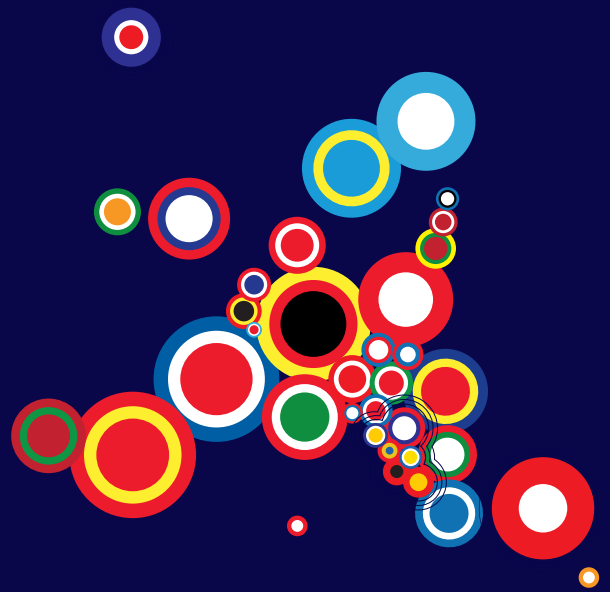




INSTRUMENT FOR PRE-ACCESSION ASSISTANCE (IPA II) 2014-2020

MONTENEGRO

Development of a Road Network Database and Road Safety Assessment



Action summary

Effective transportation systems are essential to Montenegro's economic growth and prosperity through facilitation and improvement of the mobility of citizens and goods, while they also have significant impacts on road safety, social development and the environment.

The Road Network Database is a platform for better management, development and planning of the road network that should contribute to decrease of congestion and reduction of emissions from transport should have positive impacts on economic growth and sustainable development.

The Road Safety Assessment is intended to provide an overview of the current accident frequencies on the road network in Montenegro and to rate the risk level on these road sections in accordance with the *Directives 2008/96/EC* and *2004/54/EC*. The Road Safety Assessment will be the basis for identifying priority projects aimed at improving safety on the road network in Montenegro.

Action Identification	
Action Programme Title	Annual Action Programme for Montenegro (2014)
Action Title	Development of a Road Network Database and Safety Assessment
Action Reference	IPA/2014/ 032-803.11/ME/Road Network Database
Sector Information	
IPA II Sector(s)	Transport
DAC Sector	21010 – Transport policy and administrative management
Budget	
Total cost	EUR 1.218 million
EU contribution	EUR 1.035 million
Management and Implementation	
Method of implementation	Indirect management
<i>Indirect management:</i> National authority or other implementing body	Directorate for Public Works
Implementation responsibilities	/
Location	
Zone benefiting from the action	Montenegro
Specific implementation area(s)	/
Timeline	
Deadline for conclusion of the Financing Agreement	At the latest by 31 December 2015
Contracting deadline	3 years following the date of conclusion of the Financing Agreement, with the exception of the cases listed under Article 189(2) Financial Regulation
End of operational implementation period	6 years following the date of conclusion of the Financing Agreement.

1. RATIONALE

PROBLEM AND STAKEHOLDER ANALYSIS

Effective transportation systems are essential to Montenegro's economic growth and prosperity through facilitation and improvement of the mobility of citizens and goods, while they also have significant impacts on road safety, social development and the environment. While adequate transport infrastructure is stimulating economic growth it however tends to bring about persistent and detrimental impacts, whether it is at local, regional or global level, particularly with regard to environment and health.

Transport is an important industry which also has a major impact on the functioning of the Montenegro's economy as a whole. Considering the fact that Montenegro is about to launch the construction of a highway to establish a link between the port of Bar and the Serbian border, reinforcing the national capacities in dealing with road safety at an increased volume of traffic is of a vital importance. The national authorities have been dealing with all related issues to road safety by their sole means and no technical assistance has been provided so far. The authorities have recognized several factors to improve safety including harmonising road accident information, statistics and databases. At a longer run, enhancing the capacities of the line Ministries (Transport and Internal Affairs) will provide for an inductive climate to apply Intelligent Transport Systems in the country.

Road infrastructure is the backbone of Montenegro's transport systems. The existing networks should be used and managed as efficiently as possible with the help of a national up-to-date road network database. The development of the database will help identifying and prioritising issues such as congestion, emission control and improve transport efficiency and logistics throughout the supply chain. This improved approach in managing the road network of Montenegro aims at supporting the transport systems development and promoting the efficiency and sustainability of the growing transport sector.

The ultimate goal is to ensure efficient mobility and to reduce negative side effects of road transport.

The transport policy of Montenegro is largely in line with the EU transport *acquis* in terms of legislation, but still lot needs to be done in terms of planning and sustainable development. The Government of Montenegro has adopted *Transport Strategy* in 2008, as a guiding document in this sector. However, the planning process faces many difficulties due to lack of basic data on the road transport network. The cadastre of roads will build and maintain a high-quality database on road safety information, too.

The database of transport road network shall provide a solid base for further transport planning and development as currently basic info is missing. The database will further be used as a platform for improving road safety in Montenegro as one of the major challenges and a common denominator for growth.

More than half of all road traffic victims are working age, making road safety critical to both health and economic development. Motorization increasing rapidly in Montenegro and a volume of registered vehicles increased between 1998 and 2008 for 70% create a concern that safety measures will not keep pace with intensifying road activity.

Road safety is a major social issue. The figures from Montenegro show that there were 84 fatalities in 2003. An increase was recorded in 2007 to 122 and 95 fatalities in 2010, and the last figures from 2013 are back to 74. The economic crisis that began in 2008 may have had a positive short term impact on those figures due to decrease in overall mobility. However, there is still a long way to go in order to achieve the 2020 UN Decade of Action target, which is to reduce by 50% the expected number of fatalities. The EU orientation policy goes into this direction, too, by setting the baseline at the fatalities of 2010 to be halved by 2020. EU is calling for integration of these targets into the national road safety strategy and deployment of new technologies in improving road safety.

One of the basic and most urgent issues in the transport sector is establishment of a database of the road transport network. The database will serve as a platform for further update of the transport strategy of Montenegro with more accurate and update information as well as enabling better transport planning and development. Currently, the planning of transport in the road domain is based on

inaccurate information. The same problems are faced at maintenance level which also has negative impacts over the road safety.

Montenegro' road transport policy is primarily governed by the following legislation framework:

- *Law on Amendments to the Law on Roads (Official Gazette of Montenegro 36/11)* defines road safety and in that manner the *Directive EC 2008/96* has been transposed in Montenegrin legislation. Further activities will be focused on preparation of by-laws and rulebooks;
- The *Law on Road Safety (Official Gazette of Montenegro 33/2012)* is partially harmonized with the relevant safety *acquis*, while the new law will be drafted in Q2 of 2018 and enforceable in Q4 of 2018, aimed to further align with *acquis*.

The existing data on state roads that the Directorate for Transport disposes with are not of suitable quality and format. They are out-dated and incomplete and collected manually, based on visual assessments, that are registered and kept in written documents (word or excel files) or hard copy. Furthermore, the existing data does not contain geographical references, and rather is based on distance (kilometres) markings on the roads.

Consequently, this situation brings under a question mark the reliability and accuracy of the information obtained and lack of this data creates a serious obstacle for efficient and effective, not only management and maintenance of the road transport network, but also planning and development.

The so called *cadastre of roads* shall be employed in the preparation of a comprehensive transport strategic document for Montenegro including information on transport development in all sector', scenarios and budget estimates. The projects or interventions to be identified and prioritised by the transport strategic document will not be able to reach the necessary level of readiness, as well as maturity without the basic information to be provided by the database. Furthermore, the database shall provide information on the traffic demand and flow which is necessary to have bankable projects too.

In accordance to the Law on road safety (Official Gazette of Montenegro 33/2012), the Police Directorate (PD) is in charge of control and regulation of traffic. The Police Directorate is under the competence of the Ministry of Interior and this Directorate is focused on safety of participants in road transport and safety requirements for vehicles. A vehicle safety is ensured through roadside controls and through technical inspection of vehicles.

Moreover, most of the activities of PD lie in prevention and restrictive measures to traffic participants which have been already systematically implemented on the basis of data that can be reached by analysing traffic accidents.

The Police Directorate, i.e. Ministry of Interior, owns, manages, maintains and updates the traffic accident database. When a traffic accident happens, the traffic police officers are in all cases visiting the accident site and conduct intensive monitoring of an accident (traffic accidents with material damage, with the injuries, with the fatal outcome). There is a need to improve the accuracy of data collected including the precise geographic coordinates, as until now the site of the accident is only defined descriptively. It is expected that this issues is going to be solved by the end of 2014. All previous analysis and identifications of critical points on road network in Montenegro were carried out on the basis of the information from this database.

RELEVANCE WITH THE IPA II INDICATIVE STRATEGY PAPER (OR MULTI-COUNTRY STRATEGY PAPER) AND OTHER KEY REFERENCES

The *Indicative Strategy Paper for Montenegro (2014-2020)* states that enhancing road transport connections represents a national priority for Montenegro, in particular as regards the corridor linking Bar, the main port of Montenegro, to the border with Serbia at Boljare. In the context of the accession negotiations, Montenegro still needs to further align its legislation with the EU legislation in the transport sector and establish the specific administrative structures required by EU *acquis*, in particular regulatory and accident investigation bodies.

The required reforms will have to address the alignment with the EU *acquis* on transport, such as significant improvement of road transport safety through further harmonization and enforcement of the relevant technical and environmental requirements for vehicles. It is also important to ensure capacity building compliance with safety and security standards for all modes of transport, in particular road

safety and transport of dangerous goods, safety in tunnels, and the establishment of an independent accident investigation body. An efficient administrative structure and capacity building are crucial for appropriate sector development strategy as well as for the preparation and implementation of complex infrastructure projects.

As it is stated in *Montenegro 2013 Progress Report* in addition to the legislative changes and novelties in field of road safety, road transport and passenger rights further alignment is needed notably in vehicle roadworthiness inspections and roadside checks, driving licences, professional drivers' qualification and training, infrastructure safety.

Integration of the SEE transport system in the European one continues to be a priority for the region over the long term, according to *SEE Strategy 2020*. Among the important issues of transport facilitation the following can be mentioned: enforcement of market rules in transport, removal of cross-border bottlenecks and transport non-physical barriers, enhancing the rules and practices in the areas of transport safety.

Transport Development Strategy of Montenegro 2008-2018 is pointing out that reducing the road usurpation is one of the priorities in the upcoming period. This can be achieved by updating road data base (report on road land expropriation, technical road documentation and road facilities and similar) and keeping records on immovable belongings to the state roads. As a result, the road infrastructure will be better protected.

The Strategy of Road Transport Safety Improvement (2010-2019) refers to principles for improvement of road safety in Montenegro. The strategy defines further development and functioning of road safety system in Montenegro in order for the country to be part of the regional and global road system..

State Road Development and Maintenance Strategy 2008-2018 is referring to updating and complementing the road database. This database is used for road maintenance plans and for decisions about projection, construction, reconstruction and maintenance of roads.

Action Plan for 2014 for the Implementation of the Strategy for Road Safety Improvement Montenegro (2010-2019) Strategy is under the jurisdiction of the Ministry of Interior, but the Ministry of Transport and Maritime Affairs has some activities that should be implemented by this institution and it will also contribute to the development of a functional transport system which should provide the expected quality , with constant decrease in the number of deaths and seriously injured people in road traffic.

SECTOR APPROACH ASSESSMENT

As regards administrative structure, the overall responsibility for the development, management and coordination of the transport sector in Montenegro lies with the Ministry of Transport and Maritime Affairs. The Directorate of Transport is established within the Ministry to act as public authority, in charge for management, development, building, reconstruction, maintenance and protection of state roads. The Ministry of Interior and the Police Directorate have responsibility for the safety and security of road transport, dangerous goods, roadworthiness tests, registration of vehicles and driver licensing.

Regarding donor coordination in the transport sector, EBRD, together with bilateral donor organisations in the Czech Republic, Germany, France and Italy, and the EIB, are also working actively on road infrastructure projects. Another important tool for donor coordination is the Western Balkans Investment Framework (WBIF) which is used by the transport sector to strengthen coherence and synergies in donors' support, both at national and regional level. In addition, Montenegro has signed an agreement with China for the financing and construction of the Smokovac- Uvač -Mateševo segment of the Bar-Boljare highway.

Regarding sector budget support, the Ministry of Transport and Maritime Affairs is responsible for preparation of the Plan of regular investment maintenance, reconstruction and construction of the national roads. The Plan is endorsed by the Government of Montenegro on annual basis (the actual one is adopted in March 2014), and this Plan refers to protection of existing and development of the new national roads, in accordance with the relevant national strategies.

The sector budget support is provided through the *Law on Budget* of Montenegro that is adopted on yearly basis. This law contains precisely the positions of sources of income and expenses on an annual basis. Under the position of expenses, the current and capital expenditures are defined. Expenses or

expenditures are allocated by spending units, where as a consumer unit is the Ministry of Transport and Maritime Affairs with other institutions which are under its jurisdiction. Allocated funds for MoTMA are divided into current and capital resources. On the basis of the approved amount of capital resources, by the proposal of the MoTMA, every year the Government of Montenegro adopts Plan for the regular maintenance, reconstruction and construction of state roads. Meanwhile, under this plan the Program for development, implementation and maintenance of data base will be also defined.

LESSONS LEARNED AND LINK TO PREVIOUS FINANCIAL ASSISTANCE

In the previous financial perspective 2007-2013, IPA supported Development of Transport Sector with overall cost of EUR 23 400 000 of which EU contribution was EUR 6 200 000.

Activity 1 (Support to the transport sector) of this Action was based on enhancement of the institutional capacity related to road, rail and civil aviation transport management and continuation of the process of harmonization of transport-related legislation in accordance with the requirements of the *acquis* and on the enhancement of the technical capacity of the Project Implementation Units within the Ministry of Transport (Roads Directorate) and the Railway Company in order to fulfil their tasks of project prioritization, feasibility studies, design documentation and supervision of construction. These PIUs have been focused on managing existing and future loan and grant funding (including future IPA pre-accession funding).

Support to the transport sector under *CARDS Annual programmes from 2001 to 2005* has focused on rationalization of institutional structures, harmonization of primary legislation, preparing transport development strategy and enhancing the PIUs' (road and rail) project management capacity. The primary impact of this action component was to maintain the momentum of institutional development and legal harmonization in accordance with the *acquis*.

Some lessons learned from the previous EU assistance and recommendations in order to improve overall process could be addressed to different stages such as:

- To update the existing main strategic framework for the transport sector extending the time to cover at least the period up to 2020;
- To prepare detailed Action plans for the strategy as a whole and for each transport mode should be prepared including a prioritization of selected projects gathered within the identified measures/priorities. The prioritization could be based on a multi criteria analysis having as a key requirement the source of financing approved;
- To include output/result and impact indicators in monitoring mechanisms ;
- To rely on temporary staff and lack of expert skills in the administration hinder proper implementation of projects.

2. INTERVENTION LOGIC

LOGICAL FRAMEWORK MATRIX

OVERALL OBJECTIVE	OBJECTIVELY VERIFIABLE INDICATORS (OVI)	SOURCES OF VERIFICATION	
To ensure effective implementation of the strategy for improvement of the road safety	LPI – Logistics performance indicator for infrastructure	World bank	
SPECIFIC OBJECTIVE	OBJECTIVELY VERIFIABLE INDICATORS (OVI)	SOURCES OF VERIFICATION	ASSUMPTIONS
To improve management, planning and development of the road transport network in order to reduce traffic accidents	Improved traffic measurement along the core transport network Reduced percentage of fatalities on state and regional roads	Action reports of the Directorate for Transport Annual reports of the Ministry of Interior and the Police Department	Continued commitment to already established road safety agenda Steady progress on sector reforms in line with ISP and applicable national strategies
RESULTS	OBJECTIVELY VERIFIABLE INDICATORS (OVI)	SOURCES OF VERIFICATION	ASSUMPTIONS
R1: Database of the state and regional road transport network established and operational R2: Increased capacities of the Directorate for Transport in planning and managing the road transport network R3: Risk mapping and Road Investment Plan in place and capacities built in tackling road safety issues	Road data base established and regularly updated	Action reports of the Directorate for Transport	Legal, institutional etc. proposals and results of the action are implemented in a consequent manner Good co-operation among institutions involved Sustainability of legal framework and institutions having received IB support ensured Sustainability of staff trained, further training of incoming new staff (and replacements) ensured Continued investments into roads and maintenance
ACTIVITIES	MEANS	OVERALL COST	ASSUMPTIONS

<p>R.1 – A.1: Screening and analysis of the road transport network (state and regional roads, approximately 1 850 km)</p> <p>R.1 – A.2: Preparation of a digital database of the road transport network including detailed information on all relevant road features, installation of hardware and software</p> <p>R.2 – A.1: On-job training for the employees of the Directorate for Transport in planning, management and operation of data base</p> <p>R.2 – A.2: Preparation of a user manual (guide) for the database</p> <p>R.2 – A.3: Supply and installation of automated counters for traffic flow (at least 70 pieces)</p> <p>R.3 – A.1: Provision of services for analysis of the road safety on the transport network</p> <p>R.3 – A.2: Preparation of plans for risk mapping along the road transport network</p> <p>R.3 – A.3: Performance tracking</p> <p>R.3 – A.4: Star rating</p> <p>R.3 – A.5: Preparation of safer Road Investment Plan with prioritisation of urgent actions</p> <p>R.3 – A.6: On-job training of the licensed institution for auditing road safety aspects</p> <p>R.3 – A.7: Preparation of technical documentation for rehabilitation of at least ten prioritised black spots on the road transport network</p>	<p>3 Service contracts</p> <p>1 Supply contract</p>	<p>EUR 1 218 000</p>	<p>Counterpart staff in beneficiary institutions identified, available and co-operates in implementing the action</p> <p>Readiness and availability of human resources to participate in the trainings and build capacities</p> <p>Terms of reference and technical specifications drafted in a way to allow engagement of qualified consultants and suppliers with adequate experience</p>
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ADDITIONAL DESCRIPTION

Road Network Database

As part of the foreseen activities (R1A1, R1A2, R2A1, R2A2), in the establishment of a functional road database, the following will be performed:

- recording and testing of all state roads in order to create a digital road network and collect the necessary data about the roads;
- provision of a system that keeps, updates and presents data on roads and connects the road features with the road network;
- processing of all data and the process of entering the data in the database system;
- On-job training of the employees in the Directorate of Transport for the independent management of the system and carry out on the spot testing and inspection of roads and road facilities, data processing, performing extraction and analysis of information from the system for construction planning, maintenance and protection of state roads;
- provision of an user manual for the management of the road database system.

Supply and use of today's modern information systems in gathering geographic data about the state roads will enable the Directorate for Transport to perform efficiently the responsibilities in the management of state roads and shall contribute to the advancement of the cooperation with the other state institutions and authorities (implementation of national infrastructure with geographic data which is under the jurisdiction of Real Estate Administration of Montenegro). Furthermore, in cooperation with the Ministry of Interior a system of traffic accident positioning will be established, the determination of the so-called black spots (risk mapping), the analysing of the causes of their appearance and taking measures to eliminate them.

In addition to data on roads and road infrastructure, fundamental source for the development and implementation of transport policy and traffic management systems are traffic data on the roads, which are obtained by traffic counting. The traffic counting is conducted to collect information on the intensity and structure of the traffic flow. The basic fact is the average annual daily traffic (AADT), which is obtained when the total flow of vehicles per one year on one section of the road is divided by the number of days in the year.

In the earlier period the traffic counting has been performed manually while today the modern systems of continuous traffic counting are well developed and this is done by using the automated traffic counter device for collecting data on vehicles with appropriate software for processing and displaying the data obtained. Therefore, the systematic collection of data is conducted by the use of automatic traffic counters and this data is based on: the traffic loads, the structure of traffic flow, speed traffic flow as well as the disproportions of the traffic load in space and time on the road network.

The data collected by traffic counting is the basis for planning of the reconstruction and maintenance of the existing road network, forming crossroads, indicating the possible need for construction of new routes or bypasses and other measures in order to improve existing and future traffic.

From the data of traffic loads and structure of traffic flows the parameters which have been obtained are used for dimensioning a roadway structure and lifetime of the roadway. The vehicle speed is important information for traffic safety on the roads and by the flow of vehicles enabling real fortification of traffic conditions on each road section on which a continuous vehicle counting is done.

The activity R2A3 will be the basis towards a sustainable and rational management of public roads in Montenegro, establishing an adequate system of continuous traffic counting which implies that the contractor selected through public procurement has to:

- carry out the purchase and installation of 70 automatic traffic counters on state roads;
- provide the software for data processing and server application for communication with counters and for automatic data collection by displaying the current condition of traffic;

- carry out the training of employees in the Directorate for Transport for self-management system;
- provide the manual of procedures for management of the system of automatic traffic counting;
- Provide support for information system after the signing of the contract as well as a guarantee for devices and software.

The Database will be used as a platform upon which the road transport network will be better managed, maintained and developed as a great bulk of accurate and currently missing information. At a longer perspective, the objective is to plan and develop a road network in Montenegro by reducing congestions and travelling time, improving flows and road safety and increasing the competitiveness of the Country in the Region.

The public must be able to identify clearly where the roads with high risks are. In order to increase public awareness on the roads safety, certain useful information provided in the data base shall be made available to the public via suitable web application. Free access to the information in the data base has significant potential to complement efforts of the authorities in improving behaviour of road users towards minimising the traffic accidents occurring.

Road Safety Assessment

The activities (R3A1, R3A2, R3A3, R3A4, R3A5 and R3A6) around the establishment of the Road Safety Assessment shall be implemented in line with the Directives 2008/96/EC and 2004/54/EC and shall be composed of four phases.

Risk Mapping is based on real road accident and traffic data, colour-coded maps that will show a road's safety performance by measuring and mapping the rate at which people are killed or seriously injured. Different maps can be produced depending on the target audience. In the preparation of the Risk Maps the following analyses/data will be used:

- number of road accidents where people were seriously injured or killed over a three-year period;
- number of kilometres travelled on the road network;
- both technical and statistical data, available, on roads and road sections of the national road network.

Based on analyses of the data, roads and road sections will be ranked into five colour coded risk bands. A video-based road inspection shall be performed by using a specialized inspection vehicle to be equipped with a built-in video camera, a GPS system, and customized hardware and software. The video images recorded during an inspection shall allow for each road design feature to be measured and rated according to RAP protocols and enable the ranking of roads according to the Star Rating system. It shall be based on:

- risk rating of roads and road sections according to their technical condition;
- available measures for the improvement of road sections based on their potential to reduce fatalities and injuries;
- objective assessments on where the most affordable and cost-effective road improvements can be made on the network.

The processing of the video data shall allow for the evaluation of the key elements and parameters of roads and road sections. On-the-job training will be carried for the staff to perform road safety control in Montenegro. Moreover, the personnel will be included in all four phases in order to acquire know-how on handling the equipment, producing risk mapping as well as applying all relevant EU procedures in road assessments. This would enable the Montenegrin authorities to independently perform a subsequent assessment (in accordance to the Montenegrin law on road safety) without being dependent on external support (both human and financial).

Based on the analysis of the road data from selected roads and road sections, the roads will be ranked according to their condition, scoring from one to five stars, five-star roads being the safest, and one-star being the least safe. The results shall provide ratings for whole road lengths as well as individual one-hundred meter sections. Those ratings will show the probability of a road accident occurrence and how well the road is secured against death or serious injury in the event of a road accident.

Through the Performance Tracking it will be identified whether fewer people are being killed or seriously injured on individual routes or road networks over time, and importantly, through consultation with road authorities, the countermeasures that are most effective shall be defined. The Performance Tracking Protocol shall allow for a comparison to be made between the risk mapping results of two consecutive three-year periods.

In order to perform the inspection of the road network, a software and special technical equipment is necessary to be outsourced by the Contractor/Consultant. This software/equipment is a crucial tool in producing the final output which is the Road Investment Plan. The same software is also used in processing all the data from the inspection including Risk Mapping. The software shall also allow for the development of a Safer Roads Investment Plan. As a final product this Plan will be compared with the existing risk mapping performed by the Ministry of Interior and adequately a prioritization of rehabilitation actions will be drawn.

Under the activity R3A7, at least ten actions identified in the Risk Mapping and the National Road Investment Plan will be further processed and all necessary technical documentation prepared for launching the works on their rehabilitation. The preparation of the tender dossiers will be launched as a separate service contract.

3. IMPLEMENTATION ARRANGEMENTS

ROLES AND RESPONSIBILITIES

A Working Group is established for the transport sector and participates in the preparation of this Action. Members of the working group represent the following four institutions:

- Ministry of Transport and Maritime Affairs (MoTMA);
- Ministry of Interior (MoI);
- Directorate for Transport (DT); and
- Police Department (PD).

The Steering Committee will be established at the beginning of the Action implementation.

The direct beneficiary of this action is the Directorate for Transport (DT) of Montenegro which is under the competence of the Ministry of Transport and Maritime Affairs (MoTMA). The DT will also be involved in the management and implementation process of the Action.

The Department for Regular Maintenance and Protection of State Roads within the DT will be responsible for Action implementation and shall manage the database for state roads (1,850 km of state roads). In order to provide a regular monitoring, maintenance and planning of the road network a comprehensive database is needed to facilitate the process and improve the accuracy of the information as well as the outputs.

Ministry of Interior will maintain, manage and update database for traffic accidents.

IMPLEMENTATION METHOD(S) AND TYPE(S) OF FINANCING

Action will be implemented in indirect management through three (3) service contracts and one (1) supply contracts, with total value of EUR 1 218 000. Co-financing will be ensured in the national budget.

4. PERFORMANCE MEASUREMENT

METHODOLOGY FOR MONITORING (AND EVALUATION)

Monitoring and evaluation of the implementation of this Action will be conducted in accordance with the rules of indirect management and respecting the requirements and provisions of IPA II regulations and those that will be laid down in Framework Agreement and in respective Financing Agreement. Achieving of the Action results will be regularly monitored by the responsible national implementing body and National IPA Coordinator.

Implementation of this Action will be subject of special attention of Sectoral Monitoring Committee and IPA Monitoring Committee which shall measure progress in relation to achieving the objectives of the actions and their expected outputs, results and impact by means of indicators related to a baseline situation, as well as progress with regard to financial execution. The sectoral monitoring committee will report to the IPA Monitoring Committee and will make proposals on any corrective action to ensure the achievement of the objectives of the Action and enhance its efficiency, effectiveness, impact and sustainability.

Moreover, in accordance with Article 8 of Commission Implementing Regulation (EU) no 447/2014 NIPAC shall take measures to ensure that the objectives set out in the Action are appropriately addressed during the implementation of EU assistance. Procedures for implementing monitoring activities will be set out in the revised Manuals of Procedures aligned with new IPA regulations. Best practices from the monitoring of implementation of previous actions and recommendations given by external monitoring in this sector will be also taken into consideration.

This Action shall be subject to evaluations, in accordance with Article 30(4) of Regulation (EU, Euratom) No 966/2012 and with Article 22 of Commission Implementing Regulation (EU) no 447/2014. The results of evaluations shall be taken into account by the IPA Monitoring Committee and the Sectoral Monitoring Committee.

INDICATOR MEASUREMENT

INDICATOR	DESCRIPTION	BASELINE (2010)	LAST (2013)	MILESTONE 2017	TARGET 2020	SOURCE OF INFORMATION
ISP INDICATOR(S) Logistic performance index for infrastructure (LPI)	LPI for infrastructure is focused on the quality of trade and transport related infrastructure	2.45	2.84 (2014)	2.85-3.05	3.05- 3.25	World Bank
ACTION OUTCOME INDICATOR 1 Reduced percentage of fatalities on state and regional roads	Recent years have been recorded trend of decreasing the number fatalities in road traffic accidents. Expectations are that this trend will continue in forthcoming periods.	73	59	+ 10% compared with 2010 baseline	+ 15% compared with 2010 baseline	Annual reports of the Ministry of Interior and the Police Department
ACTION OUTCOME INDICATOR 2 Improved traffic measurement along the core transport network	By the use of automatic traffic counters and this data is based on: the traffic loads, the structure of traffic flow, speed traffic flow as well as the disproportions of the traffic load in space and time on the road network. The data collected by traffic counting is the basis for planning of the reconstruction and maintenance of the existing road network, forming crossroads, indicating the possible need for construction of new routes or bypasses and other measures in order to improve existing and future traffic.	7	7 (2014)	at least 70	at least 70	Action Reports of the Directorate for Transport
ACTION OUTPUT INDICATOR 1 Road data base established and regularly updated	Functional system of road database i.e. all the information about the roads and road structures, their condition and the traffic on them, on which the analysis is based planning of construction, reconstruction, maintenance and protection of state roads. System of traffic accident positioning in cooperation with MoI will be established, the determination of the so-called black spots ,the analysing of the causes of their appearance and taking measures to eliminate them.	n/a	n/a	100%	100%	Action Reports of the Directorate for Transport

5. CROSS-CUTTING ISSUES

ENVIRONMENT AND CLIMATE CHANGE (AND IF RELEVANT DISASTER RESILIENCE)

The transport road network database will play an important role in strengthening the economic and social cohesion of the country and environmental issues will be increasingly integrated in the development of the Montenegro's transport strategy which will be integral part of the EU transport policy, thus reducing social costs to the society.

The database provides opportunities for planning for sustainable transport development which further by integrating land-use pattern reduces the overall need to travel and, where travel is necessary, encourages the use of more sustainable options.

Reducing the energy consumption and CO2 emissions and the associated impacts of climate change are one of the side results expected from the assistance provided. The database will facilitate better management of the road network through identification of bottlenecks leading to action proposals which can contribute to reduction of congestions that yield in overall fall of emission caused by motorised transport.

ENGAGEMENT WITH CIVIL SOCIETY (AND IF RELEVANT OTHER NON-STATE STAKEHOLDERS)

The representatives of the civil society active in the field related to road safety from Montenegro will be involved in a participatory and advisory manner in the implementation of the Road safety part of the actions from the very beginning.

EQUAL OPPORTUNITIES AND GENDER MAINSTREAMING

Through the Risk Mapping and Performance tracking programme on road safety data can be obtained and aggregated on the gender aspects that further can be used for other purposes than the objectives of this Action. Depending on the needs, these programmes can produce also other type of demographic information such as age, nationality, social and economic information. The actions will make sure that no segregation or discrimination is exhibited in the implementation and that all stakeholders, beneficiaries, partners and staff are given equal opportunities.

MINORITIES AND VULNERABLE GROUPS

Despite the fact that the scope of this action is not to tackle directly any minority or vulnerable groups, the action will make sure that any minorities or vulnerable groups are hampered as a consequence to the actions taken over by these Actions. Moreover, vulnerable groups in the transport sector such as the motorcyclists, cyclists and pedestrians will be given special attention through both action aiming to improve their mobility and safety.

6. SUSTAINABILITY

The Road Network Database will provide investments for transport infrastructure that have a positive impact on economic growth, create wealth and jobs, and enhance trade, geographical accessibility and the mobility of people. Management and planning of the transport road network should maximise the positive impact on economic growth and minimises negative impact on the environment.

Development and establishment of a Road Network Database will ensure efficient management of road infrastructure through better overview of the entire road network, conditions of the network, and necessities of future road infrastructure improvements and investments. Establishing cadastre and data base of transport infrastructure is important in the aim of its protection and qualitative decision making related to regulation of transport. In order to gain financial sustainability in this sector one of the main precondition is strengthening capacities for data processing and planning processes, by use of appropriate software tools for planning activities of road maintenance and definition of income level generated from roads. In order to establish responsible and high quality maintenance of road infrastructure there is necessity of continuous updating road data base (report on road land

expropriation, technical road documentation and road facilities and similar) and, as soon as conditions are created, starting the activities on keeping recording on immovable belonging to state roads.

Within the Directorate for Transport there are reserved three (3) positions for the management of database (in the Subsector for regular and investment maintenance and protection of state roads and maintaining of a database of state roads). This Subsector is under the Sector for preparation, construction, maintenance and protection of state roads where are six (6) people currently employed. The database for traffic accidents will be maintained, managed and updated by the employees of the Ministry of Interior in line with the responsibilities and duties of the Ministry. As per the current organisation no additional staff is foreseen to be recruited in dealing with the database and its updating. Additional procurement of necessary equipment for database is planned through national budget before the implementation of action.

7. COMMUNICATION AND VISIBILITY

Communication and visibility will be given high importance during the implementation of the Action.

Elements of the communication strategy may include: press release, press conferences, leaflets and/or brochures, newsletters, web pages, vehicle panels, promotional items, reports, audio-visual productions. Any supplies or equipment delivered under an EU-funded Action must be clearly identified and must visibly carry the EU logo and the mention "*Provided by the support of the EU*" in the operational language of the EU programme and in the local language.

Visibility and communication actions shall demonstrate how the intervention contributes to the agreed programme objectives and the accession process. Actions shall be aimed at strengthening general public awareness and support of interventions financed and the objectives pursued. The actions shall aim at highlighting to the relevant target audiences the added value and impact of the EU's interventions. Visibility actions should also promote transparency and accountability on the use of funds.

It is the responsibility of the beneficiary to keep the EU Delegation fully informed of the planning and implementation of the specific visibility and communication activities.

The beneficiary shall report on its visibility and communication actions in the report submitted to the IPA Monitoring Committee and the Sectoral Monitoring Committees.