

DRAFT INDICATORS FOR TRANSPORT

| Area | Indicators | Definition | Unit | Source | Remarks | EU28 |
|----------------|--|--|------|--|--|------|
| Infrastructure | 1. Total length of constructed / reconstructed roads within SEETO (Transport Community Treaty) Core and Comprehensive Road Network at the end of the respective year | <p><i>Quantitative indicator (yearly/cumulatively calculating for each following year)</i></p> <p>The length of constructed/reconstructed roads within SEETO (Transport Community Treaty) Core and Comprehensive Road Network is calculated on the basis of the number of Km that are constructed/reconstructed and put into operation after adoption of the NTS 2018-2030</p> | Km | <p>Primary source: Public enterprise for State roads</p> <p><u>Note:</u> The primary data is regularly submitted by PESR to the State Statistical Office and published within the Annual Statistical report. However statistic available online does not provide detail information about deviation of total state road network per the Core and comprehensive road network length and roads out of the Core and comprehensive road network length.</p> <p>Data available online: http://makstat.stat.gov.mk/PXWeb/pxweb/mk/MakStat/MakStat_Transport_Infrastruktura</p> | <p>Baseline data: 0 (2017)</p> <p>Target 2030: 360,5 km new motorway and express road constructed/reconstructed (28+100.5+66+122.5+43.5)¹</p> | n.a. |
| | 2. Total length of railway line constructed/recons | <p><i>Quantitative indicator</i></p> <p>Length of railway constructed/reconstructed</p> | Km | Public enterprise Macedonian Railways Infrastructure (Network statement) | Baseline data: 0 (2017) | n.a. |

¹ Calculations aiming to set the target/roads (2030) made by of MoTC, Department for European Union were based on the information bellow (provided by PE State Roads in September 2018): Corridor X, new motorway - missing link: Demir Kapija- Smokvica, total **28 km**; Corridor VIII, new motorway - missing links: toward Albania (57 km from Kichevo to Ohrid, under construction + 35 km Gostivar – Kichevo + 8,5 km Trebeniste – Struga), total **100,5 km**; Route 6 towards Kosovo (13 km Skopje – border with Kosovo) and Route 8 (6 km Podmolje – Ohrid, under construction) + Route 10 (47 km Miladinovci –Shtip, under construction), total **66 km**; new express road, Corridor X-d (16 km Gradsko – Drenovo, under construction + 10km Drenovo- Raec, under construction) + (27.5 km Bitola – Medzitlija) and Route 10 towards Bulgarian border (37 km Shtip – Radovis, under construction + 32 km Strumica – Novo Selo), total **122,5 km**; reconstruction works on Corridor VIII for upgrading of road sections towards Bulgaria, Rankovce- Kriva Palanka (23km) and Kriva Palanka-border with Bulgaria (13km), and Corridor X-d, Raec – Prilep (7.5km), total **43,5 km**

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| | cluded within SEETO (Transport Community Treaty) Core and Comprehensive Railway Network at the end of the respective year | according to EU standards where there is no operational railway infrastructure Yearly/cumulatively calculating for each following year | | Data only available online: https://www.mzi.mk/documents/OBJAVA-NA-MREZA-2019.pdf State Statistical Office: http://makstat.stat.gov.mk/PXWeb/pxweb/mk/MakStat/MakStat_Transport_IndikatorizaTransport/325_Trans_MK_01_qlavindik_mk.px/table/tableViewLayout2/?rxid=f188a507-5148-4036-9699-ec8f1999cb4c | Target 2030: 168 km new railway constructed (Xd=16km+VIII=63+89km) ² | |
| | 3. Railways, goods transported (Net ton-km) | <i>Quantitative indicator (annually measured)</i> Goods transported by railway are the volume of goods transported by railway, annually measured in metric tons times kilometres travelled. Net- ton km is measurement unit for transport of freight, one ton freight on rail in length of 1km. | Net-ton km ³ | Primary source: PE Macedonian railways – Infrastructure, MoTC; Official source: State statistical office http://makstat.stat.gov.mk/PXWeb/pxweb/en/MakStat/MakStat_Transport_ZeleznickiTransport/575_Trans_Mk_T01PrevStZ_ang.px/table/tableViewLayout2/?rxid=69202dfe-21be-42d6-858b-158dba2baf1e | Baseline data: 276,628,000 in 2017 307,156,000 in 2018 Target 2030: At least 624.870,000 Net ton-km ⁴ | n.a. |

² Calculations aiming to set the target (2030) made by of MoTC, Department for European Union were based on the information collected from the PE "Macedonian Railways - Infrastructure" and the Rail department in the MoTC, in September 2018, as follows: Corridor X-d (**16 km** under construction) + Corridor VIII missing links: toward Albania (**63 km** from Kichevo to border crossing) + towards Bulgaria (**31 km** Kumanovo-Beljakovce, under construction + **58 km** from Beljakovce to border crossing)

³Note: Net ton-km is a different measure of work performed than the gross ton-kilometers, where the measure includes rail wagons' empty weight for both empty and loaded movements. This measure of gross ton-kilometers is also called 'trailing tons' or the total tons being hauled.

⁴ Freight traffic volume, Feasibility study in frames of the project Preparation of Detailed design and tender documentation for construction of new railway section Kriva Palanka – Border with Republic of Bulgaria, as part of Corridor VIII: EuropeAid/136050/IH/SER/MK (2017)

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| | | | | (Select: Net-tonnes km; year, total) | | |
| | 4. Number of well-equipped intermodal / multimodal infrastructure; | <p><i>Quantitative</i> indicator (Yearly/cumulative)</p> <p>Multimodal/Intermodal node with terminals and platforms constructed & equip, incl. hub in Skopje (Trubarevo)</p> <p>Completion of the phases for implementation of the project progress made toward the indicator to be assumed, i.e. technical documentation prepared, tender procedure to be analysed as "partly achieved, in %)</p> | Number of Operational Multimodal / intermodal nodes (%) ??? | PE Macedonian railways – infrastructure, MoTC https://www.mzi.mk/documents/network for the respective year | Baseline data: 0 (2017) Target 2030: 1 Trubarevo- Skopje intermodal terminal in operation | n.a. |
| safety | 5. Number of rail accidents | <p><i>quantitative</i> indicator</p> <p>Indicators are to measure the Rail transport safety performance and the effectiveness of the Railway safety management system (RSMS) therefore it is a key-character of the railway system.</p> <p><i>Counting total number of Rail accidents</i> involving passenger, freight and other <i>trains</i> (Collision of trains, level crossings accident, accidents to person, derailment, other) happened during the year</p> | number | State statistical office http://makstat.stat.gov.mk/PX/Web/pxweb/en/MakStat/MakStat_Transport_SoobrakajniNesreki/125_Trans_Mk_ZelSN_ang.px/table/tableViewLayout2/?rxid=6263d405-f656-4350-a635-777e57b54850 (Select: Railways accidents total; year) | Baseline data: 45 in 2017 97 in 2018 Target 2030: >23 | n.a. |
| | 6. Number of fatalities/million inhabitants on an annual basis in the | <p><i>quantitative</i> indicator (yearly)</p> <p>EC indicator calculated as ratio N of fatalities happened during the year and divided to the absolute</p> | Road fatalities/millions of | Numerator: State Statistical Office, Annual Statistical reports. Information for fatalities also available | Numerator: 155 (2017) fatalities Denominator: | Numerator: 2016: 25,643 people killed in road accidents |

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| | roads of Republic of North Macedonia | number of population (millions) at the end of respected year = N fatalities/ millions of habitants Number counted will be compared to the baseline (counting % decrease) | habitants compared to the baseline (counting % decrease) | online at: http://makstat.stat.gov.mk/PXWeb/pxweb/en/MakStat/MakStat_Transport_SoobrakajiniNesreki/325_Trans_MK_T_48_en.px/?rxid=e80a0716-3402-45bc-af5d-01a8715b98c7 – (Select: Total number of killed people in RNM; total age groups) Denominator: Population: http://www.stat.gov.mk/OblastOpsto.aspx?id=2 | 2.075 million inhabitants Baseline data: (155/2,075,000)*100,000= 74.69 fatalities/million inhabitants; Target 2030: < 38 fatalities/million inhabitants; | https://ec.europa.eu/eurostat/data/database?node_code=sdg_11_40 (Select: Tables by themes Transport/ Road transport / People killed in road accidents (number) Denominator: population: 511,373,278 persons at the 01 Jan 2017: https://ec.europa.eu/eurostat/data/database?node_code=sdg_11_40 (Select: Tables by themes / Population and social conditions / Demography and migration / Population / Population on 1 January Baseline: 2016: 50.1 fatalities / million inhabitants |
| ITS | 7. ITS deployment on road Corridor X | <i>quantitative</i> indicator (N+2 (every second year)) Completion of the phases for implementation of the project for deployment of ITS on road Corridor X | Absolute number | MoTC, ITS implementation plan (under development) | Baseline data: 0 (2017) Target 2030: 1 major project fully implemented and operational (Corridor X) | n.a. |
| Competitiveness of the logistic sector | 8. Logistics performance index (LPI) – infrastructure | N+ 2 following the year the statistical data refers to LPI is used as a composite indicator drawing on topic relevant data from operators surveys conducted worldwide. | LPI Infrastructure index score 1- | Primary data source of information: World bank worldbank.org/lpi | Baseline data: 2.47(2018) | https://lpi.worldbank.org/international/global data is available at EU MS level, |

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| | | <p>The World Bank publishes a bi-annual report of country rankings and scores. Calculations are based on the six components (customs, infrastructure, international shipments, logistic competence, tracking & tracing and timeliness).</p> <p>LPI Infrastructure describes (in score) the quality of trade and transport related infrastructure (e.g., ports, railroads, roads, information technology)</p> <p>Data aggregated from LPI surveys conducted by the World Bank in partnership with academic and international institutions, private companies and individuals engaged in international logistics. Respondents evaluated the transport related infrastructure on a rating ranging from 1 (very low) to 5 (very high).</p> | 5(1=low to 5=high); | | <p>Target 2030:3,2⁵</p> <p>Note: LPI is a complex indicator and should be monitor on a higher than sector level</p> <p>World Bank, International Trade Department measures the availability and quality of logistics and key transport services, as well as government services. 2009 round of surveys covered more than 5,000 country assessments by nearly 1,000 international freight forwarders. Respondents evaluate eight markets on six core dimensions on a scale from 1 (worst) to 5 (best). The markets are chosen based on the most important export and import markets of the respondents country, random selection, and, for landlocked countries, neighboring countries that connect them with international markets.</p> | <p>highest value in EU (Germany): 4.37</p> <p>lowest value in EU (Bulgaria): 2.76</p> <p>in 24 out of 28 MSs, the value is above 3</p> <p>(exceptions: Bulgaria, Romania, Malta, Cyprus)</p> |

⁵The ranking of Slovenia (2018), as a country of similar size and complexity was considered as a target