



**MONTENEGRO  
STATISTICAL OFFICE OF  
MONTENEGRO**

## **METHODOLOGICAL GUIDELINES**

STATISTICS OF TRANSPORT

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**The legal basis** for the implementation of transport statistical survey is the Law on Official Statistics and Official Statistical System of Montenegro ("Official Gazette of Montenegro", No. 18/12 from 30. 03. 2012) and Annual Plan for statistical surveys.

Law on Official Statistics and the system of official statistics reporting units are obliged to give information and individual data obtained in the survey are protected and can be used only for statistical purposes.

## METHODOLOGICAL GUIDELINES

### **The aim of statistical survey**

The aim of survey in the field of transport statistics is collecting, processing and disseminating data on the passengers, goods and infrastructure by type of traffic as well as data of the postal and telecommunications services and infrastructure in the postal and telecommunications traffic. Furthermore the aim is collecting processing and disseminating data on traffic accidents, injured and killed persons in accidents and data on registered road motor vehicles and trailers. The data are used

to monitor volume and the dynamics of the observed phenomenon.

### **Variables**

The surveys collect data on transported passengers, goods and infrastructure by type of transport: rail, road, sea and air as well as postal, telecommunications services and infrastructure of the postal and telecommunications traffic, traffic accidents, injured and killed persons in accidents, registered road motor vehicles and trailer vehicles, the length of the road network and registered merchant navy.

### **Questionnaires**

The questionnaires are available on the website: [www.monstat.org](http://www.monstat.org) (Questionnaire domain Transport)

### **Coverage**

Units for all surveys of transport except survey of freight road transport are enterprises with 5 or more employees who are in the Statistical Business Register according to the activity classification in Section H (KD 2010), divisions 49, 50, 51, 52, 53 and Section J divisions 61.

Survey transport of goods by road conducted on a sample, frame for sample selection is a database of registered vehicles that are obtained from Ministry Interior of Montenegro.

### **Covered geographical area**

The territory of Montenegro.

### **Method, time and sources of the data collection**

Transport data are collected through regular quarterly and annual surveys, data collection apply to reporting methods, by mail, in addition to study on freight road transport used for polls methods.

Quarterly and annual reports submitted to the the reporting unit relevant statistical services within the time provided in the Annual Plan of Statistical Surveys.

Questionnaire and instructions reporting unit receives from the competent statistical services.

Statistical Office of Montenegro performs all the tasks of preparing for the proper and successful implementation of survey. For this purpose, perform the following tasks: develops methodology for survey, prepare forms, determines the framework for the selection of the reporting units, the selection of the reporting units and compiles a adress list of reporting units, printed material for conducting survey (forms), and submit them to the regional offices that perform distribution patterns in selected enterprises. Regional office of collected material (filled questionnaire) and sent to the same in the Statistical Office of Montenegro data processing. To increase the response rate suggests reminders by mail, email or phone.

It is a calculation and logical control in the case of some illogical (surge or drop in turnover, large changes in the number of employees compared to the previous month), contacted the reporting units for verification.

#### Data source:

- (i) for rail transport are reporting units with the carriage of passengers and goods by rail prevailing activity (Section H, field 49);
- (ii) road passenger traffic reporting units with the carriage of passengers in road traffic prevailing activity (Section H, field 49);
- (iii) road freight transport vehicles for transportation of goods payload of 3500 kg and higher, as well as tractors. Sources of data are legal and natural persons who are owners or users of vehicles there are in the sample. Frame for sample selection is a database of registered vehicles that are obtained from Ministry Interior of Montenegro;
- (iv) local road traffic reporting units with the carriage of passengers in local road (urban) traffic prevailing activity (Section H, field 49);
- (v) traffic at airports reporting units that perform service activities in air traffic (Section H, field 52);
- (vi) air traffic reporting units which operate in air traffic (Section H, field 51);
- (vii) maritime traffic reporting units with the carriage of goods and passengers in maritime transport prevailing activity (Section H, field 50);
- (viii) report on the arrival and departure of ships reporting units are the Port Authority;
- (ix) reloading the reporting unit which is engaged manipulating freight (shipping in ships and unloading from them) core business (Section H, field 52);
- (x) postal and telecommunications traffic reporting unit which is a postal traffic (Section H, area 53) and telecommunications (sector J, division 61) the prevailing activity.

- (xi) Source data for the number of road traffic accidents is Montenegro police directorate and the number of registered road motor vehicles and trailers Ministry of Interior of Montenegro.

### Calculation of results

Results transport statistics are presented quantitatively. Indexes transport are calculated as simple indices

$$P = pt / po * 100 \quad (1)$$

*P* - simple indices;

*pt* - value of the current (selected) period;

*po* - the value of the base period.

### Dissemination

The published data are available to users in the Monthly Statistical Bulletin, Statistical Yearbook, Monthly statistical review, on the Web and application for the Android devices. Depending to the requirements and user equipment the data shall be submitted by post, fax or e-mail.

### Harmonization with EU regulations

Statistics railway transport is conducted in accordance with Regulation (EC) No. 91/2003.

Statistics of road freight transport is conducted in accordance with Regulations (EC) No. 1172/98 and No. 70/2012.

Statistics port traffic is conducted in accordance with Directive (EC) No. 2009/42 and No. 2012/186.

Statistics of traffic safety is conducted in accordance with Regulation (EC) No. 93/704.

Statistics of transport of passengers and cargo at airports is partly harmonized with Regulation (EC) No. 437/2003.

Other research of transport are according domestic to the needs of domestic users.

### **General definitions**

*Passenger* is every person with ticket or appropriate document with the aim to travel to desired place.

*Passenger kilometer* presents the transport of one person over the distance of 1 km.

*Goods transported* are goods transferred based on the contract on transport. The quantity of goods transported is expressed in gross weight, meaning that the quantity of goods covers also the quantity of packaging or packing material (containers).

*Tonne-kilometre* indicate transport of one-tone goods over the distance of 1 km.

*Interal transport* means transport between two places (a place of loading / embarkation and a place of unloading / disembarkation), which are located in the state.

*International transport* means transport between (loading / embarkation or unloading / disembarkation) in the country and place (of loading / embarkation or unloading / disembarkation) in another country.

*Transit* means transport through the country between two places (a place of loading / embarkation and a place of unloading / disembarkation) outside the country.

## RAILWAY TRANSPORT

### Survey

1. Survey on the transport of passengers and goods by rail (quarterly periodicity)
2. Survey on railway infrastructure (annual periodicity)

The aim of surveys in railway transport is collecting, processing and disseminating data on the passengers, goods and infrastructure. The data are used to monitor volume and the dynamics of the observed phenomenon.

*Train-km* means the unit of measurement representing the movement of a train over a distance of one kilometer. Used distance is the distance actually run, if available, otherwise use the standard distance between the origin and destination on the network.

A *serious accident* means any accident which involved at least one rail vehicle in motion, and which results in at least one killed or seriously injured person, or substantial damage to rolling stock, track, other installations or environment, or a major traffic jam. Excluded are accidents in workshops, warehouses.

*Person killed* means any person killed immediately or died within 30 days of the result of an accident, excluding suicides.

*Seriously injured person* means any person injured who was hospitalized for more than 24 hours because of the Consequences of the accident, except for suicide attempts.

*The railway* is intended solely for movement of train. Data on the length of railway lines are shown as building and as the really length.

*Building length* is measured from baseline to end point. Building length: open line and length of the main wicket-track in stations and other official places.

*The really length* of the line is the length of the open line and cellular transient gauge, and is measured from the middle to the middle station buildings or other official sites.

## ROAD TRANSPORT

### Survey

1. Transport goods by road (quarterly periodicity)
2. Road passengers transport (quarterly periodicity)
3. Local road passengers transport (quarterly periodicity)
4. Number of injury accidents (quarterly periodicity)
5. Number of registered road motor vehicles and trailers (quarterly periodicity)
6. Road network (annual periodicity)

The aim of survey in road freight transport is collecting, processing and disseminating data relating to vehicle, travel and goods transported by road. The data are used to monitor volume and the dynamics of the observed phenomenon.

Sample – Stratified sample.

Stratification criteria

Stratification is done according to load capacity.

All vehicles are classified under the category of "allowed load capacity" to 6 load categories.

Class 1: vehicles up to 4,999 kg;

Class 2: vehicles from 5000 kg to 9999 kg;

Class 3: vehicles from 10 000 kg to 11 999 kg;

Class 4: vehicles from 12 000 kg 14 999 kg;

Class 5: vehicles of 15 000 kg 19 999 kg;

Class 6: vehicles from 20 000 + kg.

*Road transport* is any movements of goods and/or passengers using a road vehicle on a given road network.

*Road cabotage* transport is national road transport performed by a motor vehicle registered in another country.

*Cross-trade road transport* is international road transport performed by a road motor vehicle registered in a third country.

*Transport for hire or reward* is the carriage for remuneration, of persons or goods, on behalf of third parties.

*Transport on own account* is transport which is not for hire or reward.

*Goods road motor vehicle* is any single road motor vehicle designed to carry goods (lorry), or any coupled combination of road vehicles designed to carry goods, (i.e. lorry with trailer(s), or road tractor with semitrailer and with or without trailer).



*Road tractor* is road motor vehicle designed, exclusively or primarily, to haul other road vehicles which are not power-driven

Transport by types of goods classified under classification of goods NST 2007.

The aim of survey in road and local road passengers transport is collecting, processing and disseminating data on the passengers, the number and capacity of means of transport. The data are used to monitor volume and the dynamics of the observed phenomenon

Under the *urban and suburban traffic* represent a completely organized public transport of passengers of city and suburban traffic carried by bus, in the cities and suburbs, as well as transportation to and from the airport and other places in the city. Urban and suburban transport is only done as the line transport.

*The line transport* means that kind of carriage which is performed according to a predetermined route - line to a specific timetable, certain positions for loading / unloading of passengers, intervals of departures and arrivals at different positions and at a specified price on the basis of transportation tariffs. All lines within the urban and suburban areas form a network line of this type of public transport passengers.

*City and suburban line* is a line whose starting and end point are within the the metropolitan area and is partially located within the the metropolitan area, and partly in the suburb.

*Intercity line* is a line that connects two distant place outside the urban and suburban areas.

Under the *number of lines* corresponds to the number of lines that have defined places of departure and arrival in one direction.

*Engine power* is expressed in kW.

The aim of survey number of injury accidents is collecting, processing and disseminating data of traffic accidents, as well as data on the killed and injured persons in accidents. The data are used to monitor volume and the dynamics of the observed phenomenon.

*Traffic accident* is an event that occurred on the road or the start on the road, which was attended by at least one vehicle in motion and in which one or more persons injured or killed or died within 30 days of the result of the traffic accident or a result damage to property.

*Fatal accident* is any injury accident resulting in a person killed.

*Non-fatal accident* is any accident resulting in a person injured other than a fatal accident.

*Casualty* is any person killed or injured as a result of an injury accident. Any person killed immediately or dying within 30 days as a result of an injury accident.

Person *injured* any person not killed, but who sustained an injury as result of an injury accident, normally needing medical treatment.

The aim of survey number of registered road motor vehicles and trailers is collecting, processing and disseminating data on the number of registered vehicles by vehicle type, age of vehicle and type of fuel spending by vehicles. The data are used to monitor volume and the dynamics of the observed phenomenon.

Registered *road motor vehicle* and trailer are all vehicles registered in the Ministry of Interiors, except military vehicles.

For the *first time registered* vehicles include: new and imported vehicles, i.e. vehicles with the first-time registration in Montenegro.

*Age of road vehicle* is time passed from the first registration of road motor vehicle regardless of registration country.

*Passenger car* is road motor vehicle, other than a motor cycle, intended for the carriage of passengers and designed to seat no more than nine persons (including the driver).

*Motorcycle* is two-wheeled road motor vehicle with or without side-car, including motor scooter, or three-wheeled road motor vehicle not exceeding 400 unladen weight. All such vehicles with a cylinder capacity of 50 cc or over are included, as are those under 50 cc which do not meet the definition of moped.

*Motor-coach* or bus is passenger road motor vehicle designed to seat more than nine persons (including the driver).

*Goods road motor vehicle* is any single road motor vehicle designed to carry goods (lorry), or any coupled combination of road vehicles designed to carry goods, (i.e. lorry with trailer(s), or road tractor with semitrailer and with or without trailer).

*Special purpose* road vehicle is road vehicle designed for purposes other than the carriage of passengers or good (this category includes e.g. fire brigade vehicles, ambulances, mobile cranes, self-propelled rollers, bulldozers with metallic wheels or track, vehicles for recording film, radio and TV programmes, mobile library vehicles, towing vehicles for vehicles in need of repair, and other road vehicles not specified elsewhere).

*Road tractor* is road motor vehicle designed, exclusively or primarily, to haul other road vehicles which are not power-driven.

Semi-trailer is goods road vehicle with no front axle designed in such way that part of the vehicle and a substantial part of its loaded weight rests on the road tractor.

*Trailer* is goods road vehicle designed to be hauled by a road motor vehicle.

*Agricultural tractors* is motor vehicle designed exclusively or primarily for agricultural purposes whether or not permitted to use roads opened to public traffic.

The aim of road network survey is collecting, processing and disseminating data on road network. The data are used to monitor volume and the dynamics of the observed phenomenon.

*Road* is every surface that has a permanent place traffic. Data on the roads by type of road are grouped into three basic groups: asphalt, gravel and earthen.

*Modern roads* are considered roads with pavement veiled asphalt, concrete or gambling.

*Other kind* of protection are gravel, cobbles, bricks, and the like.

*Earthen road* was built without a lane.

*Uncategorized road* surface is used for traffic on any basis and made available to multiple users (rural, field and forest roads, roads on dikes for flood protection, parking lots, etc.).

*The bridge* is a building structure that traffic translates over water, valleys, roads or any other obstructions.

## MARITIME TRANSPORT

### Survey

1. Arrival and departure of ships in ports (quarterly periodicity)
2. Transshipment in ports (annual periodicity)
3. Capacity transshipment funds in maritime transport (annual periodicity)
4. Survey of transport of passengers and goods by sea (quarterly periodical)
5. Survey of maritime transport - state inventory (annual periodicity)
6. Survey of merchant navy (annual periodical)

The aim of survey arrival and departure of ships in ports is collecting, processing and disseminating data on ship traffic, passengers and goods in seaports. The data are used to monitor volume and the dynamics of the observed phenomenon.

*Ports* are places for loading/embarkation and unloading/disembarkation passengers and goods at the seashore built particularly for this purpose, while docks are similar places on riverbanks and lakefronts.

The aim of surveys transshipment in ports and capacity transshipment funds in maritime transport are collecting, processing and disseminating data on transshipment of goods in ports, as well as data on the capacity transshipment funds. The data are used to monitor volume and the dynamics of the observed phenomenon.

*Gantry cranes* all types of cranes fixed to land or rail cargo handling by ship or boat.

*Overhead cranes* include all kinds of cranes in the warehouse, or open space, which are used to move cargo.

*Auto-cranes* represent a special type of motor vehicles is determined by the crane (arrows).

*Auto-lifts* (forklifts) are motor vehicles where the load is placed on the forks or other attachments.

*Trans-shipped tons* of cargo related to the total amount of cargo that passes through the transshipment business entity, where the same load, regardless of the number of manipulations that it has executed, shown only once.

*Manipulated tons* is a unit of performance that expresses the sum of operations registered by kind that are made (unloading, loading, reloading the direct transfer).

*Unloading* includes unloading goods from the vehicle to the ground, the coast or other spaces for the facility (warehouse, factory grounds and the like).

*Loading* involves loading goods from the country, coast or other areas of transportation.

*Direct transshipment* entails transshipment of goods from one vehicle to another, without the use of space on the ground, coast.

The aim of surveys maritime transport and maritime transport - state inventory are collecting, processing and disseminating data on transported passengers and goods in maritime transport, as well as data on the capacity. The data are used to monitor volume and the dynamics of the observed phenomenon.

*Passenger ships* are vessels with its own propulsion devices that can simultaneously carry more than 12 passengers.

*Cargo ships* are vessels intended for freight.

The aim of survey on the merchant navy is collecting, processing and disseminating data on the registered fleet of maritime transport. The data are used to monitor volume and the dynamics of the observed phenomenon.

*Tugboats* (tractors) ships are intended for towing vessels of other units.

The *capacity of means* of transport is expressed in GRT (gross tonnage registration), cargo capacity, passenger stations, the number of beds and kW (power).

*Fishing boat*, this category includes boats for fishing vessels and fish processing.

*GRT-gross tonnage* is a measure of the total size of the ship determined in accordance with the provisions of the International Convention on tonnage measurement of ships, 1969.

*DWT- the loading* capacity of the ship, including fuel, lubricants, etc., for the normal functioning of the ship, measured in tons, when the ship is immersed in a water line.

*Technical facilities* at ports in number and maximum size vessel that can accommodate include: docks, rafts, special dock for ship repair.

## AIR TRANSPORT

### Survey

1. Survey of traffic at airport (quarterly periodicity)
2. Survey of the airport infrastructure and traffic at airports (annually periodicity)
3. Survey of air transport (quarterly periodicity)
4. Survey of turnover in air transport and infrastructure (annually periodicity)

The aim of survey of traffic at airport and airport infrastructure are collecting, processing and disseminating data on transported passengers and goods on airports and infrastructure of airports. The data are used to monitor volume and the dynamics of the observed phenomenon.

*Airport* is defined area of land or water (including any buildings, facilities, and equipment) intended to be used either aircraft take-off and landing, as well as for movements of aircrafts on the land area, and open for commercial air transport operations.

*Passengers in aircraft* are all passengers in aircraft when the aircraft landing at the reporting airport or take-off of aircraft from the reporting airport.

*Goods* are any goods that are transported for a fee, other than mail, baggage and airline stocks.

*Runway* is a designated rectangular area at the airport of intended landing and takeoff of aircraft, which has the following characteristics:

- *Available length for take off*

*The length of runway* declared available and suitable for the ground run of an aircraft taking off.

- *Available lengths to stop*

*The length of runway* which is declared available and suitable for the ground run of an aircraft landing.

The aim of survey air transport and infrastructure in air transport are collecting, processing and disseminating data on transported passengers and goods on air transport and infrastructure. The data are used to monitor volume and the dynamics of the observed phenomenon.

*Standing-regular lines* are those on which the transport is performed during the year and where public transport is performed by a particular schedule (timetable).

*The number of lines* is the sum of all the lines, taking each line in only one direction. If the circuit will only go in one direction, is taken as one line. If you later impose traffic in the opposite direction, the number of lines remains unchanged.

*Scheduled air service* for passenger and goods transports a commercial air service operated according to a published timetable.

*Non-scheduled air service* is a commercial air service other than scheduled air service.

*The realized passenger kilometers* is one of the main performance indicators of the organization of air traffic, and refer to the total length of transportation of all passengers on all routes at home and abroad.

## POSTAL AND TELECOMMUNICATION ACTIVITIES

### Survey

1. Survey of postal activities and telecommunication (quarterly periodicity)
2. Survey of postal and telecommunication network (annual periodicity)

The aim of surveys on postal activities and telecommunication as well as postal and telecommunication network is collecting, processing and disseminating data on postal and telecommunications services and network. The data are used to monitor volume and the dynamics of the observed phenomenon.

*Postal service* is a service of receiving, processing, transfer, and delivering letter mails in accordance with accepted standards.

*Postal network* of universal postal operator is a set of postal facilities, equipment, and other means which are connected in a universal, technical and technological unity for purpose of providing universal postal service .

*Contracting mails* operate under a contract concluded between the public operator and the legal or natural person in the name and for the account of the public operator provides postal services.

*Post office delivery* perform tasks receipt, dispatching, arrival and delivery of postal items.

*Post offices without delivery area* opens, generally, in areas with more postal office, and performs reception, arrival and dispatch of mail, with a team that can perform and delivery of postal items to the post office.

*Seasonal post office* are open due to increased demand for services (e.g. during the tourist season).

*Letter* is a type of communication in written form on paper or other appropriate data carrier, which must be sent and delivered to the address indicated by the sender on the item or letter cover.

*Package* is a postal consignment containing goods and items.

*Registered mail* is the item for which the sender is issued a certificate of acceptance and shall be delivered to the recipient with the signature in case of loss, damage or reduced content of the prescribed fee paid damages.

*Other printed papers* are printed publications issued by the publisher of a daily, occasionally or in a given period (newspapers and magazines).

*Fixed telecommunication* is a service providing to users the access to public fixed network at the fixed location, and the use of public accessible telephone service at the fixed location.



Mobile telecommunication is a service providing to users the access to public mobile network, and the use of mobile telecommunication services.

*Subscriber* means any natural or legal person who is the provider of publicly available communications services contracted for the purpose of using these services

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