 12 | Belarus | CHARNIUK | Aliaksei | Minskavtodor-center | |
| 13 | Belarus | LEONCHIK | SERGEY | Ministry of transport and communications | [Signature] |
| 14 | Belarus | MUSAEV | Raphael | Belarusian Auto Moto Touring Club | [Signature] |
| 15 | Belarus | POTYAKINA | Irina | Belarusian Auto Moto Touring Club | [Signature] |
| 16 | Georgia | GOGILAVA | Mzevar | Tbilisi Municipality City Hall Department of Transport | [Signature] |
| 17 | Georgia | JINCHARADZE | Guram | Ministry of Regional Development and Infrastructure of Georgia, Road Department of Georgia | [Signature] |
| 18 | Georgia | KEZHERASHVILI | Erekle | Ministry of Economy and Sustainable Development of Georgia | DEPARTURE 19/10 22:50 |
| 19 | Georgia | BUJIASHVILI | Sopio | Ministry of Internal Affairs of Georgia | [Signature] |
| 20 | Georgia | PAPASHVILI | Tinatini | Ministry of Internal Affairs of Georgia | [Signature] |
| 21 | Moldova | BRINISTER | Valentin | Ministry of Economy and Infrastructure | [Signature] |
| 22 | Moldova | APOSTOL | Pavel | National Patrol Inspectorate of the General Inspectorate of Police | DEPARTURE 19/10 15:15 |
| 23 | Moldova | COCIUG | Victor | Ministry of Economy and Infrastructure | [Signature] |
| 24 | Moldova | GIRBU | Oleg | State Chancellery | [Signature] |

15/10/2018

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|---------------------|---------|---------------|-----------|--|----------------------------------|
| 25 | Moldova | ION | Cotruta | Ministry of Economy and Infrastructure | DEPARTURE 19/10 15:15 |
| 26 | Moldova | LUPASCU | Dumitru | National Patrol Inspectorate of the General Inspectorate of Police | DEPARTURE 18/10 16:00 |
| 27 | Moldova | ROGOVEI | Radu | Ministry of Economy and Infrastructure | DEPARTURE 19/10 15:15 |
| 28 | Moldova | SCURTU | Nicolae | National Patrol Inspectorate of the General Police Inspectorate | DEPARTURE 19/10 15:15 |
| 29 | Ukraine | PANCHYSHYN | Mykola | Ministry of Infrastructure of Ukraine | DEPARTURE 19/10 15:15 |
| 30 | Ukraine | SILCHENKO | Maryna | State Road Agency of Ukraine | X |
| 31 | Ukraine | SYRVATKA | Pavlo | LCE "Lvivavtodor" | DEPARTURE 19/10 08:25 |
| 32 | Ukraine | ZAGREBA | Viktor | Ministry of Infrastructure of Ukraine | DEPARTURE 19/10 08:25 |
| Other Organizations | | | | | |
| 33 | | CZAPSKI | Radoslaw | World Bank | DEPARTURE 19/10 08:25 |
| 34 | | HALLEMAN | Brendan | International Road Federation | |
| 35 | | DIMITROPOULOS | Ioannis | World Bank | |
| 36 | | IVCHENKO | Mariya | World Bank | |
| 37 | | KELLY | Emma | Road Safety Support | |
| 38 | | KUKIC | Dragoslav | World Bank | |
| 39 | | LISKOVA | Veronika | European Commission, DG MOVE | |
| 40 | | NUNEZ | Antonio | World Bank | |
| 41 | | SJORUP | Jan | Road safety support (RSS) | |
| 42 | | FLIEGER | Marcin | Global Road Safety Partnership | |
| 43 | | WIJERS | Philip | Sensys Gatso Group | |
| | | Valiyev | Nijat | WB | |
| | SRB | Jovanov | Dejan | WB RS | |
| | BLR | Kabak | Sergey | Belodornii | |

ToR

“IDENTIFICATION OF AT LEAST TOP TEN BLACKSPOT LOCATIONS AND INITIATION OF BLACK SPOT IMPROVEMENT PROGRAMS”

1. BACKGROUND

Contemporary traffic management involves highly demanding and complicate requirements for accommodating diverse types of road users. The safety of all road users, especially vulnerable ones, is a high priority for the country.

Today there are several tools developed for road infrastructure safety management (RISM) and most of them are stipulated under European Directive 2008/96/EC. The Directive calls for use of Road Safety Impact Assessment (RSIA), Road Safety Audits (RSA), Road Safety Inspections (RSI) and Network Safety Management (NSM).

Under NSM, one of the oldest but still most effective procedures in lower- and middle-income countries (LMIC) is the so-called Black Spot Management (BSM). Even though it is a generally established measure, BSM still has significant challenges when it comes to implementation, due to issues of availability, quality and/or relevance of crash data, as well as lack of clarity and/or differing approaches regarding criteria, definitions and/or methodology.

Crash data are not reliable and detailed as they should be. Sometimes crash data might consider as secret and sometimes causes of crashes are mostly connected to the penalties (e.g. speeding, not obeying the traffic roles, etc.) not to the real contributing factors. Moreover, data do not always comply with a standard format such as CADaS (**Common** Accident Data Set). When it comes to the Criteria and definition of the Black Spots situation is even worse. There are no clear and officially adopted criteria and definitions that can be implemented. Finally, modern approach to BSM (e.g. based on RIPCORD-ISEREST EU Project) is not in place in any of EaP countries, nor promoted in some of Regional Road Safety Projects (TRACECA RS II).

[Paragraph can be inserted with country-specific context e.g. national program, part of which is the assignment in question. Reference to EaP context.]

2. OBJECTIVES

The main purposes of this project is establishment of BSM as regular procedure and identification of 10 Black Spots with national program for its improvements (remedy measures with action plan for implementation).

The necessary steps to achieve those objectives include:

- Adoption of definitions of black spots at national level, harmonized as much as possible within EaP countries and with best International/Europe practice;
- Identification of initial broader set of potential Black Spots list (pre-identified locations), based primarily on crash data, regardless of the causes of accidents;
- Second level analysis of pre-identified location where locations with local road conditions as contributing factor to accidents are selected;
- Preparation of final list of black spots (selection of at least 10 locations for improvement);

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- Proposed treatments on identified locations with preferably low-cost and high-effectiveness measures;
 - Preparation of draft bidding documents for detailed design and improvement works on selected locations (Black Spots);
 - Preparation of costed and timed national program (action plan) for black spot improvement; and
 - Proposal of evaluation of implemented measures on locations and national programs.

3. TASKS AND SCOPE OF WORKS

The Consultant should implement the following tasks:

Task 1: Establishment of Methodological approach within BSM (including definition of Black Spot)

- *Analysis of current state of BSM in the country;*
- *Proposal for improvements of BSM process;*
- *Agreed definition of Black Spot including criteria and methodology.*

Task 2: Identification of black spots

- *Identification of accident black spots on the national road networks*
 - *Compilation of available data and review of their completeness, quality and relevance (with gap analysis and proposed improvements);*
 - *Analysis of available crash data including proxies as necessary (i.e. alternative methods, if crash data base does not lend itself to useful analysis);*
 - *Preparation of initial broader set of potential Black Spot list;*
 - *Second level analysis of pre-identified location where locations with local road conditions as contributing factor to accidents are selected;*
 - *Preparation of final list of black spots (selection of at least 10 locations where local road factors contribute to crashes).*

Task 3: Analysis and proposals for treatment of pre-selected black spots

- *Field surveys regarding crash contributing factors on finally selected locations (final list of Black Spots);*
- *Proposal of preferably low-cost and high-effective measures that will prevent similar accidents at analyzed locations in future; and*
- *Preparation of draft bidding documents for detailed design and improvement works.*

Task 4: Preparation of national action plan for Black Spot improvements with proposed evaluation

- *Development of national action plan for Black Spot improvement programs*
 - *Identification of legal, procedural and administrative requirements for implementation of Black Spot programs in the country and proposal for improvements if necessary;*
 - *Preparation of draft costed and timed national annual and multi-year Black Spot improvement program (including of cost-benefit analysis for locations that will be improved);*
 - *Preparation of the final national annual and multi-year Black Spot program following incorporation of road managing agency comments.*
- *Proposal of monitoring of Black Spot improvements and evaluation of measures and whole implementation of national Black Spot action plan / program.*

Note: Consultant is obliged to establish communication and to have consultations with relevant institutions/organizations (e.g. with national Traffic Police, Road Administrations in all tasks at stages where some of agreements between different stakeholders or decisions should be made.

4. TIME SCHEDULE AND ACTION PLAN

The above stated activities the Consultant should finish within 12 months of the date of signing of the Contract. The consultant in his proposal will submit detail plan with proposed methodology and activities with time frames for each of the activities and for whole scope of works.

Expected timeline is:

- *Task 1: Methodology: Consultancy start date + 2 months*
- *Task 2: Identification of blackspots: Consultancy start date + 6 months*
- *Task 3: Analysis and proposal for treatment: Consultancy start date + 9 months*
- *Task 4: Consultancy signing date + 12 months*

5. DELIVERABLES

Beside deliverables specified in Tasks and Scope of Works, the Consultant will prepare:

5.1. Technical Deliverables

- Task 1 draft: 1.5 months
- Task 1 final: 2 months
- Task 2 initial set: 4 months
- Task 2 draft final set: 5.5 months
- Task 2 final set: 6 months
- Task 3 draft proposal: 8 months
- Task 3 final proposal and bidding documents: 9 months
- Task 4 draft action plan: 10 months
- Task 4 final action plan: 11 months
- Final compiled report: 12 months

5.2. Management Deliverables

- An inception report with the results of the assessment of the background information available and its reflection to ToR .
- Short, E-mail based progress reports detailing work done and to be done in next month. Monthly reports should indicate faced risks and their mitigation.
- Quarterly progress interim reports detailing the work done in the previous quarter, the detailed plan of activities to be taken in the next quarter, and an updated outline plan to be completed until the end of the project.

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- A final report providing guidance on the result of the different activities with Chapter dedicated to the "Lessons learned".

The reports shall be delivered in the local country language and English in two hard copies and in the electronic format as a '*.pdf' file. Translation and interpretation costs will be borne by the Consultant.

6. GENERAL REQUIREMENTS AND QUALIFICATION

6.1. Qualifications of the Consultancy firm:

- **Firm's profile** (*organization and capabilities*)
Permanent employment of at least 30 engineers
At least two projects containing road safety activities above 300000 E in last 5 years
- **Specific experience of the firm**, *relevant to the assignment or of similar nature*
At least two projects undertaken in some of EaP countries
- **Experience under similar conditions**
At least two projects regarding Black Spot Management and at least one crash data analysis contained project in last 7 years

6.2. Qualifications of the Experts team:

- **Team leader:** *Road infrastructure safety specialist, minimum 10 y (5 years of international experience and work on Black Spot improvement Projects and preparation on action plans. Preferably work experience at least in three EaP countries),*
- **Team member:** *Road safety policy specialist, minimum 7 y (of international experience and work on Black Spots. Preferably work at some of EaP countries),*
- **Team member:** *Road accident analysis expert, minimum 7 y (of international experience including CADaS and preferably work at some of EaP countries) and*
- **Team member:** *Civil engineer - Road Designer, minimum 5 y (of experience in Design and Construction including preparation of bidding documents. Preferably work at some of EaP countries).*

Annex E

| | AVERAGE | Initial benchmarking March 2018 | | | | | | |
|--|--|---------------------------------|-----|-----|-----|-----|-----|---------|
| | | note* | | | | | | |
| Objectives and desired outcomes | Impact indicators used | ARM | AZE | BLR | GEO | MDA | UKR | EaP AVE |
| 2.1. Implementation of road safety impact assessment (RSIA) | 1. Legal basis for RSIA exists | 90 | 95 | 25 | 60 | 70 | 0 | 57 |
| | 2. Adequate RSIA manual in official use | 80 | 95 | 70 | 60 | 5 | 0 | 52 |
| | 3. Trained staff for RSIA available | 60 | 50 | 30 | 50 | 30 | 0 | 37 |
| | 4. Road Authorities have budget to purchase RSIA | 50 | 95 | 15 | 15 | 40 | 0 | 36 |
| | 5. All major new roads and reconstructions passed RSIA procedure | 75 | 95 | 25 | 80 | 50 | 0 | 54 |
| | 6. RSIA Recommendations being accepted in feasibility stage | 80 | 95 | 50 | 30 | 100 | 0 | 59 |
| 2.2. Implementation of road safety audit (RSA) | 1. Legal basis for RSA exists | 85 | 50 | 40 | 80 | 80 | 0 | 56 |
| | 2. Adequate RSA manual in official use | 95 | 70 | 70 | 80 | 5 | 0 | 53 |
| | 3. Trained road safety auditors available | 25 | 50 | 30 | 50 | 30 | 5 | 32 |
| | 4. Road Authorities have budget to purchase RSA | 25 | 95 | 30 | 10 | 5 | 0 | 28 |
| | 5. All new, reconstructed and rehabilitated roads being safety audited | 50 | 95 | 60 | 80 | 30 | 5 | 53 |
| | 6. RSA Recommendations being implemented by Roads Authority | 80 | 95 | 50 | 80 | 20 | 0 | 54 |
| 2.3. Implementation of road safety inspection (RSI)* <small>* NOTE: RSI is procedure similar to RSA, but related to the existing roads. Usual work of state inspectors or traffic police is just small part of full RSI scope</small> | 1. Legal basis for RSI exists | 75 | 95 | 80 | 80 | 70 | 0 | 67 |
| | 2. Adequate RSI manual in official use | 65 | 95 | 80 | 80 | 50 | 0 | 62 |
| | 3. Trained road safety inspectors available | 60 | 95 | 50 | 50 | 30 | 5 | 48 |
| | 4. Road Authorities have budget to purchase RSI | 50 | 95 | 50 | 20 | 5 | 0 | 37 |
| | 5. Roads systematically being inspected | 70 | 95 | 80 | 80 | 50 | 0 | 63 |
| | 6. RSI Recommendations being implemented by Roads Authority | 80 | 50 | 80 | 80 | 50 | 0 | 57 |
| 2.4. Black spot treatment (Black Spot Management) - BSM | 1. Legal basis for BSM exists | 60 | 50 | 90 | 30 | 10 | 20 | 43 |
| | 2. Adequate BSM Manual in official use | 50 | 35 | 90 | 50 | 5 | 30 | 43 |
| | 3. Clear definition (criteria) of black spot exists | 80 | 80 | 90 | 50 | 20 | 30 | 58 |
| | 4. Trained black spot investigators available | 80 | 80 | 70 | 30 | 30 | 5 | 49 |
| | 5. Annual black spot improvement program in place | 95 | 75 | 70 | 30 | 5 | 20 | 49 |
| | 6. Road Authorities has dedicated funds for BSM improvements | 90 | 50 | 70 | 20 | 10 | 5 | 41 |
| | 7. BSM recommendations being implemented by Roads Authority | 90 | 70 | 70 | 50 | 50 | 5 | 56 |
| | AVERAGE | Update in June 2018 | | | | | | |
| Objectives and desired outcomes | Impact indicators used | ARM | AZE | BLR | GEO | MDA | UKR | EaP AVE |
| 2.1. Implementation of road safety impact assessment (RSIA) | 1. Legal basis for RSIA exists | 90 | 95 | 5 | 5 | 5 | 5 | 34 |
| | 2. Adequate RSIA manual in official use | 80 | 95 | 5 | 5 | 5 | 5 | 33 |
| | 3. Trained staff for RSIA available | 60 | 50 | 5 | 5 | 10 | 5 | 23 |
| | 4. Road Authorities have budget to purchase RSIA | 50 | 95 | 5 | 5 | 5 | 5 | 28 |
| | 5. All major new roads and reconstructions passed RSIA procedure | 75 | 95 | 5 | 5 | 5 | 5 | 32 |
| | 6. RSIA Recommendations being accepted in feasibility stage | 80 | 95 | 5 | 5 | 5 | 5 | 33 |
| 2.2. Implementation of road safety audit (RSA) | 1. Legal basis for RSA exists | 85 | 50 | 5 | 30 | 5 | 5 | 30 |
| | 2. Adequate RSA manual in official use | 95 | 70 | 5 | 85 | 5 | 5 | 44 |
| | 3. Trained road safety auditors available | 25 | 50 | 5 | 50 | 30 | 15 | 29 |
| | 4. Road Authorities have budget to purchase RSA | 25 | 95 | 5 | 10 | 5 | 5 | 24 |
| | 5. All new, reconstructed and rehabilitated roads being safety audited | 50 | 95 | 5 | 10 | 25 | 5 | 32 |
| | 6. RSA Recommendations being implemented by Roads Authority | 80 | 95 | 5 | 50 | 20 | 5 | 43 |
| 2.3. Implementation of road safety inspection (RSI)* <small>* NOTE: RSI is procedure similar to RSA, but related to the existing roads. Usual work of state inspectors or traffic police is just small part of full RSI scope</small> | 1. Legal basis for RSI exists | 75 | 95 | 25 | 75 | 85 | 5 | 60 |
| | 2. Adequate RSI manual in official use | 65 | 95 | 25 | 80 | 20 | 5 | 48 |
| | 3. Trained road safety inspectors available | 60 | 95 | 25 | 50 | 30 | 10 | 45 |
| | 4. Road Authorities have budget to purchase RSI | 50 | 95 | 75 | 20 | 5 | 5 | 42 |
| | 5. Roads systematically being inspected | 70 | 95 | 75 | 75 | 35 | 5 | 59 |
| | 6. RSI Recommendations being implemented by Roads Authority | 80 | 50 | 75 | 80 | 50 | 5 | 57 |
| 2.4. Black spot treatment (Black Spot Management) - BSM | 1. Legal basis for BSM exists | 60 | 50 | 90 | 10 | 10 | 50 | 45 |
| | 2. Adequate BSM Manual in official use | 50 | 35 | 75 | 70 | 5 | 85 | 53 |
| | 3. Clear definition (criteria) of black spot exists | 80 | 80 | 85 | 10 | 20 | 85 | 60 |
| | 4. Trained black spot investigators available | 80 | 80 | 70 | 40 | 30 | 20 | 53 |
| | 5. Annual black spot improvement program in place | 95 | 75 | 70 | 75 | 5 | 20 | 57 |
| | 6. Road Authorities has dedicated funds for BSM improvements | 90 | 50 | 70 | 50 | 10 | 5 | 46 |
| | 7. BSM recommendations being implemented by Roads Authority | 90 | 70 | 70 | 70 | 50 | 5 | 59 |